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Transportation of Hazardous Materials Emergency Preparedness Hazards Assessment

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S-EHA-G-00003
Revision 1

TRANSPORTATION OF HAZARDOUS MATERIALS (U) EMERGENCY PREPAREDNESS HAZARDS ASSESSMENT SAVANNAH RIVER SITE

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SRS
SAVANNAH RIVER SITE

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LIST OF ACRONYMS

ALOHA	Areal Locations of Hazardous Atmospheres
ALS	Analytical Laboratories Section
ARCHIE	Automated Resource for Chemical Hazard Incident Evaluation
BIO	Basis for Interim Operation
CEDE	Committed Effective Dose Equivalent
CFR	Code of Federal Regulations
CIIS	Chemical Inventory Information System
CLAB	Central Laboratory
DOE	Department of Energy
DOT	Department of Transportation
EAL	Emergency Action Level
EMG	Emergency Management Guide
EMPP	Emergency Management Program Procedure
EPHA	Emergency Preparedness Hazards Assessment
EPIP	Emergency Plan Implementing Procedure
EPZ	Emergency Planning Zone
ERPG	Emergency Response Planning Guide
GE	General Emergency
HAD	Hazards Assessment Document
HEPA	High Efficiency Particulate Air
IDLH	Immediately Dangerous to Life and Health
ILNTV	Intermediate Level Non Tritium Vault
ILTV	Intermediate Level Tritium Vault
LLW	Low Level Waste
LLWSB	Long-Lived Waste Storage Building
LNTV	Low Non Tritium Vault

LIST OF ACRONYMS

NoUE	Notification of Unusual Event
NMSP	Nuclear Materials Stabilization Program
OTR	Over The Road
PAC	Protective Action Criteria
RCRA	Resource Conservation and Recovery Act
RD	Release Designation
SAE	Site Area Emergency
SAR	Safety Analysis Report
SRS	Savannah River Site
TEDE	Total Effective Dose Equivalent
THM	Transportation of Hazardous Materials
TPCIC	Technical Programs Common Industrial Chemical
TPQ	Threshold Planning Quantity
TPSQ	Technical Programs Screening Quantity
TPQ	Threshold Planning Quantity
TRU	Transuranic
UNH	Uranyl Nitrate Hexahydrate
WAC	Waste Acceptance Criteria
WINDs	Weather Information and Display System
WSI	Wackenhut Services Incorporated

ABBREVIATIONS

C	Celsius (temperature)
Ci	Curies
cpm	counts per minute
d/m/ml	disintegrations per minute per milliliter
F	Fahrenheit (temperature)
ft	feet
ft/sec	feet per second
gal	gallons
hr	hour
in H_2O	inches of water column (pressure)
lbm	pounds-mass
min	minutes
mm Hg	millimeters of mercury (pressure)
m	meter, or milli (10^{-3})
n	nano (10^{-9})
ppm	parts per million
Vol %	volume percent (concentration)
wt%	weight percent (concentration)
μ	micro (10^{-6})

1.0 INTRODUCTION

1.1 Purpose

This report documents the Emergency Preparedness Hazards Assessment (EPHA) for the Transportation of Hazardous Materials (THM) at the Department of Energy (DOE) Savannah River Site (SRS). This hazards assessment is intended to identify and analyze those transportation hazards significant enough to warrant consideration in the SRS Emergency Management Program. This guidance for the conduct of an EPHA was based primarily on the Emergency Management Program Procedure (EMPP) 6Q-001 (Ref. 1).

1.2 Scope

The EPHA for the THM scope includes the transportation of hazardous materials (radiological and chemical) to include the following (Ref. 2):

- Offsite shipments of DOE owned hazardous materials.
- Receipt of DOE owned hazardous materials.
- Receipt of non-DOE owned (e.g., DOD) hazardous materials.
- Non-DOE owned hazardous materials routinely shipped via truck on South Carolina State Route 125/278 and SRS Route 1 & 1A.
- Non-DOE owned hazardous materials routinely shipped via rail through SRS.

Because Safe Secure Transport (SST) transportation incidents are under the jurisdiction of DOE Albuquerque, NM and spent fuel transportation is addressed in the Reactors EPHA, the scope of the THM EPHA specifically excludes any Safe Secure Transport (SST) and the transportation of spent fuel, both offsite and Inter/Intra-Area (Ref. 2). The only exception to this is a scenario involving malevolent acts to an offsite spent fuel shipment, in a Type B Container, to the Receiving Basin for Offsite Fuel (RBOF) or L-Reactor disassembly basin.

1.3 Background

This EPHA is intended to provide an emergency planning basis that is in compliance with the requirements of DOE Emergency Management Guide (EMG) (Ref. 3). This document does not address the EMG beyond what is necessary to develop Emergency Action Levels (EALs). Those issues, such as evacuation route planning and protective actions, will be addressed by an SRS site level consolidation document.

The EPHA methodology specified in EMPP 6Q-001 (Ref. 1) differs from existing safety documentation [e. g., Hazard Assessment Document (HAD), Safety Analysis Report (SAR) - Addendum]. The specified consequence analysis methodology utilizes the concept of a barrier approach to hazardous material releases as opposed to a risk/probability assessment of potential accidents or analyses as totally unmitigated releases. The EPHA involves the compilation and screening of radiological and chemical inventories with respect to their airborne hazard potentials. For materials failing this screening process, a detailed hazard characterization and barrier identification process is applied. Then, event scenarios are defined for potential releases of the materials (ranging from minor to beyond design basis), including information on release mechanism, duration of release, initiator identification, and source term calculations. A consequence assessment is performed from the scenarios to determine downwind dose/concentrations at the defined receptor locations.

Because this EPHA deals with transportation incidents, the consequence assessment will be utilized to also determine the distance to defined Protective Action Criteria (PAC). This distance will be utilized for determining if events are defined as Site Area Emergencies (SAE) opposed to General Emergencies (GE) based on the location of a particular accident. This differs slightly from the methodology utilized for stationary facilities as their distances are fixed. Finally, the EALs and Emergency Planning Zones (EPZs) are determined from these results.

Events capable of exceeding defined PAC at the receptor locations are assigned an emergency classification. Based on the events, corresponding classification, and indications of each event, a Emergency Plan Implementing Procedure (EPIP) will be written for use by personnel to accurately (and quickly) classify events and to recommend protective actions.

Because the distance to PAC is not unique no true site boundary receptor point exists for potential General Emergency (GE) classification. For the THM EPHA a distance of 6,000 meters was selected as an analysis point to make preliminary GE determinations. This corresponds to the downwind distance for one hour during adverse meteorological (1.7 m/s wind speed) conditions.

The EPHA is required to address malevolent acts within the accident analysis. The DOE Emergency Management Guide (EMG) assumes two types of malevolent acts, moderate and extreme (Ref. 3). Moderate events are those that could be initiated by a single individual using materials or tools readily available in the facility, or small quantities of flammables. Extreme events, such as those used in Vulnerability Assessments and Radiological/Toxicological Sabotage assessments, should provide an upper bound on the severity of potential consequences. In most cases, malevolent acts would have consequences similar to those caused by other initiators. For example, catastrophic failure of a chemical storage tank may be postulated due to a seismic event. If the same level of damage may be caused by an act of sabotage, such as running a truck into the tank, the malevolent act would simply by considered another initiator for the failure of the tank.

1.4 Revision Summary

This revision to the EPHA concentrated primarily on updating the consequence assessment of chemical releases and incorporating the changes resulting from revisions made to the ERPG values since the completion of Revision 0 of this document. Also the layout and format of the document has been updated to conform to current EPHA formatting.

2.0 SUMMARY

An EPHA was conducted for the transportation activities involving hazardous materials in accordance with EMPP 6Q-001 (Ref. 1). The analysis included the following:

- A compilation, screening, and hazard characterization of both chemical and radiological materials
- Barrier identification
- Accident scenario development for potential releases of identified hazardous materials
- Consequence assessment of the identified scenarios
- Emergency classification development

Based on this EPHA, THM requires an emergency plan and implementation procedure.

The materials present within the scope of this EPHA requiring full consequence assessment are:

- Chemicals:

Acetaldehyde	Diphenylmethane-4,4-diisocyanate	Methylene Chloride	Tetrahydrofuran
Acetonitrile	Ethyl Acetate	Methyol Cellosolve	Titanium Dioxide
Acetic Acid	Ethyl Benzene	Monoethanolamine	Toluene
Alpha-Pinene	Ethylene Oxide	Morpholine	Toluidine-o
Ammonia	Fluorosilicic Acid	N Butyl Alcohol	Trichloroethane-1,1,1
Ammonium Hydroxide	Fluorosilicic Acid 25%	N Methyl Pyrrolidone	Trichloroethylene
Benzene	Formaldehyde	Nitric Acid	Triethylamine
Benzoic Acid	Formic Acid	Onyxide	Trimethylamine
Benzyl Alcohol	Glycol Ether DE	Perchloroethylene	Vinyl Acetate
Benzyl Chloride	Glycol Ether EB	Petroleum Sulfonate	Xylenes
Butyraldehyde	Hydrochloric Acid 31%	Phenol, Molten	
Carbon disulfide	Hydrofluoric Acid 70%	Propagyl Alcohol	
Carbon Monoxide	Hydrogen Chloride	Propionic Acid	
Chloracetone	Hydrogen Peroxide	Rodine 50 (formaldehyde)	
Chlorine	Isopropyl Alcohol	Silica (as respirable dust)	
Chlorosulfonic Acid		Sodium Hypochlorite 13-15%	
Cyclohexane	Magnesium Oxide	Sodium Sulfhydrate	
Cyclohexanone	Methyl Alcohol	Sulfur Dioxide	
Diethylamine	Methyl Bromide	Sulfur, Molten	
Diethylene Glycol	Methyl Ethyl Ketone	Sulfuric Acid 66%	
Dioxane	Methyl Isobutyl Ketone	Sulfuric Acid, Fuming	

- Radionuclides:

H-3	I-129	Pu-239	Cm-244
C-14	Cs-137	Pu-240	Cf-252
Cr-51	Ce-144	Am-241	
Co-60	U-235	Pu-241	
Sr-90	Np-237	Pu-242	
Ru-106	Pu-238	Am-243	

For the materials identified above, accident scenarios were identified that may exceed the specified PAC at the downwind receptor points of interest. For each scenario identified, a consequence assessment and corresponding EAL determination was made. The results show the potential for the following:

	Radiological	Chemical
• General Emergencies (GE):	1	3
• Site Area Emergencies (SAE):	31	56
• Alert:	10	0
• Notification of Unusual Events (NoUE):	0	0

The EPZ corresponds to the General Site Boundary.

3.0 SRS TRANSPORTATION SYSTEM DESCRIPTION

The SRS is managed by Westinghouse Savannah River Company (WSRC) for the DOE. Facilities have been operated primarily to produce radioactive material products for United States defense activities, energy activities, and other federal government programs. The site is located in South Carolina, bordered by the Savannah River to the south-southwest. It is approximately twelve miles south of Aiken, SC; 15 miles east-southeast of Augusta, GA; and eight miles west of Barnwell, SC. South Carolina State Highway 278 and SRS Road 1 parallel the site along the site boundary and pass through small sections along the site perimeter. Access to the site is strictly controlled by Wackenhut Services Incorporated; however, SC State Route 125 passes through the site property, running north to south along the Savannah River starting in Jackson, SC and SRS Road 1A allows public traffic during regular business hours to portions of 3/700 area. Additionally, CSX Transportation has a right of way for their tracks passing through the site adjacent to SC State Route 125, Figure 1 - Appendix A. Materials, Freight On Board (FOB) delivery point, are delivered to the site by common carrier and materials belonging to others may be transported on and through the site as portions of other loads. The roads and railways onsite were developed to provide safe and efficient transportation of personnel, supplies, products, and wastes in support of facility operations. Vehicles transporting hazardous materials include those operated by DOE, WSRC, DOE contractors on site, as well as vehicles operated by vendors and commercial carriers transporting materials to, from, and through the site.

For the THM EPHA special rules are applied for determining boundaries (receptor points) for postulated releases. Additionally, segmentation is generally utilized to isolate incidents that do not propagate into other areas. In this case, segmentation will be utilized as a work control tool for scenario development and to properly estimate inventories released when barriers fail. Segments and boundaries are described in the following sections.

3.1 Segment 1, Small Vehicles and Containers

For purposes of this EPHA, Small Vehicles and Containers are defined as any transporting device $\leq$ 6,000 gallons and/or 800 cubic feet.

These limits are chosen because the majority of vehicles and containers utilized for inter-site transportation would fall within this segment. Additionally, materials shipped in less than tanker quantities and less than tractor/trailer rigs will also fall within this segment. This segment is intended to capture shipments of smaller quantities such as drums, carboys, B-25s, boxed material, etc.

3.2 Segment 2, Large Vehicles and Containers

Large Vehicles or Containers transporting liquids in quantities >6,000 gallons and $\leq$ 10,000 gallons or transporting solids in volumes >800 cubic feet and $\leq$2,880 cubic feet.

These limits are chosen because the majority of Over The Road (OTR) vehicles (tank trucks and tractor trailers) will fall within this segment. Due to Department of Transportation (DOT) regulations (Ref. 4), Transporters typically limit OTR tankers to hold between 6,000 & 10,000 gallons with the typical size being 8,600 gallons. Box trailer units pulled by OTR tractors generally do not exceed 45 feet in length and 8 feet in width with an effective interior load height of 8 feet. This segment is intended to capture bulk shipments of materials.

3.3 3Segment 3, Special Vehicles and Containers

For purposes of this EPHA, Special Vehicles and Containers are defined as any transporting device > 10,000 gallons for liquids, > 2,880 cubic feet for solids and rail cars of all sizes.

These limits are chosen because shipments of these quantities are either by rail or are issued special permits by DOT. OTR shipments of this size are typically escorted and utilize special pre-planned routes. This segment is intended to capture abnormally large quantities of material and rail shipments.

3.4 Boundary Descriptions

Boundaries are utilized to determine event classification during emergencies. During movement of hazardous materials on roadways and rail, the distance to personnel that may be impacted will vary greatly. For this reason fixed boundary distances are established from the point of release per EMPP 6Q-001 as described below and illustrated in Figure 2 - Appendix A.

3.4.1 Site Boundary

The site boundary is defined as the perimeter of the DOE-owned and controlled land at SRS (Ref. 1). The site boundary is utilized for stationary facilities to determine if PAC is exceeded off site for and is a fixed distance. For transportation incidents, the distance to the site boundary varies based on the specific location of an incident. The THM EPHA analysis is based on a site boundary of 6,000 meters from the point of release, to reflect a one hour downwind distance during adverse meteorological conditions.

3.4.2 Facility Boundary

The facility boundary is defined as 100 meters from the point of release per EMPP-6Q-001 (Ref. 1).

3.5 Receptor Points

The downwind receptor points of interest are utilized to determine if the specified PAC is exceeded, requiring emergency declarations as described in the following sections.

3.5.1 Notification of Unusual Event

This applies to Radiological releases only and is determined by comparing the distance to 0.1 mrem Total Effective Dose Equivalent (TEDE) with the distance to the site boundary. Information regarding the distance to 0.1 mrem TEDE is not developed in this EPHA. The distance is accident specific and will have to be calculated at the time of accident utilizing information and tools available. That distance will have to be compared with the distance to site boundary for the specific incident to determine if a NoUE shall be declared.

3.5.2 Alert

This applies to radiological and chemical events regardless of location. ALERTS are declared anytime the PAC for the particular material(s) is exceeded 30 meters from the release point but less than 100 meters from the release point.

3.5.3 Site Area Emergency

This applies to radiological and chemical events regardless of location. SAEs are declared anytime the PAC is exceeded at one hundred meters from the release point and is not exceeded at or beyond the site boundary.

3.5.4 General Emergency

Applies to radiological and chemical events regardless of location. GEs are declared anytime that the PAC is exceeded at or beyond the site boundary. The site boundary distance will vary depending upon the location of the incident. Information regarding the distance to PAC will be developed in this EPHA and that distance will have to be compared with the distance to site boundary for the specific incident to determine if a GE shall be declared. For calculational purposes in this EPHA a distance of 6,000 meters is utilized to make initial GE determinations.

4.0 IDENTIFICATION AND SCREENING OF HAZARDS

Maximum inventories of radioactive and non radioactive hazardous materials are identified in Calculations 1 through 4 - Appendix B. Included as applicable are both physical limits and associated administrative limits. External hazards are identified in Calculation 2 - Appendix B and were developed by obtaining inventories from a representative sample of Transporters in the area or those known to move material across the site boundary. Each of the hazardous materials found was analyzed utilizing the criteria specified in EMPP-6Q-001 (Ref. 1) to eliminate insignificant hazards; those remaining were characterized. Based on characterization, additional materials presenting insignificant hazards were eliminated from further analysis. The results of the screening and characterization are presented in Calculations 3 and 4 - Appendix B.

4.1 Hazardous Chemical Identification & Screening

Chemical inventories for SRS fixed facilities were obtained from the SRS Chemical Inventory Information System (CIIS) downloaded per S-ESR-G-00001 (Ref. 5). Shipping and Receiving records provided by the Transportation Department, a review of inventories of hazardous waste from the Mixed Hazardous Waste Storage facilities EPHA, and a review of inventories presented in revision 1 of "Evaluation of Accident Risks in the Transportation of Hazardous Materials by Truck and Rail at the Savannah River Site, WSRC-RP-715" (Ref. 6) were utilized to formulate inventories of materials routinely transported.

Additionally, to obtain a representative sample of non-DOE owned hazardous materials routinely shipped across the site boundary via truck on State Routes 125/278, SRS Routes 1 & 1A, and Rail; inventories were requested from the following:

Table 4.1 Transporters

Air Products & Chemicals ***Hazardous Material Manager*** ***403 Carline Rd.*** ***Langley, SC 29834***	AIRCO Hazardous Materials Manager 3702 Clanton Rd. Augusta, GA 30906	Amoco Chemicals & Polymers Hazardous Materials Manager 3702 Clanton Rd. Augusta, GA 30906
Chemical Leman Tank Lines Hazardous Materials Manager Columbia Nitrogen Rd. Augusta, GA 30906	***Cryogenic Transportation Inc.*** ***Hazardous Materials Manager*** ***113 Laney Walker Blvd.*** ***Augusta, GA 30901***	***CSX Rail*** ***Director - Hazardous Materials*** ***500 Water Street*** ***Jacksonville, FL 32202***
Eka Nobel Inc., NYACOL ***Hazardous Materials Manager*** ***2432 New Savannah Rd.*** ***Augusta, GA 30906***	Federal Express Hazardous Materials Manager 1070 Bertram Rd. Augusta, GA 30909	Fleet Transport Hazardous Materials Manager 1507 Jordan Rd Augusta, GA 30904
Florida Rock & Tank Lines ***Hazardous Materials Manager*** ***1814 Carmichael Rd.*** ***Augusta, GA 30906***	***HOLOX*** ***Hazardous Materials Manager*** ***1221 New Savannah Rd.*** ***Augusta, GA 30906***	***Infinger*** ***Hazardous Materials Manager*** ***1016 Atomic Rd*** ***North Augusta, SC 29841***
Kenan ***Hazardous Materials Manager*** ***Sweetwater Rd*** ***Belvedere, SC 29841***	***Liquid Carbonic*** ***Hazardous Materials Manager*** ***Columbia Nitrogen Rd.*** ***Augusta, GA 30906***	Monsanto Hazardous Materials Manager 1610 Marvin Griffin Rd Augusta, GA 30906

Table 4.1 cont. Transporters

Montgomery Tank Lines ***Hazardous Materials Manager*** ***2421 Old Savannah Rd.*** ***Augusta, GA 30906***	North American Van Lines Hazardous Materials Manager 700 Twiggs St. Augusta, GA 30901	***OLIN*** ***Hazardous Materials Manager*** ***2402 Old Savannah Rd.*** ***Augusta, GA 30906***
Roadway Express Hazardous Materials Manager 725 Laney Walker Blvd. Augusta, GA 30901	***Schwerman*** ***Hazardous Materials Manager*** ***1601 Marvin Griffin Rd.*** ***Augusta, GA 30906***	Transport South Hazardous Materials Manager 121 Murrah Rd. North Augusta, SC 29841
UPS ***Hazardous Materials Manager*** ***5315 Summit Parkway*** ***San Antonio, TX 78228***	***Van Waters & Rogers*** ***Hazardous Materials Manager*** ***1455 Columbia Nitrogen Rd.*** ***Augusta, GA 30906***	Yellow Freight System Hazardous Materials Manager 4200 Wheeler Rd. Augusta, GA 30907

Those Transporters listed above that responded to the inventory request are bolded and their responses are incorporated in this document as Appendix C.

The chemical inventory for transportation was analyzed by dividing it into the three segments developed in Section 3.

- Segment 1, Small Vehicles and Containers $\leq$ 6,000 gallons and/or 800 cubic feet.
- Segment 2, Large Vehicles or Containers transporting liquids in quantities >6,000 gallons and $\leq$ 10,000 gallons or transporting solids in volumes >800 cubic feet and $\leq$2,880 cubic feet.
- Segment 3, Special Vehicles & Containers > 10,000 gallons for liquids, >2,880 cubic feet for solids, and Rail Cars of all sizes.

4.2 Radionuclide Screening

The radiological inventory and screening for the THM EPHA was conducted in accordance with EMPP 6Q-001 (Ref. 1). The radionuclides were screened using quantities listed in 10 CFR 30.72 (Ref. 7) and employing the methodology identified in DOE STD-1027. If the sum of all the ratios of the inventory of each nuclide to that nuclide's Screening Quantity (SQ) from 10 CFR 30.72 is less than one, the entire inventory was screened (eliminated from analysis). The radioactive materials analyzed in this hazards assessment were extracted from and quantities based on the maximum inventories of radionuclides transported to and/or across the site based on individual facility EPHAs, SARs, BIOs, JCOs, various transportation documents, Hazardous Materials Shipment Public Access Roads Forms, Waste Acceptance Criteria Manual, approximate inventories from the Inter-Site Transportation Radiological and Toxicological Sabotage Vulnerability Assessment (Ref. 9 through 18), and from the inventories produced by those responding to written request as described in section 4.1.

The radionuclide inventory for transportation was completed by compiling the entire inventory into the three segments developed in section 3.

- Segment 1, Small Vehicles and Containers $\leq$ 6,000 gallons and/or 800 cubic feet.
- Segment 2, Large Vehicles or Containers transporting liquids in quantities >6,000 gallons and $\leq$ 10,000 gallons or transporting solids in volumes >800 cubic feet and $\leq$2,880 cubic feet.
- Segment 3, Special Vehicles & Containers > 10,000 gallons, >2,880 cubic feet, and Rail Cars of all sizes.

Two criteria are applied to the radionuclide inventories for screening purposes and are explained below.

4.2.1 Sum of Ratios

Radionuclides are screened using the screening quantities listed in 10 CFR 30.72 (Ref. 7) and employing the methodology identified in DOE STD-1027 (Ref. 8). If the sum of all the ratios of the inventory of each nuclide to that nuclide's Screening Quantity from 10 CFR 30.72 is less than one, the entire inventory can be screened:

$$\sum_{i=1}^{n} \frac{r_i}{SQ_i} < 1.0$$

where: r = Ci of individual nuclide
n = number of nuclides
SQ = Screening Quantity for individual nuclide (Ci)

The nuclides in the THM inventory cannot be screened out if the ratio of at least one nuclide in the inventory is found to exceed the above criteria. An example of the calculation for an inventory of 200 Ci of Plutonium-238 is as follows :

- Radionuclide: Pu-238
- SQ(Pu-238): 2 Ci
- r(Pu-238) / SQ(Pu-238) = 2.00E02 Ci/ 2 Ci = <u>1.00E+02</u>
- Since 1.00E+02 is greater than 1, this precludes screening radionuclides by calculating the sum of all the ratios.

4.2.2 Percentage of Contribution

To aid in the accident scenario/consequence assessment analysis, some of the radionuclides present are eliminated because they contribute only a small percentage to the resulting dose. The percentage of dose contribution is found using the total segment inventory. Refer to Calculation 4 - Appendix B for the detailed analysis.

4.3 Hazards Requiring Analysis

After applying the above described methodologies to the chemical and radionuclide inventories the results were summarized in Calculations 3 and 4 - Appendix B. Table 4.2 indicates those hazards requiring further analysis. Carbon monoxide, diethylamine, ethylene oxide, hydrogen chloride, methyl bromide, and sulfur dioxide are shipped as compressed gases in containers of varying sizes and different pressures. This EPHA cannot evaluate the different conditions to accurately develop consequences from these materials. It is determined that emergency classification for the release of these chemicals be made based on the DOT guidance (Ref. 28). These chemicals, therefore, are eliminated from the analyses contained in this document.

Table 4.2 Hazards Requiring Further Analysis

Chemicals	Radionuclides
Acetaldehyde	H-3
Acetonitrile	C-14
Acetic Acid	Co-60
Alpha-Pinene	Sr-90
Ammonia	Ru-106
Ammonium Hydroxide	I-129
Benzene	Cs-137
Benzoic Acid	Ce-144
Benzyl Alcohol	U-235
Benzyl Chloride	Np-237
Butyraldehyde	Pu-238
Carbon disulfide	Pu-239
Chloracetone	Pu-240
Chlorine	Am-241
Chlorosulfonic Acid	Pu-241
Cyclohexane	Pu-242
Cyclohexanone	Am-243
Diethylene Glycol	Cm-244
Dioxane	Cf-252
Diphenylmethane-4,4-Diisocyanate	-
Ethyl Acetate	-
Ethyl Benzene	-
Fluorosilicic Acid	-
Fluosilicic Acid 25%	-
Formaldehyde (Rodine)	-
Formic Acid	-
Glycol Ether DE	-
Glycol Ether EB	-
Hydrochloric Acid 31%	-
Hydrofluoric Acid 70%	-
Hydrogen Peroxide	-
Isopropyl Alcohol	-
Magnesium Oxide	-
Methyl Alcohol	-
Methyl Ethyl Ketone	-
Methyl Isobutyl Ketone /	-
Methylene Chloride	-
Methyol Cellosolve	-
Monoethanolamine	-
Morpholine	-

Table 4.2 cont. Hazards Requiring Further Analysis

Chemicals	Radionuclides
N Butyl Alcohol	-
N Methyl Pyrrolidone	-
Nitric Acid	-
Onyxide	-
Perchloroethylene	-
Phenol, Molten	-
Propagyl Alcohol	-
Propionic Acid	-
Rodine 50 (formaldehyde)	-
Silica (as respirable dust)	-
Sodium Sulfhydrate	-
Sulfuric Acid	-
Sulfuric Acid, Fuming	-
Tetrahydrofuran	-
Titanium Dioxide	-
Toluene	-
Toluidine-o	-
Trichloroethane-1,1,1	-
Trichloroethylene	-
Triethylamine	-
Trimethylamine	-
Vinyl Acetate	-
Xylenes	-

5.0 BARRIER IDENTIFICATION

From the Identification and Screening of Hazards, Section 4.0, some of the materials present require barrier identification. Sections 5.1 through 5.3 contain a summary of the systems in each segment and a barrier identification analysis for those materials that failed the screening. These materials will be evaluated further for their possible release modes and downwind consequences.

5.1 Segment 1, Small Vehicles & Containers

5.1.1 Chemical Sources

The chemicals not eliminated in Segment 1 by screening are listed in Table 5.1 along with the associated barriers, mitigative features, and administrative controls.

5.1.2 Radiological Sources

The radionuclides not eliminated in segment 1 by screening are listed in Table 5.1 along with the associated barriers, mitigative features, and administrative controls.

Table 5.1 Barrier Identification - Segment 1

Material	Description of Barriers	Description of Mitigative Features	Description of Administrative Features
Radionuclides: H-3 C-14 Cr-51 Co-60 Sr-90 Ru-106 I-129 Cs-137 Ce-144 U-235 Np-237 Pu-238 Pu-239 Pu-240 Am-241 Pu-241 Pu-242 Am-243 Cm-244 Cf-252	B-25, B-012, 21 inch by 21 inch cardboard box, 55 gallon drums, Concrete Culvert, Type B casks (estimated as less than 800 cubic feet), Sample Container (max. about 200 ml), SRTC Material Container, Tank trucks estimated as less than 5000 gallons, 70 ton cask metal scrap, Basin Deionizer, Reactor Samples Container (1000 ml per sample)	Container Specifications	State & Federal regulatory limitations on type material, routes containers and vehicles DOT Placard Regulations SRS Transportation Procedures. 19Q

Chemicals **All Chemicals Listed in Table 4.2**	Drums, boxes, carboys, glass jars & bottles, bags, buckets, cylinders, tanks, etc.	Container Specifications	State & Federal regulatory limitations on type material, routes containers and vehicles DOT Placard Regulations SRS Transportation Procedures 19Q

5.2 Segment 2, Large Vehicles & Containers

5.2.1 Chemical Sources

The chemicals not eliminated in Segment 2 by screening are listed in Table 5.2 along with the associated barriers, mitigative features, and administrative controls.

5.2.2 Radiological Sources

None

Table 5.2 Barrier Identification - Segment 2

Material	Description of Barriers	Description of Mitigative Features	Description of Administrative Features
Chemicals **All Chemicals Listed in Table 4.2**	Drums, boxes, carboys, glass jars & bottles, bags, buckets, cylinders, tanks, etc.	Container Specifications	State & Federal regulatory limitations on type material, routes containers and vehicles DOT Placard Regulations SRS Transportation Procedures 19Q

5.3 Segment 3, Special Vehicles & Containers

5.3.1 Chemical Sources

The chemicals not eliminated in Segment 3 by screening are listed in Table 5.3 along with the associated barriers, mitigative features, and administrative controls.

5.3.2 Radiological Sources

None

Table 5.3 Barrier Identification - Segment 3

Material	Description of Barriers	Description of Mitigative Features	Description of Administrative Features
Chemicals **All Chemicals Listed in Table 4.2**	Drums, boxes, carboys, glass jars & bottles, bags, buckets, cylinders, tanks, etc.	Container Specifications	State & Federal regulatory limitations on type material, routes containers and vehicles DOT Placard Regulations SRS Transportation Procedures 19Q

6.0 ACCIDENT ANALYSIS

The barriers that maintain control over the radionuclides / chemicals identified in Section 5.0 have been analyzed and the possible failure modes considered. The barrier analyses, its results, and resulting release designations are described in this section

The use of the barrier challenge/failure analysis method of EPHA accident analysis implicitly analyzes the vast majority of moderate malevolent acts. Moderate malevolent acts are defined as events that could be initiated by a single individual using materials or tools readily available in the facility, or small quantities of flammables. Within Section 6.0, the potential events that would challenge/fail a barrier are not normally detailed, as the list can become quite long. However, if events are identified where the only initiator to a release is a malevolent act, it will be explicitly stated in the EPHA. Otherwise, no notation is made.

6.1 Segment 1, Small Vehicles and Containers

6.1.1 Chemical Releases

Table 6.1 lists those chemicals requiring hazards analysis in Segment 1 of the THM EPHA.

6.1.1.1 Failure of Primary Barrier

The effects of the failure of the primary barrier differ greatly depending on the container, its size/type, its contents as well as the physical form. The primary barrier for release is the container in which the material is transported in.

Failure of a container for liquids would allow any free liquids to flow into diked areas and/or the soil, allowing the material to evaporate directly to the atmosphere. The eventual surface area of a liquid spill is an important factor in the rate of evaporation.

Failure of the containers which house powders would allow materials to migrate directly to the atmosphere via resuspension, and other release mechanisms. For failure of the container which houses particles or granules, materials may fall to the ground forming a mound. Releases to the atmosphere via evaporation would be minimal.

6.1.1.2 Effects of Other Barriers/Mitigative Features

Although various mitigative features are available, they depend largely upon the specific transport container, location, and contents. As a measure of conservatism, no mitigative effects were credited. Examples of such mitigative barriers and features could include shipping trays for samples, secondary barriers, and actions taken by response personnel.

6.1.1.3 Range of Possible Releases

Leaks or ruptures release the contents from a container and or multiple containers. The releases are limited to the container size involved in the accident. However, due to the segment limitations the container size for Segment 1 will not exceed 6000 gallons or 800 ft^3. Each chemical to be analyzed and its associated release designation (RD number) are shown in Table 6.1.

Released liquid materials will produce a spill surface area available for evaporation of 4.074 ft^2 per gallon or 30.5 ft^2 per ft^3 of liquid. The maximum surface area would be 24,420 ft^2.

Solids that are in the form of particles or granules will produce surface areas available for aerosolization of unpredictable size and shape. Accidents involving solids will utilize an Airborne Release Fraction of 1E-03 which will be applied to the entire inventory released. The maximum quantity for solids is 800 ft^3.

6.1.2 Radiological Releases

Table 6.2 lists the radionuclide transport containers, the calculated source term, and the release designation for each release in Segment 1.

6.1.2.1 Failure of Primary Barrier

The effects of the failure of the primary barrier differ greatly depending on the container, its size/type, its contents as well as the contents and physical form. The primary barrier for release is the container in which the material is transported.

Failures of containers resulting in fire will cause the materials involved to be carried into the atmosphere through convection currents.

Failure of a container for liquids would first cause a release due to impact and then allow any free liquids to flow into diked areas and or the soil allowing the material to enter the atmosphere via resuspension with the exception of Heavy Water which would evaporate directly to the atmosphere (Ref. 21). The eventual surface area of a liquid spill is an important factor in the rate of evaporation.

Failure of a container for powders would first cause a release due to impact and then allow materials to migrate directly to the atmosphere via resuspension.

Failure of a container of gases would release the gases directly to the environment and can be approximated as an instantaneous release.

6.1.2.2 Effects of Other Barriers/Mitigative Features

Although various mitigative features are available, depending largely of the specific transport container, location, and contents. As a measure of conservatism no mitigative effects were credited. Examples of such mitigative barriers and features could include shipping trays, secondary barriers, and actions taken by response personnel.

6.1.2.3 Range of Possible Releases

For transportation incidents releases are categorized into two potential types, fire and impact/resuspension. Calculation 5 - Appendix develops the maximum source terms

6.2 Segment 2, Large Vehicles & Containers

6.2.1 Chemical Releases

Table 6.1 lists those materials requiring hazards analysis in Segment 2 of the THM EPHA.

6.2.1.1 Failure of Primary Barrier

The effects of the failure of the primary barrier are the same as listed in section 6.1.1.1.

6.2.1.2 Effects of Other Barriers/Mitigative Features

The effects of other barriers/mitigative features are the same as section 6.1.1.2.

6.2.1.3 Range of Possible Releases

Range of possible releases is the same as section 6.1.1.3, except that the maximum quantities are increased as follows:

Leaks or ruptures release the contents from a container and or multiple containers. The releases are limited to the container size involved in the accident. However, due to the segment limitations the container size for Segment 1 will not exceed 10,000 gallons or 2,880 ft^3.

Released liquid materials will produce a spill surface area available for evaporation of 4.074 ft^2 per gallon or 30.5 ft^2 per ft^3 of liquid. The maximum surface area would be 40,700 ft^2.

Solids, which are in the form of particles or granules, will produce surface areas available for aerosolization of unpredictable size and shape. Accidents involving solids will utilize an Airborne Release Fraction of 1E-03 which will be applied to the entire inventory released. The maximum quantity for solids is 2,880 ft^3.

6.2.2 Radiological

There are no Segment 2 radiological releases.

6.3 Segment 3, Special Vehicles & Containers

6.3.1 Chemical Releases

Table 6.1 lists those materials requiring hazards analysis in Segment 3 of the THM EPHA.

6.3.1.1 Failure of Primary Barrier

The effects of the failure of the primary barrier are the same as listed in section 6.1.1.1.

6.3.1.2 Effects of Other Barriers/Mitigative Features

The effects of other barriers/mitigative features are the same as section 6.1.1.2.

6.3.1.3 Range of Possible Releases

Range of possible releases is the same as section 6.1.1.3, except that the maximum quantities are increased as follows:

Leaks or ruptures release the contents from a container and or multiple containers. The releases are limited to the container size involved in the accident. Due to the segment limitations the container sizes for Segment 3 exceed 10,000 gallons or 2,880 ft^3.

Released liquid materials will produce a spill surface area available for evaporation of 4.074 ft^2 per gallon or 30.5 ft^2 per ft^3 of liquid. For calculational purposes, the ALOHA default maximum puddle size of 10,000 m^2 will be utilized for segment 3. A 10,000 m^2 puddle is equal to an ~28,000 gallon spill, instantaneously spreading to a 1cm depth covering an area of ~2.25 acres. This assumes the surface is perfectly flat, there are zero obstructions, and none of the material is absorbed into the ground. The default 10,000 m^2 is sufficiently conservative to address segment 3 scenarios.

Solids that are in the form of particles or granules will produce surface areas available for aerosolization of unpredictable size and shape. Accidents involving solids will utilize an Airborne Release Fraction of 1E-03 that will be applied to the entire inventory released. The maximum quantity for solids utilized for segment 3 is 5,760 ft^3 the standard rail car size.

6.3.2 Radiological Releases

There are no Segment 3 radiological releases.

Based on size none of the transport containers can be considered to be in Segment 3. However, some of the containers may be shipped by rail and therefore are considered as Segment 3 hazards. They are shown in Table 6.1.

Table 6.1 Segment 1 Chemicals, Associated ERPG, and State

Chemical Name / Molecular Weight	ERPG or Equiv ppm	State (S)olid (L)iquid (G)as	RELEASE DESIGNATION
Acetaldehyde / 44.1	200	L	1-RD-1
Acetic Acid	35	L	1-RD-2
Acetonitrile / 41.1	60	L	1-RD-3
Alpha-Pinene / 136.3	300 (mg/m^3)	L	1-RD-4
Ammonium Hydroxide	35	L	1-RD-5
Benzene / 78.1	150	L	1-RD-6
Benzyl Alcohol	100	L	1-RD-7
Benzyl Chloride	10	L	1-RD-8
Butyraldehyde	500 (mg/m^3)	L	1-RD-9
Carbon disulfide / 76.1	50	L	1-RD-10
Chloracetone / 92.5	3.8	L	1-RD-11
Chlorosulfonic Acid / 116.52	10	L	1-RD-12
Cyclohexane / 84.2	1300	L	1-RD-13
Cyclohexanone / 98.2	125	L	1-RD-14
Diethylene Glycol / 106.1	100	L	1-RD-15
Dioxane / 88.1	75	L	1-RD-16
Diphenylmethane-4,4-Diisocyanate / 250.3	2 (mg/m^3)	L/S	1-RD-17
Ethyl Acetate / 88.1	2000	L	1-RD-18
Ethyl benzene / 106.2	125	L	1-RD-19
Ethylene Glycol Monobutyl Ether (Glycol Ether EB) / 118.2	125	L	1-RD-20
Fluorosilicic Acid / 144.1 as Hf	12.5 (mg/m^3)	L	1-RD-21
Formic Acid / 46.0	10	L	1-RD-22
Glycol Ether DE / 134.2	500 (mg/m^3)	L	1-RD-23
Hydrochloric Acid 31% / 36.5	20	L	1-RD-24
Hydrofluoric Acid 70% / 20.0	20	L	1-RD-25
Hydrogen Peroxide / 34.0	50	L	1-RD-26
Isopropyl Alcohol 60.1	400	L	1-RD-27
Methyl Alcohol / 32.0	1000	L	1-RD-28
Methyl Ethyl Ketone / 72.1	300	L	1-RD-29
Methyl Isobutyl Ketone / 100.2	500	L	1-RD-30
Methylene Chloride / 84.9	750	L	1-RD-31
Methyol Cellosolve / 76.1	25	L	1-RD-32
Monoethanolamine /61.1	30	L	1-RD-33
Morpholine / 87.1	100	L	1-RD-34
N Butyl Alcohol / 74.1	50	L	1-RD-35
N Methyl Pyrrolidone / 99.15	500(mg/m^3)	L	1-RD-36
Nitric Acid / 63.0	15	L	1-RD-37
Onyxide	60 (mg/m^3)	-	1-RD-38
Perchloroethylene / 165.8	200	L	1-RD-39
Phenol, Molten / 94.1	50	L/S	1-RD-40
Propagyl Alcohol / 56.1	5	L	1-RD-41
Propionic Acid / 74.1	15	L	1-RD-42
Rodine 50 (formaldehyde) /30.0	10	L	1-RD-43
Sulfuric Acid / 98.1	10	L	1-RD-44
Sulfuric Acid, Fuming / 98.1	10	L	1-RD-45
Tetrahydrofuran / 72.1	2000	L	1-RD-46
Toluene / 92.1	300	L	1-RD-47
Toluidine-o / 107.2	10	L	1-RD-48
Trichloroethane-1,1,1 / 133.4	700	L	1-RD-49
Trichloroethylene / 131.4	500	L	1-RD-50
Triethylamine / 101.22	3	L	1-RD-51
Vinyl Acetate / 86.1	75	L	1-RD-52
Xylenes / 106.2	200	L	1-RD-53

Table 6-1 cont. Segment 1 Chemicals, Associated ERPG, and State

Chemical Name / Molecular Weight	ERPG or Equiv ppm	State (S)olid (L)iquid (G)as	RELEASE DESIGNATION
Benzoic Acid	75 (mg/m^3)	S	1-RD-54
Magnesium Oxide / 40.3	50	S	1-RD-55
Silica (as respirable dust)	0.5 (mg/m^3)	S	1-RD-56
Sodium Sulfhydrate / 56.06	4 (mg/m^3)	S	1-RD-57
Titanium Dioxide / 79.9	50	S	1-RD-58
Ammonia / 17.0	200	G*	1-RD-59
Chlorine / 70.9	3	G*	1-RD-60
Trimethylamine / 59.1	100	G*	1-RD-61

* Liquefied gas

Table 6.2 Equivalent Source Terms for Segment 1 Radionuclides, and Associated Release Designations

Container of LLW SWDF (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-67	Impact + Resuspension 1-RD-68
5.65E+03	Waste	2.83E+00	6.10E+00

Container of LLW Compactor (253-H)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-69	Impact + Resuspension 1-RD-70
4.20E-02	Waste	2.10E-05	4.54E-05

MW Waste - Tritium Bearing Container (Waste)

H-3 (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-71	Impact + Resuspension 1-RD-72
5.00E+03	Waste	2.50E+00	5.90E+00

Container of MW Waste - Beta/Gamma (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-73	Impact + Resuspension 1-RD-74
4.30E-03	Waste	2.15E-06	5.08E-06

Container of MW WASTE - Alpha (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-75	Impact + Resuspension 1-RD-76
2.91E+00	Waste	1.45E-03	3.43E-03

Container of TRU (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-77	Impact + Resuspension 1-RD-78
5.03E-01	Waste	2.52E-04	5.43E-04

Container for ILNTV Combustibles (E Area Vaults)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-79	Impact + Resuspension 1-RD-80
1.52E+00	Waste	7.62E-04	1.65E-03

Table 6.2 Continued.

Container for LNTV Noncombustibles (E Area)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-81	Impact + Resuspension 1-RD-82
1.62E+01	Waste	8.11E-03	1.75E-02

ILTV Bulk Container (E Area Vaults)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-83	Impact + Resuspension 1-RD-84
1.89E+00	Waste	9.47E-04	2.04E-03

ILTV Crucibles Container (E Area Vaults)

H-3 (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-85	Impact + Resuspension 1-RD-86
4.00E+04	Waste	9.10E-04	1.97E-03

LLWSB Container (E Area Vaults)

H-3 (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-87	Impact + Resuspension 1-RD-88
1.00E+04	Waste	7.70E-04	1.66E-03

Pu O2 Container (235F and 247F)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-89	Impact + Resuspension 1-RD-90
9.16E+02	Pu	5.50E-02	1.91E+00

H Canyon Sample Container (221H to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-91	Impact + Resuspension 1-RD-92
1.54E+01	Liquid	3.08E-02	3.36E-02

H Canyon Sample Container (221H to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-93	Impact + Resuspension 1-RD-94
2.25E-05	Liquid	4.51E-08	4.91E-08

Table 6.2 Continued.

H Canyon Sample Container (221H to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-95	Impact + Resuspension 1-RD-96
7.51E-04	Liquid	1.50E-06	1.64E-06

F Canyon Sample Container (221F to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-97	Impact + Resuspension 1-RD-98
1.20E-01	Liquid	2.40E-04	2.62E-04

F Canyon Sample Container (221F to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-99	Impact + Resuspension 1-RD-100
2.25E-02	Liquid	4.50E-05	4.90E-05

F Canyon Sample Container (221F to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-101	Impact + Resuspension 1-RD-102
4.75E+00	Liquid	9.50E-03	1.04E-02

HB Line Sample Container (221H to 772-1F)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-103	Impact + Resuspension 1-RD-104
8.55E-01	Liquid	1.71E-03	1.86E-03

HB Line Sample Container (221H to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-105	Impact + Resuspension 1-RD-106
8.55E-01	Liquid	1.71E-03	1.86E-03

FB Line Oxide Container (221F to Inter Area)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	Source Terms (Ci)	
		Fire 1-RD-107	Impact + Resuspension 1-RD-108
6.19E+03	Powder	3.71E-01	1.11E-02

Table 6.2 Continued.

FB Line Sample Container (221F to SRTC)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-109	Impact + Resuspension 1-RD-110
6.87E-01	Liquid	1.37E-03	1.50E-03

235F Material Container (235F to 221H)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	Source Terms (Ci)	
		Fire 1-RD-111	Impact + Resuspension 1-RD-112
3.79E+04	Powder	2.27E+00	6.10E-01

235F Material Container (235F to 221 F)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	Source Terms (Ci)	
		Fire 1-RD-113	Impact + Resuspension 1-RD-114
1.84E+02	Powder	1.10E-02	3.31E-02

SRTC Material Container (SRTC to DWPF)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-115	Impact + Resuspension 1-RD-116
7.60E+00	Aggr	4.56E-02	8.21E-03

A Line Material (A Line)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-117	Impact + Resuspension 1-RD-118
8.45E-04	Liquid	1.69E-06	1.84E-06

UNH Trailer (H Area Outside)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-119	Impact + Resuspension 1-RD-120
3.99E+01	Liquid	7.98E-02	7.98E-02

Container, Pail, Casket, Charge Can, Type A for Storage Vault (235-F)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	Source Terms (Ci)	
		Fire 1-RD-121	Impact + Resuspension 1-RD-122
2.74E+05	Surface	8.20E+-01	1.48E-02

Table 6.2 Continued.

RBOF Portable Deionizer Column Transport (RBOF)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-123	Impact + Resuspension 1-RD-124
8.57E-02	L/Resin	8.57E-04	1.01E-04

RBOF Spent Deoinizer Resin Transport (RBOF)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-125	Impact + Resuspension 1-RD-126
6.94E-01	L/Resin	6.94E-03	8.19E-04

Disassembly Basin Deionizer & Purif Resin Cask (Reactors)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-127	Impact + Resuspension 1-RD-128
5.51E-04	L/Resin	5.51E-06	6.50E-07

Reactor Samples Container (Reactors to 771-D/F)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-129	Impact + Resuspension 1-RD-130
5.51E-04	Liquid	1.10E-06	1.20E-06

Sample Truck (Inter Area)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-131	Impact + Resuspension 1-RD-132
5.92E-02	Liquid	1.18E-04	1.29E-04

Moderator Transport in 55 Gallon Drums (100-400 Areas)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-133	Impact + Resuspension 1-RD-134
2.26E+00	Liquid	4.52E-03	4.93E-03

Table 6.2 Continued.

SRTC 776A to F Tank Farm 5000 Gallon Truck (776A to Tank Farm)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-135	Impact + Resuspension 1-RD-136
6.91E-02	Liquid	1.38E-04	1.51E-04

Contaminated Water Transport (100 Area to 211-F)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-137	Impact + Resuspension 1-RD-138
2.26E+00	Liquid	4.52E-03	4.93E-03

100 Area Sludge Transport (100 Area to 241-F)(2000 gallons)

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)	
		Fire 1-RD-139	Impact + Resuspension 1-RD-140
6.52E-04	L/Sludge	1.30E-06	3.78E-07

Sabotage attack on offsite fuel being transported in a NON-SRS Cask (Type B).

$Pu\text{-}238_{equiv}$ (Ci)	Form	Source Terms (Ci)
		Explosion 1-RD-141
1.3E+04	Solid	3.0E-01

7.0 CONSEQUENCE ASSESSMENT

This section provides an overview of the methodology and presents the results of the analysis used to transform the accident scenarios identified in Section 6.0 into projected ground-level concentration/doses at the previously identified receptor locations.

7.1 Description of Methodology

7.1.1 Chemical Dispersion Modeling

The release of hazardous chemicals was modeled using the Areal Locations of Hazardous Atmospheres (ALOHA) (Ref. 19) dispersion program. ALOHA utilizes both a straight line Gaussian model and a heavy gas computation model. Parameters (spill area required for ERPG-2 concentrations to reach receptor points, material at risk, maximum concentration for segment maximum inventories, maximum distance PAC for segment maximum source terms) for each postulated accident were individually calculated (Calculation 7 - Appendix B).

7.1.2 Radionuclide Dispersion Modeling

The HOTSPOT computer code (Ref. 20) was used for dispersion modeling of all radionuclide releases. Several HOTSPOT data sheets (Calculation 6 - Appendix 2) were developed and reviewed to calculate the dispersion of radionuclides. Each sheet is based on a series HOTSPOT runs for a single isotope. Calculation 5 - Appendix B converts the radionuclides of concern to a single source term. This allows several isotopes to be evaluated at the same time utilizing the ratio of dose conversion factors for the various isotopes to the base line isotope used in the HOTSPOT runs. Meteorological conditions utilized are consistent with procedure TP-95-002 (Ref. 21) for the various release heights along with comparisons utilizing average and adverse met conditions.

7.1.3 Dispersion Modeling Parameters

Distances to receptor locations:

- 30 meters from the release point
- 100 meters from the release point
- Distance to PAC from the release point

Meteorology (Ref. 21)

For the THM EPHA all releases are ground releases and utilize the dispersion meteorology shown in tables 7.1 and 7.2

Table 7.1 EPHA 95% Dispersion Meteorology

Release Height	30 meter to Facility Boundary	Facility Boundary to Site Boundary	Site Boundary and Beyond
Ground	Class E, 1.7 m/s	Class E, 1.7 m/s	Class E, 1.7 m/s

Table 7.2 EPHA 50% Dispersion Meteorology

Release Height	30 meter to Facility Boundary	Facility Boundary to Site Boundary	Site Boundary and Beyond
Ground	Class C, 2.5 m/s	Class C, 2.5 m/s	Class C, 2.5 m/s

Default Values (Ref. 21)

- Deposition velocity of 1 cm/sec.
- Receptor height of 0 meters
- Sample time of 30 minutes for fires and 10 minutes for all other releases

7.2 Event Classification Determination

Consequence Assessment results are evaluated against the following criteria to determine the appropriate emergency class for the event scenario (Ref. 1).

(1) Thirty meters from the release point or edge of the spill. The consequence (e.g., radiation dose or peak concentration of a toxic chemical) at this receptor location provides the demarcation between an accident that would require emergency response organization involvement (e.g., ALERT) and one that would not.

(2) One hundred meters from the release point or edge of the spill. The consequence (e.g., radiation dose or peak concentration of a toxic chemical) at this receptor location provides the demarcation between an ALERT and SAE declaration.

(3) Maximum distance to PAC from the release point or edge of the spill. This distance is compared to the closest site boundary. The consequence (e.g., radiation dose or peak concentration of a toxic chemical) at this receptor location is the demarcation for a GE declaration.

(4) Notification of Unusual Event (NoUE) - The NoUE emergency classification is below an Alert and is not recognized by DOE. Radiological NoUEs are required by the states of Georgia and South Carolina to be identified and reported at a level of 0.1 mrem (TEDE) at the site boundary. The NoUE aligns with the Unusual Occurrence category in DOE Order 232.1A.

In each of the zones the releases are evaluated to determine if the PAC has been exceeded. The last zone where the PAC has been exceeded determines the event classification. The PACs are a personnel radiation exposure level (1 rem TEDE) (Ref. 22) or toxic chemical concentration (ERPG-2) (Ref. 22, 25 & 27) above which protective action is considered.

Although the radiological PAC is defined in terms of TEDE (external dose plus internal dose), the radiological dispersion model only calculates Committed Effective Dose Equivalent (CEDE). The CEDE is the 50 year committed dose from inhalation of radionuclides. For non-reactor type accidents, as in this EPHA, the CEDE is by far the major portion of the TEDE and can be considered equivalent for purposes of the EPHA.

7.3 Accidents With Multiple Release Mechanisms

Some accident events involve multiple release mechanisms; an instantaneous release(s) followed by a longer term release(s). In these cases, the following conservative assumption was used:

- The dominating release mechanism (e.g., impact) is used for the release duration with other contributing mechanisms (e.g., spill, resuspension) added together to form one release amount.

7.4 Consequence Assessment Results

EPHAs are typically developed for facilities having fixed hazards. Due to the nature of transportation incidents, accident specific information cannot be predicted nor developed in advance. It is practical that this EPHA developed consequences based on segment maximums for distance to PAC as well as developing maximum chemical source terms required to exceed PAC at 30 and 100 meters. The results from the consequence assessments performed for the EPHA are presented in the following tables.

- Table 7.3 Lists the 95% Adverse results for all THM EPHA chemical releases.
- Table 7.4 Lists the 95% Adverse results for all THM EPHA radiological releases.
- Table 7.5 Lists the 50% Average results for all THM EPHA chemical releases.
- Table 7.6 Lists the 50% Average results for all THM EPHA radiological releases.

Table 7.3 **95% Adverse met Consequence Assessment Results - Chemical**

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (FT^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (FT^2)	Maximum Distance to PAC for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC for Segment 3 Maximum Source Term (10,000 m^2 Puddle)* (meters)
1-RD-1	60	672	635	824	1400
1-RD-2	115	1425	428	568	1200
1-RD-3	21	265	1100	1400	2200
1-RD-4	491	5941	202	261	432
1-RD-5	Previously analyzed chemical which screens as not a severe airborne hazard.				
1-RD-6	68	695	549	708	1200
1-RD-7	>30000	>100000	27	34	56
1-RD-8	730	9200	163	213	360
1-RD-9	84	777	532	686	1100
1-RD-10	4.4	31	2200	2800	4500
1-RD-11	0.5	7	8900	>10000	>10000
1-RD-12	> 30000	> 100000	27	34	56
1-RD-13	1045	11000	135	196	332
1-RD-14	7750	NA	52	67	109
1-RD-15	> 30000	> 100000	27	34	56
1-RD-16	98	1400	501	643	1000
1-RD-17	17237	>100000	35	45	72
1-RD-18	1885	18400	103	150	255
1-RD-19	3300	24086	147	189	306
1-RD-20	>30000	> 100000	27	34	56
1-RD-21	24600	>100000	21	38	61
1-RD-22	7	101	2400	3100	5000
1-RD-23	8750	>100000	50	64	103
1-RD-24	3230	39400	79	102	165
1-RD-25	24600	>100000	2.18	38	61
1-RD-26	5175	62200	63	81	131
1-RD-27	848	4930	217	282	468
1-RD-28	1115	14000	132	253	442
1-RD-29	250	2125	334	436	679
1-RD-30	6034	32500	87	112	187
1-RD-31	96	1110	450	592	1000
1-RD-32	145	1810	377	498	1200
1-RD-33	18500	>100000	34	44	70
1-RD-34	191	2380	328	586	936
1-RD-35	288	3630	262	436	701
1-RD-36	>30000	NA	27	34	56
1-RD-37	12	141	1700	2200	3500
1-RD-38	Insufficient info for EAL	Insufficient info for EAL	Insufficient info for EAL	Insufficient info for EAL	Insufficient info for EAL
1-RD-39	1175	8575	166	217	363
1-RD-40	4550	53500	68	88	142
1-RD-41	6	71	2700	3700	5900
1-RD-42	283	3600	263	346	597
1-RD-43	18	226	1200	1600	2900
1-RD-44	>30000	>100000	27	34	56
1-RD-45	37	437	936	1200	1900
1-RD-46	1080	13300	138	183	310
1-RD-47	1810	7730	174	226	376
1-RD-48	6260	73000	58	75	122
1-RD-49	472	6060	208	275	466

Table 7.3 cont. 95% Adverse met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (FT^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (FT^2)	Maximum Distance to PAC for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC for Segment 3 Maximum Source Term (10,000 m^2 Puddle)* (meters)
1-RD-50	522	5760	206	271	456
1-RD-51	1.7	20	5300	6900	>10000
1-RD-52	25.6	225	914	1200	1900
1-RD-53	6720	> 32140	56	111	182
	Pounds Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (lb_m)	**Pounds Required to produce ERPG-2 Concentration @ 100 meters (SAE) (lb_m)**	**Maximum Distance to PAC for Segment 1 Maximum Source Term (37,600 lb_m) (meters)**	**Maximum Distance to PAC for Segment 2 Maximum Source Term (135,000 lb_m) (meters)**	**Maximum Distance to PAC for Segment 3 Maximum Source Term (263,000 lb_m) (meters)**
1-RD-54	285	3000	344	580	755
1-RD-55	490	5100	260	437	567
1-RD-56	1.9	20	2500	4300	5800
1-RD-57	15	160	1100	1800	2400
1-RD-58	490	5100	260	437	567
	Pounds Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (lb_m)	**Pounds Required to produce ERPG-2 Concentration @ 100 meters (SAE) (lb_m)**	**Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (1 ton) ** (meters)**	**Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (10 tons)** (meters)**	**Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (17.5 tons)** (meters)**
1-RD-59	7	77	550	1800	2400
1-RD-60	0.3	3	4000	6300	6400
1-RD-61	1.3	6.7	1200	3200	4000

* ALOHA default maximum (see section 6.3.1.1)

Table 7.4 95% Adverse met Consequence Assessment Results - Radiological

Protective Action Criteria = 1 rem TEDE				
Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)	Possible Event Class*
1-RD-67	6.4E-01**	3.2E-01**	N/A	NONE
1-RD-68	3.8E-01**	1.9E-02**	N/A	NONE
1-RD-69	8.00E-02	1.20E-02	N/A	NONE
1-RD-70	1.80E-01	3.10E-02	N/A	NONE
1-RD-71	1.90E-03	4.00E-04	N/A	NONE
1-RD-72	5.70E-03	1.20E-03	N/A	NONE
1-RD-73	7.00E-02	1.20E-03	N/A	NONE
1-RD-74	2.10E-02	3.50E-03	N/A	NONE
1-RD-75	4.70E+00	1.00E+00	1.00E+02	ALERT
1-RD-76	1.40E+01	2.40E+00	1.60E+02	SAE
1-RD-77	8.20E-01	1.40E-01	N/A	NONE
1-RD-78	2.20E+00	3.70E-01	5.0E+01	ALERT
1-RD-79	2.50E+00	4.20E-01	6.00E+01	ALERT
1-RD-80	6.70E+00	1.10E+00	1.10E+02	SAE
1-RD-81	2.60E+01	4.50E+00	2.30E+02	SAE
1-RD-82	7.10E+01	1.20E+01	3.80E+02	SAE
1-RD-83	3.10E+00	5.20E-01	7.00E+01	ALERT
1-RD-84	8.20E+00	1.40E+00	1.20E+02	SAE
1-RD-85	7.10E-07	1.50E-07	N/A	NONE
1-RD-86	1.96E-06	3.90E-07	N/A	NONE
1-RD-87	6.00E-07	1.20E-07	N/A	NONE
1-RD-88	1.60E-06	3.30E-07	N/A	NONE
1-RD-89	1.80E+02	3.00E+01	6.30E+02	SAE
1-RD-90	7.70E+03	1.30E+03	5.16E+03	SAE
1-RD-91	1.00E+02	1.70E+01	4.60E+02	SAE
1-RD-92	1.40E+02	2.30E+01	5.40E+02	SAE

* For transportation event class estimations 6,000 meters was utilized for General Emergencies

** These values were taken directly from the EAV EPHA (Ref.29) because the basis for the high source term originally used could not be determined and is deemed to be in error.

Table 7.4 cont. 95% Adverse met Consequence Assessment Results - Radiological

Protective Action Criteria = 1 rem TEDE				
Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)	Possible Event Class *
1-RD-93	1.50E-04	2.50E-05	N/A	NONE
1-RD-94	2.00E-04	3.40E-05	N/A	NONE
1-RD-95	4.90E-03	8.30E-04	N/A	NONE
1-RD-96	6.60E-03	1.10E-03	N/A	NONE
1-RD-97	7.80E-01	1.30E-01	N/A	NONE
1-RD-98	1.10E+00	1.80E-01	3.00E+01	ALERT
1-RD-99	1.50E-01	2.50E-02	N/A	NONE
1-RD-100	2.00E-01	3.40E-02	N/A	NONE
1-RD-101	3.10E+01	5.30E+00	2.50E+02	SAE
1-RD-102	4.20E+01	7.20E+00	2.90E+02	SAE
1-RD-103	5.50E+00	9.50E-01	9.00E+01	ALERT
1-RD-104	7.50E+00	1.30E+00	1.10E+02	SAE
1-RD-105	5.50E+00	9.50E-01	9.00E+01	ALERT
1-RD-106	7.50E+00	1.30E+00	1.10E+02	SAE
1-RD-107	1.20E+03	2.10E+02	1.74E+03	SAE
1-RD-108	4.40E+01	7.60E+00	3.00E+02	SAE
1-RD-109	4.40E+00	7.60E-01	8.00E+01	ALERT
1-RD-110	6.10E+00	1.00E+00	1.00E+02	SAE
1-RD-111	7.40E+03	1.30E+03	5.00E+03	SAE
1-RD-112	2.50E+03	4.20E+02	2.70E+03	SAE
1-RD-113	3.60E+01	6.10E+00	2.70E+02	SAE
1-RD-114	1.30E+02	2.30E+01	5.40E+02	SAE
1-RD-115	1.50E+02	2.50E+01	5.70E+02	SAE
1-RD-116	3.30E+01	5.70E+00	2.60E+02	SAE
1-RD-117	5.50E-03	9.30E-04	N/A	NONE
1-RD-118	7.40E-03	1.30E-03	N/A	NONE
1-RD-119	2.60E+02	4.40E+01	7.70E+02	SAE
1-RD-120	3.20E+02	5.50E+01	8.60E+02	SAE
1-RD-121	2.70E+03	4.50E+02	2.80E+03	SAE
1-RD-122	6.00E+01	1.00E+01	3.60E+02	SAE
1-RD-123	2.80E+00	4.70E-01	6.00E+01	ALERT
1-RD-124	4.10E-01	7.00E-02	N/A	NONE
1-RD-125	2.30E+01	3.80E+00	2.10E+02	SAE
1-RD-126	3.30E+00	5.60E-01	7.00E+01	ALERT
1-RD-127	1.80E-02	3.00E-03	N/A	NONE
1-RD-128	2.60E-03	4.50E-04	N/A	NONE
1-RD-129	3.60E-03	6.10E-04	N/A	NONE
1-RD-130	4.90E-03	8.30E-04	N/A	NONE
1-RD-131	3.80E-01	6.50E-02	N/A	NONE
1-RD-132	5.20E-01	8.90E-02	N/A	NONE
1-RD-133	1.50E+01	2.50E+00	1.60E+02	SAE
1-RD-134	2.00E+01	3.40E+00	1.90E+02	SAE
1-RD-135	4.50E-01	7.60E-02	N/A	NONE
1-RD-136	6.10E-01	1.00E-01	N/A	NONE
1-RD-137	1.50E+01	2.50E+00	1.60E+02	SAE
1-RD-138	2.10E+01	3.40E+00	1.90E+02	SAE
1-RD-139	4.20E-03	7.20E-04	N/A	NONE
1-RD-140	1.50E-03	2.60E-04	N/A	NONE
1-RD-141	1.10E+04	1.50E+03	1.80E+04	GE

* For transportation event class estimations 6,000 meters was utilized for General Emergencies

** These values were taken directly from the EAV EPHA (Ref.29) because the basis for the high source term originally used could not be determined and is deemed to be in error.

Table 7.5 50% Average met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (FT^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (FT^2)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (10,000 m^2 Puddle) (meters)
1-RD-1	410	4600	601	780	1300
1-RD-2	895	11850	140	178	280
1-RD-3	177	2325	303	386	1600
1-RD-4	3341	42582	77	98	155
1-RD-5	Previously analyzed chemical which screens as not a severe airborne hazard.				
1-RD-6	535	> 4000	499	641	1000
1-RD-7	>30000	> 100000	27	34	56
1-RD-8	3700	50000	72	91	143
1-RD-9	737	6485	471	603	994
1-RD-10	32.3	> 260	1800	2400	3900
1-RD-11	4	50	5400	690	>10000
1-RD-12	>30000	> 100000	27	34	56
1-RD-13	> 2950	18700	115	149	247
1-RD-14	>30000	> 100000	27	34	56
1-RD-15	>30000	> 100000	27	34	56
1-RD-16	997	13000	135	556	907
1-RD-17	>30000	>100000	16	20	32
1-RD-18	3140	35500	82	107	180
1-RD-19	17700	>100000	35	45	72
1-RD-20	>30000	> 100000	27	34	56
1-RD-21	>30000	> 100000	27	34	56
1-RD-22	59	760	528	677	1100
1-RD-23	>30000	>100000	27	34	56
1-RD-24	13080	> 100000	41	52	82
1-RD-25	>30000	> 100000	<10	<10	<100
1-RD-26	26800	>100000	29	37	58
1-RD-27	9600	>36000	47	248	408
1-RD-28	12200	> 100000	42	53	85
1-RD-29	3165	9384	313	400	540
1-RD-30	>30000	61426	27	34	173
1-RD-31	132	1712	380	494	819
1-RD-32	1950	27750	94	119	186
1-RD-33	>30000	> 100000	27	34	56
1-RD-34	1450	19600	111	140	220
1-RD-35	1995	26900	96	121	191
1-RD-36	>30000	> 100000	27	34	56
1-RD-37	82	1015	469	603	2200
1-RD-38	Insufficient infor for EAL	Insufficient infor for EAL	Insufficient infor for EAL	Insufficient infor for EAL	Insufficient infor for EAL
1-RD-39	9850	12900	113	133	177
1-RD-40	14550	> 100000	39	49	78
1-RD-41	37	447	696	895	1500
1-RD-42	2050	28500	93	118	185
1-RD-43	116	1440	392	501	805
1-RD-44	>30000	> 100000	<10	<10	<100
1-RD-45	189	2300	313	402	647
1-RD-46	3010	21100	108	140	232
1-RD-47	11950	> 22350	118	144	191
1-RD-48	23880	> 100000	30	39	56
1-RD-49	875	7840	176	229	381
1-RD-50	> 1700	8200	174	225	375
1-RD-51	20	245	2400	3200	5100
1-RD-52	11.3	143	3200	4100	6700
1-RD-53	30300	> 100000	27	34	56

	Pounds required to produce ERPG-2 Concentration at 30 meters (ALERT) (lb_m)	Pounds required to produce ERPG-2 Concentration at 30 meters (SAE) (lb_m)	Maximum Distance to PAC for Segment 1 Maximum Source Term (37,600$_m$) (meters)	Maximum Distance to PAC for Segment 2 Maximum Source Term (135,000 lb_m)) (meters)	Maximum Distance to PAC for Segment 3 Maximum Source Term (263,000 lb_m) (meters)
1-RD-54	1900	21300	133	252	353
1-RD-55	3400	37200	100	191	267
1-RD-56	12.8	142	1300	2000	2600
1-RD-57	100	1135	569	948	1200
1-RD-58	3400	37200	100	191	267
	Pounds Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (lb_m)	Pounds Required to produce ERPG-2 Concentration @ 100 meters (SAE) (lb_m)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (1 ton) ** (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (10 tons)** (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (17.5 tons)** (meters)
1-RD-59	47	558	190	570	750
1-RD-60	2	10	2700	7500	9300
1-RD-61	9	110	1000	2800	3600

* ALOHA default maximum (see section 6.3.1.1)

Table 7.6 50% Average met Consequence Assessment Results - Radiological

Protective Action Criteria = 1 rem TEDE			
Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)
1-RD-67	1.9E-01**	7.2E-03**	N/A
1-RD-68	1.1E-01**	4.4E-03**	N/A
1-RD-69	2.00E-02	2.70E-03	N/A
1-RD-70	5.40E-02	7.73E-03	N/A
1-RD-71	5.00E-04	7.20E-05	N/A
1-RD-72	1.50E-03	2.10E-04	N/A
1-RD-73	2.00E-03	2.80E-04	N/A
1-RD-74	6.00E-03	8.20E-04	N/A
1-RD-75	1.40E+00	1.00E+00	1.00E+03
1-RD-76	4.10E+00	1.00E+00	1.00E+02
1-RD-77	2.40E-01	3.30E-02	N/A
1-RD-78	6.40E-01	8.80E-02	N/A
1-RD-79	7.20E-01	9.90E-02	N/A
1-RD-80	2.00E+00	1.00E+00	1.00E+02
1-RD-81	7.70E+00	1.10E+00	1.00E+02
1-RD-82	2.10E+01	2.80E+01	1.70E+02
1-RD-83	9.00E-01	1.20E-01	N/A
1-RD-84	2.40E+00	3.30E-01	5.00E+1
1-RD-85	1.80E-07	2.60E-08	N/A
1-RD-86	5.00E-07	7.10E-08	N/A
1-RD-87	1.60E-07	2.20E-08	N/A
1-RD-88	4.20E-07	6.00E-08	N/A
1-RD-89	5.20E+01	7.10E+00	2.80E+02
1-RD-90	2.30E+03	3.10E+02	2.05E+03
1-RD-91	2.90E+01	4.00E+00	2.10E+02
1-RD-92	4.00E+01	5.40E+00	2.50E+02
1-RD-93	4.30E-05	5.90E-06	N/A
1-RD-94	5.80E-05	7.90E-06	N/A
1-RD-95	1.40E-03	1.90E-04	N/A
1-RD-96	1.90E-03	2.70E-04	N/A
1-RD-97	2.30E-01	3.10E-02	N/A
1-RD-98	3.10E-01	4.20E-02	N/A
1-RD-99	4.20E-02	5.80E-03	N/A

** These values were taken directly from the EAV EPHA (Ref. 29) because the basis for the high source term originally used could not be determined and is deemed to be in error

Table 7.6 cont. 50% Average met Consequence Assessment Results - Radiological

Protective Action Criteria = 1 rem TEDE			
Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)
1-RD-100	5.80E-02	7.90E-03	N/A
1-RD-101	9.00E+00	1.20E+00	1.10E+02
1-RD-102	1.20E+01	1.70E+00	1.30E+02
1-RD-103	1.60E+00	1.00E+00	1.00E+02
1-RD-104	2.20E+00	1.00E+00	1.00E+02
1-RD-105	1.60E+00	1.00E+00	1.00E+02
1-RD-106	2.20E+00	1.00E+00	1.00E+02
1-RD-107	3.50E+02	4.80E+01	7.60E+02
1-RD-108	1.30E+01	1.80E+00	1.40E+02
1-RD-109	1.30E+00	1.00E+00	1.00E+02
1-RD-110	1.80E+00	1.00E+00	1.00E+02
1-RD-111	2.20E+03	2.90E+02	1.99E+03
1-RD-112	7.20E+02	9.80E+01	1.10E+03
1-RD-113	1.00E+01	1.40E+00	1.20E+02
1-RD-114	3.90E+01	5.40E+00	2.40E+02
1-RD-115	4.30E+01	5.90E+00	2.50E+02
1-RD-116	9.70E+00	1.30E+00	1.10E+02
1-RD-117	1.60E-03	2.20E-04	N/A
1-RD-118	2.20E-03	3.00E-04	N/A
1-RD-119	7.60E+01	1.00E+01	3.40E+02
1-RD-120	9.50E+01	1.30E+01	3.80E+02
1-RD-121	7.80E+02	1.10E+02	1.15E+03
1-RD-122	1.80E+01	2.40E+00	1.69E+02
1-RD-123	8.10E-01	1.10E-01	N/A
1-RD-124	1.20E-01	1.60E-02	N/A
1-RD-125	6.60E+00	1.00E+00	1.00E+02
1-RD-126	9.70E-01	1.30E-01	N/A
1-RD-127	5.20E-03	7.20E-04	N/A
1-RD-128	7.70E-04	1.10E-04	N/A
1-RD-129	1.00E-03	1.40E-04	N/A
1-RD-130	1.40E-03	1.90E-04	N/A
1-RD-131	1.10E-01	1.50E-02	N/A
1-RD-132	1.50E-01	2.10E-02	N/A
1-RD-133	4.30E+00	1.00E+00	1.00E+02
1-RD-134	5.80E+00	1.00E+00	1.00E+02
1-RD-135	1.30E-01	1.80E-02	N/A
1-RD-136	1.80E-01	2.40E-02	N/A
1-RD-137	4.30E+00	1.00E+00	1.00E+02
1-RD-138	5.80E+00	1.00E+00	1.00E+02
1-RD-139	1.20E-03	1.70E-04	N/A
1-RD-140	4.50E-04	6.10E-05	N/A

8.0 EMERGENCY CLASSES AND EALS

This section documents the correlation of the consequence assessment (section 7) with the requirements to classify events. Table 7.5 presents a summary of all classifications, however, additional rationale for specific EALs is required. If an identified initiator has the potential, through barrier analysis, to cause the release of hazardous materials resulting in consequences greater than or equal to PAC at the identified receptor locations, then EALs are required (Ref. 25)

Various materials are continually shipped to, from and through the SRS. Therefore, materials are transported in many different types of containers by a variety of methods. For this reason initiators such as tornadoes, earthquakes handling accidents, projectiles, corrosion, and sabotage were evaluated and found credible on any given day. For this reason, specific initiators are not listed for each consequence, rather they are grouped as being generic. With generic initiators and the special circumstances of the THM EPHA release mechanisms for chemical incidents are considered to be spills to the ground.

8.1 General Emergency (GE) EALs

8.1.1 Chemical Releases

Leakage or rupture of any container resulting in a spill producing a puddle with a surface area available for evaporation capable of producing a chemical concentration greater than ERPG-2 to a distance greater than the distance of the accident to the site boundary.

8.1.2 Radiological Releases

Extreme malevolent act against a Type B shipping container transporting spent fuel that results in a breach of the container 1-RD-141.

8.2 Site Area Emergency (SAE)

8.2.1 Chemical Releases

Leakage or rupture of any container resulting in a spill producing a puddle with a surface area available for evaporation in the range of the target surface area in table 8.2

Table 8.1 Chemical Spill Target Surface Areas for Site Area Emergencies

Chemical	ft^2 Target Surface Area	Gallons	Release Designation
Acetaldehyde / 44.1	672	165	1-RD-1
Acetic Acid	1425	350	1-RD-2
Acetonitrile / 41.1	265	65	1-RD-3
Alpha-Pinene / 136.3	5941	1458	1-RD-4
Ammonium Hydroxide	Should have been screened out.		1-RD-5
Benzene / 78.1	695	171	1-RD-6
Benzyl Alcohol	>100000	24541	1-RD-7
Benzyl Chloride	9200	2258	1-RD-8
Butyraldehyde	777	191	1-RD-9
Carbon disulfide / 76.1	31	8	1-RD-10
Chloracetone / 92.5	7	2	1-RD-11
Chlorosulfonic Acid / 116.52	>100000	24546	1-RD-12
Cyclohexane / 84.2	11000	2700	1-RD-13
Cyclohexanone / 98.2	NA	NA	1-RD-14
Diethylene Glycol / 106.1	> 100000	24541	1-RD-15
Dioxane / 88.1	1400	344	1-RD-16
Diphenylmethane-4,4-Diisocyanate/ 250	>100000	24541	1-RD-17

Table 8.1 cont. Chemical Spill Target Surface Areas for Site Area Emergencies

Chemical	ft^2 Target Surface Area	Gallons	Release Designation
UNLISTED CHEMICAL	See DOT Guidebook	N/A	N/A
Ethyl Acetate / 88.1	18400	4516	1-RD-18
Ethyl benzene / 106.2	24086	5911	1-RD-19
Ethelene Glycol Monobutyl Ether / 118.2	>100000	24541	1-RD-20
Fluorosilicic Acid / 144.1.	>100000	24541	1-RD-21
Formic Acid / 46.0	101	25	1-RD-22
Glycol Ether DE / 134.2	>100000	24541	1-RD-23
Hydrochloric Acid 31% / 36.5	39400	9671	1-RD-24
Hydrofluoric Acid 70% / 20.0	>100000	24546	1-RD-25
Hydrogen Peroxide / 34.0	62200	15264	1-RD-26
Isopropyl Alcohol 60.1	4930	1210	1-RD-27
Methyl Alcohol / 32.0	14000	3436	1-RD-28
Methyl Ethyl Ketone / 72.1	2125	521	1-RD-29
Methyl Isobutyl Ketone / 100.2	32500	7976	1-RD-30
Methylene Chloride / 84.9	1110	272	1-RD-31
Methyol Cellosolve / 76.1	1810	444	1-RD-32
Monoethanolamine /61.1	>100000	24541	1-RD-33
Morpholine / 87.1	2380	584	1-RD-34
N Butyl Alcohol / 74.1	3630	891	1-RD-35
N Methyl Pyrrolidone / 99.15	NA	NA	1-RD-36
Nitric Acid / 63.0	141	35	1-RD-37
Onyxide	See DOT Guidebook	N/A	1-RD-38
Perchloroethylene / 165.8	8575	2105	1-RD-39
Phenol, Molten / 94.1	53500	13132	1-RD-40
Propagyl Alcohol / 56.1	71	17	1-RD-41
Propionic Acid / 74.1	3600	883	1-RD-42
Rodine 50 (formaldehyde) /30.0	226	55	1-RD-43
Sulfuric Acid / 98.1	>100000	24546	1-RD-44
Sulfuric Acid, Fuming / 98.1	437	107	1-RD-45
Tetrahydrofuran / 72.1	13300	3264	1-RD-46
Toluene / 92.1	7730	1897	1-RD-47
Toluidine-o / 107.2	73000	17919	1-RD-48
Trichloroethane-1,1,1 / 133.4	6060	1487	1-RD-49
Trichloroethylene / 131.4	5760	1414	1-RD-50
Triethylamine / 101.22	20	5	1-RD-51
Vinyl Acetate / 86.1	225	55	1-RD-52
Xylenes	> 32140	7889	1-RD-53

Table 8.1 Cont. Chemical Spill Target Weight for Site Area Emergencies

Chemical	Weight in Pounds	Gallons	Release Designation
Benzoic Acid	3000	NA	1-RD-54
Magnesium Oxide / 40.3	5100	NA	1-RD-55
Silica (as respirable dust)	20	NA	1-RD-56
Sodium Sulfhydrate / 56.06	160	NA	1-RD-57
Titanium Dioxide / 79.9	5100	NA	1-RD-58
Ammonia / 17.0	77	NA	1-RD-59
Chlorine / 70.9	3	NA	1-RD-60
Trimethylamine	6.7	NA	1-RD-61

8.2.2 Radiological Releases

Transportation Accidents resulting in

- Containers MW Waste - Alpha (waste) ruptured as a result of impact
1-RD-76

- Containers of ILNTV Combustibles (E Area Vaults) ruptured as a result of impact
1-RD-80

- Containers of LNTV Noncombustibles (E Area) burning, or ruptured as a result of impact
1-RD-81 & 1-RD-82

- ILTV Bulk containers (E Area Vaults) ruptured as a result of impact
1-RD-84

- PuO_2 Containers (235F and 247F) burning, or ruptured as a result of impact
1-RD-89 & 1-RD-90

- H Canyon Sample Container (221H to SRTC) burning, or ruptured as a result of impact
1-RD-91 & 1-RD-92

- F Canyon Sample Container (221H to SRTC) burning, ruptured as a result of impact
1-RD-101 & 1-RD-102

- HB Line Sample Container (221H to 772-1F) ruptured as a result of impact
1-RD-104

- HB Line Sample Container (221H to SRTC) ruptured as a result of impact
1-RD-106

- FB Line Oxide Container (221F to Inter Area) burning, or ruptured as a result of impact
1-RD-107 & 1-RD-108

- 235F Material Container (235F to 221H) ruptured as a result of impact
1-RD-112

- FB Line Sample Container (221H to SRTC) ruptured as a result of impact
1-RD-110

- 235F Material Container (235F to 221H) burning
1-RD-111

- 235 F Material Container (235F to 221F) burning
1-RD-113

- 235F Material Container (235F to 221F ruptured as a result of impact
1-RD-114

- SRTC Material Container (SRTC to DWPF) burning, or ruptured as a result of impact
1-RD-115 & 1-RD-116

- UNH Trailer (H Area outside) burning, or ruptured as a result of impact
1-RD-119 & 1-RD-120

- Container, Pail, Casket, Charge Can, Type A for Storage Vault (235-F) burning, or ruptured as a result of impact
1-RD-121 & 1-RD-122

- RBOF Spent Deionizer Resin Transport (RBOF) burning
1-RD-125

- Moderator Transport in 55 gallon Drums (100-400 Areas) burning, or ruptured as a result of impact
1-RD-133 & 1-RD-134

- Contaminated Water Transport (100 Area to 211F) burning, or ruptured as a result of impact
1-RD-137 & 1-RD-138

8.3 Alert

8.3.1 Chemical Releases

Leakage or rupture of any container resulting in a spill producing a puddle with a surface area available for evaporation in the range of the target surface area in table 8.2

Table 8.2 Chemical Spill Target Surface Areas for Alert Emergencies

Chemical	ft^2 Target Surface Area	Gallons	Release Designation
UNLISTED CHEMICAL	See DOT Guidebook	N/A	N/A
Acetaldehyde / 44.1	60	15	1-RD-1
Acetic Acid	115	2855	1-RD-2
Acetonitrile / 41.1	21	5	1-RD-3
Alpha-Pinene / 136.3	491	120	1-RD-4
Ammonium Hydroxide	Should have been screened out.		1-RD-5
Benzene / 78.1	68	17	1-RD-6
Benzyl Alcohol	>30000	7362	1-RD-7
Benzyl Chloride	730	179	1-RD-8
Butyraldehyde	84	21	1-RD-9
Carbon disulfide / 76.1	4.4	1	1-RD-10
Chloracetone / 92.5	0.5	1	1-RD-11
Chlorosulfonic Acid / 116.52	>30000	7364	1-RD-12
Cyclohexane / 84.2	1045	257	1-RD-13
Cyclohexanone / 98.2	7750	1902	1-RD-14
Diethylene Glycol / 106.1	> 30000	7362	1-RD-15
Dioxane / 88.1	98	24	1-RD-16
Diphenylmethane-4,4-Diisocyanate/ 250	17237	4260	1-RD-17
Ethyl Acetate / 88.1	1885	463	1-RD-18
Ethyl benzene / 106.2	3300	810	1-RD-19
Ethylene Glycol Monobutyl Ether	>30000	7362	1-RD-20
Fluorosilicic Acid / 144.1	24600	6037	1-RD-21
Formic Acid / 46.0	7	2	1-RD-22
Glycol Ether DE / 134.2	8750	2147	1-RD-23
Hydrochloric Acid 31% / 36.5	3230	793	1-RD-24
Hydrofluoric Acid 70% / 20.0	24600	6038	1-RD-25
Hydrogen Peroxide / 34.0	5175	1270	1-RD-26
Isopropyl Alcohol 60.1	848	208	1-RD-27
Methyl Alcohol / 32.0	1115	274	1-RD-28
Methyl Ethyl Ketone / 72.1	250	61	1-RD-29
Methyl Isobutyl Ketone / 100.2	6034	1481	1-RD-30
Methylene Chloride / 84.9	96	24	1-RD-31
Methyol Cellosolve / 76.1	145	35.6	1-RD-32
Monoethanolamine /61.1	18500	4540	1-RD-33
Morpholine / 87.1	191	47	1-RD-34
N Butyl Alcohol / 74.1	288	71	1-RD-35

Table 8.2 cont. Chemical Spill Target Surface Areas for Alert Emergencies

Chemical	ft^2 Target Surface Area	Gallons	Release Designation
N Methyl Pyrrolidone / 99.15	>30000	7362	1-RD-36
Nitric Acid / 63.0	12	3	1-RD-37
Onyxide	See DOT Guidebook	N/A	1-RD-38
Perchloroethylene / 165.8	1175	288	1-RD-39
Phenol, Molten / 94.1	4550	1117	1-RD-40
Propagyl Alcohol / 56.1	6	1	1-RD-41
Propionic Acid / 74.1	283	69	1-RD-42
Rodine 50 (formaldehyde) /30.0	18	4	1-RD-43
Sulfuric Acid / 98.1	>30000	7364	1-RD-44
Sulfuric Acid, Fuming / 98.1	37	9	1-RD-45
Tetrahydrofuran / 72.1	425	104	1-RD-46
Toluene / 92.1	1810	444	1-RD-47
Toluidine-o / 107.2	6260	1537	1-RD-48
Trichloroethane-1,1,1 / 133.4	690	169	1-RD-49
Trichloroethylene / 131.4	522	128	1-RD-50
Triethylamine / 101.22	1.7	0.4	1-RD-51
Vinyl Acetate / 86.1	25.6	6	1-RD-52
Xylenes	6720	1649	1-RD-53

Table 8.2 Chemical Spill Target Weight for Alert Emergencies

Chemical	Weight in Pounds	Gallons	Release Designation
Benzoic Acid	285	NA	1-RD-54
Magnesium Oxide / 40.3	490	NA	1-RD-55
Silica (as respirable dust)	1.9	NA	1-RD-56
Sodium Sulfhydrate / 56.06	15	NA	1-RD-57
Titanium Dioxide / 79.9	490	NA	1-RD-58
Ammonia / 17.0	7	NA	1-RD-59
Chlorine / 70.9	0.3	NA	1-RD-60
Trimethylamine	1.3	NA	1-RD-61

8.3.2 Radiological Releases

Transportation Accidents resulting in

- Containers of MW Waste - Alpha (waste) burning
  1-RD-75

- Containers TRU waste leaking as a result of impact
  1-RD-78

- Containers of ILNTV Combustibles (E Area Vaults) burning
1-RD-79

- ILTV Bulk Container (E Area Vaults) burning
  1-RD-83

- Containers of ILNTV Combustibles (E Area Vaults) leaking as a result of impact
  1-RD-98

- HB Line Sample Container (221H to 772 1F) burning
  1-RD-103

- HB Line Sample Container (221H to SRTC) burning
  1-RD-105

- FB Line Sample Container (221H to SRTC) burning
  1-RD-109
- RBOF Portable Deionizer Column Transport (RBOF) burning
  1-RD-123

- RBOF Spent Deionizer Resin Transport (RBOF) leaking as a result of impact
  1-RD-126

9.0 EMERGENCY PLANNING ZONE (EPZ) DETERMINATION

The facility EPZ is defined as an area within which special planning and preparedness efforts are warranted as a means of apportioning preparedness resources. The methodology used in determining the EPZ is outlined in EMPP 6Q-001 (Ref. 1).

The EMG (Ref. 3) directs the EPZ for a site should not be extended beyond the site boundary solely on the basis of potential consequences of a transportation accident if transportation activity is comparable (in terms of materials, quantities, and mode of shipment) to that normally conducted on public routes. Transportation activities analyzed in this EPHA meet this test, therefore, The EPZ is the site boundary and does not require calculation for public routes.

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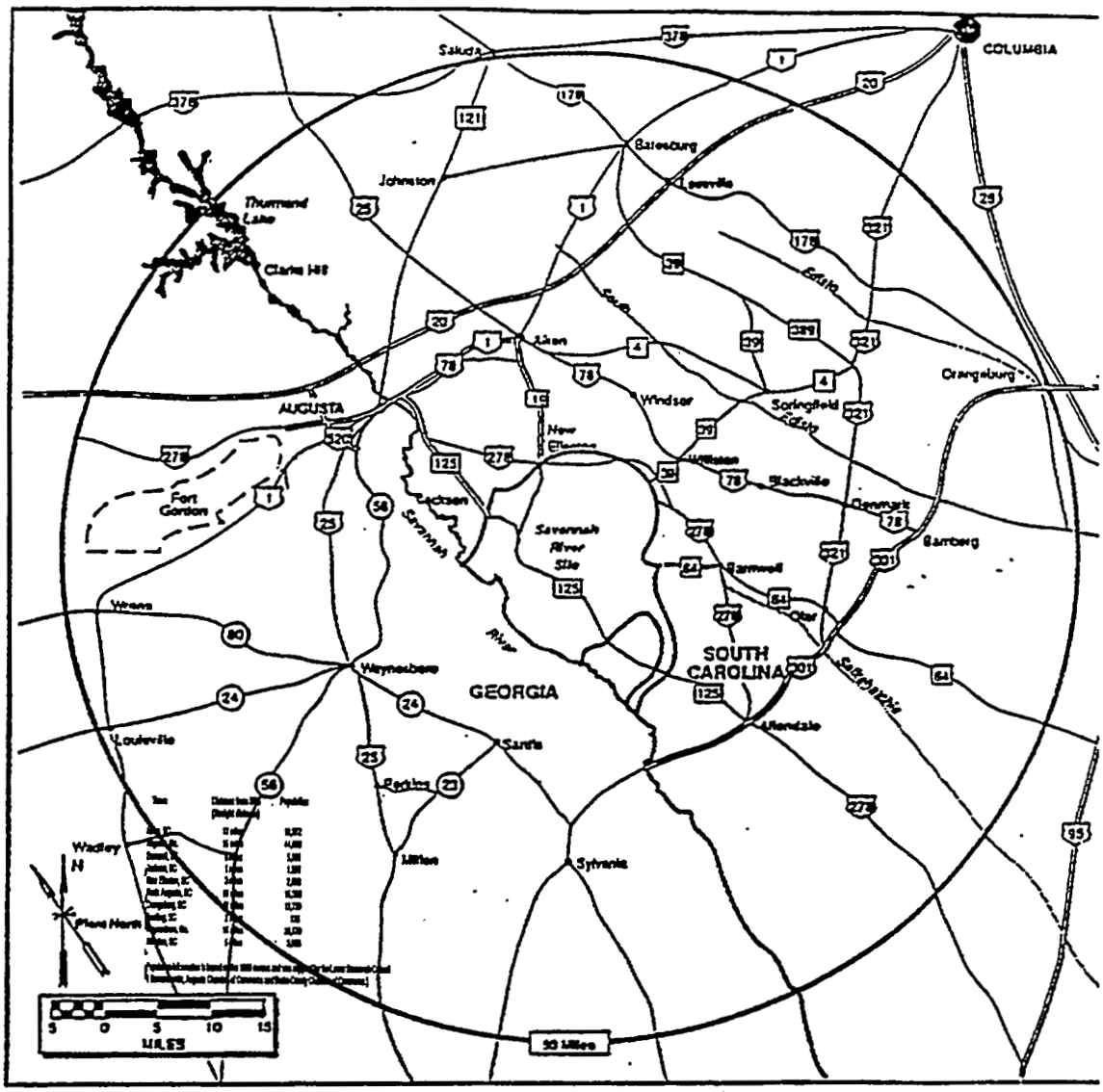
APPENDIX A

FIGURES

Figure 1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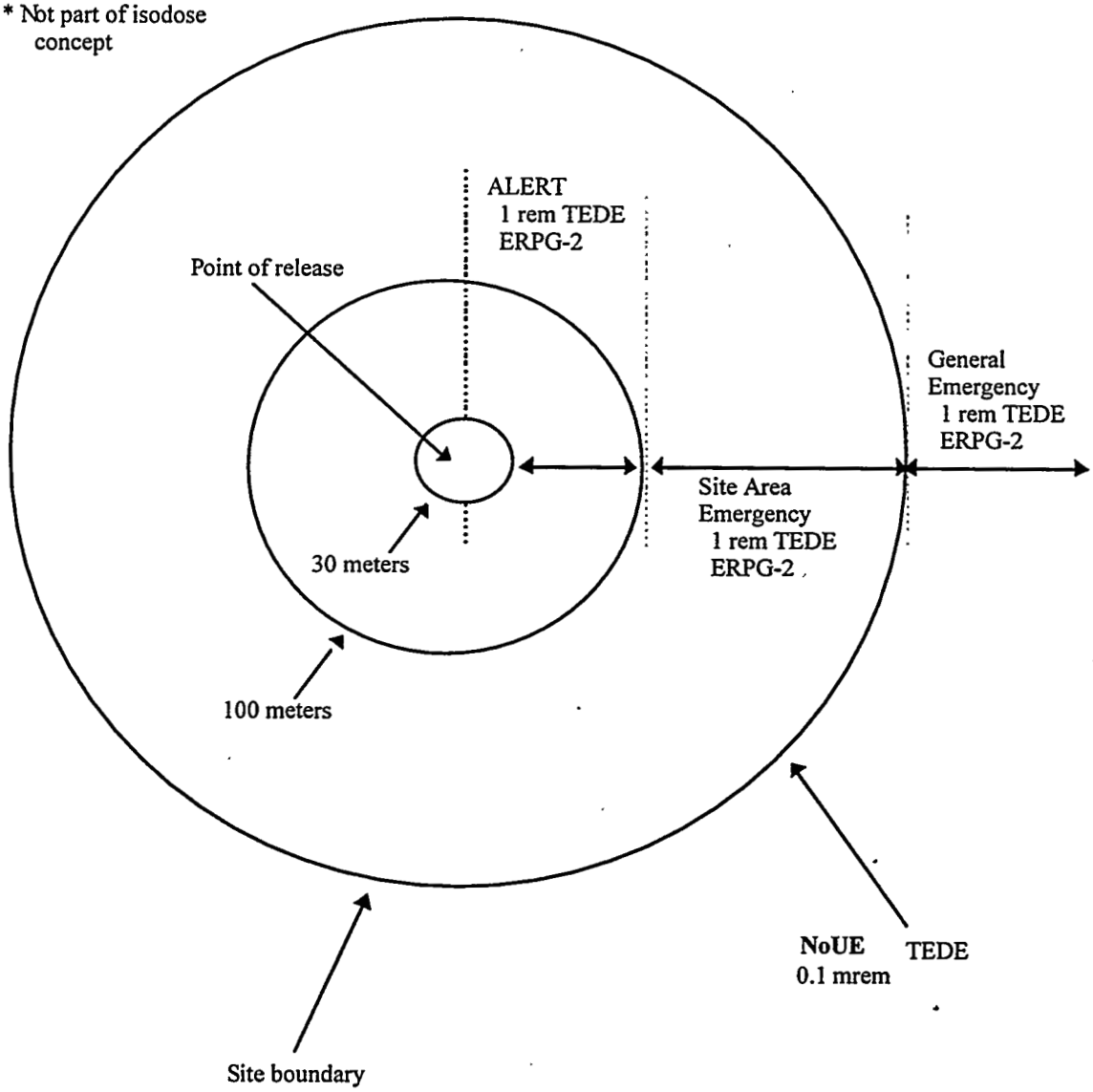
Williston
Blackville
Denmark
Barnwell
Fort Gordon
Jackson
Savannah River Site
Savannah
Waynesboro
GEORGIA
SOUTH CAROLINA
Allendale
Sylvania
Millen
Swainsboro
Louisville
Wadley
N
Plane North
5 0 5 10 15
MILES
50 Miles

Figure 2 Isodose Concept

Class	Isodose	Where
NoUE	0.1 mrem TEDE*	At and beyond the site boundary
Alert	1 rem TEDE ERPG-2	At 30 meters to 100 meters
SAE	1 rem TEDE ERPG-2	At 100 meters to site boundary
GE	1 rem TEDE ERPG-2	At and beyond the site boundary

* Not part of isodose concept



APPENDIX B

CALCULATIONS

Calculation 1	CIIS Chemical Screening
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ENGINEERING COMPUTATION SHEET

Title of Project THM EPHA | Reviewed by S. A. Henderson
Subject Inventory, Screening/ CIIS Chemical s | Works Calculation 1
Computer M. Nadeau | Date 09/14/95 | Sheet No. 1 of 5 (163 pp attch)

INTRODUCTION

This calculation presents the results of a review of the Savannah River Site (SRS) chemical inventory as reported on the Chemical Information and Inventory System (CIIS) database. The purpose of the review is to eliminate chemicals with insignificant hazards as defined in the Emergency Management Program Procedure (EMPP) 6Q-001 (Ref. 1).

This review was concerned with evaluating the chemicals as an airborne chemical hazard to humans. The materials were not evaluated to determine if they represented a non-airborne hazard (e.g. liquid spill into a water supply) or if they represent a potential initiator or promoter of a release of some other material, e.g., a flammable chemical or chemicals that may form hazardous reaction products. In addition, this review evaluates materials in the chemical state they were purchased. It does not include chemicals created as part of the process nor chemicals considered to be waste.

The chemical inventory entries from the CIIS that will require further characterization are summarized in Calculation 3. The remaining chemical inventory entries were eliminated as insignificant hazards.

DISCUSSION / ASSUMPTIONS

Engineering Studies Report S-ESR-G-00001 presents the methodology used to review the chemical inventory information (Ref. 2). It presents guidance on how to obtain chemical inventory information from the CIIS, the loading of the information into a FILEMAKER-PRO database and the screening of the information to determine if any chemicals require further evaluation.

The "Reasons" referred to in the "Screening Comments" of the FILEMAKER-PRO databases correspond to portions of Section A.3.e(1) of EMPP 6Q-001 as follows:

(a) Chemical is not present in quantities greater than a Technical Programs Screening Quantity (TPSQ) established for that material. A current list of TPSQs is available from Emergency Services Technical Programs-Safety Analysis Engineering Section (ESTP-SAES).

(b) Chemical has already been identified as posing an insignificant hazard by ESTP- SAES, and there is nothing to indicate that a more detailed evaluation is required.

(c) One or more of the following is valid:

- A "zero" amount is presented as the maximum quantity in the CIIS report and it has been verified that the use of the material has been discontinued by the facility
- The material is identified as a sample
- The material is identified as part of the radionuclide inventory
- The material is used in a laboratory setting and in laboratory quantities

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(d) One or more of the following is valid:

- The material is commonly used in industry and/or by the general public. This includes any substance to the extent it is used for personal, family or household purposes or is present in the same form and concentration as a product packaged for distribution and use by the general public, e.g., motor oil, gasoline, diesel fuel.
- The material is a true solid,i.e., not a finely divided powder under normal circumstances and does not present an airborne concern.
- The material is not hazardous to humans as a result of inhalation.
- The material has a vapor pressure of ≤0.5 mm Hg @ 25°C and an ERPG-2 or equivalent ≥1 ppm.

CALCULATION

1. Approximately 44,000 entries were compiled from the CIIS for the SRS. To reduce the number of chemicals to be analyzed to a manageable quantity, only chemicals reported in 1000 lbs or greater are analyzed in this calculation (approximately 1600 entries).

2. This screening does not include chemicals considered to be hazardous waste.

3. Other materials and hazard sources, such as flammable or explosive materials and energy sources are not considered if they do not exhibit acute or chronic toxicity via the inhalation pathway. Consideration of their potential for initiating releases of radioactive or chemically toxic materials, contributing to dispersal of those materials, or degrading the effectiveness of safety systems is considered during barrier identification and event scenario development.

4. This review was concerned with evaluating the chemicals as an airborne chemical hazard to humans. The materials were not evaluated to determine if the chemical represents a non-airborne hazard, e.g., liquid spill into a water supply.

5. This review evaluates materials in the chemical state they were purchased. It does not include chemicals created as part of a site process.

6. Previously Analyzed Chemical Identification

   The FILEMAKER-PRO database ESPAC.FM presents a list of the chemicals which have been defined by ESTP as being an "Insignificant Hazard" (Ref. 3). This database was used to identify the materials already analyzed in the chemical inventory information from previously conducted EPHAs.

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RESULTS

A FILEMAKER-PRO database of the chemical inventory from the CIIS in accordance with the guidance in S-ESR-G-00001 and EMPP-001 (Refs. 1, 2). The buildings associated with each areas were identified and all listings for those buildings were imported into a new database, named "(area)DUMP.FM" with more than 8,800 records that were matched with Material Safety Data Sheets (MSDS) initially.

The screening of the chemical inventory was conducted, using the criteria in EMPP-001, as follows:

(a) Eliminate a chemical if it is not present in quantities greater than a Technical Programs Screening Quantity (TPSQ) established for that material (Refs. 4, 5). An approved list of TPSQs is maintained by ESTG. All entries where the total amount in a building was below the TPSQ for that material were exported to a database named "TRANTPSQ.FM."

(b) Eliminate a chemical if it has been previously analyzed to be insignificant hazards and there is nothing to indicate that a more detailed evaluation is required (e.g., the material is present in greater than end-user quantities). The listings in (area)DUMP.FM were compared to the Emergency Services Previously Analyzed Chemical (ESPAC.FM) database to find those materials already identified from previously conducted EPHA's as posing insignificant threats (Ref. 3). All previously identified materials were transferred to a database named "TRANPAC.FM".

(c) Eliminate the chemical if one or more of the following is valid:

- A "zero" amount is shown as the maximum quantity in the CIIS report and it is verified that the use of the chemical has been discontinued by the facility or inventory is ≤0.5 lbs.
- The material is identified as a sample.
- The material is used in a laboratory setting and in laboratory scale quantities. Materials whose maximum amount at a given location or segment was under approximately twenty pounds were designated as being a laboratory quantity. A database named "TRANLABQ.FM" was created.

(d) Propose elimination of the chemical if it satisfies one or more of the following criteria. Upon completion of the previous screening steps MSDSs and references were consulted to determine the properties of the chemicals remaining in the database TRANDUMP.FM. The below listed criteria was utilized to determine if a material should be screened or retained for further evaluation.

- The material is commonly used in industry and/or by the general public:
  Materials such as vehicle fuel and common industrial solvents are normally screened. These materials can be event initiators for hazardous materials in close proximity. Consider and document their possible effects on other more hazardous materials, e.g., as initiators or promoters of a release. This includes any substance to the extent it is used for personal, family, or household purpose or is present in the same form and concentration as a product packaged for distribution and use by the general public, e.g., motor oil, gasoline, diesel fuel. Materials that identified as being a common material were transferred to a database named "TRANCOM.FM." Materials proposed as common are reviewed by the Hazard Assessment Team and ESTP-SAES. Materials accepted as common are added to the data base of common materials maintained by ESTP-SAES.

- The material is a true solid, i.e., not a finely divided powder under normal circumstances and does not present an airborne concern.

- The material cannot cause harm via the inhalation pathway from an acute exposure. Materials such as sodium hydroxide solution that do not fit the conventional definition of "hazards" for airborne human health or safety impacts, could cause a significant environmental impact. Consider the effects on the environment, the necessary response actions, and the time within which actions need to be taken when determining whether to include such materials within the scope of the hazard assessment for a given facility.

- The material has a vapor pressure of $\leq$0.5 mm Hg @ 25°C and an ERPG-2 or equivalent of $\geq$1 ppm

Materials exhibiting the above qualities were transferred to a database named "TRANDEL.FM".

The final set of records that could be eliminated using screening criteria were transferred to a database named "1kinventory.FM".

Filemaker Pro data sheets 1 through 163 (attachment) list the screening results for the CIIS Database. Materials not screened shall undergo further evaluation and characterization in Calculation 3 to determine if they require hazards analysis.

REFERENCES

1. *Standards for Development and Maintenance of Hazard Assessments.* EMPP 6Q-001, Revision 1, Manual 6Q, Vol. II, November 1, 1995.

2. Nadeau, M. L. and Henderson, S. A., *Electronic Screening of Chemical Inventory Information (U).* S-ESR-G-00001, Revision 0, February 28, 1993.

3. Nadeau, M. L., *Implementation of the Emergency Services Previously Analyzed Chemical Database.* EPD-EST-94-0069,January 24, 1995.

4. Henderson, S. A., *Technical Program Screening Quantity (TPSQ) Values For Use In Facility Hazards Assessment (U).* S-ESR-G-00002, Revision 0, May 23, 1995.

5. Henderson, S. A., *Technical Programs Screening Quantity For Methyl Isobutyl Ketone, $(CH_3)_2CHCH_2COCH_3$ (U).* EPD-EST-94-0023, August 7, 1994.

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ENGINEERING COMPUTATION SHEET

Title of Project THM EPHA

Reviewed by S. A. Henderson

Subject Inventory, Screening/ CIIS Chemical s

Works Calculation 1

Computer M. Nadeau

Date 09/14/95

Sheet No. 5 of 5 (163 pp attch)

Attachment
Site Chemical Screening Results (163 pages)

INTRODUCTION

This calculation tabulates the inventories of chemical materials transported to and/or across the site based on the information received from a representative sampling of transporters moving hazardous materials in the area. This calculation applies the screening methodology as per procedure 6Q-001 (Ref. 1) resulting in a tabulated listing of chemicals to be further evaluated in the Transportation of Hazardous Materials (THM) Emergency Preparedness Hazards Assessment (EPHA). Each of the chemicals requiring further evaluation will be evaluated by EPHA segment.

DISCUSSION / ASSUMPTIONS

Requests for inventories (Ref. 2) of all hazardous materials transported to and/or through the site were made of a representative sample of transporters in the area and/or known to transport across the site boundary. Of the twenty requests made, fourteen replies were received. Of these fourteen replies (Sheets 10 through 104), one was from CSX transportation and another from Van Waters & Rogers. These two companies collectively reported in excess of six hundred (600) separate hazardous chemicals transported across the site. The other eleven respondents, on average reported less than four hazardous chemicals. It is assumed the information provided by the fourteen respondents is correct and is a representative sampling of the non-DOE owned chemicals that may cross the site. The Chemical Abstract Service (CAS) registry numbers indicated are those supplied by the transporter and randomly verified utilizing SAX (Ref. 3). Materials listed from the transporters with multiple CAS registry numbers indicate the material is made up of several constituents with the CAS registry numbers representing the primary materials. These materials were separated and evaluated as individual chemicals, as it would be impossible to ascertain the quantity in each solution on any specific load. Certain items with multiple CAS registry numbers may be screened as common industrial materials (Ref. 4) i. e. gasoline, although their independent CAS registry numbers would indicate a mixture of chemicals that would not screen in pure form.

CALCULATION

The replies received (see correspondence Appendix - C) present the hazardous chemical inventories as shown in the table below, from each of the respondents. The information from these inventories was tabulated and sorted by CAS registry number, as this is the only unique identifier for each of the chemicals presented. Duplicate entries were eliminated and the remaining names and CAS registry numbers were utilized to present the following table of chemicals reported by the representative sampling of transporters as crossing the site boundary. The table lists the chemical name, CAS registry number, and an indication whether material is screened from further analysis per 6Q-001 (Ref. 1) with the reason indicated. Because multiple containers could be involved in the same load it was assumed quantities could equal the maximum volume of the shipping devise, therefore TPSQ screening will be performed by segment only in the specific segments outlined in the THM EPHA. The SAX (Ref. 3) "Entry Number" is provided for reference purposes where applicable.

Chemical Name	CAS registry number	SAX Entry number	Screened from further analysis (x)	Reason for screening (Ref. 3, 5, 6, & 7)
Acetaldehyde	75-07-0	AAG250		
Acetic Acid	64-19-7	AAT250		
Acetone	67-64-1	ABC750	X	Common Material

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ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM

Reviewed by D. J. Hadlock

Subject Inventory, Screening/Characterization of External Hazards

Works Calculation 2

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Chemical Name	CAS registry number	SAX Entry number	Screened from further analysis (x)	Reason for screening (Ref. 3, 5, 6, & 7)
Acrylamide	79-06-1	ADS250	X	Solid in pure form
Activated Carbon	7440-44-0	CBT500	X	Common Non-Hazardous Material
Adipic Acid	124-04-9	AEN250	X	Solid in pure form
Aerosol 501	37294-49-8	DJC000		
Aerosol A-102	39354-45-5	CAK000		
Aerosol QTS	64741-65-7	-		
Alpha-Pinene	80-56-8	PIH250		
Aluminum Hydroxide	21645-51-2	AHC000	X	Solid in pure form
Aluminum Sulfate	10043-01-3	AHG750	X	Solid in pure form
Ammonia	7664-41-7	AMY500		
Aqua ammonia liquid	1336-21-6	ANK250		
Ammonium Bicarbonate	1066-33-7	ANB250	X	Solid in pure form
Ammonium Bifluoride	1341-49-7	ANJ000	X	Solid in pure form
Ammonium Hydroxide	1336-21-6	ANK250		
Ammonium Nitrate	6484-52-2	ANN000	X	Solid in pure form
Ammonium Persulfate	7727-54-0	ANR000	X	Solid in pure form
Ammonium Sulfate	7783-20-2	ANU750	X	Solid in pure form
Ammonyx	8001-54-5	AFP250		
Amphosol	139-10-6	AOB500	X	Solid in pure form
Argon	7440-37-1	AQW250	X	Not a toxicological inhalation hazard
Arlacel 80	8007-43-0	SKV100	X	Solid in pure form
Ascorbic Acid	50-81-7	ARN000	X	Solid in pure form
Benzoflex 9-88	94-51-9	DWS800	X	Not an EPHA inhalation hazard
Benzoic Acid	65-85-0	BCL750		Respirable powder
Benzyl Alcohol	100-51-6	BDX500		
Benzyl Chloride	100-44-7	BEE375		
Borates, tetra Sodium Salts	1330-43-4	DXG035	X	Solid in pure form
Boric Acid	10043-35-3	BMC000	X	Solid in pure form
Brij 30	9002-92-0	DXY000		
Brij 97	9004-98-2	OIG000	X	Solid in pure form
Bubble Breaker 748	64741-88-4	MQV850	X	Common Material
Butene Oxide-1	106-88-7	BOX750		
Butyraldehyde	123-72-8	BSU250		
Calcium Carbonate	471-34-1	CAT775	X	Solid in pure form
Calcium Hydroxide	1305-62-0	CAT225	X	Solid in pure form
Calcium Hypochlorite	7778-54-3	HOV500	X	Solid in pure form
Calcium Oxide	1305-78-8	CAU500	X	Solid in pure form
Carbon Dioxide	124-38-9	CBU250	X	Not a toxocological inhalation hazard
Carbon Monoxide	630-08-0	CBW750		
Caustic Potash	1310-58-3	PLJ500	X	Solid in pure form
Chloracetone	78-95-5	CDN200		
Chlorine	7782-50-5	CDV750		
Chloronitrobenzene	25167-93-5	CJA950		
Chlorosulfonic Acid	7790-94-5	CLG500		
Citric Acid	77-92-9	CMS750	X	Solid in pure form

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Chemical Name	CAS registry number	SAX Entry number	Screened from further analysis (x)	Reason for screening (Ref. 3, 5, 6, & 7)
Copper Sulfate	7758-99-8	CNP500		
Cumene	98-82-8	COE750		
Cyclohexane	108-94-1	CPC000		
Di Sodium Sulfosuccinate	577-11-7	DJL000	X	Solid in pure form
Di-Tertobutyl-p-cresol-2,6	128-37-0	BFW750	X	Solid in pure form
Diammonium Phosphate	7783-28-0	ANR500	X	Solid in pure form
Diatomaceous Earth	68855-54-9	DCJ800	X	Solid in pure form
Dicalcium Phosphate	7757-93-9	CAW100	X	Solid in pure form
Diesel Fuel	68476-34-6	FOP000	X	Common material
Diethanolamine	111-42-2	DMF000	X	Solid in pure form
Diethyl Ethane Phosphonite	2651-85-6	DJH500	X	Not an EPHA inhalation hazard
Diethylamine	124-40-3	DOQ800		
Diethylene Glycol	111-46-6	DJD600		
Dioxane	123-91-1	DVQ000		
Diphenylmethane-4,4-Diisocyanate	101-68-8	MJP400		Melts @ 37.2¤ C
Dipropylene Glycol	25265-71-8	OQM000	X	Vp < 0.5 & not a severe inhalation hazard
Disodium Phosphate	7558-79-4	SJH090	X	Solid in pure form
Dowfax 2A1	119345-04-9			
Dowicide	6152-33-6	BGJ750	X	Solid in pure form
Dowicil	4080-31-3	CEG550	X	Solid in pure form
Dursban	2921-88-2	CMA100		
Ethyl Acetate	141-78-6	EFR000		
Ethyl Alcohol	64-17-5	EFU000	X	Common material
Ethyl Benzene	100-41-4	EGP500		
Ethylene	75-85-1	EIO000	X	Not a toxicological inhalation hazard
Ethylene Glycol	107-21-1	EJC500	X	Common material
Ethylene Oxide	75-21-8	EJN500		
Ethylenediaminediacetic Acid Tetra Sodium Salt -N,N	64-02-8	EIV000	X	Solid in pure form
Ethylhexanol -2	104-76-7	EKQ000		
Ferric Chloride	7705-08-0	FAU000	X	Solid in pure form
Ferrous Sulfate	7720-78-7	FBN100	X	Solid in pure form
Ferrous Sulfate	7782-63-0	FBO000	X	Solid in pure form
Fluorosilicic Acid	16961-83-4	SCO500		
Fluosilicic Acid 25%	16961-83-4	SCO500		
Forestall	61791-34-2	-		
Formaldehyde	50-00-0	FMV000		
Formic Acid	64-18-6	FNA000		
Freon MCA	76-13-14	FOO000	X	Common material
Fumaric Acid	110-17-8	FOU000	X	Solid in pure form
Gasoline	8006-61-9	GBY000	X	Common material
Glycerine	56-81-5	GGA000		
Glycol Ether DB	112-34-5	DJF200	X	Not an EPHA inhalation hazard

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Chemical Name	CAS registry number	SAX Entry number	Screened from further analysis (x)	Reason for screening (Ref. 3, 5, 6, & 7)
Glycol Ether DE	111-90-0	CBR000		
Glycol Ether EB	111-76-2	BPJ850		
Glycolic Acid	79-14-1	GHO000	X	Solid in pure form
Hazardous Waste NOS	-	-		
Hexamethylenediamine	124-09-4	HEO000	X	Solid in pure form
Hydrated Amorphous Silica	7631-86-9	SCI000	X	Not a toxicological hazard
Hydrochloric Acid	7647-01-0	HHC000		
Hydrochloric Acid 31%	7647-01-0	HHC000		
Hydrofluoric Acid 70%	7664-39-3	HHU500		
Hydrogen Peroxide	7722-84-1	HIB000		
Hydroquinone	123-31-9	HIH000	X	Solid in pure form
Igepal CA 630	9002-93-1	PKF500	X	Common material
Igepal CO 630	68412-54-4	PKF000	X	Common material
Isopar	64742-47-8	-		
Isopropyl Alcohol	67-63-0	INJ000		
Lactic Acid	50-21-5	LAG000	X	Not an EPHA inhalation hazard
Lecithin	8002-43-5	LEF200		
Liquefied Petroleum Gases	68476-85-7	LGM000	X	Common material
Magnesium Carbonate	7760-50-1	MAC650	X	Solid in pure form, as a respirable powder does not present inhalation hazard
Magnesium Oxide	1309-48-4	MAH500		Respirable powder
Magnesium Sulfate	7487-88-9	MAJ250	X	Solid in pure form
Malic Acid	6915-15-7	MAN000	X	Solid in pure form
Methocel	9004-67-5	-		
Methoxyacetic Acid	625-45-6	MDW275	X	Solid in pure form
Methyl Alcohol	67-56-1	MGB150		
Methyl Bromide	74-83-9	MHR200		
Methyl Ethyl Ketone	78-93-3	MKA400		
Methyl Isobutyl Ketone	108-10-1	HFG500		
Methylene Chloride	75-09-2	MJP450		
Methyol Cellosolve	109-86-4	EJH500		
Mineral Oil	8042-47-5	MQV875	X	Common material
Mineral Spirits	8052-41-3	SLU500	X	Common material
Monoethanolamine	141-43-5	EEC600		
Morpholine	110-91-8	MRP750		
Myrj	9004-99-3	PJV250	X	Not an EPHA inhalation hazard
N Butyl Alcohol	71-36-3	BPW500		
N Methyl Pyrrolidone	872-50-4	MPF200		
Naphtha	64742-89-8	NAI500		
Napthalene	91-20-3	NAJ500	X	Common material
Natrasol	9004-62-0	-		
Natural Gas	-	-	X	Common material
Neodol 25-12	68131-39-5	-		
Neodol 91-8	68439-46-3	-		
Neutronyx	9016-45-9	NND500	X	Solid in pure form
Nitric Acid	7697-37-2	NED500		

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Reviewed by D. J. Hadlock

Subject Inventory, Screening/Characterization of External Hazards

Works Calculation 2

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Date 09/14/95

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Chemical Name	CAS registry number	SAX Entry number	Screened from further analysis (x)	Reason for screening (Ref. 3, 5, 6, & 7)
Nitrogen	7727-37-9	NGP500	X	Not a toxicological inhalation hazard
Nitromethane	75-52-5	NHM500	X	Common material
Nitroosylsulfuric Acid	7782-78-1	-		
Onyxide	4719-04-4	BBA625		
Oxalic Acid	144-62-7	OLA000	X	Solid in pure form
Oxodiacetic Acid	110-99-6	ONQ100	X	Solid in pure form
Oxygen	7782-44-7	OQW000	X	Not a toxicological inhalation hazard
Perchloroethylene	127-18-4	PCF275		
Percofloc	9002-86-2	PKQ059	X	Solid in pure form
Pertrolatum Snow White min oil	8009-03-8	MQV750	X	Common material
Petroleum Oil	8002-05-9	PCS250	X	Common material
Petroleum Sulfonate	68608-26-4	-		
Phenol, Molten	108-95-2	PDN750		Shipped as liquid @ 45¤ C
Phosphoric Acid	7664-38-2	PHB250		
Phosphoric Acid 75 - 85%	7664-38-2	PHB250		
Phosphoric Anhydride	1314-56-3	PHS250	X	Solid in pure form
Phosphorus, White (in water)	7723-14-0	PHP000		Solid, spontaneously burns in air
Phosphorus, Yellow	7723-14-0	PHO740		Solid, spontaneously burns in air
Pluronic	9003-11-6	PJH630	X	Not an EPHA inhalation hazard
Polyethylene Glycols	9038-95-3	GHY000	X	Solid in pure form
Polyethylene Sorbitol	9002-88-4	PJS750	X	Solid in pure form
Polyoxyethylene Sorbitol	25322-68-3	PJT000	X	Common material
Polyphosphoric Acid	8017-16-1	-		
Potassium Benzoate	582-25-2	PKW760	X	Solid in pure form
Potassium Carbonate	584-08-7	PLA000	X	Solid in pure form
Potassium Nitrate	7757-79-1	PLL500	X	Solid in pure form
Potassium Permanganate	7722-64-7	PLP000	X	Solid in pure form
Potassium Persulfate	7727-21-1	DWQ000	X	Solid in pure form
Potassium Tripolyphosphate	13845-36-8	PLW400	X	Solid, respirable powder not an EPHA inhalation hazard
Propagyl Alcohol	107-19-7	PMN450		
Propane	74-98-6	PMJ750	X	Common material
Propionic Acid	79-09-4	PMU750		
Propyl Gallate-n	121-79-9	PNM750	X	Solid in pure form
Propylene Glycol	57-55-6	PML000	X	Not an EPHA inhalation hazard
Radioactive Material NOS	-	-		
Rhodacal UB	151-21-3	SIB600	X	Solid in pure form
Rocket Motors	Reactive Solid	-	X	Solid in pure form
Rodine 50 (formaldehyde)	50-00-0	FMV000		
Rodine 213	143106-84-7	RCF000	X	Solid in pure form
Salicylamide	65-45-2	SAH000	X	Solid in pure form
Silica (as respirable dust)	14808-60-7	SCJ500		Respirable powder
Silica, Crystalline-Cristobalite	14464-46-1	SCJ000	X	Solid in pure form
Silicone 45	63148-62-9	DUB600		
Silicone 323	70131-67-8	-		
Silicone 462	7732-18-5	WAT259	X	Common material
Silicone 471	25322-69-4	PKI500	X	Not an EPHA inhalation hazard

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Title of Project EPHA for THM

Reviewed by D. J. Hadlock

Subject Inventory, Screening/Characterization of External Hazards

Works Calculation 2

Computer S. A. Henderson

Date 09/14/95

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Chemical Name	CAS registry number	SAX Entry number	Screened from further analysis (x)	Reason for screening (Ref. 3, 5, 6, & 7)
Silicone Oil 45	48-62-9	SCR400	X	Not an EPHA inhalation hazard
Soda Ash	497-19-8	SFO000	X	Solid in pure form
Sodium Acetate	6131-90-4	SEG500	X	Solid in pure form
Sodium Acid Pyrophosphate	7758-16-9	DXF800	X	Solid in pure form
Sodium Aluminum Phosphate	7785-88-8	AHG500	X	Solid in pure form
Sodium Benzoate	532-32-1	SFB000	X	Solid in pure form
Sodium Bicarbonate	144-55-8	SFC500	X	Solid in pure form
Sodium Bisulfite	7681-57-4	SII000	X	Solid in pure form
Sodium Chlorate	7775-09-9	SFS000	X	Solid in pure form
Sodium Chloride	7647-14-5	SFT000	X	Solid in pure form
Sodium Erythorbate	6381-77-7	-		
Sodium Fluoride	7681-49-4	SHF500	X	Solid in pure form
Sodium Formate	141-53-7	SHJ000	X	Solid in pure form
Sodium Hexametaphosphate	68915-31-1	SHM500	X	Solid in pure form
Sodium Hydrosulfite	7775-14-6	SHR500	X	Solid in pure form
Sodium Hydroxide	1310-73-2	SHS000	X	Solid in pure form
Sodium Hydroxyacetate	2836-32-0	SHT000	X	Solid in pure form
Sodium Hypochlorite 13-15%	7681-52-9	SHU500		Highly Reactive
Sodium Nitrite	7632-00-0	SIQ500	X	Solid in pure form
Sodium Perborate Tetrahydrate	10486-00-7	SJB350	X	Solid in pure form
Sodium Persulfate	7775-27-1	SJE000	X	Solid in pure form
Sodium Phosphate, Tribasic	7601-54-9	SJH200	X	Solid in pure form
Sodium Propionate	137-40-6	SJL500	X	Solid in pure form
Sodium Silicate	1344-09-8	SJU000	X	Solid in pure form
Sodium Silicofluoride	16893-85-9	DXE000	X	Solid in pure form
Sodium Sulfate	7757-82-6	SJY000	X	Solid in pure form
Sodium Sulfhydrate	16721-80-5	SHR000		Solid, spontaneously combusts in air
Sodium Sulfide	1313-82-2	SJY500	X	Solid in pure form
Sodium Sulfite	7757-83-7	SJZ000	X	Solid in pure form
Sodium Tetraborate Penta	12179-04-3	-		
Sodium Thiosulfate	7772-98-7	SKI000	X	Solid in pure form
Sodium Trimetaphosphate	7785-84-4	SKM500	X	Solid in pure form
Sodium Tripolyphosphate	7758-29-4	SKN000	X	Solid in pure form
Sodium(I) Nitrate 1:1	7631-99-4	SIO900	X	Solid in pure form
Sorbic Acid	110-44-1	SKU000	X	Solid in pure form
Sorbitan Monooleate	1338-43-8	SKV100	X	Solid in pure form
Stearic Acid	57-11-4	SLK000	X	Solid in pure form
Stearic Acid	1323-39-3	SLL000	X	Common material
Stepanol	151-21-3	SIB600	X	Solid in pure form
Sulfamic Acid	5329-14-6	SNK500	X	Solid in pure form
Sulfur Dioxide	7446-09-5	SOH500		
Sulfur, Molten	7704-34-9	SOD500		Shipped as liquid @ 120¤ C, Reactive
Sulfuric Acid	7664-93-9	SOI500		
Sulfuric Acid 66%	7664-93-9	SOI500		
Sulfuric Acid, Fuming	8014-95-7	SOI520		
Tergitol	139-88-8	EMT500	X	Solid in pure form

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Chemical Name	CAS registry number	SAX Entry number	Screened from further analysis (x)	Reason for screening (Ref. 3, 5, 6, & 7)
Tergitol 15-S-9 (nonionic)	68131-40-8	TAY250	X	Solid in pure form
Tetraborate Decahydrate	1303-96-4	SFE500	X	Solid in pure form
Tetrahydrofuran	109-99-9	TCR750		
Tetrasodium Pyrophosphate	7722-88-5	TEE500	X	Solid in pure form
Titanium Dioxide	13463-67-7	TGG760		respirable powder
Toluene	108-88-3	TGK750		
Toluidine-o	95-53-4	TGQ750		
Tree/weed killing compounds	Herbicides	-		CSX Descriptive Term
Trichloroethane-1,1,1	71-55-6	MIH275		
Trichloroethylene	79-01-6	TIO750		
Triethanolamine 85%	102-71-6	TKP500		Vp < 0.5
Triethanolamine 99%	102-71-6	TKP500		Vp < 0.5
Triethylamine	121-44-8	TJO000		
Trimethylamine	75-50-3	TLD500		
Trimethylbenzene-1,2,4	95-63-6	TLL750		
Trisodium Phosphate	10101-89-0	SJH200	X	Solid in pure form
Triton CF-10	60864-33-7	-		
Triton N-57 & 101	127087-87-0	-		
Triton X-100 & 114	9036-19-5	GHS000	X	Common material
Triton X-207	68891-21-4	-		
Tween	9005-64-5	PKL000	X	Not an EPHA inhalation hazard
UREA 46% Nitrogen	57-13-6	USS000	X	Not a toxicological inhalation hazard
Versene Acid	60-00-4	EIX000	X	Solid in pure form
Versenex	140-01-2	-		
Vinyl Acetate	108-05-4	VLU250		polymerizes when exposed to light
Wax	25155-30-0	DXW200	X	Common material
Whitconol	37220-82-9	-		
Witconate	9007-48-1	AFO250	X	Solid in pure form
Xylenes	1330-20-7	XGS000		

RESULTS

The following table lists those materials that would not screen out based on initial properties and will be carried forward to calculation 3 for full characterization and screening based on charecteristics.

Chemical Name	CAS registry number	SAX Entry number	Comments (Ref. 3, 5, 6, & 7)
Acetaldehyde	75-07-0	AAG250	
Acetic Acid	64-19-7	AAT250	
Aerosol 501	37294-49-8	DJC000	
Aerosol A-102	39354-45-5	CAK000	
Aerosol QTS	64741-65-7	-	
Alpha-Pinene	80-56-8	PIH250	**possibly most severe conseq chem.**
Ammonia	7664-41-7	AMY500	
Ammonium Hydroxide	1336-21-6	ANK250	
Ammonyx	8001-54-5	AFP250	
Benzoic Acid	65-85-0	BCL750	Respirable powder
Benzyl Alcohol	100-51-6	BDX500	
Benzyl Chloride	100-44-7	BEE375	
Brij 30	9002-92-0	DXY000	
Butene Oxide-1	106-88-7	BOX750	
Butyraldehyde	123-72-8	BSU250	
Carbon Monoxide	630-08-0	CBW750	
Chloracetone	78-95-5	CDN200	
Chlorine	7782-50-5	CDV750	
Chloronitrobenzene	25167-93-5	CJA950	
Chlorosulfonic Acid	7790-94-5	CLG500	
Copper Sulfate	7758-99-8	CNP500	
Cumene	98-82-8	COE750	
Cyclohexane	108-94-1	CPC000	
Diethylamine	124-40-3	DOQ800	
Diethylene Glycol	111-46-6	DJD600	
Dioxane	123-91-1	DVQ000	
Diphenylmethane-4,4-Diisocyanate	101-68-8	MJP400	Melts @ 37.2¤ C
Dowfax 2A1	119345-04-9	-	
Dursban	2921-88-2	CMA100	
Ethyl Acetate	141-78-6	EFR000	
Ethyl Benzene	100-41-4	EGP500	
Ethylene Oxide	75-21-8	EJN500	
Ethylhexanol -2	104-76-7	EKQ000	
Fluorosilicic Acid	16961-83-4	SCO500	
Fluosilicic Acid 25%	16961-83-4	SCO500	
Forestall	61791-34-2	-	
Formaldehyde	50-00-0	FMV000	
Formic Acid	64-18-6	FNA000	
Glycerine	56-81-5	GGA000	
Glycol Ether DE	111-90-0	CBR000	
Glycol Ether EB	111-76-2	BPJ850	
Hydrochloric Acid	7647-01-0	HHC000	
Hydrochloric Acid 31%	7647-01-0	HHC000	

Chemical Name	CAS registry number	SAX Entry number	Comments (Ref. 3, 5, 6, & 7)
Hydrofluoric Acid 70%	7664-39-3	HHU500	
Hydrogen Peroxide	7722-84-1	HIB000	
Isopar	64742-47-8	-	
Isopropyl Alcohol	67-63-0	INJ000	
Lecithin	8002-43-5	LEF200	
Magnesium Oxide	1309-48-4	MAH500	Respirable powder
Methocel	9004-67-5	-	
Methyl Alcohol	67-56-1	MGB150	
Methyl Bromide	74-83-9	MHR200	
Methyl Ethyl Ketone	78-93-3	MKA400	
Methyl Isobutyl Ketone	108-10-1	HFG500	
Methylene Chloride	75-09-2	MJP450	
Methyol Cellosolve	109-86-4	EJH500	
Monoethanolamine	141-43-5	EEC600	
Morpholine	110-91-8	MRP750	
N Butyl Alcohol	71-36-3	BPW500	
N Methyl Pyrrolidone	872-50-4	MPF200	
Naphtha	64742-89-8	NAI500	
Natrasol	9004-62-0	-	
Neodol 25-12	68131-39-5	-	
Neodol 91-8	68439-46-3	-	
Nitric Acid	7697-37-2	NED500	
Nitroosylsulfuric Acid	7782-78-1	-	
Onyxide	4719-04-4	BBA625	
Perchloroethylene	127-18-4	PCF275	
Petroleum Sulfonate	68608-26-4	-	
Phenol, Molten	108-95-2	PDN750	Shipped as liquid @ 45¤ C
Phosphoric Acid	7664-38-2	PHB250	
Phosphoric Acid 75 - 85%	7664-38-2	PHB250	
Phosphorus, White (in water)	7723-14-0	PHP000	Solid, spontaneously combusts in air
Phosphorus, Yellow	7723-14-0	PHO740	Solid, spontaneously combusts in air
Polyphosphoric Acid	8017-16-1	-	
Propagyl Alcohol	107-19-7	PMN450	
Propionic Acid	79-09-4	PMU750	
Radioactive Material NOS	-	-	
Rodine 50 (formaldehyde)	50-00-0	FMV000	
Silica (as respirable dust)	14808-60-7	SCJ500	Respirable powder
Silicone 45	63148-62-9	DUB600	
Silicone 323	70131-67-8		

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Chemical Name	CAS registry number	SAX Entry number	Comments (Ref. 3, 5, 6, & 7)
Sodium Erythorbate	6381-77-7	-	
Sodium Hypochlorite 13-15%	7681-52-9	SHU500	Highly Reactive
Sodium Sulfhydrate	16721-80-5	SHR000	Solid, spontaneously combusts in air
Sodium Tetraborate Penta	12179-04-3	-	
Sulfur Dioxide	7446-09-5	SOH500	
Sulfur, Molten	7704-34-9	SOD500	Shipped as liquid @ 120¤ C, Reactive
Sulfuric Acid	7664-93-9	SOI500	
Sulfuric Acid 66%	7664-93-9	SOI500	
Sulfuric Acid, Fuming	8014-95-7	SOI520	
Tetrahydrofuran	109-99-9	TCR750	
Titanium Dioxide	13463-67-7	TGG760	respirable powder
Toluene	108-88-3	TGK750	
Toluidine-o	95-53-4	TGQ750	
Tree/weed killing compounds	Herbicides	-	CSX Descriptive Term
Trichloroethane-1,1,1	71-55-6	MIH275	
Trichloroethylene	79-01-6	TIO750	
Triethanolamine 85%	102-71-6	TKP500	Vp < 0.5
Triethanolamine 99%	102-71-6	TKP500	Vp < 0.5
Triethylamine	121-44-8	TJO000	
Trimethylamine	75-50-3	TLD500	
Trimethylbenzene-1,2,4	95-63-6	TLL750	
Triton CF-10	60864-33-7	-	
Triton N-57 & 101	127087-87-0	-	
Triton X-207	68891-21-4	-	
Versenex	140-01-2	-	
Vinyl Acetate	108-05-4	VLU250	polymerizes when exposed to light
Whitconol	37220-82-9	-	
Xylenes	1330-20-7	XGS000	

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Subject Characterization/Screening of THM EPHA chemicals | Works Calculation 3

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INTRODUCTION

This calculation characterizes the un-screened materials from calculations 1 and 2, and screens out additional materials based on their characteristics and volume restrictions. Materials not screened out during initial screening require further characterization and limited analysis to ascertain if they will screen based on characteristics and segmentation. For the THM EPHA additional screening is done based on the different transporting container types and sizes within each segment.

DISCUSSION / ASSUMPTIONS

THM EPHA calculations 1 and 2 developed chemical materials that do not screen out from further analysis based on their initial limited information. These materials are separated and characterized as individual chemicals and are assumed to be in each segment. Certain criteria (vapor pressure, state, hazards etc...) is developed during characterization that allows for screening out additional materials per 6Q-001 (Ref. 1).

CALCULATION

The following table lists the chemical name, molecular weight, CAS registry number, SAX entry number (Ref. 2), the ERPG-2 or equivalent value where possible (Ref. 3), ambient state, boiling point in degrees centigrade, and the vapor pressure at 20 degrees centigrade or temperature indicated (Ref. 2, 3, 4, & 5). From this information each chemical is evaluated and a determination is made weather it can be screened out from further evaluation in the segment based on the chemical characteristics and hazards involved. Because multiple containers could be involved in the same load it was assumed quantities could equal the maximum volume of the shipping devise, therefore any TPSQ screening is not performed.

Chemical Name / Molecular Weight	CAS #	SAX #	ERPG or Equiv ppm	State (S)olid (L)uqu (G)as	BP Deg. C	Pv mmHg @ 20 C	Screen from further Analysis	Comments
Acetadehyde / 44.1	75-07-0	AAG250	TBD	L	20.8	740		
Acetic Acid	64-19-7	AAT250	TBD	L	118.1	11.4		
Acetonitrile / 41.1	75-05-8	ABE500	35	L	81.6	73		
Aerosol 501 / 307.3	37294-49-8	DJC000	-	-	-	-	X	Trace amount & not a severe hazard
Aerosol A-102 / 112.4	39354-45-5	CAK000	-	S	-	-	X	Trace quantity in a common material
Aerosol QTS	64741-65-7	-	-	-	-	-	X	Common material, Vendor conf
Alpha-Pinene / 136.3	80-56-8	PIH250	TBD	L	155	10@37		possibly most severe conseq chem.
Ammonia / 17.0	7664-41-7	AMY500	200	G	-	>760		
Ammonium Hydroxide	1336-21-6	ANK250	TBD	L	-	Var		< 44% ammonia
Ammonyx	8001-54-5	AFP250	-	L	-	-	X	Trace quantity in a common material
Benzene / 78.1	71-43-2	BBL250	150	L	80	75		
Benzoic Acid	65-85-0	BCL750	TBD	S	249	1@96 C		Respirable powder
Benzyl Alcohol	100-51-6	BDX500	TBD	L	205	1		
Benzyl Chloride	100-44-7	BEE375	TBD	L	179	-		TLV=1ppm
Brij 30	9002-92-0	DXY000	-	-	-	-	X	Trace quantity in a common material
Butene Oxide-1	106-88-7	BOX750	-	L	63	-	X	Not a severe inhalation hazard
Butyraldehyde	123-72-8	BSU250	TBD	L	74.7	-		
Carbon disulfide / 76.1	75-15-0	CBV500	50	L	46.6	297		
Carbon Monoxide / 28.0	630-08-0	CBW750	350	G	(-191.3)	>760		
Chloracetone / 92.5	78-95-5	CDN200	TBD	L	119	-		TLV=1ppm
Chlorine / 70.9	7782-50-5	CDV750	3	G	(-34)	4800		
Chloronitrobenzene / 157.96	25167-93-5	CJA950	-	S	-	-	X	Solid trace amnt. in a common material
Chlorosulfonic Acid / 116.52	7790-94-5	CLG500	TBD	L	151	1@32 C		

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Chemical Name / Molecular Weight	CAS #	SAX #	ERPG or Equiv ppm	State (S)olid (L)uqu (G)as	BP Deg. C	Pv mmHg @ 20 C	Screen from further Analysis	Comments
Copper Sulfate / 249.7	7758-99-8	CNP500	-	S	MP=110	-	X	Solid in pure form
Cumene / 120.2	98-82-8	COE750	-	L	152	10	X	Not a severe inhalation hazard
Cyclohexane / 84.2	110-82-7	CPB000	TBD	L	80.5	78		
Cyclohexanone / 98.2	108-94-1	CPC000	TBD	L	115.6	10		TWA=25ppm
Diethylamine / 45.1	124-40-3	DOQ800	100	G	6.7	>760		
Diethylene Glycol / 106.1	111-46-6	DJD600	TBD	L	245.8	1@91 C		
Dioxane / 88.1	123-91-1	DVQ000	125	L	101.1	29		TWA=100 ppm
Diphenylmethane-4,4-Diisocyanate / 250.3	101-68-8	MJP400	TBD	S/L	194	0.001@ 40 C		Melts @ 37.2° C, Inhalation poision PEL=0.02 ppm
Dowfax 2A1	119345-04-9	-	-	-	-	-	X	Common material, Vendor conf
Dursban / 350.6	2921-88-2	CMA100	-	S	-	-	X	Solid in pure form
Ethyl Acetate / 88.1	141-78-6	EFR000	2000	L	77.2	100		TWA=400ppm
Ethyl Benzene / 106.2	100-41-4	EGP500	erpg1-125	L	136.2	10@26		TWA=100ppm
Ethylene Oxide / 44.1	75-21-8	EJN500	50	G	10.6	>760		
Ethylhexanol -2 / 130.3	104-76-7	EKQ000	TBD	L	184	0.2	X	Vp<0.5, not a severe inhalation haz.
Fluorosilicic Acid / 144.1	16961-83-4	SCO500	TBD	L	Decom	-		
Fluosilic Acid 25% / 144.1	16961-83-4	SCO500	TBD	L'	Decom	-		
Forestall	61791-34-2	-	-	-	-	-	X	Trace amount in common, Vendor conf
Formaldehyde / 30.0	50-00-0	FMV000	10	G	-	>760	X	Transported in special (seg 3) cont.
Formic Acid / 46.0	64-18-6	FNA000	TBD	L	100.8	40		TWA=5ppm
Glycerine / 92.1	56-81-5	GGA000	-	L	290	0.0025	X	Vp <0.5, not a severe inhalation haz.
Glycol Ether DE / 134.2	111-90-0	CBR000	TBD	L	-	-		
Glycol Ether EB	111-76-2	BPJ850	TBD	L	168.4	300		TWA= 50ppm
Hazardous Waste NOS	-	-	-	-	-	-	X	components evaluated in pure forms
Hydrochloric Acid / 36.5	7647-01-0	HHL000	TBD	G/L	(-84)	3040		Concentrated
Hydrochloric Acid 31% / 36.5	7647-01-0	HHL000	TBD	L	-	23.4		< 40 WT%
Hydrofluoric Acid 70% / 20.0	7664-39-3	HHU500	TBD	L	-	-		TWA=3ppm
Hydrogen chloride / 36.5	7647-01-0	HHX000	TBD	G	(-85)	30780		as a gas
Hydrogen Peroxide / 34.0	7722-84-1	HIB000	10	L	152	1@15 C		
Isopar	64742-47-8	-	-	-	-	-	X	Trace amount in common, Vendor conf
Isopropyl Alcohol 60.1	67-63-0	INJ000	400	L	82.5	-		
Lecithin	8002-43-5	LEF200	-	S	-	-	X	Solid in pure form
Magnesium Oxide / 40.3	1309-48-4	MAH500	50	S	3600	~0		Respirable powder
Methocel	9004-67-5	-	-	-	-	-	X	Trace amount in common, Vendor conf
Methyl Alcohol / 32.0	67-56-1	MGB150	1000	L	56.2	96		
Methyl Bromide / 94.9	74-83-9	MHR200	TBD	G	3.56	1824		TWA=5ppm
Methyl Ethyl Ketone / 72.1	78-93-3	MKA400	TBD	L	79.57	71.2		
Methyl Isobutyl Ketone / 100.2	108-10-1	HFG500	250	L	118	16		TWA=50ppm
Methylene Chloride / 84.9	75-09-2	MJP450	TBD	L	40	350		
Methyol Cellosolve / 76.1	109-86-4	EJH500	TBD	L	124.5	6.2		TWA=25ppm
Monoethanolamine /61.1	141-43-5	EEC600	TBD	L	170.5	6		TWA=3ppm
Morpholine / 87.1	110-91-8	MRP750	TBD	L	128.9	10 @23		
N Butyl Alcohol / 74.1	71-36-3	BPW500	50	L	117.7	5.5		TWA=100ppm
N Methyl Pyrrolidone / 99.15	872-50-4	MPF200	TBD	L	202	-		
Naphtha /	64742-89-8	NAI500	-	L	149	-	X	Common, not a severe inhalation haz.
Natrasol	9004-62-0	-	-	-	-	-	X	Trace amount in common, Vendor conf
Neodol 25-12	68131-39-5	-	-	-	-	-	X	Trace amount in common, Vendor conf
Neodol 91-8	68439-46-3	-	-	-	-	-	X	Trace amount in common, Vendor conf

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Chemical Name / Molecular Weight	CAS #	SAX #	ERPG or Equiv ppm	State (S)olid (L)uqu (G)as	BP Deg. C	Pv mmHg @ 20 C	Screen from further Analysis	Comments
Nitric Acid / 63.0	7697-37-2	NED500	15	L	86	wt%		
Nitroosylsulfuric Acid	7782-78-1	-	-	-	-	-	X	Trace amount in common, Vendor conf
Onyxide	4719-04-4	BBA625	TBD	-	-	-		NIF
Perchloroethylene / 165.8	127-18-4	PCF275	200	L	121.1	14		
Petroleum Sulfonate	68608-26-4	-	TBD	-	-	-		NIF
Phenol, Molten / 94.1	108-95-2	PDN750	50	S/L	181.7	0.4		Shipped as liquid @ 45° C
Phosphoric Acid / 98.0	7664-38-2	PHB250	5	L/S	213	0.028	X	Vp <0.5, ERPG >1
Phosphoric Acid 75 - 85% / 98	7664-38-2	PHB250	5	L	213	0.028	X	Vp <0.5 ERPG >1
Phosphorus, White (in water)	7723-14-0	PHP000	TBD	S	280	1@76 C	X	Solid, spontaneously burns in air Transported in special cont. (seg. 3)
Phosphorus, Yellow /123.88	7723-14-0	PHO740	TBD	S	280	1@76 C	X	Solid, spontaneously burns in air Transported in special cont. (seg 3)
Polyphosphoric Acid	8017-16-1	-	-	-	-	-	X	Trace amount in common, Vendor conf
Propagyl Alcohol / 56.1	107-19-7	PMN450	5	L	114.5	11.6		TWA= 1ppm
Propionic Acid / 74.1	79-09-4	PMU750	TBD	L	141.1	10@39		TWA=10ppm
Radioactive Material NOS	-	-	-		-	-	X	Analyzed with radionuclides
Rodine 50 (formaldehyde) /30.0	50-00-0	FMV000	10	L	Infl.	Infl		In solution
Silica (as respirable dust)	14808-60-7	SCJ500	TBD	S	-	-		Respirable dust, TWA= 10mg/m^3
Silicone 45	63148-62-9	DUB600	-	SS	-	-	X	Semi solid & common
Silicone 323	70131-67-8	-	-		-	-	X	
Sodium Erythorbate	6381-77-7	-	-		-	-	X	Trace amount in common, Vendor conf
Sodium Hypochlorite 13-15% 75.45	7681-52-9	SHU500	TBD	L	Decom	-	X	Rail car only in this Wt% Highly Reactive, Initiator only
Sodium Sulfhydrate / 56.06	16721-80-5	SHR000	TBD	S	-	-		Solid, spontaneously combusts in air Initiator only
Sodium Tetraborate Penta	12179-04-3	-	-	-	-	-	X	Trace amount in common, Vendor conf
Sulfur Dioxide / 64.1	7446-09-5	SOH500	3	G	(-10)	>760		
Sulfur, Molten / 32.06	7704-34-9	SOD500	TBD	S/L	444.6	1@188	X	Special container only, (seg 3) Shipped as liquid @ 120° C, Reactive
Sulfuric Acid / 98.1	7664-93-9	SOI500	10	L	290	1@145		
Sulfuric Acid 66% / 98.1	7664-93-9	SOI500	10	L	290	1@145		
Sulfuric Acid, Fuming / 98.1	8014-95-7	SOI520	10	L	290	1@145		
Tetrahydrofuran / 72.1	109-99-9	TCR750	1000	L	65.4	132		TWA=200ppm
Titanium Dioxide / 79.9	13463-67-7	TGG760	TBD	S	-	-		respirable powder, TWA=5mg/m^3
Toluene / 92.1	108-88-3	TGK750	300	L	111.1	20		
Toluidine-o / 107.2	95-53-4	TGQ750	10	L	200	0.3		
Tree/weed killing compounds	Herbicides	-	-	-	-	-	X	CSX Descriptive Term, evaluated in pure form
Trichloroethane-1,1,1 / 133.4	71-55-6	MIH275	1000	L	74.1	100		TWA=350ppm
Trichloroethylene / 131.4	79-01-6	TIO750	500	L	87.2	58		
Triethanolamine 85%	102-71-6	TKP500	-	L	360	10@205	X	Vp < 0.5
Triethanolamine 99%	102-71-6	TKP500	-	L	360	10@205	X	Vp < 0.5
Triethylamine / 101.22	121-44-8	TJO000	TBD	L	89.5	-		
Trimethylamine / 59.1	75-50-3	TLD500	TBD	G	2.87	>760		TWA= 10ppm
Trimethylbenzene-1,2,4 / 120.2	95-63-6	TLL750	-	L	168.89	-	X	Not a severe inhalation hazard
Triton CF-10	60864-33-7	-	-	-	-	-	X	
Triton N-57 & 101	127087-87-0	-	-	-	-	-	X	
Triton X-207	68891-21-4	-	-	-	-	-	X	
Versenex	140-01-2	-	-	-	-	-	X	
Vinyl Acetate / 86.1	108-05-4	VLU250	75	L	73	100@21		polymerizes when exposed to light
Whitconol	37220-82-9	-	-	-	-	-	X	Trace amount in common, Vendor conf
Xylenes / 106.2	1330-20-7	XGS000	200	L	138.5	6.72		

RESULTS

The following table lists those materials requiring full hazards analysis in the THM EPHA.

Chemical Name / Molecular Weight	CAS #
Acetadehyde / 44.1	75-07-0
Acetic Acid	64-19-7
Acetonitrile / 41.1	75-05-8
Alpha-Pinene / 136.3	80-56-8
Ammonia / 17.0	7664-41-7
Ammonium Hydroxide	1336-21-6
Benzene / 78.1	71-43-2
Benzoic Acid	65-85-0
Benzyl Alcohol	100-51-6
Benzyl Chloride	100-44-7
Butyraldehyde	123-72-8
Carbon disulfide / 76.1	75-15-0
Carbon Monoxide / 28.0	630-08-0
Chloracetone / 92.5	78-95-5
Chlorine / 70.9	7782-50-5
Chlorosulfonic Acid / 116.52	7790-94-5
Cyclohexane / 84.2	110-82-7
Cyclohexanone / 98.2	108-94-1
Diethylamine / 45.1	124-40-3
Diethylene Glycol / 106.1	111-46-6
Dioxane / 88.1	123-91-1
Diphenylmethane-4,4-Diisocyanate / 250.3	101-68-8
Ethyl Acetate / 88.1	141-78-6
Ethyl Benzene / 106.2	100-41-4
Ethylene Oxide / 44.1	75-21-8
Fluorosilicic Acid / 144.1	16961-83-4
Fluosilicic Acid 25% / 144.1	16961-83-4
Formic Acid / 46.0	64-18-6
Glycol Ether DE / 134.2	111-90-0
Glycol Ether EB	111-76-2
Hydrochloric Acid / 36.5	7647-01-0
Hydrochloric Acid 31% / 36.5	7647-01-0
Hydrofluoric Acid 70% / 20.0	7664-39-3
Hydrogen chloride (gas) / 36.5	7647-01-0
Hydrogen Peroxide / 34.0	7722-84-1
Isopropyl Alcohol 60.1	67-63-0
Magnesium Oxide / 40.3	1309-48-4
Methyl Alcohol / 32.0	67-56-1
Methyl Bromide / 94.9	74-83-9
Methyl Ethyl Ketone / 72.1	78-93-3
Methyl Isobutyl Ketone / 100.2	108-10-1
Methylene Chloride / 84.9	75-09-2
Methyol Cellosolve / 76.1	109-86-4

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Chemical Name / Molecular Weight	CAS #
Monoethanolamine /61.1	141-43-5
Morpholine / 87.1	110-91-8
N Butyl Alcohol / 74.1	71-36-3
N Methyl Pyrrolidone / 99.15	872-50-4
Nitric Acid / 63.0	7697-37-2
Onyxide	4719-04-4
Perchloroethylene / 165.8	127-18-4
Petroleum Sulfonate	68608-26-4
Phenol, Molten / 94.1	108-95-2
Propagyl Alcohol / 56.1	107-19-7
Propionic Acid / 74.1	79-09-4
Rodine 50 (formaldehyde) /30.0	50-00-0
Silica (as respirable dust)	14808-60-7
Sodium Sulfhydrate / 56.06	16721-80-5
Sulfur Dioxide / 64.1	7446-09-5
Sulfuric Acid / 98.1	7664-93-9
Sulfuric Acid 66% / 98.1	7664-93-9
Sulfuric Acid, Fuming / 98.1	8014-95-7
Tetrahydrofuran / 72.1	109-99-9
Titanium Dioxide / 79.9	13463-67-7
Toluene / 92.1	108-88-3
Toluidine-o / 107.2	95-53-4
Trichloroethane-1,1,1 / 133.4	71-55-6
Trichloroethylene / 131.4	79-01-6
Triethylamine / 101.22	121-44-8
Trimethylamine / 59.1	75-50-3
Vinyl Acetate / 86.1	108-05-4
Xylenes / 106.2	1330-20-7

REFERENCES

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2. Lewis, Richard J., *SAX's Dangerous Properties of Industrial Materials,* Eighth Edition, Volumes 1-4, Van Nostrand Reinhold, New York, NY, 1992.

3. Craig, D. K., *Description of Methodology for Deriving ERPG-equivalents for Chemicals,* S-CLC-G-00074, Rev. 0 and *SWMF Chemicals on "Master File" Requiring Independent Verrification,* S-CLC-G-00079 Rev. 0, Westinghouse Savana River Company, Aiken, SC, July 10, 1995.

4. NIOSH, *Pocket Guide to Chemical Hazards,* U.S. Department of Health and Human Services, Washington, DC, June, 1994.

5. Association of American Railroads, Bureau of Explosives, *Emergency Handling of Hazardous Materials in Surface Transportation,* Washington, DC, July 1989.

INTRODUCTION

The purpose of this calculation is to screen and eliminate radioactive isotopes that do not contribute significantly to the total dose. Quantities are based on the maximum inventories of radionuclides transported to and/or across the site based on individual facility EPHAs, SARs, BIOs, JCOs, various transportation documents, and Hazardous Materials Shipment Public Access Roads Forms, the Waste Acceptance Criteria Manual and approximate inventories from the Inter-Site Transportation Radiological and Toxicological Sabotage Vulnerability Assessment (Ref. 1-11). The radionuclides were screened using quantities listed in 10 CFR 30.72 (Ref. 10) and employing the methodology identified in DOE STD-1027. If the sum of all the ratios of the inventory of each nuclide to that nuclide's Screening Quantity (SQ) from 10CFR30.72 is less than one, the entire inventory was screened (eliminated from analysis):

$$\sum_{i=1}^{n} \frac{r_i}{SQ_i} < 1.0$$

where: r = Ci of individual nuclide
n = number of nuclides
SQ = Screening Quantity for individual nuclide (Ci)

Per this analysis, all the nuclides fail the screening methodology. The nuclides were further characterized by their contribution to dose upon release. Therefore radioactive isotopes that do not contribute significantly to the total dose were eliminated. The remaining radionuclides contributed greater than or equal to 95% of the total dose as required in the EMPP-6Q-001 (Ref. 12).

INPUT/ASSUMPTIONS

The projected maximum radionuclide inventory was developed using various sources as discussed above. Where information was incomplete or unavailable, approximations were used. Some of the inventory lists only one or two of the isotopes. In those cases, the distribution was considered to be made of only those isotopes. The following facilities/missions were considered:

235-F	247-F
F Canyon	FB Line
A Line	H Canyon
HB Line	Outside Facilities (UNH Solution)
Tritium Facilities	Reactor Disassembly Basins
RBOF	Other Reactor Facilities
SRTC Operations	SRTC ALARA & Environmental Compliance
SRTC TNX Operations	SRTC Engineering & Central Labs
Central Labs	ITP
Tank Farms	F/H ETF
TRU Wastes	Low Level Compactor
Mixed Wastes	Spent Solvent
SREL	Construction
D&D Operations	Environmental Restoration Waste Sites

As part of this calc-note SST and spent fuel were not considered in the analysis as they were specifically excluded from the scope of the transportation EPHA.

CALCULATION

The release fractions (RF) (Ref. 13) and inhalation Dose Conversion Factors (DCF) (Ref. 14) were used to evaluate the radionuclides of interest. The radionuclide screening for the transportation associated with each of the above facilities are shown in Table 1.

Table 1 Radionuclide Screening

Note: Release Fractions (RF) extracted from DOE Standard 1027.92.
Inhalation Dose Conversion Factors (DCF) extracted from DOE/EH-0071.
DCF for H-3 increased by 50% to account for absorption.
Undesignated alpha radiation considered as Am-241.
Undesignated Beta/Gamma radiation considered as Co-60.
Tank Farm Sludge (25 liters) worst case was from HM-Process.
Depleted Uranium Oxide was considered all U-235 for conservatism.
DTotal = D for that container.

Container for LLW SWDF (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+01	9.50E-05	1.00E+05	9.50E+07	0.36%
Co-60	1.00E-02	1.50E-01	6.75E+04	1.01E+08	0.39%
Sr-90	1.00E-03	1.30E+00	5.00E+01	6.50E+04	0.00%
Ru-106	1.00E-02	4.40E-01	7.50E+03	3.30E+07	0.13%
Cs-137	1.00E-02	3.20E-02	5.00E+01	1.60E+04	0.00%
U-234	1.00E-03	1.30E+02	4.00E+04	5.20E+09	19.83%
Am-241	1.00E-03	5.20E+02	4.00E+04	2.08E+10	79.30%

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Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Screening of Radionuclides Works Calculation 4

Computer E. T. Ketusky Date 09/95

Container for LLW Compactor (253-H)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	8.30E-01	7.89E+01	0.34%
C-14	1.00E-02	2.10E-03	2.80E-04	5.88E-03	0.00%
Ni-59	1.00E-02	2.70E-03	5.30E-03	1.43E-01	0.00%
Co-60	1.00E-02	1.50E-01	2.09E+00	3.14E+03	13.39%
Se-79	1.00E-02	8.90E-03	4.30E-05	3.83E-03	0.00%
Sr-90	1.00E-03	1.30E+00	9.20E-02	1.20E+02	0.51%
Tc-99	1.00E-02	7.50E-03	1.40E-05	1.05E-03	0.00%
Sn-126	1.00E-02	8.60E-02	2.40E-05	2.06E-02	0.00%
I-129	5.00E-01	1.80E-01	6.90E-09	6.21E-04	0.00%
Cs-137	1.00E-02	3.20E-02	6.30E-02	2.02E+01	0.09%
U-233	1.00E-03	1.30E+02	1.80E-06	2.34E-01	0.00%
U-234	1.00E-03	1.30E+02	6.30E-04	8.19E+01	0.35%
U-235	1.00E-03	1.20E+02	9.20E-06	1.10E+00	0.00%
U-236	1.00E-03	1.20E+02	1.20E-04	1.44E+01	0.06%
U-238	1.00E-03	1.20E+02	1.90E-04	2.28E+01	0.10%
Np-237	1.00E-03	4.90E+02	1.80E-06	8.82E-01	0.00%
Pu-238	1.00E-03	4.60E+02	7.60E-03	3.50E+03	14.94%
Pu-239	1.00E-03	5.10E+02	7.60E-03	3.88E+03	16.56%
Pu-240	1.00E-03	5.10E+02	7.60E-03	3.88E+03	16.56%
Pu-241	1.00E-03	1.00E+01	9.20E-02	9.20E+02	3.93%
Pu-242	1.00E-03	4.80E+02	7.60E-03	3.65E+03	15.59%
Am-241	1.00E-03	5.20E+02	7.91E-03	4.11E+03	17.57%

Container for MW Waste - Tritium Bearing (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	5.00E+03	4.75E+05	100%

Container for MW Waste - Beta/Gamma (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
C0-60	1.00E-02	1.50E-01	1.00E+00	1.50E+03	24%
Sr-90	1.00E-02	1.30E+00	1.00E-03	1.30E+01	0%
Y-90	1.00E-02	8.20E-03	1.00E-03	8.20E-02	0%
Cs-137	1.00E-02	3.20E-02	1.50E+01	4.80E+03	75%
Ba-137m	1.00E-02	4.40E-04	1.50E+01	6.60E+01	1%

Container for MW Waste - Alpha (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-239	1.00E-03	5.10E+02	1.20E+00	6.12E+05	44%
Pu-240	1.00E-03	5.10E+02	3.00E-01	1.53E+05	11%
Pu-241	1.00E-03	1.00E+01	5.50E+00	5.50E+04	4%
Am-241	1.00E-03	5.20E+02	1.10E+00	5.72E+05	41%

Container for LAWV (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	1.00E+01	9.50E+02	0.34%
C-14	1.00E-02	2.10E-03	3.30E-03	6.93E-02	0.00%
Ni-59	1.00E-02	2.70E-03	6.30E-02	1.70E+00	0.00%
Co-60	1.00E-02	1.50E-01	2.53E+01	3.80E+04	13.52%
Se-79	1.00E-02	8.90E-03	5.20E-04	4.63E-02	0.00%
Sr-90	1.00E-03	1.30E+00	1.10E+00	1.43E+03	0.51%
Tc-99	1.00E-02	7.50E-03	1.70E-04	1.28E-02	0.00%
Sn-126	1.00E-02	8.60E-02	2.90E-04	2.49E-01	0.00%
I-129	5.00E-01	1.80E-01	8.30E-08	7.47E-03	0.00%
Cs-137	1.00E-02	3.20E-02	7.60E-01	2.43E+02	0.09%
U-233	1.00E-03	1.30E+02	2.20E-05	2.86E+00	0.00%
U-234	1.00E-03	1.30E+02	7.50E-03	9.75E+02	0.35%
U-235	1.00E-03	1.20E+02	1.10E-04	1.32E+01	0.00%
U-236	1.00E-03	1.20E+02	1.40E-03	1.68E+02	0.06%
U-238	1.00E-03	1.20E+02	2.30E-03	2.76E+02	0.10%
Np-237	1.00E-03	4.90E+02	2.20E-05	1.08E+01	0.00%
Pu-238	1.00E-03	4.60E+02	9.10E-02	4.19E+04	14.92%
Pu-239	1.00E-03	5.10E+02	9.10E-02	4.64E+04	16.54%
Pu-240	1.00E-03	5.10E+02	9.10E-02	4.64E+04	16.54%
Pu-241	1.00E-03	1.00E+01	1.10E+00	1.10E+04	3.92%
Pu-242	1.00E-03	4.80E+02	9.10E-02	4.37E+04	15.57%
Am-241	1.00E-03	5.20E+02	9.47E-02	4.92E+04	17.55%

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Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Screening of Radionuclides Works Calculation 4

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Container for ILNTV Combustibles (E-Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	1.00E+01	9.50E+02	0.12%
Ni-59	1.00E-02	2.70E-03	2.30E+01	6.21E+02	0.08%
Co-60	1.00E-02	1.50E-01	3.00E+00	4.50E+03	0.56%
Se-79	1.00E-02	8.90E-03	2.30E-03	2.05E-01	0.00%
Sr-90	1.00E-03	1.30E+00	2.30E+01	2.99E+04	3.73%
Tc-99	1.00E-02	7.50E-03	7.80E-04	5.85E-02	0.00%
Sn-126	1.00E-02	8.60E-02	2.30E-03	1.98E+00	0.00%
I-129	5.00E-01	1.80E-01	2.10E-07	1.89E-02	0.00%
Cs-137	1.00E-02	3.20E-02	2.30E+02	7.36E+04	9.18%
U-233	1.00E-03	1.30E+02	3.30E-05	4.29E+00	0.00%
U-234	1.00E-03	1.30E+02	7.50E-03	9.75E+02	0.12%
U-235	1.00E-03	1.20E+02	1.10E-04	1.32E+01	0.00%
U-236	1.00E-03	1.20E+02	2.30E-03	2.76E+02	0.03%
U-238	1.00E-03	1.20E+02	2.30E-03	2.76E+02	0.03%
Pu-238	1.00E-03	4.60E+02	2.30E-01	1.06E+05	13.19%
Pu-239	1.00E-03	5.10E+02	2.30E-01	1.17E+05	14.62%
Pu-240	1.00E-03	5.10E+02	2.30E-01	1.17E+05	14.62%
Pu-241	1.00E-03	1.00E+01	2.70E+00	2.70E+04	3.37%
Pu-242	1.00E-03	4.80E+02	2.30E-01	1.10E+05	13.76%
Am-241	1.00E-03	5.20E+02	4.10E-01	2.13E+05	26.58%

Container for LNTV Noncombustibles (E-Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	1.00E+01	9.50E+02	0.01%
C-14	1.00E-02	2.10E-03	2.30E-02	4.83E-01	0.00%
Ni-59	1.00E-02	2.70E-03	1.80E+03	4.86E+04	0.44%
Co-60	1.00E-02	1.50E-01	1.80E+03	2.71E+06	24.73%
Se-79	1.00E-02	8.90E-03	1.80E-02	1.60E+00	0.00%
Sr-90	1.00E-03	1.30E+00	1.80E+03	2.34E+06	21.38%
Tc-99	1.00E-02	7.50E-03	4.70E-03	3.53E-01	0.00%
Sn-126	1.00E-02	8.60E-02	1.80E-02	1.55E+01	0.00%
I-129	5.00E-01	1.80E-01	1.20E-06	1.08E-01	0.00%
Cs-137	1.00E-02	3.20E-02	1.70E+03	5.44E+05	4.97%
U-233	1.00E-03	1.30E+02	3.30E-05	4.29E+00	0.00%
U-234	1.00E-03	1.30E+02	2.30E-02	2.99E+03	0.03%
U-236	1.00E-03	1.20E+02	1.80E+00	2.16E+05	1.97%
U-238	1.00E-03	1.20E+02	1.20E-01	1.44E+04	0.13%
Np-237	1.00E-03	4.90E+02	4.70E-04	2.30E+02	0.00%
Pu-238	1.00E-03	4.60E+02	1.80E+00	8.28E+05	7.57%
Pu-239	1.00E-03	5.10E+02	1.80E+00	9.18E+05	8.39%
Pu-240	1.00E-03	5.10E+02	1.80E+00	9.18E+05	8.39%
Pu-241	1.00E-03	1.00E+01	2.20E+01	2.20E+05	2.01%
Pu-242	1.00E-03	4.80E+02	1.80E+00	8.64E+05	7.90%
Am-241	1.00E-03	5.20E+02	2.54E+00	1.32E+06	12.07%

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Screening of Radionuclides Works Calculation 4

Computer E. T. Ketusky Date 09/95

Container for ILTV Bulk (E Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	1.70E+02	1.62E+04	0.44%
Ni-59	1.00E-02	2.70E-03	1.00E+00	2.70E+01	0.00%
Co-60	1.00E-02	1.50E-01	1.96E+03	2.94E+06	79.91%
Se-79	1.00E-02	8.90E-03	2.30E-03	2.05E-01	0.00%
Sr-90	1.00E-03	1.30E+00	2.30E+01	2.99E+04	0.81%
Tc-99	1.00E-02	7.50E-03	1.10E-03	8.25E-02	0.00%
Cs-137	1.00E-02	3.20E-02	2.30E+02	7.36E+04	2.00%
U-233	1.00E-03	1.30E+02	3.30E-05	4.29E+00	0.00%
U-234	1.00E-03	1.30E+02	7.50E-02	9.75E+03	0.27%
U-235	1.00E-03	1.20E+02	1.10E-04	1.32E+01	0.00%
U-236	1.00E-03	1.20E+02	2.30E-02	2.76E+03	0.08%
U-238	1.00E-03	1.20E+02	2.30E-02	2.76E+03	0.08%
Np-237	1.00E-03	4.90E+02	1.10E-04	5.39E+01	0.00%
Pu-238	1.00E-03	4.60E+02	2.30E-01	1.06E+05	2.88%
Pu-239	1.00E-03	5.10E+02	2.30E-01	1.17E+05	3.19%
Pu-240	1.00E-03	5.10E+02	2.30E-01	1.17E+05	3.19%
Pu-241	1.00E-03	1.00E+01	2.70E+00	2.70E+04	0.73%
Pu-242	1.00E-03	4.80E+02	2.30E-01	1.10E+05	3.00%
Am-241	1.00E-03	5.20E+02	2.43E-01	1.26E+05	3.43%

Container - ILTV Crucibles (E Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	4.00E+04	3.80E+06	73.56%
C-14	1.00E-02	2.10E-03	7.90E-03	1.66E-01	0.00%
Ni-59	1.00E-02	2.70E-03	1.40E+00	3.78E+01	0.00%
Co-60	1.00E-02	1.50E-01	2.70E+02	4.05E+05	7.84%
Se-79	1.00E-02	8.90E-03	1.80E-03	1.60E-01	0.00%
Sr-90	1.00E-03	1.30E+00	1.80E+02	2.34E+05	4.53%
Tc-99	1.00E-02	7.50E-03	1.60E-03	1.20E-01	0.00%
Sn-126	1.00E-02	8.60E-02	1.80E-03	1.55E+00	0.00%
I-129	5.00E-01	1.80E-01	4.20E-07	3.78E-02	0.00%
Cs-137	1.00E-02	3.20E-02	1.80E+02	5.76E+04	1.12%
U-234	1.00E-03	1.30E+02	7.90E-03	1.03E+03	0.02%
U-235	1.00E-03	1.20E+02	9.30E-06	1.12E+00	0.00%
U-236	1.00E-03	1.20E+02	1.80E-02	2.16E+03	0.04%
U-238	1.00E-03	1.20E+02	1.60E-04	1.92E+01	0.00%
Np-237	1.00E-03	4.90E+02	1.80E-01	8.82E+04	1.71%
Pu-238	1.00E-03	4.60E+02	1.80E-01	8.28E+04	1.60%
Pu-239	1.00E-03	5.10E+02	1.80E-01	9.18E+04	1.78%
Pu-240	1.00E-03	5.10E+02	1.80E-01	9.18E+04	1.78%
Pu-241	1.00E-03	1.00E+01	2.20E+00	2.20E+04	0.43%
Pu-242	1.00E-03	4.80E+02	1.80E-01	8.64E+04	1.67%
Am-241	1.00E-03	5.20E+02	3.90E-01	2.03E+05	3.93%

Container for LLWSB (E Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
H-3	1.00E+00	9.50E-05	1.00E+04	9.50E+05	3.97%
C-14	1.00E-02	2.10E-03	2.30E+04	4.83E+05	2.02%
Ni-59	1.00E-02	2.70E-03	2.30E+00	6.21E+01	0.00%
Co-60	1.00E-02	1.50E-01	2.32E+02	3.48E+05	1.46%
Se-79	1.00E-02	8.90E-03	2.30E+00	2.05E+02	0.00%
Sr-90	1.00E-03	1.30E+00	2.30E+02	2.99E+05	1.25%
Tc-99	1.00E-02	7.50E-03	2.30E+03	1.73E+05	0.72%
Sn-126	1.00E-02	8.60E-02	2.30E+00	1.98E+03	0.01%
I-129	5.00E-01	1.80E-01	2.30E+02	2.07E+07	86.49%
Cs-137	1.00E-02	3.20E-02	2.30E+02	7.36E+04	0.31%
U-233	1.00E-03	1.30E+02	3.30E-05	4.29E+00	0.00%
U-234	1.00E-03	1.30E+02	2.30E-01	2.99E+04	0.12%
U-235	1.00E-03	1.20E+02	1.10E-04	1.32E+01	0.00%
U-236	1.00E-03	1.20E+02	2.30E-01	2.76E+04	0.12%
U-238	1.00E-03	1.20E+02	2.30E-01	2.76E+04	0.12%
Np-237	1.00E-03	4.90E+02	2.30E-01	1.13E+05	0.47%
Pu-238	1.00E-03	4.60E+02	2.30E-01	1.06E+05	0.44%
Pu-239	1.00E-03	5.10E+02	2.30E-01	1.17E+05	0.49%
Pu-240	1.00E-03	5.10E+02	2.30E-01	1.17E+05	0.49%
Pu-241	1.00E-03	1.00E+01	2.70E+00	2.70E+04	0.11%
Pu-242	1.00E-03	4.80E+02	2.30E-01	1.10E+05	0.46%
Am-241	1.00E-03	5.20E+02	4.40E-01	2.29E+05	0.96%

Pu O2 Container (235-F, 247-F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	9.16E+02	4.21E+08	100.00%

Container, Pail, Casket, Charge can, Type A Storage Vault (235-F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	2.74E+05	1.26E+11	99.99%
U-235	1.00E-03	1.20E+02	4.86E-03	5.83E+02	0.00%
Np-237	1.00E-03	4.90E+02	1.41E+01	6.91E+06	0.01%

H Canyon Sample Container to SRTC (221H to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	1.54E+01	7.08E+06	100.00%

H Canyon Sample Container to SRTC (221H to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
U-235	1.00E-03	1.20E+02	8.64E-05	1.04E+01	100.00%

H Canyon Sample Container to SRTC (221H to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Np-237	1.00E-03	4.90E+02	7.05E-04	3.45E+02	100.00%

F Canyon Sample Container to SRTC (221F to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	1.20E-01	5.51E+04	100.00%

F Canyon Sample Container to SRTC (221F to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Am-243	1.00E-03	5.20E+02	1.99E-02	1.03E+04	100.00%

F Canyon Sample Container to SRTC (221F to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Cm-244	1.00E-03	2.70E+02	8.09E+00	2.18E+06	100.00%

HB Line Sample Container (221H&F to 772-1F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	8.55E-01	3.93E+05	100.00%

HB Line Sample Container (221H to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	8.55E-01	3.93E+05	100.00%

FB Line Oxide Container (221F to Inter Area)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-239	1.00E-03	5.10E+02	5.58E+03	2.85E+09	100.00%

FB Line Sample Container (221F to 773A)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-239	1.00E-03	5.10E+02	6.20E-01	3.16E+05	100.00%

235F Material Container to 221 HB Line (235F to 221H)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	3.42E+04	1.57E+10	100.00%

235F Material Container to 221 FB Line (235F to 221F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-239	1.00E-03	5.10E+02	1.86E+02	9.49E+07	100.00%

SRTC Material Container to DWPF (SRTC to DWPF)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Cf-252	1.00E-03	1.30E+02	2.69E+01	3.50E+06	100.00%

A Line Material Container (A Line)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
(assumed U235)	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Depleted UO3	1.00E-03	1.20E+02	3.24E-03	3.89E+02	100.00%

UNH Trailer (H Area Outside Facilities)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci/l)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
U-234	1.00E-03	1.30E+02	6.55E-03	8.52E-04	78.06%
U-235	1.00E-03	1.20E+02	2.48E-05	2.98E-06	0.27%
U-236	1.00E-03	1.20E+02	2.23E-04	2.68E-05	2.45%
U-238	1.00E-03	1.20E+02	1.64E-03	1.97E-04	18.04%
Pu-238	1.00E-03	4.60E+02	0.00	0.00	0.00
Pu-239	1.00E-03	5.10E+02	2.50E-05	1.28E-05	1.17%

RBOF Portable Deionizer Column Transport (RBOF)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Cr-51	1.00E+00	2.60E-04	1.70E+01	4.42E+03	6%
Co-60	1.00E-02	1.50E-01	3.20E-01	4.80E+02	1%
Zn-65	1.00E-02	1.80E-02	8.50E-01	1.53E+02	0%
Zr-95	1.00E-02	1.90E-02	1.40E+00	2.66E+02	0%
Nb-95	1.00E-02	4.50E-03	7.40E-01	3.33E+01	0%
Ru-106	1.00E-03	4.40E-01	8.90E+00	3.92E+03	5%
Cs-137	1.00E-03	3.20E-02	1.00E+03	3.20E+04	42%
Ce-144	1.00E-02	3.50E-01	1.00E+01	3.50E+04	46%

RBOF Spent Deionizer Resin Transport (RBOF)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Cr-51	1.00E+00	2.61E-04	9.60E+00	2.51E+03	0%
Co-60	1.00E-02	1.50E-01	1.80E-01	2.70E+02	0%
Zn-65	1.00E-02	1.80E-02	4.70E-01	8.46E+01	0%
Zr-95	1.00E-02	1.90E-02	7.70E-01	1.46E+02	0%
Nb-95	1.00E-02	4.50E-03	4.10E-01	1.85E+01	0%
Ru-106	1.00E-03	4.40E-01	4.90E+00	2.16E+03	0%
Cs-134	1.00E-03	4.70E-02	4.10E-01	1.93E+01	0%
Cs-137	1.00E-02	3.20E-02	5.70E+02	1.82E+05	36%
Ce-144	1.00E-02	3.50E-01	5.70E+00	2.00E+04	4%
Pu-240	1.00E-03	5.10E+02	5.90E-01	3.01E+05	59%

Disassembly Basin Deionizer & Purif Resin Cask (Reactors, RBOF)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Co-60	1.00E-02	1.50E-01	1.69E+00	2.54E+03	100%

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Container for Reactor Samples to 771-D/F (Reactors to 771D/F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Co-60	1.00E-02	1.50E-01	1.69E+00	2.54E+03	100%

Sample Truck (Inter Area to/from SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Cs-137	1.00E-02	3.20E-02	8.51E+02	2.72E+05	100%

Moderator in 55 Gallon Drum (100-400 Areas)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Am-241	1.00E-03	5.20E+02	2.00E+00	1.04E+06	100%

SRTC 776-A to F Tank Farm 5000 Gallon Truck (SRTC to F Tank Farm)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-239	1.00E-03	5.10E+02	6.23E-02	3.17E+04	100%

Contaminated Water Transport (100 Area to 211-F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Am-241	1.00E-03	5.20E+02	2.00E+00	1.04E+06	100%

100 Area Sludge Transport, 2000 Gallons (100 Areas to 241-F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Co-60	1.00E-02	1.50E-01	2.00E+00	3.00E+03	100%

RESULTS

Table 2 presents the radionuclides inventories determined for the various onsite and offsite shipments to contribute greater than or equal to 95% of the total dose as required in the EMPP-6Q-001.

Table 2 Screened Radionuclides

Note: Release Fractions (RF) extracted from DOE Standard 1027.92.
Inhalation Dose Conversion Factors (DCF) extracted from DOE/EH-0071.
DCF for H-3 increased by 50% to account for absorption.
Undesignated alpha radiation considered as Am-241.
Undesignated Beta/Gamma radiation considered as Co-60.
Tank Farm Sludge (25 liters) worst case was from HM-Process.
Depleted Uranium Oxide was considered all U-235 for conservatism.
$D_{TOT(1)}$ refers to the total of column D for that container from Table 1.

Container of LLW SWDF (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
U-234	1.00E-03	1.30E+02	4.00E+04	5.20E+09	19.83%
Am-241	1.00E-03	5.20E+02	4.00E+04	2.08E+10	79.30%
					99%

Container for LLW Compactor (253-H)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Co-60	1.00E-02	1.50E-01	2.09E+00	3.14E+03	13.39%
Pu-238	1.00E-03	4.60E+02	7.60E-03	3.50E+03	14.94%
Pu-239	1.00E-03	5.10E+02	7.60E-03	3.88E+03	16.56%
Pu-240	1.00E-03	5.10E+02	7.60E-03	3.88E+03	16.56%
Pu-242	1.00E-03	4.80E+02	7.60E-03	3.65E+03	15.59%
Am-241	1.00E-03	5.20E+02	7.91E-03	4.11E+03	17.57%
					95%

MW Waste - Tritium Bearing Container (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
H-3	1.00E+00	9.50E-05	5.00E+03	4.75E+05	100%
					100%

Container of MW Waste - Beta/Gamma (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
C0-60	1.00E-02	1.50E-01	1	1.50E+03	24%
Cs-137	1.00E-02	3.20E-02	1.50E+01	4.80E+03	75.25%
					99%

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Container of MW WASTE - Alpha (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-239	1.00E-03	5.10E+02	1.20E+00	6.12E+05	44%
Pu-240	1.00E-03	5.10E+02	3.00E-01	1.53E+05	11%
Am-241	1.00E-03	5.20E+02	1.10E+00	5.72E+05	41%
					96%

Container of LAWV (Waste)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Co-60	1.00E-02	1.50E-01	2.53E+01	3.80E+04	13.52%
Pu-238	1.00E-03	4.60E+02	9.10E-02	4.19E+04	14.92%
Pu-239	1.00E-03	5.10E+02	9.10E-02	4.64E+04	16.54%
Pu-240	1.00E-03	5.10E+02	9.10E-02	4.64E+04	16.54%
Pu-242	1.00E-03	4.80E+02	9.10E-02	4.37E+04	15.57%
Am-241	1.00E-03	5.20E+02	9.47E-02	4.92E+04	17.55%
					95%

Container for ILNTV Combustibles (E Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Sr-90	1.00E-03	1.30E+00	2.30E+01	2.99E+04	3.73%
Cs-137	1.00E-02	3.20E-02	2.30E+02	7.36E+04	9.18%
Pu-238	1.00E-03	4.60E+02	2.30E-01	1.06E+05	13.19%
Pu-239	1.00E-03	5.10E+02	2.30E-01	1.17E+05	14.62%
Pu-240	1.00E-03	5.10E+02	2.30E-01	1.17E+05	14.62%
Pu-242	1.00E-03	4.80E+02	2.30E-01	1.10E+05	13.76%
Am-241	1.00E-03	5.20E+02	4.10E-01	2.13E+05	26.58%
					96%

Container for LNTV Noncombustibles (E Area)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Sr-90	1.00E-03	1.30E+00	1.80E+03	2.34E+06	28.58%
Co-60	1.00E-02	1.50E-01	1.80E+03	2.71E+06	24.73%
Pu-238	1.00E-03	4.60E+02	1.80E+00	8.28E+05	7.57%
Pu-239	1.00E-03	5.10E+02	1.80E+00	9.18E+05	8.39%
Pu-240	1.00E-03	5.10E+02	1.80E+00	9.18E+05	8.39%
Pu-242	1.00E-03	4.80E+02	1.80E+00	8.64E+05	7.90%
Am-241	1.00E-03	5.20E+02	2.54E+00	1.32E+06	12.07%
					98%

ILTV Bulk Container (E Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Co-60	1.00E-02	1.50E-01	1.96E+03	2.94E+06	79.91%
Pu-239	1.00E-03	5.10E+02	2.30E-01	1.17E+05	3.19%
Pu-240	1.00E-03	5.10E+02	2.30E-01	1.17E+05	3.19%
Pu-242	1.00E-03	4.80E+02	2.30E-01	1.10E+05	3.00%
Pu-238	1.00E-03	4.60E+02	2.30E-01	1.06E+05	2.88%
Am-241	1.00E-03	5.20E+02	2.43E-01	1.26E+05	3.43%
					96%

ILTV Crucibles Container (E Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
H-3	1.00E+00	9.50E-05	4.00E+04	3.80E+06	73.56%
Co-60	1.00E-02	1.50E-01	2.70E+02	4.05E+05	7.84%
Sr-90	1.00E-03	1.30E+00	1.80E+02	2.34E+05	4.53%
Np-237	1.00E-03	4.90E+02	1.80E-01	8.82E+04	1.71%
Pu-239	1.00E-03	5.10E+02	1.80E-01	9.18E+04	1.78%
Pu-240	1.00E-03	5.10E+02	1.80E-01	9.18E+04	1.78%
Pu-242	1.00E-03	4.80E+02	1.80E-01	8.64E+04	1.67%
Am-241	1.00E-03	5.20E+02	3.90E-01	2.03E+05	3.93%
					96.79%

LLWSB Container (E Area Vaults)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
H-3	1.00E+00	9.50E-05	4.00E+04	3.80E+06	79.82%
Sr-90	1.00E-03	1.30E+00	1.80E+02	2.34E+05	4.92%
Am-241	1.00E-03	5.20E+02	3.90E-01	2.03E+05	4.26%
Pu-239	1.00E-03	5.10E+02	1.80E-01	9.18E+04	1.93%
Pu-240	1.00E-03	5.10E+02	1.80E-01	9.18E+04	1.93%
Np-237	1.00E-03	4.90E+02	1.80E-01	8.82E+04	1.85%
					95%

Pu O2 Container (235F and 247F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-238	1.00E-03	4.60E+02	9.16E+02	4.21E+08	100.00%
					100%

Container, Pail, Casket, Charge Can, Type A Storage Vault (235-F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-238	1.00E-03	1.06E-04	2.74E+05	2.90E+04	99.99%
					100.00%

H Canyon Sample Container (221H to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-238	1.00E-03	4.60E+02	1.54E+01	7.08E+06	100.00%
					100%

H Canyon Sample Container (221H to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
U-235	1.00E-03	1.20E+02	8.64E-05	1.04E+01	100.00%
					100%

H Canyon Sample Container (221H to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Np-237	1.00E-03	4.90E+02	7.05E-04	3.45E+02	100.00%
					100%

F Canyon Sample Container (221F to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-238	1.00E-03	4.60E+02	1.20E-01	5.51E+04	100.00%
					100%

F Canyon Sample Container (221F to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Am-243	1.00E-03	5.20E+02	1.99E-02	1.03E+04	100.00%
					100%

F Canyon Sample Container (221F to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Cm-244	1.00E-03	2.70E+02	8.09E+00	2.18E+06	100.00%
					100%

HB Line Sample Container (221H to 772-1F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOTAL}$
Pu-238	1.00E-03	4.60E+02	8.55E-01	3.93E+05	100.00%
					100%

HB Line Sample Container (221H to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-238	1.00E-03	4.60E+02	8.55E-01	3.93E+05	100.00%
					100%

FB Line Oxide Container (221F to Inter Area)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-239	1.00E-03	5.10E+02	5.58E+03	2.85E+09	100.00%
					100.00%

FB Line Sample Container (221F to SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-239	1.00E-03	5.10E+02	6.20E-01	3.16E+05	100.00%
					100%

235F Material Container to 221 HB Line (235F to 221H)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-238	1.00E-03	4.60E+02	3.42E+04	1.57E+10	100.00%
					100%

235F Material Container to 221 FB Line (235F to 221 F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-239	1.00E-03	5.10E+02	1.86E+02	9.49E+07	100.00%
					100.00%

SRTC Material Container (SRTC to DWPF)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Cf-252	1.00E-03	4.24E-05	2.69E+01	1.14E+00	100.00%
					100.00%

A Line Material (A Line)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
(assume U-235)	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Depleted UO3	1.00E-03	1.20E+02	3.24E-03	3.89E+02	100.00%
					100%

UNH Trailer (H Area Outside)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
U-235	1.00E-03	1.20E+02	8.20E+03	9.84E+08	100%
					100%

RBOF Portable Deionizer Column Transport (RBOF)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Cr-51	1.00E+00	2.60E-04	1.70E+01	4.42E+03	5.80%
Ru-106	1.00E-03	4.40E-01	8.90E+00	3.92E+03	5.13%
Cs-137	1.00E-03	3.20E-02	1.00E+03	3.20E+04	41.96%
Ce-144	1.00E-02	3.50E-01	1.00E+01	3.50E+04	45.89%
					98.78%

RBOF Spent Deoinizer Resin Transport (RBOF)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Cs-137	1.00E-02	3.20E-02	5.70E+02	1.82E+05	36%
Pu-240	1.00E-03	5.10E+02	5.90E-01	3.01E+05	59%
					95%

Disassembly Basin Deionizer & Purif Resin Cask (Reactors)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Co-60	1.00E-02	1.50E-01	1.69E+00	2.54E+03	100%
					100%

Container for Reactor Samples to 771-D/F(Reactors to 771-D/F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Co-60	1.00E-02	1.50E-01	1.69E+00	2.54E+03	100%
					100%

Sample Truck (Inter Area to/from SRTC)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Cs-137	1.00E-02	3.20E-02	8.51E+02	2.72E+05	100%
					100%

Moderator Transport in 55 Gallon Drums (100-400 Areas)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Am-241	1.00E-03	5.20E+02	2.00E+00	1.04E+06	100%
					100%

SRTC 776A to F Tank Farm 5000 Gallon Truck (776A to Tank Farm)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Pu-239	1.00E-03	5.10E+02	6.23E-02	3.17E+04	100%
					100%

Contaminated Water Transport (100 Area to 211-F)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Am-241	1.00E-03	5.20E+02	2.00E+00	1.04E+06	100%
					100%

100 Area Sludge Transport (100 Area to 241-F)(2000 gallons)

Radionuclides	RF	DCF (rem/uCi)	Inventory (Ci)	Total Release (rem)	Percent
	A	B	C	D=ABC*1E6	$E=D/D_{TOT(1)}$
Co-60	1.00E-02	1.50E-01	2.00E+00	3.00E+03	100%
					100%

Based on the screening criteria the following radionuclides require accident analysis in the THM EPHA:

Ru-106	U-235	Pu-238	Pu-239	Pu-240	U-234
Pu-242	Am-241	Am-243	Cr-51	Co-60	Sr-90
Cf-252	H-3	Cs-137	Np-237	Cm-244	Ce-144

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INTRODUCTION

The radionuclide source terms for fire, impact, and resuspension were calculated for each of the transportation containers as identified in Calculation 4. Calculation 4 determined the radionuclides for each transportation container which contributed greater than or equal to 95% of the total dose (screened the radionuclides) as required in EMPP-6Q-001. The physical state was also recorded.

In this calculation the results from Calculation 4 are converted to a total PU-238 Material at Risk (MAR) equivalent for each container. The purpose of using a single isotope MAR equivalent is to simplify the calculation for the source term and aide in the dispersion modeling.

Bounding Airborne Release Fractions (ARF) and Airborne Release Rates (ARR) for the recorded physical states, based on Reference 1, were then applied to the Pu-238 equivalent MAR for each of the three release mechanisms (fire, impact, resuspension). For conservatism the fire ARF and resuspension ARR used for solids were the same as those used for powders.

INPUT/ASSUMPTIONS

The initial quantities of radionuclides per container were based on the maximum inventories of radionuclides transported to and/or across the site based on individual facility EPHAs, SARs, BIOs, JCOs, various transportation documents, and Hazardous materials Shipment Public Access Roads Forms, the Waste Acceptance Manual and appropriate inventories from the Inter-Site Transportation Radiological and Toxicological Sabotage Vulnerability Assessment as identified in Calculation 4.

The radionuclides which do not contribute significantly to the total dose were eliminated in Calculation 4. The radionuclides were screened using quantities listed in 10 CFR 30.72 and employing the methodology identified in DOE STD-1027. Per the analysis in Calculation 4, all of the nuclides failed the screening methodology. The nuclides were further characterized by their contribution to dose upon release. Therefore the radionuclides which did not contribute significantly to the total dose were eliminated. The remaining radionuclides contributed greater or equal to 95% of the total dose.

When combining isotopes into the Pu-238 equivalent, it was assumed that the contents within the container were homogenous and of one physical form. The physical form of the contents of each container were based on Calculation 4. This was necessary because only isotopes of similar physical characteristics should be combined. The tritium inventory was not combined.

CALCULATION

The following equation was used to convert multiple isotopes into a single isotopic equivalent. The tritium inventory was not combined.

$$PU_{238\,eq} = \frac{1\,(\sum A_i \times DCF_i)}{DCF_{Pu\,238}}$$

where:

$PU_{238\,eq}$: Pu-238 is utilized as the base isotope for establishing Curie equivalents.

$DCF_{Pu\,238}$: The exposure to dose conversion factor (CEDE) for inhalation per unit intake for Pu-238 (Ref. 2).

A_i: The number of Ci of the ith isotope.

DCF_i: The exposure-to dose conversion factor for inhalation for the ith isotope (Ref. 2).

The isotopes were combined into a Pu-238 equivalent for each of the shipping containers as shown in below in Table 1.

Table 1. PU-238 Equivalent or H-3 for each Shipping Container

Container of LLW SWDF (Waste)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
U-234	4.00E+03	1.30E+08	1.13E+03
Am-241	4.00E+03	5.20E+08	4.52E+03
			5.65E+03

Container of LLW Compactor (253-H)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Co-60	2.09E+00	1.50E+05	6.82E-04
Pu-238	7.60E-03	4.60E+08	7.60E-03
Pu-239	7.60E-03	5.10E+08	8.43E-03
Pu-240	7.60E-03	5.10E+08	8.43E-03
Pu-242	7.60E-03	4.80E+08	7.93E-03
Am-241	7.91E-03	5.20E+08	8.94E-03
			4.20E-02

MW Waste - Tritium Bearing Container (Waste)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	H-3 (Ci)
H-3	5.00E+03	9.50E+01	5.00E+03
			5.00E+03

Container of MW Waste - Beta/Gamma (Waste)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
C0-60	1.00E+01	1.50E+05	3.26E-03
Cs-137	1.50E+01	3.20E+04	1.04E-03
			4.30E-03

Container of MW WASTE - Alpha (Waste)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-239	1.20E+00	5.10E+08	1.33E+00
Pu-240	3.00E-01	5.10E+08	3.33E-01
Am-241	1.10E+00	5.20E+08	1.24E+00
			2.91E+00

Container of LAWV (Waste)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Co-60	2.53E+01	1.50E+05	8.25E-03
Pu-238	9.10E-02	4.60E+08	9.10E-02
Pu-239	9.10E-02	5.10E+08	1.01E-01
Pu-240	9.10E-02	5.10E+08	1.01E-01
Pu-242	9.10E-02	4.80E+08	9.50E-02
Am-241	9.47E-02	5.20E+08	1.07E-01
			5.03E-01

Container for ILNTV Combustibles (E Area Vaults)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Sr-90	2.30E+01	1.30E+06	6.50E-02
Cs-137	2.30E+02	3.20E+04	1.60E-02
Pu-238	2.30E-01	4.60E+08	2.30E-01
Pu-239	2.30E-01	5.10E+08	2.55E-01
Pu-240	2.30E-01	5.10E+08	2.55E-01
Pu-242	2.30E-01	4.80E+08	2.40E-01
Am-241	4.10E-01	5.20E+08	4.63E-01
			1.52E+00

Container for LNTV Noncombustibles (E Area)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Sr-90	1.80E+03	1.30E+06	5.09E+00
Co-60	1.80E+03	1.50E+05	5.87E-01
Pu-238	1.80E+00	4.60E+08	1.80E+00
Pu-239	1.80E+00	5.10E+08	2.00E+00
Pu-240	1.80E+00	5.10E+08	2.00E+00
Pu-242	1.80E+00	4.80E+08	1.88E+00
Am-241	2.54E+00	5.20E+08	2.87E+00
			1.62E+01

ILTV Bulk Container (E Area Vaults)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Co-60	1.96E+03	1.50E+05	6.39E-01
Pu-239	2.30E-01	5.10E+08	2.55E-01
Pu-240	2.30E-01	5.10E+08	2.55E-01
Pu-242	2.30E-01	4.80E+08	2.40E-01
Pu-238	2.30E-01	4.60E+08	2.30E-01

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM

Subject Source Terms and Release Designation for Radionuclides

Computer E. T. Ketusky Date 09/03/96

Reviewed by S.A. Henderson

Works Calculation 5

Sheet No. 4 of 20

Am-241	2.43E-01	5.20E+08	2.75E-01
			1.89E+00

ILTV Crucibles Container (E Area Vaults)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	H-3 (Ci)
H-3	4.00E+04	9.50E+01	4.00E+04
			4.00E+04
			Pu-238$_{equiv}$ (Ci)
Co-60	2.70E+02	1.50E+05	8.80E-02
Sr-90	1.80E+02	1.30E+06	5.09E-01
Np-237	1.80E-01	4.90E+08	1.92E-01
Pu-239	1.80E-01	5.10E+08	2.00E-01
Pu-240	1.80E-01	5.10E+08	2.00E-01
Pu-242	1.80E-01	4.80E+08	1.88E-01
Am-241	3.90E-01	5.20E+08	4.41E-01
			1.82E+00

LLWSB Container (E Area Vaults)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	H-3 (Ci)
H-3	1.00E+04	9.50E+01	1.00E+04
			1.00E+04
			Pu-238$_{equiv}$ (Ci)
Sr-90	1.80E+02	1.30E+06	5.09E-01
Am-241	3.90E-01	5.20E+08	4.41E-01
Pu-239	1.80E-01	5.10E+08	2.00E-01
Pu-240	1.80E-01	5.10E+08	2.00E-01
Np-237	1.80E-01	4.90E+08	1.92E-01
			1.54E+00

Pu O2 Container (235F and 247F)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238$_{equiv}$ (Ci)
Pu-238	9.16E+02	4.60E+08	9.16E+02
			9.16E+02

Container, Pail, Casket, Charge Can, Type A Storage Vault (235-F)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238$_{equiv}$ (Ci)
Pu-238	2.74E+05	4.60E+08	2.74E+05

2.74E+05

H Canyon Sample Container (221H to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-238	1.54E+01	4.60E+08	1.54E+01
			1.54E+01

H Canyon Sample Container (221H to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
U-235	8.64E-05	1.20E+08	2.25E-05
			2.25E-05

H Canyon Sample Container (221H to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Np-237	7.05E-04	4.90E+08	7.51E-04
			7.51E-04

F Canyon Sample Container (221F to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-238	1.20E-01	4.60E+08	1.20E-01
			1.20E-01

F Canyon Sample Container (221F to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Am-241	1.99E-02	5.20E+08	2.25E-02
			2.25E-02

F Canyon Sample Container (221F to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Cm-244	8.09E+00	2.70E+08	4.75E+00
			4.75E+00

HB Line Sample Container (221H to 772-1F)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)

Pu-238	8.55E-01	4.60E+08	8.55E-01
			8.55E-01

HB Line Sample Container (221H to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-238	8.55E-01	4.60E+08	8.55E-01
			8.55E-01

FB Line Oxide Container (221F to Inter Area)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-239	5.58E+03	5.10E+08	6.19E+03
			6.19E+03

FB Line Sample Container (221F to SRTC)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-239	6.20E-01	5.10E+08	6.87E-01
			6.87E-01

235F Material Container (235F to 221H)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-238	3.42E+04	5.10E+08	3.79E+04
			3.42E+04

235F Material Container (235F to 221 F)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-239	1.66E+02	5.10E+08	1.84E+02
			1.84E+02

SRTC Material Container (SRTC to DWPF)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Cf-252	2.69E+01	1.30E+08	7.60E+00
			7.60E+00

A Line Material (A Line)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)

(assume U-235)

Depleted UO3	3.24E-03	1.20E+08	8.45E-04
			8.45E-04

UNH Trailer (H Area Outside)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
U-234	1.15E+02	1.30E+08	3.24E+01
U-238	2.87E+01	1.20E+08	7.49E+00
			3.99E+01

RBOF Portable Deionizer Column Transport (RBOF)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Cr-51	1.70E+01	2.60E+02	9.61E-06
Ru-106	8.90E+00	4.40E+05	8.51E-03
Cs-137	1.00E+03	3.20E+04	6.96E-02
Ce-144	1.00E+01	3.50E+05	7.61E-03
			8.57E-02

RBOF Spent Deoinizer Resin Transport (RBOF)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Cs-137	5.70E+02	3.20E+04	3.97E-02
Pu-240	5.90E-01	5.10E+08	6.54E-01
			6.94E-01

Disassembly Basin Deionizer & Purif Resin Cask (Reactors)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Co-60	1.69E+00	1.50E+05	5.51E-04
			5.51E-04

Reactor Samples Container (Reactors to 771-D/F)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Co-60	1.69E+00	1.50E+05	5.51E-04
			5.51E-04

Sample Truck (Inter Area)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Cs-137	8.51E+02	3.20E+04	5.92E-02
			5.92E-02

Moderator Transport in 55 Gallon Drums (100-400 Areas)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Am-241	2.00E+00	5.20E+08	2.26E+00
			2.26E+00

SRTC 776A to F Tank Farm 5000 Gallon Truck (776A to Tank Farm)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Pu-239	6.23E-02	5.10E+08	6.91E-02
			6.91E-02

Contaminated Water Transport (100 Area to 211-F)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Am-241	2.00E+00	5.20E+08	2.26E+00
			2.26E+00

100 Area Sludge Transport (100 Area to 241-F) (2000 gallons)

Radionuclides	Inventory (Ci)	DCF (rem/Ci)	Pu-238equiv (Ci)
Co-60	2.00E+00	1.50E+05	6.52E-04
			6.52E-04

Table 2 calculates the source terms for the equivalent Pu-238 inventory and tritium inventory using the ARR and ARF for the different release mechanism (fire, impact, resuspension) for the identified different forms (Reference 2). The RF value used for the different mechanisms is equal to one unless otherwise indicated. The time used in resuspension is 2 hours. The DR (damage ratio) was normally conservatively considered to be one (with exceptions as noted). Table 2 also shows the release designations.

Table 2 Source Terms for Shipping Containers

Container of LLW SWDF (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-67	Impact + Resuspension 1-RD-68
5.65E+03	Waste	5.00E-04	1.00E-03	4.00E-05	2	2.83E+00	6.10E+00

*Note: Packaged Waste

Container of LLW Compactor (253-H)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-69	Impact + Resuspension 1-RD-70
4.20E-02	Waste	5.00E-04	1.00E-03	4.00E-05	2	2.10E-05	4.54E-05

*Note: Packaged Waste

MW Waste - Tritium Bearing Container (Waste)

H-3 (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-71	Impact + Resuspension 1-RD-72
5.00E+03	Waste	5.00E-04	1.00E-03	9.00E-05	2	2.50E+00	5.90E+00

*Note: Packaged Waste

Container of MW Waste - Beta/Gamma (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-73	Impact + Resuspension 1-RD-74
4.30E-03	Waste	5.00E-04	1.00E-03	9.00E-05	2	2.15E-06	5.08E-06

*Note: Packaged Waste

Container of MW WASTE - Alpha (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-75	Impact + Resuspension 1-RD-76
2.91E+00	Waste	5.00E-04	1.00E-03	9.00E-05	2	1.45E-03	3.43E-03

*Note: Packaged Waste

Container of TRU (Waste)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-77	Impact + Resuspension 1-RD-78
5.03E-01	Waste	5.00E-04	1.00E-03	4.00E-05	2	2.52E-04	5.43E-04

*Note: Packaged Waste

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Container for ILNTV Combustibles (E Area Vaults)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-79	Impact + Resuspension 1-RD-80
1.52E+00	Waste	5.00E-04	1.00E-03	4.00E-05	2	7.62E-04	1.65E-03

*Note: Packaged Waste

Container for LNTV Noncombustibles (E Area)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension (per hour)		Fire 1-RD-81	Impact + Resuspension 1-RD-82
1.62E+01	Waste	5.00E-04	1.00E-03	4.00E-05	2	8.11E-03	1.75E-02

*Note: Packaged Waste

ILTV Bulk Container (E Area Vaults)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact + Resuspension (per hour)			Fire 1-RD-83	Impact + Resuspension 1-RD-84
1.89E+00	Waste	5.00E-04	1.00E-03	4.00E-05	2	9.47E-04	2.04E-03

*Note: Packaged Waste

ILTV Crucibles Container (E Area Vaults)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension		Fire 1-RD-85	Impact + Resuspension 1-RD-86
1.82E+00	Waste	5.00E-04	1.00E-03	4.00E-05	2	9.10E-04	1.97E-03

*Note: Packaged Waste

LLWSB Container (E Area Vaults)

H-3 (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire*	Impact +	Resuspension		Fire 1-RD-87	Impact + Resuspension 1-RD-88
1.54E+00	Waste	5.00E-04	1.00E-03	4.00E-05	2	7.70E-04	1.66E-03

*Note: Packaged Waste

Pu O2 Container (235F and 247F)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact +	Resuspension		Fire 1-RD-89	Impact + Resuspension 1-RD-90
9.16E+02	Pu*	6.00E-05	2.00E-03	4.00E-05	2	5.50E-02	1.91E+00

*Powder,non-reactive, Fire RF =.01, Impact RF=.4

H Canyon Sample Container (221H to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-91	Impact + Resuspension 1-RD-92
1.54E+01	Liquid	2.00E-03	2.00E-03	9.00E-05	2	3.08E-02	3.36E-02

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H Canyon Sample Container (221H to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-93	Impact + Resuspension 1-RD-94
2.25E-05	Liquid	2.00E-03	2.00E-03	9.00E-05	2	4.51E-08	4.91E-08

H Canyon Sample Container (221H to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-95	Impact + Resuspension 1-RD-96
7.51E-04	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.50E-06	1.64E-06

F Canyon Sample Container (221F to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-97	Impact + Resuspension 1-RD-98
1.20E-01	Liquid	2.00E-03	2.00E-03	9.00E-05	2	2.40E-04	2.62E-04

F Canyon Sample Container (221F to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-99	Impact + Resuspension 1-RD-100
2.25E-02	Liquid	2.00E-03	2.00E-03	9.00E-05	2	4.50E-05	4.90E-05

F Canyon Sample Container (221F to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-101	Impact + Resuspension 1-RD-102
4.75E+00	Liquid	2.00E-03	2.00E-03	9.00E-05	2	9.50E-03	1.04E-02

HB Line Sample Container (221H to 772-1F)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-103	Impact + Resuspension 1-RD-104
8.55E-01	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.71E-03	1.86E-03

HB Line Sample Container (221H to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-105	Impact + Resuspension 1-RD-106
8.55E-01	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.71E-03	1.86E-03

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FB Line Oxide Container (221F to Inter Area)

Pu-238$_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-107	Impact + Resuspension 1-RD-108
6.19E+03	Powder	6.00E-05	1.00E-05	4.00E-05	2	3.71E-01	1.11E-02

*Powder, nonreactive, Fire RF=0.1, Impact RF=.01,

FB Line Sample Container (221F to SRTC)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-109	Impact + Resuspension 1-RD-110
6.87E-01	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.37E-03	1.50E-03

235F Material Container (235F to 221H)

Pu-238$_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-111	Impact + Resuspension 1-RD-112
3.42E+04	Powder	6.00E-05	1.00E-05	4.00E-05	2	2.27E+0	6.08E-01

*Powder, nonreactive, Fire RF=0.1, Impact RF=.01,

235F Material Container (235F to 221 F)

Pu-238$_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-113	Impact + Resuspension 1-RD-114
1.84E+02	Powder	6.00E-05	1.00E-05	4.00E-05	2	1.1E-02	3.31E-02

*Powder, nonreactive, Fire RF=0.1, Impact RF=.01,

SRTC Material Container (SRTC to DWPF)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-115	Impact + Resuspension 1-RD-116
7.60E+00	Aggr	6.00E-03	1.00E-03	4.00E-05	2	4.56E-02	8.21E-03

A Line Material (A Line)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-117	Impact + Resuspension 1-RD-118
8.45E-04	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.69E-06	1.84E-06

UNH Trailer (H Area Outside)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-119	Impact + Resuspension 1-RD-120
3.99E+01	Liquid	2.00E-03	2.00E-03	9.00E-05	2	7.98E-02	7.98E-02

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Container, Pail, Casket, Charge Can, Type A for Storage Vault (235-F)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-121	Impact + Resuspension 1-RD-122
2.74E+05	Surface	6.00E-05	1.00E-05	4.00E-05	2	8.22E-01	1.48E-02

Damage ratio of .5 used based on possible scenarios,*Fuel or Surface, RF =.01

RBOF Portable Deionizer Column Transport (RBOF)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-123	Impact + Resuspension 1-RD-124
8.57E-02	L/Resin	1.00E-02	1.00E-03	9.00E-05	2	8.57E-04	1.01E-04

*Resin, polystyrene

RBOF Spent Deoinizer Resin Transport (RBOF)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-125	Impact + Resuspension 1-RD-126
6.94E-01	L/Resin	1.00E-02	1.00E-03	9.00E-05	2	6.94E-03	8.19E-04

*Resin, polystyrene

Disassembly Basin Deionizer & Purif Resin Cask (Reactors)

$Pu\text{-}238_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-127	Impact + Resuspension 1-RD-128
5.51E-04	L/Resin	1.00E-02	1.00E-03	9.00E-05	2	5.51E-06	6.50E-07

*Resin, polystyrene

Reactor Samples Container (Reactors to 771-D/F)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-129	Impact + Resuspension 1-RD-130
5.51E-04	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.10E-06	1.20E-06

Sample Truck (Inter Area)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-131	Impact + Resuspension 1-RD-132
5.92E-02	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.18E-04	1.29E-04

Moderator Transport in 55 Gallon Drums (100-400 Areas)

$Pu\text{-}238_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-133	Impact + Resuspension 1-RD-134
2.26E+00	Liquid	2.00E-03	2.00E-03	9.00E-05	2	4.52E-03	4.93E-03

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SRTC 776A to F Tank Farm 5000 Gallon Truck (776A to Tank Farm)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-135	Impact + Resuspension 1-RD-136
6.91E-02	Liquid	2.00E-03	2.00E-03	9.00E-05	2	1.38E-04	1.51E-04

Contaminated Water Transport (100 Area to 211-F)

Pu-238$_{equiv}$ (Ci)	Form	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-137	Impact + Resuspension 1-RD-138
2.26E+00	Liquid	2.00E-03	2.00E-03	9.00E-05	2	4.52E-03	4.93E-03

100 Area Sludge Transport (100 Area to 241-F)(2000 gallons)

Pu-238$_{equiv}$ (Ci)	Form*	ARFS x RF			time (hrs)	Source Terms (Ci)	
		Fire	Impact + Resuspension			Fire 1-RD-139	Impact + Resuspension 1-RD-140
6.52E-04	L/Sludge	2.00E-03	4.00E-04	9.00E-05	2	1.30E-06	3.78E-07

*Impact RF =0.4

REFERENCES

1. *DOE Handbook Airborne Release Fractions/Rates and Respirable Fractions for Nonreactor Nuclear Facilities*, DOE-HDBK-3010-94, U.S. Department of Energy, October 1994.

2. *Internal Dose Conversion Factors for Calculation of Dose to the Public*, DOE/EH-0071, U.S. Department of Energy, Washington, DC, July 1988.

INTRODUCTION

The purpose of this calculation is to determine the downwind consequences of radiological releases that may result from transportation accidents at the Savannah River Site. This calculation utilizes source terms for postulated scenarios involving both fires and impact/re-suspension events. The scenarios include numerous types of packaging and material configurations.

ASSUMPTIONS

- All source terms have been normalized to a single isotope equivalent, as appropriate.
- A release fraction appropriate to the applicable release mechanism scenario has been applied to all source terms. Accordingly, a release fraction of 1 is utilized as input to the computer dispersion model.

ANALYTICAL METHODS AND CALCULATIONS

The HOTSPOT computer code is used for all radionuclide dispersion modeling. Dispersion modeling is performed for each scenario identified. Dispersion modeling parameters utilized in this calculation are as follows.

HOTSPOT Settings

- Complex Geometry
- Wind Height - 2 meters (ground)
- Sample Time - 30 minutes for fires, 10 minutes for impact/re-suspension events
- Source Term Geometry: Area
- Release Elevation - Surface Release
- Release horizontal dimension:3m
- Release vertical dimension: 3m

Distances to receptor locations

- 30 meters from the release
- 100 meters from the release
- Distance to the 1 rem CEDE point

Meteorology

95% Adverse Dispersion Conditions - all receptor locations

- Stability Class E
- 1.7 m/s wind speed
- Inversion Layer: 200 meters
- 50% Average Dispersion Conditions - all receptor locations
- Stability Class C
- 2.5 m/s wind speed
- Inversion Layer: 500 meters for Pu-238, 200 meters for H-3

RESULTS

Table 1 95% Adverse met Consequence Assessment Results - Radiological

Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)
1-RD-67	1.40E+01	2.40E+00	6.00E+02
1-RD-68	2.50E+04	4.20E+03	1.09E+04
1-RD-69	8.00E-02	1.20E-02	N/A
1-RD-70	1.80E-01	3.10E-02	N/A
1-RD-71	1.90E-03	4.00E-04	N/A
1-RD-72	5.70E-03	1.20E-03	N/A
1-RD-73	7.00E-02	1.20E-03	N/A
1-RD-74	2.10E-02	3.50E-03	N/A
1-RD-75	4.70E+00	1.00E+00	1.00E+02
1-RD-76	1.40E+01	2.40E+00	1.60E+02
1-RD-77	8.20E-01	1.40E-01	N/A
1-RD-78	2.20E+00	3.70E-01	5.00E+01
1-RD-79	2.50E+00	4.20E-01	6.00E+01
1-RD-80	6.70E+00	1.10E+00	1.10E+02
1-RD-81	2.60E+01	4.50E+00	2.30E+02
1-RD-82	7.10E+01	1.20E+01	3.80E+02
1-RD-83	3.10E+00	5.20E-01	7.00E+01
1-RD-84	8.20E+00	1.40E+00	1.20E+02
1-RD-85	7.10E-07	1.50E-07	N/A
1-RD-86	1.96E-06	3.90E-07	N/A
1-RD-87	6.00E-07	1.20E-07	N/A
1-RD-88	1.60E-06	3.30E-07	N/A
1-RD-89	1.80E+02	3.00E+01	6.30E+02
1-RD-90	7.70E+03	1.30E+03	5.16E+03
1-RD-91	1.00E+02	1.70E+01	4.60E+02
1-RD-92	1.40E+02	2.30E+01	5.40E+02
1-RD-93	1.50E-04	2.50E-05	N/A
1-RD-94	2.00E-04	3.40E-05	N/A
1-RD-95	4.90E-03	8.30E-04	N/A
1-RD-96	6.60E-03	1.10E-03	N/A
1-RD-97	7.80E-01	1.30E-01	N/A
1-RD-98	1.10E+00	1.8E-01	3.00E+01

Table 1 cont. 95% Adverse met Consequence Assessment Results - Radiological

Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)
1-RD-99	1.50E-01	2.50E-02	N/A
1-RD-100	2.00E-01	3.40E-02	N/A
1-RD-101	3.10E+01	5.30E+00	2.50E+02
1-RD-102	4.20E+01	7.20E+00	2.90E+02
1-RD-103	5.50E+00	9.50E-01	9.00E+01
1-RD-104	7.50E+00	1.30E+00	1.10E+02
1-RD-105	5.50E+00	9.50E-01	9.00E+01
1-RD-106	7.50E+00	1.30E+00	1.10E+02
1-RD-107	1.20E+03	2.10E+02	1.74E+03
1-RD-108	4.40E+01	7.60E+01	3.00E+02
1-RD-109	4.40E+00	7.60E-01	8.00E+01
1-RD-110	6.10E+00	1.00E+00	1.00E+02
1-RD-111	7.40E+03	1.30E+03	5.00E+03
1-RD-112	2.50E+03	4.20E+02	2.70E+03
1-RD-113	3.60E+01	6.10E+00	2.70E+02
1-RD-114	1.30E+02	2.30E+01	5.40E+02
1-RD-115	1.50E+02	2.50E+01	5.70E+02
1-RD-116	3.30E+01	5.70E+00	2.60E+02
1-RD-117	5.50E-03	9.30E-04	N/A
1-RD-118	7.40E-03	1.30E-03	N/A
1-RD-119	2.6E+02	4.4E+01	7.70E+02
1-RD-120	3.2E+02	5.5E+01	8.60E+02
1-RD-121	2.70E+03	4.50E+02	2.80E+03
1-RD-122	6.00E+01	1.00E+01	3.60E+02
1-RD-123	2.80E+00	4.70E-01	6.00E+01
1-RD-124	4.10E-01	7.00E-02	N/A
1-RD-125	2.30E+01	3.80E+00	2.10E+02
1-RD-126	3.30E+00	5.60E-01	7.00E+01
1-RD-127	1.80E-02	3.00E-03	N/A
1-RD-128	2.60E-03	4.50E-04	N/A
1-RD-129	3.60E-03	6.10E-04	N/A
1-RD-130	4.90E-03	8.30E-04	N/A
1-RD-131	3.80E-01	6.50E-02	N/A
1-RD-132	5.20E-01	8.90E-02	N/A
1-RD-133	1.50E+01	2.50E+00	1.60E+02
1-RD-134	2.00E+01	3.40E+00	1.90E+02
1-RD-135	4.50E-01	7.60E-02	N/A
1-RD-136	6.10E-01	1.00E-01	N/A
1-RD-137	1.50E+01	2.50E+00	1.60E+02
1-RD-138	2.10E+01	3.40E+00	1.90E+02
1-RD-139	4.20E-03	7.20E-04	N/A
1-RD-140	1.50E-03	2.60E-04	N/A

Table 2 50% Average met Consequence Assessment Results - Radiological

Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)
1-RD-67	1.40E+00	1.00E-01	1.00E+02
1-RD-68	7.23E+03	9.90E+02	3.98E+03
1-RD-69	2.00E-02	2.70E-03	N/A
1-RD-70	5.40E-02	7.73E-03	N/A
1-RD-71	5.00E-04	7.20E-05	N/A
1-RD-72	1.50E-03	2.10E-04	N/A
1-RD-73	2.00E-03	2.80E-04	N/A
1-RD-74	6.00E-03	8.20E-04	N/A
1-RD-75	1.40E+00	1.00E+00	1.00E+03
1-RD-76	4.10E+00	1.00E+00	1.00E+02
1-RD-77	2.40E-01	3.30E-02	N/A
1-RD-78	6.40E-01	8.80E-02	N/A
1-RD-79	7.20E-01	9.90E-02	N/A
1-RD-80	2.00E+00	1.00E+00	1.00E+02
1-RD-81	7.70E+00	1.10E+00	1.00E+02
1-RD-82	2.10E+01	2.80E+01	1.70E+02
1-RD-83	9.00E-01	1.20E-01	N/A
1-RD-84	2.40E+00	3.30E-01	5.00E+1
1-RD-85	1.80E-07	2.60E-08	N/A
1-RD-86	5.00E-07	7.10E-08	N/A
1-RD-87	1.60E-07	2.20E-08	N/A
1-RD-88	4.20E-07	6.00E-08	N/A
1-RD-89	5.20E+01	7.10E+00	2.80E+02
1-RD-90	2.30E+03	3.10E+02	2.05E+03
1-RD-91	2.90E+01	4.00E+00	2.10E+02
1-RD-92	4.00E+01	5.40E+00	2.50E+02
1-RD-93	4.30E-05	5.90E-06	N/A
1-RD-94	5.80E-05	7.90E-06	N/A
1-RD-95	1.40E-03	1.90E-04	N/A
1-RD-96	1.90E-03	2.70E-04	N/A
1-RD-97	2.30E-01	3.10E-02	N/A
1-RD-98	3.10E-01	4.20E-02	N/A
1-RD-99	4.20E-02	5.80E-03	N/A

Table2 cont. 50% Average met Consequence Assessment Results - Radiological

Release Designation	Total Dose @ 30 meters (rem)	Total Dose @ 100 meters (rem)	Maximum Distance to PAC (meters)
1-RD-100	5.80E-02	7.90E-03	N/A
1-RD-101	9.00E+00	1.20E+00	1.10E+02
1-RD-102	1.20E+01	1.70E+00	1.30E+02
1-RD-103	1.60E+00	1.00E+00	1.00E+02
1-RD-104	2.20E+00	1.00E+00	1.00E+02
1-RD-105	1.60E+00	1.00E+00	1.00E+02
1-RD-106	2.20E+00	1.00E+00	1.00E+02
1-RD-107	3.50E+02	4.80E+01	7.60E+02
1-RD-108	1.30E+01	1.80E+00	1.40E+02
1-RD-109	1.30E+00	1.00E+00	1.00E+02
1-RD-110	1.80E+00	1.00E+00	1.00E+02
1-RD-111	2.20E+03	2.90E+02	1.99E+03
1-RD-112	7.20E+02	9.80E+01	1.10E+03
1-RD-113	1.00E+01	1.40E+00	1.20E+02
1-RD-114	3.90E+01	5.40E+00	2.40E+02
1-RD-115	4.30E+01	5.90E+00	2.50E+02
1-RD-116	9.70E+00	1.30E+00	1.10E+02
1-RD-117	1.60E-03	2.20E-04	N/A
1-RD-118	2.20E-03	3.00E-04	N/A
1-RD-119	7.6E+01	1.0E+01	3.40E+02
1-RD-120	9.5E+01	1.3E+01	3.80E+02
1-RD-121	7.80E+02	1.10E+02	1.15E+03
1-RD-122	1.80E+01	2.40E+00	1.60E+02
1-RD-123	8.10E-01	1.10E-01	N/A
1-RD-124	1.20E-01	1.60E-02	N/A
1-RD-125	6.60E+00	1.00E+00	1.00E+02
1-RD-126	9.70E-01	1.30E-01	N/A
1-RD-127	5.20E-03	7.20E-04	N/A
1-RD-128	7.70E-04	1.10E-04	N/A
1-RD-129	1.00E-03	1.40E-04	N/A
1-RD-130	1.40E-03	1.90E-04	N/A
1-RD-131	1.10E-01	1.50E-02	N/A
1-RD-132	1.50E-01	2.10E-02	N/A
1-RD-133	4.30E+00	1.00E+00	1.00E+02
1-RD-134	5.80E+00	1.00E+00	1.00E+02
1-RD-135	1.30E-01	1.80E-02	N/A
1-RD-136	1.80E-01	2.40E-02	N/A
1-RD-137	4.30E+00	1.00E+00	1.00E+02
1-RD-138	5.80E+00	1.00E+00	1.00E+02
1-RD-139	1.20E-03	1.70E-04	N/A
1-RD-140	4.50E-04	6.10E-05	N/A

REFERENCES

1. Hadlock, D.J., *Consequence Assessment For Emergency Preparedness Hazards Assessments.* TP-95-002, Rev. 2. Westinghouse Savannah River Company, Savannah River Site, Aiken, SC, November 9, 1995.

2. Hadlock, D.J., *Emergency Preparedness Hazards Assessments.* WSRC-RP-95-1001, Guideline 2.1.3, Rev. 0. Westinghouse Savannah River Company, Savannah River Site, Aiken, SC, November 30, 1995.

3. Hadlock, D.J., *Emergency Preparedness Hazards Assessment Style Guide.* ECS-EST-95-0018, Rev. 0. Westinghouse Savannah River Company, Savannah River Site, Aiken, SC, February 28, 1995.

4. *Standards for Development and Maintenance of an Emergency Preparedness Hazards Assessment.* 6Q, Vol. II, EMPP 6Q-001, Rev. 1. Westinghouse Savannah River Company, Savannah River Site, Aiken, SC, November 1, 1995.

Release Designation: 1-RD-67, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:46
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.4E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.4 rem

D = 0.03 km	D = 0.10 km	D = 0.16 km
DEP = 9.1E-01 uCi/m^2	DEP = 1.5E-01 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 9.1E-05 (Ci-s)/m^3	CHI = 1.5E-05 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 2.4E+02 rem	SURFACE BONE 4.2E+01 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 2.0E+01 rem	RED MARROW 3.4E+00 rem	RED MARROW 1.5E+00 rem
LIVER 5.4E+01 rem	LIVER 9.2E+00 rem	LIVER 4.1E+00 rem
GONADS 3.0E+00 rem	GONADS 5.1E-01 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 1.4E+01 rem	EQUIVALENT 2.4E+00 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-67, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 10:54
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.4E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.188 rem

D = 0.03 km	D = 0.04 km	D = 0.10 km
DEP = 9.0E-02 uCi/m^2	DEP = 6.8E-02 uCi/m^2	DEP = 1.2E-02 uCi/m^2
CHI = 9.0E-06 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3	CHI = 1.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 2.4E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 3.3E+00 rem
RED MARROW 2.0E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 2.7E-01 rem
LIVER 5.4E+00 rem	LIVER 4.1E+00 rem	LIVER 7.4E-01 rem
GONADS 3.0E-01 rem	GONADS 2.3E-01 rem	GONADS 4.1E-02 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 1.4E+00 rem	EQUIVALENT 1.0E+00 rem	EQUIVALENT 1.9E-01 rem

Release Designation: 1-RD-68, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:35
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.1E+00 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 4.2E+03 rem

D = 0.03 km	D = 0.10 km	D = 10.88 km
DEP = 1.6E+03 uCi/m^2	DEP = 2.7E+02 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 1.6E-01 (Ci-s)/m^3	CHI = 2.7E-02 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 4.3E+05 rem	SURFACE BONE 7.4E+04 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 3.6E+04 rem	RED MARROW 6.1E+03 rem	RED MARROW 1.5E+00 rem
LIVER 9.6E+04 rem	LIVER 1.6E+04 rem	LIVER 4.1E+00 rem
GONADS 5.4E+03 rem	GONADS 9.1E+02 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 2.5E+04 rem	EQUIVALENT 4.2E+03 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-68, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:37
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.1E+00 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 9.9E+02 rem

D = 0.03 km	D = 0.10 km	D = 3.98 km
DEP = 4.7E+02 uCi/m^2	DEP = 6.4E+01 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 4.7E-02 (Ci-s)/m^3	CHI = 6.4E-03 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 1.3E+05 rem	SURFACE BONE 1.7E+04 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 1.1E+04 rem	RED MARROW 1.4E+03 rem	RED MARROW 1.5E+00 rem
LIVER 2.8E+04 rem	LIVER 3.9E+03 rem	LIVER 4.1E+00 rem
GONADS 1.6E+03 rem	GONADS 2.1E+02 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 7.2E+03 rem	EQUIVALENT 9.9E+02 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-69, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:16
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.1E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.012 rem

D = 0.03 km
DEP = 4.4E-03 uCi/m^2
CHI = 4.4E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.2E+00 rem
RED MARROW 9.9E-02 rem
LIVER 2.7E-01 rem
GONADS 1.5E-02 rem
EFFECTIVE DOSE
EQUIVALENT 6.8E-02 rem

D = 0.10 km
DEP = 7.6E-04 uCi/m^2
CHI = 7.6E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.0E-01 rem
RED MARROW 1.7E-02 rem
LIVER 4.5E-02 rem
GONADS 2.5E-03 rem
EFFECTIVE DOSE
EQUIVALENT 1.2E-02 rem

Release Designation: 1-RD-69, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:17
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.1E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.7E-03 rem

D = 0.03 km
DEP = 1.3E-03 uCi/m^2
CHI = 1.3E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.5E-01 rem
RED MARROW 2.9E-02 rem
LIVER 7.8E-02 rem
GONADS 4.3E-03 rem
EFFECTIVE DOSE
EQUIVALENT 2.0E-02 rem

D = 0.10 km
DEP = 1.8E-04 uCi/m^2
CHI = 1.8E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.8E-02 rem
RED MARROW 4.0E-03 rem
LIVER 1.1E-02 rem
GONADS 5.9E-04 rem
EFFECTIVE DOSE
EQUIVALENT 2.7E-03 rem

Release Designation: 1-RD-70, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:39
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.031 rem

D = 0.03 km
DEP = 1.2E-02 uCi/m^2
CHI = 1.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.2E+00 rem
RED MARROW 2.7E-01 rem
LIVER 7.2E-01 rem
GONADS 4.0E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E-01 rem

D = 0.10 km
DEP = 2.0E-03 uCi/m^2
CHI = 2.0E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.5E-01 rem
RED MARROW 4.6E-02 rem
LIVER 1.2E-01 rem
GONADS 6.8E-03 rem
EFFECTIVE DOSE
EQUIVALENT 3.1E-02 rem

Release Designation: 1-RD-70, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:39
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.3E-03 rem

D = 0.03 km
DEP = 3.5E-03 uCi/m^2
CHI = 3.5E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.5E-01 rem
RED MARROW 7.8E-02 rem
LIVER 2.1E-01 rem
GONADS 1.2E-02 rem
EFFECTIVE DOSE
EQUIVALENT 5.4E-02 rem

D = 0.10 km
DEP = 4.8E-04 uCi/m^2
CHI = 4.8E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E-01 rem
RED MARROW 1.1E-02 rem
LIVER 2.9E-02 rem
GONADS 1.6E-03 rem
EFFECTIVE DOSE
EQUIVALENT 7.3E-03 rem

Release Designation: 1-RD-71, Adverse

HOTSPOT 7.0 TRITIUM RELEASE 9-09-1996 12:49
TOTAL TRITIUM RELEASE : 2.5E+00 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 4.0E-04 rem

D = 0.03 km	D = 0.10 km
CHI = 6.3E-02 (Ci-s)/m^3	CHI = 1.3E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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EFFECTIVE DOSE EQUIVALENT 1.9E-03 rem	EFFECTIVE DOSE EQUIVALENT 4.0E-04 rem

Release Designation: 1-RD-71, Average

HOTSPOT 7.0 TRITIUM RELEASE 9-09-1996 12:50
TOTAL TRITIUM RELEASE : 2.5E+00 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.2E-05 rem

D = 0.03 km	D = 0.10 km
CHI = 1.6E-02 (Ci-s)/m^3	CHI = 2.3E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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EFFECTIVE DOSE EQUIVALENT 5.0E-04 rem	EFFECTIVE DOSE EQUIVALENT 7.2E-05 rem

Release Designation: 1-RD-72, Adverse

HOTSPOT 7.0 TRITIUM RELEASE 9-10-1996 20:41
TOTAL TRITIUM RELEASE : 5.9E+00 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.2E-03 rem

D = 0.03 km	D = 0.10 km
CHI = 1.8E-01 (Ci-s)/m^3	CHI = 3.8E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
---	---
EFFECTIVE DOSE EQUIVALENT 5.7E-03 rem	EFFECTIVE DOSE EQUIVALENT 1.2E-03 rem

Release Designation: 1-RD-72, Average

HOTSPOT 7.0 TRITIUM RELEASE 9-10-1996 20:42
TOTAL TRITIUM RELEASE : 5.9E+00 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.1E-04 rem

D = 0.03 km
CHI = 4.8E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 1.5E-03 rem

D = 0.10 km
CHI = 6.8E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 2.1E-04 rem

Release Designation: 1-RD-73, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:24
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.1E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.2E-03 rem

D = 0.03 km
DEP = 4.6E-04 uCi/m^2
CHI = 4.6E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.2E-01 rem
RED MARROW 1.0E-02 rem
LIVER 2.7E-02 rem
GONADS 1.5E-03 rem
EFFECTIVE DOSE
EQUIVALENT 7.0E-03 rem

D = 0.10 km
DEP = 7.8E-05 uCi/m^2
CHI = 7.8E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.1E-02 rem
RED MARROW 1.7E-03 rem
LIVER 4.7E-03 rem
GONADS 2.6E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.2E-03 rem

Release Designation: 1-RD-73, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:25
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.1E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.8E-04 rem

D = 0.03 km
DEP = 1.3E-04 uCi/m^2
CHI = 1.3E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.6E-02 rem
RED MARROW 3.0E-03 rem
LIVER 8.0E-03 rem
GONADS 4.4E-04 rem
EFFECTIVE DOSE
EQUIVALENT 2.0E-03 rem

D = 0.10 km
DEP = 1.8E-05 uCi/m^2
CHI = 1.8E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.9E-03 rem
RED MARROW 4.1E-04 rem
LIVER 1.1E-03 rem
GONADS 6.1E-05 rem
EFFECTIVE DOSE
EQUIVALENT 2.8E-04 rem

Release Designation: 1-RD-74, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:43
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.1E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.5E-03 rem

D = 0.03 km
DEP = 1.3E-03 uCi/m^2
CHI = 1.3E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.6E-01 rem
RED MARROW 3.0E-02 rem
LIVER 8.0E-02 rem
GONADS 4.5E-03 rem
EFFECTIVE DOSE
EQUIVALENT 2.1E-02 rem

D = 0.10 km
DEP = 2.3E-04 uCi/m^2
CHI = 2.3E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.2E-02 rem
RED MARROW 5.1E-03 rem
LIVER 1.4E-02 rem
GONADS 7.6E-04 rem
EFFECTIVE DOSE
EQUIVALENT 3.5E-03 rem

Release Designation: 1-RD-74, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:44
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.1E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 8.2E-04 rem

D = 0.03 km
DEP = 3.9E-04 uCi/m^2
CHI = 3.9E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E-01 rem
RED MARROW 8.8E-03 rem
LIVER 2.4E-02 rem
GONADS 1.3E-03 rem
EFFECTIVE DOSE
EQUIVALENT 6.0E-03 rem

D = 0.10 km
DEP = 5.4E-05 uCi/m^2
CHI = 5.4E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E-02 rem
RED MARROW 1.2E-03 rem
LIVER 3.2E-03 rem
GONADS 1.8E-04 rem
EFFECTIVE DOSE
EQUIVALENT 8.2E-04 rem

Release Designation: 1-RD-75, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:29
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.802 rem

D = 0.03 km	D = 0.09 km	D = 0.10 km
DEP = 3.1E-01 uCi/m^2	DEP = 6.9E-02 uCi/m^2	DEP = 5.2E-02 uCi/m^2
CHI = 3.1E-05 (Ci-s)/m^3	CHI = 6.9E-06 (Ci-s)/m^3	CHI = 5.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 8.3E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 1.4E+01 rem
RED MARROW 6.9E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 1.2E+00 rem
LIVER 1.8E+01 rem	LIVER 4.1E+00 rem	LIVER 3.1E+00 rem
GONADS 1.0E+00 rem	GONADS 2.3E-01 rem	GONADS 1.7E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 4.7E+00 rem	EQUIVALENT 1.0E+00 rem	EQUIVALENT 8.0E-01 rem

Release Designation: 1-RD-75, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:30
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.188 rem

D = 0.03 km
DEP = 9.0E-02 uCi/m^2
CHI = 9.0E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.4E+01 rem
RED MARROW 2.0E+00 rem
LIVER 5.4E+00 rem
GONADS 3.0E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E+00 rem

D = 0.04 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 1.2E-02 uCi/m^2
CHI = 1.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.3E+00 rem
RED MARROW 2.7E-01 rem
LIVER 7.4E-01 rem
GONADS 4.1E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.9E-01 rem

Release Designation: 1-RD-76, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:46
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.4E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.4 rem

D = 0.03 km
DEP = 9.1E-01 uCi/m^2
CHI = 9.1E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.4E+02 rem
RED MARROW 2.0E+01 rem
LIVER 5.4E+01 rem
GONADS 3.0E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E+01 rem

D = 0.10 km
DEP = 1.5E-01 uCi/m^2
CHI = 1.5E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.2E+01 rem
RED MARROW 3.4E+00 rem
LIVER 9.2E+00 rem
GONADS 5.1E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.4E+00 rem

D = 0.16 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-76, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:47
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.4E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.555 rem

D = 0.03 km
DEP = 2.7E-01 uCi/m^2
CHI = 2.7E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.2E+01 rem
RED MARROW 5.9E+00 rem
LIVER 1.6E+01 rem
GONADS 8.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 4.1E+00 rem

D = 0.07 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 3.6E-02 uCi/m^2
CHI = 3.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.8E+00 rem
RED MARROW 8.1E-01 rem
LIVER 2.2E+00 rem
GONADS 1.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 5.5E-01 rem

Release Designation: 1-RD-77, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:32
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.5E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.139 rem

D = 0.03 km
DEP = 5.3E-02 uCi/m^2
CHI = 5.3E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E+01 rem
RED MARROW 1.2E+00 rem
LIVER 3.2E+00 rem
GONADS 1.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 8.2E-01 rem

D = 0.10 km
DEP = 9.1E-03 uCi/m^2
CHI = 9.1E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.5E+00 rem
RED MARROW 2.0E-01 rem
LIVER 5.5E-01 rem
GONADS 3.0E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E-01 rem

Release Designation: 1-RD-77, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:33
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.5E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.033 rem

D = 0.03 km
DEP = 1.6E-02 uCi/m^2
CHI = 1.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.2E+00 rem
RED MARROW 3.5E-01 rem
LIVER 9.4E-01 rem
GONADS 5.2E-02 rem
EFFECTIVE DOSE
EQUIVALENT 2.4E-01 rem

D = 0.10 km
DEP = 2.1E-03 uCi/m^2
CHI = 2.1E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.8E-01 rem
RED MARROW 4.8E-02 rem
LIVER 1.3E-01 rem
GONADS 7.1E-03 rem
EFFECTIVE DOSE
EQUIVALENT 3.3E-02 rem

Release Designation: 1-RD-78, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:49
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.4E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.374 rem

D = 0.03 km
DEP = 1.4E-01 uCi/m^2
CHI = 1.4E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.9E+01 rem
RED MARROW 3.2E+00 rem
LIVER 8.6E+00 rem
GONADS 4.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.2E+00 rem

D = 0.05 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 2.4E-02 uCi/m^2
CHI = 2.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.6E+00 rem
RED MARROW 5.4E-01 rem
LIVER 1.5E+00 rem
GONADS 8.1E-02 rem
EFFECTIVE DOSE
EQUIVALENT 3.7E-01 rem

Release Designation: 1-RD-78, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:50
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.4E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.088 rem

D = 0.03 km	D = 0.10 km
DEP = 4.2E-02 uCi/m^2	DEP = 5.7E-03 uCi/m^2
CHI = 4.2E-06 (Ci-s)/m^3	CHI = 5.7E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
---	---
SURFACE BONE 1.1E+01 rem	SURFACE BONE 1.5E+00 rem
RED MARROW 9.4E-01 rem	RED MARROW 1.3E-01 rem
LIVER 2.5E+00 rem	LIVER 3.4E-01 rem
GONADS 1.4E-01 rem	GONADS 1.9E-02 rem
EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 6.4E-01 rem	EQUIVALENT 8.8E-02 rem

Release Designation: 1-RD-79, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:35
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 7.6E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.421 rem

D = 0.03 km	D = 0.06 km	D = 0.10 km
DEP = 1.6E-01 uCi/m^2	DEP = 6.7E-02 uCi/m^2	DEP = 2.8E-02 uCi/m^2
CHI = 1.6E-05 (Ci-s)/m^3	CHI = 6.7E-06 (Ci-s)/m^3	CHI = 2.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
---	---	---
SURFACE BONE 4.4E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 7.4E+00 rem
RED MARROW 3.6E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 6.1E-01 rem
LIVER 9.7E+00 rem	LIVER 4.0E+00 rem	LIVER 1.6E+00 rem
GONADS 5.4E-01 rem	GONADS 2.2E-01 rem	GONADS 9.2E-02 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 2.5E+00 rem	EQUIVALENT 1.0E+00 rem	EQUIVALENT 4.2E-01 rem

Release Designation: 1-RD-79, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 11:36
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 7.6E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.099 rem

D = 0.03 km
DEP = 4.7E-02 uCi/m^2
CHI = 4.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+01 rem
RED MARROW 1.1E+00 rem
LIVER 2.8E+00 rem
GONADS 1.6E-01 rem
EFFECTIVE DOSE
EQUIVALENT 7.2E-01 rem

D = 0.10 km
DEP = 6.5E-03 uCi/m^2
CHI = 6.5E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.7E+00 rem
RED MARROW 1.4E-01 rem
LIVER 3.9E-01 rem
GONADS 2.2E-02 rem
EFFECTIVE DOSE
EQUIVALENT 9.9E-02 rem

Release Designation: 1-RD-80, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:52
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.6E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m

RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.1 rem

D = 0.03 km
DEP = 4.4E-01 uCi/m^2
CHI = 4.4E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.2E+02 rem
RED MARROW 9.7E+00 rem
LIVER 2.6E+01 rem
GONADS 1.4E+00 rem
EFFECTIVE DOSE
EQUIVALENT 6.7E+00 rem

D = 0.10 km
DEP = 7.4E-02 uCi/m^2
CHI = 7.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.0E+01 rem
RED MARROW 1.7E+00 rem
LIVER 4.4E+00 rem
GONADS 2.5E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E+00 rem

D = 0.11 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-80, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:53
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.6E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.267 rem

D = 0.03 km
DEP = 1.3E-01 uCi/m^2
CHI = 1.3E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.4E+01 rem
RED MARROW 2.8E+00 rem
LIVER 7.6E+00 rem
GONADS 4.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.0E+00 rem

D = 0.05 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 1.7E-02 uCi/m^2
CHI = 1.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.7E+00 rem
RED MARROW 3.9E-01 rem
LIVER 1.0E+00 rem
GONADS 5.8E-02 rem
EFFECTIVE DOSE
EQUIVALENT 2.7E-01 rem

Release Designation: 1-RD-81, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 20:13
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.1E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 4.5 rem

D = 0.03 km
DEP = 1.7E+00 uCi/m^2
CHI = 1.7E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.6E+02 rem
RED MARROW 3.8E+01 rem
LIVER 1.0E+02 rem
GONADS 5.7E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.6E+01 rem

D = 0.10 km
DEP = 2.9E-01 uCi/m^2
CHI = 2.9E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.9E+01 rem
RED MARROW 6.5E+00 rem
LIVER 1.8E+01 rem
GONADS 9.7E-01 rem
EFFECTIVE DOSE
EQUIVALENT 4.5E+00 rem

D = 0.23 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-81, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 20:15
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.1E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.1 rem

D = 0.03 km
DEP = 5.0E-01 uCi/m^2
CHI = 5.0E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E+02 rem
RED MARROW 1.1E+01 rem
LIVER 3.0E+01 rem
GONADS 1.7E+00 rem
EFFECTIVE DOSE
EQUIVALENT 7.7E+00 rem

D = 0.10 km
DEP = 6.9E-02 uCi/m^2
CHI = 6.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.9E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E+00 rem

D = 0.10 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-82, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:55
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.8E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 12 rem

D = 0.03 km	D = 0.10 km	D = 0.38 km
DEP = 4.6E+00 uCi/m^2	DEP = 7.9E-01 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 4.6E-04 (Ci-s)/m^3	CHI = 7.9E-05 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 1.2E+03 rem	SURFACE BONE 2.1E+02 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 1.0E+02 rem	RED MARROW 1.8E+01 rem	RED MARROW 1.5E+00 rem
LIVER 2.8E+02 rem	LIVER 4.7E+01 rem	LIVER 4.1E+00 rem
GONADS 1.5E+01 rem	GONADS 2.6E+00 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 7.1E+01 rem	EQUIVALENT 1.2E+01 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-82, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 20:56
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.8E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.8 rem

D = 0.03 km
DEP = 1.4E+00 uCi/m^2
CHI = 1.4E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.7E+02 rem
RED MARROW 3.0E+01 rem
LIVER 8.1E+01 rem
GONADS 4.5E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.1E+01 rem

D = 0.10 km
DEP = 1.8E-01 uCi/m^2
CHI = 1.8E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.0E+01 rem
RED MARROW 4.1E+00 rem
LIVER 1.1E+01 rem
GONADS 6.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.8E+00 rem

D = 0.17 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-83, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 20:18
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 9.5E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.524 rem

D = 0.03 km	D = 0.07 km	D = 0.10 km
DEP = 2.0E-01 uCi/m^2	DEP = 6.9E-02 uCi/m^2	DEP = 3.4E-02 uCi/m^2
CHI = 2.0E-05 (Ci-s)/m^3	CHI = 6.9E-06 (Ci-s)/m^3	CHI = 3.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 5.4E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 9.2E+00 rem
RED MARROW 4.5E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 7.6E-01 rem
LIVER 1.2E+01 rem	LIVER 4.1E+00 rem	LIVER 2.0E+00 rem
GONADS 6.7E-01 rem	GONADS 2.3E-01 rem	GONADS 1.1E-01 rem
EFFECTIVE DOSE EQUIVALENT 3.1E+00 rem	EFFECTIVE DOSE EQUIVALENT 1.0E+00 rem	EFFECTIVE DOSE EQUIVALENT 5.2E-01 rem

Release Designation: 1-RD-83, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 20:18
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 9.5E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.123 rem

D = 0.03 km
DEP = 5.9E-02 uCi/m^2
CHI = 5.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.6E+01 rem
RED MARROW 1.3E+00 rem
LIVER 3.5E+00 rem
GONADS 2.0E-01 rem
EFFECTIVE DOSE
EQUIVALENT 9.0E-01 rem

D = 0.10 km
DEP = 8.0E-03 uCi/m^2
CHI = 8.0E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.2E+00 rem
RED MARROW 1.8E-01 rem
LIVER 4.8E-01 rem
GONADS 2.7E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.2E-01 rem

Release Designation: 1-RD-84, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-27-1996 19:08
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.0E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.4 rem

D = 0.03 km	D = 0.10 km	D = 0.12 km
DEP = 5.4E-01 uCi/m^2	DEP = 9.2E-02 uCi/m^2	DEP = 6.7E-02 uCi/m^2
CHI = 5.4E-05 (Ci-s)/m^3	CHI = 9.2E-06 (Ci-s)/m^3	CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 1.5E+02 rem	SURFACE BONE 2.5E+01 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 1.2E+01 rem	RED MARROW 2.0E+00 rem	RED MARROW 1.5E+00 rem
LIVER 3.2E+01 rem	LIVER 5.5E+00 rem	LIVER 4.0E+00 rem
GONADS 1.8E+00 rem	GONADS 3.1E-01 rem	GONADS 2.2E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 8.2E+00 rem	EQUIVALENT 1.4E+00 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-84, Average

HOTSPOT 7.0 GENERAL PLUME 9-27-1996 19:11
RADIONUCLIDE: PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.0E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.330 rem

D = 0.03 km	D = 0.05 km	D = 0.10 km
DEP = 1.6E-01 uCi/m^2	DEP = 6.7E-02 uCi/m^2	DEP = 2.2E-02 uCi/m^2
CHI = 1.6E-05 (Ci-s)/m^3	CHI = 6.7E-06 (Ci-s)/m^3	CHI = 2.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 4.3E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 5.8E+00 rem
RED MARROW 3.5E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 4.8E-01 rem
LIVER 9.5E+00 rem	LIVER 4.0E+00 rem	LIVER 1.3E+00 rem
GONADS 5.3E-01 rem	GONADS 2.2E-01 rem	GONADS 7.2E-02 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 2.4E+00 rem	EQUIVALENT 1.0E+00 rem	EQUIVALENT 3.3E-01 rem

Release Designation: 1-RD-85, Adverse

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:30
TOTAL TRITIUM RELEASE : 9.1E-04 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.5E-07 rem

D = 0.03 km
CHI = 2.3E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 7.1E-07 rem

D = 0.10 km
CHI = 4.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 1.5E-07 rem

Release Designation: 1-RD-85, Average

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:31
TOTAL TRITIUM RELEASE : 9.1E-04 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.6E-08 rem

D = 0.03 km	D = 0.10 km
CHI = 5.9E-06 (Ci-s)/m^3	CHI = 8.5E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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EFFECTIVE DOSE EQUIVALENT 1.8E-07 rem	EFFECTIVE DOSE EQUIVALENT 2.6E-08 rem

Release Designation: 1-RD-86, Adverse

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:32
TOTAL TRITIUM RELEASE : 2.0E-03 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.9E-07 rem

D = 0.03 km
CHI = 6.2E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 1.9E-06 rem

D = 0.10 km
CHI = 1.3E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 3.9E-07 rem

Release Designation: 1-RD-86, Average

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:32
TOTAL TRITIUM RELEASE : 2.0E-03 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.1E-08 rem

D = 0.03 km
CHI = 1.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 5.0E-07 rem

D = 0.10 km
CHI = 2.3E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 7.1E-08 rem

Release Designation: 1-RD-87, Adverse

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:38
TOTAL TRITIUM RELEASE : 7.7E-04 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.2E-07 rem

D = 0.03 km	D = 0.10 km
CHI = 1.9E-05 (Ci-s)/m^3	CHI = 4.0E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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EFFECTIVE DOSE EQUIVALENT 6.0E-07 rem	EFFECTIVE DOSE EQUIVALENT 1.2E-07 rem

Release Designation: 1-RD-87, Average

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:38
TOTAL TRITIUM RELEASE : 7.7E-04 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.2E-08 rem

D = 0.03 km	D = 0.10 km
CHI = 5.0E-06 (Ci-s)/m^3	CHI = 7.2E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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EFFECTIVE DOSE EQUIVALENT 1.6E-07 rem	EFFECTIVE DOSE EQUIVALENT 2.2E-08 rem

Release Designation: 1-RD-88, Adverse

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:36
TOTAL TRITIUM RELEASE : 1.7E-03 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.3E-07 rem

D = 0.03 km
CHI = 5.2E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 1.6E-06 rem

D = 0.10 km
CHI = 1.1E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 3.3E-07 rem

Release Designation: 1-RD-88, Average

HOTSPOT 7.0 TRITIUM RELEASE 9-28-1996 20:37
TOTAL TRITIUM RELEASE : 1.7E-03 curies 100.000 % TRITIUM OXIDE
Dose Results Include Skin Absorption
Source Term Width: 3 m Source Term Height: 3 m
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 0.0E+00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 6.0E-08 rem

D = 0.03 km
CHI = 1.3E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 4.2E-07 rem

D = 0.10 km
CHI = 1.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

EFFECTIVE DOSE
EQUIVALENT 6.0E-08 rem

Release Designation: 1-RD-89, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 20:45
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.5E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 30 rem

D = 0.03 km
DEP = 1.2E+01 uCi/m^2
CHI = 1.2E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.1E+03 rem
RED MARROW 2.6E+02 rem
LIVER 7.0E+02 rem
GONADS 3.9E+01 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E+02 rem

D = 0.10 km
DEP = 2.0E+00 uCi/m^2
CHI = 2.0E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.4E+02 rem
RED MARROW 4.4E+01 rem
LIVER 1.2E+02 rem
GONADS 6.6E+00 rem
EFFECTIVE DOSE
EQUIVALENT 3.0E+01 rem

D = 0.63 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-89, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 20:44
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.5E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.1 rem

D = 0.03 km	D = 0.10 km	D = 0.28 km
DEP = 3.4E+00 uCi/m^2	DEP = 4.7E-01 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 3.4E-04 (Ci-s)/m^3	CHI = 4.7E-05 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 9.2E+02 rem	SURFACE BONE 1.3E+02 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 7.6E+01 rem	RED MARROW 1.0E+01 rem	RED MARROW 1.5E+00 rem
LIVER 2.0E+02 rem	LIVER 2.8E+01 rem	LIVER 4.1E+00 rem
GONADS 1.1E+01 rem	GONADS 1.6E+00 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 5.2E+01 rem	EQUIVALENT 7.1E+00 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-90, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 21:52
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.9E+00 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.3E+03 rem

D = 0.03 km
DEP = 5.0E+02 uCi/m^2
CHI = 5.0E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E+05 rem
RED MARROW 1.1E+04 rem
LIVER 3.0E+04 rem
GONADS 1.7E+03 rem
EFFECTIVE DOSE
EQUIVALENT 7.7E+03 rem

D = 0.10 km
DEP = 8.6E+01 uCi/m^2
CHI = 8.6E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+04 rem
RED MARROW 1.9E+03 rem
LIVER 5.1E+03 rem
GONADS 2.9E+02 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E+03 rem

D = 5.16 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-90, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 21:53
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.9E+00 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.1E+02 rem

D = 0.03 km
DEP = 1.5E+02 uCi/m^2
CHI = 1.5E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.0E+04 rem
RED MARROW 3.3E+03 rem
LIVER 8.9E+03 rem
GONADS 4.9E+02 rem
EFFECTIVE DOSE
EQUIVALENT 2.3E+03 rem

D = 0.10 km
DEP = 2.0E+01 uCi/m^2
CHI = 2.0E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.4E+03 rem
RED MARROW 4.5E+02 rem
LIVER 1.2E+03 rem
GONADS 6.7E+01 rem
EFFECTIVE DOSE
EQUIVALENT 3.1E+02 rem

D = 2.05 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-91, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:00
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.1E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 17 rem

D = 0.03 km
DEP = 6.5E+00 uCi/m^2
CHI = 6.5E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+03 rem
RED MARROW 1.5E+02 rem
LIVER 3.9E+02 rem
GONADS 2.2E+01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+02 rem

D = 0.10 km
DEP = 1.1E+00 uCi/m^2
CHI = 1.1E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.0E+02 rem
RED MARROW 2.5E+01 rem
LIVER 6.7E+01 rem
GONADS 3.7E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.7E+01 rem

D = 0.46 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-91, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:01
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.1E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 4.0 rem

D = 0.03 km
DEP = 1.9E+00 uCi/m^2
CHI = 1.9E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.2E+02 rem
RED MARROW 4.3E+01 rem
LIVER 1.1E+02 rem
GONADS 6.4E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.9E+01 rem

D = 0.10 km
DEP = 2.6E-01 uCi/m^2
CHI = 2.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.0E+01 rem
RED MARROW 5.8E+00 rem
LIVER 1.6E+01 rem
GONADS 8.7E-01 rem
EFFECTIVE DOSE
EQUIVALENT 4.0E+00 rem

D = 0.21 km
DEP = 6.6E-02 uCi/m^2
CHI = 6.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-92, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:05
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.4E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 23 rem

D = 0.03 km
DEP = 8.9E+00 uCi/m^2
CHI = 8.9E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.4E+03 rem
RED MARROW 2.0E+02 rem
LIVER 5.3E+02 rem
GONADS 3.0E+01 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E+02 rem

D = 0.10 km
DEP = 1.5E+00 uCi/m^2
CHI = 1.5E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.1E+02 rem
RED MARROW 3.4E+01 rem
LIVER 9.1E+01 rem
GONADS 5.0E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.3E+01 rem

D = 0.54 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-92, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:06
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.4E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 5.4 rem

D = 0.03 km
DEP = 2.6E+00 uCi/m^2
CHI = 2.6E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.0E+02 rem
RED MARROW 5.8E+01 rem
LIVER 1.6E+02 rem
GONADS 8.7E+00 rem
EFFECTIVE DOSE
EQUIVALENT 4.0E+01 rem

D = 0.10 km
DEP = 3.5E-01 uCi/m^2
CHI = 3.5E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.6E+01 rem
RED MARROW 7.9E+00 rem
LIVER 2.1E+01 rem
GONADS 1.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 5.4E+00 rem

D = 0.25 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-93, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:06
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-08 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.5E-05 rem

D = 0.03 km	D = 0.10 km
DEP = 9.6E-06 uCi/m^2	DEP = 1.6E-06 uCi/m^2
CHI = 9.6E-10 (Ci-s)/m^3	CHI = 1.6E-10 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 2.6E-03 rem	SURFACE BONE 4.4E-04 rem
RED MARROW 2.1E-04 rem	RED MARROW 3.6E-05 rem
LIVER 5.7E-04 rem	LIVER 9.8E-05 rem
GONADS 3.2E-05 rem	GONADS 5.4E-06 rem
EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 1.5E-04 rem	EQUIVALENT 2.5E-05 rem

Release Designation: 1-RD-93, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:08
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-08 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 5.9E-06 rem

D = 0.03 km
DEP = 2.8E-06 uCi/m^2
CHI = 2.8E-10 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.6E-04 rem
RED MARROW 6.2E-05 rem
LIVER 1.7E-04 rem
GONADS 9.3E-06 rem
EFFECTIVE DOSE
EQUIVALENT 4.3E-05 rem

D = 0.10 km
DEP = 3.8E-07 uCi/m^2
CHI = 3.8E-11 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.0E-04 rem
RED MARROW 8.5E-06 rem
LIVER 2.3E-05 rem
GONADS 1.3E-06 rem
EFFECTIVE DOSE
EQUIVALENT 5.9E-06 rem

Release Designation: 1-RD-94, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:07
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-08 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.4E-05 rem

D = 0.03 km
DEP = 1.3E-05 uCi/m^2
CHI = 1.3E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.5E-03 rem
RED MARROW 2.9E-04 rem
LIVER 7.8E-04 rem
GONADS 4.3E-05 rem
EFFECTIVE DOSE
EQUIVALENT 2.0E-04 rem

D = 0.10 km
DEP = 2.2E-06 uCi/m^2
CHI = 2.2E-10 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.0E-04 rem
RED MARROW 4.9E-05 rem
LIVER 1.3E-04 rem
GONADS 7.4E-06 rem
EFFECTIVE DOSE
EQUIVALENT 3.4E-05 rem

Release Designation: 1-RD-94, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:08
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-08 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.9E-06 rem

D = 0.03 km
DEP = 3.8E-06 uCi/m^2
CHI = 3.8E-10 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.0E-03 rem
RED MARROW 8.5E-05 rem
LIVER 2.3E-04 rem
GONADS 1.3E-05 rem
EFFECTIVE DOSE
EQUIVALENT 5.8E-05 rem

D = 0.10 km
DEP = 5.2E-07 uCi/m^2
CHI = 5.2E-11 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E-04 rem
RED MARROW 1.2E-05 rem
LIVER 3.1E-05 rem
GONADS 1.7E-06 rem
EFFECTIVE DOSE
EQUIVALENT 7.9E-06 rem

Release Designation: 1-RD-95, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:09
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 8.3E-04 rem

D = 0.03 km
DEP = 3.2E-04 uCi/m^2
CHI = 3.2E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 8.6E-02 rem
RED MARROW 7.1E-03 rem
LIVER 1.9E-02 rem
GONADS 1.1E-03 rem
EFFECTIVE DOSE
EQUIVALENT 4.9E-03 rem

D = 0.10 km
DEP = 5.4E-05 uCi/m^2
CHI = 5.4E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.5E-02 rem
RED MARROW 1.2E-03 rem
LIVER 3.2E-03 rem
GONADS 1.8E-04 rem
EFFECTIVE DOSE
EQUIVALENT 8.3E-04 rem

Release Designation: 1-RD-95, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:10
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.9E-04 rem

D = 0.03 km
DEP = 9.3E-05 uCi/m^2
CHI = 9.3E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.5E-02 rem
RED MARROW 2.1E-03 rem
LIVER 5.6E-03 rem
GONADS 3.1E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E-03 rem

D = 0.10 km
DEP = 1.3E-05 uCi/m^2
CHI = 1.3E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.4E-03 rem
RED MARROW 2.8E-04 rem
LIVER 7.6E-04 rem
GONADS 4.2E-05 rem
EFFECTIVE DOSE
EQUIVALENT 1.9E-04 rem

Release Designation: 1-RD-96, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:09
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.6E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.1E-03 rem

D = 0.03 km
DEP = 4.3E-04 uCi/m^2
CHI = 4.3E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.2E-01 rem
RED MARROW 9.7E-03 rem
LIVER 2.6E-02 rem
GONADS 1.4E-03 rem
EFFECTIVE DOSE
EQUIVALENT 6.6E-03 rem

D = 0.10 km
DEP = 7.4E-05 uCi/m^2
CHI = 7.4E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.0E-02 rem
RED MARROW 1.6E-03 rem
LIVER 4.4E-03 rem
GONADS 2.5E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E-03 rem

Release Designation: 1-RD-96, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:09
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.6E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.7E-04 rem

D = 0.03 km
DEP = 1.3E-04 uCi/m^2
CHI = 1.3E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.4E-02 rem
RED MARROW 2.8E-03 rem
LIVER 7.6E-03 rem
GONADS 4.2E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.9E-03 rem

D = 0.10 km
DEP = 1.7E-05 uCi/m^2
CHI = 1.7E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.7E-03 rem
RED MARROW 3.9E-04 rem
LIVER 1.0E-03 rem
GONADS 5.8E-05 rem
EFFECTIVE DOSE
EQUIVALENT 2.7E-04 rem

Release Designation: 1-RD-97, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:11
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.4E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.133 rem

D = 0.03 km
DEP = 5.1E-02 uCi/m^2
CHI = 5.1E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E+01 rem
RED MARROW 1.1E+00 rem
LIVER 3.0E+00 rem
GONADS 1.7E-01 rem
EFFECTIVE DOSE
EQUIVALENT 7.8E-01 rem

D = 0.10 km
DEP = 8.7E-03 uCi/m^2
CHI = 8.7E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+00 rem
RED MARROW 1.9E-01 rem
LIVER 5.2E-01 rem
GONADS 2.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E-01 rem

Release Designation: 1-RD-97, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:12
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.4E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.031 rem

D = 0.03 km	D = 0.10 km
DEP = 1.5E-02 uCi/m^2	DEP = 2.0E-03 uCi/m^2
CHI = 1.5E-06 (Ci-s)/m^3	CHI = 2.0E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 4.0E+00 rem	SURFACE BONE 5.5E-01 rem
RED MARROW 3.3E-01 rem	RED MARROW 4.5E-02 rem
LIVER 8.9E-01 rem	LIVER 1.2E-01 rem
GONADS 5.0E-02 rem	GONADS 6.8E-03 rem
EFFECTIVE DOSE EQUIVALENT 2.3E-01 rem	EFFECTIVE DOSE EQUIVALENT 3.1E-02 rem

Release Designation: 1-RD-98, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:11
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.6E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.180 rem

D = 0.03 km
DEP = 6.9E-02 uCi/m^2
CHI = 6.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.9E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E+00 rem

D = 0.03 km
DEP = 6.6E-02 uCi/m^2
CHI = 6.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 1.2E-02 uCi/m^2
CHI = 1.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.2E+00 rem
RED MARROW 2.6E-01 rem
LIVER 7.1E-01 rem
GONADS 3.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E-01 rem

Release Designation: 1-RD-98, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:12
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.6E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.042 rem

D = 0.03 km
DEP = 2.0E-02 uCi/m^2
CHI = 2.0E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.5E+00 rem
RED MARROW 4.5E-01 rem
LIVER 1.2E+00 rem
GONADS 6.7E-02 rem
EFFECTIVE DOSE
EQUIVALENT 3.1E-01 rem

D = 0.10 km
DEP = 2.8E-03 uCi/m^2
CHI = 2.8E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.5E-01 rem
RED MARROW 6.2E-02 rem
LIVER 1.7E-01 rem
GONADS 9.2E-03 rem
EFFECTIVE DOSE
EQUIVALENT 4.2E-02 rem

Release Designation: 1-RD-99, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:13
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.025 rem

D = 0.03 km
DEP = 9.5E-03 uCi/m^2
CHI = 9.5E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.6E+00 rem
RED MARROW 2.1E-01 rem
LIVER 5.7E-01 rem
GONADS 3.2E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.5E-01 rem

D = 0.10 km
DEP = 1.6E-03 uCi/m^2
CHI = 1.6E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.4E-01 rem
RED MARROW 3.6E-02 rem
LIVER 9.7E-02 rem
GONADS 5.4E-03 rem
EFFECTIVE DOSE
EQUIVALENT 2.5E-02 rem

Release Designation: 1-RD-99, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:14
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 5.8E-03 rem

D = 0.03 km	D = 0.10 km
DEP = 2.8E-03 uCi/m^2	DEP = 3.8E-04 uCi/m^2
CHI = 2.8E-07 (Ci-s)/m^3	CHI = 3.8E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 7.5E-01 rem	SURFACE BONE 1.0E-01 rem
RED MARROW 6.2E-02 rem	RED MARROW 8.5E-03 rem
LIVER 1.7E-01 rem	LIVER 2.3E-02 rem
GONADS 9.3E-03 rem	GONADS 1.3E-03 rem
EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 4.3E-02 rem	EQUIVALENT 5.8E-03 rem

Release Designation: 1-RD-100, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:13
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.034 rem

D = 0.03 km
DEP = 1.3E-02 uCi/m^2
CHI = 1.3E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.5E+00 rem
RED MARROW 2.9E-01 rem
LIVER 7.8E-01 rem
GONADS 4.3E-02 rem
EFFECTIVE DOSE
EQUIVALENT 2.0E-01 rem

D = 0.10 km
DEP = 2.2E-03 uCi/m^2
CHI = 2.2E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.9E-01 rem
RED MARROW 4.9E-02 rem
LIVER 1.3E-01 rem
GONADS 7.3E-03 rem
EFFECTIVE DOSE
EQUIVALENT 3.4E-02 rem

Release Designation: 1-RD-100, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:13
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-05 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.9E-03 rem

D = 0.03 km
DEP = 3.8E-03 uCi/m^2
CHI = 3.8E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.0E+00 rem
RED MARROW 8.5E-02 rem
LIVER 2.3E-01 rem
GONADS 1.3E-02 rem
EFFECTIVE DOSE
EQUIVALENT 5.8E-02 rem

D = 0.10 km
DEP = 5.2E-04 uCi/m^2
CHI = 5.2E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E-01 rem
RED MARROW 1.2E-02 rem
LIVER 3.1E-02 rem
GONADS 1.7E-03 rem
EFFECTIVE DOSE
EQUIVALENT 7.9E-03 rem

Release Designation: 1-RD-101, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:16
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 9.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 5.3 rem

D = 0.03 km
DEP = 2.0E+00 uCi/m^2
CHI = 2.0E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.4E+02 rem
RED MARROW 4.5E+01 rem
LIVER 1.2E+02 rem
GONADS 6.7E+00 rem
EFFECTIVE DOSE
EQUIVALENT 3.1E+01 rem

D = 0.10 km
DEP = 3.4E-01 uCi/m^2
CHI = 3.4E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.3E+01 rem
RED MARROW 7.7E+00 rem
LIVER 2.1E+01 rem
GONADS 1.1E+00 rem
EFFECTIVE DOSE
EQUIVALENT 5.3E+00 rem

D = 0.25 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-101, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:29
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 9.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.2 rem

D = 0.03 km	D = 0.10 km	D = 0.11 km
DEP = 5.9E-01 uCi/m^2	DEP = 8.0E-02 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 5.9E-05 (Ci-s)/m^3	CHI = 8.0E-06 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 1.6E+02 rem	SURFACE BONE 2.2E+01 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 1.3E+01 rem	RED MARROW 1.8E+00 rem	RED MARROW 1.5E+00 rem
LIVER 3.5E+01 rem	LIVER 4.8E+00 rem	LIVER 4.1E+00 rem
GONADS 2.0E+00 rem	GONADS 2.7E-01 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 9.0E+00 rem	EQUIVALENT 1.2E+00 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-102, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:16
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.0E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.2 rem

D = 0.03 km	D = 0.10 km	D = 0.29 km
DEP = 2.7E+00 uCi/m^2	DEP = 4.7E-01 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 2.7E-04 (Ci-s)/m^3	CHI = 4.7E-05 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 7.4E+02 rem	SURFACE BONE 1.3E+02 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 6.1E+01 rem	RED MARROW 1.0E+01 rem	RED MARROW 1.5E+00 rem
LIVER 1.6E+02 rem	LIVER 2.8E+01 rem	LIVER 4.1E+00 rem
GONADS 9.1E+00 rem	GONADS 1.6E+00 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 4.2E+01 rem	EQUIVALENT 7.2E+00 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-102, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:17
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.0E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.7 rem

D = 0.03 km
DEP = 8.0E-01 uCi/m^2
CHI = 8.0E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.2E+02 rem
RED MARROW 1.8E+01 rem
LIVER 4.8E+01 rem
GONADS 2.7E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.2E+01 rem

D = 0.10 km
DEP = 1.1E-01 uCi/m^2
CHI = 1.1E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.0E+01 rem
RED MARROW 2.4E+00 rem
LIVER 6.6E+00 rem
GONADS 3.7E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.7E+00 rem

D = 0.13 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-103, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:31
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.7E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.946 rem

D = 0.03 km
DEP = 3.6E-01 uCi/m^2
CHI = 3.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.8E+01 rem
RED MARROW 8.1E+00 rem
LIVER 2.2E+01 rem
GONADS 1.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 5.5E+00 rem

D = 0.09 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 6.2E-02 uCi/m^2
CHI = 6.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.7E+01 rem
RED MARROW 1.4E+00 rem
LIVER 3.7E+00 rem
GONADS 2.1E-01 rem
EFFECTIVE DOSE
EQUIVALENT 9.5E-01 rem

Release Designation: 1-RD-103, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:33
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.7E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.222 rem

D = 0.03 km	D = 0.04 km	D = 0.10 km
DEP = 1.1E-01 uCi/m^2	DEP = 6.6E-02 uCi/m^2	DEP = 1.4E-02 uCi/m^2
CHI = 1.1E-05 (Ci-s)/m^3	CHI = 6.6E-06 (Ci-s)/m^3	CHI = 1.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 2.9E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 3.9E+00 rem
RED MARROW 2.4E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 3.2E-01 rem
LIVER 6.4E+00 rem	LIVER 4.0E+00 rem	LIVER 8.7E-01 rem
GONADS 3.5E-01 rem	GONADS 2.2E-01 rem	GONADS 4.8E-02 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 1.6E+00 rem	EQUIVALENT 1.0E+00 rem	EQUIVALENT 2.2E-01 rem

Release Designation: 1-RD-104, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:19
RADIONUCLIDE: PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.3 rem

D = 0.03 km
DEP = 4.9E-01 uCi/m^2
CHI = 4.9E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+02 rem
RED MARROW 1.1E+01 rem
LIVER 2.9E+01 rem
GONADS 1.6E+00 rem
EFFECTIVE DOSE
EQUIVALENT 7.5E+00 rem

D = 0.10 km
DEP = 8.4E-02 uCi/m^2
CHI = 8.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+01 rem
RED MARROW 1.9E+00 rem
LIVER 5.0E+00 rem
GONADS 2.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E+00 rem

D = 0.11 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-104, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:20
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.301 rem

D = 0.03 km
DEP = 1.4E-01 uCi/m^2
CHI = 1.4E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.9E+01 rem
RED MARROW 3.2E+00 rem
LIVER 8.6E+00 rem
GONADS 4.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.2E+00 rem

D = 0.05 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 2.0E-02 uCi/m^2
CHI = 2.0E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.3E+00 rem
RED MARROW 4.4E-01 rem
LIVER 1.2E+00 rem
GONADS 6.5E-02 rem
EFFECTIVE DOSE
EQUIVALENT 3.0E-01 rem

Release Designation: 1-RD-105, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:35
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.7E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.946 rem

D = 0.03 km
DEP = 3.6E-01 uCi/m^2
CHI = 3.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.8E+01 rem
RED MARROW 8.1E+00 rem
LIVER 2.2E+01 rem
GONADS 1.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 5.5E+00 rem

D = 0.09 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 6.2E-02 uCi/m^2
CHI = 6.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.7E+01 rem
RED MARROW 1.4E+00 rem
LIVER 3.7E+00 rem
GONADS 2.1E-01 rem
EFFECTIVE DOSE
EQUIVALENT 9.5E-01 rem

Release Designation: 1-RD-105, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:36
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.7E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.222 rem

D = 0.03 km
DEP = 1.1E-01 uCi/m^2
CHI = 1.1E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.9E+01 rem
RED MARROW 2.4E+00 rem
LIVER 6.4E+00 rem
GONADS 3.5E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.6E+00 rem

D = 0.04 km
DEP = 6.6E-02 uCi/m^2
CHI = 6.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 1.4E-02 uCi/m^2
CHI = 1.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.9E+00 rem
RED MARROW 3.2E-01 rem
LIVER 8.7E-01 rem
GONADS 4.8E-02 rem
EFFECTIVE DOSE
EQUIVALENT 2.2E-01 rem

Release Designation: 1-RD-106, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:21
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.3 rem

D = 0.03 km
DEP = 4.9E-01 uCi/m^2
CHI = 4.9E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+02 rem
RED MARROW 1.1E+01 rem
LIVER 2.9E+01 rem
GONADS 1.6E+00 rem
EFFECTIVE DOSE
EQUIVALENT 7.5E+00 rem

D = 0.10 km
DEP = 8.4E-02 uCi/m^2
CHI = 8.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+01 rem
RED MARROW 1.9E+00 rem
LIVER 5.0E+00 rem
GONADS 2.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E+00 rem

D = 0.11 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-106, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:21
RADIONUCLIDE: PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.301 rem

D = 0.03 km	D = 0.05 km	D = 0.10 km
DEP = 1.4E-01 uCi/m^2	DEP = 6.7E-02 uCi/m^2	DEP = 2.0E-02 uCi/m^2
CHI = 1.4E-05 (Ci-s)/m^3	CHI = 6.7E-06 (Ci-s)/m^3	CHI = 2.0E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 3.9E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 5.3E+00 rem
RED MARROW 3.2E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 4.4E-01 rem
LIVER 8.6E+00 rem	LIVER 4.0E+00 rem	LIVER 1.2E+00 rem
GONADS 4.8E-01 rem	GONADS 2.2E-01 rem	GONADS 6.5E-02 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 2.2E+00 rem	EQUIVALENT 1.0E+00 rem	EQUIVALENT 3.0E-01 rem

Release Designation: 1-RD-107, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:31
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.7E-01 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.1E+02 rem

D = 0.03 km	D = 0.10 km	D = 1.74 km
DEP = 7.9E+01 uCi/m^2	DEP = 1.3E+01 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 7.9E-03 (Ci-s)/m^3	CHI = 1.3E-03 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 2.1E+04 rem	SURFACE BONE 3.6E+03 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 1.8E+03 rem	RED MARROW 3.0E+02 rem	RED MARROW 1.5E+00 rem
LIVER 4.7E+03 rem	LIVER 8.0E+02 rem	LIVER 4.1E+00 rem
GONADS 2.6E+02 rem	GONADS 4.5E+01 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE EQUIVALENT 1.2E+03 rem	EFFECTIVE DOSE EQUIVALENT 2.1E+02 rem	EFFECTIVE DOSE EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-107, Average

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:30
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.7E-01 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 48 rem

D = 0.03 km	D = 0.10 km	D = 0.76 km
DEP = 2.3E+01 uCi/m^2	DEP = 3.1E+00 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 2.3E-03 (Ci-s)/m^3	CHI = 3.1E-04 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 6.2E+03 rem	SURFACE BONE 8.5E+02 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 5.1E+02 rem	RED MARROW 7.0E+01 rem	RED MARROW 1.5E+00 rem
LIVER 1.4E+03 rem	LIVER 1.9E+02 rem	LIVER 4.1E+00 rem
GONADS 7.7E+01 rem	GONADS 1.0E+01 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 3.5E+02 rem	EQUIVALENT 4.8E+01 rem	EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-108, Adverse
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 10:37
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.1E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.6 rem

D = 0.03 km
DEP = 2.9E+00 uCi/m^2
CHI = 2.9E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.8E+02 rem
RED MARROW 6.5E+01 rem
LIVER 1.7E+02 rem
GONADS 9.7E+00 rem
EFFECTIVE DOSE
EQUIVALENT 4.4E+01 rem

D = 0.10 km
DEP = 4.9E-01 uCi/m^2
CHI = 4.9E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+02 rem
RED MARROW 1.1E+01 rem
LIVER 3.0E+01 rem
GONADS 1.6E+00 rem
EFFECTIVE DOSE
EQUIVALENT 7.6E+00 rem

D = 0.30 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-108, Average
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 9:53
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.1E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : NONE
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.8 rem

D = 0.03 km
DEP = 8.6E-01 uCi/m^2
CHI = 8.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+02 rem
RED MARROW 1.9E+01 rem
LIVER 5.1E+01 rem
GONADS 2.9E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E+01 rem

D = 0.10 km
DEP = 1.2E-01 uCi/m^2
CHI = 1.2E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.2E+01 rem
RED MARROW 2.6E+00 rem
LIVER 7.0E+00 rem
GONADS 3.9E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E+00 rem

D = 0.14 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-109, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:40
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.4E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.758 rem

D = 0.03 km
DEP = 2.9E-01 uCi/m^2
CHI = 2.9E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.8E+01 rem
RED MARROW 6.5E+00 rem
LIVER 1.7E+01 rem
GONADS 9.7E-01 rem
EFFECTIVE DOSE
EQUIVALENT 4.4E+00 rem

D = 0.08 km
DEP = 6.6E-02 uCi/m^2
CHI = 6.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 4.9E-02 uCi/m^2
CHI = 4.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+01 rem
RED MARROW 1.1E+00 rem
LIVER 3.0E+00 rem
GONADS 1.6E-01 rem
EFFECTIVE DOSE
EQUIVALENT 7.6E-01 rem

Release Designation: 1-RD-109, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 21:42
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.4E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.178 rem

D = 0.03 km
DEP = 8.5E-02 uCi/m^2
CHI = 8.5E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+01 rem
RED MARROW 1.9E+00 rem
LIVER 5.1E+00 rem
GONADS 2.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E+00 rem

D = 0.04 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 1.2E-02 uCi/m^2
CHI = 1.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.1E+00 rem
RED MARROW 2.6E-01 rem
LIVER 7.0E-01 rem
GONADS 3.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E-01 rem

Release Designation: 1-RD-110, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:28
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.0 rem

D = 0.03 km
DEP = 4.0E-01 uCi/m^2
CHI = 4.0E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E+02 rem
RED MARROW 8.8E+00 rem
LIVER 2.4E+01 rem
GONADS 1.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 6.1E+00 rem

D = 0.10 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-110, Average

HOTSPOT 7.0 GENERAL PLUME 9-10-1996 22:28
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.243 rem

D = 0.03 km
DEP = 1.2E-01 uCi/m^2
CHI = 1.2E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.1E+01 rem
RED MARROW 2.6E+00 rem
LIVER 7.0E+00 rem
GONADS 3.9E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E+00 rem

D = 0.04 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 1.6E-02 uCi/m^2
CHI = 1.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.3E+00 rem
RED MARROW 3.5E-01 rem
LIVER 9.5E-01 rem
GONADS 5.3E-02 rem
EFFECTIVE DOSE
EQUIVALENT 2.4E-01 rem

Release Designation: 1-RD-111, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:38
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.3E+00 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.3E+03 rem

D = 0.03 km
DEP = 4.8E+02 uCi/m^2
CHI = 4.8E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+05 rem
RED MARROW 1.1E+04 rem
LIVER 2.9E+04 rem
GONADS 1.6E+03 rem
EFFECTIVE DOSE
EQUIVALENT 7.4E+03 rem

D = 0.10 km
DEP = 8.2E+01 uCi/m^2
CHI = 8.2E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.2E+04 rem
RED MARROW 1.8E+03 rem
LIVER 4.9E+03 rem
GONADS 2.7E+02 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E+03 rem

D = 5.01 km
DEP = 6.9E-02 uCi/m^2
CHI = 6.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-111, Average

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:37
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 2.3E+00 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.9E+02 rem

D = 0.03 km
DEP = 1.4E+02 uCi/m^2
CHI = 1.4E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.8E+04 rem
RED MARROW 3.1E+03 rem
LIVER 8.4E+03 rem
GONADS 4.7E+02 rem
EFFECTIVE DOSE
EQUIVALENT 2.2E+03 rem

D = 0.10 km
DEP = 1.9E+01 uCi/m^2
CHI = 1.9E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.2E+03 rem
RED MARROW 4.3E+02 rem
LIVER 1.2E+03 rem
GONADS 6.4E+01 rem
EFFECTIVE DOSE
EQUIVALENT 2.9E+02 rem

D = 1.99 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-112, Adverse
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 9:56
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.1E-01 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : NONE
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 4.2E+02 rem

D = 0.03 km
DEP = 1.6E+02 uCi/m^2
CHI = 1.6E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.3E+04 rem
RED MARROW 3.6E+03 rem
LIVER 9.6E+03 rem
GONADS 5.3E+02 rem
EFFECTIVE DOSE
EQUIVALENT 2.5E+03 rem

D = 0.10 km
DEP = 2.7E+01 uCi/m^2
CHI = 2.7E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.4E+03 rem
RED MARROW 6.1E+02 rem
LIVER 1.6E+03 rem
GONADS 9.1E+01 rem
EFFECTIVE DOSE
EQUIVALENT 4.2E+02 rem

D = 2.70 km
DEP = 6.5E-02 uCi/m^2
CHI = 6.5E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 3.9E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-112, Average
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 9:57
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.1E-01 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : NONE
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 98 rem

D = 0.03 km
DEP = 4.7E+01 uCi/m^2
CHI = 4.7E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+04 rem
RED MARROW 1.0E+03 rem
LIVER 2.8E+03 rem
GONADS 1.6E+02 rem
EFFECTIVE DOSE
EQUIVALENT 7.2E+02 rem

D = 0.10 km
DEP = 6.4E+00 uCi/m^2
CHI = 6.4E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.7E+03 rem
RED MARROW 1.4E+02 rem
LIVER 3.8E+02 rem
GONADS 2.1E+01 rem
EFFECTIVE DOSE
EQUIVALENT 9.8E+01 rem

D = 1.10 km
DEP = 6.9E-02 uCi/m^2
CHI = 6.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-113, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:40
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.1E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 6.1 rem

D = 0.03 km
DEP = 2.3E+00 uCi/m^2
CHI = 2.3E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.3E+02 rem
RED MARROW 5.2E+01 rem
LIVER 1.4E+02 rem
GONADS 7.8E+00 rem
EFFECTIVE DOSE
EQUIVALENT 3.6E+01 rem

D = 0.10 km
DEP = 4.0E-01 uCi/m^2
CHI = 4.0E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E+02 rem
RED MARROW 8.9E+00 rem
LIVER 2.4E+01 rem
GONADS 1.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 6.1E+00 rem

D = 0.27 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-113, Average

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:41
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.1E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.4 rem

D = 0.03 km
DEP = 6.8E-01 uCi/m^2
CHI = 6.8E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+02 rem
RED MARROW 1.5E+01 rem
LIVER 4.1E+01 rem
GONADS 2.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+01 rem

D = 0.10 km
DEP = 9.3E-02 uCi/m^2
CHI = 9.3E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.5E+01 rem
RED MARROW 2.1E+00 rem
LIVER 5.6E+00 rem
GONADS 3.1E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E+00 rem

D = 0.12 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-114, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:14
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.3E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 23 rem

D = 0.03 km	D = 0.10 km	D = 0.54 km
DEP = 8.7E+00 uCi/m^2	DEP = 1.5E+00 uCi/m^2	DEP = 6.7E-02 uCi/m^2
CHI = 8.7E-04 (Ci-s)/m^3	CHI = 1.5E-04 (Ci-s)/m^3	CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 2.4E+03 rem	SURFACE BONE 4.0E+02 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 1.9E+02 rem	RED MARROW 3.3E+01 rem	RED MARROW 1.5E+00 rem
LIVER 5.2E+02 rem	LIVER 8.9E+01 rem	LIVER 4.0E+00 rem
GONADS 2.9E+01 rem	GONADS 5.0E+00 rem	GONADS 2.2E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 1.3E+02 rem	EQUIVALENT 2.3E+01 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-114, Average

HOTSPOT 7.0 GENERAL PLUME 9-28-1996 10:16
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.3E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 5.4 rem

D = 0.03 km	D = 0.10 km	D = 0.24 km
DEP = 2.6E+00 uCi/m^2	DEP = 3.5E-01 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 2.6E-04 (Ci-s)/m^3	CHI = 3.5E-05 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 6.9E+02 rem	SURFACE BONE 9.4E+01 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 5.7E+01 rem	RED MARROW 7.8E+00 rem	RED MARROW 1.5E+00 rem
LIVER 1.5E+02 rem	LIVER 2.1E+01 rem	LIVER 4.1E+00 rem
GONADS 8.5E+00 rem	GONADS 1.2E+00 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 3.9E+01 rem	EQUIVALENT 5.4E+00 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-115, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:00
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.6E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 25 rem

D = 0.03 km
DEP = 9.7E+00 uCi/m^2
CHI = 9.7E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.6E+03 rem
RED MARROW 2.2E+02 rem
LIVER 5.8E+02 rem
GONADS 3.2E+01 rem
EFFECTIVE DOSE
EQUIVALENT 1.5E+02 rem

D = 0.10 km
DEP = 1.6E+00 uCi/m^2
CHI = 1.6E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.4E+02 rem
RED MARROW 3.7E+01 rem
LIVER 9.9E+01 rem
GONADS 5.5E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.5E+01 rem

D = 0.57 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-115, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:01
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.6E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 5.9 rem

D = 0.03 km
DEP = 2.8E+00 uCi/m^2
CHI = 2.8E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.6E+02 rem
RED MARROW 6.3E+01 rem
LIVER 1.7E+02 rem
GONADS 9.4E+00 rem
EFFECTIVE DOSE
EQUIVALENT 4.3E+01 rem

D = 0.10 km
DEP = 3.9E-01 uCi/m^2
CHI = 3.9E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.0E+02 rem
RED MARROW 8.6E+00 rem
LIVER 2.3E+01 rem
GONADS 1.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 5.9E+00 rem

D = 0.25 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-116, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:04
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.2E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 5.7 rem

D = 0.03 km
DEP = 2.2E+00 uCi/m^2
CHI = 2.2E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.8E+02 rem
RED MARROW 4.8E+01 rem
LIVER 1.3E+02 rem
GONADS 7.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 3.3E+01 rem

D = 0.10 km
DEP = 3.7E-01 uCi/m^2
CHI = 3.7E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.0E+02 rem
RED MARROW 8.2E+00 rem
LIVER 2.2E+01 rem
GONADS 1.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 5.7E+00 rem

D = 0.26 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-116, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:05
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.2E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.3 rem

D = 0.03 km	D = 0.10 km	D = 0.11 km
DEP = 6.3E-01 uCi/m^2	DEP = 8.7E-02 uCi/m^2	DEP = 6.8E-02 uCi/m^2
CHI = 6.3E-05 (Ci-s)/m^3	CHI = 8.7E-06 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 1.7E+02 rem	SURFACE BONE 2.3E+01 rem	SURFACE BONE 1.8E+01 rem
RED MARROW 1.4E+01 rem	RED MARROW 1.9E+00 rem	RED MARROW 1.5E+00 rem
LIVER 3.8E+01 rem	LIVER 5.2E+00 rem	LIVER 4.1E+00 rem
GONADS 2.1E+00 rem	GONADS 2.9E-01 rem	GONADS 2.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 9.7E+00 rem	EQUIVALENT 1.3E+00 rem	EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-117, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:02
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.7E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 9.3E-04 rem

D = 0.03 km
DEP = 3.6E-04 uCi/m^2
CHI = 3.6E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.7E-02 rem
RED MARROW 8.0E-03 rem
LIVER 2.1E-02 rem
GONADS 1.2E-03 rem
EFFECTIVE DOSE
EQUIVALENT 5.5E-03 rem

D = 0.10 km
DEP = 6.1E-05 uCi/m^2
CHI = 6.1E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.6E-02 rem
RED MARROW 1.4E-03 rem
LIVER 3.7E-03 rem
GONADS 2.0E-04 rem
EFFECTIVE DOSE
EQUIVALENT 9.3E-04 rem

Release Designation: 1-RD-117, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:03
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.7E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.2E-04 rem

D = 0.03 km
DEP = 1.0E-04 uCi/m^2
CHI = 1.0E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.8E-02 rem
RED MARROW 2.3E-03 rem
LIVER 6.3E-03 rem
GONADS 3.5E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.6E-03 rem

D = 0.10 km
DEP = 1.4E-05 uCi/m^2
CHI = 1.4E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.9E-03 rem
RED MARROW 3.2E-04 rem
LIVER 8.6E-04 rem
GONADS 4.8E-05 rem
EFFECTIVE DOSE
EQUIVALENT 2.2E-04 rem

Release Designation: 1-RD-118, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:07
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.8E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.3E-03 rem

D = 0.03 km
DEP = 4.9E-04 uCi/m^2
CHI = 4.9E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E-01 rem
RED MARROW 1.1E-02 rem
LIVER 2.9E-02 rem
GONADS 1.6E-03 rem
EFFECTIVE DOSE
EQUIVALENT 7.4E-03 rem

D = 0.10 km
DEP = 8.3E-05 uCi/m^2
CHI = 8.3E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.2E-02 rem
RED MARROW 1.8E-03 rem
LIVER 5.0E-03 rem
GONADS 2.8E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E-03 rem

Release Designation: 1-RD-118, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:08
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.8E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.0E-04 rem

D = 0.03 km
DEP = 1.4E-04 uCi/m^2
CHI = 1.4E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.8E-02 rem
RED MARROW 3.2E-03 rem
LIVER 8.5E-03 rem
GONADS 4.7E-04 rem
EFFECTIVE DOSE
EQUIVALENT 2.2E-03 rem

D = 0.10 km
DEP = 1.9E-05 uCi/m^2
CHI = 1.9E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.2E-03 rem
RED MARROW 4.3E-04 rem
LIVER 1.2E-03 rem
GONADS 6.5E-05 rem
EFFECTIVE DOSE
EQUIVALENT 3.0E-04 rem

Release Designation: 1-RD-119, Adverse

HOTSPOT 7.0 GENERAL PLUME 10-08-1996 14:53 RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.0E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 44 rem

D = 0.03 km
DEP = 1.7E+01 uCi/m^2
CHI = 1.7E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 4.6E+03 rem
RED MARROW 3.8E+02 rem
LIVER 1.0E+03 rem
GONADS 5.6E+01 rem
EFFECTIVE DOSE
EQUIVALENT 2.6E+02 rem

D = 0.10 km
DEP = 2.9E+00 uCi/m^2
CHI = 2.9E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 7.8E+02 rem
RED MARROW 6.4E+01 rem
LIVER 1.7E+02 rem
GONADS 9.6E+00 rem
EFFECTIVE DOSE
EQUIVALENT 4.4E+01 rem

D = 0.77 km
DEP = 6.6E-02 uCi/m^2
CHI = 6.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-119, Average

HOTSPOT 7.0 GENERAL PLUME 10-08-1996 14:43
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.0E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 10 rem

D = 0.03 km
DEP = 5.0E+00 uCi/m^2
CHI = 5.0E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 1.3E+03 rem
RED MARROW 1.1E+02 rem
LIVER 3.0E+02 rem
GONADS 1.6E+01 rem
EFFECTIVE DOSE
EQUIVALENT 7.6E+01 rem

D = 0.10 km
DEP = 6.8E-01 uCi/m^2
CHI = 6.8E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 1.8E+02 rem
RED MARROW 1.5E+01 rem
LIVER 4.1E+01 rem
GONADS 2.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+01 rem

D = 0.34 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-120, Adverse

HOTSPOT 7.0 GENERAL PLUME 10-08-1996 14:47
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.0E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 55 rem

D = 0.03 km
DEP = 2.1E+01 uCi/m^2
CHI = 2.1E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 5.7E+03 rem
RED MARROW 4.7E+02 rem
LIVER 1.3E+03 rem
GONADS 7.0E+01 rem
EFFECTIVE DOSE
EQUIVALENT 3.2E+02 rem

D = 0.10 km
DEP = 3.6E+00 uCi/m^2
CHI = 3.6E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 9.7E+02 rem
RED MARROW 8.0E+01 rem
LIVER 2.2E+02 rem
GONADS 1.2E+01 rem
EFFECTIVE DOSE
EQUIVALENT 5.5E+01 rem

D = 0.86 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-120, Average

OTSPOT 7.0 GENERAL PLUME 10-08-1996 14:48
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.0E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 13 rem

D = 0.03 km
DEP = 6.2E+00 uCi/m^2
CHI = 6.2E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 1.7E+03 rem
RED MARROW 1.4E+02 rem
LIVER 3.7E+02 rem
GONADS 2.1E+01 rem
EFFECTIVE DOSE
EQUIVALENT 9.5E+01 rem

D = 0.10 km
DEP = 8.4E-01 uCi/m^2
CHI = 8.4E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:
SURFACE BONE 2.3E+02 rem
RED MARROW 1.9E+01 rem
LIVER 5.0E+01 rem
GONADS 2.8E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E+01 rem

D = 0.38 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-121, Adverse
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 10:01
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.2E-01 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 4.5E+02 rem

D = 0.03 km
DEP = 1.7E+02 uCi/m^2
CHI = 1.7E-02 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.7E+04 rem
RED MARROW 3.9E+03 rem
LIVER 1.0E+04 rem
GONADS 5.8E+02 rem
EFFECTIVE DOSE
EQUIVALENT 2.7E+03 rem

D = 0.10 km
DEP = 3.0E+01 uCi/m^2
CHI = 3.0E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 8.0E+03 rem
RED MARROW 6.6E+02 rem
LIVER 1.8E+03 rem
GONADS 9.9E+01 rem
EFFECTIVE DOSE
EQUIVALENT 4.5E+02 rem

D = 2.80 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-121, Average
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 10:03
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.2E-01 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.1E+02 rem

D = 0.03 km
DEP = 5.1E+01 uCi/m^2
CHI = 5.1E-03 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E+04 rem
RED MARROW 1.1E+03 rem
LIVER 3.1E+03 rem
GONADS 1.7E+02 rem
EFFECTIVE DOSE
EQUIVALENT 7.8E+02 rem

D = 0.10 km
DEP = 7.0E+00 uCi/m^2
CHI = 7.0E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.9E+03 rem
RED MARROW 1.6E+02 rem
LIVER 4.2E+02 rem
GONADS 2.3E+01 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E+02 rem

D = 1.15 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-122, Adverse
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 10:05
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 10 rem

D = 0.03 km
DEP = 3.9E+00 uCi/m^2
CHI = 3.9E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E+03 rem
RED MARROW 8.7E+01 rem
LIVER 2.3E+02 rem
GONADS 1.3E+01 rem
EFFECTIVE DOSE
EQUIVALENT 6.0E+01 rem

D = 0.10 km
DEP = 6.7E-01 uCi/m^2
CHI = 6.7E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+02 rem
RED MARROW 1.5E+01 rem
LIVER 4.0E+01 rem
GONADS 2.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+01 rem

D = 0.36 km
DEP = 6.5E-02 uCi/m^2
CHI = 6.5E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 3.9E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation 1-RD-122, Average
HOTSPOT 7.0 GENERAL PLUME 10-02-1996 10:06
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-02 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.4 rem

D = 0.03 km
DEP = 1.1E+00 uCi/m^2
CHI = 1.1E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.1E+02 rem
RED MARROW 2.6E+01 rem
LIVER 6.9E+01 rem
GONADS 3.8E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E+01 rem

D = 0.10 km
DEP = 1.6E-01 uCi/m^2
CHI = 1.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.2E+01 rem
RED MARROW 3.5E+00 rem
LIVER 9.4E+00 rem
GONADS 5.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.4E+00 rem

D = 0.16 km
DEP = 6.6E-02 uCi/m^2
CHI = 6.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 3.9E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-123, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:12
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.6E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.474 rem

D = 0.03 km
DEP = 1.8E-01 uCi/m^2
CHI = 1.8E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.9E+01 rem
RED MARROW 4.1E+00 rem
LIVER 1.1E+01 rem
GONADS 6.0E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.8E+00 rem

D = 0.06 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 3.1E-02 uCi/m^2
CHI = 3.1E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 8.3E+00 rem
RED MARROW 6.9E-01 rem
LIVER 1.9E+00 rem
GONADS 1.0E-01 rem
EFFECTIVE DOSE
EQUIVALENT 4.7E-01 rem

Release Designation: 1-RD-123, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:12
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.6E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.111 rem

D = 0.03 km
DEP = 5.3E-02 uCi/m^2
CHI = 5.3E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E+01 rem
RED MARROW 1.2E+00 rem
LIVER 3.2E+00 rem
GONADS 1.8E-01 rem
EFFECTIVE DOSE
EQUIVALENT 8.1E-01 rem

D = 0.10 km
DEP = 7.3E-03 uCi/m^2
CHI = 7.3E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.0E+00 rem
RED MARROW 1.6E-01 rem
LIVER 4.4E-01 rem
GONADS 2.4E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E-01 rem

Release Designation: 1-RD-124, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:16
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.0E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.070 rem

D = 0.03 km
DEP = 2.7E-02 uCi/m^2
CHI = 2.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.2E+00 rem
RED MARROW 5.9E-01 rem
LIVER 1.6E+00 rem
GONADS 8.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 4.1E-01 rem

D = 0.10 km
DEP = 4.5E-03 uCi/m^2
CHI = 4.5E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.2E+00 rem
RED MARROW 1.0E-01 rem
LIVER 2.7E-01 rem
GONADS 1.5E-02 rem
EFFECTIVE DOSE
EQUIVALENT 7.0E-02 rem

Release Designation: 1-RD-124, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:17
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.0E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.016 rem

D = 0.03 km
DEP = 7.8E-03 uCi/m^2
CHI = 7.8E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.1E+00 rem
RED MARROW 1.7E-01 rem
LIVER 4.7E-01 rem
GONADS 2.6E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.2E-01 rem

D = 0.10 km
DEP = 1.1E-03 uCi/m^2
CHI = 1.1E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.9E-01 rem
RED MARROW 2.4E-02 rem
LIVER 6.4E-02 rem
GONADS 3.6E-03 rem
EFFECTIVE DOSE
EQUIVALENT 1.6E-02 rem

Release Designation: 1-RD-125, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:14
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.8 rem

D = 0.03 km
DEP = 1.5E+00 uCi/m^2
CHI = 1.5E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.0E+02 rem
RED MARROW 3.3E+01 rem
LIVER 8.8E+01 rem
GONADS 4.9E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.3E+01 rem

D = 0.10 km
DEP = 2.5E-01 uCi/m^2
CHI = 2.5E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.8E+01 rem
RED MARROW 5.6E+00 rem
LIVER 1.5E+01 rem
GONADS 8.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 3.8E+00 rem

D = 0.21 km
DEP = 6.7E-02 uCi/m^2
CHI = 6.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.0E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-125, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:15
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.901 rem

D = 0.03 km
DEP = 4.3E-01 uCi/m^2
CHI = 4.3E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.2E+02 rem
RED MARROW 9.6E+00 rem
LIVER 2.6E+01 rem
GONADS 1.4E+00 rem
EFFECTIVE DOSE
EQUIVALENT 6.6E+00 rem

D = 0.09 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 5.9E-02 uCi/m^2
CHI = 5.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.6E+01 rem
RED MARROW 1.3E+00 rem
LIVER 3.5E+00 rem
GONADS 2.0E-01 rem
EFFECTIVE DOSE
EQUIVALENT 9.0E-01 rem

Release Designation: 1-RD-126, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 17:41
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.2E-04 Ci
Source Term Width: 3 m Source Term Height: 3.m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.564 rem

D = 0.03 km
DEP = 2.2E-01 uCi/m^2
CHI = 2.2E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.8E+01 rem
RED MARROW 4.8E+00 rem
LIVER 1.3E+01 rem
GONADS 7.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 3.3E+00 rem

D = 0.07 km
DEP = 6.6E-02 uCi/m^2
CHI = 6.6E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 3.9E+00 rem
GONADS 2.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 3.7E-02 uCi/m^2
CHI = 3.7E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.9E+00 rem
RED MARROW 8.2E-01 rem
LIVER 2.2E+00 rem
GONADS 1.2E-01 rem
EFFECTIVE DOSE
EQUIVALENT 5.6E-01 rem

Release Designation: 1-RD-126, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 17:12
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 8.2E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.132 rem

D = 0.03 km
DEP = 6.3E-02 uCi/m^2
CHI = 6.3E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.7E+01 rem
RED MARROW 1.4E+00 rem
LIVER 3.8E+00 rem
GONADS 2.1E-01 rem
EFFECTIVE DOSE
EQUIVALENT 9.7E-01 rem

D = 0.10 km
DEP = 8.6E-03 uCi/m^2
CHI = 8.6E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+00 rem
RED MARROW 1.9E-01 rem
LIVER 5.2E-01 rem
GONADS 2.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E-01 rem

Release Designation: 1-RD-127, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:25
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.5E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.0E-03 rem

D = 0.03 km
DEP = 1.2E-03 uCi/m^2
CHI = 1.2E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.1E-01 rem
RED MARROW 2.6E-02 rem
LIVER 7.0E-02 rem
GONADS 3.9E-03 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E-02 rem

D = 0.10 km
DEP = 2.0E-04 uCi/m^2
CHI = 2.0E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 5.4E-02 rem
RED MARROW 4.4E-03 rem
LIVER 1.2E-02 rem
GONADS 6.6E-04 rem
EFFECTIVE DOSE
EQUIVALENT 3.0E-03 rem

Release Designation: 1-RD-127, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:26
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 5.5E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.2E-04 rem

D = 0.03 km
DEP = 3.4E-04 uCi/m^2
CHI = 3.4E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.2E-02 rem
RED MARROW 7.6E-03 rem
LIVER 2.1E-02 rem
GONADS 1.1E-03 rem
EFFECTIVE DOSE
EQUIVALENT 5.2E-03 rem

D = 0.10 km
DEP = 4.7E-05 uCi/m^2
CHI = 4.7E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E-02 rem
RED MARROW 1.0E-03 rem
LIVER 2.8E-03 rem
GONADS 1.6E-04 rem
EFFECTIVE DOSE
EQUIVALENT 7.2E-04 rem

Release Designation: 1-RD-128, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:26
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.5E-07 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 4.5E-04 rem

D = 0.03 km
DEP = 1.7E-04 uCi/m^2
CHI = 1.7E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.6E-02 rem
RED MARROW 3.8E-03 rem
LIVER 1.0E-02 rem
GONADS 5.7E-04 rem
EFFECTIVE DOSE
EQUIVALENT 2.6E-03 rem

D = 0.10 km
DEP = 2.9E-05 uCi/m^2
CHI = 2.9E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.9E-03 rem
RED MARROW 6.5E-04 rem
LIVER 1.8E-03 rem
GONADS 9.7E-05 rem
EFFECTIVE DOSE
EQUIVALENT 4.5E-04 rem

Release Designation: 1-RD-128, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:26
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 6.5E-07 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.1E-04 rem

D = 0.03 km
DEP = 5.0E-05 uCi/m^2
CHI = 5.0E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E-02 rem
RED MARROW 1.1E-03 rem
LIVER 3.0E-03 rem
GONADS 1.7E-04 rem
EFFECTIVE DOSE
EQUIVALENT 7.7E-04 rem

D = 0.10 km
DEP = 6.9E-06 uCi/m^2
CHI = 6.9E-10 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.9E-03 rem
RED MARROW 1.5E-04 rem
LIVER 4.1E-04 rem
GONADS 2.3E-05 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E-04 rem

Release Designation: 1-RD-129, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:27
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.1E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 6.1E-04 rem

D = 0.03 km
DEP = 2.3E-04 uCi/m^2
CHI = 2.3E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.3E-02 rem
RED MARROW 5.2E-03 rem
LIVER 1.4E-02 rem
GONADS 7.8E-04 rem
EFFECTIVE DOSE
EQUIVALENT 3.6E-03 rem

D = 0.10 km
DEP = 4.0E-05 uCi/m^2
CHI = 4.0E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E-02 rem
RED MARROW 8.9E-04 rem
LIVER 2.4E-03 rem
GONADS 1.3E-04 rem
EFFECTIVE DOSE
EQUIVALENT 6.1E-04 rem

Release Designation: 1-RD-129, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:28
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.1E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.4E-04 rem

D = 0.03 km
DEP = 6.8E-05 uCi/m^2
CHI = 6.8E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E-02 rem
RED MARROW 1.5E-03 rem
LIVER 4.1E-03 rem
GONADS 2.3E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E-03 rem

D = 0.10 km
DEP = 9.3E-06 uCi/m^2
CHI = 9.3E-10 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.5E-03 rem
RED MARROW 2.1E-04 rem
LIVER 5.6E-04 rem
GONADS 3.1E-05 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E-04 rem

Release Designation: 1-RD-130, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:49
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.2E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 8.3E-04 rem

D = 0.03 km
DEP = 3.2E-04 uCi/m^2
CHI = 3.2E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 8.5E-02 rem
RED MARROW 7.1E-03 rem
LIVER 1.9E-02 rem
GONADS 1.1E-03 rem
EFFECTIVE DOSE
EQUIVALENT 4.9E-03 rem

D = 0.10 km
DEP = 5.4E-05 uCi/m^2
CHI = 5.4E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.5E-02 rem
RED MARROW 1.2E-03 rem
LIVER 3.2E-03 rem
GONADS 1.8E-04 rem
EFFECTIVE DOSE
EQUIVALENT 8.3E-04 rem

Release Designation: 1-RD-130, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:13
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.2E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.9E-04 rem

D = 0.03 km
DEP = 9.3E-05 uCi/m^2
CHI = 9.3E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.5E-02 rem
RED MARROW 2.1E-03 rem
LIVER 5.6E-03 rem
GONADS 3.1E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.4E-03 rem

D = 0.10 km
DEP = 1.3E-05 uCi/m^2
CHI = 1.3E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.4E-03 rem
RED MARROW 2.8E-04 rem
LIVER 7.6E-04 rem
GONADS 4.2E-05 rem
EFFECTIVE DOSE
EQUIVALENT 1.9E-04 rem

Release Designation: 1-RD-131, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:30
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.2E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.065 rem

D = 0.03 km
DEP = 2.5E-02 uCi/m^2
CHI = 2.5E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.7E+00 rem
RED MARROW 5.6E-01 rem
LIVER 1.5E+00 rem
GONADS 8.3E-02 rem
EFFECTIVE DOSE
EQUIVALENT 3.8E-01 rem

D = 0.10 km
DEP = 4.3E-03 uCi/m^2
CHI = 4.3E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E+00 rem
RED MARROW 9.5E-02 rem
LIVER 2.6E-01 rem
GONADS 1.4E-02 rem
EFFECTIVE DOSE
EQUIVALENT 6.5E-02 rem

Release Designation: 1-RD-131, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:31
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.2E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.015 rem

D = 0.03 km
DEP = 7.3E-03 uCi/m^2
CHI = 7.3E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.0E+00 rem
RED MARROW 1.6E-01 rem
LIVER 4.4E-01 rem
GONADS 2.4E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.1E-01 rem

D = 0.10 km
DEP = 1.0E-03 uCi/m^2
CHI = 1.0E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.7E-01 rem
RED MARROW 2.2E-02 rem
LIVER 6.0E-02 rem
GONADS 3.3E-03 rem
EFFECTIVE DOSE
EQUIVALENT 1.5E-02 rem

Release Designation: 1-RD-132, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:54
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.3E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.089 rem

D = 0.03 km
DEP = 3.4E-02 uCi/m^2
CHI = 3.4E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 9.2E+00 rem
RED MARROW 7.6E-01 rem
LIVER 2.0E+00 rem
GONADS 1.1E-01 rem
EFFECTIVE DOSE
EQUIVALENT 5.2E-01 rem

D = 0.10 km
DEP = 5.8E-03 uCi/m^2
CHI = 5.8E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.6E+00 rem
RED MARROW 1.3E-01 rem
LIVER 3.5E-01 rem
GONADS 1.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 8.9E-02 rem

Release Designation: 1-RD-132, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 11:55
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.3E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.021 rem

D = 0.03 km
DEP = 1.0E-02 uCi/m^2
CHI = 1.0E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.7E+00 rem
RED MARROW 2.2E-01 rem
LIVER 6.0E-01 rem
GONADS 3.3E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.5E-01 rem

D = 0.10 km
DEP = 1.4E-03 uCi/m^2
CHI = 1.4E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.7E-01 rem
RED MARROW 3.0E-02 rem
LIVER 8.2E-02 rem
GONADS 4.5E-03 rem
EFFECTIVE DOSE
EQUIVALENT 2.1E-02 rem

Release Designation: 1-RD-133, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:36
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.5 rem

D = 0.03 km
DEP = 9.6E-01 uCi/m^2
CHI = 9.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.6E+02 rem
RED MARROW 2.1E+01 rem
LIVER 5.7E+01 rem
GONADS 3.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.5E+01 rem

D = 0.10 km
DEP = 1.6E-01 uCi/m^2
CHI = 1.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.4E+01 rem
RED MARROW 3.6E+00 rem
LIVER 9.8E+00 rem
GONADS 5.4E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.5E+00 rem

D = 0.16 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-133, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:35
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.587 rem

D = 0.03 km	D = 0.07 km	D = 0.10 km
DEP = 2.8E-01 uCi/m^2	DEP = 6.9E-02 uCi/m^2	DEP = 3.8E-02 uCi/m^2
CHI = 2.8E-05 (Ci-s)/m^3	CHI = 6.9E-06 (Ci-s)/m^3	CHI = 3.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
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SURFACE BONE 7.6E+01 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 1.0E+01 rem
RED MARROW 6.3E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 8.5E-01 rem
LIVER 1.7E+01 rem	LIVER 4.1E+00 rem	LIVER 2.3E+00 rem
GONADS 9.3E-01 rem	GONADS 2.3E-01 rem	GONADS 1.3E-01 rem
EFFECTIVE DOSE	EFFECTIVE DOSE	EFFECTIVE DOSE
EQUIVALENT 4.3E+00 rem	EQUIVALENT 1.0E+00 rem	EQUIVALENT 5.9E-01 rem

Release Designation: 1-RD-134, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 17:14
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.4 rem

D = 0.03 km
DEP = 1.3E+00 uCi/m^2
CHI = 1.3E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.5E+02 rem
RED MARROW 2.9E+01 rem
LIVER 7.8E+01 rem
GONADS 4.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.0E+01 rem

D = 0.10 km
DEP = 2.2E-01 uCi/m^2
CHI = 2.2E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.0E+01 rem
RED MARROW 4.9E+00 rem
LIVER 1.3E+01 rem
GONADS 7.4E-01 rem
EFFECTIVE DOSE
EQUIVALENT 3.4E+00 rem

D = 0.19 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-134, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:17
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.797 rem

D = 0.03 km
DEP = 3.8E-01 uCi/m^2
CHI = 3.8E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.0E+02 rem
RED MARROW 8.5E+00 rem
LIVER 2.3E+01 rem
GONADS 1.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 5.8E+00 rem

D = 0.09 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 5.2E-02 uCi/m^2
CHI = 5.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.4E+01 rem
RED MARROW 1.2E+00 rem
LIVER 3.1E+00 rem
GONADS 1.7E-01 rem
EFFECTIVE DOSE
EQUIVALENT 8.0E-01 rem

Release Designation: 1-RD-135, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:38
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.4E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2.m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.076 rem

D = 0.03 km
DEP = 2.9E-02 uCi/m^2
CHI = 2.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.9E+00 rem
RED MARROW 6.5E-01 rem
LIVER 1.8E+00 rem
GONADS 9.7E-02 rem
EFFECTIVE DOSE
EQUIVALENT 4.5E-01 rem

D = 0.10 km
DEP = 5.0E-03 uCi/m^2
CHI = 5.0E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E+00 rem
RED MARROW 1.1E-01 rem
LIVER 3.0E-01 rem
GONADS 1.7E-02 rem
EFFECTIVE DOSE
EQUIVALENT 7.6E-02 rem

Release Designation: 1-RD-135, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:38
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.4E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.018 rem

D = 0.03 km
DEP = 8.6E-03 uCi/m^2
CHI = 8.6E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.3E+00 rem
RED MARROW 1.9E-01 rem
LIVER 5.1E-01 rem
GONADS 2.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.3E-01 rem

D = 0.10 km
DEP = 1.2E-03 uCi/m^2
CHI = 1.2E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.2E-01 rem
RED MARROW 2.6E-02 rem
LIVER 7.0E-02 rem
GONADS 3.9E-03 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E-02 rem

Release Designation: 1-RD-136, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:03
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.104 rem

D = 0.03 km
DEP = 4.0E-02 uCi/m^2
CHI = 4.0E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E+01 rem
RED MARROW 8.9E-01 rem
LIVER 2.4E+00 rem
GONADS 1.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 6.1E-01 rem

D = 0.10 km
DEP = 6.8E-03 uCi/m^2
CHI = 6.8E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+00 rem
RED MARROW 1.5E-01 rem
LIVER 4.1E-01 rem
GONADS 2.3E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E-01 rem

Release Designation: 1-RD-136, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:04
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.5E-04 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.024 rem

D = 0.03 km
DEP = 1.2E-02 uCi/m^2
CHI = 1.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.1E+00 rem
RED MARROW 2.6E-01 rem
LIVER 7.0E-01 rem
GONADS 3.9E-02 rem
EFFECTIVE DOSE
EQUIVALENT 1.8E-01 rem

D = 0.10 km
DEP = 1.6E-03 uCi/m^2
CHI = 1.6E-07 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.3E-01 rem
RED MARROW 3.6E-02 rem
LIVER 9.6E-02 rem
GONADS 5.3E-03 rem
EFFECTIVE DOSE
EQUIVALENT 2.4E-02 rem

Release Designation: 1-RD-137, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:40
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.5 rem

D = 0.03 km
DEP = 9.6E-01 uCi/m^2
CHI = 9.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.6E+02 rem
RED MARROW 2.1E+01 rem
LIVER 5.7E+01 rem
GONADS 3.2E+00 rem
EFFECTIVE DOSE
EQUIVALENT 1.5E+01 rem

D = 0.10 km
DEP = 1.6E-01 uCi/m^2
CHI = 1.6E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.4E+01 rem
RED MARROW 3.6E+00 rem
LIVER 9.8E+00 rem
GONADS 5.4E-01 rem
EFFECTIVE DOSE
EQUIVALENT 2.5E+00 rem

D = 0.16 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-137, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:41
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.5E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.587 rem

D = 0.03 km
DEP = 2.8E-01 uCi/m^2
CHI = 2.8E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.6E+01 rem
RED MARROW 6.3E+00 rem
LIVER 1.7E+01 rem
GONADS 9.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 4.3E+00 rem

D = 0.07 km
DEP = 6.9E-02 uCi/m^2
CHI = 6.9E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

D = 0.10 km
DEP = 3.8E-02 uCi/m^2
CHI = 3.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.0E+01 rem
RED MARROW 8.5E-01 rem
LIVER 2.3E+00 rem
GONADS 1.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 5.9E-01 rem

Release Designation: 1-RD-138, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:06
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 3.4 rem

D = 0.03 km
DEP = 1.3E+00 uCi/m^2
CHI = 1.3E-04 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.5E+02 rem
RED MARROW 2.9E+01 rem
LIVER 7.8E+01 rem
GONADS 4.3E+00 rem
EFFECTIVE DOSE
EQUIVALENT 2.0E+01 rem

D = 0.10 km
DEP = 2.2E-01 uCi/m^2
CHI = 2.2E-05 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 6.0E+01 rem
RED MARROW 4.9E+00 rem
LIVER 1.3E+01 rem
GONADS 7.4E-01 rem
EFFECTIVE DOSE
EQUIVALENT 3.4E+00 rem

D = 0.19 km
DEP = 6.8E-02 uCi/m^2
CHI = 6.8E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.8E+01 rem
RED MARROW 1.5E+00 rem
LIVER 4.1E+00 rem
GONADS 2.3E-01 rem
EFFECTIVE DOSE
EQUIVALENT 1.0E+00 rem

Release Designation: 1-RD-138, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:08
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 4.9E-03 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 0.797 rem

D = 0.03 km	D = 0.09 km	D = 0.10 km
DEP = 3.8E-01 uCi/m^2	DEP = 6.8E-02 uCi/m^2	DEP = 5.2E-02 uCi/m^2
CHI = 3.8E-05 (Ci-s)/m^3	CHI = 6.8E-06 (Ci-s)/m^3	CHI = 5.2E-06 (Ci-s)/m^3
50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:	50-YR DOSE COMMITMENT:
---	---	---
SURFACE BONE 1.0E+02 rem	SURFACE BONE 1.8E+01 rem	SURFACE BONE 1.4E+01 rem
RED MARROW 8.5E+00 rem	RED MARROW 1.5E+00 rem	RED MARROW 1.2E+00 rem
LIVER 2.3E+01 rem	LIVER 4.1E+00 rem	LIVER 3.1E+00 rem
GONADS 1.3E+00 rem	GONADS 2.3E-01 rem	GONADS 1.7E-01 rem
EFFECTIVE DOSE EQUIVALENT 5.8E+00 rem	EFFECTIVE DOSE EQUIVALENT 1.0E+00 rem	EFFECTIVE DOSE EQUIVALENT 8.0E-01 rem

Release Designation: 1-RD-139, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:43
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.3E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 7.2E-04 rem

D = 0.03 km
DEP = 2.8E-04 uCi/m^2
CHI = 2.8E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.4E-02 rem
RED MARROW 6.1E-03 rem
LIVER 1.7E-02 rem
GONADS 9.2E-04 rem
EFFECTIVE DOSE
EQUIVALENT 4.2E-03 rem

D = 0.10 km
DEP = 4.7E-05 uCi/m^2
CHI = 4.7E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.3E-02 rem
RED MARROW 1.0E-03 rem
LIVER 2.8E-03 rem
GONADS 1.6E-04 rem
EFFECTIVE DOSE
EQUIVALENT 7.2E-04 rem

Release Designation: 1-RD-139, Average

HOTSPOT 7.0 GENERAL PLUME 9-09-1996 22:43
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 1.3E-06 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 30.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 1.7E-04 rem

D = 0.03 km
DEP = 8.1E-05 uCi/m^2
CHI = 8.1E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.2E-02 rem
RED MARROW 1.8E-03 rem
LIVER 4.8E-03 rem
GONADS 2.7E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.2E-03 rem

D = 0.10 km
DEP = 1.1E-05 uCi/m^2
CHI = 1.1E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 3.0E-03 rem
RED MARROW 2.5E-04 rem
LIVER 6.6E-04 rem
GONADS 3.7E-05 rem
EFFECTIVE DOSE
EQUIVALENT 1.7E-04 rem

Release Designation: 1-RD-140, Adverse

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:09
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.8E-07 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 1.7 m/s
STABILITY CLASS : E DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 200.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 2.6E-04 rem

D = 0.03 km
DEP = 1.0E-04 uCi/m^2
CHI = 1.0E-08 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 2.7E-02 rem
RED MARROW 2.2E-03 rem
LIVER 6.0E-03 rem
GONADS 3.3E-04 rem
EFFECTIVE DOSE
EQUIVALENT 1.5E-03 rem

D = 0.10 km
DEP = 1.7E-05 uCi/m^2
CHI = 1.7E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 4.6E-03 rem
RED MARROW 3.8E-04 rem
LIVER 1.0E-03 rem
GONADS 5.7E-05 rem
EFFECTIVE DOSE
EQUIVALENT 2.6E-04 rem

Release Designation: 1-RD-140, Average

HOTSPOT 7.0 GENERAL PLUME 9-11-1996 12:10
RADIONUCLIDE : PU-238 Inhalation Class : W
HALFLIFE : 87.740 years
SOURCE TERM : 3.8E-07 Ci
Source Term Width: 3 m Source Term Height: 3 m
RELEASE FRACTION : 1.00E+00
FILTER EFFICIENCY: 0.000000 %
EFFECTIVE RELEASE HEIGHT : 0.00 m
WIND SPEED (h=2 m): 2.5 m/s
STABILITY CLASS : C DEPOSITION VELOCITY : 1.00 cm/s
RECEPTOR HEIGHT : 0.0 m INVERSION LAYER HEIGHT : 500.0 m
SAMPLE TIME : 10.000 min
MAXIMUM DOSE DISTANCE : < 0.10 km MAXIMUM CEDE : > 6.1E-05 rem

D = 0.03 km
DEP = 2.9E-05 uCi/m^2
CHI = 2.9E-09 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 7.9E-03 rem
RED MARROW 6.5E-04 rem
LIVER 1.8E-03 rem
GONADS 9.7E-05 rem
EFFECTIVE DOSE
EQUIVALENT 4.5E-04 rem

D = 0.10 km
DEP = 4.0E-06 uCi/m^2
CHI = 4.0E-10 (Ci-s)/m^3
50-YR DOSE COMMITMENT:

SURFACE BONE 1.1E-03 rem
RED MARROW 8.9E-05 rem
LIVER 2.4E-04 rem
GONADS 1.3E-05 rem
EFFECTIVE DOSE
EQUIVALENT 6.1E-05 rem

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INTRODUCTION

This calculation estimates the vapor concentrations of chemicals requiring full hazards analysis for the transportation EPHA, at 30 and 100 meter receptor points and the maximum distance to ERPG-2 concentration for each of the THM EPHA segments for adverse and average meteorological conditions. Concentrations for ALOHA default distances for maximum segment source terms are also analyzed.

ASSUMPTIONS

Releases are ground level and immediately spread to 1 cm depth. (Ref 1)
SRS established 95% adverse meteorological conditions: (Ref 2)
E-stability, 1.7 m/s wind, 200 m inversion and 29° C ambient temperature.
SRS established 50% average meteorological conditions: (Ref 2)
C-stability, 2.5 m/s wind, 500 m inversion and 25° C ambient temperature.
Receptor points are at ground level. (Ref 2)

CALCULATION

The Areal Locations of Hazardous Atmospheres (ALOHA), dispersion model, Version 5.1, (Ref. 3) is utilized to calculate and/or back calculate, as appropriate, concentration information for the following chemicals and associated ERPG-2 values (Ref. 4).

Table 1 Chemicals, Associated ERPG, and State

Chemical Name / Molecular Weight	ERPG or Equiv ppm	State (S)olid (L)iquid (G)as	RELEASE DESIGNATION
Acetaldehyde / 44.1	200	L	1-RD-1
Acetic Acid	SEE CALC 8	L	1-RD-2
Acetonitrile / 41.1	SEE CALC 8	L	1-RD-3
Alpha-Pinene / 136.3	SEE CALC 8	L	1-RD-4
Ammonium Hydroxide	200	L	1-RD-5
Benzene / 78.1	150	L	1-RD-6
Benzyl Alcohol	SEE CALC 8	L	1-RD-7
Benzyl Chloride	10	L	1-RD-8
Butyraldehyde	SEE CALC 8	L	1-RD-9
Carbon disulfide / 76.1	50	L	1-RD-10
Chloracetone / 92.5	SEE CALC 8	L	1-RD-11
Chlorosulfonic Acid / 116.52	10	L	1-RD-12
Cyclohexane / 84.2	1300	L	1-RD-13
Cyclohexanone / 98.2	SEE CALC 8	L	1-RD-14
Diethylene Glycol / 106.1	SEE CALC 8	L	1-RD-15
Dioxane / 88.1	SEE CALC 8	L	1-RD-16
Diphenylmethane-4,4-Diisocyanate / 250.3	SEE CALC 8	L/S	1-RD-17
Ethyl Acetate / 88.1	2000	L	1-RD-18
Ethyl benzene / 106.2	SEE CALC 8	L	1-RD-19
Ethylene Glycol Monobutyl Ether /118.2	150	L	1-RD-20
Fluorosilicic Acid / 144.1	20	L	1-RD-21
Formic Acid / 46.0	SEE CALC 8	L	1-RD-22
Glycol Ether DE / 134.2	SEE CALC 8	L	1-RD-23
Hydrochloric Acid 31% / 36.5	20	L	1-RD-24

Table 1 cont. Chemicals, Associated ERPG, and State

Chemical Name / Molecular Weight	ERPG or Equiv ppm	State (S)olid (L)iquid (G)as	RELEASE DESIGNATION
Hydrofluoric Acid 70% / 20.0	20	L	1-RD-25
Hydrogen Peroxide / 34.0	SEE CALC 8	L	1-RD-26
Isopropyl Alcohol 60.1	400	L	1-RD-27
Methyl Alcohol / 32.0	1000	L	1-RD-28
Methyl Ethyl Ketone / 72.1	SEE CALC 8	L	1-RD-29
Methyl Isobutyl Ketone / 100.2	SEE CALC 8	L	1-RD-30
Methylene Chloride / 84.9	750	L	1-RD-31
Methyol Cellosolve / 76.1	SEE CALC 8	L	1-RD-32
Monoethanolamine /61.1	SEE CALC 8	L	1-RD-33
Morpholine / 87.1	SEE CALC 8	L	1-RD-34
N Butyl Alcohol / 74.1	50	L	1-RD-35
N Methyl Pyrrolidone / 99.15	SEE CALC 8	L	1-RD-36
Nitric Acid / 63.0	15	L	1-RD-37
Onyxide	SEE CALC 8	-	1-RD-38
Perchloroethylene / 165.8	200	L	1-RD-39
Phenol, Molten / 94.1	50	L/S	1-RD-40
Propagyl Alcohol / 56.1	5	L	1-RD-41
Propionic Acid / 74.1	SEE CALC 8	L	1-RD-42
Rodine 50 (formaldehyde) /30.0	10	L	1-RD-43
Sulfuric Acid / 98.1	10	L	1-RD-44
Sulfuric Acid, Fuming / 98.1	10	L	1-RD-45
Tetrahydrofuran / 72.1	SEE CALC 8	L	1-RD-46
Toluene / 92.1	300	L	1-RD-47
Toluidine-o / 107.2	10	L	1-RD-48
Trichloroethane-1,1,1 / 133.4	SEE CALC 8	L	1-RD-49
Trichloroethylene / 131.4	500	L	1-RD-50
Triethylamine / 101.22	SEE CALC 8	L	1-RD-51
Vinyl Acetate / 86.1	75	L	1-RD-52
Xylenes / 106.2	200	L	1-RD-53
Benzoic Acid	SEE CALC 8	S	1-RD-54
Magnesium Oxide / 40.3	50	S	1-RD-55
Silica (as respirable dust)	SEE CALC 8	S	1-RD-56
Sodium Sulfhydrate / 56.06	SEE CALC 8	S	1-RD-57
Titanium Dioxide / 79.9	50	S	1-RD-58
Ammonia / 17.0	200	G*	1-RD-59
Chlorine / 70.9	3	G*	1-RD-60
Trimethylamine	25	G*	1-RD-61

* Liquefied Gas

The ALOHA computer code was utilized to develop ground level concentrations at specified receptor points. Liquids (including liquefied gases) are input as puddles, solids are input as direct releases after applying appropriate release fractions. The ALOHA code is then allowed to calculate the ground level concentration at the specified receptor point and these results are compared with the target concentration of ERPG-2. If the ALOHA projected concentration is greater than the target concentration the source term (puddle area, release rate as applicable) is reduced and the concentration re-calculated by ALOHA. If the ALOHA projected concentration is less than the target concentration the source term (puddle area, release rate as applicable) is increased and the concentration re-calculated by ALOHA. This process continues until the source term producing the target concentration at the target receptor point is established.

Additional ALOHA calculations were performed to determine the footprint of the ERPG-2 concentration for the maximum allowed source term per segment for each of the materials at risk. The segment maximums were also

utilized to allow ALOHA to calculate the maximum concentration at 6,000 meters for 95% meteorological conditions (ALOHA default distance based on wind speed for one hour) and 10,000 meters for 50% meteorological conditions (ALOHA default distance).

For releases lasting less than fifteen minutes, a fifteen minute peak average is calculated by:

$$\text{(concentration)} \left(\frac{\text{release time}}{\text{15 min.}} \right) = \text{min. avg.}$$

The computational preference in The ALOHA Code was allowed (by selecting "Let Model Decide" option) to have the code select the spreading algorithm (Gaussian or Heavy Gas). The algorithm selected is displayed in the data output for the particular analysis.

The following formulas are utilized to convert various results to the various quantities presented.

Equation 1.

- G=SM X 2.642

where:

G=gallons
SM= square meters at one centimeter depth
2.642 = gallons per square meter at one centimeter depth.

Equation 2.

- LBM=G X SG X 8.328

where:

LBM = pounds mass
G=gallons
SG = specific gravity
8.328 = density of water (pounds per gallon)

Data output beginning on sheet 8 shows key input values and the calculated values of interest.

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SRS SAVANNAH RIVER SITE

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RESULTS All results shown are centerline distance downwind.

Table 2 95% Adverse met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (ft^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (ft^2)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (170,940 ft^2) (meters)
1-RD-1	60	672	635	824	1400
1-RD-2	223	2820	299	393	770
1-RD-3	14	172	1500	1900	3000
1-RD-4	>30000	>100000	27	34	56
1-RD-5	655	3500	259	Runtime Default	Runtime Default
1-RD-6	68	695	549	708	1200
1-RD-7	>30000	>100000	27	34	56
1-RD-8	730	9200	163	213	360
1-RD-9	17	202	1200	1600	2500
1-RD-10	4.4	31	2200	2800	4500
1-RD-11	0.5	7	8900	>10000	>10000
1-RD-12	>30000	>100000	27	34	56
1-RD-13	1045	11000	135	196	332
1-RD-14	> 30000	> 100000	27	34	56
1-RD-15	> 30000	> 100000	27	34	56
1-RD-16	200	1700	324	457	751
1-RD-17	WIP	WIP	WIP	WIP	WIP
1-RD-18	1885	18400	103	150	255
1-RD-19	3450	> 14182	134	172	283
1-RD-20	> 30000	> 100000	27	34	56
1-RD-21	24600	>100000	21	38	61
1-RD-22	26	319	975	1400	2300
1-RD-23	2650	31400	88	114	186
1-RD-24	3230	39400	79	102	165
1-RD-25	24600	>100000	2.18	38	61
1-RD-26	555	7500	179	232	390
1-RD-27	848	4930	217	282	468
1-RD-28	1115	14000	132	253	442
1-RD-29	1030	11100	148	193	324
1-RD-30	2510	9750	155	200	333
1-RD-31	96	1110	450	592	1000
1-RD-32	>30000	>100000	27	34	56
1-RD-33	>30000	>100000	27	34	56
1-RD-34	> 30000	>100000	27	26	42
1-RD-35	288	3630	262	436	701
1-RD-36	>30000	>100000	27	34	56
1-RD-37	12	141	1700	2200	3500
1-RD-38	insf info for ERPG	insf info for ERPG	insf info for ERPG	insf info for ERPG	insf info for ERPG
1-RD-39	1175	8575	166	217	363
1-RD-40	4550	53500	68	88	142
1-RD-41	6	71	2700	3700	5900
1-RD-42	2850	34300	85	109	177
1-RD-43	18	226	1200	1600	2900
1-RD-44	>30000	>100000	27	34	56
1-RD-45	37	437	936	1200	1900
1-RD-46	425	4738	228	298	504
1-RD-47	1810	7730	174	226	376
1-RD-48	6260	73000	58	75	122
1-RD-49	690	7080	188	248	421

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Table 2 cont. 95% Adverse met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (ft^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (ft^2)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (170,940 ft^2) (meters)
1-RD-50	522	5760	206	271	456
1-RD-51	65	630	568	734	1200
1-RD-52	25.6	225	914	1200	1900
1-RD-53	6720	> 32140	56	111	182
1-RD-54	490	5100	260	437	567
1-RD-55	490	5100	260	437	567
1-RD-56	490	5100	260	437	567
1-RD-57	490	5100	260	437	567
1-RD-58	490	5100	260	437	567
	Pounds Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (lb_m)	Pounds Required to produce ERPG-2 Concentration @ 100 meters (SAE) (lb_m)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (1 ton) ** (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (10 tons)** (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (17.5 tons)** (meters)
1-RD-59	7	77	550	1800	2400
1-RD-60	0.3	3	4000	6300	6400
1-RD-61	1	6	1200	3200	4000

* ALOHA default maximum (see section 6.3.1.1)

Table 3 50% Average met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (ft^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (ft^2)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (170,940 ft^2) (meters)
1-RD-1	410	4600	601	780	1300
1-RD-2	1587	21400	107	135	211
1-RD-3	103	1297	408	522	2200
1-RD-4	>30000	>100000	27	34	56
1-RD-5	57	714	548	703	1100
1-RD-6	535	> 4000	499	641	1000
1-RD-7	> 30000	> 100000	27	34	56
1-RD-8	3700	50000	72	91	143
1-RD-9	119	1485	997	1300	2000
1-RD-10	32.3	> 260	1800	2400	3900
1-RD-11	4	50	5400	6900	>10000
1-RD-12	>30000	>100000	27	34	56
1-RD-13	> 2950	18700	115	149	247
1-RD-14	> 30000	> 100000	27	34	56
1-RD-15	> 30000	> 100000	27	34	56
1-RD-16	1750	> 17150	257	312	435
1-RD-17	WIP	WIP	WIP	WIP	WIP
1-RD-18	3140	35500	82	107	180
1-RD-19	16700	> 100000	36	46	74

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Table 3 cont. 50% Average met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (ft^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (ft^2)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (170,940 ft^2) (meters)
1-RD-20	> 30000	> 100000	27	34	56
1-RD-21	>30000	>100000	27	34	56
1-RD-22	168	2090	326	417	669
1-RD-23	11180	> 100000	44	56	89
1-RD-24	13080	> 100000	41	52	82
1-RD-25	> 30000	> 100000	27	34	56
1-RD-26	3307	46580	74	94	147
1-RD-27	9600	>36000	47	248	408
1-RD-28	12200	> 100000	42	53	85
1-RD-29	> 6250	19000	113	147	242
1-RD-30	10750	> 34500	39	112	148
1-RD-31	132	1712	380	494	819
1-RD-32	>30000	>100000	27	34	56
1-RD-33	>30000	> 100000	27	34	56
1-RD-34	> 30000	> 100000	27	34	56
1-RD-35	1995	26900	96	121	191
1-RD-36	>30000	>100000	27	34	56
1-RD-37	82	1015	469	603	2200
1-RD-38	insf info for ERPG	insf info for ERPG	insf info for ERPG	insf info for ERPG	insf info for ERPG
1-RD-39	9850	12900	113	133	177
1-RD-40	14550	> 100000	39	49	78
1-RD-41	37	447	696	895	1500
1-RD-42	12850	> 100000	41	52	83
1-RD-43	116	1440	392	501	805
1-RD-44	> 30000	> 100000	27	34	56
1-RD-45	189	2300	313	402	647
1-RD-46	> 1850	7500	181	236	392
1-RD-47	11950	> 22350	118	144	191
1-RD-48	23880	> 100000	30	39	
1-RD-49	955	11300	150	196	329
1-RD-50	> 1700	8200	174	225	375
1-RD-51	485	> 3670	522	691	1100
1-RD-52	181	> 2130	786	1000	1800
1-RD-53	30300	> 100000	27	34	56
1-RD-54	3400	37200	100	191	267
1-RD-55	3400	37200	100	191	267
1-RD-56	3400	37200	100	191	267
1-RD-57	3400	37200	100	191	267
1-RD-58	3400	37200	100	191	267
	Pounds Required to produce ERPG-2 Concentration @ 30 meters (ALERT)	Pounds Required to produce ERPG-2 Concentration @ 100 meters (SAE)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (1 ton) ** (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (10 tons)** (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (17.5 tons)** (meters)
1-RD-59	47	558	190	570	750
1-RD-60	2	10	2700	7500	9300
1-RD-61	9	110	1000	2800	3600

* ALOHA default maximum (see section 6.3.1.1)

REFERENCES

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2. Hadlock, D. J., *Consequence Assessment for Emergency Preparedness Hazards Assessments,* TP-95-002, Rev. 1, May 26, 1995.

3. *ALOHA, Areal Locations Of Hazardous Atmospheres, Version 5.1, User's Manuel,* National Oceanic and Atmospheric Administration and U.S. Environmental Protection Agency, October, 1992.

4. Craig, D. K., *ERPGs and TEELs for Chemicals of Concern at SRS,* ECS-CAT-96-0071, Rev. 10, August, 1996.

95% Adverse Meteorological Conditions
ALOHA Runs

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM
Reviewed by S. A. Henderson
Subject Concentration Analysis for THM Hazardous Chemicals
Works Calculation 7
Computer T. M. Franey
Date 09/16/96
Sheet No. 9 of 577

SITE DATA INFORMATION: 1-RD-1

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 60 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.41 kilograms/min
Max Average Sustained Release Rate: 552 grams/min
(averaged over a minute or more)
Total Amount Released: 17.4 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 201 ppm
Indoor: 201 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 10 of 577

SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 672 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 87.3 kilograms/min
Max Average Sustained Release Rate: 5.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 179 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 11 of 577

SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2,880 kilograms/min
Max Average Sustained Release Rate: 197 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,886 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 635 meters
Max Threat Zone for IDLH: 53 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,160 ppm
Indoor: 4,160 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 7

Computer T. M. Franey Date 09/16/96 Sheet No. 12 of 577

SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4,740 kilograms/min
Max Average Sustained Release Rate: 325 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,693 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 824 meters
Max Threat Zone for IDLH: 71 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6,410 ppm
Indoor: 6,410 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12,300 kilograms/min
Max Average Sustained Release Rate: 847 kilograms/min
(averaged over a minute or more)
Total Amount Released: 25,079 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 1.4 kilometers
Max Threat Zone for IDLH: 125 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14,000 ppm
Indoor: 14,000 ppm
Note: Indoor graph is shown with a dotted line.

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Computer T. M. Franey | Date 09/16/96 | Sheet No. 14 of 577

SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,293 ppm or 2.63%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 223 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 269 grams/min
Max Average Sustained Release Rate: 250 grams/min
(averaged over a minute or more)
Total Amount Released: 13.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,293 ppm or 2.63%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2820 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.97 kilograms/min
Max Average Sustained Release Rate: 2.78 kilograms/min
(averaged over a minute or more)
Total Amount Released: 154 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 13 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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Computer T. M. Franey | Date 09/16/96 | Sheet No. 16 of 577

SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,293 ppm or 2.63%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 23.2 kilograms/min
Max Average Sustained Release Rate: 21.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,213 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 299 meters
Max Threat Zone for IDLH: 34 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 146 ppm
Indoor: 146 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,293 ppm or 2.63%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 37.7 kilograms/min
Max Average Sustained Release Rate: 35.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,979 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 393 meters
Max Threat Zone for IDLH: 44 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 211 ppm
Indoor: 211 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,293 ppm or 2.63%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 95.6 kilograms/min
Max Average Sustained Release Rate: 90 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,029 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 770 meters
Max Threat Zone for IDLH: 79 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 804 ppm
Indoor: 804 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,909 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 14 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 103 grams/min
Max Average Sustained Release Rate: 80.7 grams/min
(averaged over a minute or more)
Total Amount Released: 3.92 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 35 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 34.9 ppm
Indoor: 34.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,909 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 172 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.07 kilograms/min
Max Average Sustained Release Rate: 858 grams/min
(averaged over a minute or more)
Total Amount Released: 42.4 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 35 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35.1 ppm
Indoor: 35.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,909 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 115 kilograms/min
Max Average Sustained Release Rate: 96.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,876 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 35 ppm
Max Threat Zone for LOC: 1.5 kilometers
Max Threat Zone for IDLH: 60 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,070 ppm
Indoor: 2,070 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,909 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 188 kilograms/min
Max Average Sustained Release Rate: 157 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,970 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 35 ppm
Max Threat Zone for LOC: 1.9 kilometers
Max Threat Zone for IDLH: 78 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,020 ppm
Indoor: 3,020 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,909 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 474 kilograms/min
Max Average Sustained Release Rate: 400 kilograms/min
(averaged over a minute or more)
Total Amount Released: 20,338 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 35 ppm
Max Threat Zone for LOC: 3.0 kilometers
Max Threat Zone for IDLH: 134 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5,960 ppm
Indoor: 5,960 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-4

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 0.0010 atm
Ambient Saturation Concentration: 1,056 ppm or 0.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.12 kilograms/min
Max Average Sustained Release Rate: 6.91 kilograms/min
(averaged over a minute or more)
Total Amount Released: 400 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 186 ppm

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 0.0010 atm
Ambient Saturation Concentration: 1,056 ppm or 0.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.7 kilograms/min
Max Average Sustained Release Rate: 22 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,274 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 56.1 ppm

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 0.0010 atm
Ambient Saturation Concentration: 1,056 ppm or 0.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.84 kilograms/min
Max Average Sustained Release Rate: 5.67 kilograms/min
(averaged over a minute or more)
Total Amount Released: 328 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16.7 ppm

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 0.0010 atm
Ambient Saturation Concentration: 1,056 ppm or 0.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.55 kilograms/min
Max Average Sustained Release Rate: 9.26 kilograms/min
(averaged over a minute or more)
Total Amount Released: 536 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 24.3 ppm

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 0.0010 atm
Ambient Saturation Concentration: 1,056 ppm or 0.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 24.3 kilograms/min
Max Average Sustained Release Rate: 23.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,367 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 60.2 ppm

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 74.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 655 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 15.7 kilograms/min
Max Average Sustained Release Rate: 1.97 kilograms/min
(averaged over a minute or more)
Total Amount Released: 32.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 74.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 80.1 kilograms/min
Max Average Sustained Release Rate: 10.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 159 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 97 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 74.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 533 kilograms/min
Max Average Sustained Release Rate: 69.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,022 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 259 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 855 ppm
Indoor: 855 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 152,425 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 68 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 909 grams/min
Max Average Sustained Release Rate: 743 grams/min
(averaged over a minute or more)
Total Amount Released: 36.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 151 ppm
Indoor: 151 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 152,425 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 695 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.19 kilograms/min
Max Average Sustained Release Rate: 6.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 340 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 150 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 14 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 150 ppm
Indoor: 150 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 152,425 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 243 kilograms/min
Max Average Sustained Release Rate: 207 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,465 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 150 ppm
Max Threat Zone for LOC: 549 meters
Max Threat Zone for IDLH: 89 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,600 ppm
Indoor: 2,600 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 152,425 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 397 kilograms/min
Max Average Sustained Release Rate: 337 kilograms/min
(averaged over a minute or more)
Total Amount Released: 17,140 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 150 ppm
Max Threat Zone for LOC: 708 meters
Max Threat Zone for IDLH: 117 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,060 ppm
Indoor: 4,060 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 152,425 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,010 kilograms/min
Max Average Sustained Release Rate: 858 kilograms/min
(averaged over a minute or more)
Total Amount Released: 43,878 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 150 ppm
Max Threat Zone for LOC: 1.2 kilometers
Max Threat Zone for IDLH: 200 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9,300 ppm
Indoor: 9,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 308 grams/min
Max Average Sustained Release Rate: 298 grams/min
(averaged over a minute or more)
Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.1 ppm
Indoor: 10.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 967 grams/min
Max Average Sustained Release Rate: 933 grams/min
(averaged over a minute or more)
Total Amount Released: 53.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 55 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3 ppm
Indoor: 3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 250 grams/min
Max Average Sustained Release Rate: 241 grams/min
(averaged over a minute or more)
Total Amount Released: 13.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.897 ppm
Indoor: 0.897 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 408 grams/min
Max Average Sustained Release Rate: 393 grams/min
(averaged over a minute or more)
Total Amount Released: 22.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.3 ppm
Indoor: 1.3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.04 kilograms/min
Max Average Sustained Release Rate: 1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 57.4 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.22 ppm
Indoor: 3.22 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0022 atm
Ambient Saturation Concentration: 2,263 ppm or 0.23%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 730 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 184 grams/min
Max Average Sustained Release Rate: 179 grams/min
(averaged over a minute or more)
Total Amount Released: 10.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0022 atm
Ambient Saturation Concentration: 2,263 ppm or 0.23%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 9200 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.08 kilograms/min
Max Average Sustained Release Rate: 2.01 kilograms/min
(averaged over a minute or more)
Total Amount Released: 117 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 100 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0022 atm
Ambient Saturation Concentration: 2,263 ppm or 0.23%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.31 kilograms/min
Max Average Sustained Release Rate: 5.14 kilograms/min
(averaged over a minute or more)
Total Amount Released: 297 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 163 meters
Max Threat Zone for IDLH: 163 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16.4 ppm
Indoor: 16.4 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0022 atm
Ambient Saturation Concentration: 2,263 ppm or 0.23%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.67 kilograms/min
Max Average Sustained Release Rate: 8.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 486 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 213 meters
Max Threat Zone for IDLH: 213 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 23.7 ppm
Indoor: 23.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0022 atm
Ambient Saturation Concentration: 2,263 ppm or 0.23%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.1 kilograms/min
Max Average Sustained Release Rate: 21.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,238 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 360 meters
Max Threat Zone for IDLH: 360 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 58.7 ppm
Indoor: 58.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,016 ppm or 17.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 17 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 266 grams/min
Max Average Sustained Release Rate: 208 grams/min
(averaged over a minute or more)
Total Amount Released: 9.82 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.8 ppm
Indoor: 50.8 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,016 ppm or 17.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 202 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.73 kilograms/min
Max Average Sustained Release Rate: 2.17 kilograms/min
(averaged over a minute or more)
Total Amount Released: 105 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.1 ppm
Indoor: 50.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,016 ppm or 17.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 260 kilograms/min
Max Average Sustained Release Rate: 215 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,585 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 1.2 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,920 ppm
Indoor: 2,920 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,016 ppm or 17.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 424 kilograms/min
Max Average Sustained Release Rate: 351 kilograms/min
(averaged over a minute or more)
Total Amount Released: 17,342 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 1.6 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,570 ppm
Indoor: 4,570 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,016 ppm or 17.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,080 kilograms/min
Max Average Sustained Release Rate: 892 kilograms/min
(averaged over a minute or more)
Total Amount Released: 44,423 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 2.5 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10,500 ppm
Indoor: 10,500 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 559,378 ppm or 55.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 4.4 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 35 minutes
Max Computed Release Rate: 322 grams/min
Max Average Sustained Release Rate: 210 grams/min
(averaged over a minute or more)
Total Amount Released: 5.11 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 49.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 559,378 ppm or 55.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 31 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 39 minutes
Max Computed Release Rate: 2 kilograms/min
Max Average Sustained Release Rate: 1.33 kilograms/min
(averaged over a minute or more)
Total Amount Released: 36.0 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 21 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 49.7 ppm
Indoor: 48.8 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 559,378 ppm or 55.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 51 minutes
Max Computed Release Rate: 1,120 kilograms/min
Max Average Sustained Release Rate: 775 kilograms/min
(averaged over a minute or more)
Total Amount Released: 28,347 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 2.2 kilometers
Max Threat Zone for IDLH: 524 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11,600 ppm
Indoor: 11,600 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 559,378 ppm or 55.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 51 minutes
Max Computed Release Rate: 1,820 kilograms/min
Max Average Sustained Release Rate: 1,270 kilograms/min
(averaged over a minute or more)
Total Amount Released: 47,244 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 2.8 kilometers
Max Threat Zone for IDLH: 684 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 19,400 ppm
Indoor: 19,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 559,378 ppm or 55.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 53 minutes
Max Computed Release Rate: 4,630 kilograms/min
Max Average Sustained Release Rate: 3,230 kilograms/min
(averaged over a minute or more)
Total Amount Released: 124,947 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 4.5 kilometers
Max Threat Zone for IDLH: 1.1 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 101,000 ppm
Indoor: 101,000 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-11

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.45 atm
Ambient Saturation Concentration: 453,066 ppm or 45.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.5 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 38 minutes
Max Computed Release Rate: 30.7 grams/min
Max Average Sustained Release Rate: 19.9 grams/min
(averaged over a minute or more)
Total Amount Released: 509 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.65 ppm
Indoor: 4.61 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-11
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.45 atm
Ambient Saturation Concentration: 453,066 ppm or 45.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 43 minutes
Max Computed Release Rate: 357 grams/min
Max Average Sustained Release Rate: 237 grams/min
(averaged over a minute or more)
Total Amount Released: 7.13 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5.24 ppm
Indoor: 5.21 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-11
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.45 atm
Ambient Saturation Concentration: 453,066 ppm or 45.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 808 kilograms/min
Max Average Sustained Release Rate: 565 kilograms/min
(averaged over a minute or more)
Total Amount Released: 24,523 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: 8.9 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7,910 ppm

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1-RD-11 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.45 atm
Ambient Saturation Concentration: 453,066 ppm or 45.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,320 kilograms/min
Max Average Sustained Release Rate: 923 kilograms/min
(averaged over a minute or more)
Total Amount Released: 40,292 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: greater than 10 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 13,100 ppm

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1-RD-11 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.45 atm
Ambient Saturation Concentration: 453,066 ppm or 45.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3,340 kilograms/min
Max Average Sustained Release Rate: 2,360 kilograms/min
(averaged over a minute or more)
Total Amount Released: 103,802 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: greater than 10 kilometers
Note: The Heavy Gas footprint is an initial screening:
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 33,600 ppm

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1-RD-12

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: unk ppm IDLH: not available ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 17.2 grams/min
Max Average Sustained Release Rate: 16.6 grams/min
(averaged over a minute or more)
Total Amount Released: 954 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.62 ppm
Indoor: 0.62 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-12
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: unk ppm IDLH: not available ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 53.8 grams/min
Max Average Sustained Release Rate: 51.9 grams/min
(averaged over a minute or more)
Total Amount Released: 2.99 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.184 ppm
Indoor: 0.184 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-12
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: unk ppm IDLH: not available ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.9 grams/min
Max Average Sustained Release Rate: 13.4 grams/min
(averaged over a minute or more)
Total Amount Released: 773 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0551 ppm
Indoor: 0.0551 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-12
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: unk ppm IDLH: not available ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.7 grams/min
Max Average Sustained Release Rate: 21.9 grams/min
(averaged over a minute or more)
Total Amount Released: 1.26 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0799 ppm
Indoor: 0.0799 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 66 of 577

1-RD-12

SITE DATA INFORMATION

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:

Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: unk ppm IDLH: not available ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 57.7 grams/min
Max Average Sustained Release Rate: 55.7 grams/min
(averaged over a minute or more)
Total Amount Released: 3.21 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.197 ppm
Indoor: 0.197 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 157,328 ppm or 15.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1045 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.2 kilograms/min
Max Average Sustained Release Rate: 11 kilograms/min
(averaged over a minute or more)
Total Amount Released: 555 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,300 ppm
Indoor: 1,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 157,328 ppm or 15.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 11000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 125 kilograms/min
Max Average Sustained Release Rate: 106 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,356 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 26 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,300 ppm
Indoor: 1,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 157,328 ppm or 15.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 20420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 225 kilograms/min
Max Average Sustained Release Rate: 191 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,730 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 135 meters
Max Threat Zone for IDLH: 36 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,270 ppm
Indoor: 2,270 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 157,328 ppm or 15.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 436 kilograms/min
Max Average Sustained Release Rate: 371 kilograms/min
(averaged over a minute or more)
Total Amount Released: 18,941 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 196 meters
Max Threat Zone for IDLH: 55 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,230 ppm
Indoor: 4,230 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 157,328 ppm or 15.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,110 kilograms/min
Max Average Sustained Release Rate: 949 kilograms/min
(averaged over a minute or more)
Total Amount Released: 48,500 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 332 meters
Max Threat Zone for IDLH: 96 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9,940 ppm
Indoor: 9,940 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0072 atm
Ambient Saturation Concentration: 7,361 ppm or 0.74%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.7 kilograms/min
Max Average Sustained Release Rate: 9.35 kilograms/min
(averaged over a minute or more)
Total Amount Released: 537 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 349 ppm
Indoor: 349 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0072 atm
Ambient Saturation Concentration: 7,361 ppm or 0.74%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 30.4 kilograms/min
Max Average Sustained Release Rate: 29.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,684 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 104 ppm
Indoor: 104 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0072 atm
Ambient Saturation Concentration: 7,361 ppm or 0.74%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.85 kilograms/min
Max Average Sustained Release Rate: 7.57 kilograms/min
(averaged over a minute or more)
Total Amount Released: 435 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 31.1 ppm
Indoor: 31.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0072 atm
Ambient Saturation Concentration: 7,361 ppm or 0.74%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12.8 kilograms/min
Max Average Sustained Release Rate: 12.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 710 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 45 ppm
Indoor: 45 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0072 atm
Ambient Saturation Concentration: 7,361 ppm or 0.74%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 32.6 kilograms/min
Max Average Sustained Release Rate: 31.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,808 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 111 ppm
Indoor: 111 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 255 grams/min
Max Average Sustained Release Rate: 245 grams/min
(averaged over a minute or more)
Total Amount Released: 14.1 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6.71 ppm
Indoor: 6.71 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 801 grams/min
Max Average Sustained Release Rate: 771 grams/min
(averaged over a minute or more)
Total Amount Released: 44.1 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2 ppm
Indoor: 2 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 207 grams/min
Max Average Sustained Release Rate: 199 grams/min
(averaged over a minute or more)
Total Amount Released: 11.4 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.596 ppm
Indoor: 0.596 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-15

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 338 grams/min
Max Average Sustained Release Rate: 325 grams/min
(averaged over a minute or more)
Total Amount Released: 18.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.865 ppm
Indoor: 0.865 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-15

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 860 grams/min
Max Average Sustained Release Rate: 827 grams/min
(averaged over a minute or more)
Total Amount Released: 47.4 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.14 ppm
Indoor: 2.14 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,381 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 200 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 994 grams/min
Max Average Sustained Release Rate: 887 grams/min
(averaged over a minute or more)
Total Amount Released: 47.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 125 ppm
Indoor: 125 ppm
Note; Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,381 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.58 kilograms/min
Max Average Sustained Release Rate: 6.82 kilograms/min
(averaged over a minute or more)
Total Amount Released: 368 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 125 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 15 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 125 ppm
Indoor: 125 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,381 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 20420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 81.4 kilograms/min
Max Average Sustained Release Rate: 73.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,002 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 125 ppm
Max Threat Zone for LOC: 324 meters
Max Threat Zone for IDLH: 50 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 792 ppm
Indoor: 792 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,381 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 158 kilograms/min
Max Average Sustained Release Rate: 143 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,773 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 125 ppm
Max Threat Zone for LOC: 457 meters
Max Threat Zone for IDLH: 74 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,360 ppm
Indoor: 1,360 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,381 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 400 kilograms/min
Max Average Sustained Release Rate: 365 kilograms/min
(averaged over a minute or more)
Total Amount Released: 19,846 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 125 ppm
Max Threat Zone for LOC: 751 meters
Max Threat Zone for IDLH: 128 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,900 ppm
Indoor: 2,900 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-17
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 7.96e-004 atm
Ambient Saturation Concentration: 810 ppm or 0.081%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 75 square feet
Average Puddle Depth: 1 inches
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.49 grams/min
Max Average Sustained Release Rate: 3.4 grams/min
(averaged over a minute or more)
Total Amount Released: 196 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.496 ppm
Indoor: 0.496 ppm

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1-RD-17 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 7.96e-004 atm
Ambient Saturation Concentration: 810 ppm or 0.081%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 920 square feet
Average Puddle Depth: 1 inches
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 37.8 grams/min
Max Average Sustained Release Rate: 36.8 grams/min
(averaged over a minute or more)
Total Amount Released: 2.12 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.5 ppm
Indoor: 0.5 ppm

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1-RD-17 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 7.96e-004 atm
Ambient Saturation Concentration: 810 ppm or 0.081%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 inches
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 867 grams/min
Max Average Sustained Release Rate: 846 grams/min
(averaged over a minute or more)
Total Amount Released: 48.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: .5 ppm
Max Threat Zone for LOC: 547 meters
Max Threat Zone for IDLH: 27 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.18 ppm

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1-RD-17 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 7.96e-004 atm
Ambient Saturation Concentration: 810 ppm or 0.081%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 inches
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.42 kilograms/min
Max Average Sustained Release Rate: 1.38 kilograms/min
(averaged over a minute or more)
Total Amount Released: 79.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: .5 ppm
Max Threat Zone for LOC: 729 meters
Max Threat Zone for IDLH: 34 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.61 ppm

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1-RD-17 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 7.96e-004 atm
Ambient Saturation Concentration: 810 ppm or 0.081%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 inches
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.6 kilograms/min
Max Average Sustained Release Rate: 3.52 kilograms/min
(averaged over a minute or more)
Total Amount Released: 203 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: .5 ppm
Max Threat Zone for LOC: 1.3 kilometers
Max Threat Zone for IDLH: 56 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.4 ppm

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SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 151,884 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1885 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 23.7 kilograms/min
Max Average Sustained Release Rate: 19.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 967 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,000 ppm
Indoor: 2,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 151,884 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 18400 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 209 kilograms/min
Max Average Sustained Release Rate: 175 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,721 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,000 ppm
Indoor: 2,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 151,884 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 20420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 231 kilograms/min
Max Average Sustained Release Rate: 194 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,644 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 103 meters
Max Threat Zone for IDLH: 36 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,200 ppm
Indoor: 2,200 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

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SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 151,884 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 447 kilograms/min
Max Average Sustained Release Rate: 375 kilograms/min
(averaged over a minute or more)
Total Amount Released: 18,791 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 150 meters
Max Threat Zone for IDLH: 54 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,120 ppm
Indoor: 4,120 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

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SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 151,884 ppm or 15.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,140 kilograms/min
Max Average Sustained Release Rate: 956 kilograms/min
(averaged over a minute or more)
Total Amount Released: 48,160 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 255 meters
Max Threat Zone for IDLH: 94 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9,630 ppm
Indoor: 9,630 ppm
Note: Indoor graph is shown with a dotted line.

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CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,157 ppm or 1.62%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3450 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.68 kilograms/min
Max Average Sustained Release Rate: 4.45 kilograms/min
(averaged over a minute or more)
Total Amount Released: 252 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 160 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 10 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 160 ppm
Indoor: 160 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,157 ppm or 1.62%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 14182 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 18.1 kilograms/min
Max Average Sustained Release Rate: 17.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 978 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 160 ppm
Max Threat Zone for LOC: 60 meters
Max Threat Zone for IDLH: 20 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 82.6 ppm
Indoor: 82.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,157 ppm or 1.62%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 30.4 kilograms/min
Max Average Sustained Release Rate: 29 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,648 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 160 ppm
Max Threat Zone for LOC: 134 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 246 ppm
Indoor: 246 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,157 ppm or 1.62%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 49.7 kilograms/min
Max Average Sustained Release Rate: 47.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,692 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 160 ppm
Max Threat Zone for LOC: 172 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 346 ppm
Indoor: 346 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,157 ppm or 1.62%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 126 kilograms/min
Max Average Sustained Release Rate: 121 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,862 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 160 ppm
Max Threat Zone for LOC: 283 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 653 ppm
Indoor: 653 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30000 square feet
Average Puddle Depth: 1 inches
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.81 kilograms/min
Max Average Sustained Release Rate: 1.76 kilograms/min
(averaged over a minute or more)
Total Amount Released: 101 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 54.8 ppm

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1-RD-20
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.75 kilograms/min
Max Average Sustained Release Rate: 5.56 kilograms/min
(averaged over a minute or more)
Total Amount Released: 319 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16.3 ppm

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1-RD-20
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.49 kilograms/min
Max Average Sustained Release Rate: 1.43 kilograms/min
(averaged over a minute or more)
Total Amount Released: 82.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.89 ppm

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1-RD-20

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.43 kilograms/min
Max Average Sustained Release Rate: 2.34 kilograms/min
(averaged over a minute or more)
Total Amount Released: 134 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.09 ppm

1-RD-20

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:

Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.18 kilograms/min
Max Average Sustained Release Rate: 5.96 kilograms/min
(averaged over a minute or more)
Total Amount Released: 342 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 17.5 ppm

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1-RD-21

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24600 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 6.01 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-21

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 107639 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 476 grams/min
Max Average Sustained Release Rate: 443 grams/min
(averaged over a minute or more)
Total Amount Released: 24.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 61 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.69 ppm
Indoor: 7.69 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-21
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 5.97 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.18 ppm
Indoor: 2.18 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-21
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 189 grams/min
Max Average Sustained Release Rate: 176 grams/min
(averaged over a minute or more)
Total Amount Released: 9.68 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 38 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.15 ppm
Indoor: 3.15 ppm
Note: Indoor graph is shown with a dotted line.

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SRS

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1-RD-21

SITE DATA INFORMATION

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:

Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 476 grams/min
Max Average Sustained Release Rate: 443 grams/min
(averaged over a minute or more)
Total Amount Released: 24.3 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 61 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.69 ppm
Indoor: 7.69 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 68,996 ppm or 6.90%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 26 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 60.5 grams/min
Max Average Sustained Release Rate: 53.3 grams/min
(averaged over a minute or more)
Total Amount Released: 2.82 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 24 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 68,996 ppm or 6.90%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 319 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 633 grams/min
Max Average Sustained Release Rate: 565 grams/min
(averaged over a minute or more)
Total Amount Released: 30.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 80 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 68,996 ppm or 6.90%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 38.5 kilograms/min
Max Average Sustained Release Rate: 34.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,887 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 975 meters
Max Threat Zone for IDLH: 750 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 306 ppm
Indoor: 306 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 68,996 ppm or 6.90%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 62.6 kilograms/min
Max Average Sustained Release Rate: 56.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,079 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 20 ppm
Max Threat Zone for LOC: 1.4 kilometers
Max Threat Zone for IDLH: 1.1 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 930 ppm
Indoor: 930 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 68,996 ppm or 6.90%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 158 kilograms/min
Max Average Sustained Release Rate: 144 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,828 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 20 ppm
Max Threat Zone for LOC: 2.3 kilometers
Max Threat Zone for IDLH: 1.7 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,710 ppm
Indoor: 1,710 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2650 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 865 grams/min
Max Average Sustained Release Rate: 835 grams/min
(averaged over a minute or more)
Total Amount Released: 48.0 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25 ppm
Indoor: 25 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 31400 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.27 kilograms/min
Max Average Sustained Release Rate: 8.95 kilograms/min
(averaged over a minute or more)
Total Amount Released: 515 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25 ppm
Indoor: 25 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.28 kilograms/min
Max Average Sustained Release Rate: 7.03 kilograms/min
(averaged over a minute or more)
Total Amount Released: 404 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 88 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 21.1 ppm
Indoor: 21.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 11.9 kilograms/min
Max Average Sustained Release Rate: 11.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 661 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 114 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 30.6 ppm
Indoor: 30.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0016 atm
Ambient Saturation Concentration: 1,670 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3230 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 197 grams/min
Max Average Sustained Release Rate: 189 grams/min
(averaged over a minute or more)
Total Amount Released: 10.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0016 atm
Ambient Saturation Concentration: 1,670 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 39400 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.11 kilograms/min
Max Average Sustained Release Rate: 2.03 kilograms/min
(averaged over a minute or more)
Total Amount Released: 116 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0016 atm
Ambient Saturation Concentration: 1,670 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.34 kilograms/min
Max Average Sustained Release Rate: 1.29 kilograms/min
(averaged over a minute or more)
Total Amount Released: 73.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 79 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14.2 ppm
Indoor: 14.2 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 124 of 577

SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0016 atm
Ambient Saturation Concentration: 1,670 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.18 kilograms/min
Max Average Sustained Release Rate: 2.09 kilograms/min
(averaged over a minute or more)
Total Amount Released: 120 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 102 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20.5 ppm
Indoor: 20.5 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM
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Subject Concentration Analysis for THM Hazardous Chemicals
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Date 09/16/96
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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0016 atm
Ambient Saturation Concentration: 1,670 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.51 kilograms/min
Max Average Sustained Release Rate: 5.29 kilograms/min
(averaged over a minute or more)
Total Amount Released: 302 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 165 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.4 ppm
Indoor: 50.4 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 126 of 577

SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24600 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 6.01 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM
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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 107639 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 476 grams/min
Max Average Sustained Release Rate: 443 grams/min
(averaged over a minute or more)
Total Amount Released: 24.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 61 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.69 ppm
Indoor: 7.69 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM
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Subject Concentration Analysis for THM Hazardous Chemicals
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Date 09/16/96
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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 5.97 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.18 ppm
Indoor: 2.18 ppm
Note: Indoor graph is shown with a dotted line.

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Reviewed by S. A. Henderson
Subject Concentration Analysis for THM Hazardous Chemicals
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Computer T. M. Franey
Date 09/16/96
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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 189 grams/min
Max Average Sustained Release Rate: 176 grams/min
(averaged over a minute or more)
Total Amount Released: 9.68 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 38 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.15 ppm
Indoor: 3.15 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 476 grams/min
Max Average Sustained Release Rate: 443 grams/min
(averaged over a minute or more)
Total Amount Released: 24.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 61 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.69 ppm
Indoor: 7.69 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 131 of 577

SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,488 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 555 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 43.2 grams/min
Max Average Sustained Release Rate: 41.8 grams/min
(averaged over a minute or more)
Total Amount Released: 2.40 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,488 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 503 grams/min
Max Average Sustained Release Rate: 488 grams/min
(averaged over a minute or more)
Total Amount Released: 28.0 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 25 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson
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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,488 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.54 kilograms/min
Max Average Sustained Release Rate: 1.49 kilograms/min
(averaged over a minute or more)
Total Amount Released: 85.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 179 meters
Max Threat Zone for IDLH: 44 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 17.7 ppm
Indoor: 17.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,488 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.51 kilograms/min
Max Average Sustained Release Rate: 2.43 kilograms/min
(averaged over a minute or more)
Total Amount Released: 139 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 232 meters
Max Threat Zone for IDLH: 56 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25.5 ppm
Indoor: 25.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,488 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.33 kilograms/min
Max Average Sustained Release Rate: 6.13 kilograms/min
(averaged over a minute or more)
Total Amount Released: 352 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 390 meters
Max Threat Zone for IDLH: 91 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 62.7 ppm
Indoor: 62.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.076 atm
Ambient Saturation Concentration: 77,490 ppm or 7.75%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 848 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.43 kilograms/min
Max Average Sustained Release Rate: 3.64 kilograms/min
(averaged over a minute or more)
Total Amount Released: 182 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 400 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 400 ppm
Indoor: 400 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM
Reviewed by S. A. Henderson
Subject Concentration Analysis for THM Hazardous Chemicals
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Computer T. M. Franey
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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.076 atm
Ambient Saturation Concentration: 77,490 ppm or 7.75%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 4930 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 23.5 kilograms/min
Max Average Sustained Release Rate: 19.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 988 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 400 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 400 ppm
Indoor: 400 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.076 atm
Ambient Saturation Concentration: 77,490 ppm or 7.75%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 108 kilograms/min
Max Average Sustained Release Rate: 90.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,610 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 400 ppm
Max Threat Zone for LOC: 217 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,370 ppm
Indoor: 1,370 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.076 atm
Ambient Saturation Concentration: 77,490 ppm or 7.75%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 176 kilograms/min
Max Average Sustained Release Rate: 148 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,543 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 400 ppm
Max Threat Zone for LOC: 282 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,030 ppm
Indoor: 2,030 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.076 atm
Ambient Saturation Concentration: 77,490 ppm or 7.75%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 446 kilograms/min
Max Average Sustained Release Rate: 378 kilograms/min
(averaged over a minute or more)
Total Amount Released: 19,280 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 400 ppm
Max Threat Zone for LOC: 468 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,210 ppm
Indoor: 4,210 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 207,481 ppm or 20.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1115 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.8 kilograms/min
Max Average Sustained Release Rate: 5.56 kilograms/min
(averaged over a minute or more)
Total Amount Released: 253 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 207,481 ppm or 20.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 14000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 85.1 kilograms/min
Max Average Sustained Release Rate: 62.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,890 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 20 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 207,481 ppm or 20.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 144 kilograms/min
Max Average Sustained Release Rate: 107 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,944 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 132 meters
Max Threat Zone for IDLH: 27 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,340 ppm
Indoor: 1,340 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 207,481 ppm or 20.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 234 kilograms/min
Max Average Sustained Release Rate: 174 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,096 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 253 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,080 ppm
Indoor: 4,080 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 207,481 ppm or 20.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 591 kilograms/min
Max Average Sustained Release Rate: 444 kilograms/min
(averaged over a minute or more)
Total Amount Released: 20,724 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 422 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7,640 ppm
Indoor: 7,640 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,614 ppm or 15.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1030 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 10.3 kilograms/min
Max Average Sustained Release Rate: 8.56 kilograms/min
(averaged over a minute or more)
Total Amount Released: 425 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 18 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,200 ppm
Indoor: 1,200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,614 ppm or 15.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 11100 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 99.2 kilograms/min
Max Average Sustained Release Rate: 83.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,183 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,200 ppm
Indoor: 1,200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,614 ppm or 15.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 211 kilograms/min
Max Average Sustained Release Rate: 177 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,949 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 148 meters
Max Threat Zone for IDLH: 83 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,370 ppm
Indoor: 2,370 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,614 ppm or 15.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 343 kilograms/min
Max Average Sustained Release Rate: 289 kilograms/min
(averaged over a minute or more)
Total Amount Released: 14,653 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 193 meters
Max Threat Zone for IDLH: 109 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,650 ppm
Indoor: 3,650 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,614 ppm or 15.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 871 kilograms/min
Max Average Sustained Release Rate: 736 kilograms/min
(averaged over a minute or more)
Total Amount Released: 37,509 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 324 meters
Max Threat Zone for IDLH: 188 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 8,180 ppm
Indoor: 8,180 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.033 atm
Ambient Saturation Concentration: 33,167 ppm or 3.32%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2510 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.61 kilograms/min
Max Average Sustained Release Rate: 6.13 kilograms/min
(averaged over a minute or more)
Total Amount Released: 340 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 250 ppm
Indoor: 250 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.033 atm
Ambient Saturation Concentration: 33,167 ppm or 3.32%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 9750 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 24.2 kilograms/min
Max Average Sustained Release Rate: 22.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,250 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 250 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 13 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 250 ppm
Indoor: 250 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 153 of 577

SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.033 atm
Ambient Saturation Concentration: 33,167 ppm or 3.32%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 58.2 kilograms/min
Max Average Sustained Release Rate: 54.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,019 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 250 ppm
Max Threat Zone for LOC: 155 meters
Max Threat Zone for IDLH: 18 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 491 ppm
Indoor: 491 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 154 of 577

SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.033 atm
Ambient Saturation Concentration: 33,167 ppm or 3.32%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 95 kilograms/min
Max Average Sustained Release Rate: 88.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,935 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 250 ppm
Max Threat Zone for LOC: 200 meters
Max Threat Zone for IDLH: 27 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 711 ppm
Indoor: 711 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 156 of 577

SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.65 atm
Ambient Saturation Concentration: 656,830 ppm or 65.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 96 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 28 minutes
Max Computed Release Rate: 8.71 kilograms/min
Max Average Sustained Release Rate: 5.53 kilograms/min
(averaged over a minute or more)
Total Amount Released: 109 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 751 ppm
Indoor: 710 ppm
Note: Indoor graph is shown with a dotted line.

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ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

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SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.65 atm
Ambient Saturation Concentration: 656,830 ppm or 65.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1110 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 31 minutes
Max Computed Release Rate: 88.6 kilograms/min
Max Average Sustained Release Rate: 57.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,256 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 97 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 750 ppm
Indoor: 715 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 158 of 577

SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified).
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.65 atm
Ambient Saturation Concentration: 656,830 ppm or 65.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 35 minutes
Max Computed Release Rate: 1,690 kilograms/min
Max Average Sustained Release Rate: 1,120 kilograms/min
(averaged over a minute or more)
Total Amount Released: 27,638 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 450 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 17,000 ppm
Indoor: 16,700 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.65 atm
Ambient Saturation Concentration: 656,830 ppm or 65.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 35 minutes
Max Computed Release Rate: 2,760 kilograms/min
Max Average Sustained Release Rate: 1,840 kilograms/min
(averaged over a minute or more)
Total Amount Released: 46,063 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 592 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35,800 ppm
Indoor: 35,100 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.65 atm
Ambient Saturation Concentration: 656,830 ppm or 65.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: 37 minutes
Max Computed Release Rate: 7,010 kilograms/min
Max Average Sustained Release Rate: 4,690 kilograms/min
(averaged over a minute or more)
Total Amount Released: 121,824 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 1.0 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 187,000 ppm
Indoor: 184,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 637 grams/min
Max Average Sustained Release Rate: 616 grams/min
(averaged over a minute or more)
Total Amount Released: 35.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 37 ppm
Indoor: 37 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 107639 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.13 kilograms/min
Max Average Sustained Release Rate: 2.06 kilograms/min
(averaged over a minute or more)
Total Amount Released: 118 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.7 ppm
Indoor: 11.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 516 grams/min
Max Average.Sustained Release Rate: 500 grams/min
(averaged over a minute or more)
Total Amount Released: 28.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.29 ppm
Indoor: 3.29 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 841 grams/min
Max Average Sustained Release Rate: 814 grams/min
(averaged over a minute or more)
Total Amount Released: 46.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.76 ppm
Indoor: 4.76 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: METHL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.13 kilograms/min
Max Average Sustained Release Rate: 2.06 kilograms/min
(averaged over a minute or more)
Total Amount Released: 118 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.7 ppm
Indoor: 11.7 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM
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SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 637 grams/min
Max Average Sustained Release Rate: 616 grams/min
(averaged over a minute or more)
Total Amount Released: 35.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 37 ppm
Indoor: 37 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 107639 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.13 kilograms/min
Max Average Sustained Release Rate: 2.06 kilograms/min
(averaged over a minute or more)
Total Amount Released: 118 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.7 ppm
Indoor: 11.7 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 168 of 577

SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 516 grams/min
Max Average Sustained Release Rate: 500 grams/min
(averaged over a minute or more)
Total Amount Released: 28.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.29 ppm
Indoor: 3.29 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson
Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7
Computer T. M. Franey | Date 09/16/96 | Sheet No. 169 of 577

SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 841 grams/min
Max Average Sustained Release Rate: 814 grams/min
(averaged over a minute or more)
Total Amount Released: 46.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.76 ppm
Indoor: 4.76 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 170 of 577

SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.13 kilograms/min
Max Average Sustained Release Rate: 2.06 kilograms/min
(averaged over a minute or more)
Total Amount Released: 118 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.7 ppm
Indoor: 11.7 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 171 of 577

SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 31.5 kilograms/min
Max Average Sustained Release Rate: 29.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,692 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 19 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,130 ppm
Indoor: 1,130 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson
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Computer T. M. Franey | Date 09/16/96 | Sheet No. 172 of 577

SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 107639 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 106 kilograms/min
Max Average Sustained Release Rate: 101 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,693 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 41 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 638 ppm
Indoor: 638 ppm
Note: Indoor graph is shown with a dotted line.

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Computer T. M. Franey | Date 09/16/96 | Sheet No. 173 of 577

SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 25.5 kilograms/min
Max Average Sustained Release Rate: 24.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,370 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 112 ppm
Indoor: 112 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 41.6 kilograms/min
Max Average Sustained Release Rate: 39.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,236 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 26 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 348 ppm
Indoor: 348 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 106 kilograms/min
Max Average Sustained Release Rate: 101 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,693 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 42 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 642 ppm
Indoor: 642 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,452 ppm or 1.25%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 288 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 365 grams/min
Max Average Sustained Release Rate: 340 grams/min
(averaged over a minute or more)
Total Amount Released: 18.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,452 ppm or 1.25%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3630 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.05 kilograms/min
Max Average Sustained Release Rate: 3.79 kilograms/min
(averaged over a minute or more)
Total Amount Released: 211 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 10 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 178 of 577

SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,452 ppm or 1.25%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 25 kilograms/min
Max Average Sustained Release Rate: 23.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,306 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 262 meters
Max Threat Zone for IDLH: 27 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 127 ppm
Indoor: 127 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,452 ppm or 1.25%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 40.7 kilograms/min
Max Average Sustained Release Rate: 38.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,133 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 436 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 392 ppm
Indoor: 392 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,452 ppm or 1.25%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 103 kilograms/min
Max Average Sustained Release Rate: 97.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,427 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 701 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 719 ppm
Indoor: 719 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.31 kilograms/min
Max Average Sustained Release Rate: 1.27 kilograms/min
(averaged over a minute or more)
Total Amount Released: 73.3 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 46.9 ppm

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.15 kilograms/min
Max Average Sustained Release Rate: 4.02 kilograms/min
(averaged over a minute or more)
Total Amount Released: 233 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14.1 ppm

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours.

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.07 kilograms/min
Max Average Sustained Release Rate: 1.04 kilograms/min
(averaged over a minute or more)
Total Amount Released: 60.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.23 ppm

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.75 kilograms/min
Max Average Sustained Release Rate: 1.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 98.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6.13 ppm

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 feet
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.46 kilograms/min
Max Average Sustained Release Rate: 4.32 kilograms/min
(averaged over a minute or more)
Total Amount Released: 250 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15.1 ppm

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.10 atm
Ambient Saturation Concentration: 104,109 ppm or 10.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 12 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 67.3 grams/min
Max Average Sustained Release Rate: 54.2 grams/min
(averaged over a minute or more)
Total Amount Released: 2.70 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15.4 ppm
Indoor: 15.4 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.10 atm
Ambient Saturation Concentration: 104,109 ppm or 10.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 141 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 679 grams/min
Max Average Sustained Release Rate: 559 grams/min
(averaged over a minute or more)
Total Amount Released: 28.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm
Indoor: 15 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.10 atm
Ambient Saturation Concentration: 104,109 ppm or 10.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 90.3 kilograms/min
Max Average Sustained Release Rate: 76.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,947 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 15 ppm
Max Threat Zone for LOC: 1.7 kilometers
Max Threat Zone for IDLH: 467 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,100 ppm
Indoor: 1,100 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.10 atm
Ambient Saturation Concentration: 104,109 ppm or 10.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 147 kilograms/min
Max Average Sustained Release Rate: 126 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,457 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 15 ppm
Max Threat Zone for LOC: 2.2 kilometers
Max Threat Zone for IDLH: 601 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,620 ppm
Indoor: 1,620 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.10 atm
Ambient Saturation Concentration: 104,109 ppm or 10.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 373 kilograms/min
Max Average Sustained Release Rate: 320 kilograms/min
(averaged over a minute or more)
Total Amount Released: 16,500 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 15 ppm
Max Threat Zone for LOC: 3.5 kilometers
Max Threat Zone for IDLH: 982 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,300 ppm
Indoor: 3,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.030 atm
Ambient Saturation Concentration: 30,601 ppm or 3.06%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1175 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.7 kilograms/min
Max Average Sustained Release Rate: 4.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 247 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 149 ppm
Indoor: 149 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.030 atm
Ambient Saturation Concentration: 30,601 ppm or 3.06%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 8575 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 31.6 kilograms/min
Max Average Sustained Release Rate: 29.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,669 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 52 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.030 atm
Ambient Saturation Concentration: 30,601 ppm or 3.06%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 86.5 kilograms/min
Max Average Sustained Release Rate: 81.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,577 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 166 meters
Max Threat Zone for IDLH: 91 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 458 ppm
Indoor: 458 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.030 atm
Ambient Saturation Concentration: 30,601 ppm or 3.06%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 141 kilograms/min
Max Average Sustained Release Rate: 133 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,493 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 217 meters
Max Threat Zone for IDLH: 120 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 685 ppm
Indoor: 685 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.030 atm
Ambient Saturation Concentration: 30,601 ppm or 3.06%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 361 kilograms/min
Max Average Sustained Release Rate: 340 kilograms/min
(averaged over a minute or more)
Total Amount Released: 19,169 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 363 meters
Max Threat Zone for IDLH: 204 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME-DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,490 ppm
Indoor: 1,490 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-40
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 4550 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.19 kilograms/min
Max Average Sustained Release Rate: 1.19 kilograms/min
(averaged over a minute or more)
Total Amount Released: 71.0 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-40
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 53500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12.6 kilograms/min
Max Average Sustained Release Rate: 12.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 753 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.94 kilograms/min
Max Average Sustained Release Rate: 5.92 kilograms/min
(averaged over a minute or more)
Total Amount Released: 355 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 68 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.68 kilograms/min
Max Average Sustained Release Rate: 9.67 kilograms/min
(averaged over a minute or more)
Total Amount Released: 579 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 88 meters
Max Threat Zone for IDLH: 38 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

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1-RD-40

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 24.6 kilograms/min
Max Average Sustained Release Rate: 24.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,473 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 142 meters
Max Threat Zone for IDLH: 61 meters

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1-RD-41

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.035 atm
Ambient Saturation Concentration: 35,735 ppm or 3.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 71 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 202 grams/min
Max Average Sustained Release Rate: 176 grams/min
(averaged over a minute or more)
Total Amount Released: 9.26 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5.02 ppm
Indoor: 5.02 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.035 atm
Ambient Saturation Concentration: 35,735 ppm or 3.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 51.1 kilograms/min
Max Average Sustained Release Rate: 45.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,447 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: 2.7 kilometers
Max Threat Zone for IDLH: 15 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 675 ppm
Indoor: 675 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.035 atm
Ambient Saturation Concentration: 35,735 ppm or 3.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 83.2 kilograms/min
Max Average Sustained Release Rate: 74.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,997 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: 3.7 kilometers
Max Threat Zone for IDLH: 25 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 963 ppm
Indoor: 963 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.035 atm
Ambient Saturation Concentration: 35,735 ppm or 3.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 211 kilograms/min
Max Average Sustained Release Rate: 190 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,186 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: 5.9 kilometers
Max Threat Zone for IDLH: 42 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,850 ppm
Indoor: 1,850 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0055 atm
Ambient Saturation Concentration: 5,590 ppm or 0.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2850 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 978 grams/min
Max Average Sustained Release Rate: 938 grams/min
(averaged over a minute or more)
Total Amount Released: 53.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0055 atm
Ambient Saturation Concentration: 5,590 ppm or 0.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 34300 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 10.5 kilograms/min
Max Average Sustained Release Rate: 10.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 576 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0055 atm
Ambient Saturation Concentration: 5,590 ppm or 0.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.59 kilograms/min
Max Average Sustained Release Rate: 7.29 kilograms/min
(averaged over a minute or more)
Total Amount Released: 416 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 85 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 39.6 ppm
Indoor: 39.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0055 atm
Ambient Saturation Concentration: 5,590 ppm or 0.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12.4 kilograms/min
Max Average Sustained Release Rate: 11.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 678 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 109 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 57.4 ppm
Indoor: 57.4 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0055 atm
Ambient Saturation Concentration: 5,590 ppm or 0.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 31.4 kilograms/min
Max Average Sustained Release Rate: 30.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,723 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 177 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 142 ppm
Indoor: 142 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.023 atm
Ambient Saturation Concentration: 23,824 ppm or 2.38%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 18 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 16.5 grams/min
Max Average Sustained Release Rate: 14.1 grams/min
(averaged over a minute or more)
Total Amount Released: 731 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.023 atm
Ambient Saturation Concentration: 23,824 ppm or 2.38%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 226 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 171 grams/min
Max Average Sustained Release Rate: 150 grams/min
(averaged over a minute or more)
Total Amount Released: 7.83 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.023 atm
Ambient Saturation Concentration: 23,824 ppm or 2.38%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 14 kilograms/min
Max Average Sustained Release Rate: 12.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 665 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 1.2 kilometers

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 203 ppm
Indoor: 203 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.023 atm
Ambient Saturation Concentration: 23,824 ppm or 2.38%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.7 kilograms/min
Max Average Sustained Release Rate: 20.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,082 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 1.6 kilometers

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 293 ppm
Indoor: 293 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.023 atm
Ambient Saturation Concentration: 23,824 ppm or 2.38%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 57.2 kilograms/min
Max Average Sustained Release Rate: 51.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,742 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 2.9 kilometers

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 721 ppm
Indoor: 721 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 17.2 grams/min
Max Average Sustained Release Rate: 16.6 grams/min
(averaged over a minute or more)
Total Amount Released: 954 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.62 ppm
Indoor: 0.62 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 53.8 grams/min
Max Average Sustained Release Rate: 51.9 grams/min
(averaged over a minute or more)
Total Amount Released: 2.99 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.184 ppm
Indoor: 0.184 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.9 grams/min
Max Average Sustained Release Rate: 13.4 grams/min
(averaged over a minute or more)
Total Amount Released: 773 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0551 ppm
Indoor: 0.0551 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.7 grams/min
Max Average Sustained Release Rate: 21.9 grams/min
(averaged over a minute or more)
Total Amount Released: 1.26 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0799 ppm
Indoor: 0.0799 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 7.51e-006 atm
Ambient Saturation Concentration: 7.64 ppm or 7.64e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 57.7 grams/min
Max Average Sustained Release Rate: 55.7 grams/min
(averaged over a minute or more)
Total Amount Released: 3.21 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.197 ppm
Indoor: 0.197 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,855 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 37 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 67.3 grams/min
Max Average Sustained Release Rate: 59 grams/min
(averaged over a minute or more)
Total Amount Released: 3.11 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 20 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.2 ppm
Indoor: 10.2 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,855 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 437 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 697 grams/min
Max Average Sustained Release Rate: 618 grams/min
(averaged over a minute or more)
Total Amount Released: 32.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 67 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,855 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 32.4 kilograms/min
Max Average Sustained Release Rate: 29.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,556 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 10 ppm
Max Threat Zone for LOC: 936 meters
Max Threat Zone for IDLH: 584 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 265 ppm
Indoor: 265 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,855 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 52.9 kilograms/min
Max Average Sustained Release Rate: 47.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,546 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 10 ppm
Max Threat Zone for LOC: 1.2 kilometers
Max Threat Zone for IDLH: 748 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 375 ppm
Indoor: 375 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,855 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 135 kilograms/min
Max Average Sustained Release Rate: 121 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,501 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 10 ppm
Max Threat Zone for LOC: 1.9 kilometers
Max Threat Zone for IDLH: 1.2 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 713 ppm
Indoor: 713 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,246 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 425 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.48 kilograms/min
Max Average Sustained Release Rate: 6.47 kilograms/min
(averaged over a minute or more)
Total Amount Released: 302 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 232 of 577

SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,246 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 4738 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 83.7 kilograms/min
Max Average Sustained Release Rate: 65 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,091 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 16 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 233 of 577

SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,246 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 400 kilograms/min
Max Average Sustained Release Rate: 315 kilograms/min
(averaged over a minute or more)
Total Amount Released: 15,088 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 228 meters
Max Threat Zone for IDLH: 36 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,410 ppm
Indoor: 4,410 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson
Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7
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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,246 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 653 kilograms/min
Max Average Sustained Release Rate: 516 kilograms/min
(averaged over a minute or more)
Total Amount Released: 24,763 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 298 meters
Max Threat Zone for IDLH: 49 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7,170 ppm
Indoor: 7,170 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM
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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,246 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,660 kilograms/min
Max Average Sustained Release Rate: 1,320 kilograms/min
(averaged over a minute or more)
Total Amount Released: 63,532 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 504 meters
Max Threat Zone for IDLH: 87 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 17,200 ppm
Indoor: 17,200 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 236 of 577

SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.046 atm
Ambient Saturation Concentration: 46,708 ppm or 4.67%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1810 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.56 kilograms/min
Max Average Sustained Release Rate: 6.01 kilograms/min
(averaged over a minute or more)
Total Amount Released: 329 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 300 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 10 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 ppm
Indoor: 300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.046 atm
Ambient Saturation Concentration: 46,708 ppm or 4.67%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7730 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 26.2 kilograms/min
Max Average Sustained Release Rate: 24.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,325 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 300 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 25 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 ppm
Indoor: 300 ppm
Note: Indoor graph is shown with a dotted line.

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Computer T. M. Franey | Date 09/16/96 | Sheet No. 238 of 577

SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.046 atm
Ambient Saturation Concentration: 46,708 ppm or 4.67%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 78.8 kilograms/min
Max Average Sustained Release Rate: 72.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,001 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 300 ppm
Max Threat Zone for LOC: 174 meters
Max Threat Zone for IDLH: 46 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 721 ppm
Indoor: 721 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.046 atm
Ambient Saturation Concentration: 46,708 ppm or 4.67%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 129 kilograms/min
Max Average Sustained Release Rate: 119 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,541 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 300 ppm
Max Threat Zone for LOC: 226 meters
Max Threat Zone for IDLH: 61 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,060 ppm
Indoor: 1,060 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.046 atm
Ambient Saturation Concentration: 46,708 ppm or 4.67%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 327 kilograms/min
Max Average Sustained Release Rate: 302 kilograms/min
(averaged over a minute or more)
Total Amount Released: 16,690 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 300 ppm
Max Threat Zone for LOC: 376 meters
Max Threat Zone for IDLH: 105 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,210 ppm
Indoor: 2,210 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson
Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7
Computer T. M. Franey | Date 09/16/96 | Sheet No. 241 of 577

SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 4.69e-004 atm
Ambient Saturation Concentration: 477 ppm or 0.048%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 6260 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 302 grams/min
Max Average Sustained Release Rate: 293 grams/min
(averaged over a minute or more)
Total Amount Released: 16.9 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 14 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 4.69e-004 atm
Ambient Saturation Concentration: 477 ppm or 0.048%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 73000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.18 kilograms/min
Max Average Sustained Release Rate: 3.08 kilograms/min
(averaged over a minute or more)
Total Amount Released: 178 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 47 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 4.69e-004 atm
Ambient Saturation Concentration: 477 ppm or 0.048%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.11 kilograms/min
Max Average Sustained Release Rate: 1.08 kilograms/min
(averaged over a minute or more)
Total Amount Released: 62.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 58 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.05 ppm
Indoor: 4.05 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 4.69e-004 atm
Ambient Saturation Concentration: 477 ppm or 0.048%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.82 kilograms/min
Max Average Sustained Release Rate: 1.76 kilograms/min
(averaged over a minute or more)
Total Amount Released: 102 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 75 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5.88 ppm
Indoor: 5.88 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 4.69e-004 atm
Ambient Saturation Concentration: 477 ppm or 0.048%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.62 kilograms/min
Max Average Sustained Release Rate: 4.48 kilograms/min
(averaged over a minute or more)
Total Amount Released: 259 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 122 meters
Max Threat Zone for IDLH: 56 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14.5 ppm
Indoor: 14.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.19 atm
Ambient Saturation Concentration: 197,357 ppm or 19.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 690 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 16.3 kilograms/min
Max Average Sustained Release Rate: 13.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 664 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.19 atm
Ambient Saturation Concentration: 197,357 ppm or 19.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7080 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 151 kilograms/min
Max Average Sustained Release Rate: 126 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,302 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 96 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.19 atm
Ambient Saturation Concentration: 197,357 ppm or 19.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 496 kilograms/min
Max Average Sustained Release Rate: 415 kilograms/min
(averaged over a minute or more)
Total Amount Released: 20,901 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 188 meters
Max Threat Zone for IDLH: 187 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,350 ppm
Indoor: 3,350 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.19 atm
Ambient Saturation Concentration: 197,357 ppm or 19.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 811 kilograms/min
Max Average Sustained Release Rate: 682 kilograms/min
(averaged over a minute or more)
Total Amount Released: 34,290 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 248 meters
Max Threat Zone for IDLH: 246 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5,610 ppm
Indoor: 5,610 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.19 atm
Ambient Saturation Concentration: 197,357 ppm or 19.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2,070 kilograms/min
Max Average Sustained Release Rate: 1,740 kilograms/min
(averaged over a minute or more)
Total Amount Released: 88,085 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 421 meters
Max Threat Zone for IDLH: 419 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 13,900 ppm
Indoor: 13,900 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 118,599 ppm or 11.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 522 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.9 kilograms/min
Max Average Sustained Release Rate: 5.95 kilograms/min
(averaged over a minute or more)
Total Amount Released: 309 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 20 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 500 ppm
Indoor: 499 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 118,599 ppm or 11.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 5760 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 68.5 kilograms/min
Max Average Sustained Release Rate: 59.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,126 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 63 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 500 ppm
Indoor: 500 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 118,599 ppm or 11.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 274 kilograms/min
Max Average Sustained Release Rate: 240 kilograms/min
(averaged over a minute or more)
Total Amount Released: 12,617 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 206 meters
Max Threat Zone for IDLH: 138 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,870 ppm
Indoor: 1,870 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 118,599 ppm or 11.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 447 kilograms/min
Max Average Sustained Release Rate: 392 kilograms/min
(averaged over a minute or more)
Total Amount Released: 20,678 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 271 meters
Max Threat Zone for IDLH: 181 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,980 ppm
Indoor: 2,980 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 118,599 ppm or 11.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,140 kilograms/min
Max Average Sustained Release Rate: 1,000 kilograms/min
(averaged over a minute or more)
Total Amount Released: 53,010 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 456 meters
Max Threat Zone for IDLH: 311 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7,370 ppm
Indoor: 7,360 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 65 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 751 grams/min
Max Average Sustained Release Rate: 639 grams/min
(averaged over a minute or more)
Total Amount Released: 32.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 101 ppm
Indoor: 101 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 630 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.48 kilograms/min
Max Average Sustained Release Rate: 5.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 288 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 100 ppm
Max Threat Zone for LOC: 97 meters
Max Threat Zone for IDLH: 22 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 100 ppm
Indoor: 100 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 213 kilograms/min
Max Average Sustained Release Rate: 186 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,745 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 100 ppm
Max Threat Zone for LOC: 568 meters
Max Threat Zone for IDLH: 138 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,810 ppm
Indoor: 1,810 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 348 kilograms/min
Max Average Sustained Release Rate: 306 kilograms/min
(averaged over a minute or more)
Total Amount Released: 15,958 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 100 ppm
Max Threat Zone for LOC: 734 meters
Max Threat Zone for IDLH: 181 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,850 ppm
Indoor: 2,850 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 884 kilograms/min
Max Average Sustained Release Rate: 779 kilograms/min
(averaged over a minute or more)
Total Amount Released: 40,857 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 100 ppm
Max Threat Zone for LOC: 1.2 kilometers
Max Threat Zone for IDLH: 307 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6,590 ppm
Indoor: 6,590 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 184,394 ppm or 18.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 25.6 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 482 grams/min
Max Average Sustained Release Rate: 374 grams/min
(averaged over a minute or more)
Total Amount Released: 17.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 75 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 75.1 ppm
Indoor: 75.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 184,394 ppm or 18.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 225 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.75 kilograms/min
Max Average Sustained Release Rate: 2.95 kilograms/min
(averaged over a minute or more)
Total Amount Released: 143 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 97 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 75.2 ppm
Indoor: 75.1 ppm
Note: Indoor graph is shown with a dotted line.

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SRS SAVANNAH RIVER SITE

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 184,394 ppm or 18.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 326 kilograms/min
Max Average Sustained Release Rate: 266 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,083 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 914 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,140 ppm
Indoor: 3,140 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 184,394 ppm or 18.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 531 kilograms/min
Max Average Sustained Release Rate: 435 kilograms/min
(averaged over a minute or more)
Total Amount Released: 21,449 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 1.2 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5,000 ppm
Indoor: 5,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 184,394 ppm or 18.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,350 kilograms/min
Max Average Sustained Release Rate: 1,110 kilograms/min
(averaged over a minute or more)
Total Amount Released: 55,081 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 1.9 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11,900 ppm
Indoor: 11,900 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.011 atm
Ambient Saturation Concentration: 11,207 ppm or 1.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 6720 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.04 kilograms/min
Max Average Sustained Release Rate: 5.78 kilograms/min
(averaged over a minute or more)
Total Amount Released: 330 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 14 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.011 atm
Ambient Saturation Concentration: 11,207 ppm or 1.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 32140 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 27 kilograms/min
Max Average Sustained Release Rate: 25.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,483 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 64 meters
Max Threat Zone for IDLH: 31 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 90.9 ppm
Indoor: 90.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.011 atm
Ambient Saturation Concentration: 11,207 ppm or 1.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 20.8 kilograms/min
Max Average Sustained Release Rate: 19.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,139 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 75.6 ppm
Indoor: 75.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.011 atm
Ambient Saturation Concentration: 11,207 ppm or 1.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 33.9 kilograms/min
Max Average Sustained Release Rate: 32.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,860 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 111 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 235 ppm
Indoor: 235 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.011 atm
Ambient Saturation Concentration: 11,207 ppm or 1.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 86.3 kilograms/min
Max Average Sustained Release Rate: 82.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,738 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 182 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 429 ppm
Indoor: 429 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .49 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 3.7 grams/sec
Total Amount Released: 222 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.9 ppm
Indoor: 30.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 5.1 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 38.6 grams/sec
Total Amount Released: 2.31 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.2 ppm
Indoor: 28.3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.6 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 284 grams/sec
Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 260 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 370 ppm
Indoor: 209 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 437 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,330 ppm
Indoor: 749 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 263 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.99 kilograms/sec
Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 567 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,590 ppm
Indoor: 1,460 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-59

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA, ANHYDROUS
Molecular Weight: 17.03 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: -33.43° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 5 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: 32 minutes
Max Computed Release Rate: 2.01 kilograms/min
Max Average Sustained Release Rate: 203 grams/min
(averaged over a minute or more)
Total Amount Released: 3.17 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 217 ppm

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA, ANHYDROUS
Molecular Weight: 17.03 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: -33.43° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 55 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: 37 minutes
Max Computed Release Rate: 19.9 kilograms/min
Max Average Sustained Release Rate: 2.05 kilograms/min
(averaged over a minute or more)
Total Amount Released: 34.8 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 207 ppm

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For analysis on 1 ton, see hard copy.

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1-RD-60

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: CHLORINE Molecular Weight: 70.90 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: -34.03° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: .1 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: 9 minutes
Max Computed Release Rate: 258 grams/min
Max Average Sustained Release Rate: 36.3 grams/min
(averaged over a minute or more)
Total Amount Released: 145 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.38 ppm

1-RD-60

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:

Chemical Name: CHLORINE Molecular Weight: 70.90 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: -34.03° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 1 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: 10 minutes
Max Computed Release Rate: 2.34 kilograms/min
Max Average Sustained Release Rate: 347 grams/min
(averaged over a minute or more)
Total Amount Released: 1.45 kilograms

FOOTPRINT INFORMATION:

Model Run: Heavy Gas
User specified LOC: 3 ppm
Max Threat Zone for LOC: 180 meters
Max Threat Zone for IDLH: 23 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.03 ppm

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1-RD-61

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRIMETHYLAMINE, ANHYDROUS
Molecular Weight: 59.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 2.87° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: 15 minutes
Max Computed Release Rate: 961 grams/min
Max Average Sustained Release Rate: 90.9 grams/min
(averaged over a minute or more)
Total Amount Released: 609 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 32 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 28.1 ppm

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1-RD-61
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: TRIMETHYLAMINE, ANHYDROUS
Molecular Weight: 59.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 2.87° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 5 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: boiling point
Release Duration: 17 minutes
Max Computed Release Rate: 4.52 kilograms/min
Max Average Sustained Release Rate: 431 grams/min
(averaged over a minute or more)
Total Amount Released: 3.04 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 25 ppm
Max Threat Zone for LOC: 113 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 31.2 ppm

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50 % Average Meteorological Conditions
ALOHA Runs

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SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 410 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 34.7 kilograms/min
Max Average Sustained Release Rate: 4.32 kilograms/min
(averaged over a minute or more)
Total Amount Released: 205 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 4600 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 366 kilograms/min
Max Average Sustained Release Rate: 48.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,244 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 12 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,870 kilograms/min
Max Average Sustained Release Rate: 252 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,747 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 601 meters
Max Threat Zone for IDLH: 36 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,770 ppm
Indoor: 2,770 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3,080 kilograms/min
Max Average Sustained Release Rate: 418 kilograms/min
(averaged over a minute or more)
Total Amount Released: 19,502 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 780 meters
Max Threat Zone for IDLH: 47 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,040 ppm
Indoor: 4,040 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-1
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETALDEHYDE
Molecular Weight: 44.05 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 10000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 20.40° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7,970 kilograms/min
Max Average Sustained Release Rate: 1,100 kilograms/min
(averaged over a minute or more)
Total Amount Released: 51,216 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 1.3 kilometers
Max Threat Zone for IDLH: 82 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 8,090 ppm
Indoor: 8,090 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 21,051 ppm or 2.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1587 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.4 kilograms/min
Max Average Sustained Release Rate: 2.39 kilograms/min
(averaged over a minute or more)
Total Amount Released: 131 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 21,051 ppm or 2.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 21400 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 29.3 kilograms/min
Max Average Sustained Release Rate: 29.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,579 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 25 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 21,051 ppm or 2.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 33.3 kilograms/min
Max Average Sustained Release Rate: 33 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,792 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 107 meters
Max Threat Zone for IDLH: 27 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 53.2 ppm
Indoor: 53.2 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 21,051 ppm or 2.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 54.4 kilograms/min
Max Average Sustained Release Rate: 54 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,927 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 135 meters
Max Threat Zone for IDLH: 34 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 67.5 ppm
Indoor: 67.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-2
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 21,051 ppm or 2.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 139 kilograms/min
Max Average Sustained Release Rate: 138 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,458 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 211 meters
Max Threat Zone for IDLH: 56 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 117 ppm
Indoor: 117 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 122,023 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 103 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 641 grams/min
Max Average Sustained Release Rate: 589 grams/min
(averaged over a minute or more)
Total Amount Released: 33.0 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 35 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35.2 ppm
Indoor: 35.2 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 122,023 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1297 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.94 kilograms/min
Max Average Sustained Release Rate: 6.55 kilograms/min
(averaged over a minute or more)
Total Amount Released: 374 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 35 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35 ppm
Indoor: 35 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 122,023 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 112 kilograms/min
Max Average Sustained Release Rate: 109 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,329 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 35 ppm
Max Threat Zone for LOC: 408 meters
Max Threat Zone for IDLH: 27 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 256 ppm
Indoor: 256 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 122,023 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 183 kilograms/min
Max Average Sustained Release Rate: 177 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,365 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 35 ppm
Max Threat Zone for LOC: 522 meters
Max Threat Zone for IDLH: 34 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 324 ppm
Indoor: 324 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-3
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 122,023 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 462 kilograms/min
Max Average Sustained Release Rate: 452 kilograms/min
(averaged over a minute or more)
Total Amount Released: 26,542 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 35 ppm
Max Threat Zone for LOC: 2.2 kilometers
Max Threat Zone for IDLH: 80 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,230 ppm
Indoor: 3,230 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 7.78e-004 atm
Ambient Saturation Concentration: 792 ppm or 0.079%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 16.7 kilograms/min
Max Average Sustained Release Rate: 16.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 858 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
The point selected is at the source.

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 7.78e-004 atm
Ambient Saturation Concentration: 792 ppm or 0.079%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 40.3 kilograms/min
Max Average Sustained Release Rate: 39.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,071 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15.1 ppm

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 7.78e-004 atm
Ambient Saturation Concentration: 792 ppm or 0.079%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 10.4 kilograms/min
Max Average Sustained Release Rate: 10.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 534 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.27 ppm

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 7.78e-004 atm
Ambient Saturation Concentration: 792 ppm or 0.079%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 16.9 kilograms/min
Max Average Sustained Release Rate: 16.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 872 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.23 ppm

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1-RD-4 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TERPINOLENE / ALPHA-PINENE / TURP
Molecular Weight: 136.24 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 ppm
Boiling Point: 185.00° C
Vapor Pressure at Ambient Temperature: 7.78e-004 atm
Ambient Saturation Concentration: 792 ppm or 0.079%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 43.3 kilograms/min
Max Average Sustained Release Rate: 42.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,223 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16 ppm

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 17.72 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: 0.87 atm
Ambient Saturation Concentration: 884,396 ppm or 88.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 57 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 43 minutes
Max Computed Release Rate: 3.53 kilograms/min
Max Average Sustained Release Rate: 1.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 36.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 198 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 17.72 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: 0.87 atm
Ambient Saturation Concentration: 884,396 ppm or 88.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 714 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 47 minutes
Max Computed Release Rate: 37.3 kilograms/min
Max Average Sustained Release Rate: 15.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 454 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 199 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 17.72 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: 0.87 atm
Ambient Saturation Concentration: 884,396 ppm or 88.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 53 minutes
Max Computed Release Rate: 1,040 kilograms/min
Max Average Sustained Release Rate: 463 kilograms/min
(averaged over a minute or more)
Total Amount Released: 15,519 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 548 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,530 ppm
Indoor: 2,520 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 17.72 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: 0.87 atm
Ambient Saturation Concentration: 884,396 ppm or 88.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 54 minutes
Max Computed Release Rate: 1,690 kilograms/min
Max Average Sustained Release Rate: 757 kilograms/min
(averaged over a minute or more)
Total Amount Released: 25,866 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 703 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,210 ppm
Indoor: 3,200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-5
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA - 29% - SAH
Molecular Weight: 17.72 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 27.66° C
Vapor Pressure at Ambient Temperature: 0.87 atm
Ambient Saturation Concentration: 884,396 ppm or 88.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 56 minutes
Max Computed Release Rate: 4,250 kilograms/min
Max Average Sustained Release Rate: 1,930 kilograms/min
(averaged over a minute or more)
Total Amount Released: 68,407 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 1.1 kilometers

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5,550 ppm
Indoor: 5,550 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 127,171 ppm or 12.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 535 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.6 kilograms/min
Max Average Sustained Release Rate: 6.13 kilograms/min
(averaged over a minute or more)
Total Amount Released: 347 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 150 ppm
Indoor: 150 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 127,171 ppm or 12.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 4000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 44.6 kilograms/min
Max Average Sustained Release Rate: 42.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,415 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 77 meters
Max Threat Zone for IDLH: 11 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 102 ppm
Indoor: 102 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 127,171 ppm or 12.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 250 kilograms/min
Max Average Sustained Release Rate: 239 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,871 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 150 ppm
Max Threat Zone for LOC: 499 meters
Max Threat Zone for IDLH: 61 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,540 ppm
Indoor: 1,540 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 127,171 ppm or 12.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 408 kilograms/min
Max Average Sustained Release Rate: 392 kilograms/min
(averaged over a minute or more)
Total Amount Released: 22,742 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 150 ppm
Max Threat Zone for LOC: 641 meters
Max Threat Zone for IDLH: 79 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,220 ppm
Indoor: 2,220 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-6
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZENE Molecular Weight: 78.11 kg/kmol
TLV-TWA: 0.10 ppm IDLH: 3000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 150 ppm
Boiling Point: 80.09° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 127,171 ppm or 12.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,030 kilograms/min
Max Average Sustained Release Rate: 1,000 kilograms/min
(averaged over a minute or more)
Total Amount Released: 58,341 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 150 ppm
Max Threat Zone for LOC: 1.0 kilometers
Max Threat Zone for IDLH: 133 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,400 ppm
Indoor: 4,400 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 644 grams/min
Max Average Sustained Release Rate: 633 grams/min
(averaged over a minute or more)
Total Amount Released: 30.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.07 ppm
Indoor: 3.07 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.03 kilograms/min
Max Average Sustained Release Rate: 1.99 kilograms/min
(averaged over a minute or more)
Total Amount Released: 96.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 55 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.953 ppm
Indoor: 0.953 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 521 grams/min
Max Average Sustained Release Rate: 512 grams/min
(averaged over a minute or more)
Total Amount Released: 24.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.458 ppm
Indoor: 0.458 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-7
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 200 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 852 grams/min
Max Average Sustained Release Rate: 838 grams/min
(averaged over a minute or more)
Total Amount Released: 40.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.582 ppm
Indoor: 0.582 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0017 atm
Ambient Saturation Concentration: 1,747 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.54 kilograms/min
Max Average Sustained Release Rate: 1.53 kilograms/min
(averaged over a minute or more)
Total Amount Released: 79.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0017 atm
Ambient Saturation Concentration: 1,747 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 50000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 18.9 kilograms/min
Max Average Sustained Release Rate: 18.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 966 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 100 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0017 atm
Ambient Saturation Concentration: 1,747 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.46 kilograms/min
Max Average Sustained Release Rate: 9.35 kilograms/min
(averaged over a minute or more)
Total Amount Released: 485 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 72 meters
Max Threat Zone for IDLH: 72 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.15 ppm
Indoor: 7.15 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0017 atm
Ambient Saturation Concentration: 1,747 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 15.5 kilograms/min
Max Average Sustained Release Rate: 15.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 792 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 91 meters
Max Threat Zone for IDLH: 91 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.07 ppm
Indoor: 9.07 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-8
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BENZYL CHLORIDE
Molecular Weight: 126.58 kg/kmol
TLV-TWA: 1.00 ppm · IDLH: 10.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 179.40° C
Vapor Pressure at Ambient Temperature: 0.0017 atm
Ambient Saturation Concentration: 1,747 ppm or 0.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 39.5 kilograms/min
Max Average Sustained Release Rate: 39 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,020 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 143 meters
Max Threat Zone for IDLH: 143 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15.7 ppm
Indoor: 15.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50.ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 119 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.69 kilograms/min
Max Average Sustained Release Rate: 1.49 kilograms/min
(averaged over a minute or more)
Total Amount Released: 81.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.2 ppm
Indoor: 50.2 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1485 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 18.3 kilograms/min
Max Average Sustained Release Rate: 16.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 924 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 264 kilograms/min
Max Average Sustained Release Rate: 245 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,848 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 997 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,690 ppm
Indoor: 1,690 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 429 kilograms/min
Max Average Sustained Release Rate: 400 kilograms/min
(averaged over a minute or more)
Total Amount Released: 22,716 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 1.3 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,450 ppm
Indoor: 2,450 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-9
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,090 kilograms/min
Max Average Sustained Release Rate: 1,020 kilograms/min
(averaged over a minute or more)
Total Amount Released: 58,347 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 2.0 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,880 ppm
Indoor: 4,880 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.47 atm
Ambient Saturation Concentration: 481,124 ppm or 48.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 32.3 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 33 minutes
Max Computed Release Rate: 2.1 kilograms/min
Max Average Sustained Release Rate: 1.48 kilograms/min
(averaged over a minute or more)
Total Amount Released: 37.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 49.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.47 atm
Ambient Saturation Concentration: 481,124 ppm or 48.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 260 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 36 minutes
Max Computed Release Rate: 14.9 kilograms/min
Max Average Sustained Release Rate: 10.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 303 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 81 meters
Max Threat Zone for IDLH: 22 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 33.1 ppm
Indoor: 33 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.47 atm
Ambient Saturation Concentration: 481,124 ppm or 48.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 42 minutes
Max Computed Release Rate: 1,120 kilograms/min
Max Average Sustained Release Rate: 841 kilograms/min
(averaged over a minute or more)
Total Amount Released: 28,488 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 1.8 kilometers
Max Threat Zone for IDLH: 436 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5,760 ppm
Indoor: 5,750 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.47 atm
Ambient Saturation Concentration: 481,124 ppm or 48.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 43 minutes
Max Computed Release Rate: 1,820 kilograms/min
Max Average Sustained Release Rate: 1,380 kilograms/min
(averaged over a minute or more)
Total Amount Released: 47,479 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 2.4 kilometers
Max Threat Zone for IDLH: 564 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9,040 ppm
Indoor: 9,020 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-10
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CARBON BISULFIDE
Molecular Weight: 76.14 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 46.23° C
Vapor Pressure at Ambient Temperature: 0.47 atm
Ambient Saturation Concentration: 481,124 ppm or 48.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 44 minutes
Max Computed Release Rate: 4,620 kilograms/min
Max Average Sustained Release Rate: 3,510 kilograms/min
(averaged over a minute or more)
Total Amount Released: 125,568 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 50 ppm
Max Threat Zone for LOC: 3.9 kilometers
Max Threat Zone for IDLH: 929 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 21,400 ppm
Indoor: 21,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-11
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.38 atm
Ambient Saturation Concentration: 384,742 ppm or 38.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 4 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 35 minutes
Max Computed Release Rate: 215 grams/min
Max Average Sustained Release Rate: 152 grams/min
(averaged over a minute or more)
Total Amount Released: 4.10 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5.09 ppm

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1-RD-11SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.38 atm
Ambient Saturation Concentration: 384,742 ppm or 38.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 50 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 39 minutes
Max Computed Release Rate: 2.27 kilograms/min
Max Average Sustained Release Rate: 1.66 kilograms/min
(averaged over a minute or more)
Total Amount Released: 51.2 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5.01 ppm

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1-RD-11 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.38 atm
Ambient Saturation Concentration: 384,742 ppm or 38.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 49 minutes
Max Computed Release Rate: 806 kilograms/min
Max Average Sustained Release Rate: 624 kilograms/min
(averaged over a minute or more)
Total Amount Released: 25,001 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: 5.4 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,070 ppm

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1-RD-11 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.38 atm
Ambient Saturation Concentration: 384,742 ppm or 38.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 50 minutes
Max Computed Release Rate: 1,310 kilograms/min
Max Average Sustained Release Rate: 1,020 kilograms/min
(averaged over a minute or more)
Total Amount Released: 41,668 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: 6.9 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6,290 ppm

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1-RD-11 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ACETYL CHLORIDE
Molecular Weight: 78.50 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 5 ppm
Boiling Point: 50.75° C
Vapor Pressure at Ambient Temperature: 0.38 atm
Ambient Saturation Concentration: 384,742 ppm or 38.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 51 minutes
Max Computed Release Rate: 3,330 kilograms/min
Max Average Sustained Release Rate: 2,610 kilograms/min
(averaged over a minute or more)
Total Amount Released: 110,199 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 5 ppm
Max Threat Zone for LOC: greater than 10 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14,500 ppm

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SITE DATA INFORMATION: 1-RD-12
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 35.3 grams/min
Max Average Sustained Release Rate: 34.8 grams/min
(averaged over a minute or more)
Total Amount Released: 1.71 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.186 ppm
Indoor: 0.186 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-12
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 111 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 5.36 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0577 ppm
Indoor: 0.0577 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-12
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 28.6 grams/min
Max Average Sustained Release Rate: 28.1 grams/min
(averaged over a minute or more)
Total Amount Released: 1.38 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0277 ppm
Indoor: 0.0277 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-12
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 46.7 grams/min
Max Average Sustained Release Rate: 46 grams/min
(averaged over a minute or more)
Total Amount Released: 2.26 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0352 ppm
Indoor: 0.0352 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-12
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CHLOROSULFONIC ACID
Molecular Weight: 116.52 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 119 grams/min
Max Average Sustained Release Rate: 117 grams/min
(averaged over a minute or more)
Total Amount Released: 5.75 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0608 ppm
Indoor: 0.0608 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 131,831 ppm or 13.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2950 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 36.9 kilograms/min
Max Average Sustained Release Rate: 34.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,993 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 13 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 384 ppm
Indoor: 384 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 131,831 ppm or 13.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 18700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 215 kilograms/min
Max Average Sustained Release Rate: 205 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,867 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 16 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,300 ppm
Indoor: 1,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 131,831 ppm or 13.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 277 kilograms/min
Max Average Sustained Release Rate: 265 kilograms/min
(averaged over a minute or more)
Total Amount Released: 15,363 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 115 meters
Max Threat Zone for IDLH: 19 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,580 ppm
Indoor: 1,580 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 131,831 ppm or 13.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 452 kilograms/min
Max Average Sustained Release Rate: 434 kilograms/min
(averaged over a minute or more)
Total Amount Released: 25,189 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 149 meters
Max Threat Zone for IDLH: 29 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,300 ppm
Indoor: 2,300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-13
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANE
Molecular Weight: 84.16 kg/kmol
TLV-TWA: 300.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 80.72° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 131,831 ppm or 13.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,150 kilograms/min
Max Average Sustained Release Rate: 1,110 kilograms/min
(averaged over a minute or more)
Total Amount Released: 64,626 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 247 meters
Max Threat Zone for IDLH: 50 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,650 ppm
Indoor: 4,650 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0057 atm
Ambient Saturation Concentration: 5,792 ppm or 0.58%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 16.8 kilograms/min
Max Average Sustained Release Rate: 16.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 862 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 88.7 ppm
Indoor: 88.7 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 358 of 577

SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0057 atm
Ambient Saturation Concentration: 5,792 ppm or 0.58%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 52.7 kilograms/min
Max Average Sustained Release Rate: 52.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,704 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 27.5 ppm
Indoor: 27.5 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 359 of 577

SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0057 atm
Ambient Saturation Concentration: 5,792 ppm or 0.58%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.6 kilograms/min
Max Average Sustained Release Rate: 13.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 698 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 13.2 ppm
Indoor: 13.2 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0057 atm
Ambient Saturation Concentration: 5,792 ppm or 0.58%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.2 kilograms/min
Max Average Sustained Release Rate: 21.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,139 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16.8 ppm
Indoor: 16.8 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-14
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 5000.00 ppm
Footprint Level of Concern: 1300 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0057 atm
Ambient Saturation Concentration: 5,792 ppm or 0.58%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 56.6 kilograms/min
Max Average Sustained Release Rate: 56 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,902 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1300 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 29 ppm
Indoor: 29 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-15

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 558 grams/min
Max Average Sustained Release Rate: 548 grams/min
(averaged over a minute or more)
Total Amount Released: 26.2 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.14 ppm
Indoor: 2.14 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.76 kilograms/min
Max Average Sustained Release Rate: 1.73 kilograms/min
(averaged over a minute or more)
Total Amount Released: 82.4 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.666 ppm
Indoor: 0.666 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 451 grams/min
Max Average Sustained Release Rate: 443 grams/min
(averaged over a minute or more)
Total Amount Released: 21.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.319 ppm
Indoor: 0.319 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 738 grams/min
Max Average Sustained Release Rate: 725 grams/min
(averaged over a minute or more)
Total Amount Released: 34.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.406 ppm
Indoor: 0.406 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-15

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 125 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.89 kilograms/min
Max Average Sustained Release Rate: 1.85 kilograms/min
(averaged over a minute or more)
Total Amount Released: 88.4 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.702 ppm
Indoor: 0.702 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,142 ppm or 5.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1750 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.21 kilograms/min
Max Average Sustained Release Rate: 9.19 kilograms/min
(averaged over a minute or more)
Total Amount Released: 533 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 125 ppm
Indoor: 125 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,142 ppm or 5.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 17150 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 83.5 kilograms/min
Max Average Sustained Release Rate: 83.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,794 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 125 ppm
Max Threat Zone for LOC: 87 meters
Max Threat Zone for IDLH: 22 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 108 ppm
Indoor: 108 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,142 ppm or 5.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 kilograms/min
Max Average Sustained Release Rate: 117 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,740 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 125 ppm
Max Threat Zone for LOC: 257 meters
Max Threat Zone for IDLH: 36 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 794 ppm
Indoor: 794 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,142 ppm or 5.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 193 kilograms/min
Max Average Sustained Release Rate: 192 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,033 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 125 ppm
Max Threat Zone for LOC: 312 meters
Max Threat Zone for IDLH: 45 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,060 ppm
Indoor: 1,060 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-16
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 2000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 125 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,142 ppm or 5.11%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 494 kilograms/min
Max Average Sustained Release Rate: 492 kilograms/min
(averaged over a minute or more)
Total Amount Released: 28,217 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 125 ppm
Max Threat Zone for LOC: 435 meters
Max Threat Zone for IDLH: 67 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,680 ppm
Indoor: 1,680 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 5.96e-004 atm
Ambient Saturation Concentration: 607 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 300 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 24.9 grams/min
Max Average Sustained Release Rate: 24.6 grams/min
(averaged over a minute or more)
Total Amount Released: 1.24 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.499 ppm

ENGINEERING COMPUTATION SHEET

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7
Computer T. M. Franey | Date 09/16/96 | Sheet No. 373 of 577

1-RD-17

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 5.96e-004 atm
Ambient Saturation Concentration: 607 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5.meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3800 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 283 grams/min
Max Average Sustained Release Rate: 279 grams/min
(averaged over a minute or more)
Total Amount Released: 14.0 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.498 ppm

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 374 of 577

1-RD-17

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 5.96e-004 atm
Ambient Saturation Concentration: 607 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.69 kilograms/min
Max Average Sustained Release Rate: 1.67 kilograms/min
(averaged over a minute or more)
Total Amount Released: 83.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: .5 ppm
Max Threat Zone for LOC: 242 meters
Max Threat Zone for IDLH: 27 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.5 ppm

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 375 of 577

1-RD-17

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 5.96e-004 atm
Ambient Saturation Concentration: 607 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.76 kilograms/min
Max Average Sustained Release Rate: 2.72 kilograms/min
(averaged over a minute or more)
Total Amount Released: 136 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: .5 ppm
Max Threat Zone for LOC: 309 meters
Max Threat Zone for IDLH: 34 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.91 ppm

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration-Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 376 of 577

1-RD-17

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLANILINE (DIPHEYNLMETHANE DIISOCYANATE)
Molecular Weight: 250.3 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 100.00 ppm
Footprint Level of Concern: .5 ppm
Boiling Point: 195.87° C
Vapor Pressure at Ambient Temperature: 5.96e-004 atm
Ambient Saturation Concentration: 607 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.05 kilograms/min
Max Average Sustained Release Rate: 6.95 kilograms/min
(averaged over a minute or more)
Total Amount Released: 346 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: .5 ppm
Max Threat Zone for LOC: 492 meters
Max Threat Zone for IDLH: 56 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.3 ppm

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Subject Concentration Analysis for THM Hazardous Chemicals. | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 377 of 577

SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 125,394 ppm or 12.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3140 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 39.7 kilograms/min
Max Average Sustained Release Rate: 37 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,098 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,000 ppm
Indoor: 2,000 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 378 of 577

SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 125,394 ppm or 12.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 35500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 401 kilograms/min
Max Average Sustained Release Rate: 381 kilograms/min
(averaged over a minute or more)
Total Amount Released: 21,939 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 26 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,000 ppm
Indoor: 2,000 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM
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SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 125,394 ppm or 12.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 281 kilograms/min
Max Average Sustained Release Rate: 266 kilograms/min
(averaged over a minute or more)
Total Amount Released: 15,268 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 82 meters
Max Threat Zone for IDLH: 17 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,510 ppm
Indoor: 1,510 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 380 of 577

SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 125,394 ppm or 12.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 457 kilograms/min
Max Average Sustained Release Rate: 435 kilograms/min
(averaged over a minute or more)
Total Amount Released: 25,047 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 107 meters
Max Threat Zone for IDLH: 28 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,210 ppm
Indoor: 2,210 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 381 of 577

SITE DATA INFORMATION: 1-RD-18
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL ACETATE
Molecular Weight: 88.11 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 10000.00 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 77.06° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 125,394 ppm or 12.5%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,160 kilograms/min
Max Average Sustained Release Rate: 1,110 kilograms/min
(averaged over a minute or more)
Total Amount Released: 64,327 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 2000 ppm
Max Threat Zone for LOC: 180 meters
Max Threat Zone for IDLH: 47 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4,490 ppm
Indoor: 4,490 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 382 of 577

SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,900 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 16700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 32.3 kilograms/min
Max Average Sustained Release Rate: 32.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,743 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 160 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 22 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 160 ppm
Indoor: 160 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 383 of 577

SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,900 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 182 kilograms/min
Max Average Sustained Release Rate: 180 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,753 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 160 ppm
Max Threat Zone for LOC: 71 meters
Max Threat Zone for IDLH: 55 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 87.9 ppm
Indoor: 87.9 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 384 of 577

SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,900 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 46.6 kilograms/min
Max Average Sustained Release Rate: 46.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,511 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 160 ppm
Max Threat Zone for LOC: 36 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 42.2 ppm
Indoor: 42.2 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 385 of 577

SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,900 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 76.3 kilograms/min
Max Average Sustained Release Rate: 75.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,104 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 160 ppm
Max Threat Zone for LOC: 46 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 53.5 ppm
Indoor: 53.5 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

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SITE DATA INFORMATION: 1-RD-19
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 160 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,900 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 195 kilograms/min
Max Average Sustained Release Rate: 194 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,470 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 160 ppm
Max Threat Zone for LOC: 74 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 92.7 ppm
Indoor: 92.7 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-20

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.58 kilograms/min
Max Average Sustained Release Rate: 5.51 kilograms/min
(averaged over a minute or more)
Total Amount Released: 279 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 13.6 ppm

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1-RD-20
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 17.9 kilograms/min
Max Average Sustained Release Rate: 17.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 893 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.3 ppm

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1-RD-20

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.57 kilograms/min
Max Average Sustained Release Rate: 4.52 kilograms/min
(averaged over a minute or more)
Total Amount Released: 229 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.05 ppm

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1-RD-20
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.5 kilograms/min
Max Average Sustained Release Rate: 7.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 375 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.61 ppm

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1-RD-20
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 700.00 ppm
Footprint Level of Concern: 150 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 4.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 19.2 kilograms/min
Max Average Sustained Release Rate: 19 kilograms/min
(averaged over a minute or more)
Total Amount Released: 958 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 150 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.54 ppm

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1-RD-21
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24600 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 6.01 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-21
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 107639 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 476 grams/min
Max Average Sustained Release Rate: 443 grams/min
(averaged over a minute or more)
Total Amount Released: 24.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 61 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.69 ppm
Indoor: 7.69 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 5.97 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.18 ppm
Indoor: 2.18 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:
Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 189 grams/min
Max Average Sustained Release Rate: 176 grams/min
(averaged over a minute or more)
Total Amount Released: 9.68 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 38 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.15 ppm
Indoor: 3.15 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-21

SITE DATA INFORMATION

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 0000 hours

CHEMICAL INFORMATION:

Chemical Name: Fluorosilicic acid as HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 2.36e-004 atm
Ambient Saturation Concentration: 240 ppm or 0.024%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 1.7 meters/sec from 90° true
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 476 grams/min
Max Average Sustained Release Rate: 443 grams/min
(averaged over a minute or more)
Total Amount Released: 24.3 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 61 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.69 ppm
Indoor: 7.69 ppm

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,013 ppm or 5.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 168 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 392 grams/min
Max Average Sustained Release Rate: 391 grams/min
(averaged over a minute or more)
Total Amount Released: 22.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 23 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,013 ppm or 5.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2090 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.4 kilograms/min
Max Average Sustained Release Rate: 4.38 kilograms/min
(averaged over a minute or more)
Total Amount Released: 250 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 79 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,013 ppm or 5.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 47 kilograms/min
Max Average Sustained Release Rate: 46.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,641 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 326 meters
Max Threat Zone for IDLH: 255 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 98.3 ppm
Indoor: 98.3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,013 ppm or 5.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 76.9 kilograms/min
Max Average Sustained Release Rate: 76.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,316 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 417 meters
Max Threat Zone for IDLH: 327 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 125 ppm
Indoor: 125 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-22
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 20 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,013 ppm or 5.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 197 kilograms/min
Max Average Sustained Release Rate: 196 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,011 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 669 meters
Max Threat Zone for IDLH: 522 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 217 ppm
Indoor: 217 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 11180 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.2 kilograms/min
Max Average Sustained Release Rate: 6.12 kilograms/min
(averaged over a minute or more)
Total Amount Released: 316 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25 ppm
Indoor: 25 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 51.2 kilograms/min
Max Average Sustained Release Rate: 50.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,598 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 86 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 19.5 ppm
Indoor: 19.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.2 kilograms/min
Max Average Sustained Release Rate: 13 kilograms/min
(averaged over a minute or more)
Total Amount Released: 669 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 44 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.37 ppm
Indoor: 9.37 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 21.5 kilograms/min
Max Average Sustained Release Rate: 21.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,093 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.9 ppm
Indoor: 11.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-23
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 25 ppm
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 55 kilograms/min
Max Average Sustained Release Rate: 54.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,789 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 25 ppm
Max Threat Zone for LOC: 89 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20.6 ppm
Indoor: 20.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0012 atm
Ambient Saturation Concentration: 1,206 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 13080 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.38 kilograms/min
Max Average Sustained Release Rate: 1.36 kilograms/min
(averaged over a minute or more)
Total Amount Released: 67.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 20 ppm
Indoor: 20 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0012 atm
Ambient Saturation Concentration: 1,206 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.69 kilograms/min
Max Average Sustained Release Rate: 9.54 kilograms/min
(averaged over a minute or more)
Total Amount Released: 472 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 79 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 13.5 ppm
Indoor: 13.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0012 atm
Ambient Saturation Concentration: 1,206 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.51 kilograms/min
Max Average Sustained Release Rate: 2.47 kilograms/min
(averaged over a minute or more)
Total Amount Released: 123 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 41 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6.55 ppm
Indoor: 6.55 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0012 atm
Ambient Saturation Concentration: 1,206 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.09 kilograms/min
Max Average Sustained Release Rate: 4.03 kilograms/min
(averaged over a minute or more)
Total Amount Released: 200 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 52 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 8.29 ppm
Indoor: 8.29 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-24
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN CHLORIDE 33-40% / MSDS 6966
Molecular Weight: 36.46 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 148.89° C
Vapor Pressure at Ambient Temperature: 0.0012 atm
Ambient Saturation Concentration: 1,206 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 10.4 kilograms/min
Max Average Sustained Release Rate: 10.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 507 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 82 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14.3 ppm
Indoor: 14.3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 1.28e-004 atm
Ambient Saturation Concentration: 130 ppm or 0.013%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 417 grams/min
Max Average Sustained Release Rate: 403 grams/min
(averaged over a minute or more)
Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.6 ppm
Indoor: 10.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 1.28e-004 atm
Ambient Saturation Concentration: 130 ppm or 0.013%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.31 kilograms/min
Max Average Sustained Release Rate: 1.26 kilograms/min.
(averaged over a minute or more)
Total Amount Released: 53.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 55 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.27 ppm
Indoor: 3.27 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 1.28e-004 atm
Ambient Saturation Concentration: 130 ppm or 0.013%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 338 grams/min
Max Average Sustained Release Rate: 326 grams/min
(averaged over a minute or more)
Total Amount Released: 13.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.58 ppm
Indoor: 1.58 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 1.28e-004 atm
Ambient Saturation Concentration: 130 ppm or 0.013%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 552 grams/min
Max Average.Sustained Release Rate: 532 grams/min
(averaged over a minute or more)
Total Amount Released: 22.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2 ppm
Indoor: 2 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 416 of 577

SITE DATA INFORMATION: 1-RD-25
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDDUFLOURIC ACID - 70 WT% - SAH
Molecular Weight: 20.01 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 20 ppm
Boiling Point: 110.35° C
Vapor Pressure at Ambient Temperature: 1.28e-004 atm
Ambient Saturation Concentration: 130 ppm or 0.013%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.41 kilograms/min
Max Average Sustained Release Rate: 1.36 kilograms/min
(averaged over a minute or more)
Total Amount Released: 57.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 20 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.45 ppm
Indoor: 3.45 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,636 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3307 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 393 grams/min
Max Average Sustained Release Rate: 388 grams/min
(averaged over a minute or more)
Total Amount Released: 19.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 10 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,636 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 46580 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.91 kilograms/min
Max Average Sustained Release Rate: 4.84 kilograms/min
(averaged over a minute or more)
Total Amount Released: 242 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 37 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,636 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.65 kilograms/min
Max Average Sustained Release Rate: 2.61 kilograms/min
(averaged over a minute or more)
Total Amount Released: 131 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 74 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.42 ppm
Indoor: 7.42 ppm
Note: Indoor graph is shown with a dotted line.

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Computer T. M. Franey | Date 09/16/96 | Sheet No. 420 of 577

SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,636 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.32 kilograms/min
Max Average Sustained Release Rate: 4.25 kilograms/min
(averaged over a minute or more)
Total Amount Released: 212 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 94 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.39 ppm
Indoor: 9.39 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-26
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1.00 ppm IDLH: 75.00 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,636 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 11 kilograms/min
Max Average Sustained Release Rate: 10.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 538 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 147 meters
Max Threat Zone for IDLH: 56 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16.1 ppm
Indoor: 16.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.060 atm
Ambient Saturation Concentration: 61,017 ppm or 6.10%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 9600 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 42.8 kilograms/min
Max Average Sustained Release Rate: 42.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,542 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 400 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 17 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 400 ppm
Indoor: 400 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.060 atm
Ambient Saturation Concentration: 61,017 ppm or 6.10%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 36000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 152 kilograms/min
Max Average Sustained Release Rate: 152 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,123 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 400 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 33 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 202 ppm
Indoor: 202 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.060 atm
Ambient Saturation Concentration: 61,017 ppm or 6.10%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 105 kilograms/min
Max Average Sustained Release Rate: 105 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,267 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 400 ppm
Max Threat Zone for LOC: 47 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 168 ppm
Indoor: 168 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.060 atm
Ambient Saturation Concentration: 61,017 ppm or 6.10%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 172 kilograms/min
Max Average Sustained Release Rate: 172 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,273 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 400 ppm
Max Threat Zone for LOC: 248 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,270 ppm
Indoor: 1,270 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-27
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: ISOPROPANOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 400.00 ppm IDLH: 12000.00 ppm
Footprint Level of Concern: 400 ppm
Boiling Point: 82.26° C
Vapor Pressure at Ambient Temperature: 0.060 atm
Ambient Saturation Concentration: 61,017 ppm or 6.10%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 442 kilograms/min
Max Average Sustained Release Rate: 442 kilograms/min
(averaged over a minute or more)
Total Amount Released: 26,343 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 400 ppm
Max Threat Zone for LOC: 408 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,240 ppm
Indoor: 2,240 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.17 atm
Ambient Saturation Concentration: 168,779 ppm or 16.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 12200 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 69.2 kilograms/min
Max Average Sustained Release Rate: 59.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,148 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 19 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.17 atm
Ambient Saturation Concentration: 168,779 ppm or 16.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 512 kilograms/min
Max Average Sustained Release Rate: 448 kilograms/min
(averaged over a minute or more)
Total Amount Released: 24,221 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 82 meters
Max Threat Zone for IDLH: 55 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 724 ppm
Indoor: 724 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.17 atm
Ambient Saturation Concentration: 168,779 ppm or 16.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 134 kilograms/min
Max Average Sustained Release Rate: 115 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,168 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 42 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 348 ppm
Indoor: 348 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.17 atm
Ambient Saturation Concentration: 168,779 ppm or 16.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 218 kilograms/min
Max Average Sustained Release Rate: 189 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,122 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 53 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 442 ppm
Indoor: 442 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

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SITE DATA INFORMATION: 1-RD-28
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ALCOHOL
Molecular Weight: 32.04 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 25000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 64.70° C
Vapor Pressure at Ambient Temperature: 0.17 atm
Ambient Saturation Concentration: 168,779 ppm or 16.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 550 kilograms/min
Max Average Sustained Release Rate: 481 kilograms/min
(averaged over a minute or more)
Total Amount Released: 26,016 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 85 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 764 ppm
Indoor: 764 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 432 of 577

SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 127,903 ppm or 12.8%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 6250 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 58.1 kilograms/min
Max Average Sustained Release Rate: 55.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,177 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 17 meters
Max Threat Zone for IDLH: 14 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 499 ppm
Indoor: 499 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 127,903 ppm or 12.8%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 19000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 168 kilograms/min
Max Average Sustained Release Rate: 161 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,306 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 49 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,200 ppm
Indoor: 1,200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 127,903 ppm or 12.8%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 213 kilograms/min
Max Average Sustained Release Rate: 205 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,864 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 113 meters
Max Threat Zone for IDLH: 57 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,430 ppm
Indoor: 1,430 ppm
Note: Indoor graph is shown with a dotted line.

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Computer T. M. Franey | Date 09/16/96 | Sheet No. 435 of 577

SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 127,903 ppm or 12.8%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 347 kilograms/min
Max Average Sustained Release Rate: 334 kilograms/min
(averaged over a minute or more)
Total Amount Released: 19,451 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC: 147 meters
Max Threat Zone for IDLH: 74 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,030 ppm
Indoor: 2,030 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-29
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 1200 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.13 atm
Ambient Saturation Concentration: 127,903 ppm or 12.8%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 881 kilograms/min
Max Average Sustained Release Rate: 854 kilograms/min
(averaged over a minute or more)
Total Amount Released: 49,900 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1200 ppm
Max Threat Zone for LOC; 242 meters
Max Threat Zone for IDLH: 123 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,940 ppm
Indoor: 3,940 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10750 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 36.4 kilograms/min
Max Average Sustained Release Rate: 36.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,025 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 18 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 34500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 112 kilograms/min
Max Average Sustained Release Rate: 112 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,222 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 46 meters
Max Threat Zone for IDLH: 32 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 90.9 ppm
Indoor: 90.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 80.5 kilograms/min
Max Average Sustained Release Rate: 80 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,461 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 39 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 77.3 ppm
Indoor: 77.3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 132 kilograms/min
Max Average Sustained Release Rate: 131 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,297 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 250 ppm
Max Threat Zone for LOC: 112 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 312 ppm
Indoor: 312 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-30
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 3000.00 ppm
Footprint Level of Concern: 250 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 338 kilograms/min
Max Average Sustained Release Rate: 336 kilograms/min
(averaged over a minute or more)
Total Amount Released: 18,640 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 250 ppm
Max Threat Zone for LOC: 148 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 643 ppm
Indoor: 643 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 561,055 ppm or 56.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 132 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 26 minutes
Max Computed Release Rate: 11.5 kilograms/min
Max Average Sustained Release Rate: 7.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 150 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 751 ppm
Indoor: 709 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 561,055 ppm or 56.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1712 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 28 minutes
Max Computed Release Rate: 130 kilograms/min
Max Average Sustained Release Rate: 90.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,948 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint wasn't drawn because effects of near-field patchiness make plume presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 750 ppm
Indoor: 708 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 561,055 ppm or 56.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 31 minutes
Max Computed Release Rate: 1,640 kilograms/min
Max Average Sustained Release Rate: 1,170 kilograms/min
(averaged over a minute or more)
Total Amount Released: 27,792 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 380 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7,410 ppm
Indoor: 7,240 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 7

Computer T. M. Franey | Date 09/16/96 | Sheet No. 445 of 577

SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 561,055 ppm or 56.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 31 minutes
Max Computed Release Rate: 2,670 kilograms/min
Max Average Sustained Release Rate: 1,920 kilograms/min
(averaged over a minute or more)
Total Amount Released: 46,320 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 494 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11,900 ppm
Indoor: 11,700 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-31
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYLENE CHLORIDE
Molecular Weight: 84.90 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 750 ppm
Boiling Point: 40.00° C
Vapor Pressure at Ambient Temperature: 0.55 atm
Ambient Saturation Concentration: 561,055 ppm or 56.1%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 32 minutes
Max Computed Release Rate: 6,780 kilograms/min
Max Average Sustained Release Rate: 4,900 kilograms/min
(averaged over a minute or more)
Total Amount Released: 122,503 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 750 ppm
Max Threat Zone for LOC: 819 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 29,600 ppm
Indoor: 29,100 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.26 kilograms/min
Max Average Sustained Release Rate: 1.24 kilograms/min
(averaged over a minute or more)
Total Amount Released: 59.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.6 ppm
Indoor: 10.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.95 kilograms/min
Max Average Sustained Release Rate: 3.87 kilograms/min
(averaged over a minute or more)
Total Amount Released: 186 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.28 ppm
Indoor: 3.28 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.02 kilograms/min
Max Average Sustained Release Rate: 1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 48.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.59 ppm
Indoor: 1.59 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.66 kilograms/min
Max Average Sustained Release Rate: 1.63 kilograms/min
(averaged over a minute or more)
Total Amount Released: 78.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.01 ppm
Indoor: 2.01 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-32
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: METHYL CELLOSOLVE
Molecular Weight: 76.1 kg/kmol
TLV-TWA: not available IDLH: not available
Footprint Level of Concern: 250 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.24 kilograms/min
Max Average Sustained Release Rate: 4.16 kilograms/min
(averaged over a minute or more)
Total Amount Released: 200 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 250 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.46 ppm
Indoor: 3.46 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.26 kilograms/min
Max Average Sustained Release Rate: 1.24 kilograms/min
(averaged over a minute or more)
Total Amount Released: 59.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.6 ppm
Indoor: 10.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.95 kilograms/min
Max Average Sustained Release Rate: 3.87 kilograms/min
(averaged over a minute or more)
Total Amount Released: 186 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.28 ppm
Indoor: 3.28 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.02 kilograms/min
Max Average Sustained Release Rate: 1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 48.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.59 ppm
Indoor: 1.59 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.66 kilograms/min
Max Average Sustained Release Rate: 1.63 kilograms/min
(averaged over a minute or more)
Total Amount Released: 78.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.01 ppm
Indoor: 2.01 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-33
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.24 kilograms/min
Max Average Sustained Release Rate: 4.16 kilograms/min
(averaged over a minute or more)
Total Amount Released: 200 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.46 ppm
Indoor: 3.46 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 47.8 kilograms/min
Max Average Sustained Release Rate: 47.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,560 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 286 ppm
Indoor: 286 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 151 kilograms/min
Max Average Sustained Release Rate: 149 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,041 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 88.8 ppm
Indoor: 88.8 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 38.7 kilograms/min
Max Average Sustained Release Rate: 38.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,072 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 42.6 ppm
Indoor: 42.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 63.3 kilograms/min
Max Average Sustained Release Rate: 62.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,386 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 54.1 ppm
Indoor: 54.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-34
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 1400 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 162 kilograms/min
Max Average Sustained Release Rate: 160 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,632 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1400 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 93.7 ppm
Indoor: 93.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.0093 atm
Ambient Saturation Concentration: 9,442 ppm or 0.94%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1995 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.31 kilograms/min
Max Average Sustained Release Rate: 3.29 kilograms/min
(averaged over a minute or more)
Total Amount Released: 179 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.0093 atm
Ambient Saturation Concentration: 9,442 ppm or 0.94%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 26900 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 40.5 kilograms/min
Max Average Sustained Release Rate: 40.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,171 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 28 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.0093 atm
Ambient Saturation Concentration: 9,442 ppm or 0.94%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 36.9 kilograms/min
Max Average Sustained Release Rate: 36.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,978 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 96 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 47.8 ppm
Indoor: 47.8 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-35
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: BUTYL ALCOHOL
Molecular Weight: 74.12 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 8000.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 117.66° C
Vapor Pressure at Ambient Temperature: 0.0093 atm
Ambient Saturation Concentration: 9,442 ppm or 0.94%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 60.4 kilograms/min
Max Average Sustained Release Rate: 59.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,232 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 121 meters
Max Threat Zone for IDLH: 34 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 60.7 ppm
Indoor: 60.7 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.25 kilograms/min
Max Average Sustained Release Rate: 3.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 162 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.85 kilograms/min
Max Average Sustained Release Rate: 7.74 kilograms/min
(averaged over a minute or more)
Total Amount Released: 390 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.04 ppm

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.02 kilograms/min
Max Average Sustained Release Rate: 1.99 kilograms/min
(averaged over a minute or more)
Total Amount Released: 101 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.95 ppm

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.3 kilograms/min
Max Average Sustained Release Rate: 3.26 kilograms/min
(averaged over a minute or more)
Total Amount Released: 164 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.47 ppm

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1-RD-36 SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 1000 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 feet
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.43 kilograms/min
Max Average Sustained Release Rate: 8.31 kilograms/min
(averaged over a minute or more)
Total Amount Released: 419 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.26 ppm

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.083 atm
Ambient Saturation Concentration: 84,423 ppm or 8.44%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 82 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 390 grams/min
Max Average Sustained Release Rate: 383 grams/min
(averaged over a minute or more)
Total Amount Released: 22.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15.1 ppm
Indoor: 15.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.083 atm
Ambient Saturation Concentration: 84,423 ppm or 8.44%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1015 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.24 kilograms/min
Max Average Sustained Release Rate: 4.24 kilograms/min
(averaged over a minute or more)
Total Amount Released: 254 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 31 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm
Indoor: 15 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.083 atm
Ambient Saturation Concentration: 84,423 ppm or 8.44%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 92.4 kilograms/min
Max Average Sustained Release Rate: 92.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,447 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 469 meters
Max Threat Zone for IDLH: 139 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 142 ppm
Indoor: 142 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.083 atm
Ambient Saturation Concentration: 84,423 ppm or 8.44%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 152 kilograms/min
Max Average Sustained Release Rate: 152 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,927 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 15 ppm
Max Threat Zone for LOC: 603 meters
Max Threat Zone for IDLH: 177 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 181 ppm
Indoor: 181 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-37
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: NITRIC ACID; FUMING OR CONCENTRATED
Molecular Weight: 63.01 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Footprint Level of Concern: 15 ppm
Boiling Point: 83.00° C
Vapor Pressure at Ambient Temperature: 0.083 atm
Ambient Saturation Concentration: 84,423 ppm or 8.44%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 390 kilograms/min
Max Average Sustained Release Rate: 390 kilograms/min
(averaged over a minute or more)
Total Amount Released: 22,882 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 15 ppm
Max Threat Zone for LOC: 2.2 kilometers
Max Threat Zone for IDLH: 815 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,970 ppm
Indoor: 1,970 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.024 atm
Ambient Saturation Concentration: 24,830 ppm or 2.48%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 9850 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 52.1 kilograms/min
Max Average Sustained Release Rate: 51.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,892 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 175 ppm
Indoor: 175 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.024 atm
Ambient Saturation Concentration: 24,830 ppm or 2.48%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 12900 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 67.6 kilograms/min
Max Average Sustained Release Rate: 67.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,751 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 89 meters
Max Threat Zone for IDLH: 46 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.024 atm
Ambient Saturation Concentration: 24,830 ppm or 2.48%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 125 kilograms/min
Max Average Sustained Release Rate: 125 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,941 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 113 meters
Max Threat Zone for IDLH: 57 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 372 ppm
Indoor: 372 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.024 atm
Ambient Saturation Concentration: 24,830 ppm or 2.48%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 205 kilograms/min
Max Average Sustained Release Rate: 204 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,364 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 133 meters
Max Threat Zone for IDLH: 68 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 492 ppm
Indoor: 492 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRACHLOROETHYLENE
Molecular Weight: 165.83 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 500.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 200 ppm
Boiling Point: 121.25° C
Vapor Pressure at Ambient Temperature: 0.024 atm
Ambient Saturation Concentration: 24,830 ppm or 2.48%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 526 kilograms/min
Max Average Sustained Release Rate: 523 kilograms/min
(averaged over a minute or more)
Total Amount Released: 29,073 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 200 ppm
Max Threat Zone for LOC: 177 meters
Max Threat Zone for IDLH: 97 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 837 ppm
Indoor: 837 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-40
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 14550 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.25 kilograms/min
Max Average Sustained Release Rate: 8.15 kilograms/min
(averaged over a minute or more)
Total Amount Released: 421 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-40
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 52.7 kilograms/min
Max Average Sustained Release Rate: 52.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,682 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 31.1 ppm
Indoor: 31.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-40
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.6 kilograms/min
Max Average Sustained Release Rate: 13.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 692 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 39 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14.9 ppm
Indoor: 14.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-40
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.2 kilograms/min
Max Average Sustained Release Rate: 21.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,130 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 49 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 19 ppm
Indoor: 19 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-40
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PHENOL Molecular Weight: 94.11 kg/kmol
TLV-TWA: 5.00 ppm IDLH: 250.00 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 181.84° C
Vapor Pressure at Ambient Temperature: 0.0038 atm
Ambient Saturation Concentration: 3,865 ppm or 0.39%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 50° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 50° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 56.6 kilograms/min
Max Average Sustained Release Rate: 55.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,879 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 78 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 32.8 ppm
Indoor: 32.8 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.027 atm
Ambient Saturation Concentration: 27,722 ppm or 2.77%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 37 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 119 grams/min
Max Average Sustained Release Rate: 119 grams/min
(averaged over a minute or more)
Total Amount Released: 6.95 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5.08 ppm
Indoor: 5.08 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.027 atm
Ambient Saturation Concentration: 27,722 ppm or 2.77%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 447 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.3 kilograms/min
Max Average Sustained Release Rate: 1.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 75.0 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5 ppm
Indoor: 5 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-41

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.027 atm
Ambient Saturation Concentration: 27,722 ppm or 2.77%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 61.9 kilograms/min
Max Average Sustained Release Rate: 61.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,499 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 5 ppm
Max Threat Zone for LOC: 696 meters
Max Threat Zone for IDLH: 27 meters

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1-RD-41

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.027 atm
Ambient Saturation Concentration: 27,722 ppm or 2.77%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 101 kilograms/min
Max Average Sustained Release Rate: 101 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,726 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 5 ppm
Max Threat Zone for LOC: 895 meters
Max Threat Zone for IDLH: 34 meters

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPYL ALCOHOL
Molecular Weight: 60.10 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 4000.00 ppm
Footprint Level of Concern: 5 ppm
Boiling Point: 97.20° C
Vapor Pressure at Ambient Temperature: 0.027 atm
Ambient Saturation Concentration: 27,722 ppm or 2.77%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 260 kilograms/min
Max Average Sustained Release Rate: 259 kilograms/min
(averaged over a minute or more)
Total Amount Released: 14,636 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 5 ppm
Max Threat Zone for LOC: 1.5 kilometers
Max Threat Zone for IDLH: 56 meters

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0041 atm
Ambient Saturation Concentration: 4,213 ppm or 0.42%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 12850 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.96 kilograms/min
Max Average Sustained Release Rate: 6.88 kilograms/min
(averaged over a minute or more)
Total Amount Released: 356 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0041 atm
Ambient Saturation Concentration: 4,213 ppm or 0.42%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 50.1 kilograms/min
Max Average Sustained Release Rate: 49.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,552 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 80 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 34.6 ppm
Indoor: 34.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0041 atm
Ambient Saturation Concentration: 4,213 ppm or 0.42%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12.9 kilograms/min
Max Average Sustained Release Rate: 12.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 659 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 41 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 16.6 ppm
Indoor: 16.6 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0041 atm
Ambient Saturation Concentration: 4,213 ppm or 0.42%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 21.1 kilograms/min
Max Average Sustained Release Rate: 20.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,076 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 52 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 21.1 ppm
Indoor: 21.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-42
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0041 atm
Ambient Saturation Concentration: 4,213 ppm or 0.42%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 53.7 kilograms/min
Max Average Sustained Release Rate: 53.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,739 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 83 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 36.5 ppm
Indoor: 36.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,876 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 116 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 103 grams/min
Max Average Sustained Release Rate: 102 grams/min
(averaged over a minute or more)
Total Amount Released: 5.80 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,876 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1440 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.15 kilograms/min
Max Average Sustained Release Rate: 1.14 kilograms/min
(averaged over a minute or more)
Total Amount Released: 63.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,876 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 17.5 kilograms/min
Max Average Sustained Release Rate: 17.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 961 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 392 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 67.9 ppm
Indoor: 67.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,876 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 28.6 kilograms/min
Max Average Sustained Release Rate: 28.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,570 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 501 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 86.2 ppm
Indoor: 86.2 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-43
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: FORMALDEHYDE-56%-SAH
Molecular Weight: 24.78 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 10 ppm
Boiling Point: 100.10° C
Vapor Pressure at Ambient Temperature: 0.018 atm
Ambient Saturation Concentration: 17,876 ppm or 1.79%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 73.3 kilograms/min
Max Average Sustained Release Rate: 72.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,002 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 805 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 149 ppm
Indoor: 149 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30430 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 35.3 grams/min
Max Average Sustained Release Rate: 34.8 grams/min
(averaged over a minute or more)
Total Amount Released: 1.71 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.186 ppm
Indoor: 0.186 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 111 grams/min
Max Average Sustained Release Rate: 109 grams/min
(averaged over a minute or more)
Total Amount Released: 5.36 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0577 ppm
Indoor: 0.0577 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 28.6 grams/min
Max Average Sustained Release Rate: 28.1 grams/min
(averaged over a minute or more)
Total Amount Released: 1.38 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0277 ppm
Indoor: 0.0277 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 46.7 grams/min
Max Average Sustained Release Rate: 46 grams/min
(averaged over a minute or more)
Total Amount Released: 2.26 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0352 ppm
Indoor: 0.0352 ppm
Note: Indoor graph is shown with a dotted line.

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Title of Project EPHA for THM | Reviewed by S. A. Henderson
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SITE DATA INFORMATION: 1-RD-44
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID
Molecular Weight: 98.08 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 330.00° C
Vapor Pressure at Ambient Temperature: 5.37e-006 atm
Ambient Saturation Concentration: 5.47 ppm or 5.47e-004%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 119 grams/min
Max Average Sustained Release Rate: 117 grams/min
(averaged over a minute or more)
Total Amount Released: 5.75 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.0608 ppm
Indoor: 0.0608 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,705 ppm or 1.27%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 189 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 426 grams/min
Max Average Sustained Release Rate: 423 grams/min
(averaged over a minute or more)
Total Amount Released: 23.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 20 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,705 ppm or 1.27%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2300 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.76 kilograms/min
Max Average Sustained Release Rate: 4.73 kilograms/min
(averaged over a minute or more)
Total Amount Released: 258 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 66 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,705 ppm or 1.27%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 47 kilograms/min
Max Average Sustained Release Rate: 46.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,518 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 313 meters
Max Threat Zone for IDLH: 205 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 46.1 ppm
Indoor: 46.1 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,705 ppm or 1.27%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 77.2 kilograms/min
Max Average Sustained Release Rate: 76.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,127 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 402 meters
Max Threat Zone for IDLH: 263 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 58.7 ppm
Indoor: 58.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-45
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: SULFURIC ACID, FUMING -
Molecular Weight: 98.00 kg/kmol
TLV-TWA: 0.25 ppm IDLH: 19.60 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 93.50° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,705 ppm or 1.27%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 198 kilograms/min
Max Average Sustained Release Rate: 197 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,576 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 647 meters
Max Threat Zone for IDLH: 420 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 102 ppm
Indoor: 102 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,394 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1850 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 57 minutes
Max Computed Release Rate: 35 kilograms/min
Max Average Sustained Release Rate: 29.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,512 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 15 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 484 ppm
Indoor: 484 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,394 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 132 kilograms/min
Max Average Sustained Release Rate: 114 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,111 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,394 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 408 kilograms/min
Max Average Sustained Release Rate: 355 kilograms/min
(averaged over a minute or more)
Total Amount Released: 19,189 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 181 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,460 ppm
Indoor: 2,460 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,394 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 664 kilograms/min
Max Average Sustained Release Rate: 582 kilograms/min
(averaged over a minute or more)
Total Amount Released: 31,515 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 236 meters
Max Threat Zone for IDLH: IDLH level was never exceeded
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,650 ppm
Indoor: 3,650 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-46
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200.00 ppm IDLH: 20000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,394 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,680 kilograms/min
Max Average Sustained Release Rate: 1,490 kilograms/min
(averaged over a minute or more)
Total Amount Released: 81,034 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 392 meters
Max Threat Zone for IDLH: 37 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7,660 ppm
Indoor: 7,660 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.037 atm
Ambient Saturation Concentration: 38,111 ppm or 3.81%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 11950 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 51.1 kilograms/min
Max Average Sustained Release Rate: 50.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,894 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 300 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 19 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 ppm
Indoor: 300 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.037 atm
Ambient Saturation Concentration: 38,111 ppm or 3.81%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 22350 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 93.5 kilograms/min
Max Average Sustained Release Rate: 93.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,288 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 300 ppm
Max Threat Zone for LOC: 41 meters
Max Threat Zone for IDLH: 26 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 102 ppm
Indoor: 102 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.037 atm
Ambient Saturation Concentration: 38,111 ppm or 3.81%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 102 kilograms/min
Max Average Sustained Release Rate: 101 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,759 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 300 ppm
Max Threat Zone for LOC: 118 meters
Max Threat Zone for IDLH: 29 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 441 ppm
Indoor: 441 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.037 atm
Ambient Saturation Concentration: 38,111 ppm or 3.81%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 167 kilograms/min
Max Average Sustained Release Rate: 166 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,423 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 300 ppm
Max Threat Zone for LOC: 144 meters
Max Threat Zone for IDLH: 35 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 772 ppm
Indoor: 772 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-47
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TOLUENE Molecular Weight: 92.14 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 2000.00 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 110.63° C
Vapor Pressure at Ambient Temperature: 0.037 atm
Ambient Saturation Concentration: 38,111 ppm or 3.81%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 427 kilograms/min
Max Average Sustained Release Rate: 426 kilograms/min
(averaged over a minute or more)
Total Amount Released: 24,080 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 300 ppm
Max Threat Zone for LOC: 191 meters
Max Threat Zone for IDLH: 55 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,270 ppm
Indoor: 1,270 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 3.39e-004 atm
Ambient Saturation Concentration: 345 ppm or 0.034%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 23880 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.07 kilograms/min
Max Average Sustained Release Rate: 2.04 kilograms/min
(averaged over a minute or more)
Total Amount Released: 103 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 3.39e-004 atm
Ambient Saturation Concentration: 345 ppm or 0.034%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.21 kilograms/min
Max Average Sustained Release Rate: 8.09 kilograms/min
(averaged over a minute or more)
Total Amount Released: 406 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.91 ppm
Indoor: 3.91 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 3.39e-004 atm
Ambient Saturation Concentration: 345 ppm or 0.034%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.11 kilograms/min
Max Average Sustained Release Rate: 2.08 kilograms/min
(averaged over a minute or more)
Total Amount Released: 105 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.88 ppm
Indoor: 1.88 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-48
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-TOLUIDINE
Molecular Weight: 107.15 kg/kmol
TLV-TWA: 2.00 ppm IDLH: 100.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 10 ppm
Boiling Point: 200.40° C
Vapor Pressure at Ambient Temperature: 3.39e-004 atm
Ambient Saturation Concentration: 345 ppm or 0.034%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.45 kilograms/min
Max Average Sustained Release Rate: 3.41 kilograms/min
(averaged over a minute or more)
Total Amount Released: 171 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 10 ppm
Max Threat Zone for LOC: 39 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.39 ppm
Indoor: 2.39 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 165,660 ppm or 16.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 955 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 58 minutes
Max Computed Release Rate: 24 kilograms/min
Max Average Sustained Release Rate: 21.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,180 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint wasn't drawn because effects of
near-field patchiness make plume presentation
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 165,660 ppm or 16.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 11300 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 253 kilograms/min
Max Average Sustained Release Rate: 235 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,269 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 99 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,000 ppm
Indoor: 1,000 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 165,660 ppm or 16.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 530 kilograms/min
Max Average Sustained Release Rate: 494 kilograms/min
(averaged over a minute or more)
Total Amount Released: 28,014 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 150 meters
Max Threat Zone for IDLH: 149 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,900 ppm
Indoor: 1,900 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 165,660 ppm or 16.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 864 kilograms/min
Max Average Sustained Release Rate: 809 kilograms/min
(averaged over a minute or more)
Total Amount Released: 45,989 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 196 meters
Max Threat Zone for IDLH: 195 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,920 ppm
Indoor: 2,920 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-49
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 1000 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 165,660 ppm or 16.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2,200 kilograms/min
Max Average Sustained Release Rate: 2,070 kilograms/min
(averaged over a minute or more)
Total Amount Released: 118,257 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 1000 ppm
Max Threat Zone for LOC: 329 meters
Max Threat Zone for IDLH: 326 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6,590 ppm
Indoor: 6,580 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.097 atm
Ambient Saturation Concentration: 98,733 ppm or 9.87%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.8 kilograms/min
Max Average Sustained Release Rate: 22.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,336 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 500 ppm
Max Threat Zone for LOC: 13 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 208 ppm
Indoor: 208 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.097 atm
Ambient Saturation Concentration: 98,733 ppm or 9.87%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 8200 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 102 kilograms/min
Max Average Sustained Release Rate: 102 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,106 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 61 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 500 ppm
Indoor: 500 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.097 atm
Ambient Saturation Concentration: 98,733 ppm or 9.87%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 293 kilograms/min
Max Average Sustained Release Rate: 293 kilograms/min
(averaged over a minute or more)
Total Amount Released: 17,547 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 174 meters
Max Threat Zone for IDLH: 108 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,140 ppm
Indoor: 1,140 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-50
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRICHLOROETHYLENE
Molecular Weight: 131.39 kg/kmol
TLV-TWA: 50.00 ppm IDLH: 1000.00 ppm
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 500 ppm
Boiling Point: 86.95° C
Vapor Pressure at Ambient Temperature: 0.097 atm
Ambient Saturation Concentration: 98,733 ppm or 9.87%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,240 kilograms/min
Max Average Sustained Release Rate: 1,240 kilograms/min
(averaged over a minute or more)
Total Amount Released: 73,841 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 500 ppm
Max Threat Zone for LOC: 375 meters
Max Threat Zone for IDLH: 237 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,510 ppm
Indoor: 3,510 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 485 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.3 kilograms/min
Max Average Sustained Release Rate: 5.19 kilograms/min
(averaged over a minute or more)
Total Amount Released: 306 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 100 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters(10.9 yards)
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 100 ppm
Indoor: 100 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3670 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 36.3 kilograms/min
Max Average Sustained Release Rate: 36 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,147 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 68.5 ppm
Indoor: 68.5 ppm
Note: Indoor graph is shown with a dotted line.

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SRS SAVANNAH RIVER SITE

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 224 kilograms/min
Max Average Sustained Release Rate: 224 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,393 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 100 ppm
Max Threat Zone for LOC: 522 meters
Max Threat Zone for IDLH: 107 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,120 ppm
Indoor: 1,120 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 367 kilograms/min
Max Average Sustained Release Rate: 367 kilograms/min
(averaged over a minute or more)
Total Amount Released: 21,953 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 100 ppm
Max Threat Zone for LOC: 691 meters
Max Threat Zone for IDLH: 140 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,620 ppm
Indoor: 1,620 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-51
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 100 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 945 kilograms/min
Max Average Sustained Release Rate: 944 kilograms/min
(averaged over a minute or more)
Total Amount Released: 56,291 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 100 ppm
Max Threat Zone for LOC: 1.1 kilometers
Max Threat Zone for IDLH: 233 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3,220 ppm
Indoor: 3,220 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,288 ppm or 15.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 181 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.15 kilograms/min
Max Average Sustained Release Rate: 2.76 kilograms/min
(averaged over a minute or more)
Total Amount Released: 150 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 74.9 ppm
Indoor: 74.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,288 ppm or 15.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2130 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 32.6 kilograms/min
Max Average Sustained Release Rate: 29.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,621 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 71.3 ppm
Indoor: 71.3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,288 ppm or 15.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 333 kilograms/min
Max Average Sustained Release Rate: 306 kilograms/min
(averaged over a minute or more)
Total Amount Released: 17,191 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 786 meters
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,780 ppm
Indoor: 1,780 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,288 ppm or 15.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 543 kilograms/min
Max Average Sustained Release Rate: 502 kilograms/min
(averaged over a minute or more)
Total Amount Released: 28,222 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 1.0 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,630 ppm
Indoor: 2,630 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-52
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: VINYL ACETATE
Molecular Weight: 86.09 kg/kmol
TLV-TWA: 10.00 ppm IDLH: -unavail-
Note: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 72.50° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 153,288 ppm or 15.3%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,380 kilograms/min
Max Average Sustained Release Rate: 1,280 kilograms/min
(averaged over a minute or more)
Total Amount Released: 72,530 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User specified LOC: 75 ppm
Max Threat Zone for LOC: 1.8 kilometers
Note: The Heavy Gas footprint is an initial screening.
For short releases it may be an overestimation.
Be sure to check concentration information at specific locations.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5,460 ppm
Indoor: 5,460 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.0087 atm
Ambient Saturation Concentration: 8,878 ppm or 0.89%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30300 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 40.8 kilograms/min
Max Average Sustained Release Rate: 40.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,166 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 200 ppm
Indoor: 200 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.0087 atm
Ambient Saturation Concentration: 8,878 ppm or 0.89%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 99999 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default . Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 129 kilograms/min
Max Average Sustained Release Rate: 128 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,832 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 62.3 ppm
Indoor: 62.3 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.0087 atm
Ambient Saturation Concentration: 8,878 ppm or 0.89%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 33.1 kilograms/min
Max Average Sustained Release Rate: 32.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,760 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 29.9 ppm
Indoor: 29.9 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-53
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.0087 atm
Ambient Saturation Concentration: 8,878 ppm or 0.89%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 54.2 kilograms/min
Max Average Sustained Release Rate: 53.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,876 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

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SITE DATA INFORMATION:
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Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: O-XYLENE Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100.00 ppm IDLH: 1000.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: 144.43° C
Vapor Pressure at Ambient Temperature: 0.0087 atm
Ambient Saturation Concentration: 8,878 ppm or 0.89%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 138 kilograms/min
Max Average Sustained Release Rate: 137 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,334 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 3.4 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 25.7 grams/sec
Total Amount Released: 1.54 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.6 ppm
Indoor: 30.5 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.2 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 281 grams/sec
Total Amount Released: 16.9 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because
effects of near-field patchiness make plume
presentation unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 29.7 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.6 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 284 grams/sec
Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 100 meters

TIME DEPENDENT INFORMATION:
.Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50.6 ppm
Indoor: 30 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 191 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 182 ppm
Indoor: 108 ppm
Note: Indoor graph is shown with a dotted line.

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SITE DATA INFORMATION: 1-RD-54 - 1-RD-58
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: RESPIRABLE DUST
Molecular Weight: 80.00 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 50 ppm
Boiling Point: -unavail-
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: 100 centimeters
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 263 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.99 kilograms/sec
Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 50 ppm
Max Threat Zone for LOC: 267 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 354 ppm
Indoor: 210 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-59

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA, ANHYDROUS
Molecular Weight: 17.03 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: -33.43° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 34 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: 31 minutes
Max Computed Release Rate: 12.4 kilograms/min
Max Average Sustained Release Rate: 1.35 kilograms/min
(averaged over a minute or more)
Total Amount Released: 21.5 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 203 ppm

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA, ANHYDROUS
Molecular Weight: 17.03 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: -33.43° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 400 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: 34 minutes
Max Computed Release Rate: 133 kilograms/min
Max Average Sustained Release Rate: 14.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 253 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 202 ppm

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1-RD-59
SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA, ANHYDROUS
Molecular Weight: 17.03 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: -33.43° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2000 square feet
Puddle Mass: 1 tons
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: 23 minutes
Max Computed Release Rate: 745 kilograms/min
Max Average Sustained Release Rate: 87.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 907 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 245 meters
Max Threat Zone for IDLH: 152 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1,080 ppm

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SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA, ANHYDROUS
Molecular Weight: 17.03 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: -33.43° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 20000 square feet
Puddle Mass: 10 tons
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: 24 minutes
Max Computed Release Rate: 6,980 kilograms/min
Max Average Sustained Release Rate: 842 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,072 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 767 meters
Max Threat Zone for IDLH: 475 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 5,270 ppm

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1-RD-59

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: AMMONIA, ANHYDROUS
Molecular Weight: 17.03 kg/kmol
TLV-TWA: 25.00 ppm IDLH: 500.00 ppm
Footprint Level of Concern: 200 ppm
Boiling Point: -33.43° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 35000 square feet
Puddle Mass: 17.5 tons
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: 25 minutes
Max Computed Release Rate: 12,000 kilograms/min
Max Average Sustained Release Rate: 1,460 kilograms/min
(averaged over a minute or more)
Total Amount Released: 15,876 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User specified LOC: 200 ppm
Max Threat Zone for LOC: 997 meters
Max Threat Zone for IDLH: 628 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6,940 ppm

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For analysis on 1 ton, see hard copy.

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1-RD-60

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CHLORINE Molecular Weight: 70.90 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: -34.03° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 0.5 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: 8 minutes
Max Computed Release Rate: 1.27 kilograms/min
Max Average Sustained Release Rate: 181 grams/min
(averaged over a minute or more)
Total Amount Released: 726 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 6.71 ppm

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1-RD-60

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Date and Time: Fixed at July 1, 1996 1300 hours

CHEMICAL INFORMATION:
Chemical Name: CHLORINE Molecular Weight: 70.90 kg/kmol
TLV-TWA: 0.50 ppm IDLH: 30.00 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: -34.03° C
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true
Inversion Height: 500 meters
Stability Class: C Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 7 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: boiling point
Release Duration: 9 minutes
Max Computed Release Rate: 7.09 kilograms/min
Max Average Sustained Release Rate: 1.03 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4.35 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.43 ppm

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For analysis on quantity for ERPG-2 at 30 m, see hard copy.

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For analysis on quantity for ERPG-2 At 100 m, see hard copy.

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ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM

Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals

Works Calculation 7

Computer T. M. Franey

Date 09/16/96

Sheet No. 575 of 577

1-RD-61

For analysis on 1 ton, see hard copy.

OSR 25-10 (Rev 6-18-92)

ENGINEERING COMPUTATION SHEET

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Subject Concentration Analysis for THM Hazardous Chemicals

Works Calculation 7

Computer T. M. Franey

Date 09/16/96

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1-RD-61

For analysis on 10 tons, see hard copy.

OSR 25-10 (Rev 6-18-92)

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM

Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals

Works Calculation 7

Computer T. M. Franey

Date 09/16/96

Sheet No. 577 of 577

1-RD-61
For analysis on 17.5 tons, see hard copy.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 1 of 314

INTRODUCTION

Calculation 8 is for chemicals that underwent a full hazard analysis in calculation 7 and had ERPG values that have changed since Revision 0 of Transportation EPHA. This calculation estimates the vapor concentrations of chemicals requiring full hazards analysis for the transportation EPHA, at 30 and 100 meter receptor points and the maximum distance to ERPG-2 concentration for each of the THM EPHA segments for adverse and average meteorological conditions. Concentrations for ALOHA default distances for maximum segment source terms are also analyzed.

ASSUMPTIONS

Releases are ground level and immediately spread to 1-cm depth. (Ref 1)
SRS established 95% adverse meteorological conditions: (Ref 2)
E-stability, 1.7 m/s wind, 200 m inversion and 29° C ambient temperature.
SRS established 50% average meteorological conditions: (Ref 2)
C-stability, 2.5 m/s wind, 500 m inversion and 25° C ambient temperature.
Receptor points are at ground level. (Ref 2)

CALCULATION

The Areal Locations of Hazardous Atmospheres (ALOHA), dispersion model, Version 5.2.1s, (Ref. 3) is utilized to calculate and/or back calculate, as appropriate, concentration information for the following chemicals and associated ERPG-2 values (Ref. 4).

Table 1 Chemicals, Associated ERPG, and State

Chemical Name / Molecular Weight	ERPG-2 or Equiv ppm	State (S)olid (L)iquid (G)as	RELEASE DESIGNATION
Acetic Acid	35	L	1-RD-2
Acetonitrile / 41.1	60	L	1-RD-3
Alpha-Pinene / 136.3	300 (mg/m^3)	L	1-RD-4
Benzyl Alcohol	100	L	1-RD-7
Butyraldehyde	500 (mg/m^3)	L	1-RD-9
Chloracetone / 92.5	1	L	1-RD-11
Cyclohexanone / 98.2	125	L	1-RD-14
Diethylene Glycol / 106.1	100	L	1-RD-15
Dioxane / 88.1	75	L	1-RD-16
Diphenylmethane-4,4-Diisocyanate	2 (mg/m^3)	L	1-RD-17
Ethyl benzene / 106.2	125	L	1-RD-19
Ethylene Glycol Monobutyl Ether	125	L	1-RD-20
Formic Acid / 46.0	10	L	1-RD-22
Diethylene Glycol Dimethyl Ether	500 (mg/m^3)	L	1-RD-23
Hydrogen Peroxide / 34.0	50	L	1-RD-26
Methyl Ethyl Ketone / 72.1	300	L	1-RD-29
Methyl Isobutyl Ketone / 100.2	500	L	1-RD-30
Ethylene Glycol Monomethyl Ether	25	L	1-RD-32

Table 1 cont. Chemicals, Associated ERPG, and State

Chemical Name / Molecular Weight	ERPG-2 or Equiv ppm	State (S)olid (L)iquid (G)as	RELEASE DESIGNATION
Monoethanolamine /61.1	30	L	1-RD-33
Morpholine / 87.1	100	L	1-RD-34
N Methyl Pyrrolidone / 99.15	500	L	1-RD-36
Propionic Acid / 74.1	15	L	1-RD-42
Tetrahydrofuran / 72.1	2000	L	1-RD-46
Trichloroethane-1,1,1 / 133.4	700	L	1-RD-49
Triethylamine / 101.22	3	L	1-RD-51
Benzoic Acid	75 (mg/m^3)	S	1-RD-54
Silicia, Crystalline Quartz (Resp. dust) / 60.09	0.5 (mg/m^3)	S	1-RD-56
Sodium Sulfhydrate	4 (mg/m^3)	S	1-RD-57

The ALOHA computer code was utilized to develop ground level concentrations at specified receptor points. Liquids at ambient temperature are input as puddles, solids at ambient temperature are input as direct releases after applying appropriate release fractions, and gases are input as instantaneous direct releases. The ALOHA code is then allowed to calculate the ground level concentration at the specified receptor point and these results are compared with the target concentration of ERPG-2. If the ALOHA projected concentration is greater than the target concentration the source term (puddle area, release rate as applicable) is reduced and the concentration re-calculated by ALOHA. If the ALOHA projected concentration is less than the target concentration the source term (puddle area, release rate as applicable) is increased and the concentration re-calculated by ALOHA. This process continues until the source term producing the target concentration at the target receptor point is established.

Additional ALOHA calculations were performed to determine the footprint of the ERPG-2 concentration for the maximum allowed source term per segment for each of the materials at risk. The segment maximums were also utilized to allow ALOHA to calculate the maximum concentration at 6,000 meters for 95% meteorological conditions (ALOHA default distance based on wind speed for one hour) and 10,000 meters for 50% meteorological conditions (ALOHA default distance).

RESULTS

All results shown are centerline distance downwind.

Table 2 95% Adverse met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (FT^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (FT^2)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (170,940 ft^2) (meters)
1-RD-2	115	1425	428	568	1200
1-RD-3	21	265	1100	1400	2200
1-RD-4	491	5941	202	261	432
1-RD-7	>30000	>100000	27	34	56
1-RD-9	84	777	532	686	1100
1-RD-11	3	39	3400	4800	>10000
1-RD-14	7750	NA	52	67	109
1-RD-15	> 30000	> 100000	27	34	56
1-RD-16	98	1400	501	643	1000
1-RD-17	17237	>100000	35	45	72
1-RD-19	3300	24086	147	189	306
1-RD-20	>30000	>100000	27	34	56
1-RD-22	7	101	2400	3100	5000
1-RD-23	8750	>100000	50	64	103
1-RD-26	5175	62200	63	81	131
1-RD-29	250	2125	334	436	679
1-RD-30	6034	32500	87	112	187
1-RD-32	145	1810	377	498	1200
1-RD-33	18500	>100000	34	44	70
1-RD-34	> 30000	>100000	27	26	42
1-RD-36	>30000	NA	27	34	56
1-RD-42	283	3600	263	346	597
1-RD-46	1080	13300	138	183	310
1-RD-49	472	6060	208	275	466
1-RD-51	1.7	20	5300	6900	>10000

Table 2 cont. 95% Adverse met Consequence Assessment Results - Chemical

	Pounds required to produce ERPG-2 Concentration at 30 meters (ALERT) (lb_m)	Pounds required to produce ERPG-2 Concentration at 30 meters (SAE) (lb_m)	Maximum Distance to PAC for Segment 1 Maximum Source Term (37,600 lbm)) (meters)	Maximum Distance to PAC for Segment 2 Maximum Source Term (135,000 lbm) (meters)	Maximum Distance to PAC for Segment 3 Maximum Source Term (263,000 lbm) (meters)
1-RD-54	285	3000	344	580	755
1-RD-56	1.9	20	2500	4300	5800
1-RD-57	15	160	1100	1800	2400

Table 3 50% Average met Consequence Assessment Results - Chemical

	Puddle Size Required to produce ERPG-2 Concentration @ 30 meters (ALERT) (FT^2)	Puddle Size Required to produce ERPG-2 Concentration @ 100 meters (SAE) (FT^2)	Maximum Distance to PAC (GE) for Segment 1 Maximum Source Term (24,420 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 2 Maximum Source Term (40,700 ft^2) (meters)	Maximum Distance to PAC (GE) for Segment 3 Maximum Source Term (170,940 ft^2) (meters)
1-RD-2	895	11850	140	178	280
1-RD-3	177	2325	303	386	1600
1-RD-4	3341	42582	77	98	155
1-RD-7	> 30000	> 100000	27	34	56
1-RD-9	737	6485	471	603	994
1-RD-11	37	477	651	832	1300
1-RD-14	> 30000	> 100000	27	34	56
1-RD-15	> 30000	> 100000	27	34	56
1-RD-16	997	13000	135	556	907
1-RD-17	>30000	>100000	16	20	32
1-RD-19	17700	> 100000	35	45	72
1-RD-20	>30000	>100000	27	34	56
1-RD-22	59	760	528	677	1100
1-RD-23	>30000	> 100000	27	34	56
1-RD-26	26800	>100000	29	37	58
1-RD-29	3165	9384	313	400	640
1-RD-30	>30000	61426	27	34	173
1-RD-32	1950	27750	94	119	186
1-RD-33	>30000	> 100000	27	34	56
1-RD-34	1450	19600	111	140	220
1-RD-36	>30000	>100000	27	34	56
1-RD-42	2050	28500	93	118	185
1-RD-46	3010	21100	108	140	232
1-RD-49	875	7840	176	229	381
1-RD-51	11.3	143	3200	4100	6700
	Pounds required to produce ERPG-2 Concentration at 30 meters (ALERT) (lb_m)	Pounds required to produce ERPG-2 Concentration at 30 meters (SAE) (lb_m)	Maximum Distance to PAC for Segment 1 Maximum Source Term (37,600 lbm) (meters)	Maximum Distance for PAC for Segment 2 Maximum Source Term (135,000 lbm) (meters)	Maximum Distance to PAC for Segment 3 Maximum Source Term (263,000 lbm) (meters)
1-RD-54	1900	21300	133	252	353
1-RD-56	12.8	142	1300	2000	2600
1-RD-57	100	1135	569	948	1200

REFERENCES

1. Hadlock, D. J., *Standards for Development and Maintenance of a Facility Hazards Assessment, 6Q Vol. 2,* EMPP 6Q-001, Rev. 1, Westinghouse Savannah River Company, Savannah River Site, Aiken, SC, November 1, 1995.

2. Hadlock, D. J., *Consequence Assessment for Emergency Preparedness Hazards Assessments,* TP-95-002, Rev. 3, January 20, 1997.

3. *ALOHA, Areal Locations Of Hazardous Atmospheres, Version 5.2.1S, User's Manuel,* National Oceanic and Atmospheric Administration and U.S. Environmental Protection Agency, June, 1995.

4. Craig, D. K., *ERPGs and TEELs for Chemicals of Concern , WSMS-SAE-98-00101, Rev. 14, Augusta 4, 1998. Addendum to Rev. 14, ERPGs and TEELs for Chemicals of Concern, WSMS Inter-Office Memorandum, WSMS-SAE-M-98-00100, September 3, 1998.*

1-RD-2 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,132 ppm or 2.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 115 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 201 grams/min
Max Average Sustained Release Rate: 186 grams/min
(averaged over a minute or more)
Total Amount Released: 10.1 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35 ppm

1-RD-2 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,132 ppm or 2.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1425 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.17 kilograms/min
Max Average Sustained Release Rate: 2.02 kilograms/min
(averaged over a minute or more)
Total Amount Released: 110 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35 ppm

1-RD-2 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,132 ppm or 2.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 32.2 kilograms/min
Max Average Sustained Release Rate: 30.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,665 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 35 ppm
Max Threat Zone for LOC: 428 meters

1-RD-2 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,132 ppm or 2.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 52.5 kilograms/min
Max Average Sustained Release Rate: 49.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,716 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 35 ppm
Max Threat Zone for LOC: 568 meters

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 10 of 314

1-RD-2 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,132 ppm or 2.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 133 kilograms/min
Max Average Sustained Release Rate: 125 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,903 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 35 ppm
Max Threat Zone for LOC: 1.2 kilometers

1-RD-3 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,864 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 21 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 183 grams/min
Max Average Sustained Release Rate: 176 grams/min
(averaged over a minute or more)
Total Amount Released: 6.81 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 58.5 ppm

1-RD-3 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,864 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 265 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.95 kilograms/min
Max Average Sustained Release Rate: 1.95 kilograms/min
(averaged over a minute or more)
Total Amount Released: 75.9 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 59.9 ppm

1-RD-3 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,864 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 140 kilograms/min
Max Average Sustained Release Rate: 140 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,790 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 1.1 kilometers

1-RD-3 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,864 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 228 kilograms/min
Max Average Sustained Release Rate: 228 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,467 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 1.4 kilometers

1-RD-3 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.14 atm
Ambient Saturation Concentration: 145,864 ppm or 14.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 575 kilograms/min
Max Average Sustained Release Rate: 575 kilograms/min
(averaged over a minute or more)
Total Amount Released: 24,165 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 2.2 kilometers

1-RD-4 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136, 26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 300 mg/ (cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0085 atm
Ambient Saturation Concentration: 8,689 ppm or 0.87%
Note: Not enough chemical data to use Heavy Gas option.

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meter
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .0086 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 516 grams / min
Total Amount Released: 31.0 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off centerline: 0 meters
Max concentration:
Outdoor: 299 mg / (cu m)
Indoor: 106 mg / (cu m)
Note: Indoor graph is shown with a dotted line.

SPILL AREA CALCULATION FOR 1-RD-4 ADVERSE / ALERT CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	8.64E-3	kg/s		
MW (Molecular Weight)	136	kg/kg-mole		
Pv (Vapor Pressure)	6.49	mm Hg		
Pv (Vapor Pressure)	865	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	120.6	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	45.7	m^2	491	ft^2
Km (Mass Transfer Coeff)	4.03E-3	m/s		
Z (Pool Diameter in Wind Direction)	8	m		
Sc (Schmidt Number)	1.72			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air	8.72E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	0.46	m^3		
Evaporation Rate	518	g/min		
60 min lb released	68.56			

1-RD-4 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperatures: 0.0085 atm
Ambient Saturation Concentration: 8,689 ppm or 0.87%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .091 kilograms/ sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 5.46 kilograms/min
Total Amount Released: 328 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 mg / (cu m)
Indoor: 106 mg / (cu m)
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 19 of 314

SPILL AREA CALCULATION FOR 1-RD-4 ADVERSE / SAE CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	9.09E-2	kg/s		
MW (Molecular Weight)	136	kg/kg-mole		
Pv (Vapor Pressure)	6.49	mm Hg		
Pv (Vapor Pressure)	865	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	1458	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	551.9	m^2	5941	ft^2
Km (Mass Transfer Coeff)	3.51E-3	m/s		
Z (Pool Diameter in Wind Direction)	27	m		
Sc (Schmidt Number)	1.72			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air	8.72E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	5.52	m^3		
Evaporation Rate	5456	g/min		
60 min lb released	721.67			

1-RD-4 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperatures: 0.0085 atm
Ambient Saturation Concentration: 8,689 ppm or 0.87%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .346 kilograms/ sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 20.8 kilograms/min
Total Amount Released: 1,246 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 300 mg/cu m)
Max Threat Zone for LOC: 202 meters

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 21 of 314

Determination of Evaporation Rate for Segment 1 Maximum Source Term of 24420 ft^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	3.46E-1	kg/s		
MW (Molecular Weight)	136	kg/kg-mole		
Pv (Vapor Pressure)	6.49	mm Hg		
Pv (Vapor Pressure)	865	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	5993	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	2268.5	m^2	24421	ft^2
Km (Mass Transfer Coeff)	3.25E-3	m/s		
Z (Pool Diameter in Wind Direction)	54	m		
Sc (Schmidt Number)	1.72			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air	8.72E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	22.69	m^3		
Evaporation Rate	20732	g/min		
60 min lb released	2742.32			

1-RD-4 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperatures: 0.0085 atm
Ambient Saturation Concentration: 8,689 ppm or 0.87%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .56 kilograms/ sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 33.6 kilograms/min
Total Amount Released: 2,016 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 300 mg/(cu m)
Max Threat Zone for LOC: 261 meters

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 23 of 314

Determination of Evaporation Rate for Segment 2 Maximum Source Term of 40700 ft²

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	5.60E-1	kg/s		
MW (Molecular Weight)	136	kg/kg-mole		
Pv (Vapor Pressure)	6.49	mm Hg		
Pv (Vapor Pressure)	865	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	9988	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3780.8	m^2	40700	ft^2
Km (Mass Transfer Coeff)	3.15E-3	m/s		
Z (Pool Diameter in Wind Direction)	69	m		
Sc (Schmidt Number)	1.72			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air	8.72E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	37.81	m^3		
Evaporation Rate	33585	g/min		
60 min lb released	4442.51			

1-RD-4 ADV ERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperatures: 0.0085 atm
Ambient Saturation Concentration: 8,689 ppm or 0.87%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.4 kilograms/ sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 84 kilograms/min
Total Amount Released: 5,040 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 300 mg/(cu m)
Max Threat Zone for LOC: 432 meters

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

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Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 25 of 314

Determination of Evaporation Rate for Segment 3 Maximum Source Term of 10000 m^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	1.40E+0	kg/s		
MW (Molecular Weight)	136	kg/kg-mole		
Pv (Vapor Pressure)	6.49	mm Hg		
Pv (Vapor Pressure)	865	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	26418	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	10000.0	m^2	107650	ft^2
Km (Mass Transfer Coeff)	2.99E-3	m/s		
Z (Pool Diameter in Wind Direction)	113	m		
Sc (Schmidt Number)	1.72			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air	8.72E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	100.00	m^3		
Evaporation Rate	84160	g/min		
60 min lb released	11132.23			

1-RD-7 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 375 grams / min
Max Average Sustained Release Rate: 363 grams / min
(averaged over a minute or more)
Total amount Released: 20.8 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.63 ppm

1-RD-7 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.19 kilograms / min
Max Average Sustained Release Rate: 1.15 grams / min
(averaged over a minute or more)
Total amount Released: 65.9 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.9 ppm

1-RD-7 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 308 grams / min
Max Average Sustained Release Rate: 298 grams / min
(averaged over a minute or more)
Total amount Released: 17.0 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 27 meters

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1-RD-7 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 503 grams / min
Max Average Sustained Release Rate: 486 grams / min
(averaged over a minute or more)
Total amount Released: 27.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 34 meters

1-RD-7 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.54e-004 atm
Ambient Saturation Concentration: 157 ppm or 0.016%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.28 kilograms / min
Max Average Sustained Release Rate: 1.24 kilograms / min
(averaged over a minute or more)
Total amount Released: 70.7 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 56 meters

1-RD-9 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/ (cu m)
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,846 ppm or 18.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 84 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.29 kilograms / min
Max Average Sustained Release Rate: 1.03 kilograms / min
(averaged over a minute or more)
Total amount Released: 48.5 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 497 mg/ (cu m)

1-RD-9 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/ (cu m)
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,846 ppm or 18.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 777 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 10.5 kilograms / min
Max Average Sustained Release Rate: 8.53 kilograms / min
(averaged over a minute or more)
Total amount Released: 409 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 500 mg / (cu m)

1-RD-9 ADVERSE / MAX DIST SEG 1

SITE DATA INEORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/ (cu m)
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,846 ppm or 18.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 280 kilograms / min
Max Average Sustained Release Rate: 233 kilograms / min
(averaged over a minute or more)
Total amount Released: 11,338 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 532 meters

1-RD-9 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/ (cu m)
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,846 ppm or 18.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 456 kilograms / min
Max Average Sustained Release Rate: 379 kilograms / min
(averaged over a minute or more)
Total amount Released: 18,579 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 686 meters

1-RD-9 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/ (cu m)
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.18 atm
Ambient Saturation Concentration: 179,846 ppm or 18.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,160 kilograms / min
Max Average Sustained Release Rate: 965 kilograms / min
(averaged over a minute or more)
Total amount Released: 47,589 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 1.1 kilometers

1-RD-11 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CHLORACETONE
Molecular Weight: 92.52 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 119.00° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,221 ppm or 2.62%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.08E-4 kilograms / sec
Source Height: 0
Release Duration : 60 minutes
Release Rate: 6.47 grams/min
Total amount Released: 388 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1 ppm
Indoor: 0.356 ppm
Note: Indoor graph is shown with a dotted line.

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SPILL AREA CALCULATION FOR 1-RD-11 ADVERSE / ALERT CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	1.08E-4	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	0.8	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	0.3	m^2	3	ft^2
Km (Mass Transfer Coeff)	6.06E-3	m/s		
Z (Pool Diameter in Wind Direction)	1	m		
Sc (Schmidt Number)	1.42			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	0.003	m^3		
Evaporation Rate	6	g/min		
60 min lb released	0.86			

1-RD-11 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CHLORACETONE
Molecular Weight: 92.52 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 119.00° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,221 ppm or 2.62%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.13E-3 kilograms / sec
Source Height: 0
Release Duration : 60 minutes
Release Rate: 67.8 grams/min
Total amount Released: 4.07 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.997 ppm
Indoor: 0.353 ppm
Note: Indoor graph is shown with a dotted line.

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SPILL AREA CALCULATION FOR 1-RD-11 ADVERSE / SAE CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	1.13E-3	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	9.6	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3.6	m^2	39	ft^2
Km (Mass Transfer Coeff)	5.28E-3	m/s		
Z (Pool Diameter in Wind Direction)	2	m		
Sc (Schmidt Number)	1.42			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	0.036	m^3		
Evaporation Rate	68	g/min		
60 min lb released	8.97			

1-RD-11 ADVERSE / MAX DIST SEG 1

SITE DATA INEORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CHLORACETONE
Molecular Weight: 92.52 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 119.00° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,221 ppm or 2.62%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 4.94E-1 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 29.6 kilograms / min
Total amount Released: 1,778 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 1 ppm
Max Threat Zone for LOC: 3.4 kilometers

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Determination of Evaporation Rate for Segment 1 Maximum Source Term of 24420 ft^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	4.94E-1	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	5993	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	2268.5	m^2	24421	ft^2
Km (Mass Transfer Coeff)	3.69E-3	m/s		
Z (Pool Diameter in Wind Direction)	54	m		
Sc (Schmidt Number)	1.42			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	22.685	m^3		
Evaporation Rate	29613	g/min		
60 min lb released	3917.12			

1-RD-11 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CHLORACETONE
Molecular Weight: 92.52 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 119.00° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,221 ppm or 2.62%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 8E-1 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 48 kilograms / min
Total amount Released: 2,880 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 1 ppm
Max Threat Zone for LOC: 4.8 kilometers

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Determination of Evaporation Rate for Segment 2 Maximum Source Term of 40700 ft^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	8.00E-1	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	9988	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3780.8	m^2	40700	ft^2
Km (Mass Transfer Coeff)	3.59E-3	m/s		
Z (Pool Diameter in Wind Direction)	69	m		
Sc (Schmidt Number)	1.42			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	37.808	m^3		
Evaporation Rate	47973	g/min		
60 min lb released	6345.66			

1-RD-11 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CHLORACETONE
Molecular Weight: 92.52 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 119.00° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,221 ppm or 2.62%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters / sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 2 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 120 kilograms / min
Total amount Released: 7,200 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 1 ppm
Max Threat Zone for LOC: greater than 10 km

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Determination of Evaporation Rate for Segment 3 Maximum Source Term of 10000 m^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	2.00E+0	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	26418	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	10000.0	m^2	107650	ft^2
Km (Mass Transfer Coeff)	3.40E-3	m/s		
Z (Pool Diameter in Wind Direction)	113	m		
Sc (Schmidt Number)	1.42			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	100.000	m^3		
Evaporation Rate	120213	g/min		
60 min lb released	15901.21			

1-RD-14 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0071 atm
Ambient Saturation Concentration: 7,276 ppm or 0.73%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7750 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.43 kilograms/min
Max Average Sustained Release Rate: 4.27 kilograms/min
(averaged over a minute or more)
Total Amount Released: 244 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 125 ppm

1-RD-14 ADVERSE / SAE

Not applicable. See run for 1-RD-14 MAX DIST SEG 3.

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1-RD-14 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0071 atm
Ambient Saturation Concentration: 7,276 ppm or 0.73%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.3 kilograms/min
Max Average Sustained Release Rate: 12.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 733 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 52 meters

1-RD-14 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0071 atm
Ambient Saturation Concentration: 7,276 ppm or 0.73%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 21.6 kilograms/min
Max Average Sustained Release Rate: 20.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,197 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 67 meters

1-RD-14 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0071 atm
Ambient Saturation Concentration: 7,276 ppm or 0.73%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 55 kilograms/min
Max Average Sustained Release Rate: 53.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,045 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 109 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
dispersion predictions are unreliable for lengths
less than the maximum diameter of the puddle.
Maximum diameter of the puddle: 113 meters

1-RD-15 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 690 grams / min
Max Average Sustained Release Rate: 666 grams/min
(averaged over a minute or more)
Total Amount Released: 38.2 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 14.3 ppm

1-RD-15 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area:100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.2 kilograms / min
Max Average Sustained Release Rate: 2.12 kilograms/min
(averaged over a minute or more)
Total Amount Released: 121 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 4.3 ppm

1-RD-15 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 566 grams/min
Max Average Sustained Release Rate: 547 grams/min
(averaged over a minute or more)
Total Amount Released: 31.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
Predictions unreliable for short distances.

1-RD-15 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 925 grams/min
Max Average Sustained Release Rate: 893 grams/min
(averaged over a minute or more)
Total Amount Released: 51.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
predictions unreliable for short distances.

1-RD-15 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 2.38e-004 atm
Ambient Saturation Concentration: 242 ppm or 0.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.36 kilograms/min
Max Average Sustained Release Rate: 2.28 kilograms/min
(averaged over a minute or more)
Total Amount Released: 130 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 56 meters

1-RD-16 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,411 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 98 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 564 grams/min
Max Average Sustained Release Rate: 564 grams/min
(averaged over a minute or more)
Total Amount Released: 26.5 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 74.7 ppm

1-RD-16 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,411 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1400 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.01 kilograms/min
Max Average Sustained Release Rate: 6.31 kilograms/min
(averaged over a minute or more)
Total Amount Released: 336 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 75 ppm

1-RD-16 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,411 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default. Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 107 kilograms/min
Max Average Sustained Release Rate: 97.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,233 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 501 meters

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1-RD-16 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,411 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 175 kilograms/min
Max Average Sustained Release Rate: 159 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,557 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 643 meters

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1-RD-16 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.061 atm
Ambient Saturation Concentration: 62,411 ppm or 6.24%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 444 kilograms/min
Max Average Sustained Release Rate: 405 kilograms/min
(averaged over a minute or more)
Total Amount Released: 21,843 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 1.0 kilometers

1-RD-17 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4, 4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 2 mg / (cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas Option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 5.75e-5 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 3.45 grams / min
Total Amount Released: 207 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point"
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2 mg / (cu m)
Indoor: 0.707 mg / (cu m)
Note: Indoor graph is shown with a dotted line.

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SPILL AREA CALCULATION FOR 1-RD-17 ADVERSE / ALERT CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	5.75E-5	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	4230	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	1601.2	m^2	17237	ft^2
Km (Mass Transfer Coeff)	2.70E-3	m/s		
Z (Pool Diameter in Wind Direction)	45	m		
Sc (Schmidt Number)	2.33			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	644E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	16.01	m^3		
Evaporation Rate	3	g/min		
60 min lb released	0.46			

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1-RD-17 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4, 4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 2 mg / (cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas Option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 6.08E-4 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 36.5 grams / min
Total Amount Released: 2.19 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point"
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2 mg / (cu m)
Indoor: 0.708 mg / (cu m)
Note: Indoor graph is shown with a dotted line.

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SPILL AREA CALCULATION FOR 1-RD-17 ADVERSE / ALERT CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	6.08E-4	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	51450	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	1947504	m^2	209652	ft^2
Km (Mass Transfer Coeff)	2.35E-3	m/s		
Z (Pool Diameter in Wind Direction)	157	m		
Sc (Schmidt Number)	2.33			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	194.75	m^3		
Evaporation Rate	36	g/min		
60 min lb released	4.83			

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1-RD-17 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4, 4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 2 mg / (cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 7.98E-5 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 4.79 grams / min
Total Amount Released: 287 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 2 mg / (cu m)
Max Threat Zone for LOC: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
predictions unreliable for short distances.

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Determination of Evaporation Rate for Segment 1 Maximum Source Term of 24420 ft^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	7.98E-5	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	5993	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	2268.5	m^2	24421	ft^2
Km (Mass Transfer Coeff)	2.65E-3	m/s		
Z (Pool Diameter in Wind Direction)	54	m		
Sc (Schmidt Number)	2.33			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	22.69	m^3		
Evaporation Rate	5	g/min		
60 min lb released	0.63			

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1-RD-17 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4, 4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 2 mg / (cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.29E-4 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 7.74 grams / min
Total Amount Released: 464 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 2 mg / (cu m)
Max Threat Zone for LOC: 45 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
predictions unreliable for short distances.

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Determination of Evaporation Rate for Segment 2 Maximum Source Term of 40700 ft^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	1.29E-4	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	9988	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3780.8	m^2	40700	ft^2
Km (Mass Transfer Coeff)	2.58E-3	m/s		
Z (Pool Diameter in Wind Direction)	69	m		
Sc (Schmidt Number)	2.33			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	37.81	m^3		
Evaporation Rate	8	g/min		
60 min lb released	1.03			

1-RD-17 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4, 4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 2 mg / (cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 3.24E-4 kilograms / sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 19.4 grams / min
Total Amount Released: 1.17 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 2 mg / (cu m)
Max Threat Zone for LOC: 72 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
predictions unreliable for short distances.

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

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Determination of Evaporation Rate for Segment 3 Maximum Source Term of 10000 m^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	3.24E-4	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	26418	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	10000.0	m^2	107650	ft^2
Km (Mass Transfer Coeff)	2.44E-3	m/s		
Z (Pool Diameter in Wind Direction)	113	m		
Sc (Schmidt Number)	2.33			
U (Wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	37.81	m^3		
Evaporation Rate	19	g/min		
60 min lb released	2.57			

1-RD-19 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,129 ppm or 1.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3300 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.64 kilograms/min
Max Average Sustained Release Rate: 4.42 kilograms/min
(averaged over a minute or more)
Total Amount Released: 250 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 125 ppm

1-RD-19 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,129 ppm or 1.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24086 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 31.1 kilograms/min
Max Average Sustained Release Rate: 29.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,678 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 88.5 ppm

1-RD-19 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,129 ppm or 1.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 31.5 kilograms/min
Max Average Sustained Release Rate: 30.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,700 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 147 meters

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1-RD-19 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,129 ppm or 1.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 51.4 kilograms/min
Max Average Sustained Release Rate: 49.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,777 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 189 meters

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1-RD-19 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.016 atm
Ambient Saturation Concentration: 16,129 ppm or 1.61%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 131 kilograms/min
Max Average Sustained Release Rate: 125 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,076 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 306 meters

1-RD-20 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.04 kilograms/min
Max Average Sustained Release Rate: 3.91 kilograms/min
(averaged over a minute or more)
Total Amount Released: 224 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 95.1 ppm
Indoor: 32.1 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-20 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12.8 kilograms/min
Max Average Sustained Release Rate: 12.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 713 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 28.6 ppm
Indoor: 9.66 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-20 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.32 kilograms/min
Max Average Sustained Release Rate: 3.21 kilograms/min
(averaged over a minute or more)
Total Amount Released: 184 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
Predictions unreliable for short distances.

1-RD-20 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.42 kilograms/min
Max Average Sustained Release Rate: 5.25 kilograms/min
(averaged over a minute or more)
Total Amount Released: 301 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
Predictions unreliable for short distances.

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1-RD-20 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0015 atm
Ambient Saturation Concentration: 1,570 ppm or 0.16%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.8 kilograms/min
Max Average Sustained Release Rate: 13.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 766 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
Predictions unreliable for short distances.

1-RD-22 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User Specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 69,160 ppm or 6.92%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 32.8 grams/min
Max Average Sustained Release Rate: 32.8 grams/min
(averaged over a minute or more)
Total Amount Released: 1.44 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10.1 ppm

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1-RD-22 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User Specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 69,160 ppm or 6.92%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 101 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 393 grams/min
Max Average Sustained Release Rate: 345 grams/min
(averaged over a minute or more)
Total Amount Released: 71.8 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm

-1-RD-22 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 69,160 ppm or 6.92%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 70.1 kilograms/min
Max Average Sustained Release Rate: 63.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,331 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 2.4 kilometers

1-RD-22 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 69,160 ppm or 6.92%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 114 kilograms/min
Max Average Sustained Release Rate: 103 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,437 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 3.1 kilometers

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1-RD-22 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.068 atm
Ambient Saturation Concentration: 69,160 ppm or 6.92%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 288 kilograms/min
Max Average Sustained Release Rate: 261 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,836 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 5.0 kilometers

1-RD-23 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 8750 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.47 kilograms/min
Max Average Sustained Release Rate: 4.32 kilograms/min
(averaged over a minute or more)
Total Amount Released: 248 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 500 mg / (cu m)
Indoor: 169 mg / (cu m)
Note: Indoor graph is shown with a dotted line.

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1-RD-23 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 46.4 kilograms/min
Max Average Sustained Release Rate: 44.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,574 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 492 mg / (cu m)
Indoor: 166 mg / (cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-23 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 12 kilograms/min
Max Average Sustained Release Rate: 11.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 663 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg / (cu m)
Max Threat Zone for LOC: 50 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
predictions unreliable for short distances.

1-RD-23 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 19.6 kilograms/min
Max Average Sustained Release Rate: 18.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,084 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg / (cu m)
Max Threat Zone for LOC: 64 meters
Note: Footprint was not drawn because
effects of near-field patchiness make dispersion
predictions unreliable for short distances.

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1-RD-23 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0050 atm
Ambient Saturation Concentration: 5,107 ppm or 0.51%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 49.8 kilograms/min
Max Average Sustained Release Rate: 48.29 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,763 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg / (cu m)
Max Threat Zone for LOC: 103 meters
Note: Footprint was not drawn because
dispersion preditions are unreliable for lengths
less than the maximum diameter of the puddle.
Maximum diameter of the puddle: 113 meters

1-RD-26 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg / kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,462 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 5175 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 607 grams/min
Max Average Sustained Release Rate: 589 grams/min
(averaged over a minute or more)
Total Amount Released: 33.6 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM
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1-RD-26 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg / kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,462 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 62200 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.42 kilograms/min
Max Average Sustained Release Rate: 6.23 kilograms/min
(averaged over a minute or more)
Total Amount Released: 356 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm

ENGINEERING COMPUTATION SHEET

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1-RD-26 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg / kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,462 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.64 kilograms/min
Max Average Sustained Release Rate: 2.56 kilograms/min
(averaged over a minute or more)
Total Amount Released: 146 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 63 meters

1-RD-26 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg / kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,462 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.29 kilograms/min
Max Average Sustained Release Rate: 4.16 kilograms/min
(averaged over a minute or more)
Total Amount Released: 238 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 81 meters

1-RD-26 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg / kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0034 atm
Ambient Saturation Concentration: 3,462 ppm or 0.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 10.8 kilograms/min
Max Average Sustained Release Rate: 10.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 600 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 131 meters

1-RD-29 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg / kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 148,928 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 250 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.93 kilograms/min
Max Average Sustained Release Rate: 2.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 117 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 ppm

1-RD-29 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg / kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 148,928 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2125 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.22 kilograms/min
Max Average Sustained Release Rate: 18.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 910 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unrealible for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 ppm

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1-RD-29 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg / kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 148,928 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 228 kilograms/min
Max Average Sustained Release Rate: 194 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,559 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 334 meters

1-RD-29 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg / kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 148,928 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 371 kilograms/min
Max Average Sustained Release Rate: 362 kilograms/min
(averaged over a minute or more)
Total Amount Released: 15,653 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 436 meters

1-RD-29 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg / kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 148,928 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 941 kilograms/min
Max Average Sustained Release Rate: 917 kilograms/min
(averaged over a minute or more)
Total Amount Released: 40,061 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 679 meters

1-RD-30 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 500 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.032 atm
Ambient Saturation Concentration: 33,051 ppm or 3.31%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 6034 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 16.3 kilograms/min
Max Average Sustained Release Rate: 15.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 834 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 435 ppm

1-RD-30 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 500 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.032 atm
Ambient Saturation Concentration: 33,051 ppm or 3.31%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 32500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 81.6 kilograms/min
Max Average Sustained Release Rate: 76.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,203 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (500 ppm)
Max Threat Zone for LOC: 100 meters

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 501 ppm

1-RD-30 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 500 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.032 atm
Ambient Saturation Concentration: 33,051 ppm or 3.31%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 62.1 kilograms/min
Max Average Sustained Release Rate: 57.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,193 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (500 ppm)
Max Threat Zone for LOC: 87 meters
Note: Footprint was not drawn because effects of
near-field patchiness make dispersion predictions
unreliable for short distances.

1-RD-30 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 500 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.032 atm
Ambient Saturation Concentration: 33,051 ppm or 3.31%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 101 kilograms/min
Max Average Sustained Release Rate: 94.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,219 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (500 ppm)
Max Threat Zone for LOC: 112 meters

1-RD-30 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 500 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.032 atm
Ambient Saturation Concentration: 33,051 ppm or 3.31%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 257 kilograms/min
Max Average Sustained Release Rate: 241 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,311 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (500 ppm)
Max Threat Zone for LOC: 187 meters

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1-RD-32 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.015 atm
Ambient Saturation Concentration: 15,583 ppm 1.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 145 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 178 grams/min
Max Average Sustained Release Rate: 178 grams/min
(averaged over a minute or more)
Total Amount Released: 10.5 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25 ppm
Indoor: 8.72 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-32 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.015 atm
Ambient Saturation Concentration: 15,583 ppm 1.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1810 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.94 kilograms/min
Max Average Sustained Release Rate: 1.94 kilograms/min
(averaged over a minute or more)
Total Amount Released: 115 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25 ppm
Indoor: 8.73 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-32 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.015 atm
Ambient Saturation Concentration: 15,583 ppm 1.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 23.2 kilograms/min
Max Average Sustained Release Rate: 23.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,376 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 25 ppm
Max Threat Zone for LOC: 377 meters
Max Threat Zone for LDLH: 27 m eters

1-RD-32 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.015 atm
Ambient Saturation Concentration: 15,583 ppm 1.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 37.8 kilograms/min
Max Average Sustained Release Rate: 37.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,242 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 25 ppm
Max Threat Zone for LOC: 498 meters
Max Threat Zone for IDLH: 34 meters

1-RD-32 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.015 atm
Ambient Saturation Concentration: 15,583 ppm 1.56%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 96 kilograms/min
Max Average Sustained Release Rate: 95.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,691 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 25, ppm
Max Threat Zone for LOC: 1.2 kilometers

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1-RD-33 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA:3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 18500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 658 grams/min
Max Average Sustained Release Rate: 638 grams/min
(averaged over a minute or more)
Total Amount Released: 36.5 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 30 ppm

ENGINEERING COMPUTATION SHEET

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1-RD-33 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA:3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.3 kilograms/min
Max Average Sustained Release Rate: 3.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 183 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor:14.2 ppm

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1-RD-33 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA:3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 858 grams/min
Max Average Sustained Release Rate: 832 grams/min
(averaged over a minute or more)
Total Amount Released: 47.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 34 meters

1-RD-33 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA:3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.4 kilograms/min
Max Average Sustained Release Rate: 1.35 kilograms/min
(averaged over a minute or more)
Total Amount Released: 77.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 44 meters

1-RD-33 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA:3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 6.82e-004 atm
Ambient Saturation Concentration: 694 ppm or 0.069%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.54 kilograms/min
Max Average Sustained Release Rate: 3.43 kilograms/min
(averaged over a minute or more)
Total Amount Released: 196 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 70 meters

1-RD-34 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE
Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 191 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 279 grams/min
Max Average Sustained Release Rate: 264 grams/min
(averaged over a minute or more)
Total Amount Released: 14.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters (10.9 yards)
Note: Footprint was not drawn because
Effects of near-field patchiness make dispersion
Predictions unrealiable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 30 ppm

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1-RD-34 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE
Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2380 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.06 kilograms/min
Max Average Sustained Release Rate: 2.91 kilograms/min
(averaged over a minute or more)
Total Amount Released: 163 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 30 ppm

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1-RD-34 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE
Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 28.3 kilograms/min
Max Average Sustained Release Rate: 26.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,512 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 328 meters
Max Threat Zone for IDLH: 27 meters

1-RD-34 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE
Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 46.1 kilograms/min
Max Average Sustained Release Rate: 43.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,468 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 586 meters

1-RD-34 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE
Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.017 atm
Ambient Saturation Concentration: 16,979 ppm or 1.70%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 kilograms/min
Max Average Sustained Release Rate: 112 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,281 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 936 meters

1-RD-36 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30440 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.39 kilograms/min
Max Average Sustained Release Rate: 1.35 kilograms/min
(averaged over a minute or more)
Total Amount Released: 77.7 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
The point selected is at the source.
The concentration and dose are mathematically infinite at the source.

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1-RD-36 ADVERSE / SAE

Not applicable. See run for 1-RD-36 MAX DIST SEG 3.

1-RD-36 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.12 kilograms/min
Max Average Sustained Release Rate: 1.09 kilograms/min
(averaged over a minute or more)
Total Amount Released: 62.9 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg / (cu m)
Max Threat Zone for LOC: 27 meters

1-RD-36 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.83 kilograms/min
Max Average Sustained Release Rate: 1.78 kilograms/min
(averaged over a minute or more)
Total Amount Released: 103 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg / (cu m)
Max Threat Zone for LOC: 34 meters

1-RD-36 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 500 mg / (cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 6.02e-004 atm
Ambient Saturation Concentration: 613 ppm or 0.061%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.66 kilograms/min
Max Average Sustained Release Rate: 4.52 kilograms/min
(averaged over a minute or more)
Total Amount Released: 261 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg / (cu m)
Max Threat Zone for LOC: 56 meters

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1-RD-42 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail-
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0063 atm
Ambient Saturation Concentration: 6,444 ppm or 0.64%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 283 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 135 grams/min
Max Average Sustained Release Rate: 130 grams/min
(averaged over a minute or more)
Total Amount Released: 7.35 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm

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1-RD-42 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail-
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0063 atm
Ambient Saturation Concentration: 6,444 ppm or 0.64%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 3600 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.51 kilograms/min
Max Average Sustained Release Rate: 1.45 kilograms/min
(averaged over a minute or more)
Total Amount Released: 82.3 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm

1-RD-42 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail-
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0063 atm
Ambient Saturation Concentration: 6,444 ppm or 0.64%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 9.35 kilograms/min
Max Average Sustained Release Rate: 8.99 kilograms/min
(averaged over a minute or more)
Total Amount Released: 512 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 15 ppm
Max Threat Zone for LOC: 263 meters

1-RD-42 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail-
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0063 atm
Ambient Saturation Concentration: 6,444 ppm or 0.64%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 15.2 kilograms/min
Max Average Sustained Release Rate: 14.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 835 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 15 ppm
Max Threat Zone for LOC: 346 meters

1-RD-42 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail-
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0063 atm
Ambient Saturation Concentration: 6,444 ppm or 0.64%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 38.6 kilograms/min
Max Average Sustained Release Rate: 37.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,120 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 15 ppm
Max Threat Zone for LOC: 597 meters

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1-RD-46 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,248 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1080 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 21.6 kilograms/min
Max Average Sustained Release Rate: 16.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 767 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (2000 ppm)
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,000 ppm

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1-RD-46 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,248 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 13300 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 235 kilograms/min
Max Average Sustained Release Rate: 184 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,654 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (2000 ppm)
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2000 ppm

1-RD-46 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,248 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 419 kilograms/min
Max Average Sustained Release Rate: 331 kilograms/min
(averaged over a minute or more)
Total Amount Released:15,579 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (2000 ppm)
Max Threat Zone for LOC: 138 meters

1-RD-46 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,248 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 683 kilograms/min
Max Average Sustained Release Rate: 541 kilograms/min
(averaged over a minute or more)
Total Amount Released: 25,542 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (2000 ppm)
Max Threat Zone for LOC: 183 meters

1-RD-46 ADVERSE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.25 atm
Ambient Saturation Concentration: 257,248 ppm or 25.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,730 kilograms/min
Max Average Sustained Release Rate: 1,380 kilograms/min
(averaged over a minute or more)
Total Amount Released: 65,545 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (2000 ppm)
Max Threat Zone for LOC: 310 meters

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1-RD-49 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 198,693 ppm or 19.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 472 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA 11.8 kilograms/min
Max Average Sustained Release Rate: 9.68 kilograms/min
(averaged over a minute or more)
Total Amount Released: 473 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (700 ppm)
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because effects of
near-field patchiness make dispersion predictions
unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 699 ppm

1-RD-49 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 198,693 ppm or 19.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 6060 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 135 kilograms/min
Max Average Sustained Release Rate: 112 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,563 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (700 ppm)
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 700 ppm

1-RD-49 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 198,693 ppm or 19.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 514 kilograms/min
Max Average Sustained Release Rate: 432 kilograms/min
(averaged over a minute or more)
Total Amount Released: 21,443 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (700 ppm)
Max Threat Zone for LOC: 208 meters

1-RD-49 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 198,693 ppm or 19.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 840 kilograms/min
Max Average Sustained Release Rate: 706 kilograms/min
(averaged over a minute or more)
Total Amount Released: 35,177 kilograms

FOORTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (700 ppm)
Max Threat Zone for LOC: 275 meters

1-RD-49 ADVERSE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.20 atm
Ambient Saturation Concentration: 198,693 ppm. or 19.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2,140 kilograms/min
Max Average Sustained Release Rate: 1,810 kilograms/min
(averaged over a minute or more)
Total Amount Released: 90,343 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: equals IDLH (700 ppm)
Max Threat Zone for LOC: 466 meters

1-RD-51 ADVERSE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1.7 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 25.2 grams/min
Max Average Sustained Release Rate: 20.9 grams/min
(averaged over a minute or more)
Total Amount Released: 1.04 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:

Outdoor: 2.96 ppm.

Indoor: 0.858 ppm. Note: Indoor graph is shown with a dotted line.

1-RD-51 ADVERSE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E
Relative Humidity: 50%
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 20 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 254 grams/min
Max Average Sustained Release Rate: 215 grams/min
(averaged over a minute or more)
Total Amount Released: 10.8 kilograms
Air Temperature: 29° C
Ground Roughness: Urban or forest

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
outdoor: 2.87 ppm
Indoor: 0.847 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-51 ADVERSE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 218 kilograms/min
Max Average Sustained Release Rate: 192 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,932 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 3 ppm
Max Threat Zone for LOC: 5.3 kilometers

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1-RD-51 ADVERSE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 355 kilograms/min
Max Average Sustained Release Rate: 313 kilograms/min
(averaged over a minute or more)
Total Amount Released: 16,263 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 3 ppm
Max Threat Zone for LOC: 6.9 kilometers

1-RD-51 ADVERSE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.11 atm
Ambient Saturation Concentration: 110,492 ppm or 11.0%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 29° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 904 kilograms/min
Max Average Sustained Release Rate: 801 kilograms/min
(averaged over a minute or more)
Total Amount Released: 41,624 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 3 ppm
Max Threat Zone for LOC: greater than 10 kilometers

1-RD-54 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail-
Footprint Level of Concern: 75 mg / (cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .285 pounds
Source height: 0
Release Duration: 1 minute
Release Rate: 2.15 grams / sec
Total Amount Released: 129 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 74.8 mg / (cu m)
Indoor: 0.535 mg / (cu m)
Note: Indoor graph is shown with a dotted line.

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1-RD-54 ADVERSE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 3 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 22.7 grams/sec
Total Amount Released: 1.36 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
outdoor: 74.6 mg/(cu m)
Indoor: 0.545 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-54 ADVERSE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.6 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 284 grams/sec

Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 mg/(cu m)
Max Threat Zone for LOC: 344 meters

1-RD-54 ADVERSE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 mg/(cu m)
Max Threat Zone for LOC: 580 meters

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1-RD-54 ADVERSE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 263 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.99 kilograms/sec
Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 mg/(cu m)
Max Threat Zone for LOC: 755 meters

I-RD-56 ADVERSE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .0019 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 0.0144 grams/sec
Total Amount Released: 0.86 grams
Air Temperature: 29° C
Ground Roughness: Urban or forest

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.499 mg/(cu m)
Indoor: 0.00357 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-56 ADVERSE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .02 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 0.151 grams/sec
Total Amount Released: 9.07 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.498 mg/(cu m)
Indoor: 0.00363 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

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1-RD-56 ADVERSE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.6 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 284 grams/sec
Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 0.5 mg/(cu m)
Max Threat Zone for LOC: 2.5 kilometers

1-RD-56 ADVERSE MAX DIST.SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 0.5 mg/(cu m)
Max Threat Zone for LOC: 4.3 kilometers

1-RD-56 ADVERSE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 263 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.99 kilograms/sec
Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 0.5 mg/(cu m)
Max Threat Zone for LOC: 5.8 kilometers

1-RD-57 ADVERSE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .015 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 0.113 grams/sec
Total Amount Released: 6.80 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.94 mg/(cu m)
Indoor: 0.0282 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-57 ADVERSE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .16 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.21 grams/sec
Total Amount Released: 72.6 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.98 mg/(cu m)
Indoor: 0.0291 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-57 ADVERSE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E
Relative Humidity: 50%
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.6 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 284 grams/sec
Total Amount Released: 17.1 kilograms
Air Temperature: 29° C
Ground Roughness: Urban or forest

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 4 mg/(cu m)
Max Threat Zone for LOC: 1.1 kilometers

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1-RD-57 ADVERSE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E
Relative Humidity: 50%
Cloud Cover: 1 tenths
Air Temperature: 29°
Ground Roughness: Urban or forest

SOURCE STRENGTH INFORMATION:
Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 4 mg/(cu m)
Max Threat Zone for LOC: 1.8 kilometers

1-RD-57 ADVERSE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 0.44 (Sheltered single storied)
Time: June 30, 1998 2359 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 1.7 meters/sec from 90° true at 2 meters
Inversion Height: 200 meters
Stability Class: E Air Temperature: 29° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 1 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 263 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.99 kilograms/sec
Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 4 mg/(cu m)
Max Threat Zone for LOC: 2.4 kilometers

1-RD-2 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 20,919 ppm or 2.09%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 895 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.64 kilograms/min
Max Average Sustained Release Rate: 1.63 kilograms/min
(averaged over a minute or more)
Total Amount Released: 93.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 35 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 22 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35 ppm
Indoor: 35 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-2 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 20,919 ppm or 2.09%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 11850 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 19.6 kilograms/min
Max 4.verage Sustained Release Rate: 19.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,109 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 35 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 72 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 35 ppm
Indoor: 35 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-2 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 20,919 ppm or 2.09%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 39.2 kilograms/min
Max Average Sustained Release Rate: 38.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,218 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 35 ppm
Max Threat Zone for LOC: 140 meters
Max Threat Zone for IDLH: 100 meters

1-RD-2 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETIC ACID
Molecular Weight: 60.05 kg/kmol
TLV-TWA: 10 ppm IDLH: 50 ppm
Footprint Level of Concern: 35 ppm
Boiling Point: 117.90° C
Vapor Pressure at Ambient Temperature: 0.021 atm
Ambient Saturation Concentration: 20,919 ppm or 2.09%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90°true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: DefaultGround Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 64.1 kilograms/min
MaxAverage Sustained Release Rate: 63.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,622 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 35 ppm
Max Threat Zone for LOC: 178 meters
Max Threat Zone for IDLH: 127 meters

1-RD-3 **AVERAGE / ALERT**

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 121,986 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 177 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.32 kilograms/min
Max Average Sustained Release Rate: 1.31 kilograms/min
(averaged over a minute or more)
Total Amount Released: 61.6 kilograms

FOOTPRINT INFORMATION: Dispersion Module: Gaussian
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters (10.9 yards)
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 59.8 ppm
Indoor: 51 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-3 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 121,986 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Ground Roughness: Urban or forest
Puddle Area: 2325 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 14.9 kilograms/min
Max Average Sustained Release Rate: 14.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 729 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 19 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 59.9 ppm
Indoor: 52.4 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-3 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 121,986 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 138 kilograms/min
Max Average Sustained Release Rate: 138 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,024 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 303 meters
Max Threat Zone for IDLH: 54 meters

1-RD-3 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 121,986 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 225 kilograms/min
Max Average Sustained Release Rate: 225 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,502 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 386 meters
Max Threat Zone for IDLH: 69 meters

1-RD-3 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ACETONITRILE
Molecular Weight: 41.05 kg/kmol
TLV-TWA: 40 ppm IDLH: 500 ppm
Footprint Level of Concern: 60 ppm
Boiling Point: 81.60° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 121,986 ppm or 12.2%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 569 kilograms/min
Max Average Sustained Release Rate: 569 kilograms/min
(averaged over a minute or more)
Total Amount Released: 29,439 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 60 ppm
Max Threat Zone for LOC: 1.6 kilometers

1-RD-4 AVERAGE / ALERT

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Direct Source: .0583 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 3.5 kilograms/min
Total Amount Released: 210 kilograms

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 mg/(cu m)
Indoor: 300 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 171 of 314

SPILL AREA CALCULATION FOR 1-RD-4 AVERAGE / ALERT CONDITIONS

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions** (USA)
E (Evaporation Rate)	5.83E-2	kg/s		
MW (Molecular Weight)	136.26	kg/kg-mole		
Pv (Vapor Pressure)	5.24	mm Hg		
Pv (Vapor Pressure)	698.60	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°C		
Volume of Spill	820	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	310.4	m^2	**3341**	**ft 2**
Km (Mass Transfer Coeff)	4.89E-3	m/s		
Z (Pool Diameter in Wind Direction)	20	m		
Sc (Schmidt Number)	1.72			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	8.72E-6	m^2/sec		
D_H20 "(Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	3.10	m^3		
Evaporation Rate	3499	g/min		
60 min lb released	462.83			

1-RD-4 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .645 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 38.7 kilograms/min
Total Amount Released: 2,322 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 mg/(cu m)
Indoor: 300 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

OSR 25-10 (Rev 6-18-92)

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 173 of 314

SPILL AREA CALCULATION FOR 1-RD-4 AVERAGE / SAE CONDITIONS

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions** (USA)
E (Evaporation Rate)	6.45E-1	kg/s		
MW (Molecular Weight)	136.26	kg/kgmole		
Pv (Vapor Pressure)	5.24	mm Hg		
Pv (Vapor Pressure)	698. 60	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°c		
Volume of Spill	10450	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3955.6	m^2	**42582**	**ft^2**
Km (Mass Transfer Coeff)	4.25E-3	m/s		
Z (Pool Diameter in Wind Direction)	71	m		
Sc (Schmidt Number)	1.72			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity ofSolute in Air)	8.72E-6	m^2/sec		
D H20(Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	39.56	m^3		
Evaporation Rate	38712	g/min		
60 min lb released	5120.60			

1-RD-4 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 300 mg/(cu m)

Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)

Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .382 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 22.9 kilograms/min
Total Amount Released: 1,375 kilograms

FOOTPRINT INFORMATION: Dispersion Module: Gaussian
User-specified LOC: 300 mg/(cu m)
Max Threat Zone for LOC: 77 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 175 of 314

Determination of Evaporation Rate for Segment I Maximum Source Term of 24420 ft^2

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions** (USA)
E (Evaporation Rate)	3.82E-1	Kg/s		
MW (Molecular Weight)	136.26	kg/kg-mole		
Pv (Vapor Pressure)	5.24	mm Hg		
Pv (Vapor Pressure)	698.60	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°c		
Volume of Spill	5993	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	2268.5	m^2	**24421**	**ft^2**
Km (Mass Transfer Coeff)	4.38E-3	m/s		
Z (Pool Diameter in Wind Direction)	54	m		
Sc (Schmidt Number)	1.72			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute *in* Air)	8.72E-6	m^2/sec		
D H20 (Molecular Diffusivity *of* water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	22.69	m^3		
Evaporation Rate	22897	g/min		
60 min lb released	3028.75			

1-RD-4 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .618 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 37.1 kilograms/min
Total Amount Released: 2,225 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 300 mg/(cu m)
Max Threat Zone for LOC: 98 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 177 of 314

Determination of Evaporation Rate for Segment 2 Maximum Source Term of 40700 ft^2

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions (USA)**
E (Evaporation Rate)	6.18E-1	kg/s		
MW (Molecular Weight)	136.26	kg/kg-mole		
Pv (Vapor Pressure)	5.24	mm Hg		
Pv (Vapor Pressure)	698.60	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°c		
Volume of Spill	9988	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3780.8	m^2	**40700**	**ft^2**
Km (Mass Transfer Coeff)	4.26E-3	m/s		
Z (Pool Diameter in Wind Direction)	69	m		
Sc (Schmidt Number)	1.72			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute *in* Air)	8.72E-6	m^2/sec		
D H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	37. 81	m^3		
Evaporation Rate	37093	g/min		
60 min lb released	4906.52			

1-RD-4 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 300 mg/(cu m)
Boiling Point: 155.000° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.55 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 93 kilograms/min
Total Amount Released: 5,580 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 300 mg/(cu m)
Max Threat Zone for LOC: 155 meters

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 179 of 314

Determination of Evaporation Rate for Segment 3 Maximum Source Term of 10000 m²

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions (USA)**
E (Evaporation Rate)	1.55E+0	kg/s		
MW (Molecular Weight)	136.26	kg/kg-mole		
Pv (Vapor Pressure)	5.24	mm Hg		
Pv (Vapor Pressure)	698.60	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°c		
Volume of Spill	26418	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	10000.0	m^2	**107650**	**ft^2**
Km (Mass Transfer Coeff)	4.03E-3	m/s		
Z (Pool Diameter in Wind Direction)	113	m		
Sc (Schmidt Number)	1.72			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity ofair)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	8.72E-6	m^2/sec		
D_H20(Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	100.00	m^3		
Evaporation Rate	92950	g/min		
60 min lb released	12294.97			

1-RD-7 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 654 grams/min
MaxAverage Sustained Release Rate: 637 grams/min
(averaged over a minute or more)
Total Amount Released: 32.5 kilograms

FOOTPRINT INFORMATION: Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.47 ppm
Indoor: 2.47 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-7 AVERAGE / SAE

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 181 of 314

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70°C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Ground Roughness: Urban or forest
Soil Type: Default Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.08 kilograms/min
Max 4verage Sustained Release Rate: 2.03 kilograms/min
(averaged over a minute or more)
Total Amount Released: 103 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 55 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
outdoor: 0.775 ppm
Indoor: 0.775 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 182 of 314

1-RD-7 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70°C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 536 grams/min
MaxAverage Sustained Release Rate: 523 grams/min
(averaged over a minute or more)
Total Amount Released: 26.7 kilograms

FOOTPRINT INFORMATION: Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 183 of 314

1-RD-7 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 876 grams/min
Max Average Sustained Release Rate: 854 grams/min
(averaged over a minute or more)
Total Amount Released: 43.5 kilograms

FOOTPRINT INFORMATION: Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 184 of 314

1-RD-7 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZYL ALCOHOL
Molecular Weight: 108.14 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 204.70° C
Vapor Pressure at Ambient Temperature: 1.07e-004 atm
Ambient Saturation Concentration: 109 ppm or 0.011%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25°C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25°C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.23 kilograms/min
Max Average Sustained Release Rate: 2.18 kilograms/min
(averaged over a minute or more)
Total Amount Released: 111 kilograms

FOOTPRINT INFORMATION: Dispersion Module:
Gaussian User-specified LOC: 100 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-9 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)

Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)

Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths
Ground Roughness: Urban or forest

SOURCE STRENGTH INFORMATION:
Puddle Area: 737 square feet
Average Puddle Depth: 1 centimeters

Soil Type: Default Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 10.1 kilograms/min
Max Average Sustained Release Rate: 8.85 kilograms/min
(averaged over a minute or more)
Total Amount Released: 472 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 500 mg/(cu m)
Indoor: 500 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-9 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)

Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)

Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 6485 square feet
Average Puddle Depth: 1 centimeters

Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 79.9 kilograms/min
Max Average Sustained Release Rate: 71 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,846 kilograms

FOOTPRINT INFORMATION: Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 83 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 389 mg/(cu m)
Indoor: 389 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-9 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)

Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)

Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters

Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 283 kilograms/min
Max Average Sustained Release Rate: 254 kilograms/min
(averaged over a minute or more)
Total Amount Released: 13,863 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 471 meters

1-RD-9 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 460 kilograms/min
Max Average Sustained Release Rate: 415 kilograms/min
(averaged over a minute or more)
Total Amount Released: 22,732 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 603 meters

1-RD-9 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BUTYRALDEHYDE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)

Boiling Point: 74.80° C
Vapor Pressure at Ambient Temperature: 0.15 atm
Ambient Saturation Concentration: 149,153 ppm or 14.9%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)

Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters

Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,170 kilograms/min
Max Average Sustained Release Rate: 1,060 kilograms/min
(averaged over a minute or more)
Total Amount Released: 58,337 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 994 meters

1-RD-11 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.08E-3 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 64.8 grams/min
Total Amount Released: 3.89 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.998 ppm
Indoor: 0.998 ppm
Note: Indoor graph is shown with a dotted line.

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ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 191 of 314

SPILL AREA CALCULATION FOR 1-RD-11 AVERAGE / ALERT CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	1.08E-3	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	9.15	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3.5	m^2	37	ft^2
Km (Mass Transfer Coeff)	5.29E-3	m/s		
Z (Pool Diameter in Wind Direction)	2	m		
Sc (Schmidt Number)	1.42			
U (wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	0.035	m^3		
Evaporation Rate	65	g/min		
60 min lb released	8.57			

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 192 of 314

1-RD-11 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.2E-2 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 720 grams/min
Total Amount Released: 43.2 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1 ppm
Indoor: 1 ppm
Note: Indoor graph is shown with a dotted line.

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Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

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SPILL AREA CALCULATION FOR 1-RD-11 AVERAGE / SAE CONDITIONS

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	1.20E-2	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	^{o}C		
Volume of Spill	117	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	44.3	m^2	477	Ft^2
Km (Mass Transfer Coeff)	4.59E-3	m/s		
Z (Pool Diameter in Wind Direction)	8	m		
Sc (Schmidt Number)	1.42			
U (wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	^{o}K		
V (Volume)	0.443	m^3		
Evaporation Rate	719	g/min		
60 min lb released	95.17			

1-RD-11 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 4.94E-1 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 29.6 kilograms/min
Total Amount Released: 1,778 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 1 ppm
Max Threat Zone for LOC: 651 meters

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Title of Project EPHA for THM

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Subject Concentration Analysis for THM Hazardous Chemicals

Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96

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Determination of Evaporation Rate for Segment 1 Maximum Source Term of 24420 ft^2

Parameter	***Value***	***Dimensions***	***Value***	***Dimensions (USA)***
E (Evaporation Rate)	4.94E-1	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	5993	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	2268.5	m^2	**24421**	**ft^2**
Km (Mass Transfer Coeff)	3.69E-3	m/s		
Z (Pool Diameter in Wind Direction)	54	m		
Sc (Schmidt Number)	1.42			
U (wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1. 90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	22.685	m^3		
Evaporation Rate	29613	g/min		
60 min lb released	3917.12			

1-RD-11 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 1 ppm
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Direct Source: 8E-1 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 48 kilograms/min
Total Amount Released: 2,880 kilograms r

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 1 ppm
Max Threat Zone for LOC: 832 meters

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Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 197 of 314

Determination of Evaporation Rate for Segment 2 Maximum Source Term of 40700 ft^2

Parameter	Value	Dimensions	Value	Dimensions (USA)
E (Evaporation Rate)	8.00E-1	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	9988	Gal		
d (Depth of Pool)	0.01	M		
A (Surface Area of Spill)	3780.8	m^2	40700	ft^2
Km (Mass Transfer Coeff)	3.59E-3	m/s		
Z (Pool Diameter in Wind Direction)	69	M		
Sc (Schmidt Number)	1.42			
U (wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	37.808	m^3		
Evaporation Rate	47973	g/min		
60 min lb released	6345.66			

1-RD-11 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: ALPHA-PINENE
Molecular Weight: 136.26 kg/kmol
TLV-TWA: -unavail- IDLH: -unavai
Footprint Level of Concern: 1 ppm
Boiling Point: 155.00° C
Vapor Pressure at Ambient Temperature: 0.0069 atm
Ambient Saturation Concentration: 6,993 ppm or 0.70%
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Direct Source: 2 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 120 kilograms/min
Total Amount Released: 7,200 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 1 ppm
Max Threat Zone for LOC: 1.3 kilometers

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Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 199 of 314

Determination of Evaporation Rate for Segment 3 Maximum Source Term of 10000 m^2

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions (USA)**
E (Evaporation Rate)	2.00E+0	kg/s		
MW (Molecular Weight)	93	kg/kg-mole		
Pv (Vapor Pressure)	12.00	mm Hg		
Pv (Vapor Pressure)	1600	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	29	°C		
Volume of Spill	26418	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	10000.0	m^2	**107650**	**ft^2**
Km (Mass Transfer Coeff)	3.40E-3	m/s		
Z (Pool Diameter in Wind Direction)	113	m		
Sc (Schmidt Number)	1.42			
U (wind velocity)	1.7	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	1.06E-5	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	302.15	°K		
V (Volume)	100.000	m^3		
Evaporation Rate	120213	g/min		
60 min lb released	15901.21			

1-RD-14 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0056 atm
Ambient Saturation Concentration: 5,722 ppm or 0.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 23.6 kilograms/min
Max Average Sustained Release Rate: 23.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,274 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 99.6 ppm
Indoor: 99.6 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-14 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0056 atm
Ambient Saturation Concentration: 5,722 ppm or 0.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 75.2 kilograms/min
Max Average Sustained Release Rate: 74.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,049 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
outdoor: 31.3 ppm
Indoor: 31.3 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 202 of 314

1-RD-14 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0056 atm
Ambient Saturation Concentration: 5,722 ppm or 0.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 19.4 kilograms/min
Max Average Sustained Release Rate: 19.1 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,046 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters

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Title of Project EPHA for THM | Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 203 of 314

1-RD-14 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN ' SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0056 atm
Ambient Saturation Concentration: 5,722 ppm or 0.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 31.7 kilograms/min
Max Average Sustained Release Rate: 31.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,707 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters

1-RD-14 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: CYCLOHEXANONE
Molecular Weight: 98.14 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 155.75° C
Vapor Pressure at Ambient Temperature: 0.0056 atm
Ambient Saturation Concentration: 5,722 ppm or 0.57%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 80.7 kilograms/min
Max Average Sustained Release Rate: 79.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,346 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters

I-RD-15 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths
Ground Roughness: Urban or forest

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.21 kilograms/min
Max Average Sustained Release Rate: 1.18 kilograms/min
(Averaged over a minute or more)
Total Amount Released: 60.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.68 ppm
Indoor: 3.68 ppm
Note: Indoor graph is shown with a dotted line.

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.85 kilograms/min
Max Average Sustained Release Rate: 3.75 kilograms/min
(averaged over a minute or more)
Total Amount Released: 192 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 55 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 1.16 ppm
Indoor: 1.16 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM

Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals

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Computer N.E. Baucom B. K. Tharakan Date 09/16/96

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I-RD-15 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 990 grams/min
MaxAverage Sustained Release Rate: 966 grams/min
(averaged over a minute or more)
Total Amount Released: 49.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 208 of 314

1-RD-15 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.62 kilograms/min
Max Average Sustained Release Rate: 1.58 kilograms/min
(averaged over a minute or more)
Total Amount Released: 80.8 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-15 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: DIETHYLENE GLYCOL MONOETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 100 ppm
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 1.66e-004 atm
Ambient Saturation Concentration: 169 ppm or 0.017%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.13 kilograms/min
Max Average Sustained Release Rate: 4.03 kilograms/min
(averaged over a minute or more)
Total Amount Released: 206 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 100 ppm
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-16 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,172 ppm or 5.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 997 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.36 kilograms/min
Max Average Sustained Release Rate: 5.36 kilograms/min
(averaged over a minute or more)
Total Amount Released: 319 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters (10.9 yards)
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 75 ppm
Indoor: 75 ppm
Note: Indoor graph is shown with a dotted line.

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,172 ppm or 5.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 13000 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to I hour
Max Computed Release Rate: 63.7 kilograms/min
Max Average Sustained Release Rate: 63.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,765 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 23 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 75 ppm
Indoor: 75 ppm

1-RD-16 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,172 ppm or 5.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 117 kilograms/min
Max Average Sustained Release Rate: 117 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,910 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 135 meters
Max Threat Zone for IDLH: 31 meters

ENGINEERING COMPUTATION SHEET

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1-RD-16 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,172 ppm or 5.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 192 kilograms/min
Max Average Sustained Release Rate: 191 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,305 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 556 meters

1-RD-16 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIOXANE Molecular Weight: 88.11 kg/kmol
TLV-TWA: 25 ppm IDLH: 500 ppm
Warning: Potential or confirmed human carcinogen.
Footprint Level of Concern: 75 ppm
Boiling Point: 101.32° C
Vapor Pressure at Ambient Temperature: 0.050 atm
Ambient Saturation Concentration: 51,172 ppm or 5.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 492 kilograms/min
Max Average Sustained Release Rate: 491 kilograms/min
(averaged over a minute or more)
Total Amount Released: 28,893 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 75 ppm
Max Threat Zone for LOC: 907 meters

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1-RD-17 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4,4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 2 mg/(cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 3.88E-4 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 23.3 grams/min
Total Amount Released: 1.40 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2 mg/(cu m)
Indoor: 2 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM

Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals

Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96

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SPILL AREA CALCULATION FOR 1-RD-17 AVERAGE / ALERT CONDITIONS

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions (USA)**
E (Evaporation Rate)	3.88E-4	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°C		
Volume of Spill	22950	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	8687.3	m^2	**93518**	**ft^2**
Km (Mass Transfer Coeff)	3.32E-3	m/s		
Z (Pool Diameter in Wind Direction)	105	m		
Sc (Schmidt Number)	2.33			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	86.87	m^3		
Evaporation Rate	23	g/min		
60 min lb released	3.08			

1-RD-17 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4,4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 2 mg/(cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25°C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 4.30E-3 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 258 grams/min
Total Amount Released: 15.5 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2 mg/(cu m)
Indoor: 2 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

OSR 25-10 (Rev 6-18-92)

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 218 of 314

SPILL AREA CALCULATION FOR 1-RD-17 AVERAGE / SAE CONDITIONS

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions (USA)**
E (Evaporation Rate)	4.30E-3	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°C		
Volume of Spill	292500	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	110720.0	m^2	**1191901**	**ft^2**
Km (Mass Transfer Coeff)	2.88E-3	m/s		
Z (Pool Diameter in Wind Direction)	375	m		
Sc (Schmidt Number)	2.33			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	1107.20	m^3		
Evaporation Rate	258	g/min		
60 min lb released	34.09			

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Subject Concentration Analysis for THM Hazardous Chemicals | Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 219 of 314

1-RD-17 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4,4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 2 mg/(cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.09E-4 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 6.54 grams/min
Total Amount Released: 392 grams

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 2 mg/(cu m)
Max Threat Zone for LOC: 16 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 220 of 314

Determination of Evaporation Rate for Segment 1 Maximum Source Term of 24420 ft²

Parameter	***Value***	***Dimensions***	***Value***	***Dimensions (USA)***
E (Evaporation Rate)	1.09E-4	kg/s		
MW (Molecular Weight)	250	kg/kg-mol		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°C		
Volume of Spill	5993	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	2268.5	m^2	**24421**	**ft^2**
Km (Mass Transfer Coeff)	3.58E-3	m/s		
Z (Pool Diameter in Wind Direction)	54	m		
Sc (Schmidt Number)	2.33			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu. (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	22.69	m^3		
Evaporation Rate	7	g/min		
60 min lb released	0.87			

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Subject Concentration Analysis for THM Hazardous Chemicals — Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 — Sheet No. 221 of 314

1-RD-17 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: DIPHENYLMETHANE-4,4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 2 mg/(cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Direct Source: 1.77E-4 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 10.6 grams/min
Total Amount Released: 637 grams

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 2 mg/(cu m)
Max Threat Zone for LOC: 20 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

Title of Project EPHA for THM Reviewed by S. A. Henderson

Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 222 of 314

Determination of Evaporation Rate for Segment 2 Maximum Source Term of 40700 ft²

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions (USA)**
E (Evaporation Rate)	1.77E-4	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°C		
Volume of Spill	9988	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	3780.8	m^2	**40700**	**ft^2**
Km (Mass Transfer Coeff)	3.48E-3	m/s		
Z (Pool Diameter in Wind Direction)	69	m		
Sc (Schmidt Number)	2.33			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D_H20 (Molecular Diffusivity of Water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	37. 81	m^3		
Evaporation Rate	11	g/min		
60 min lb released	1.40			

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I-RD-17 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIPHENYLMETHANE-4,4-DIISOCYANATE
Molecular Weight: 250.27 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 2 mg/(cu m)
Boiling Point: 184.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 4.43E-4 kilograms/sec
Source Height: 0
Release Duration: 60 minutes
Release Rate: 26.6 grams/min
Total Amount Released: 1.59 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 2 mg/(cu m)
Max Threat Zone for LOC: 32 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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Subject Concentration Analysis for THM Hazardous Chemicals Works Calculation 8

Computer N.E. Baucom B. K. Tharakan Date 09/16/96 Sheet No. 224 of 314

Determination of Evaporation Rate for Segment 3 Maximum Source Term of 10000 m^2

Parameter	**Value**	**Dimensions**	**Value**	**Dimensions (USA)**
E (Evaporation Rate)	4.43E-4	kg/s		
MW (Molecular Weight)	250	kg/kg-mole		
Pv (Vapor Pressure)	0.001	mm Hg		
Pv (Vapor Pressure)	0	Pa		
Rg (Gas Law Constant)	8314	J/kgmole-K		
Temperature	25	°C		
Volume of Spill	26418	gal		
d (Depth of Pool)	0.01	m		
A (Surface Area of Spill)	10000.0	m^2	**107650**	**ft^2**
Km (Mass Transfer Coeff)	3.29E-3	m/s		
Z (Pool Diameter in Wind Direction)	113	m		
Sc (Schmidt Number)	2.33			
U (wind velocity)	2.5	m/s		
nu (kinematic viscosity of air)	1.50E-5	m^2/sec		
mu (viscosity of air)	1.90E-5	kg/m-s		
Dm (Molecular Diffusivity of Solute in Air)	6.44E-6	m^2/sec		
D H20 (Molecular Diffusivity of water)	2.40E-5			
MW_H20	18	kg/kg-mole		
Conversions				
T (Absolute)	298.15	°K		
V (Volume)	100.00	m^3		
Evaporation Rate	27	g/min		
60 min lb released	3.52			

1-RD-19 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,876 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 17700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 31.8 kilograms/min
Max Average Sustained Release Rate: 31.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,758 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 23 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 125 ppm
Indoor: 125 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-19 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,876 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 169 kilograms/min
Max Average Sustained Release Rate: 167 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,292 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 69 meters
Max Threat Zone for IDLH: 55 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 65 ppm
Indoor: 65 ppm
Note: Indoor graph is shown with a dotted line.

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Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 227 of 314

1-RD-19 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,876 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: DefaultGround Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 43.4 kilograms/min
MaxAverage Sustained Release Rate: 42.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,395 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 35 meters
Max Threat Zone for IDLH: 27 meters

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Computer N.E. Baucom B. K. Tharakan Date 09/16/96 | Sheet No. 228 of 314

1-RD-19 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,876 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 70.9 kilograms/min
Max Average Sustained Release Rate: 70.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,913 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 45 meters
Max Threat Zone for IDLH: 34 meters

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1-RD-19 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYL BENZENE
Molecular Weight: 106.17 kg/kmol
TLV-TWA: 100 ppm IDLH: 800 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 136.20° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 12,876 ppm or 1.29%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 181 kilograms/min
Max Average Sustained Release Rate: 179 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,974 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 72 meters
Max Threat Zone for IDLH: 56 meters

1-RD-20 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.54 kilograms/min
Max Average Sustained Release Rate: 6.41 kilograms/min
(averaged over a minute or more)
Total Amount Released: 338 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 22.8 ppm
Indoor: 22.8 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-20 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 20.8 kilograms/min
Max Average Sustained Release Rate: 20.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,073 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 7.14 ppm
Indoor: 7.14 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-20 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.36 kilograms/min
Max Average Sustained Release Rate: 5.26 kilograms/min
(averaged over a minute or more)
Total Amount Released: 277 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-20 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 8.77 kilograms/min
Max Average Sustained Release Rate: 8.59 kilograms/min
(averaged over a minute or more)
Total Amount Released: 453 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-20 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOBUTYL ETHER
Molecular Weight: 118.18 kg/kmol
TLV-TWA: 25 ppm IDLH: 700 ppm
Footprint Level of Concern: 125 ppm
Boiling Point: 171.32° C
Vapor Pressure at Ambient Temperature: 0.0011 atm
Ambient Saturation Concentration: 1,161 ppm or 0.12%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.4 kilograms/min
Max -Average Sustained Release Rate: 21.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,152 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 125 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-22 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,128 ppm or 5.71%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 59 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 235 grams/min
Max Average Sustained Release Rate: 227 grams/min
(averaged over a minute or more)
Total Amount Released: 13.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 17 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 9.96 ppm
Indoor: 9.96 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

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I-RD-22 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,128 ppm or 5.71%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 760 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.59 kilograms/min
Max Average Sustained Release Rate: 2.55 kilograms/min
(averaged over a minute or more)
Total Amount Released: 151 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 55 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 10 ppm
Indoor: 10 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-22 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,128 ppm or 5.71%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 70 kilograms/min
MaxAverage Sustained Release Rate: 69.9 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,187 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 528 meters
Max Threat Zone for IDLH: 285 meters

1-RD-22 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,128 ppm or 5.71%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 115 kilograms/min
Max Average Sustained Release Rate: 114 kilograms/min
(averaged over a minute or more)
Total Amount Released: 6,844 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 677 meters
Max Threat Zone for IDLH: 364 meters

1-RD-22 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: FORMIC ACID
Molecular Weight: 46.03 kg/kmol
TLV-TWA: 5 ppm IDLH: 30 ppm
Footprint Level of Concern: 10 ppm
Boiling Point: 100.56° C
Vapor Pressure at Ambient Temperature: 0.056 atm
Ambient Saturation Concentration: 57,128 ppm or 5.71%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: DefaultGround Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 293 kilograms/min
MaxAverage Sustained Release Rate: 293 kilograms/min
(averaged over a minute or more)
Total Amount Released: 17,458 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 10 ppm
Max Threat Zone for LOC: 1.1 kilometers
Max Threat Zone for IDLH: 583 meters

1-RD-23 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.1 kilograms/min
Max Average Sustained Release Rate: 21.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,185 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
outdoor: 374 mg/(cu m)
Indoor: 374 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-23 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 70.6 kilograms/min
Max Average Sustained Release Rate: 69.6 kilograms/min
(,averaged over a minute or more)
Total Amount Released: 3,770 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 118 mg/(cu m)
Indoor: 118 mg/(cu m)
Note: Indoor graph is shown with a dotted line

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1-RD-23 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 18.2 kilograms/min
Max Average Sustained Release Rate: 17.9 kilograms/min
(averaged over a minute or more)
Tota Amount Released: 972 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-23 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 29.7 kilograms/min
Max Average Sustained Release Rate: 29.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,588 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-23 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: DIETHYLENE GLYCOL DIMETHYL ETHER
Molecular Weight: 134.18 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 159.76° C
Vapor Pressure at Ambient Temperature: 0.0039 atm
Ambient Saturation Concentration: 3,963 ppm or 0.40%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 75.8 kilograms/min
Max Average Sustained Release Rate: 74.7 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,047 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

I-RD-26 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,612 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 26800 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 4.13 kilograms/min
Max Average Sustained Release Rate: 4.05 kilograms/min
(averaged over a minute or more)
Total Amount Released: 215 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 28 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 50 ppm
Indoor: 50 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-26 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,612 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50 Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 14.6 kilograms/min
Max Average Sustained Release Rate: 14.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 755 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 55 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 17.4 ppm
Indoor: 17.4 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-26 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,612 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 3.78 kilograms/min
Max Average Sustained Release Rate: 3.71 kilograms/min
(averaged over a minute or more)
Total Amount Released: 197 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 29 meters
Max Threat Zone for IDLH: 27 meters

1-RD-26 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,612 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 6.16 kilograms/min
Max Average Sustained Release Rate: 6.04 kilograms/min
(averaged over a minute or more)
Total Amount Released: 320 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 37 meters
Max Threat Zone for IDLH: 34 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-26 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: HYDROGEN PEROXIDE
Molecular Weight: 34.01 kg/kmol
TLV-TWA: 1 ppm IDLH: 75 ppm
Footprint Level of Concern: 50 ppm
Boiling Point: 150.20° C
Vapor Pressure at Ambient Temperature: 0.0026 atm
Ambient Saturation Concentration: 2,612 ppm or 0.26%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 15.6 kilograms/min
Max Average Sustained Release Rate: 15.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 810 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 50 ppm
Max Threat Zone for LOC: 58 meters
Max Threat Zone for IDLH: 56 meters

1-RD-29 AVERAGE / ALERT

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64°C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 123,729 ppm or 12.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 3165 square feet
Average Puddle Depth: 1 centimeter
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 33 kilograms/min
Max Average Sustained Release Rate: 30.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,663 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters (10.9 yards)
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 300 ppm
Indoor: 300 ppm

Note: Indoor graph is shown with a dotted line.

1-RD-29 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 123,729 ppm or 12.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness:Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 9384 square feet
Average Puddle Depth: 1 centimeters
Ground Roughness: Urban or forest
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 92.9 kilograms/min
Max Average Sustained Release Rate: 85.6 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,747 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 49 meters
Max Threat Zone for IDLH: 17 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 141 ppm
Indoor: 141 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

Title of Project EPHA for THM
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1-RD-29 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 123,729 ppm or 12.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 231 kilograms/min
Max Average Sustained Release Rate: 229 kilograms/min
(averaged over a minute or more)
Total Amount Released: 11,962 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 313 meters

1-RD-29 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
- Location: AIKEN, SOUTH CAROLINA
- Building Air Exchanges Per Hour: 60 (User specified)
- Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
- Chemical Name: METHYL ETHYL KETONE
- Molecular Weight: 72.11 kg/kmol
- TLV-TWA: 200 ppm IDLH: 3000 ppm
- Footprint Level of Concern: 300 ppm
- Boiling Point: 79.64° C
- Vapor Pressure at Ambient Temperature: 0.12 atm
- Ambient Saturation Concentration:123,729 ppm or 12.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
- wind: 2.5 meters/sec from 90° true at 2 meters
- Inversion Height: 500 meters
- Stability Class: C (user override)
- Air Temperature: 25° C
- Relative Humidity: 50% Ground Roughness: Urban or forest
- Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
- Puddle Area: 40700 square feet
- Average Puddle Depth: 1 centimeters
- Soil Type: Default Ground Temperature: 25° C
- Initial Puddle Temperature: Ground temperature
- Release Duration: ALOHA limited the duration to 1 hour
- Max Computed Release Rate: 377 kilograms/min
- Max Average Sustained Release Rate: 372 kilograms/min (averaged over a minute or more)
- Total Amount Released: 19,605 kilograms

FOOTPRINT INFORMATION:
- Model Run: Heavy Gas
- User-specified LOC: 300 ppm
- Max Threat Zone for LOC: 400 meters

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1-RD-29 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ETHYL KETONE
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 3000 ppm
Footprint Level of Concern: 300 ppm
Boiling Point: 79.64° C
Vapor Pressure at Ambient Temperature: 0.12 atm
Ambient Saturation Concentration: 123,729 ppm or 12.4%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 954 kilograms/min
Max Average Sustained Release Rate: 944 kilograms/min
(averaged over a minute or more)
Total Amount Released: 50,264 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 300 ppm
Max Threat Zone for LOC: 640 meters

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1-RD-30 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 3000 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 94.3 kilograms/min
Max Average Sustained Release Rate: 93.7 kilograms/min
(!averaged over a minute or more)
Total Amount Released: 5,360 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 393 ppm
Indoor: 393 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-30 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 3000 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 61426 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 188 kilograms/min
MaxAverage Sustained Release Rate: 187 kilograms/min
(averaged over a minute or more)
Total Amount Released: 10,688 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 ppm
Max Threat Zone for LOC: 42 meters
Max Threat Zone for IDLH: 43 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
outdoor: 92.2 ppm
Indoor: 92.2 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-30 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 3000 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25°C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 77.3 kilograms/min
Max Average Sustained Release Rate: 76.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 4,397 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-30 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 3000 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 127 kilograms/min
MaxAverage Sustained Release Rate: 126 kilograms/min
(averaged over a minute or more)
Total Amount Released: 7,189 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 500 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-30 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: METHYL ISOBUTYL KETONE
Molecular Weight: 100.16 kg/kmol
TLV-TWA: 50 ppm IDLH: 3000 ppm
Footprint Level of Concern: 500 ppm
Boiling Point: 116.50° C
Vapor Pressure at Ambient Temperature: 0.026 atm
Ambient Saturation Concentration: 26,580 ppm or 2.66%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 324 kilograms/min
Max Average Sustained Release Rate: 322 kilograms/min
(averaged over a minute or more)
Total Amount Released: 18,353 kilograms

Ground Roughness: Urban or forest

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 500 ppm
Max Threat Zone for LOC: 173 meters

1-RD-32 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,061 ppm or 1.21%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1950 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.09 kilograms/min
Max Average Sustained Release Rate: 2.09 kilograms/min
(averaged over a minute or more)
Total Amount Released: 123 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25 ppm
Indoor: 25 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-32 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,061 ppm or 1.21%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 27750 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 26.3 kilograms/min
Max Average Sustained Release Rate: 26.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,544 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 25 ppm
Indoor: 25 ppm Note: Indoor graph is shown with a dotted line.

1-RD-32 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,061 ppm or 1.21%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 23.3 kilograms/min
Max Average Sustained Release Rate: 23.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,367 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 25 ppm
Max Threat Zone for LOC: 94 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-32 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,061 ppm or 1.21%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths
Ground Roughness: Urban or forest

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 37.9 kilograms/min
Max Average Sustained Release Rate: 37.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,226 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 25 ppm
Max Threat Zone for LOC: 119 meters
Max Threat Zone for IDLH: 34 meters

1-RD-32 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: ETHYLENE GLYCOL MONOMETHYL ETHER
Molecular Weight: 76.10 kg/kmol
TLV-TWA: 5 ppm IDLH: 2000 ppm
Footprint Level of Concern: 25 ppm
Boiling Point: 124.40° C
Vapor Pressure at Ambient Temperature: 0.012 atm
Ambient Saturation Concentration: 12,061 ppm or 1.21%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 96.1 kilograms/min
Max Average Sustained Release Rate: 95.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 5,646 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 25 ppm
Max Threat Zone for LOC: 186 meters
Max Threat Zone for IDLH: 56 meters

1-RD-33 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.69 kilograms/min
Max Average Sustained Release Rate: 1.65 kilograms/min
(averaged over a minute or more)
Total Amount Released: 84.6 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.3 ppm
Indoor: 11.3 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-33 **AVERAGE** SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.36 kilograms/min
MaxAverage Sustained Release Rate: 5.23 kilograms/min
(averaged over a minute or more)
Total Amount Released: 268 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 55 meters
Max Threat Zone for IDLH: 54 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.54 ppm
Indoor: 3.54 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-33 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.39 kilograms/min
Max Average Sustained Release Rate: 1.35 kilograms/min
(averaged over a minute or more)
Total Amount Released: 69.5 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 27 meters
Max Threat Zone for IDLH: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-33 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.26 kilograms/min
Max Average Sustained Release Rate: 2.21 kilograms/min
(averaged over a minute or more)
Total Amount Released: 113 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 34 meters
Max Threat Zone for IDLH: 35 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD--33 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths
Ground Roughness: Urban or forest

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.75 kilograms/min
Max Average Sustained Release Rate: 5.61 kilograms/min
(averaged over a minute or more)
Total Amount Released: 287 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-34 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE | Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm | IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% | Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 1450 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default | Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.52 kilograms/min
Max Average Sustained Release Rate: 2.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 140 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 30 meters
Max Threat Zone for IDLH: less than 10 meters (10.9 yards)
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 30 ppm
Indoor: 30 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

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1-RD-34 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE | Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm | IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% | Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 19600 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default | Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 30.7 kilograms/min
Max Average Sustained Release Rate: 30.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,697 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 100 meters
Max Threat Zone for IDLH: 24 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 30 ppm
Indoor: 30 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-34 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 37.9 kilograms/min
Max Average Sustained Release Rate: 37.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,095 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 111 meters
Max Threat Zone for IDLH: 27 meters

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1-RD-34 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: MORPHOLINE
Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm
IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 62 kilograms/min
MaxAverage Sustained Release Rate: 61.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 3,422 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 140 meters
Max Threat Zone for IDLH: 34 meters

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1-RD-34 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MORPHOLINE Molecular Weight: 87.12 kg/kmol
TLV-TWA: 20 ppm IDLH: 8000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 128.00° C
Vapor Pressure at Ambient Temperature: 0.013 atm
Ambient Saturation Concentration: 13,479 ppm or 1.35%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 158 kilograms/min
Max Average Sustained Release Rate: 156 kilograms/min
(averaged over a minute or more)
Total Amount Released: 8,717 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 220 meters
Max Threat Zone for IDLH: 56 meters

1-RD-36 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 30001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
ReleaseDuration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.23 kilograms/min
MaxAverage Sustained Release Rate: 2.18 kilograms/min
(averaged over a minute or more)
Total Amount Released: 115 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 37.4 mg/(cu m)
Indoor: 37.4 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

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1-RD-36 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 100001 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.08 kilograms/min
Max Average Sustained Release Rate: 6.94 kilograms/min
(averaged over a minute or more)
Total Amount Released: 365 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 55 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 11.7 mg/(cu m)
Indoor: 11.7 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

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1-RD-36 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25°C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.83 kilograms/min
Max Average Sustained Release Rate: 1.79 kilograms/min
(averaged over a minute or more)
Total Amount Released: 94.3 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 27 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-36 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2.99 kilograms/min
Max Average Sustained Release Rate: 2.92 kilograms/min
(averaged over a minute or more)
Total Amount Released: 154 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 34 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-36 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1-METHYLPYRROLIDONE
Molecular Weight: 99.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 500 mg/(cu m)
Boiling Point: 202.00° C
Vapor Pressure at Ambient Temperature: 4.49e-004 atm
Ambient Saturation Concentration: 457 ppm or 0.046%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 7.6 kilograms/min
Max Wverage Sustained Release Rate: 7.45 kilograms/min
(averaged over a minute or more)
Total Amount Released: 391 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 500 mg/(cu m)
Max Threat Zone for LOC: 56 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-42 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0049 atm
Ambient Saturation Concentration: 4,960 ppm or 0.50%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 2050 square feet
Average Puddle Depth: 1 centimeters
Ground Roughness: Urban or forest
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.27 kilograms/min
Max Average Sustained Release Rate: 1.25 kilograms/min
(averaged over a minute or more)
Total Amount Released: 68.0 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 15 ppm
Max Threat Zone for LOC: 30 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm
Indoor: 15 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-42 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0049 atm
Ambient Saturation Concentration: 4,960 ppm or 0.50%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 28500 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 15.8 kilograms/min
Max Average Sustained Release Rate: 15.5 kilograms/min
(averaged over a minute or more)
Total Amount Released: 841 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 15 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 15 ppm
Indoor: 15 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-42 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavail
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0049 atm
Ambient Saturation Concentration: 4,960 ppm or 0.50%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 13.6 kilograms/min
Max Average Sustained Release Rate: 13.4 kilograms/min
(averaged over a minute or more)
Total Amount Released: 725 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 15 ppm
Max Threat Zone for LOC: 93 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

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1-RD-42 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN ' SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: PROPIONIC ACID
Molecular Weight: 74.08 kg/kmol
TLV-TWA: 10 ppm IDLH: -unavaii
Footprint Level of Concern: 15 ppm
Boiling Point: 141.17° C
Vapor Pressure at Ambient Temperature: 0.0049 atm
Ambient Saturation Concentration: 4,960 ppm or 0.50%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 22.2 kilograms/min
Max Average Sustained Release Rate: 21.8 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,183 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 15 ppm
Max Threat Zone for LOC: 118 meters

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1-RD-33 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: MONOETHANOLAMINE
Molecular Weight: 61.08 kg/kmol
TLV-TWA: 3 ppm IDLH: 1000 ppm
Footprint Level of Concern: 30 ppm
Boiling Point: 171.00° C
Vapor Pressure at Ambient Temperature: 4.85e-004 atm
Ambient Saturation Concentration: 494 ppm or 0.049%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths

Ground Roughness: Urban or forest

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 5.75 kilograms/min
Max Average Sustained Release Rate: 5.61 kilograms/min
(averaged over a minute or more)
Total Amount Released: 287 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 30 ppm
Max Threat Zone for LOC: 56 meters
Max Threat Zone for IDLH: 56 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

1-RD-46 AVERAGE ALERT

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,395 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 3010 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 59 minutes
Max Computed Release Rate: 58.1 kilograms/min
Max Average Sustained Release Rate: 48.3 kilograms/min
(averaged over a minute or more)
Total Amount Released: 2,461 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 2000 ppm
Max Threat Zone for LOC: 11 meters
Max Threat Zone for IDLH: 11 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:

Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 492 ppm
Indoor: 492 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-46 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,395 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 21100 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 371 kilograms/min
Max Average Sustained Release Rate: 314 kilograms/min
(averaged over a minute or more)
Total Amount Released: 16,403 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 2000 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2,000 ppm
Indoor: 2,000 ppm
Note: Indoor graph
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

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1-RD-46 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,395 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 426 kilograms/min
Max Average Sustained Release Rate: 361 kilograms/min
(averaged over a minute or more)
Total Amount Released: 18,900 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 2000 ppm
Max Threat Zone for LOC: 108 meters

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1-RD-46 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
- Location: AIKEN, SOUTH CAROLINA
- Building Air Exchanges Per Hour: 60 (User specified)
- Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
- Chemical Name: TETRAHYDROFURAN
- Molecular Weight: 72.11 kg/kmol
- TLV-TWA: 200 ppm IDLH: 2000 ppm
- Footprint Level of Concern: 2000 ppm
- Boiling Point: 65.97° C
- Vapor Pressure at Ambient Temperature: 0.21 atm
- Ambient Saturation Concentration: 216,395 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
- Wind: 2.5 meters/sec from 90° true at 2 meters
- Inversion Height: 500 meters
- Stability Class: C (user override)
- Air Temperature: 25° C
- Relative Humidity: 50% Ground Roughness: Urban or forest
- Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
- Puddle Area: 40700 square feet
- Average Puddle Depth: 1 centimeters
- Soil Type: Default Ground Temperature: 25° C
- Initial Puddle Temperature: Ground temperature
- Release Duration: ALOHA limited the duration to 1 hour
- Max Computed Release Rate: 694 kilograms/min
- Max Average Sustained Release Rate: 592 kilograms/min (averaged over a minute or more)
- Total Amount Released: 31,015 kilograms

FOOTPRINT INFORMATION:
- Model Run: Heavy Gas
- User-specified LOC: 2000 ppm
- Max Threat Zone for LOC: 140 meters

1-RD-46 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: TETRAHYDROFURAN
Molecular Weight: 72.11 kg/kmol
TLV-TWA: 200 ppm IDLH: 2000 ppm
Footprint Level of Concern: 2000 ppm
Boiling Point: 65.97° C
Vapor Pressure at Ambient Temperature: 0.21 atm
Ambient Saturation Concentration: 216,395 ppm or 21.6%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1,760 kilograms/min
Max Average Sustained Release Rate: 1,510 kilograms/min
(averaged over a minute or more)
Total Amount Released: 79,754 kilograms

FOOTPRINT INFORMATION:

Model Run: Heavy Gas
User-specified LOC: 2000 ppm
Max Threat Zone for LOC: 232 meters

1-RD-49 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 167,040 ppm or 16.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 875 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 59 minutes
Max Computed Release Rate: 22.8 kilograms/min
Max Average Sustained Release Rate: 20.2 kilograms/min
(averaged over a minute or more)
Total Amount Released: 1,081 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
ser-specified LOC: 700 ppm
x Threat Zone for LOC: less than 10 meters (10.9 yards)
Max Threat Zone for IDLH: less than 10 meters (10.9 yards)
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 197 ppm
Indoor: 197 ppm
Note: Indoor graph is shown with a dotted line

I-RD-49 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 167,040 ppm or 16.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 7840 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 185 kilograms/min
Max Average Sustained Release Rate: 167 kilograms/min
(averaged over a minute or more)
Total Amount Released: 9,101 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 700 ppm
Max Threat Zone for LOC: 100 meters
Note: Footprint was not drawn because effects of near-field patchiness make dispersion predictions unreliable for short distances.

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
outdoor: 700 ppm
Indoor: 700 ppm
Note: Indoor graph is shown with a dotted line.

1-RD-49 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 167,040 ppm or 16.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 548 kilograms/min
Max Average Sustained Release Rate: 497 kilograms/min
(averaged over a minute or more)
Total Amount Released: 27,359 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 700 ppm
Max Threat Zone for LOC: 176 meters

1-RD-49 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 167,040 ppm or 16.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25°C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 894 kilograms/min
Max Average Sustained Release Rate: 812 kilograms/min
(averaged over a minute or more)
Total Amount Released: 44,897 kilograms

FOOTPRINT INFORMATION:

Model Run: Heavy Gas
User-specified LOC: 700 ppm
Max Threat Zone for LOC: 229 meters

1-RD-49 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: 1,1,1-TRICHLOROETHANE
Molecular Weight: 133.40 kg/kmol
TLV-TWA: 350 ppm IDLH: 700 ppm
Footprint Level of Concern: 700 ppm
Boiling Point: 74.08° C
Vapor Pressure at Ambient Temperature: 0.16 atm
Ambient Saturation Concentration: 167,040 ppm or 16.7%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 2,270 kilograms/min
Max Average Sustained Release Rate: 2,080 kilograms/min
(averaged over a minute or more)
Total Amount Released: 115,384 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 700 ppm
Max Threat Zone for LOC: 381 meters

I-RD-51 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 11.3 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: 56 minutes
Max Computed Release Rate: 157 grams/min
Max Average Sustained Release Rate: 145 grams/min
(averaged over a minute or more)
Total Amount Released: 7.61 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.98 ppm
Indoor: 2.98 ppm
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

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1-RD-51 AVERAGE / SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 143 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25°
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 1.71 kilograms/min
Max Average Sustained Release Rate: 1.61 kilograms/min
(averaged over a minute or more)
Total Amount Released: 91.6 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 2.99 ppm
Indoor: 2.99 ppm
Note: Indoor graph is shown with a dotted line.

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1-RD-51 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 24420 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 227 kilograms/min
Max Average Sustained Release Rate: 221 kilograms/min
(averaged over a minute or more)
Total Amount Released: 12,901 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 3 ppm
Max Threat Zone for LOC: 3.2 kilometers

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1-RD-51 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 40700 square feet
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 370 kilograms/min
Max Average Sustained Release Rate: 361 kilograms/min
(averaged over a minute or more)
Total Amount Released: 21,136 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 3 ppm
Max Threat Zone for LOC: 4.1 kilometers

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1-RD-51 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: TRIETHYLAMINE
Molecular Weight: 101.19 kg/kmol
TLV-TWA: 10 ppm IDLH: 1000 ppm
Footprint Level of Concern: 3 ppm
Boiling Point: 88.77° C
Vapor Pressure at Ambient Temperature: 0.090 atm
Ambient Saturation Concentration: 91,682 ppm or 9.17%

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Puddle Area: 10000 square meters
Average Puddle Depth: 1 centimeters
Soil Type: Default Ground Temperature: 25° C
Initial Puddle Temperature: Ground temperature
Release Duration: ALOHA limited the duration to 1 hour
Max Computed Release Rate: 938 kilograms/min
Max Average Sustained Release Rate: 919 kilograms/min
(averaged over a minute or more)
Total Amount Released: 54,152 kilograms

FOOTPRINT INFORMATION:
Model Run: Heavy Gas
User-specified LOC: 3 ppm
Max Threat Zone for LOC: 6.7 kilometers

1-RD-54 AVERAGE / ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.9 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 14.4 grams/sec
Total Amount Released: 862 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 73.9 mg/(cu m)
Indoor: 44.1 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

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1-RD-54 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 21.3 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 161 grams/sec
Total Amount Released: 9.66 kilograms

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 74.8 mg/(cu m)
Indoor: 44.1 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-54 AVERAGE MAX DIST SEG 1

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.6 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 284 grams/sec
Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User- specified LOC: 75 mg/(cu m)
Max Threat Zone for LOC: 133 meters

1-RD-54 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 mg/(cu m)
Max Threat Zone for LOC: 252 meters

ENGINEERING COMPUTATION SHEET

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1-RD-54 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: BENZOIC ACID
Molecular Weight: 122.13 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 75 mg/(cu m)
Boiling Point: 249.00° C
Freezing Point: 122.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 263 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.99 kilograms/sec
Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 75 mg/(cu m)
Max Threat Zone for LOC: 353 meters

1-RD-56 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .0128 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 0.0968 grams/sec
Total Amount Released: 5.81 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.498 mg/(cu m)
Indoor: 0.297 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

1-RD-56 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .142 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 1.07 grams/sec
Total Amount Released: 64.4 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 0.499 mg/(cu m)
Indoor: 0.294 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

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1-RD-56 AVERAGE / MAX DIST SEG 1

SITE DATA INFORMATION:
- Location: AIKEN, SOUTH CAROLINA
- Building Air Exchanges Per Hour: 60 (User specified)
- Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
- Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
- Molecular Weight: 60.09 kg/kmol
- TLV-TWA: -unavail- IDLH: -unavail
- Footprint Level of Concern: 0.5 mg/(cu m)
- Boiling Point: -unavail
- Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
- Wind: 2.5 meters/sec from 90° true at 2 meters
- Inversion Height: 500 meters
- Stability Class: C (user override)
- Air Temperature: 25°C
- Relative Humidity: 50%
- Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
- Direct Source: 37.6 pounds
- Source Height: 0
- Release Duration: 1 minute
- Release Rate: 284 grams/sec
- Total Amount Released: 17.1 kilograms
- Ground Roughness: Urban or forest

FOOTPRINT INFORMATION:
- Dispersion Module: Gaussian
- User-specified LOC: 0.5 mg/(cu m)
- Max Threat Zone for LOC: 1.3 kilometers

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

Title of Project EPHA for THM

Reviewed by S. A. Henderson

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Works Calculation 8

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1-RD-56 AVERAGE MAX DIST SEG 2

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail-- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25°C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:

Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User specified LOC: 0.5 mg/(cu m)
Max Threat Zone for LOC: 2.0 kilometers

ENGINEERING COMPUTATION SHEET

SRS SAVANNAH RIVER SITE

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1-RD-56 AVERAGE / MAX DIST SEG 3

SITE DATA INFORMATION:

Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:

Chemical Name: SILICA, CRYSTALLINE QUARTZ (RESP. DUST)
Molecular Weight: 60.09 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 0.5 mg/(cu m)
Boiling Point: -unavail
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)

Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50%
Cloud Cover: 8 tenths
Ground Roughness: Urban or forest

SOURCE STRENGTH INFORMATION:

Direct Source: 263 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.99 kilograms/sec
Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:

Dispersion Module: Gaussian
User-specified LOC: 0.5 mg/(cu m)
Max Threat Zone for LOC: 2.6 kilometers

1-RD-57 AVERAGE ALERT

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: .1 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 0.756 grams/sec
Total Amount Released: 45.4 grams

TIME DEPENDENT INFORMATION:
Concentration Estimates at the point:
Downwind: 30 meters
off Centerline: 0 meters
Max Concentration:
Outdoor: 3.89 mg/(cu m)
Indoor: 2.32 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

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1-RD-57 AVERAGE SAE

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350:00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 1.135 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 8.58 grams/sec
Total Amount Released: 515 grams

TIME DEPENDENT INFORMATION:
ConcentrationEstimates at the point:
Downwind: 100 meters
Off Centerline: 0 meters
Max Concentration:
Outdoor: 3.99 mg/(cu m)
Indoor: 2.35 mg/(cu m)
Note: Indoor graph is shown with a dotted line.

ENGINEERING COMPUTATION SHEET

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1-RD-57 AVERAGE / MAX DIST SEG I

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA: -unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25°C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 37.6 pounds
Source Height: 0
Release Duration: 1 minute
Release Rate: 284 grams/sec
Total Amount Released: 17.1 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 4 mg/(cu m)
Max Threat Zone for LOC: 569 meters

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1-RD-57 AVERAGE / MAX DIST SEG 2

SITE DATA INFORMATION:
Location: AIKEN, SOUTH CAROLINA
Building Air Exchanges Per Hour: 60 (User specified)
Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
Chemical Name: SODIUM SULFHYDRATE
Molecular Weight: 56.06 kg/kmol
TLV-TWA-unavail- IDLH: -unavail
Footprint Level of Concern: 4 mg/(cu m)
Boiling Point: -unavail
Freezing Point: 350.00° C
Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
Wind: 2.5 meters/sec from 90° true at 2 meters
Inversion Height: 500 meters
Stability Class: C (user override)
Air Temperature: 25° C
Relative Humidity: 50% Ground Roughness: Urban or forest
Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
Direct Source: 135 pounds Source Height: 0
Release Duration: 1 minute
Release Rate: 1.02 kilograms/sec
Total Amount Released: 61.2 kilograms

FOOTPRINT INFORMATION:
Dispersion Module: Gaussian
User-specified LOC: 4 mg/(cu m)
Max Threat zone for LOC: 948 meters

ENGINEERING COMPUTATION SHEET

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1-RD-57 AVERAGE MAX DIST SEG 3

SITE DATA INFORMATION:
- Location: AIKEN, SOUTH CAROLINA
- Building Air Exchanges Per Hour: 60 (User specified)
- Time: June 30, 1998 1200 hours EDT (User specified)

CHEMICAL INFORMATION:
- Chemical Name: SODIUM SULFHYDRATE
- Molecular Weight: 56.06 kg/kmol
- TLV-TWA: -unavail- IDLH: -unavail
- Footprint Level of Concern: 4 mg/(cu m)
- Boiling Point: -unavail
- Freezing Point: 350.00° C
- Note: Not enough chemical data to use Heavy Gas option

ATMOSPHERIC INFORMATION: (MANUAL INPUT OF DATA)
- Wind: 2.5 meters/sec from 90° true at 2 meters
- Inversion Height: 500 meters
- Stability Class: C (user override)
- Air Temperature: 25° C
- Relative Humidity: 50% Ground Roughness: Urban or forest
- Cloud Cover: 8 tenths

SOURCE STRENGTH INFORMATION:
- Direct Source: 263 pounds Source Height: 0
- Release Duration: 1 minute
- Release Rate: 1.99 kilograms/sec
- Total Amount Released: 119 kilograms

FOOTPRINT INFORMATION:
- Dispersion Module: Gaussian
- User-specified LOC: 4 mg/(cu m)

APPENDIX C

CORRESPONDENCE

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APPENDIX D

EMERGENCY PREPAREDNESS HAZARDS ASSESSMENT

DEFINITIONS

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EPHA DEFINITIONS

1. **Accident.** A deviation from normal operations or activities associated with a hazard which has the potential to result in an emergency.
2. **Alert.** An Alert represents events in progress or having occurred that involve an actual or potential substantial reduction in the level of facility safety and protection. At SRS, an Alert has occurred if unplanned events result in hazardous material being released to the environment in concentrations that will result in exposures greater than the protective action criteria (PAC) at 30 meters from the source.
3. **Assess.** The internal process by which an organization evaluates its ability to comply with DOE and other applicable regulations, orders, plans, and procedures, conducted within a single, cognizant Program Office.
4. **Breach** A fracture or penetration, undesirable opening of a tank, container, or line that results in the release of a hazardous material. The release of hazardous material must be of a magnitude to satisfy the EAL criteria to be considered a breach. Small leaks or seepage are not to be considered a breach.
5. **Committed Effective Dose Equivalent (CEDE).** The sum of the committed dose equivalents over a fifty-year period to various organs or tissues in the body, each multiplied by the appropriate weighting factor. CEDE is applicable to exposure from internally deposited radionuclides.
6. **Common Hazardous Material.** The material is commonly used by the general public. This includes any substance used for personal, family, or household purposes or is present in the same form and concentration as a product packaged for distribution and use by the general public (e.g., motor oil, gasoline, diesel fuel). Additionally, material screened as per the criteria set forth in this procedure is common hazardous material.
7. **Consequence.** The result or effect (especially projected doses or dose rates) of a release of radioactive or hazardous materials to the environment.
8. **Consequence Assessment.** The evaluation and interpretation of radiological or other hazardous materials measurements and other information to provide a basis for decision making.
9. **Emergency Action Level (EAL).** Specific, predetermined, observable criteria used to detect, recognize, and determine the emergency class of Operational Emergencies. An EAL can be an instrument reading; an equipment status indicator; a measurable parameter, onsite or offsite; a discrete, observable event; results of analyses; or another observed phenomenon that indicates entry into a particular emergency class.

10. **Emergency Planning Zone (EPZ).** A geographic area surrounding a specific DOE facility for which special planning and preparedness efforts are carried out to ensure that prompt and effective protective actions can be taken to reduce or minimize the impact to onsite personnel, public health and safety, and the environment in the event of an Operational Emergency.

11. **Emergency Response Planning Guidelines (ERPGs).** A hazardous material personnel exposure level or range which, when exceeded by a short term or acute exposure, will cause irreversible or other serious health effects in humans. The ERPGs are approved by a committee of the American Industrial Hygiene Association.

12. **Event.** Any real-time occurrence or significant deviation from planned or expected behavior that could endanger or adversely affect people, property, or the environment.

13. **Facility.** Any equipment, structure, system, process, or activity that fulfills a specific purpose.

14. **Facility Boundary.** This boundary represents the receptor location that differentiates between an Alert and Site Area Emergency declaration.

15. **General Emergency.** A General Emergency represents events that are in progress or have occurred that involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity, catastrophic degradation of facility protection systems, or catastrophic failure in safety or protection systems threatening the integrity of a weapon or test device that could lead to substantial offsite impacts. Environmental releases of hazardous materials can reasonably be expected to exceed the appropriate protective action criteria at the site boundary.

16. **Hazard.** A process, condition, or asset which has the potential to adversely impact the health and safety of personnel, the public, the environment, or national security. Hazards are divided into three classes:

    Low - Hazards which present minor onsite and negligible offsite impacts to people, the environment, or national security.

    Moderate - Hazards which represent considerable potential onsite impacts to the people or the environment, but at most only minor offsite impacts to people, the environment, or national security.

    High - Hazards with the potential for onsite and offsite impacts to large numbers of persons or with the potential for major impacts to the environment or national security.

17. **Hazard Assessment.** A Hazards Assessment identifies hazards significant enough to include in an emergency preparedness program and forms the technical basis for applicable emergency classification procedures.

18. **Hazardous Materials.** Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment.

19. **Material-at-Risk (MAR).** The amount of hazardous material that is available to be acted on by a given physical stress. Multiply the MAR by the appropriate release fraction to determine the source term.

20. **Maximum Fire** A fire analyzed for the maximum consequence. The largest at risk hazardous material inventory is assumed to be involved and the worst fire situation is utilized.

21. **Maximum Inventory.** For a process, the maximum quantity of a hazardous material that a process produces during the process cycle. For storage tanks the maximum inventory is equivalent to the physical capacity of the tank.

22. **Notification of Unusual Event (NoUE).** The NoUE emergency classification is below an Alert and is not recognized by DOE. The states of Georgia and South Carolina require the identification and reporting of radiological NoUEs at a level of 0.1 mrem TEDE at the site boundary. The NoUE aligns with the Unusual Occurrence category in DOE Order 5000.3B.

23. **Offsite.** The area beyond the boundaries of the site.

24. **Onsite.** The facility/site area over which DOE has access control authority.

25. **Release.** An airborne effluent release to the environment as this pathway typically represents the most time-urgent situation. Releases to aquatic and ground pathways in most instances do not have the same time urgency as airborne releases. The hazard assessment considers releases to an aquatic or ground pathway having a time-urgent affect on the workers or the public (e.g., through a community water supply).

26. **Release Fraction.** The coefficient used to estimate the amount of a hazardous material (material at risk) suspended in air and made available for airborne transport under a specific set of induced physical stress. The release fraction is a combination of the fraction of the material released and the fraction of the material that is respirable.

27. **Safety Analysis.** A documented process to systematically identify the hazards of a DOE operation; to describe and analyze the adequacy of the measures taken to eliminate, control, or mitigate identified hazards; and to analyze and evaluate potential accidents and their associated risks.

28. **Safety Analysis Report (SAR).** A documented process to systematically identify the hazards of a DOE operation; to describe and analyze the adequacy of the measures taken to eliminate, control, or mitigate identified hazards; and to analyze and evaluate potential accidents and their associated risks. SARs are completed according to the WSRC 9Q manual.

29. **Segment.** a demarcation used in hazards assessment where the system, section, building, etc., is not affected by the failure of other systems, sections, buildings, etc.

30. **Site.** The area over which DOE has access control authority. This includes any area that has been designated as a National Security Area.

31. **Site Area Emergency (SAE).** An SAE represents events that are in progress or have occurred involving actual or likely major failure(s) of facility safety or safeguard systems needed for the protection of onsite personnel, the public health and safety, the environment, or national security. Environmental releases of hazardous materials are expected to exceed the appropriate PAC at or beyond the facility boundary but not expected to exceed the appropriate PAC at or beyond the site boundary.

32. **Site Boundary.** In general, the perimeter of the DOE-owned and controlled land at SRS is the site boundary. Areas where the general public has uncontrolled access to areas of SRS are offsite for purposes of emergency classification unless it can be assured (e.g., procedures in place) that those areas can be evacuated and access control established within one hour of event declaration.

33. **Source Term.** The amount of respirable material released to the environment. The source term is equal to the amount of material at risk (MAR) multiplied by an appropriate source release fraction (RF). Source term = (MAR)(RF).

34. **Total Effective Dose Equivalent (TEDE).** The sum of the deep dose equivalent (from external exposure) and the committed effective dose equivalent (from internal exposure).