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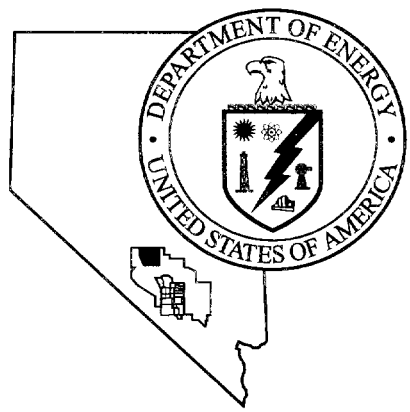
DOE/NV--643



Corrective Action Plan for Corrective Action Unit 428: Area 3 Septic Waste Systems 1 and 5 Tonopah Test Range, Nevada

Controlled Copy No.: UNCONTROLLED

Revision: 0

August 2000

Environmental Restoration
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U.S. Department of Energy
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CORRECTIVE ACTION PLAN FOR CORRECTIVE ACTION UNIT 428: AREA 3 SEPTIC WASTE SYSTEMS 1 AND 5, TONOPAH TEST RANGE, NEVADA

UNCONTROLLED

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August 2000

Prepared for the U.S. Department of Energy
Nevada Operations Office
under Contract No. DE-AC08-96NV11718

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DOE/NV--643

CORRECTIVE ACTION PLAN FOR CORRECTIVE ACTION UNIT 428: AREA 3 SEPTIC WASTE SYSTEMS 1 AND 5, TONOPAH TEST RANGE, NEVADA

Approved By: _____ Date: 8/13/00
Janet L. Appenzeller-Wing, Project Manager
Industrial Sites Project

Approved By: _____ Date: 8/13/00
for Runore C. Wycoff, Director
Environmental Restoration Division

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ACRONYMS AND ABBREVIATIONS

BN	Bechtel Nevada
CADD	Corrective Action Decision Document
CAP	Corrective Action Plan
CAU	Corrective Action Unit
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
DOE/NV	U.S. Department of Energy, Nevada Operations Office
EPA	U.S. Environmental Protection Agency
FFACO	Federal Facility Agreement and Consent Order
ft	feet
m^3	cubic meters
m	meters
mg/kg	milligrams per kilogram
µg/kg	micrograms per kilogram
NDEP	Nevada Division of Environmental Protection
NEPA	National Environmental Policy Act
NTS	Nevada Test Site
OSHA	Occupational Safety and Health Administration
PAL	Preliminary Action Level
PID	Photoionization Detector

ACRONYMS AND ABBREVIATIONS (continued)

RCRA	Resource Conservation and Recovery Act
REOP	Real Estate/Operations Permit
SVOC	Semi-Volatile Organic Compounds
SWS	Septic Waste System
SSHASP	Site-Specific Health and Safety Plan
TTR	Tonopah Test Range
TPH	Total Petroleum Hydrocarbons
VOC	Volatile Organic Compounds
yd^3	cubic yards

EXECUTIVE SUMMARY

Area 3 Septic Waste Systems 1 and 5 are identified in the Federal Facility Agreement and Consent Order as Corrective Action Unit (CAU) 428. The CAU is located in Area 3 of the Tonopah Test Range (TTR) and includes Corrective Action Sites 03-05-002-SW01 (Septic Waste System 1 [SWS 1]) and 03-05-002-SW05 (Septic Waste System 5 [SWS 5]).

The CAU consists of septic tanks and leachfields that received both sanitary and industrial effluent from various facilities in Area 3 of the TTR. The systems were operational from the mid 1950s until 1990.

Characterization activities indicated that the only constituents of concern are arsenic and benzo(a)pyrene in soil, and petroleum hydrocarbons in Septic Tanks 33-1A, 33-1B, 33-3, 33-10, and the SWS 1 Leachfield 2 Distribution Box. Septic Tanks 33-1C, 33-2, and 33-11 are filled with inert material. Septic Tank 33-8 is empty and contains a small amount of clean soil that has filtered into the tank from above.

Arsenic was detected in soil at the SWS 5 leachfield and benzo(a)pyrene was detected in soil near Septic Tank 33-1A. Although the levels of these constituents of concern exceed the U.S. Environmental Protection Agency's industrial preliminary remediation goals, they do not exceed the Resource Conservation and Recovery Act hazardous levels. Therefore, the soil will not be managed as hazardous waste. Septic tank contents were found to contain petroleum hydrocarbons as diesel above the Nevada Division of Environmental Protection action level of 100 milligrams per kilogram.

Clean closure of the site involves the excavation and disposal of impacted soil and the removal and disposal of Septic Tank 33-1A, 33-1B, 33-3, and SWS 1 Leachfield 2 Distribution Box contents. Soil impacted with arsenic and benzo(a)pyrene will be disposed at the Nevada Test Site (NTS) in the Area 23 Landfill. Upon completion of excavation, soil samples will be collected from the excavated areas to verify that the constituents of concern have been removed. The excavated areas will then be backfilled and regraded.

Septage from the tanks will be removed and disposed by an off-site subcontractor. Septic Tank 33-10 will be removed and disposed in the NTS Area 6 Hydrocarbon Landfill. The remaining septic tanks and the SWS 1 Leachfield 2 Distribution Box will then be closed by rinsing with water until visibly clean and filling with inert material such as sand or cement/grout slurry. Rinseate verification samples will be collected from the septic tanks to demonstrate that petroleum hydrocarbons have been removed to below the established level. Post-closure care is not required because this is a clean closure.

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1.0 INTRODUCTION

Area 3 Septic Waste Systems 1 and 5 are located in Area 3 of the Tonopah Test Range (TTR) (Figure 1). The site is listed in the Federal Facility Agreement and Consent Order (FFACO, 1996) as Corrective Action Unit (CAU) 428 and includes Corrective Action Sites 03-05-002-SW01 (Septic Waste System 1 [SWS 1]), and 03-05-002-SW05 (Septic Waste System 5 [SWS 5]).

The site history for the CAU is provided in the Corrective Action Investigation Plan (U.S. Department of Energy, Nevada Operations Office [DOE/NV], 1999). SWS 1 consists of two leachfields and associated septic tanks. SWS 1 received effluent from both sanitary and industrial sources from various buildings in Area 3 of the TTR (Figure 2). SWS 5 is comprised of one leachfield and outfall with an associated septic tank. SWS 5 received effluent from sources in Building 03-50 in Area 3 of the TTR (Figure 2). Both systems were active until 1990 when a consolidated sewer system was installed.

1.1 PURPOSE

The purpose of this Corrective Action Plan (CAP) is to provide the strategy and methodology to close the Area 3 SWS 1 and 5. The CAU will be closed following state and federal regulations and the FFACO (1996). Site characterization was done during May and June 1999. Samples of the tank contents, leachfield soil, and soil under the tanks and pipes were collected. The results of the characterization were reported in the Corrective Action Decision Document (CADD) (DOE/NV, 2000). Additional sampling was done in May 2000, the results of which are presented in this plan.

Soil sample results indicated that two constituents of concern were detected above Preliminary Action Levels (PALs). Total arsenic was detected at a concentration of 68.7 milligrams per kilogram (mg/kg). The arsenic was found under the center distribution line at the proximal end of the SWS 5 Leachfield (Figure 3). Total benzo(a)pyrene was detected at a concentration of 480 micrograms per kilogram (µg/kg). The benzo(a)pyrene was found in the soil under the discharge line at SWS 1 Septic Tank 33-1A (Figure 3). These concentrations are above the PALs of 3.0 mg/kg and 360 µg/kg, respectively (DOE/NV, 1999) but are below the hazardous regulatory levels for these constituents. The soil will be excavated and disposed in the Nevada Test Site (NTS) Area 23 Sanitary Landfill.

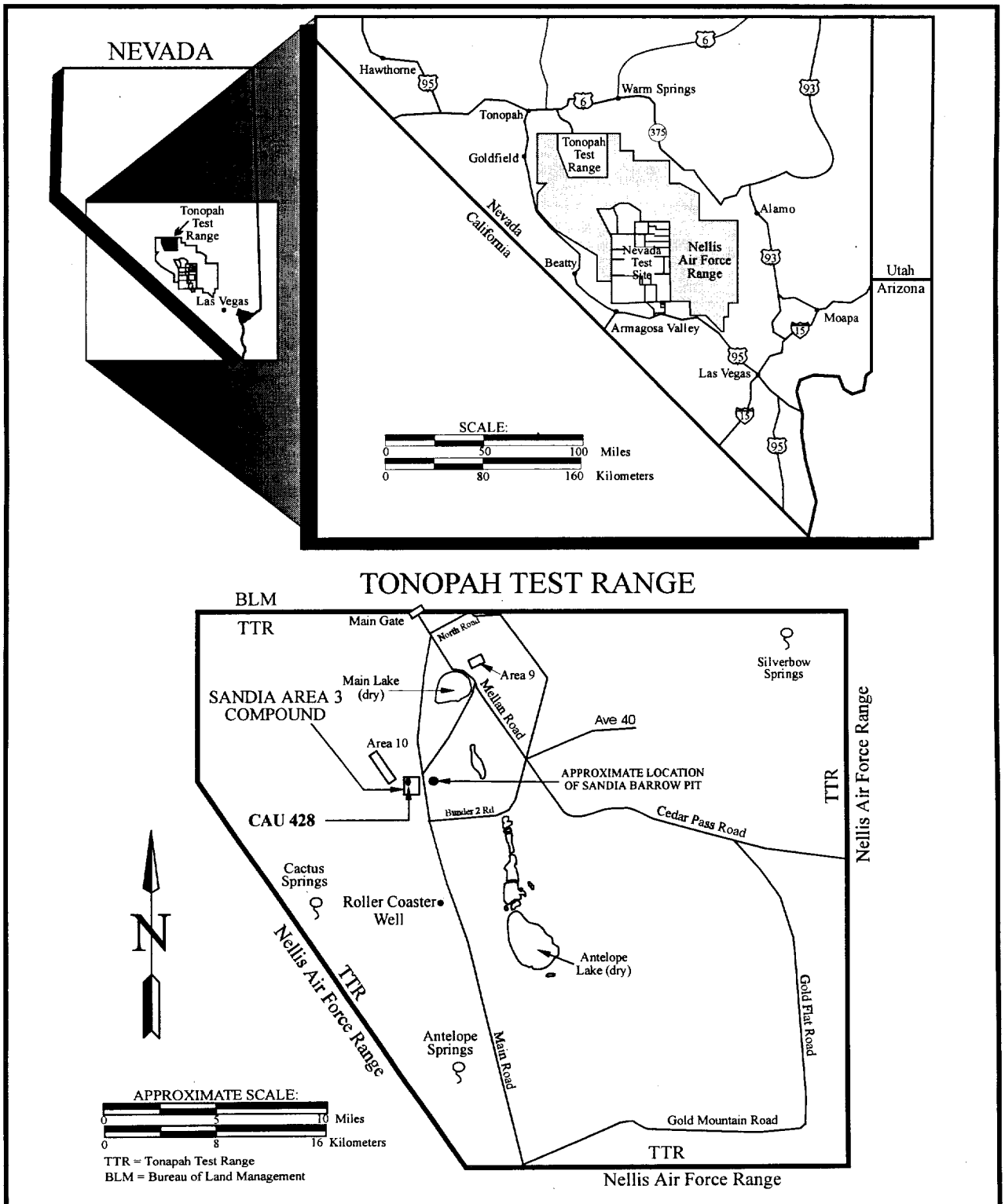

FIGURE 1
CAU 428 LOCATION MAP

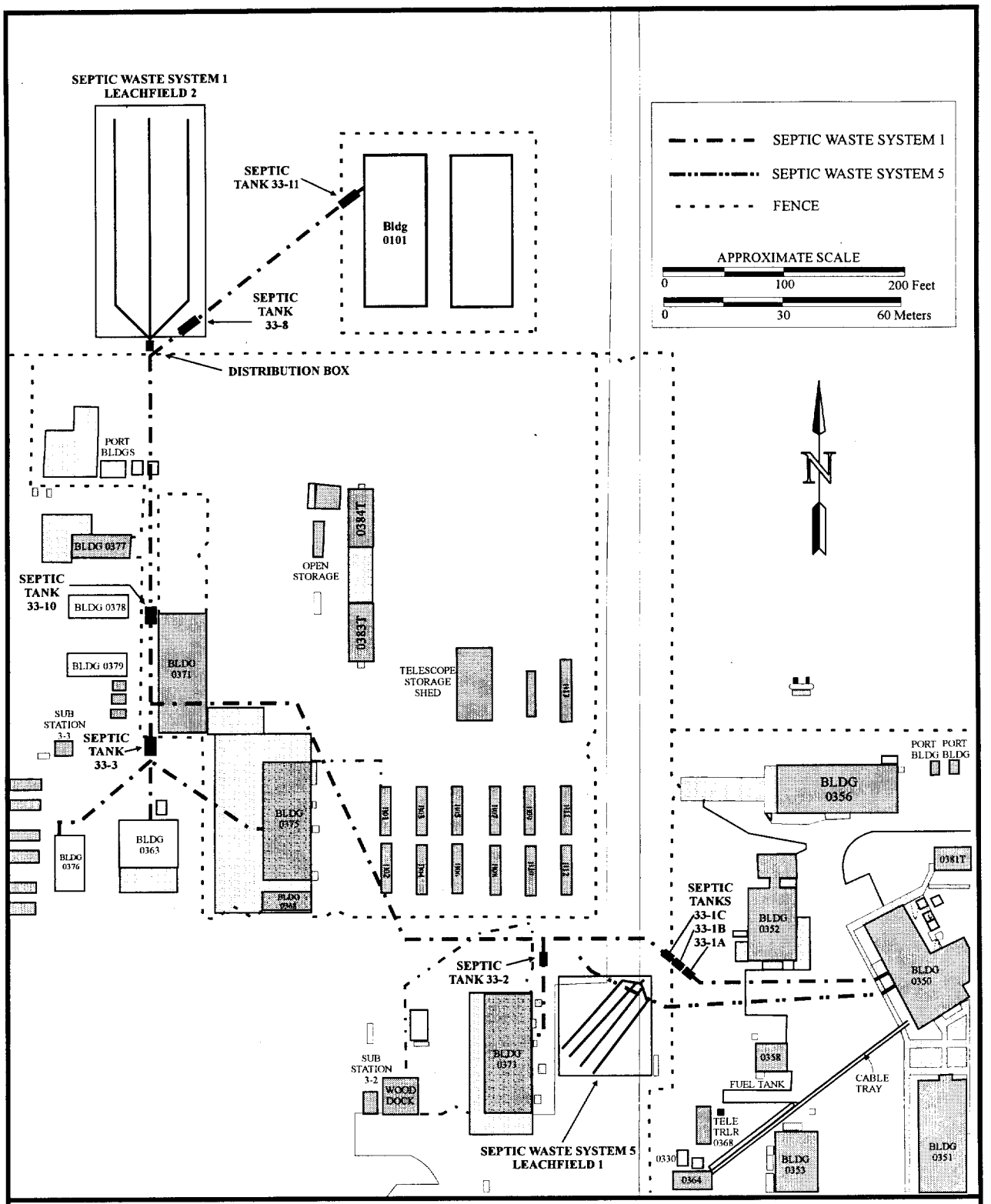

FIGURE 2
CAU 428 SEPTIC TANK LOCATIONS

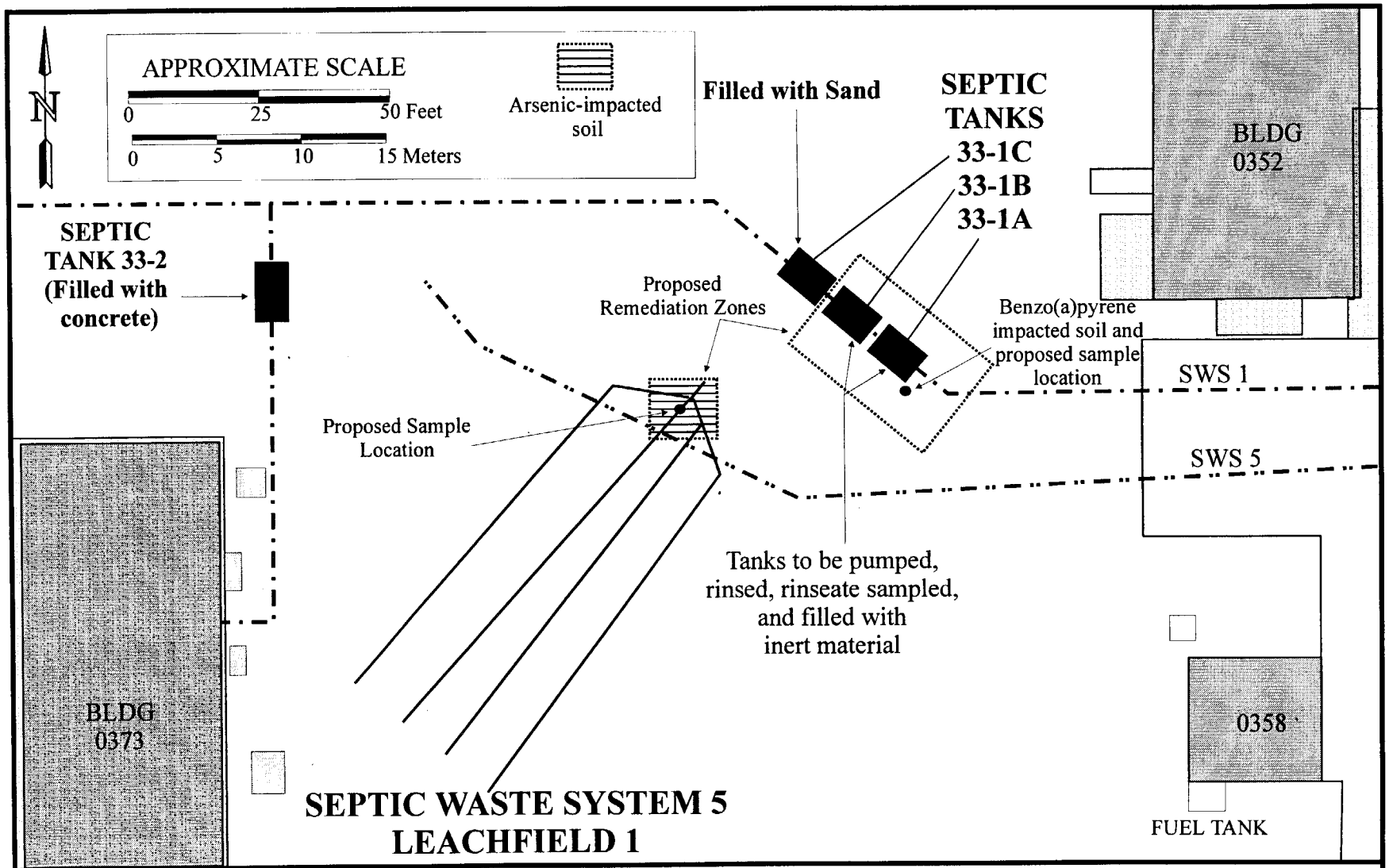

FIGURE 3
SEPTIC TANKS 33-1, 33-2, AND
SWS 5 LEACHFIELD LAYOUT

The contents of septic tanks 33-1A, 33-1B, 33-3, 33-10, and the SWS 1 Leachfield 2 Distribution Box were found to contain total petroleum hydrocarbons (TPH) as diesel above the Nevada Division of Environmental Protection (NDEP) regulatory action level for TPH of 100 mg/kg (Nevada Administrative Code, 1996). No other constituents of concern were found above action levels in the tanks. The tank contents will be removed and disposed by an off-site subcontractor. All septic tanks will be closed following applicable regulations. Tank 33-10 contains a layer of dry sludge. The tank and its contents will be excavated and disposed at the NTS Area 6 Hydrocarbon Landfill (Figures 3 and 4).

Tanks 33-1C, 33-2, and 33-11 were found to contain either concrete or sand. These tanks are considered closed. No further action is planned for these tanks (Figures 3 and 5).

Tank 33-8 contains a small amount of soil which entered through the poor fitting lid. Sample results indicate no constituents of concern were present. Therefore, the soil will be left in place and the tank will be closed by filling with an inert material such as sand or cement/grout slurry (Figure 5).

A summary of septic tank contents, laboratory results, and proposed closure activities is provided in Table 1.

1.2 SCOPE

The approved corrective action alternative was chosen in the CADD (DOE/NV, 2000). The approved alternative includes clean closure by excavation and disposal. The scope of the approved corrective action alternative consists of the following activities:

- Preplanning and site preparation.
- Excavating and removing impacted soil.
- Removing septic tank contents.
- Removing or closing septic tanks as appropriate.
- Collecting verification samples.
- Backfilling the excavations to surface grade with clean fill.
- Disposing of excavated materials and tank contents following applicable federal, state, and DOE regulations in accordance with Section 2.3 of this CAP.
- Preparing a Closure Report to document the closure activities described above.

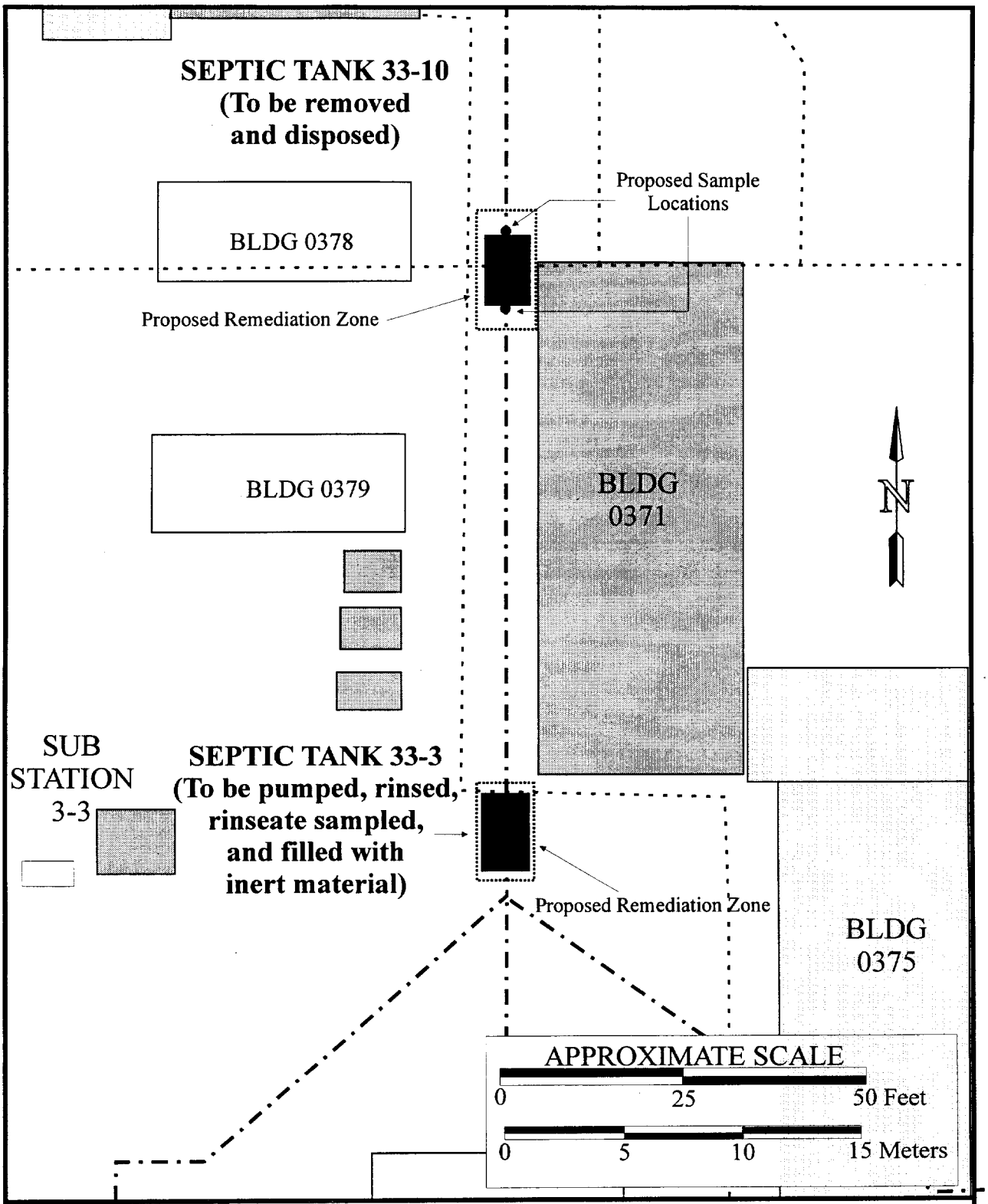

FIGURE 4
SEPTIC TANKS 33-3 AND 33-10 LAYOUT

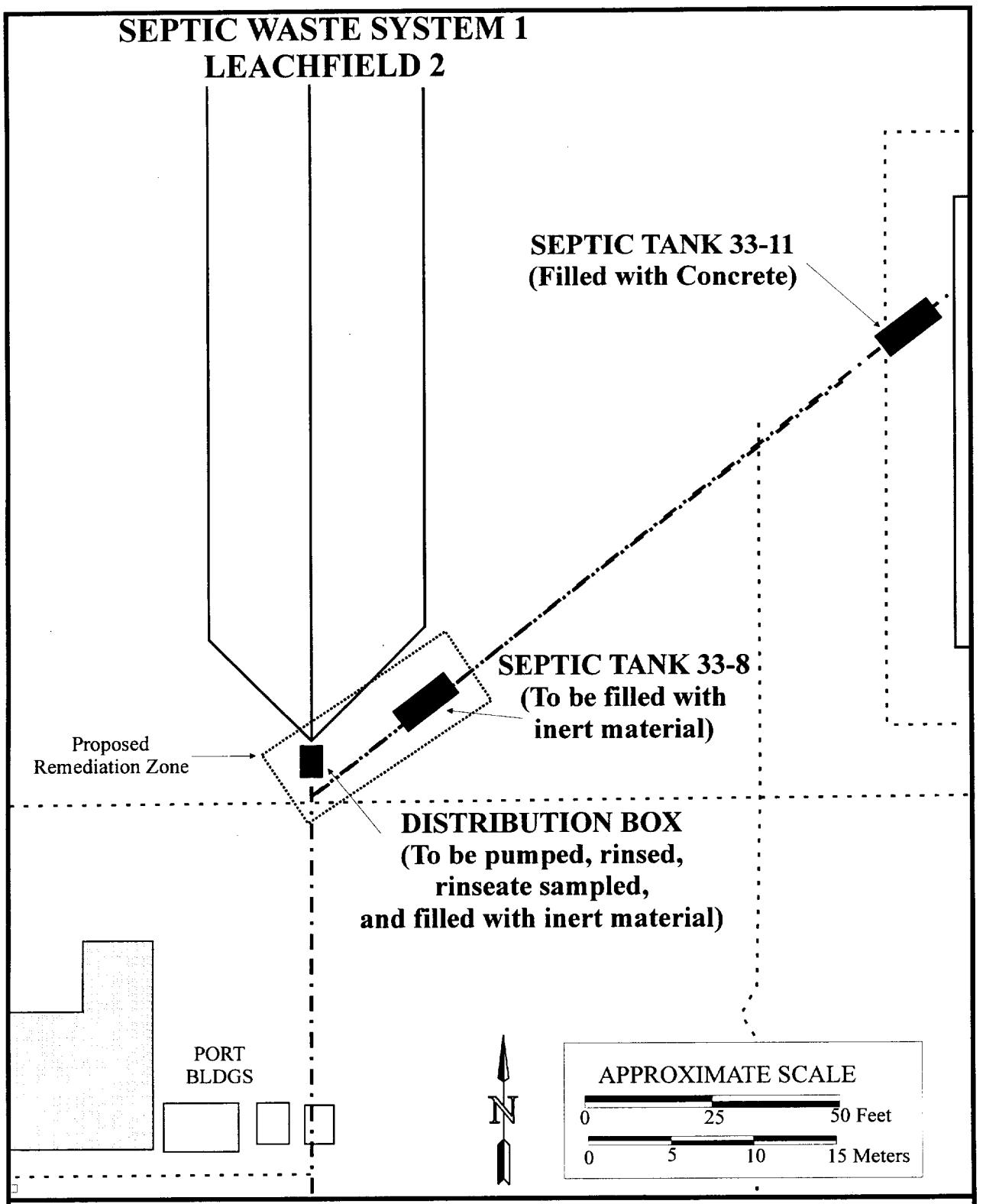

FIGURE 5
SEPTIC TANKS 33-8, 33-11, AND
SWS 1 DISTRIBUTION BOX LAYOUT

TABLE 1 - SUMMARY OF CORRECTIVE ACTIONS AT CAU 428

TANK NAME	CONTENTS	CONSTITUENT OF CONCERN (maximum concentration)	CORRECTIVE ACTION
33-1A	Septage	Diesel Range Organics (8,900 mg/kg)	Pump and dispose of content through off-site vendor, rinse, fill tank with inert material
33-1B	Septage	Diesel Range Organics (3,400 mg/kg)	Pump and dispose of content through off-site vendor, rinse, fill tank with inert material
33-1C	Sand	Not Analyzed	No further action
33-2	Cement	Not Analyzed	No further action
33-3	Septage	Diesel Range Organics (49,000 mg/kg)	Pump and dispose of content through off-site vendor, rinse, fill tank with inert material
33-8	Soil	N/A	Fill tank with inert material
33-10	Dry Sludge	Diesel Range Organics (1,300 mg/kg)	Remove tank and contents and dispose in Area 6 Hydrocarbon Landfill
33-11	Cement	N/A	No further action
SWS 1 Leachfield 2 Distribution Box	Dry Sludge	Diesel Range Organics (850 mg/kg)	Pump and dispose of content through off-site vendor, rinse, fill tank with inert material

Refer to Appendix A for laboratory results.

1.3 CORRECTIVE ACTION PLAN CONTENTS

This document is divided into the following sections in accordance with the approved FFACO Corrective Action Plan outline:

- Section 1.0 - Introduction
- Section 2.0 - Detailed Statement of Work
- Section 3.0 - Schedule
- Section 4.0 - Post-Closure Plan
- Section 5.0 - References

The appendices of this document have been modified from the approved FFACO outline. The following FFACO outline appendices have not been included or revised as indicated below:

- Appendix A1: Engineering Specifications and Drawings

  This appendix is not necessary for the site as there are no construction or engineered cover requirements for closure.

- Appendix A2: Sampling and Analysis Plan

  The sampling and analysis requirements for the site are detailed in Section 2.4, "Clean-up Verification," therefore, a separate sampling and analysis plan is not included as an appendix.

- Appendix A3: Project Organization

  This appendix is identified as Appendix B.

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2.0 DETAILED STATEMENT OF WORK

2.1 APPROVED ALTERNATIVE IMPLEMENTATION

This section describes how the approved alternative will be implemented at the Area 3 SWS 1 and 5. The approved alternative includes clean closure with excavation and disposal of impacted soils, removal and disposal of septic tank contents, closure or removal of septic tanks, verification sampling, and regrading of the site. In addition to field activities, planning and site preparation are also required.

2.1.1 PREPLANNING AND SITE PREPARATION

Prior to beginning excavation activities, the following planning and preparation activities will be accomplished:

- Preparation of planning documents such as the Site-Specific Health and Safety Plan (SSHASP), the Field Management Plan, National Environmental Policy Act (NEPA) documentation, and a Real Estate/Operations Permit (REOP).
- Site preparation including utility clearance, work permits, and delineation of excavation boundaries.
- Identification and approval of a water source for dust suppression and other construction activities.
- Scheduling and coordination of work.

2.1.1.1 SSHASP/Hazard Analysis

A SSHASP, Preliminary Hazard Assessment, and Hazard Assessment will be prepared. A copy of the SSHASP will be kept on-file in the Bechtel Nevada (BN) Environmental Restoration and the BN Environment, Safety, and Health Division Offices in Mercury, Nevada. The original document will be kept by the site Health and Safety Officer or designee at the work site. The SSHASP will be available on-site for review and signature by all workers prior to beginning work at the site. The SSHASP will provide a detailed, job-specific plan covering protection against accidents or exposure of workers to contamination. It will also discuss weather/air monitoring, accident reporting, emergency procedures, and physical and environmental hazards. The work will also be performed following the BN Environment, Safety, and Health Manual (BN, 1999a). In addition, the Material Safety Data Sheets file will be maintained by the Health and Safety Officer and will be available on-site.

2.1.1.2 Field Management Plan

A Field Management Plan will be prepared for the closure activities. The plan will outline how the work will be accomplished and provide a detailed schedule for the project. In addition, it will identify the responsible parties for each aspect of the project and determine how decisions will be made. A copy of the Field Management Plan will be placed on file at the BN Environmental Restoration offices in Mercury, Nevada, and a copy will also be available at the project field site.

2.1.1.3 NEPA Documentation

A NEPA checklist will be completed prior to beginning excavation activities at the site. If necessary, a follow-up survey will be performed and will report on the condition of existing vegetation, cultural resources, sacred sites, and wildlife immediately adjacent to the area which may be affected by construction activities, equipment and material storage areas, and access routes. Based on the findings of this survey, the excavation activities at the Area 3 SWS 1 and 5 will follow all applicable federal, state, and local laws, regulations, and permits for protection of the environment.

2.1.2 PRE-CLOSURE FIELD ACTIVITIES

Pre-closure field activities were conducted during May 2000. The purpose of these activities was to resample the Tank 33-3 contents, collect integrity samples of Tank 33-8 and sample the contents, and locate and sample Tank 33-11. Activities associated with Tanks 33-8 and 33-11 were done at the request of the NDEP.

Soil samples were collected from the backhoe bucket using a decontaminated stainless steel scoop. Tank content samples were collected from the tanks using a decontaminated long-handled polyethylene scoop. All samples, except the Tank 33-3 contents and trip blanks, were analyzed for total volatiles, total semivolatiles, total Resource Conservation and Recovery Act (RCRA) metals, total petroleum hydrocarbons, and 20-minute gamma spectrometry. Tank 33-3 was analyzed only for 20-minute gamma spectrometry and isotopic uranium. Trip blanks were analyzed only for total volatile organics.

Resampling the contents of Tank 33-3 was required to characterize the waste because the original samples indicated the presence of uranium isotopes above background levels while duplicate samples did not. The results of the confirmation samples indicated no radiological constituents above background levels.

Integrity samples of Tank 33-8 were not collected during initial characterization activities because of difficulties in accessing the tank. The tank was accessed in May 2000 and integrity samples were collected from under both ends of the tank. The NDEP also requested that the soil inside the tank be sampled. The results of all Tank 33-8 samples indicated no constituents of concern were present.

The NDEP requested that Tank 33-11 be located and sampled. The tank was located adjacent to Building 0101, was in good condition, and was found to have been filled with concrete. The NDEP was informed of the tank's condition. Integrity samples were collected from the north end of the tank. As agreed on by the NDEP, integrity samples were not collected from the south end of the tank because of a propane storage tank located nearby. Sample results indicated no constituents of concern were present.

Quality control samples were also collected during the May 2000 sampling activities. These consisted of a blind replicate from the south end of Tank 33-8 and an equipment blank. Trip blanks were also made to accompany both shipments containing samples to be analyzed for volatiles. Results from the blind replicate were the same as those for the samples of Tank 33-8. Results from the equipment blank and trip blanks indicated that no constituents of concern were present. A summary of sample locations, analyses, and results is provided in Table 2.

Pre-closure field activity documentation, including photographs, laboratory data, chain of custody forms, and field notes is provided in Appendix A.

2.1.3 FIELD ACTIVITIES

Soil contains arsenic and benzo(a)pyrene at one location each (Figures 3 and 4). Approximately 4.5 cubic meters (m^3) (6 cubic yards [yd^3]) of arsenic-impacted soil and approximately 0.8 m^3 (1 yd^3) of benzo(a)pyrene soil will be removed by excavating. The depth of the excavations is not anticipated to exceed 2.4 meters (m) (8 feet [ft]). The arsenic-impacted soil is covered with approximately 1.5 m (5 ft) of clean soil and the benzo(a)pyrene-impacted soil is covered with approximately 1 m (3 ft) of clean soil. This clean soil will be stockpiled and used to backfill the excavations. The impacted soil will be stockpiled at each location, then loaded into a dump truck, and transported to the NTS Area 23 Sanitary Landfill for disposal. The waste will be managed following Section 2.3 of this CAP.

The contents of Septic Tanks 33-1A, 33-1B, 33-3, and the SWS 1 Leachfield 2 Distribution Box contain TPH as diesel above the NDEP regulatory action level of 100 mg/kg. Therefore, the contents will be removed for disposal. The tanks will be rinsed with water until visually clean. The tank contents and rinse water will be pumped from the tanks and disposed by an off-site subcontractor.

TABLE 2 - SUMMARY OF PRE-CLOSURE SAMPLING ACTIVITIES

SAMPLE NUMBER	DATE COLLECTED	SAMPLE MATRIX	LOCATION	ANALYSIS	RESULTS
33-3-TANK	5/22/2000	Sludge	Contents of tank 33-3	Gamma 20, Isotopic U	None detected
33-11-NORTH	5/23/2000	Soil	Below the north end of tank 33-11	Volatile Organic Compounds (VOCs), Semi-volatile Organic Compounds (SVOC), Metals, TPH, Gamma 20	arsenic: 9.3 mg/kg barium: 191 mg/kg chromium: 4.3 mg/kg lead: 8.2 mg/kg Ac-228: 1.81 pCi/g K-40: 25.7 pCi/g Ra-226: 1.41 pCi/g Th-228: 2.00 pCi/g
33-8-INT	5/31/2000	Soil	Contents of tank 33-8	VOCs, SVOCs, Metals, TPH, Gamma 20	methylene chloride: 14 ug/kg* barium: 110 mg/kg chromium: 2.3 mg/kg lead: 7.6 mg/kg selenium: 5.3 mg/kg K-40: 34.8 pCi/g Ra-226: 1.29 pCi/g Th-228: 2.41 pCi/g Th-232: 2.05 pCi/g

TABLE 2 (continued) - SUMMARY OF PRE-CLOSURE SAMPLING ACTIVITIES

SAMPLE NUMBER	DATE COLLECTED	SAMPLE MATRIX	LOCATION	ANALYSIS	RESULTS
33-8-NORTH	5/31/2000	Soil	Below the north end of tank 33-8	VOCs, SVOCs, Metals, TPH, Gamma 20	methlyene chloride: 14 ug/kg* barium: 93 mg/kg chromium: 3.1 mg/kg lead: 8.3 mg/kg selenium: 8.8 mg/kg K-40: 27.2 pCi/g Ra-226: 1.31 pCi/g Th-228: 1.96 pCi/g Th-232: 2.04 pCi/g
33-8-SOUTH	5/31/2000	Soil	Below the south end of tank 33-8	VOCs, SVOCs, Metals, TPH, Gamma 20	methylene chloride: 16 ug/kg* barium: 110 mg/kg chromium: 3.0 mg/kg lead: 9.1 mg/kg selenium: 10 mg/kg K-40: 28.7 pCi/g Ra-226: 1.24 pCi/g Th-228: 1.90 pCi/g Th-232: 1.84 pCi/g

TABLE 2 (continued) - SUMMARY OF PRE-CLOSURE SAMPLING ACTIVITIES

SAMPLE NUMBER	DATE COLLECTED	SAMPLE MATRIX	LOCATION	ANALYSIS	RESULTS
33-8-SOUTHD	5/31/2000	Soil	Duplicate of 33-8-south	VOCs, SVOCs, Metals, TPH, Gamma 20	methylene chloride: 15 ug/kg* barium: 110 mg/kg chromium: 2.3 mg/kg lead: 7.4 mg/kg selenium: 6.8 mg/kg K-40: 28.2 pCi/g Ra-226: 1.21 pCi/g Th-228: 2.19 pCi/g Th-232: 2.02 pCi/g
TB52200	5/22/2000	RO Water	Trip Blank	VOCs	None detected
TB53000	5/30/2000	RO Water	Trip Blank	VOCs	2-butanone: 32 ug/kg**
33-8-RINSATE	6/5/2000	RO Water	Equipment Blank	VOCs, SVOCs, Metals, TPH, Gamma 20	bromodichloromethane: 2.5 ug/l** chloroform: 3.2 ug/l** diesel range organics: 0.22 mg/l U-235: 97.6 pCi/l**

* Analyte also detected in method blank.
** Analyte detected below the method reporting limit.
Analytical Method Used:
VOC- SW846, EPA Method 8260
SVOC- SW846, EPA Method 8270
Metals- SW846, EPA Method 6010/7470
TPH- EPA SW846 8015B Modified
Gamma 20- BN Procedure L-E10.602.PC
Isotopic U- BN Procedure OI-2154.354

Closure activities will include rinsing the tanks until visually clean and filling with an inert material such as sand or cement/grout slurry. Verification samples of the final rinse water will be collected as discussed in Section 2.4 of this plan.

Septic Tank 33-10 contains dry sludge containing petroleum hydrocarbons. It will be removed with the contents and disposed at the NTS Area 6 Hydrocarbon Landfill. Tank 33-8 contains a small amount of soil that flowed in through a poorly fitting lid. Sample results of the contents indicated that no constituents of concern are present. The soil will not be removed prior to closure in place.

Tanks 33-1C, 33-2, and 33-11 already contain inert material, therefore, no additional closure activities are required.

2.1.3.1 Decontamination of Equipment

Sampling equipment will be decontaminated off-site prior to the start of field activities. Equipment will be decontaminated using Alconox™ and water followed by a deionized water rinse. Equipment will be air dried and wrapped in aluminum foil.

Only the heavy equipment bucket will be in contact with impacted soil. Therefore, if necessary, only the bucket will require decontamination. The bucket will be decontaminated on-site over the impacted soil piles with a solution of Alconox™ and water, and rinsed with clean water. The amount of water used for decontamination will be minimal and will not result in free liquid in the soil piles.

If excessive amounts of water are required for decontamination or if more than the bucket becomes impacted, a lined, bermed decontamination pad will be used. Equipment will be driven onto the pad and steam cleaned. Decontamination rinseate from heavy equipment decontamination that remains in the lined berm at the close of the project will be placed into a 208 L (55-gal) drum prior to disposal in the Area 23 Sewage Lagoon. The decontamination liner will be disposed of in the Area 23 Sanitary Waste Landfill.

2.1.3.2 Backfilling and Grading of Site

The excavated areas will be backfilled with clean fill soil and leveled to existing grade to minimize surface obstructions and ponding.

2.2 CONSTRUCTION QUALITY ASSURANCE/QUALITY CONTROL

Construction activities consist of excavation and earth moving. Permeability and compaction testing will not be necessary. As a result, construction quality assurance/quality control is not required.

2.3 WASTE MANAGEMENT

Waste streams generated at CAU 428 will include soil containing arsenic and benzo(a)pyrene, septic sludge containing petroleum hydrocarbons as diesel, and nonhazardous sanitary trash. While the concentrations of the constituents in the soil are above the PALs, the concentrations are below that which are hazardous under RCRA. Therefore, the soil will be disposed in the NTS Area 23 Sanitary Landfill. Petroleum hydrocarbon-impacted septage will be disposed by an off-site subcontractor. Tank 33-10 will be disposed in the NTS Area 6 Hydrocarbon Landfill. Sanitary trash will be disposed in a TTR sanitary landfill. Table 3 summarizes the waste management practices that will be used during closure activities at CAU 428.

Uranium isotopes were detected above established background levels in samples collected from Tank 33-3. Duplicate samples from this tank did not show the presence of these isotopes above background levels. The tank was resampled in May 2000 and the results indicated no radiological constituents above background levels.

The ratios of uranium-234, -235, and -238 showed a slight (less than 2 percent) enrichment of the uranium isotopes. Process knowledge indicates that any enriched uranium entering the system would have probably been related to weapons research, with levels of enrichment much higher (greater than 90 percent) than those detected, resulting in much higher levels of enrichment than those detected. BN Health Physics reviewed the data and concluded that the presence of uranium-235 was the result of natural variations in the isotopes and not from enrichment. Therefore, the waste has no added radioactivity and will not require management as low-level waste.

2.3.1 CONTAINER MANAGEMENT

All waste is anticipated to be placed directly into the vehicle that will be used to transport the waste for disposal, either a dump truck for soil or the subcontractor's pump truck for septic tank contents.. If necessary, 208-liter (55-gallon) drums will be used to store waste generated at CAU 428. All drums must be in good condition (no significant rust or dents). Drums will only be

TABLE 3 - MANAGEMENT OF WASTE TYPES TO BE PRODUCED AT CAU 428

MEDIA	WASTE TYPE	MANAGEMENT PRACTICE
Impacted soil and septage	Nonhazardous soil impacted with arsenic and benzo(a)pyrene	Nonhazardous waste soil impacted with arsenic and benzo(a)pyrene will be placed into 208-L (55-gal) drums or 20-yd^3 end dumps. Soil may be stockpiled, as warranted, if trucks are not readily available for loading. Stockpiled soil will be covered with plastic at the end of the day. The waste will be transported to the NTS and disposed of at the Area 23 Sanitary Landfill. Nonhazardous waste management practices will adhere to B-E10/97.01, Nevada Operations Site Pollution Prevention Program Plan (BN, 1997) and CD-0442.010 "Waste Management and Permitting" (BN, 1999b).
	Petroleum hydrocarbon impacted septage and rinseate	Petroleum hydrocarbon impacted waste will be pumped directly from the tanks and distribution box into an off-site vendor pumper truck. The waste will be disposed of by the off-site vendor. Nonhazardous waste management practices will adhere to B-E10/97.01, Nevada Operations Site Pollution Prevention Program Plan (BN, 1997) and CD-0442.010 "Waste Management and Permitting" (BN, 1999b).
Decontamination Rinseate and Plastic Liner	Nonhazardous decontamination rinseate and liner	Because the backhoe bucket is the only part of the equipment that will be impacted with nonhazardous soil, it will be decontaminated and rinseate (Alconox™ and water) will be collected over the soil piles. If more than the bucket becomes impacted, a lined decontamination pad will be used. Decontamination rinsate from heavy equipment decontamination that remains in the lined berm at the close of the project will be placed into a 208 L (55-gal) drum prior to disposal in the Area 23 Sewage Lagoon. The decontamination liner along with other nonhazardous debris, will be disposed of in the Area 23 Sanitary Waste Landfill. Nonhazardous waste management practices will adhere to B-E10/97.01, Nevada Operations Site Pollution Prevention Program Plan (BN, 1997) and CD-0442.010 "Waste Management and Permitting" (BN, 1999b).
Miscellaneous trash and construction debris.	Septic tank 33-10 containing hydrocarbon impacted sludge	Tank 33-10 will be removed with the contents left in place. The tank will be transported to the NTS Area 6 Hydrocarbon Landfill for disposal.
	Nonhazardous trash, and construction debris	Nonhazardous trash, and construction debris will be disposed of in TTR Construction Landfill.

filled 7/8 of the maximum capacity. If the drum begins to leak, the contents must be transferred to a drum that is in good condition. The drums must be lined or made of a material that will not react with the waste. The drums must always be closed and locked while stored unless waste is added or removed. They must also be handled in such a manner that will not jeopardize the integrity of the drum.

A secondary containment system will only be required if the drums hold free liquid or are unprotected from contact with accumulated liquid. Drums with solidified contents will not require secondary containment.

Appropriate labels and relevant information will be marked on each drum with an indelible marker, or equivalent. The information will be legible and clearly visible for inspections. Pertinent data may be written on duct tape or a blank adhesive label affixed to the side of the container. The drums will be labeled with information such as:

- Waste-tracking label.
- Type of waste in the drum.
- Location waste was derived from.
- Date of accumulation.
- Awaiting/pending analysis if sampling is required.

2.3.2 SITE CONTROL

Where appropriate, temporary barricades (fencing, rope, warning cones, etc.) will be placed around the remediation zones. A remediation zone is an area where remediation work is being performed, but is not an exclusion zone as defined in Title 29 Code of Federal Regulations (CFR) 1910.120 (Occupational Safety and Health Administration [OSHA], 1996). Appropriate warning signs will be posted. Only properly trained personnel wearing appropriate personal protective equipment as specified in the SSHASP will enter the remediation zones. The proposed remediation zones and site layout are provided in Figures 3-5.

2.3.3 PERSONNEL TRAINING

Title 29 CFR 1910.120 (OSHA, 1996) details the occupational safety and health requirements that will be followed for personnel supporting excavation activities. All personnel will be required to read, understand, and sign the SSHASP prior to working at the site. A tailgate safety briefing will be held every morning and, as needed, as activities or circumstances change. Only trained and qualified personnel will operate heavy equipment. Training requirements will be detailed in the SSHASP.

2.3.4 WASTE MINIMIZATION

For the duration of the project, site workers will adhere to the BN Waste Minimization and Pollution Prevention Program. Care will be taken to segregate waste from non-waste materials, when possible, to avoid the generation of additional regulated waste.

2.4 CLEAN-UP VERIFICATION

2.4.1 VERIFICATION SAMPLING

Verification sampling is required for a clean site closure. A verification program must support the field decision that any remaining constituents of concern are less than remediation standards and provide the regulator with confidence that sufficient samples have been collected to verify that the site has been remediated. For CAU 428, the approved CADD (DOE, 2000) indicated that arsenic, benzo(a)pyrene, and TPH as diesel are the only constituents of concern above remediation standards. At SWS 1 septic tank 33-1A, soil verification samples will be analyzed for total semi-volatile organic compounds using U.S. Environmental Protection Agency (EPA) Method 8270. The final rinseate water from the septic tanks will be analyzed for TPH as diesel using EPA Method 8015B Modified. At the SWS 5 Leachfield, soil verification samples will be analyzed for total RCRA metals using EPA Methods 6010 and 7470.

Samples will also be collected from below Tank 33-10 after it is removed to verify that the contents did not leak from the tank. One soil verification sample will be collected from under each end of the tank. These two soil samples will be analyzed for total metals, total volatiles, total semi-volatiles, 20-minute gamma scan, and TPH as diesel. Soil showing obvious signs of releases, such as staining or odors, will be excavated and containerized. Samples of the impacted soil will be collected for waste characterization purposes and verification samples will be collected from the excavation.

For excavations up to 1.2 m (4 ft) deep, samples will be collected by hand using a decontaminated stainless steel scoop. For excavations exceeding 1.2 m (4 ft) in depth, the samples will be collected as grab samples from the soil in the center of the decontaminated bucket of the excavation equipment. Rinseate samples will be collected from the septic tanks using a pre-cleaned, disposable, long-handled scoop. All samples will be placed in the appropriate pre-cleaned sample containers.

The closure criteria will be based on the presence of these constituents in the verification samples. The TPH as diesel concentration will not exceed 100 mg/kg for any sample. The PAL for benzo(a)pyrene is 360 µg/kg. The PAL for arsenic is 3.0 mg/kg. Recent studies have shown natural occurring concentrations of arsenic in the soil near the TTR are as high as 43 mg/kg

(Nevada Bureau of Mines and Geology, 1998; DOE/NV, 2000; Sandia National Laboratories, 1999). Previous sampling activities in Area 3 of the TTR showed concentrations of arsenic consistently higher than the PAL, up to 24.1 mg/kg (DOE/NV, 1998). At CAU 428, sample TTR01227 had 68.7 mg/kg and is the only sample that implies contamination (DOE, 2000). The next highest detected arsenic concentration is found in sample TTR01225 with 25.8 mg/kg. Since the arsenic concentration is this sample is not unusual for this portion of the state of Nevada, 26 mg/kg will be used as the clean-up criteria for arsenic. If these criteria are not met, additional tank rinsing or soil excavation and verification sampling will be done. A two-week analytical turnaround time will be requested for all samples.

A total of four verification samples (one each from tank 33-1A, 33-1B, 33-3, and the SWS 1 Leachfield 2 Distribution Box) will be taken of the final rinseate. These samples will be analyzed for TPH as diesel.

Verification samples will be collected every 1.5 m (5 ft) laterally and vertically within the zone of impacted soil. Based on the assumed dimensions of the excavation, a total of 10 verification samples will be collected from the arsenic-impacted soil excavation. Two samples will be collected from each sidewall and the bottom of the excavation. Sidewall samples will be collected from the zone of impacted soil which is 1.5-2.3 m (5-7.5 ft) below ground surface. The samples will be analyzed for total metals. Soil showing obvious signs of releases, such as staining or odors, will be excavated and containerized. Samples of the impacted soil will be collected for waste characterization purposes and verification samples will be collected from the excavation.

A total of five verification samples will be collected from the benzo(a)pyrene-impacted soil excavation. One sample will be collected from each sidewall and the bottom of the excavation. Sidewall samples will be collected from the zone of impacted soil which is 1-1.2 m (3-4 ft) below ground surface. The samples will be analyzed for total semi-volatile organic compounds.

If the dimensions of either excavation increases, additional verification samples will be collected, as appropriate.

In addition to the laboratory samples, replicate soil samples will be taken and analyzed using a photoionization detector (PID) with a 11.2 to 11.7 electron volt lamp. This will be done to field screen soil samples for the presence of volatile and semi-volatile organic compounds. Soil will be placed into a plastic bag. The bag will be sealed and placed in the sun for 30 minutes and then headspace analysis will be done.

A summary of the number of samples to be collected and the analyses to be performed is provided in Table 4. Proposed sample locations are provided in Figures 3-5.

TABLE 4 - CAU 428 VERIFICATION SAMPLING PARAMETERS

PARAMETER	NUMBER OF SAMPLES	NUMBER OF QUALITY CONTROL SAMPLES	ANALYTICAL METHOD	SAMPLE CONTAINER
Tanks 33-10 Soil Samples				
Total Metals	2	1 Blind Replicate 1 Equipment Blank	SW-846, EPA Method 6010/7470 (EPA, 1996)	1- 250 mL glass jar 1- 1 L glass jar
Total Volatile Organic Compounds	2	1 Blind Replicate 1 Equipment Blank 1 Trip Blank 1 MS/MSD*	SW-846, EPA Method 8260 (EPA, 1996)	2- 120 mL glass jar 3- 40 mL vials 3- 40 mL vials (all zero headspace)
Total Semi-Volatile Organic Compounds	2	1 Blind Replicate 1 Equipment Blank 1 MS/MSD*	SW-846, EPA Method 8270 (EPA, 1996)	1- 250 mL glass jar 1- 1 L glass jar
Total Petroleum Hydrocarbons-Diesel	2	1 Blind Replicate 1 Equipment Blank	SW-846, EPA Method 8015 Modified (EPA, 1996)	1- 25 mL glass jar 1- 1 L glass jar
Radioactive Constituents: Gamma Scan, Isotopic Uranium**	2	1 Blind Replicate 1 Equipment Blank	L-E10.602.PC (BN, 1996) OI-2154.354 (BN, 2000)	1- 500 mL Nalgene® bottle 2- 500 mL Nalgene® bottle

TABLE 4 (continued) - CAU 428 VERIFICATION SAMPLING PARAMETERS

PARAMETER	NUMBER OF SAMPLES	NUMBER OF QUALITY CONTROL SAMPLES	ANALYTICAL METHOD	SAMPLE CONTAINER
SWS 5 Leachfield 2 Soil Samples				
Total Metals	10	1 Blind Replicate	SW-846, EPA Method 6010/7470 (EPA, 1996)	1 - 250 mL glass jar
Tank 33-1A Soil Samples				
Total Semi-Volatile Organic Compounds	5	1 Blind Replicate 1 MS/MSD*	SW-846, EPA Method 8270 (EPA, 1996)	1 - 250 mL glass jar
Tanks 33-1C, 33-3, and SWS 1 Leachfield Distribution Box Rinsate Samples				
Total Petroleum Hydrocarbons-Diesel	3 (1 each)	1 Blind Replicate	SW-846, EPA Method 8015 Modified (EPA, 1996)	1 - 1 L glass jar

* Matrix spike/matrix spike duplicate (MS/MSD) samples will be designated from an existing sample. No additional sample volume will be collected.

** Samples will be analyzed for isotopic uranium only if the gamma scan indicates an elevated detection of Uranium daughter products.

Sampling activities will be recorded in a bound logbook with numbered pages and will include the following information:

- Date and time of sampling activities
- Location of sampling activities
- Sample numbers
- Physical description of sample including any staining or odors
- Soil type
- Volume of each sample collected
- PID headspace sample results

Field notes will be recorded in black ink. Any errors will be crossed out with a single line and initialed.

All samples will be labeled with a unique sample number using the following nomenclature:

SWS1-331A-1

Where:

- SWS1 is the Corrective Action Site
- 331A is the site location (septic tank number or leachfield)
- 1 is the sample number.

All samples will be cooled to 4°C (40°F) and transported to the BN Analytical Services Laboratory under strict chain-of-custody procedures.

2.4.2 QUALITY CONTROL SAMPLES

A minimum of one quality control sample (blind replicate) will be collected for every 20 samples collected. Each blind replicate will be labeled with its own distinct sample number so that the laboratory will not be able to identify it as a quality control sample. One trip blank will be collected for the total volatiles analysis. One sample from each total volatiles and total semi-volatiles sample batch will be designated for the laboratory to run a matrix spike and a matrix

spike duplicate. In addition, at least one equipment blank will be collected for each sample batch. The data packages provided by the laboratory will be evaluated by qualified personnel.

2.5 PERMITS

Permits required for this project include an Excavating and Penetration Permit and a REOP.

2.5.1 EXCAVATING AND PENETRATION PERMIT

An approved Excavating and Penetration Permit (BN-0084) will be obtained prior to excavation. The permit contains a justification for the trenching operation and a checklist of pertinent organizations who must inspect the site so that the trenching will not impact utilities or cause a hazardous situation to workers. A copy of this permit will be kept at the project site by the construction superintendent.

2.5.2 REOP

A REOP will be completed prior to starting field activities. This DOE permit authorizes BN the right of occupancy and use of the DOE real estate for closure activities.

3.0 SCHEDULE

3.1 PROJECT SCHEDULE

Field work is tentatively planned for the fall of 2000. The schedule will require modifications if conditions exist that are outside the assumptions on which the schedule is developed. The DOE will keep the NDEP apprised of any conditions that may impact the project schedule. In the event that the project schedule requires modifications, the DOE will consult with NDEP personnel prior to making any changes.

3.2 FIELD WORK CLOSURE SCHEDULE

A tentative schedule for planned closure work consists of the following:

- Prefield Activities October 2000
- Excavation Activities November 2000
- Waste Disposal November 2000
- Verification Sampling November 2000
- Final Site Restoration December 2000
- Closure Report July 2001

Field work will be done in the safest and most efficient manner possible. Sufficient flexibility has been placed in the project schedule to account for minor difficulties (weather, equipment breakdown, etc.). The schedule may require modification if conditions exist that are outside the assumptions on which the scope and schedule are developed.

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4.0 POST-CLOSURE PLAN

The clean closure of CAU 428 Area 3 SWS 1 and 5 is expected to remove waste to levels below the remediation standard. Therefore, post-closure care is not required.

4.1 INSPECTIONS

Because this is a clean closure, all constituents of concern will have been removed to the remediation standard. Inspections will not be required following closure and the land can be released for unrestricted use.

4.2 MONITORING

Because this is a clean closure, post-closure monitoring is not required at CAU 428 Area 3 SWS 1 and 5 as all constituents of concern will have been removed to the remediation standard. The land can be released for unrestricted use.

4.3 MAINTENANCE AND REPAIR

The site will be clean closed. Maintenance or repairs will not be necessary at the site following closure.

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5.0 REFERENCES

BN, see Bechtel Nevada.

Bechtel Nevada, 1996, "Gamma Ray Spectrometry Operations," L-E10.602PC, Las Vegas, NV.

Bechtel Nevada, 1997, Nevada Operations Site Pollution Prevention Program Plan, B-E10/97.01, Revision 3, Las Vegas, NV.

Bechtel Nevada, 1999a, Environment, Safety, and Health Manual, Las Vegas, NV.

Bechtel Nevada, 1999b, "Waste Management and Permitting," Company Directive CD-0442.010, Revision 0, Las Vegas, NV.

Bechtel Nevada, 2000, "Isotopic Determination of Uranium in Environmental Samples," OI-2154.354.

DOE, see U.S. Department of Energy.

EPA, see U.S. Environmental Protection Agency

Federal Facility Agreement and Consent Order (FFACO) of 1996. Prepared by Nevada Division of Environmental Protection, U.S. Department of Energy, and U.S. Department of Defense.

Nevada Administrative Code, 1996, NAC 445A.2272, "Contamination of soil: Establishment of action levels," As adopted by the Nevada Environmental Commission, September, Carson City, NV.

Nevada Bureau of Mines and Geology, 1998, Mineral and Energy Resource Assessment of the Nellis Air Force Range, Open-File Report 98-1, Reno, NV.

Occupational Safety and Health Administration, 1996, Title 29 Code of Federal Regulations 1910.120, Hazardous Waste Operations and Emergency Response, Washington, D.C.

Sandia National Laboratories, 1999, 1998 Annual Site Environmental Report, Tonopah Test Range, Nevada, Sand99-2279, Albuquerque, NM.

U.S. Department of Energy, Nevada Operations Office, 1998, Corrective Action Decision Document for the Area 3 Landfill Complex, Tonopah Test Range, Nevada, Corrective Action Unit 424, DOE/NV--496, Las Vegas, NV.

U.S. Department of Energy, Nevada Operations Office, 1999, Corrective Action Investigation Plan for Corrective Action Unit 428: Area 3 Septic Waste Systems 1 and 5, Tonopah Test Range, Nevada, Revision 0, DOE/NV--541, Las Vegas, NV.

U.S. Department of Energy, Nevada Operations Office, 2000, Corrective Action Decision Document for Corrective Action Unit 428: Area 3 Septic Waste Systems 1 and 5, Tonopah Test Range, Nevada, Revision 0, DOE/NV--587, Las Vegas, NV.

U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846), Third Edition, Washington, D.C.

APPENDIX A

PRE-CLOSURE ACTIVITY DOCUMENTATION

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FIELD NOTES

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1030 - ARRIVE TTR, CAMERA PASS, LODGING.
- STOPPED BY THE COLONEL'S OFFICE TO LET HIM KNOW WE ARE IN TOWN, HE IS OUT OF HIS OFFICE UNTIL 0830 TOMORROW.
- OVER TO THE OFFICE, TELECONS.
- LUNCH. BACK TO OFFICE. CREW STARTS ARRIVING
1145 - OUT TO MAIN GATE TO PICK UP DANNY ELLIS - OPERATOR.
1220 - MOST OF THE REST OF CREW SHOWS UP.
1230 - GENERAL MEETING OF THE CREW, WORK SCOPE, TAILGATE SAFETY BRIEFING
1300 - OPERATOR OVER TO WESTINGHOUSE TO BORROW FORKLIFT.
1315 - OFFLOAD STAKE-BED TRUCK.
1340 - SITE WALK - 3 LOCATIONS.
- DOE ON SITE - KEVIN CABBLE, RUNORE WYCOFF, AND RENEE THOMAS.
1400 - TAILGATE SAFETY BRIEFING IN PREPARATION TO BEGIN TANK 33-3.
1430 - PREP SITE 33-3 FOR EXCAVATION. 2 PHOTOS
1440 - BEGIN EXCAVATION
1500 - EXPOSE LID OF TANK - PHOTO.
1535 - TAKE SAMPLE, 33-3-1, REPLACE LID, BACKFILL EXCAVATION.
1605 - EXCAVATION/SAMPLING OF 33-3 COMPLETE.
- BEGIN LOGISTICS FOR 33-11
1630 - CRITIQUE WITH DOE, ISSUES; ① DOE WAS NOT OFFERED A TAILGATE SAFETY MEETING, ② EZ / NOT SET UP (WE SET UP A WORK AREA, WHICH WE THOUGHT WAS SUFFICIENT), ③ CARBORET SMOKING IN WORK ZONE, H&S OFFICER DRINKING WATER PERCEIVED IN WORK AREA, ④ THEY DID NOT OBSERVE ME WASH MY HANDS, BECAUSE OF THEIR LOCATION.

SIGNATURE Donald A. Cox DATE 22 MAY 00

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

1645 - THE TEAM ASSEMBLED IN THE BN OFFICE TO ACCESS THE DAY, AND CRITIQUE THE AUDIT RESULTS.

- WE FELT THAT EVEN THOUGH THERE WERE A COUPLE OF MINOR INFRACTIONS, THE TEAM HAD CONDUCTED WORK ON THIS FIRST TANK IN A SAFE AND EFFICIENT MANNER.
- WE DISCUSSED SOLUTIONS AND DECIDED TO BEGIN TOMORROW WITH A "CLEAN SLATE" AND EVERYONE THINKING ABOUT HOW WE MAY IMPROVE THE SITUATION.

1745 - SECURE AND DEPART OFFICE.

SIGNATURE Donald B. Cox			DATE 22 MAY 00
DISCLOSED TO AND UNDERSTOOD BY	DATE	WITNESS	DATE

CAU 428, AREA 5 SEPTIC WASTE

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BOOK NO. 3.

Work continued from Page ____ 23 MAY 00

0615 - ARRIVE BN OFFICE, MORNING REPORT, PROJECT DOCUMENTATION.
- PREP FOR THE DAYS ACTIVITIES.

0700 - CREW ASSEMBLED, REVIEW OF SITE SPECIFIC HEALTH AND SAFETY PLAN/TAILGATE SAFETY BRIEFING.

0800 - WALK SITE, ESTABLISH ACCESS, SET-UP EXCLUSION ZONE (EZ)

0830 - THREE PHOTOS OF 33-11 SITE, BEGINNING WORK.
- RECONSTRUCTED 33-3 SCENE, TWO PHOTOS, 35 METERS FROM DOE SUBURBAN TO 33-3 TANK.

0930 - CHAINLINK FENCE CUT AND ROLLED BACK, PREP TO CUT SIDEWALK.

1000 - DOE ON SITE, BRIEFED ON PROJECT ACTIVITIES, TAILGATE SAFETY BRIEFING - NO QUESTIONS OR COMMENTS.

1030 - OUT TO MAIN GATE TO RETRIEVE TERESA MORGAN, BACK TO SITE, PROJECT BRIEF, TAILGATE SAFETY BRIEFING.

1110 - CUT AND REMOVE SIDEWALK, ~~BEGIN EXCAVATION OF TANK 33-11~~ DAC 23 MAY 00 → PHOTO.

1130 - OBTAIN FORKLIFT FROM WESTINGHOUSE TO PICK SIDEWALK SECTION.

1200 - LUNCH

1300 - BACK TO SITE (33-11) PROJECT DOCUMENTATION.
- BEGIN EXCAVATION OF TANK 33-11. TWO PHOTOS.

1330 - TOP OF TANK ± 1 METER, BGS. TANK IS FIBERGLASS
- EXCAVATE TANK.

1500 - EXPOSED WHAT APPEARS TO BE A FIBERGLASS LID TO THE TANK.
- CONTINUED EXCAVATION IN THE AREA OF THE LID, AND UNCOVERED WHAT SEEMS TO BE AN ACCESS OPENING ON THE NORTH END OF THE TANK
- CONTINUED TO DIG INTO AND EXPOSE OPENING OF THE TANK - THE TANK APPEARS TO HAVE BEEN FILLED WITH GROUT. RCT TAKES SWIPES.

1530 - CONTACTED TASK MANAGER, UPDATE SITUATION. SWIPES NEGATIVE.
- BACK TO 33-11 LOCATION.

SIGNATURE Donald H Cox			DATE 23MAY00
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1545 - MET WITH DOE, KEVIN HAS CALLED AND SPOKE WITH STATE REPRESENTITIVE RE PRESENT SITUATION. STATE REP ADVISES THAT WE DOCUMENT GROUTED TANK, CHECK FOR ADDITIONAL OPENINGS IN THE TOP OF THE TANK, SAMPLE NORTH END OF TANK, AND ATTEMPT TO EXCAVATE AND SAMPLE SOUTH END OF TANK. HOWEVER, DO NOT MOVE/REMOVE THE PROPANE TANK IN ORDER TO ACHIEVE SAMPLING OF THE OUTLET (SOUTH END) OF TANK. DOCUMENT, WHY THIS WAS NOT ACCOMPLISHED.

- TOOK ±6 PHOTOS OF "LID" (OPENING) AREA OF TANK.

1615 - EXCAVATE INLET (NORTH END OF TANK). PHOTOS

1645 - BACKHOE OPERATOR SNAGS OLD INLET PIPE - PHOTOS

1700 - COLLECT SOIL SAMPLE FROM BENEATH OLD INLET PIPE,

- SAMPLE HANDLING

1730 - SECURE AND DEPART LOCATION.

SIGNATURE Howard H. Cox			DATE 23MAY00
DISCLOSED TO AND UNDERSTOOD BY	DATE	WITNESS	DATE

CAU 400, ATTACH 2 - SEPTIC WASTE

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BOOK NO. 3

Work continued from Page ____ 24MAY00

0615 - ARRIVE BN OFFICE, MORNING REPORT, PROJECT DOCUMENTATION.
- PREP FOR THE DAYS ACTIVITIES

0700 - TAILGATE SAFETY BRIEFING, DISCUSSION OF TODAYS ACTIVITIES.
- SET-UP TO CONTINUE EXCAVATION OF SOUTH END OF TANK 33-11

0800 - CONTINUE EXCAVATION.

0820 - UNCOVERED A SECOND LID AT THE SOUTH END OF TANK, DIGGING INSIDE ACCESS CONFIRMS, TANK FILLED WITH GROUT. THIS WILL ALSO BE THE SOUTHERN-MOST EXTENT OF THE EXCAVATION DUE TO THE LOCATION OF THE PROPANE TANK. 9 PHOTOS. NO RAD ACTIVITY.

0840 - BACKFILL EXCAVATION, RE-INSTALL FENCE, SIDE WALKS, ETC.

1200 - LUNCH.

1300 - WORK CONTINUES ON RE-INSTALLING FENCE. (BACKFILL OPERATION PROGRESSED SLOWER THAN EXPECTED DUE TO REPAIR OF CLEANOUT STANDPIPE, AND SIDEWALK REFIT WAS PROBLEMATIC)

1415 - BEGIN MOB TO 33-8 LOCATION.

1430 - BEGIN EXCAVATION OF TANK 33-8
- TELECOM W/ S. PARSONS-DEPRY RE PROJECT.

1500 - ENDS OF CABLE (AT BOX'S) UNCOVERED.
- TELECON W/ J. NELSON RE PHOTO DOCUMENTATION
- LOGISTICS TO GET CAMERA TO LAS VEGAS

1700 - BACK OVER TO 33-8, INSPECTED COMMUNICATIONS CABLE TO INSURE THE ENTIRE CABLE HAD BEEN EXPOSED.
- CONTINUE EXCAVATION OF TANK TO EXPOSE LIDS AND ENDS.

1715 - RIPPED AN APPROXIMATE 2 FT SQUARE HOLE IN THE TOP OF THE TANK. THE TANK IS CONSTRUCTED OF FIBERGLASS AND THE TOP OF THE TANK IS APPROXIMATELY 5 FT. BELOW GROUND SURFACE. THERE WAS NO CONCRETE SLAB ENCOUNTERED

Work continued to Page 75

SIGNATURE			DATE
Donald W. Cox			24MAY00
DISCLOSED TO AND UNDERSTOOD BY	**DATE**	**WITNESS**	**DATE**

CONT. - BEFORE THE BACKHOE CONTACTED THE TANK.
- THE TANK AT THIS POINT APPEARS TO BE 3 TO 4 FT DEEP, AND IT IS DRY. THERE IS A SMALL AMOUNT OF SOIL IN THE TANK, PROBABLY FROM THE BREACH.
- NOTE THAT THE OPERATOR OF THE BACKHOE WAS BEING VERY CAREFUL, BUT HE WAS FEELING FOR CONCRETE (IT PHOTO), NOT FIBERGLASS.

1730 - BECAUSE OF HEALTH AND SAFETY CONCERNS, INCLUDING THE DEPTH OF THE EXCAVATION TO THE TANK, THE OPEN TANK, AND THE END OF THE WORK DAY IN DIMINISHING LIGHT, SHEETS OF PLYWOOD WERE PLACED INTO THE EXCAVATION COVERING THE HOLE IN THE TANK.
- THE EXCAVATION / WORK AREA IS CORDONED OFF WITH YELLOW ROPE, ORANGE FENCING, AND SIGNAGE.

1750 - SECURE AND DEPART THE LOCATION.

1800 - BN OFFICE, PROJECT DOCUMENTATION.

SIGNATURE Paul H. Cox DATE 24MAY00

DISCLOSED TO AND UNDERSTOOD BY | DATE | WITNESS | DATE

 TITLE CAU 428, AREAS - SEPTIC WASTE SYSTEMS 1 & 5

PROJECT NO.

BOOK NO. 3

Work continued from Page 25 MAY 00

0615 - ARRIVE BN OFFICE, MORNING REPORTS, PROJECT DOCUMENTATION.
- PREP FOR THE DAYS ACTIVITIES.

0700 - DISCUSS TODAYS ACTIVITIES, TAILGATE SAFETY BRIEFING.
- PLAN FOR TODAY IS TO IDENTIFY THE ~~A~~ DHC ENDS OF THE TANK, THE INLET AND OUTLET, CLEAN UP THE TOP OF THE TANK, IDENTIFY ANY ACCESS PORTS, AND GET IT READY FOR SAMPLING ON TUESDAY.

0800 - CREW WORKING ON CLEANING UP TANK (33-8), EXCAVATION, AND THE 33-11 LOCATION.

1000 - THE BACKHOE HAS CUT AN APPARENT TELEPHONE CABLE WHILE EXCAVATING THE SOUTHEND OF TANK 33-8.
- CONTACTED JERRY ELLISTON (WESTINGHOUSE)

1020 - J. ELLISTON ON SITE WITH ELECTRICIANS, ~~B~~ DHC CONFIRMS THE CABLE APPEARS TO BE A TELEPHONE CABLE BUT THEY ARE UNSURE AS TO WHO THE CABLE BELONGS TO, SANDIA, AIR FORCE ETC.
NOTE: THIS CABLE WAS NOT MARKED OR IDENTIFIED DURING THE UTILITY SURVEY.
- J. ELLISTON ADVISES THAT WE CONTINUE WORK, SINCE HE IS UNSURE WHAT EXACTLY HAS BEEN EFFECTED.
- WE CONTINUE WORK WHILE THE INVESTIGATION CONTINUES.

1100 - J. ELLISTON ON SITE AND CONFIRMS THAT THE CABLE IS AN AIR FORCE COMMUNICATIONS CABLE.
- AIR FORCE PERSONNEL ON SITE, CONFIRMS VARIOUS OUTAGES. WE WILL EXPOSE AN ADDITIONAL ±5 FT OF EACH END OF THE CABLE AND THE AIR FORCE WILL REPAIR (SPLICE) THE CABLE THIS AFTERNOON AND TOMORROW MORNING.

1200 - LUNCH

1245 - CONTINUE DRESSING UP CABLE AREA SO AIR FORCE -

Work continued to Page 77

SIGNATURE	DATE
Donald H. C[illegible]	25 MAY 00

DISCLOSED TO AND UNDERSTOOD BY	DATE	WITNESS	DATE

CHU 4C68, ITEM 3

TITLE SEPTIC WASTE SYSTEMS 1 & 5 **PROJECT NO.**

BOOK NO. 3

Work continued from Page ____ 25 MAY 00

Cont.- PERSONNEL CAN MAKE REPAIRS.

- WE ARE SETTING UP FENCING AROUND THE MAIN EXCAUATION, AND AROUND THE CABLE REPAIR AREA. CABLE AREA IS 4 TO 5 FT BGS, SO WE ARE SLOPING THE SIDES INTO THE WORK AREA.

1430 - SECURE AND DEPART LOCATION.

Work continued to Page ____

SIGNATURE Donald H. Cox			DATE 25 MAY 00
DISCLOSED TO AND UNDERSTOOD BY	DATE	WITNESS	DATE

CAU 428, AREA 3 -

78 TITLE SEPTIC WASTE SYSTEMS 1 & 5 **PROJECT NO.**

Work continued from Page ____ 31MA400 **BOOK NO.** 3

0615 - ARRIVE AT BN OFFICE, PROJECT DOCUMENTATION, PREP FOR THE DAYS ACTIVITIES.

0700 - CREW GATHERS, REVIEW WORK FOR THE DAY, TAILGATE SAFETY BRIEFING.

0800 - REVIEW ROTFC - RECORD OF TECHNICAL FIELD CHANGE TO THE SITE SPECIFIC HEALTH AND SAFETY PLAN.

0845 - MOB OVER TO 33-8 SITE, 3 PHOTO'S OF EXCAVATION, INCLUDING EXPOSED PIPES AND REPAIRED CABLE.

0850 - DOE ON SITE (KEVIN CABBLE) TAILGATE SAFETY BRIEFING.
- H & S OFFICER REVIEWS FALL PROTECTION WITH LABORER.
- REPOSITION BACKHOE, BARRIERS, ETC.

0930 - BEGIN (CONTINUE) EXCAVATION.

0940 - UNCOVER AND EXPOSE A LID ON THE TANK - PHOTO. AIR SAMPLING

1030 - TAKE INTERIOR SAMPLE, DECON.
- BACK TO BN OFFICE, SWIPES ON SAMPLES, SAMPLE HANDLING.
- FABRICATING LID FOR TANK, (3X3 METAL PLATE)

1200 - LUNCH

1240 - BACK OUT TO SITE, EXCAVATE SOUTH END OF TANK, CONCRETE OUT TO APPROX. 3 FT, EXCAVATED DOWN ALONGSIDE CONCRETE, CUT PIPE FROM (TO?) TANK. CONTINUE EXCAVATING TO DEPTH, PHOTO'S

1500 - COLLECT SOUTH END SAMPLE AND DUPLICATE. DECON
- BACK TO BN OFFICE, SWIPE SAMPLES, SAMPLE HANDLING

1530 - EXCAVATE NORTH END OF TANK, CONCRETE AS ABOVE, CUT PIPE TO (FROM?) TANK. EXCAVATE TO DEPTH, APPROX 12 FT, PHOTOS

1615 - COLLECT NORTH END SAMPLE, DECON
- BACK TO BN OFFICE, SWIPE SAMPLES, SAMPLE HANDLING.
- BACKFILL TO COMMUNICATIONS LINE.

1715 - SECURE AND DEPART LOCATION

Work continued to Page ____

SIGNATURE Donald A. Cox			DATE 31MAR.00
DISCLOSED TO AND UNDERSTOOD BY	DATE	WITNESS	DATE

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ANALYTICAL DATA

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Bechtel Nevada

ANALYTICAL SERVICES LABORATORY

SERVICES REQUEST & CHAIN OF CUSTODY RECORD

Page 1 of 1

PROJECT/ CLIENT INFORMATION

Project: CAU 428 SWS BN Org#: 2152
Charge No.: ASL Prog.:
Project Manager: Wayne Johnson
Phone: 5-0573 Fax: 5-7761 M/S: NTS 306

REPORT INFORMATION

Send Report to: Shannon Parsons-DePry
Phone: 5-0645 Fax: 5-7761 M/S: NTS 306
Turnaround: ( ) Standard - 30 days Non-rad, 60 Days Rad, Other. (X) Rush Preliminary by: 7/13/00 Final by:
Final report format: (X) Standard ( ) NTS-WAC ( ) Other 06/13/00

SAMPLE INFORMATION

Sampling Site: Area 3, SWS, 1X5
The samples submitted contain (check): ( ) Hazardous ( ) Radioactive ( ) Unknown contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.

LAB USE ONLY

Rad SGD: D339 Non-Rad SDG: V816 ~~V816~~ cac
Rad Packet: H3027 (liquid) Non-Rad Packet: W1860
Client Services Representative: H3028 (soil)

Will these analyses be performed under a signed SOW? ( ) YES ( ) NO
If so, do analyses entered here agree with the SOW? ( ) YES ( ) NO ( ) N/A
If not, identify the variation
CSR initials indicating review and approval: Date:

SAMPLE RECEIPT INFORMATION

Are all sample containers received intact (X) Yes ( ) No
Comments:

Do the labels agree with this form? (X) Yes ( ) No
Comments:

Was a Material Clearance Tag submitted? (X) Yes ( ) No
Comments:

ANALYSES & METHOD

ITEM	ID / DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	~~Isotopic~~	~~Gamma~~	VOCs	~~SVOCs~~	~~RCRA Metals~~	~~TPH (DRO)~~							COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
0	~~33-3 Tank~~	~~5/22/00~~	~~1635~~	~~Sludge/Water~~	X												Cold, 500 ml (527g)
1	33-11-North	5/23/00	1700	Soil	X	X	X	X	X	X							Cold, MS/MSD - Isotopic U only for analysis of Gamma 20
2	TB52200	5/22/00	0705	Water			X										Cold, HCl
3																	
4																	
5																	
6																	
7																	
8																	
9																	

Transfer of samples submitted for analyses

Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)
Dorm B Refrigerator	5/25/00 / 1811	Shannon M. Parsons-DePry
Shannon M. Parsons-DePry	5/25/00 / 1356	C.D. Castaneda

Complete for samples shipped to an OFF-SITE Subcontract Laboratory NEL

Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
C.D. Castaneda	5/30/00	Bechtel Courier
Relinquished (Courier & Tracking Info.)	**DATE / TIME**	**Received (1st tier Subcontractor Rep)**
Relinquished (1st tier Subcontractor Rep)	**DATE / TIME**	**Received (2nd tier Subcontractor Rep)**

Distribution: Original - To be retained by laboratory performing final analysis
Copy 1 - To be retained by laboratory performing intermediate analysis
Copy 2 - To be retained by Analytical Services Laboratory
Copy 3 - To be retained by sampler

BN-0732 (02/98)

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NEL LABORATORIES

CLIENT:	Bechtel Nevada	CLIENT ID:	TB52200
PROJECT ID:	CAV428SWS	DATE SAMPLED:	5/22/00
PROJECT #:	NA	NEL SAMPLE ID:	L0005293-02
TEST:	**Volatile Organic Compounds by EPA 8260B, December 1996**		
METHOD:	EPA 8260	EXTRACTED:	6/5/00
MATRIX:	Aqueous	ANALYZED:	6/5/00
DILUTION:	1	ANALYST:	BJV - Las Vegas Division

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25. µg/L	1,1-Dichloropropene	ND	5. µg/L
Benzene	ND	5. µg/L	cis-1,3-Dichloropropene	ND	5. µg/L
Bromobenzene	ND	5. µg/L	trans-1,3-Dichloropropene	ND	5. µg/L
Bromochloromethane	ND	5. µg/L	Ethylbenzene	ND	5. µg/L
Bromodichloromethane	ND	5. µg/L	Hexachlorobutadiene	ND	5. µg/L
Bromoform	ND	5. µg/L	2-Hexanone	ND	25. µg/L
Bromomethane	ND	5. µg/L	Iodomethane	ND	5. µg/L
2-Butanone	ND	25. µg/L	Isopropylbenzene	ND	5. µg/L
n-Butylbenzene	ND	5. µg/L	p-Isopropyltoluene	ND	5. µg/L
sec-Butylbenzene	ND	5. µg/L	Methylene chloride (Dichloromethane)	ND	5. µg/L
tert-Butylbenzene	ND	5. µg/L	4-Methyl-2-pentanone	ND	25. µg/L
Carbon disulfide	ND	5. µg/L	MTBE	ND	5. µg/L
Carbon tetrachloride	ND	5. µg/L	Naphthalene	ND	10. µg/L
Chlorobenzene	ND	5. µg/L	n-Propylbenzene	ND	5. µg/L
Chloroethane	ND	5. µg/L	Styrene	ND	5. µg/L
Chloroform	ND	5. µg/L	1,1,1,2-Tetrachloroethane	ND	5. µg/L
Chloromethane	ND	5. µg/L	1,1,2,2-Tetrachloroethane	ND	5. µg/L
2-Chlorotoluene	ND	5. µg/L	Tetrachloroethene (PCE)	ND	5. µg/L
4-Chlorotoluene	ND	5. µg/L	Toluene	ND	5. µg/L
Dibromochloromethane	ND	5. µg/L	1,2,3-Trichlorobenzene	ND	5. µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	10. µg/L	1,2,4-Trichlorobenzene	ND	5. µg/L
1,2-Dibromoethane (EDB)	ND	5. µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/L
Dibromomethane	ND	5. µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/L	Trichloroethene (TCE)	ND	5. µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/L	Trichlorofluoromethane (Freon 11)	ND	10. µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/L	1,2,3-Trichloropropane	ND	5. µg/L
Dichlorodifluoromethane (Freon 12)	ND	5. µg/L	1,2,4-Trimethylbenzene	ND	5. µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/L	1,3,5-Trimethylbenzene	ND	5. µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/L	Vinyl chloride	ND	5. µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/L	o-Xylene	ND	5. µg/L
cis-1,2-Dichloroethene	ND	5. µg/L	m,p-Xylene	ND	10. µg/L
trans-1,2-Dichloroethene	ND	5. µg/L			
1,2-Dichloropropane	ND	5. µg/L			
1,3-Dichloropropane	ND	5. µg/L			
2,2-Dichloropropane	ND	10. µg/L			

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	102	83 - 112
Dibromofluoromethane	98	84 - 109
Toluene-d8	100	88 - 113

ND - Not Detected

NEL LABORATORIES

CLIENT:	Bechtel Nevada	CLIENT ID:	33-11-North
PROJECT ID:	CAV428SWS	DATE SAMPLED:	5/23/00
PROJECT #:	NA	NEL SAMPLE ID:	L0005293-01
TEST:	**Volatile Organic Compounds by EPA 8260B, December 1996**		
METHOD:	EPA 8260B	EXTRACTED:	6/6/00
MATRIX:	Solid	ANALYZED:	6/6/00
DILUTION:	1	ANALYST:	BJV - Las Vegas Division

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25. µg/kg	1,1-Dichloropropene	ND	5. µg/kg
Benzene	ND	5. µg/kg	cis-1,3-Dichloropropene	ND	5. µg/kg
Bromobenzene	ND	5. µg/kg	trans-1,3-Dichloropropene	ND	5. µg/kg
Bromochloromethane	ND	5. µg/kg	Ethylbenzene	ND	5. µg/kg
Bromodichloromethane	ND	5. µg/kg	Hexachlorobutadiene	ND	5. µg/kg
Bromoform	ND	5. µg/kg	2-Hexanone	ND	25. µg/kg
Bromomethane	ND	5. µg/kg	Iodomethane	ND	5. µg/kg
2-Butanone	ND	25. µg/kg	Isopropylbenzene	ND	5. µg/kg
n-Butylbenzene	ND	5. µg/kg	p-Isopropyltoluene	ND	5. µg/kg
sec-Butylbenzene	ND	5. µg/kg	Methylene chloride (Dichloromethane)	ND	5. µg/kg
tert-Butylbenzene	ND	5. µg/kg	4-Methyl-2-pentanone	ND	25. µg/kg
Carbon disulfide	ND	5. µg/kg	MTBE	ND	5. µg/kg
Carbon tetrachloride	ND	5 µg/kg	Naphthalene	ND	10. µg/kg
Chlorobenzene	ND	5. µg/kg	n-Propylbenzene	ND	5. µg/kg
Chloroethane	ND	5 ug/kg	Styrene	ND	5. µg/kg
Chloroform	ND	5. µg/kg	1,1,1,2-Tetrachloroethane	ND	5. µg/kg
Chloromethane	ND	5. µg/kg	1,1,2,2-Tetrachloroethane	ND	5. µg/kg
2-Chlorotoluene	ND	5. µg/kg	Tetrachloroethene (PCE)	ND	5. µg/kg
4-Chlorotoluene	ND	5. µg/kg	Toluene	ND	5. µg/kg
Dibromochloromethane	ND	5. µg/kg	1,2,3-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5. µg/kg	1,2,4-Trichlorobenzene	ND	5. µg/kg
1,2-Dibromoethane (EDB)	ND	5. µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5. µg/kg
Dibromomethane	ND	5. µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5. µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5. µg/kg	Trichloroethene (TCE)	ND	5. µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5. µg/kg	Trichlorofluoromethane (Freon 11)	ND	10. µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5. µg/kg	1,2,3-Trichloropropane	ND	5. µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5. µg/kg	1,2,4-Trimethylbenzene	ND	5. µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5. µg/kg	1,3,5-Trimethylbenzene	ND	5. µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5. µg/kg	Vinyl chloride	ND	5. µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5. µg/kg	o-Xylene	ND	5. µg/kg
cis-1,2-Dichloroethene	ND	5. µg/kg	m,p-Xylene	ND	10. µg/kg
trans-1,2-Dichloroethene	ND	5. µg/kg			
1,2-Dichloropropane	ND	5. µg/kg			
1,3-Dichloropropane	ND	5. µg/kg			
2,2-Dichloropropane	ND	10. µg/kg			

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	97	74 - 121
Dibromofluoromethane	94	80 - 120
Toluene-d8	102	81 - 117

ND - Not Detected

NEL LABORATORIES

CLIENT:	Bechtel Nevada	CLIENT ID:	**Method Blank**
PROJECT ID:	CAV428SWS	DATE SAMPLED:	NA
PROJECT #:	NA	NEL SAMPLE ID:	000605AQ60_1B-BLK
TEST:	**Volatile Organic Compounds by EPA 8260B, December 1996**		
METHOD:	EPA 8260	ANALYST:	BJV - Las Vegas Division
MATRIX:	Aqueous	EXTRACTED:	6/5/00
		ANALYZED:	6/5/00

PARAMETER	Result µg/L	Reporting Limit	PARAMETER	Result µg/L	Reporting Limit
Acetone	ND	25 µg/L	1,1-Dichloropropene	ND	5 µg/L
Benzene	ND	5 µg/L	cis-1,3-Dichloropropene	ND	5 µg/L
Bromobenzene	ND	5 µg/L	trans-1,3-Dichloropropene	ND	5 µg/L
Bromochloromethane	ND	5 µg/L	Ethylbenzene	ND	5 µg/L
Bromodichloromethane	ND	5 µg/L	Hexachlorobutadiene	ND	5 µg/L
Bromoform	ND	5 µg/L	2-Hexanone	ND	25 µg/L
Bromomethane	ND	5 µg/L	Iodomethane	ND	5 µg/L
2-Butanone	ND	25 µg/L	Isopropylbenzene	ND	5 µg/L
n-Butylbenzene	ND	5 µg/L	p-Isopropyltoluene	ND	5 µg/L
sec-Butylbenzene	ND	5 µg/L	Methylene chloride (Dichloromethane)	ND	5 µg/L
tert-Butylbenzene	ND	5 µg/L	4-Methyl-2-pentanone	ND	25 µg/L
Carbon disulfide	ND	5 µg/L	MTBE	ND	5 µg/L
Carbon tetrachloride	ND	5 µg/L	Naphthalene	ND	10 µg/L
Chlorobenzene	ND	5 µg/L	n-Propylbenzene	ND	5 µg/L
Chloroethane	ND	5 µg/L	Styrene	ND	5 µg/L
Chloroform	ND	5 µg/L	1,1,1,2-Tetrachloroethane	ND	5 µg/L
Chloromethane	ND	5 µg/L	1,1,2,2-Tetrachloroethane	ND	5 µg/L
2-Chlorotoluene	ND	5 µg/L	Tetrachloroethene (PCE)	ND	5 µg/L
4-Chlorotoluene	ND	5 µg/L	Toluene	ND	5 µg/L
Dibromochloromethane	ND	5 µg/L	1,2,3-Trichlorobenzene	ND	5 µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	10 µg/L	1,2,4-Trichlorobenzene	ND	5 µg/L
1,2-Dibromoethane (EDB)	ND	5 µg/L	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/L
Dibromomethane	ND	5 µg/L	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/L
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/L	Trichloroethene (TCE)	ND	5 µg/L
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/L	Trichlorofluoromethane (Freon 11)	ND	10 µg/L
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/L	1,2,3-Trichloropropane	ND	5 µg/L
Dichlorodifluoromethane (Freon 12)	ND	5 µg/L	1,2,4-Trimethylbenzene	ND	5 µg/L
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/L	1,3,5-Trimethylbenzene	ND	5 µg/L
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/L	Vinyl chloride	ND	5 µg/L
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/L	o-Xylene	ND	5 µg/L
cis-1,2-Dichloroethene	ND	5 µg/L	m,p-Xylene	ND	10 µg/L
trans-1,2-Dichloroethene	ND	5 µg/L			
1,2-Dichloropropane	ND	5 µg/L			
1,3-Dichloropropane	ND	5 µg/L			
2,2-Dichloropropane	ND	10 µg/L			

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	99	83 - 112
Dibromofluoromethane	96	84 - 109
Toluene-d8	101	88 - 113

ND - Not Detected

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: CAV428SWS
PROJECT #: NA
CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: 000606SD60_1B-BLK

TEST: **Volatile Organic Compounds by EPA 8260B, December 1996**
METHOD: EPA 8260B
MATRIX: Solid
ANALYST: BJV - Las Vegas Division
EXTRACTED: 6/6/00
ANALYZED: 6/6/00

PARAMETER	Result µg/kg	Reporting Limit	PARAMETER	Result µg/kg	Reporting Limit
Acetone	ND	25 µg/kg	1,1-Dichloropropene	ND	5 µg/kg
Benzene	ND	5 µg/kg	cis-1,3-Dichloropropene	ND	5 µg/kg
Bromobenzene	ND	5 µg/kg	trans-1,3-Dichloropropene	ND	5 µg/kg
Bromochloromethane	ND	5 µg/kg	Ethylbenzene	ND	5 µg/kg
Bromodichloromethane	ND	5 µg/kg	Hexachlorobutadiene	ND	5 µg/kg
Bromoform	ND	5 µg/kg	2-Hexanone	ND	25 µg/kg
Bromomethane	ND	5 µg/kg	Iodomethane	ND	5 µg/kg
2-Butanone	ND	25 µg/kg	Isopropylbenzene	ND	5 µg/kg
n-Butylbenzene	ND	5 µg/kg	p-Isopropyltoluene	ND	5 µg/kg
sec-Butylbenzene	ND	5 µg/kg	Methylene chloride (Dichloromethane)	ND	5 µg/kg
tert-Butylbenzene	ND	5 µg/kg	4-Methyl-2-pentanone	ND	25 µg/kg
Carbon disulfide	ND	5 µg/kg	MTBE	ND	5 µg/kg
Carbon tetrachloride	ND	5 µg/kg	Naphthalene	ND	10 µg/kg
Chlorobenzene	ND	5 µg/kg	n-Propylbenzene	ND	5 µg/kg
Chloroethane	ND	5 µg/kg	Styrene	ND	5 µg/kg
Chloroform	ND	5 µg/kg	1,1,1,2-Tetrachloroethane	ND	5 µg/kg
Chloromethane	ND	5 µg/kg	1,1,2,2-Tetrachloroethane	ND	5 µg/kg
2-Chlorotoluene	ND	5 µg/kg	Tetrachloroethene (PCE)	ND	5 µg/kg
4-Chlorotoluene	ND	5 µg/kg	Toluene	ND	5 µg/kg
Dibromochloromethane	ND	5 µg/kg	1,2,3-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromo-3-chloropropane (DBCP)	ND	5 µg/kg	1,2,4-Trichlorobenzene	ND	5 µg/kg
1,2-Dibromoethane (EDB)	ND	5 µg/kg	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5 µg/kg
Dibromomethane	ND	5 µg/kg	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5 µg/kg
1,2-Dichlorobenzene (o-DCB)	ND	5 µg/kg	Trichloroethene (TCE)	ND	5 µg/kg
1,3-Dichlorobenzene (m-DCB)	ND	5 µg/kg	Trichlorofluoromethane (Freon 11)	ND	10 µg/kg
1,4-Dichlorobenzene (p-DCB)	ND	5 µg/kg	1,2,3-Trichloropropane	ND	5 µg/kg
Dichlorodifluoromethane (Freon 12)	ND	5 µg/kg	1,2,4-Trimethylbenzene	ND	5 µg/kg
1,1-Dichloroethane (1,1-DCA)	ND	5 µg/kg	1,3,5-Trimethylbenzene	ND	5 µg/kg
1,2-Dichloroethane (1,2-DCA)	ND	5 µg/kg	Vinyl chloride	ND	5 µg/kg
1,1-Dichloroethene (1,1-DCE)	ND	5 µg/kg	o-Xylene	ND	5 µg/kg
cis-1,2-Dichloroethene	ND	5 µg/kg	m,p-Xylene	ND	10 µg/kg
trans-1,2-Dichloroethene	ND	5 µg/kg			
1,2-Dichloropropane	ND	5 µg/kg			
1,3-Dichloropropane	ND	5 µg/kg			
2,2-Dichloropropane	ND	10 µg/kg			

QUALITY CONTROL DATA:

Surrogate	% Recovery	Acceptable Range
4-Bromofluorobenzene	100	74 - 121
Dibromofluoromethane	94	80 - 120
Toluene-d8	101	81 - 117

ND - Not Detected

NEL LABORATORIES

CLIENT: Bechtel Nevada
PROJECT ID: V816
PROJECT #: 17777
TEST: **Volatile Organic Compounds by EPA 8260B, December 1996**
MATRIX: Solid

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Benzene	000606SD60_1B-LCS	50	52	104	76 - 127	
Benzene	L0005293-01-MS	50	51	102	66 - 142	
Benzene	L0005293-01-MSD	50	52	104	66 - 142	1.9
Chlorobenzene	000606SD60_1B-LCS	50	51	102	75 - 130	
Chlorobenzene	L0005293-01-MS	50	49	98	60 - 133	
Chlorobenzene	L0005293-01-MSD	50	51	102	60 - 133	4.
1,1-Dichloroethene (1,1-DCE)	000606SD60_1B-LCS	50	45	90	61 - 145	
1,1-Dichloroethene (1,1-DCE)	L0005293-01-MS	50	45	90	59 - 172	
1,1-Dichloroethene (1,1-DCE)	L0005293-01-MSD	50	46	92	59 - 172	2.2
Toluene	000606SD60_1B-LCS	50	54	108	76 - 125	
Toluene	L0005293-01-MS	50	53	106	59 - 139	
Toluene	L0005293-01-MSD	50	55	110	59 - 139	3.7
Trichloroethene (TCE)	000606SD60_1B-LCS	50	50	100	71 - 120	
Trichloroethene (TCE)	L0005293-01-MS	50	50	100	62 - 137	
Trichloroethene (TCE)	L0005293-01-MSD	50	52	104	62 - 137	3.9

ND - Not Detected

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Bechtel Nevada

ANALYTICAL SERVICES LABORATORY

SERVICES REQUEST & CHAIN OF CUSTODY RECORD

PROJECT/ CLIENT INFORMATION

Project: CAU 428 SWS BN Org#: 2152
Charge No.: ASL Prog.:
Project Manager: Wayne Johnson
Phone: 5-0573 Fax: 5-7761 M/S: NTS 306

REPORT INFORMATION

Send Report to: Shannon Parsons-DeLong
Phone: 5-0645 Fax: 5-7761 M/S: NTS 306
Turnaround: ( ) Standard - 30 days Non-rad, 60 Days Rad, Other: (X) Rush Preliminary by: 7/13/00 Final by:
Final report format: (X) Standard ( ) NTS-WAC ( ) Other: 8/13/00

SAMPLE INFORMATION

Sampling Site: Area 3, SWS, 1X5
The samples submitted contain (check):
( ) Hazardous ( ) Radioactive ( ) Unknown
contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.

LAB USE ONLY

Rad SGD: D339 Non-Rad SDG: V816 / V816
Rad Packet: H3027 (liquid) Non-Rad Packet: W1860
Client Services Representative: H3028 (soil)

Will these analyses be performed under a signed SOW? ( ) YES ( ) NO
If so, do analyses entered here agree with the SOW? ( ) YES ( ) NO ( ) N/A
If not, identify the variation
CSR Initials indicating review and approval: ________ Date: ________

ANALYSES & METHOD

ITEM	ID / DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	~~Isotopic~~	~~Gamma~~	~~VOCs~~	SVOCs	RCRA metals	TPH (Full scan)							COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
~~0~~	~~33-3 Tank~~	~~5/..~~	~~1535~~	~~Sludge/Water~~	~~X~~	~~X~~											
1	33-11-North	5/23/00	1700	Soil	X	X	X	X	X	X							cold, 500 ml (527g)
~~2~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~			X										Cold, MS/MSD — Isotopic U only after analysis of Gamma. [illegible]
3																	Cold, HCl
4																	
5																	
6																	
7																	
8																	
9																	

SAMPLE RECEIPT INFORMATION

Are all sample containers received intact (X) Yes ( ) No
Comments:

Do the labels agree with this form? (X) Yes ( )
Comments:

Was a Material Clearance Tag submitted? (X) Yes ( ) No
Comments:

Transfer of samples submitted for analyses

Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)
Dorm B Refrigerator	5/25/00/1351?	Shannon M. Parsons-DeLong
Shannon M. Parsons-DeLong	5/25/00/1356	C.D. Castaneda

Complete for samples shipped to an OFF-SITE Subcontract Laboratory: RECRA LABNET

Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
C.D. Castaneda	5/30/00	FEDEX 816090907605
Relinquished (Courier & Tracking Info.)	**DATE / TIME**	**Received (1st tier Subcontractor Rep)**
Relinquished (1st tier Subcontractor Rep)	**DATE / TIME**	**Received (2nd tier Subcontractor Rep)**

Distribution: Original - To be retained by laboratory performing final analysis
Copy 1 - To be retained by laboratory performing intermediate analysis
Copy 2 - To be retained by Analytical Services Laboratory
Copy 3 - To be retained by sampler

BN-0732 (02/98)

	Cust ID:	33-11-NORTH	33-11-NORTH	33-11-NORTH	SBLKSD	SBLKSD BS
Sample Information	RFW#:	001	001 MS	001 MSD	00LE0637-MB1	00LE0637-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	0.500	0.500	0.500	0.500	0.500
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Surrogate Recovery	Nitrobenzene-d5	59 %	65 %	63 %	69 %	70 %
	2-Fluorobiphenyl	61 %	64 %	62 %	68 %	70 %
	Terphenyl-d14	75 %	78 %	70 %	89 %	84 %
	Phenol-d5	68 %	74 %	72 %	80 %	80 %
	2-Fluorophenol	64 %	68 %	67 %	76 %	75 %
	2,4,6-Tribromophenol	73 %	77 %	75 %	84 %	84 %
Phenol		370 U	72 %	69 %	330 U	77 %
bis(2-Chloroethyl)ether		370 U	370 U	370 U	330 U	330 U
2-Chlorophenol		370 U	73 %	72 %	330 U	80 %
1,3-Dichlorobenzene		370 U	370 U	370 U	330 U	330 U
1,4-Dichlorobenzene		370 U	64 %	62 %	330 U	69 %
1,2-Dichlorobenzene		370 U	370 U	370 U	330 U	330 U
2-Methylphenol		370 U	370 U	370 U	330 U	330 U
2,2'-oxybis(1-Chloropropane)		370 U	370 U	370 U	330 U	330 U
4-Methylphenol		370 U	370 U	370 U	330 U	330 U
N-Nitroso-di-n-propylamine		370 U	72 %	68 %	330 U	75 %
Hexachloroethane		370 U	370 U	370 U	330 U	330 U
Nitrobenzene		370 U	370 U	370 U	330 U	330 U
Isophorone		370 U	370 U	370 U	330 U	330 U
2-Nitrophenol		370 U	370 U	370 U	330 U	330 U
2,4-Dimethylphenol		370 U	370 U	370 U	330 U	330 U
bis(2-Chloroethoxy)methane		370 U	370 U	370 U	330 U	330 U
2,4-Dichlorophenol		370 U	370 U	370 U	330 U	330 U
1,2,4-Trichlorobenzene		370 U	65 %	62 %	330 U	71 %
Naphthalene		370 U	370 U	370 U	330 U	330 U
4-Chloroaniline		370 U	370 U	370 U	330 U	330 U
Hexachlorobutadiene		370 U	370 U	370 U	330 U	330 U
4-Chloro-3-methylphenol		370 U	81 %	78 %	330 U	88 %
2-Methylnaphthalene		370 U	370 U	370 U	330 U	330 U
Hexachlorocyclopentadiene		370 U	370 U	370 U	330 U	330 U
2,4,6-Trichlorophenol		370 U	370 U	370 U	330 U	330 U
2,4,5-Trichlorophenol		930 U	930 U	930 U	830 U	830 U

*= Outside of EPA CLP QC limits.

Recra LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 06/13/00

CLIENT: BECHTEL NEVADA VB16
WORK ORDER: 60052-001-001-0001-00

RECRA LOT #: 0005L461

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	33-11-NORTH	Silver, Total	0.06 u	MG/KG	0.06	1.0
		Arsenic, Total	9.3	MG/KG	0.35	1.0
		Barium, Total	191	MG/KG	0.01	1.0
		Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Chromium, Total	4.3	MG/KG	0.07	1.0
		Mercury, Total	0.02 u	MG/KG	0.02	1.0
		Lead, Total	8.2	MG/KG	0.25	1.0
		Selenium, Total	0.50 u	MG/KG	0.50	1.0

Recra LabNet - Lionville

INORGANICS METHOD BLANK DATA SUMMARY PAGE 06/13/00

CLIENT: BECHTEL NEVADA V816 RECRA LOT #: 0005L461

WORK ORDER: 60052-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	99L1312-MB1	Silver, Total	0.1	MG/KG	0.05	1.0
		Arsenic, Total	0.32 u	MG/KG	0.32	1.0
		Barium, Total	0.04	MG/KG	0.01	1.0
		Cadmium, Total	0.04 u	MG/KG	0.04	1.0
		Chromium, Total	0.14	MG/KG	0.06	1.0
		Lead, Total	0.23 u	MG/KG	0.23	1.0
		Selenium, Total	0.45 u	MG/KG	0.45	1.0
BLANK1	00C0168-MB1	Mercury, Total	0.02 u	MG/KG	0.02	1.0

Recra LabNet - Lionville

INORGANICS ACCURACY REPORT 06/13/00

CLIENT: BECHTEL NEVADA V816 RECRA LOT #: 0006L461

WORK ORDER: 60052-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	33-11-NORTH	Silver, Total	5.1	0.06u	5.5	92.7	1.0
		Silver, Total MSD	5.1	0.06u	5.5	92.7	1.0
		Arsenic, Total	216	9.3	221	93.6	1.0
		Arsenic, Total MSD	216	9.3	221	93.5	1.0
		Barium, Total	398	191	221	93.5	1.0
		Barium, Total MSD	385	191	221	87.9	1.0
		Cadmium, Total	5.1	0.04u	5.5	92.7	1.0
		Cadmium, Total MSD	5.1	0.04u	5.5	92.7	1.0
		Chromium, Total	25.2	4.3	22.1	94.6	1.0
		Chromium, Total MSD	25.6	4.3	22.1	96.4	1.0
		Mercury, Total	0.20	0.02u	0.17	112.6	1.0
		Mercury, Total MSD	0.18	0.02u	0.17	109.5	1.0
		Lead, Total	58.6	8.2	55.2	91.3	1.0
		Lead, Total MSD	59.8	8.2	55.2	93.5	1.0
		Selenium, Total	201	0.50u	221	91.2	1.0
		Selenium, Total MSD	200	0.50u	221	90.7	1.0

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INORGANICS DUPLICATE SPIKE REPORT 06/13/00

CLIENT: BECHTEL NEVADA V816 RECRA LOT #: 0005L461

WORK ORDER: 60052-001-001-0001-00

SAMPLE	SITE ID	ANALYTE	SPIKE#1 %RECOV	SPIKE#2 %RECOV	%DIFF
-001	33-11-NORTH	Silver, Total	92.7	92.7	0.00
		Arsenic, Total	93.6	93.5	0.046
		Barium, Total	93.5	87.9	6.1
		Cadmium, Total	92.7	92.7	0.00
		Chromium, Total	94.6	96.4	1.9
		Mercury, Total	112.6	109.5	2.9
		Lead, Total	91.3	93.5	2.4
		Selenium, Total	91.2	90.7	0.50

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INORGANICS PRECISION REPORT 06/13/00

CLIENT: BECHTEL NEVADA V816
WORK ORDER: 60052-001-001-0001-00

RECRA LOT #: 0005L461

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REP)
-001REP	33-11-NORTH	Silver, Total	0.06u	0.06u	NC	1.0
		Arsenic, Total	9.3	10.0	7.3	1.0
		Barium, Total	191	214	11.1	1.0
		Cadmium, Total	0.04u	0.04u	NC	1.0
		Chromium, Total	4.3	4.5	4.5	1.0
		Mercury, Total	0.02u	0.02	NC	1.0
		Lead, Total	8.2	8.4	2.4	1.0
		Selenium, Total	0.50u	0.50u	NC	1.0

Recra LabNet - Lionville

INORGANICS LABORATORY CONTROL STANDARDS REPORT 06/13/00

CLIENT: BECHTEL NEVADA V816
WORK ORDER: 60052-001-001-0001-00

RECRA LOT #: 0005L461

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	99L1312-LC1	Silver, LCS	49.1	50.0	MG/KG	98.2
		Arsenic, LCS	949	1000	MG/KG	94.9
		Barium, LCS	490	500	MG/KG	98.0
		Cadmium, LCS	24.9	25.0	MG/KG	99.6
		Chromium, LCS	50.1	50.0	MG/KG	100.2
		Lead, LCS	246	250	MG/KG	98.3
		Selenium, LCS	931	1000	MG/KG	93.1
LCS1	00C0168-LC1	Mercury, LCS	0.66	0.7	MG/KG	93.5

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

Client: Bechtel Nevada Corp.
Project: CAU 428 SWS
Work Order: 0006068

CASE NARRATIVE

All reported values in this report have been rounded to the correct number of significant figures. All calculations have been performed before applying significant figures, therefore, not all calculations may be reproducible with the results printed in this report.

Analytical comments for method SW8015BDRO, samples LCS-5230 and 0006068-06D: The surrogate 4-Terphenyl-d14 exceeded its set QC limit for percent recovery.

Analytical comments for method SW8270C, sample LCS-5231: The spiked analytes 4-Chloro-3-methylphenol, Pentachlorophenol, Pyrene and the surrogate 4-Terphenyl-d14 exceeded their set QC limits for percent recovery. Sample LCSD-5231: The spiked analytes 4-Chloro-3-methylphenol and Pentachlorophenol exceeded their set QC limits for percent recovery.

Analytical comments for method SW846 8270C, samples LCS/LCSD-5250: The spiked analyte 2,4-Dinitrotoluene exceeded its set QC limit for percent recovery.

Analytical comments for method SW846 8270C, sample 0006068-03BMS: The spiked analyte Pentachlorophenol was non-detected for its percent recovery and sample 0006068-03BMSD, the spiked analyte 2,4-Dinitrotoluene exceeded its set QC limit for percent recovery.

Analytical comments for method SW846 8270C, sample 0006068-03B: The acid surrogates were inadvertantly not spiked into this sample. The base/neutral surrogates passed their set limits.

Analytical comments for method SW8015BGRO: These samples were analyzed beyond the EPA recommended holding time of 14 days. The recoveries of the surrogates and matrix spike were poor on the first analysis performed on 6/15/00. The samples were re-analyzed on 6/20/00 with better results except as noted below which were similar to the original analysis. The raw data from both analysis will be included with the Data Validation Package.

Analytical comments for method SW8015BGRO, samples 0006068-03DMS/MSD: The surrogate and the matrix spike failed low their set QC limits for percent recovery.

Analytical comments for method SW8015BGRO, sample 0006068-04D: The surrogate Trifluorotoluene failed low its set QC limit for percent recovery.

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: TB53000

Tag Number:

Lab Sample ID: 0006068-01A
Date Collected: 05/30/2000
Matrix: Aqueous

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,1,1-Trichloroethane	71-55-6	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1,2,2-Tetrachloroethane	79-34-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1,2-Trichloroethane	79-00-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1-Dichloroethane	75-34-3	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1-Dichloroethene	75-35-4	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,2-Dichloroethane	107-06-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,2-Dichloropropane	78-87-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
2-Butanone	78-93-3	SW846 8260B	32	50	J	µg/L	1		06/08/2000	RDH	A7372
2-Chloroethyl vinyl ether	110-75-8	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
2-Hexanone	591-78-6	SW846 8260B	ND	50		µg/L	1		06/08/2000	RDH	A7372
4-Methyl-2-pentanone	108-10-1	SW846 8260B	ND	50		µg/L	1		06/08/2000	RDH	A7372
Acetone	67-64-1	SW846 8260B	ND	50		µg/L	1		06/08/2000	RDH	A7372
Benzene	71-43-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Bromodichloromethane	75-27-4	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Bromoform	75-25-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Bromomethane	74-83-9	SW846 8260B	ND	10		µg/L	1		06/08/2000	RDH	A7372
Carbon disulfide	75-15-0	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Carbon tetrachloride	56-23-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Chlorobenzene	108-90-7	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Chloroethane	75-00-3	SW846 8260B	ND	10		µg/L	1		06/08/2000	RDH	A7372
Chloroform	67-66-3	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Chloromethane	74-87-3	SW846 8260B	ND	10		µg/L	1		06/08/2000	RDH	A7372
cis-1,2-Dichloroethene	156-59-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
cis-1,3-Dichloropropene	10061-01-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Dibromochloromethane	124-48-1	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Dichlorodifluoromethane	75-71-8	SW846 8260B	ND	10		µg/L	1		06/08/2000	RDH	A7372
Ethylbenzene	100-41-4	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
m,p-Xylene	1330-20-7	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Methylene chloride	75-09-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
o-Xylene	95-47-6	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Styrene	100-42-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Tetrachloroethane	127-18-4	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

Toluene	108-88-3	SW846 8260B	ND	5	µg/L	1	06/08/2000	RDH	A7372
trans-1,2-Dichloroethene	156-60-5	SW846 8260B	ND	5	µg/L	1	06/08/2000	RDH	A7372
trans-1,3-Dichloropropene	10061-02-6	SW846 8260B	ND	5	µg/L	1	06/08/2000	RDH	A7372
Trichloroethene	79-01-6	SW846 8260B	ND	5	µg/L	1	06/08/2000	RDH	A7372
Trichlorofluoromethane	75-69-4	SW846 8260B	ND	10	µg/L	1	06/08/2000	RDH	A7372
Vinyl acetate	108-05-4	SW846 8260B	ND	5	µg/L	1	06/08/2000	RDH	A7372
Vinyl chloride	75-01-4	SW846 8260B	ND	10	µg/L	1	06/08/2000	RDH	A7372
surr: 1,2-Dichloroethane-d4	17060-07-0	SW846 8260B	97	85-135	%	1	06/08/2000	RDH	A7372
surr: 4-Bromofluorobenzene	460-00-4	SW846 8260B	99	81-110	%	1	06/08/2000	RDH	A7372
surr: Toluene-d8	2037-26-5	SW846 8260B	97	84-111	%	1	06/08/2000	RDH	A7372

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-INT

Tag Number:

Lab Sample ID: 0006068-02A
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,1,1-Trichloroethane	71-55-6	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1,2,2-Tetrachloroethane	79-34-5	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1,2-Trichloroethane	79-00-5	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1-Dichloroethane	75-34-3	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1-Dichloroethene	75-35-4	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,2-Dichloroethane	107-06-2	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,2-Dichloropropane	78-87-5	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
2-Butanone	78-93-3	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
2-Chloroethyl vinyl ether	110-75-8	SW846 8260B	ND	50		µg/Kg	1		06/13/2000	MHC	A7595
2-Hexanone	591-78-6	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
4-Methyl-2-pentanone	108-10-1	SW846 8260B	ND	50		µg/Kg	1		06/13/2000	MHC	A7595
Acetone	67-64-1	SW846 8260B	ND	50		µg/Kg	1		06/13/2000	MHC	A7595
Benzene	71-43-2	SW846 8260B	ND	50		µg/Kg	1		06/13/2000	MHC	A7595
Bromodichloromethane	75-27-4	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
Bromoform	75-25-2	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
Bromomethane	74-83-9	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
Carbon disulfide	75-15-0	SW846 8260B	ND	10		µg/Kg	1		06/13/2000	MHC	A7595
Carbon tetrachloride	56-23-5	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
Chlorobenzene	108-90-7	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
Chloroethane	75-00-3	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
				10		µg/Kg	1		06/13/2000	MHC	A7595

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

CLIENT SAMPLE REPORT

Chloroform	67-66-3	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Chloromethane	74-87-3	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
cis-1,2-Dichloroethene	156-59-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
cis-1,3-Dichloropropene	10061-01-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Dibromochloromethane	124-48-1	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Dichlorodifluoromethane	75-71-8	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
Ethylbenzene	100-41-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
m,p-Xylene	1330-20-7	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Methylene chloride	75-09-2	SW846 8260B	14	5	B	µg/Kg	1	06/13/2000	MHC	A7595
o-Xylene	95-47-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Styrene	100-42-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Tetrachloroethene	127-18-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Toluene	108-88-3	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
trans-1,2-Dichloroethene	156-60-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
trans-1,3-Dichloropropene	10061-02-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Trichloroethene	79-01-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Trichlorofluoromethane	75-69-4	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
Vinyl acetate	108-05-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Vinyl chloride	75-01-4	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
surr: 1,2-Dichloroethane-d4	17060-07-0	SW846 8260B	104	70-121		%	1	06/13/2000	MHC	A7595
surr: 4-Bromofluorobenzene	460-00-4	SW846 8260B	98	59-113		%	1	06/13/2000	MHC	A7595
surr: Toluene-d8	2037-26-5	SW846 8260B	102	84-138		%	1	06/13/2000	MHC	A7595

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-INT

Tag Number:

Lab Sample ID: 0006068-02B
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,2,4-Trichlorobenzene	120-82-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Dichlorobenzene	95-50-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Diphenylhydrazine	122-66-7	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,3-Dichlorobenzene	541-73-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,4-Dichlorobenzene	106-46-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,5-Trichlorophenol	95-95-4	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,6-Trichlorophenol	88-06-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dichlorophenol	120-83-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

2,4-Dimethylphenol	105-67-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2,4-Dinitrophenol	51-28-5	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2,4-Dinitrotoluene	121-14-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2,6-Dinitrotoluene	606-20-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Chloronaphthalene	91-58-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Chlorophenol	95-57-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Methylnaphthalene	91-57-6	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Methylphenol	95-48-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Nitroaniline	88-74-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Nitrophenol	88-75-5	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
3 & 4-Methylphenol	108-39-	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
3,3'-Dichlorobenzidine	91-94-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
3-Nitroaniline	99-09-2	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4,6-Dinitro-2-methylphenol	534-52-1	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Bromophenyl phenyl ether	101-55-3	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Chloro-3-methylphenol	59-50-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Chloroaniline	106-47-8	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Chlorophenyl phenyl ether	7005-72-3	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Nitroaniline	100-01-6	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Nitrophenol	100-02-7	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Acenaphthene	83-32-9	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Acenaphthylene	208-96-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Anthracene	120-12-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benz(a)anthracene	56-55-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzidine	92-87-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(a)pyrene	50-32-8	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(b)fluoranthene	205-99-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(g,h,i)perylene	191-24-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(k)fluoranthene	207-08-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzoic acid	65-85-0	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzyl alcohol	100-51-6	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethoxy)methane	111-91-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethyl)ether	111-44-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroisopropyl)ether	108-60-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-ethylhexyl)phthalate	117-81-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Butyl benzyl phthalate	85-68-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

15900 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

CLIENT SAMPLE REPORT

Carbazole	86-74-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Chrysene	218-01-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-butyl phthalate	84-74-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-octyl phthalate	117-84-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenz(a,h)anthracene	53-70-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenzofuran	132-64-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Diethyl phthalate	84-66-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dimethyl phthalate	131-11-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Diphenylamine	122-39-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Fluoranthene	206-44-0	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Fluorene	86-73-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorobenzene	118-74-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorobutadiene	87-68-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorocyclopentadiene	77-47-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachloroethane	67-72-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Isophorone	78-59-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
N-Nitrosodi-n-propylamine	621-64-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
N-Nitrosodiphenylamine	86-30-6	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Naphthalene	91-20-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Nitrobenzene	98-95-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Pentachlorophenol	87-86-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Phenanthrene	85-01-08	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Phenol	108-95-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Pyrene	129-00-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
surr: 2,4,6-Tribromophenol	118-79-6	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
surr: 2-Fluorobiphenyl	321-60-8	SW846 8270C	89	19-122	%	1	06/13/2000 06/16/2000	RDH	P5250
surr: 2-Fluorophenol	367-12-4	SW846 8270C	84	30-115	%	1	06/13/2000 06/16/2000	RDH	P5250
surr: 4-Terphenyl-d14	1718-51-0	SW846 8270C	59	25-121	%	1	06/13/2000 06/16/2000	RDH	P5250
surr: Nitrobenzene-d5	4165-60-0	SW846 8270C	90	16-137	%	1	06/13/2000 06/16/2000	RDH	P5250
surr: Phenol-d6	13127-88-3	SW846 8270C	62	23-120	%	1	06/13/2000 06/16/2000	RDH	P5250
			71	24-113	%	1	06/13/2000 06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-3047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

CLIENT SAMPLE REPORT

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-INT

Tag Number:

Lab Sample ID: 0006068-02C
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
Arsenic, total	7440-38-2	SW846 6010B	ND	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Barium, total	7440-39-3	SW846 6010B	110	1		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Cadmium, total	7440-43-9	SW846 6010B	ND	0.3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Chromium, total	7440-47-3	SW846 6010B	2.3	0.5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Lead, total	7439-92-1	SW846 6010B	7.6	3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Selenium, total	7782-49-2	SW846 6010B	5.3	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Silver, total	7440-22-4	SW846 6010B	ND	0.5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Mercury, total	7439-97-6	SW846 7471	ND	0.1		mg/Kg	1		06/12/2000	BAB	A7426b

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-INT

Tag Number:

Lab Sample ID: 0006068-02D
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
T/R Hydrocarbons: C10-C22		SW8015B	ND	10		mg/Kg	1	06/13/2000	06/15/2000	RDH	P5248
T/R Hydrocarbons: C6-C10		SW8015B	ND	1		mg/Kg	1		06/20/2000	RDH	A7646
surr: 4-Terphenyl-d14	1718-51-0	SW8015B	113	30-120		%	1	06/13/2000	06/15/2000	RDH	P5248
surr: Trifluorotoluene	98-08-8	SW8015B	93	60-130		%	1		06/20/2000	RDH	A7646

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-SOUTH

Tag Number:

Lab Sample ID: 0006068-03A
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,1,1-Trichloroethane	71-55-6	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1,2,2-Tetrachloroethane	79-34-5	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1,2-Trichloroethane	79-00-5	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1-Dichloroethane	75-34-3	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,1-Dichloroethene	75-35-4	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,2-Dichloroethane	107-06-2	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
1,2-Dichloropropane	78-87-5	SW846 8260B	ND	5		µg/Kg	1		06/13/2000	MHC	A7595
2-Butanone	78-93-3	SW846 8260B	ND	50		µg/Kg	1		06/13/2000	MHC	A7595

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.
13000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 634-0506 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

CLIENT SAMPLE REPORT

2-Chloroethyl vinyl ether	110-75-8	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
2-Hexanone	591-78-6	SW846 8260B	ND	50		µg/Kg	1	06/13/2000	MHC	A7595
4-Methyl-2-pentanone	108-10-1	SW846 8260B	ND	50		µg/Kg	1	06/13/2000	MHC	A7595
Acetone	67-64-1	SW846 8260B	ND	50		µg/Kg	1	06/13/2000	MHC	A7595
Benzene	71-43-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Bromodichloromethane	75-27-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Bromoform	75-25-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Bromomethane	74-83-9	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
Carbon disulfide	75-15-0	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Carbon tetrachloride	56-23-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Chlorobenzene	108-90-7	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Chloroethane	75-00-3	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
Chloroform	67-66-3	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Chloromethane	74-87-3	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
cis-1,2-Dichloroethene	156-59-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
cis-1,3-Dichloropropene	10061-01-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Dibromochloromethane	124-48-1	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Dichlorodifluoromethane	75-71-8	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
Ethylbenzene	100-41-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
m,p-Xylene	1330-20-7	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Methylene chloride	75-09-2	SW846 8260B	16	5	B	µg/Kg	1	06/13/2000	MHC	A7595
o-Xylene	95-47-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Styrene	100-42-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Tetrachloroethene	127-18-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Toluene	108-88-3	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
trans-1,2-Dichloroethene	156-60-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
trans-1,3-Dichloropropene	10061-02-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Trichloroethene	79-01-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Trichlorofluoromethane	75-69-4	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
Vinyl acetate	108-05-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Vinyl chloride	75-01-4	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
surr: 1,2-Dichloroethane-d4	17060-07-0	SW846 8260B	101	70-121		%	1	06/13/2000	MHC	A7595
surr: 4-Bromofluorobenzene	460-00-4	SW846 8260B	94	59-113		%	1	06/13/2000	MHC	A7595
surr: Toluene-d8	2037-26-5	SW846 8260B	100	84-138		%	1	06/13/2000	MHC	A7595

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-3907 (800) 654-0506 (303) 277-1687 Fax (303) 277-1682

Date: 22-Jun-00

CLIENT SAMPLE REPORT

Client: Sechtel Nevada Corp.
Work Order: 0006068
Project: CAU 426 SW3

Client Sample ID: 33-6-SOUTH

Tag Number:

Lab Sample ID: 0006068-03B
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,2,4-Trichlorobenzene	120-82-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Dichlorobenzene	95-50-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Diphenylhydrazine	122-66-7	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,3-Dichlorobenzene	541-73-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,4-Dichlorobenzene	106-46-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,5-Trichlorophenol	95-95-4	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,6-Trichlorophenol	88-06-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dichlorophenol	120-83-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dimethylphenol	105-67-9	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dinitrophenol	51-28-5	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dinitrotoluene	121-14-2	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,6-Dinitrotoluene	606-20-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Chloronaphthalene	91-58-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Chlorophenol	95-57-8	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Methylnaphthalene	91-57-6	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Methylphenol	95-48-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Nitroaniline	88-74-4	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Nitrophenol	88-75-5	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
3 & 4-Methylphenol	108-39-	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
3,3'-Dichlorobenzidine	91-94-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
3-Nitroaniline	99-09-2	SW846 8270C	ND	700		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4,6-Dinitro-2-methylphenol	534-52-1	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Bromophenyl phenyl ether	101-55-3	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Chloro-3-methylphenol	59-50-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Chloroaniline	106-47-8	SW846 8270C	ND	700		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Chlorophenyl phenyl ether	7005-72-3	SW846 8270C	ND	700		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Nitroaniline	100-01-6	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Nitrophenol	100-02-7	SW846 8270C	ND	700		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Acenaphthene	83-32-9	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Acenaphthylene	208-96-8	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Anthracene	120-12-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Benz(a)anthracene	56-55-3	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0306 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

CLIENT SAMPLE REPORT

Benzidine	92-87-5	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(a)pyrene	50-32-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(b)fluoranthene	205-99-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(g,h,i)perylene	191-24-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(k)fluoranthene	207-08-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzoic acid	65-85-0	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzyl alcohol	100-51-6	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethoxy)methane	111-91-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethyl)ether	111-44-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroisopropyl)ether	108-60-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-ethylhexyl)phthalate	117-81-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Butyl benzyl phthalate	85-68-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Carbazole	86-74-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Chrysene	218-01-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-butyl phthalate	84-74-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-octyl phthalate	117-84-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenz(a,h)anthracene	53-70-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenzofuran	132-64-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Diethyl phthalate	84-66-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dimethyl phthalate	131-11-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Diphenylamine	122-39-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Fluoranthene	206-44-0	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Fluorene	86-73-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorobenzene	118-74-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorobutadiene	87-68-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorocyclopentadiene	77-47-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachloroethane	67-72-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Isophorone	78-59-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
N-Nitrosodi-n-propylamine	621-64-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
N-Nitrosodiphenylamine	86-30-6	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Naphthalene	91-20-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Nitrobenzene	98-95-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Pentachlorophenol	87-86-5	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Phenanthrene	85-01-08	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Phenol	108-95-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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CLIENT SAMPLE REPORT

Pyrene	129-00-0	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2,4,6-Tribromophenol	118-79-6	SW846 8270C	0	19-122	S	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2-Fluorobiphenyl	321-60-8	SW846 8270C	72	30-115		%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2-Fluorophenol	367-12-4	SW846 8270C	0	25-121	S	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 4-Terphenyl-d14	1718-51-0	SW846 8270C	102	18-137		%	1	06/13/2000	06/16/2000	RDH	P5250
surr: Nitrobenzene-d5	4165-60-0	SW846 8270C	68	23-120		%	1	06/13/2000	06/16/2000	RDH	P5250
surr: Phenol-d6	13127-88-3	SW846 8270C	0	24-113	S	%	1	06/13/2000	06/16/2000	RDH	P5250

Client: **Bechtel Nevada Corp.** Client Sample ID: **33-8-SOUTH** Lab Sample ID: **0006068-03C**
Work Order: **0006068** Tag Number: Date Collected: **05/31/2000**
Project: **CAU 428 SWS** Matrix: **Soil**

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
Arsenic, total	7440-38-2	SW846 6010B	ND	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Barium, total	7440-39-3	SW846 6010B	110	1		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Cadmium, total	7440-43-9	SW846 6010B	ND	0.3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Chromium, total	7440-47-3	SW846 6010B	3.0	0.5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Lead, total	7439-92-1	SW846 6010B	9.1	3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Selenium, total	7782-49-2	SW846 6010B	10	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Silver, total	7440-22-4	SW846 6010B	ND	0.5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Mercury, total	7439-97-6	SW846 7471	ND	0.1		mg/Kg	1		06/12/2000	BAB	A7428b

Client: **Bechtel Nevada Corp.** Client Sample ID: **33-8-SOUTH** Lab Sample ID: **0006068-03D**
Work Order: **0006068** Tag Number: Date Collected: **05/31/2000**
Project: **CAU 428 SWS** Matrix: **Soil**

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
T/R Hydrocarbons: C10-C22		SW8015B	ND	10		mg/Kg	1	06/13/2000	06/15/2000	RDH	P5248
T/R Hydrocarbons: C6-C10		SW8015B	ND	1		mg/Kg	1		06/20/2000	RDH	A7646
surr: 4-Terphenyl-d14	1718-51-0	SW8015B	100	30-120		%	1	06/13/2000	06/15/2000	RDH	P5248
surr: Trifluorotoluene	98-08-8	SW8015B	95	60-130		%	1		06/20/2000	RDH	A7646

Client: **Bechtel Nevada Corp.** Client Sample ID: **33-8-SOUTH D** Lab Sample ID: **0006068-04A**
Work Order: **0006068** Tag Number: Date Collected: **05/31/2000**
Project: **CAU 428 SWS** Matrix: **Soil**

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 658-9506 (303) 277-1687 Fax (303) 277-1689

CLIENT SAMPLE REPORT

l,1-Trichloroethane	71-55-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
l,2,2-Tetrachloroethane	79-34-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
l,2-Trichloroethane	79-00-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
l-Dichloroethane	75-34-3	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
l-Dichloroethene	75-35-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
2-Dichloroethane	107-06-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
2-Dichloropropane	78-87-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Butanone	78-93-3	SW846 8260B	ND	50		µg/Kg	1	06/13/2000	MHC	A7595
Chloroethyl vinyl ether	110-75-8	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
Hexanone	591-78-6	SW846 8260B	ND	50		µg/Kg	1	06/13/2000	MHC	A7595
Methyl-2-pentanone	108-10-1	SW846 8260B	ND	50		µg/Kg	1	06/13/2000	MHC	A7595
etone	67-64-1	SW846 8260B	ND	50		µg/Kg	1	06/13/2000	MHC	A7595
nzene	71-43-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
omodichloromethane	75-27-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
omoform	75-25-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
omomethane	74-83-9	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
rbon disulfide	75-15-0	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
rbon tetrachloride	56-23-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
lorobenzene	108-90-7	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
loroethane	75-00-3	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
loroform	67-66-3	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
loromethane	74-87-3	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
s-1,2-Dichloroethene	156-59-2	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
s-1,3-Dichloropropene	10061-01-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
bromochloromethane	124-48-1	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
chlorodifluoromethane	75-71-8	SW846 8260B	ND	10		µg/Kg	1	06/13/2000	MHC	A7595
hylbenzene	100-41-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
,p-Xylene	1330-20-7	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
ethylene chloride	75-09-2	SW846 8260B	15	5	B	µg/Kg	1	06/13/2000	MHC	A7595
Xylene	95-47-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
yrene	100-42-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
trachloroethene	127-18-4	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
luene	108-88-3	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
ns-1,2-Dichloroethene	156-60-5	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
ns-1,3-Dichloropropene	10061-02-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595
richloroethene	79-01-6	SW846 8260B	ND	5		µg/Kg	1	06/13/2000	MHC	A7595

Qualifiers: ND - Not detected at the reporting limit J - Analyte detected below reporting limit E - Value above quantitation range S - Spike outside accepted recovery limits
B - Analyte detected in method blank L - Contract/Client reporting limit exceeded R - RPD outside accepted recovery limits Y - Unspiked sample > 4 times amount spiked
Z - Sample > 10 times blank result M - Maximum contaminant level exceeded X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.
15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5647 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

CLIENT SAMPLE REPORT

Trichlorofluoromethane	75-69-4	SW846 8260B	ND	10	µg/Kg	1	06/13/2000	MHC	A7595
Vinyl acetate	108-05-4	SW846 8260B	ND	5	µg/Kg	1	06/13/2000	MHC	A7595
Vinyl chloride	75-01-4	SW846 8260B	ND	10	µg/Kg	1	06/13/2000	MHC	A7595
surr: 1,2-Dichloroethane-d4	17060-07-0	SW846 8260B	102	70-121	%	1	06/13/2000	MHC	A7595
surr: 4-Bromofluorobenzene	460-00-4	SW846 8260B	97	69-113	%	1	06/13/2000	MHC	A7595
surr: Toluene-d8	2037-26-5	SW846 8260B	99	84-138	%	1	06/13/2000	MHC	A7595

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-SOUTH D

Tag Number:

Lab Sample ID: 0006068-04B
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,2,4-Trichlorobenzene	120-82-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Dichlorobenzene	95-50-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Diphenylhydrazine	122-66-7	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,3-Dichlorobenzene	541-73-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,4-Dichlorobenzene	106-46-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,5-Trichlorophenol	95-95-4	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,6-Trichlorophenol	88-06-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dichlorophenol	120-83-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dimethylphenol	105-67-9	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dinitrophenol	51-28-5	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dinitrotoluene	121-14-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,6-Dinitrotoluene	606-20-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Chloronaphthalene	91-58-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Chlorophenol	95-57-8	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Methylnaphthalene	91-57-6	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Methylphenol	95-48-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Nitroaniline	88-74-4	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Nitrophenol	88-75-5	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
3 & 4-Methylphenol	108-39-	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
3,3'-Dichlorobenzidine	91-94-1	SW846 8270C	ND	700		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
3-Nitroaniline	99-09-2	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4,6-Dinitro-2-methylphenol	534-52-1	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Bromophenyl phenyl ether	101-55-3	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
4-Chloro-3-methylphenol	59-50-7	SW846 8270C	ND	700		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Control/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

4-Chloroaniline	106-47-8	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Chlorophenyl phenyl ether	7005-72-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Nitroaniline	100-01-6	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Nitrophenol	100-02-7	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Acenaphthene	83-32-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Acenaphthylene	208-96-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Anthracene	120-12-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benz(a)anthracene	56-55-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzidine	92-87-5	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(a)pyrene	50-32-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(b)fluoranthene	205-99-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(g,h,i)perylene	191-24-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(k)fluoranthene	207-08-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzoic acid	65-85-0	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzyl alcohol	100-51-6	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethoxy)methane	111-91-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethyl)ether	111-44-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroisopropyl)ether	108-60-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-ethylhexyl)phthalate	117-81-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Butyl benzyl phthalate	85-68-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Carbazole	86-74-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Chrysene	218-01-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-butyl phthalate	84-74-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-octyl phthalate	117-84-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenz(a,h)anthracene	53-70-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenzofuran	132-64-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Diethyl phthalate	84-66-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dimethyl phthalate	131-11-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Diphenylamine	122-39-4	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Fluoranthene	206-44-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Fluorene	86-73-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorobenzene	118-74-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorobutadiene	87-68-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachlorocyclopentadiene	77-47-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Hexachloroethane	67-72-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

Isophorone	78-59-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
N-Nitrosodi-n-propylamine	621-64-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
N-Nitrosodiphenylamine	86-30-6	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Naphthalene	91-20-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Nitrobenzene	98-95-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Pentachlorophenol	87-86-5	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Phenanthrene	85-01-08	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Phenol	108-95-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Pyrene	129-00-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2,4,6-Tribromophenol	118-79-6	SW846 8270C	69	19-122	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2-Fluorobiphenyl	321-60-8	SW846 8270C	61	30-115	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2-Fluorophenol	367-12-4	SW846 8270C	25	25-121	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 4-Terphenyl-d14	1718-51-0	SW846 8270C	87	18-137	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: Nitrobenzene-d5	4165-60-0	SW846 8270C	51	23-120	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: Phenol-d6	13127-88-3	SW846 8270C	47	24-113	%	1	06/13/2000	06/16/2000	RDH	P5250

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-SOUTH D

Tag Number:

Lab Sample ID: 0006068-04C
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
Arsenic, total	7440-38-2	SW846 6010B	ND	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Barium, total	7440-39-3	SW846 6010B	110	1		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Cadmium, total	7440-43-9	SW846 6010B	ND	0.3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Chromium, total	7440-47-3	SW846 6010B	2.9	0.5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Lead, total	7439-92-1	SW846 6010B	7.4	3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Selenium, total	7782-49-2	SW846 6010B	6.8	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Silver, total	7440-22-4	SW846 6010B	ND	0.5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Mercury, total	7439-97-6	SW846 7471	ND	0.1		mg/Kg	1		06/12/2000	BAB	A7428b

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-SOUTH D

Tag Number:

Lab Sample ID: 0006068-04D
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
T/R Hydrocarbons: C10-C22		SW8015B	ND	10		mg/Kg	1	06/13/2000	06/15/2000	RDH	P5248

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.
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Date: 22-Jun-00

CLIENT SAMPLE REPORT

T/R Hydrocarbons: C6-C10		SW8015B	ND	1		mg/Kg	1		06/20/2000	RDH	A7646
surr: 4-Terphenyl-d14	1718-51-0	SW8015B	94	30-120		%	1	06/13/2000	06/15/2000	RDH	P5248
surr: Trifluorotoluene	98-08-8	SW8015B	58	60-130	S	%	1		06/20/2000	RDH	A7646

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-NORTH

Tag Number:

Lab Sample ID: 0006068-05A
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,1,1-Trichloroethane	71-55-6	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
1,1,2,2-Tetrachloroethane	79-34-5	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
1,1,2-Trichloroethane	79-00-5	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
1,1-Dichloroethane	75-34-3	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
1,1-Dichloroethene	75-35-4	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
1,2-Dichloroethane	107-06-2	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
1,2-Dichloropropane	78-87-5	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
2-Butanone	78-93-3	SW846 8260B	ND	50		µg/Kg	1		06/14/2000	MHC	A7595
2-Chloroethyl vinyl ether	110-75-8	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
2-Hexanone	591-78-6	SW846 8260B	ND	50		µg/Kg	1		06/14/2000	MHC	A7595
4-Methyl-2-pentanone	108-10-1	SW846 8260B	ND	50		µg/Kg	1		06/14/2000	MHC	A7595
Acetone	67-64-1	SW846 8260B	ND	50		µg/Kg	1		06/14/2000	MHC	A7595
Benzene	71-43-2	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Bromodichloromethane	75-27-4	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Bromoform	75-25-2	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Bromomethane	74-83-9	SW846 8260B	ND	10		µg/Kg	1		06/14/2000	MHC	A7595
Carbon disulfide	75-15-0	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Carbon tetrachloride	56-23-5	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Chlorobenzene	108-90-7	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Chloroethane	75-00-3	SW846 8260B	ND	10		µg/Kg	1		06/14/2000	MHC	A7595
Chloroform	67-66-3	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Chloromethane	74-87-3	SW846 8260B	ND	10		µg/Kg	1		06/14/2000	MHC	A7595
cis-1,2-Dichloroethene	156-59-2	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
cis-1,3-Dichloropropene	10061-01-5	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Dibromochloromethane	124-48-1	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595
Dichlorodifluoromethane	75-71-8	SW846 8260B	ND	10		µg/Kg	1		06/14/2000	MHC	A7595
Ethylbenzene	100-41-4	SW846 8260B	ND	5		µg/Kg	1		06/14/2000	MHC	A7595

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

m,p-Xylene	1330-20-7	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
Methylene chloride	75-09-2	SW846 8260B	14	5	B	µg/Kg	1	06/14/2000	MHC	A7595
o-Xylene	95-47-6	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
Styrene	100-42-5	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
Tetrachloroethene	127-18-4	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
Toluene	108-88-3	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
trans-1,2-Dichloroethene	156-60-5	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
trans-1,3-Dichloropropene	10061-02-6	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
Trichloroethene	79-01-6	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
Trichlorofluoromethane	75-69-4	SW846 8260B	ND	10		µg/Kg	1	06/14/2000	MHC	A7595
Vinyl acetate	108-05-4	SW846 8260B	ND	5		µg/Kg	1	06/14/2000	MHC	A7595
Vinyl chloride	75-01-4	SW846 8260B	ND	10		µg/Kg	1	06/14/2000	MHC	A7595
surr: 1,2-Dichloroethane-d4	17060-07-0	SW846 8260B	105	70-121		%	1	06/14/2000	MHC	A7595
surr: 4-Bromofluorobenzene	460-00-4	SW846 8260B	95	59-113		%	1	06/14/2000	MHC	A7595
surr: Toluene-d8	2037-26-5	SW846 8260B	96	84-138		%	1	06/14/2000	MHC	A7595

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-NORTH

Tag Number:

Lab Sample ID: 0006068-05B
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,2,4-Trichlorobenzene	120-82-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Dichlorobenzene	95-50-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,2-Diphenylhydrazine	122-66-7	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,3-Dichlorobenzene	541-73-1	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
1,4-Dichlorobenzene	106-46-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,5-Trichlorophenol	95-95-4	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4,6-Trichlorophenol	88-06-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dichlorophenol	120-83-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dimethylphenol	105-67-9	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dinitrophenol	51-28-5	SW846 8270C	ND	2000		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,4-Dinitrotoluene	121-14-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2,6-Dinitrotoluene	606-20-2	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Chloronaphthalene	91-58-7	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Chlorophenol	95-57-8	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
2-Methylnaphthalene	91-57-6	SW846 8270C	ND	300		µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

2-Methylphenol	95-48-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Nitroaniline	88-74-4	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
2-Nitrophenol	88-75-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
3 & 4-Methylphenol	108-39-	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
3,3'-Dichlorobenzidine	91-94-1	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
3-Nitroaniline	99-09-2	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4,6-Dinitro-2-methylphenol	534-52-1	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Bromophenyl phenyl ether	101-55-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Chloro-3-methylphenol	59-50-7	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Chloroaniline	106-47-8	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Chlorophenyl phenyl ether	7005-72-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Nitroaniline	100-01-6	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
4-Nitrophenol	100-02-7	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Acenaphthene	83-32-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Acenaphthylene	208-96-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Anthracene	120-12-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benz(a)anthracene	56-55-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzidine	92-87-5	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(a)pyrene	50-32-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(b)fluoranthene	205-99-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(g,h,i)perylene	191-24-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzo(k)fluoranthene	207-08-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzoic acid	65-85-0	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Benzyl alcohol	100-51-6	SW846 8270C	ND	700	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethoxy)methane	111-91-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroethyl)ether	111-44-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-chloroisopropyl)ether	108-60-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Bis(2-ethylhexyl)phthalate	117-81-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Butyl benzyl phthalate	85-68-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Carbazole	86-74-8	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Chrysene	218-01-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-butyl phthalate	84-74-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Di-n-octyl phthalate	117-84-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenz(a,h)anthracene	53-70-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Dibenzofuran	132-64-9	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250
Diethyl phthalate	84-66-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000 06/16/2000	RDH	P5250

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
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Date: 22-Jun-00

CLIENT SAMPLE REPORT

Dimethyl phthalate	131-11-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Diphenylamine	122-39-4	SW846 8270C	ND	700	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Fluoranthene	206-44-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Fluorene	86-73-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Hexachlorobenzene	118-74-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Hexachlorobutadiene	87-68-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Hexachlorocyclopentadiene	77-47-4	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Hexachloroethane	67-72-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Indeno(1,2,3-cd)pyrene	193-39-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Isophorone	78-59-1	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
N-Nitrosodi-n-propylamine	621-64-7	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
N-Nitrosodiphenylamine	86-30-6	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Naphthalene	91-20-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Nitrobenzene	98-95-3	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Pentachlorophenol	87-86-5	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Phenanthrene	85-01-08	SW846 8270C	ND	2000	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Phenol	108-95-2	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
Pyrene	129-00-0	SW846 8270C	ND	300	µg/Kg	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2,4,6-Tribromophenol	118-79-6	SW846 8270C	74	19-122	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2-Fluorobiphenyl	321-60-8	SW846 8270C	73	30-115	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 2-Fluorophenol	367-12-4	SW846 8270C	42	25-121	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: 4-Terphenyl-d14	1718-51-0	SW846 8270C	90	18-137	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: Nitrobenzene-d5	4165-60-0	SW846 8270C	67	23-120	%	1	06/13/2000	06/16/2000	RDH	P5250
surr: Phenol-d6	13127-88-3	SW846 8270C	58	24-113	%	1	06/13/2000	06/16/2000	RDH	P5250

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-NORTH

Tag Number:

Lab Sample ID: 0006068-05C
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
Arsenic, total	7440-38-2	SW846 6010B	ND	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Barium, total	7440-39-3	SW846 6010B	93	1		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Cadmium, total	7440-43-9	SW846 6010B	ND	0.3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Chromium, total	7440-47-3	SW846 6010B	3.1	0.5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Lead, total	7439-92-1	SW846 6010B	6.3	3		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Selenium, total	7782-49-2	SW846 6010B	6.8	5		mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

Silver, total	7440-22-4	SW846 6010B	ND	0.5	mg/Kg	1	06/08/2000	06/13/2000	JCB	P5199
Mercury, total	7439-97-6	SW846 7471	ND	0.1	mg/Kg	1		06/12/2000	BAB	A7428b

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-NORTH

Tag Number:

Lab Sample ID: 0006068-05D
Date Collected: 05/31/2000
Matrix: Soil

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
T/R Hydrocarbons: C10-C22		SW8015B	ND	10		mg/Kg	1	06/13/2000	06/15/2000	RDH	P5248
T/R Hydrocarbons: C6-C10		SW8015B	ND	1		mg/Kg	1		06/20/2000	RDH	A7646
surr: 4-Terphenyl-d14	1718-51-0	SW8015B	85	30-120		%	1	06/13/2000	06/15/2000	RDH	P5248
surr: Trifluorotoluene	98-08-8	SW8015B	99	60-130		%	1		06/20/2000	RDH	A7646

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 428 SWS

Client Sample ID: 33-8-RINSATE

Tag Number:

Lab Sample ID: 0006068-06A
Date Collected: 06/05/2000
Matrix: Aqueous

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,1,1-Trichloroethane	71-55-6	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1,2,2-Tetrachloroethane	79-34-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1,2-Trichloroethane	79-00-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1-Dichloroethane	75-34-3	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,1-Dichloroethene	75-35-4	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,2-Dichloroethane	107-06-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
1,2-Dichloropropane	78-87-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
2-Butanone	78-93-3	SW846 8260B	ND	50		µg/L	1		06/08/2000	RDH	A7372
2-Chloroethyl vinyl ether	110-75-8	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
2-Hexanone	591-78-6	SW846 8260B	ND	50		µg/L	1		06/08/2000	RDH	A7372
4-Methyl-2-pentanone	108-10-1	SW846 8260B	ND	50		µg/L	1		06/08/2000	RDH	A7372
Acetone	67-64-1	SW846 8260B	ND	50		µg/L	1		06/08/2000	RDH	A7372
Benzene	71-43-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Bromodichloromethane	75-27-4	SW846 8260B	2.5	5	J	µg/L	1		06/08/2000	RDH	A7372
Bromoform	75-25-2	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Bromomethane	74-83-9	SW846 8260B	ND	10		µg/L	1		06/08/2000	RDH	A7372
Carbon disulfide	75-15-0	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372
Carbon tetrachloride	56-23-5	SW846 8260B	ND	5		µg/L	1		06/08/2000	RDH	A7372

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits
B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked
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Date: 22-Jun-00

CLIENT SAMPLE REPORT

Chlorobenzene	108-90-7	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Chloroethane	75-00-3	SW846 8260B	ND	10		µg/L	1	06/08/2000	RDH	A7372
Chloroform	67-66-3	SW846 8260B	3.2	5	J	µg/L	1	06/08/2000	RDH	A7372
Chloromethane	74-87-3	SW846 8260B	ND	10		µg/L	1	06/08/2000	RDH	A7372
cis-1,2-Dichloroethene	156-59-2	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
cis-1,3-Dichloropropene	10061-01-5	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Dibromochloromethane	124-48-1	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Dichlorodifluoromethane	75-71-8	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Ethylbenzene	100-41-4	SW846 8260B	ND	10		µg/L	1	06/08/2000	RDH	A7372
m,p-Xylene	1330-20-7	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Methylene chloride	75-09-2	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
o-Xylene	95-47-6	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Styrene	100-42-5	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Tetrachloroethene	127-18-4	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Toluene	108-88-3	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
trans-1,2-Dichloroethene	156-60-5	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
trans-1,3-Dichloropropene	10061-02-6	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Trichloroethene	79-01-6	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Trichlorofluoromethane	75-69-4	SW846 8260B	ND	10		µg/L	1	06/08/2000	RDH	A7372
Vinyl acetate	108-05-4	SW846 8260B	ND	5		µg/L	1	06/08/2000	RDH	A7372
Vinyl chloride	75-01-4	SW846 8260B	ND	10		µg/L	1	06/08/2000	RDH	A7372
surr: 1,2-Dichloroethane-d4	17060-07-0	SW846 8260B	96	85-135		%	1	06/08/2000	RDH	A7372
surr: 4-Bromofluorobenzene	460-00-4	SW846 8260B	92	81-110		%	1	06/08/2000	RDH	A7372
surr: Toluene-d8	2037-26-5	SW846 8260B	96	84-111		%	1	06/08/2000	RDH	A7372

Client: Bechtel Nevada Corp.
Work Order: 0006068
Project: CAU 426 SWS

Client Sample ID: 33-8-RINSATE
Tag Number:

Lab Sample ID: 0006068-06B
Date Collected: 06/05/2000
Matrix: Aqueous

Analyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
1,2,4-Trichlorobenzene	120-82-1	SW8270C	ND	10		µg/L	1	06/12/2000	06/15/2000	RDH	P5231
1,2-Dichlorobenzene	95-50-1	SW8270C	ND	10		µg/L	1	06/12/2000	06/15/2000	RDH	P5231
1,2-Diphenylhydrazine	122-66-7	SW8270C	ND	50		µg/L	1	06/12/2000	06/15/2000	RDH	P5231
1,3-Dichlorobenzene	541-73-1	SW8270C	ND	10		µg/L	1	06/12/2000	06/15/2000	RDH	P5231
1,4-Dichlorobenzene	106-46-7	SW8270C	ND	10		µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2,4,5-Trichlorophenol	95-95-4	SW8270C	ND	10		µg/L	1	06/12/2000	06/15/2000	RDH	P5231

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

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Date: 22-Jun-00

CLIENT SAMPLE REPORT

2,4,6-Trichlorophenol	88-06-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2,4-Dichlorophenol	120-83-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2,4-Dimethylphenol	105-67-9	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2,4-Dinitrophenol	51-28-5	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2,4-Dinitrotoluene	121-14-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2,6-Dinitrotoluene	606-20-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2-Chloronaphthalene	91-58-7	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2-Chlorophenol	95-57-8	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2-Methylnaphthalene	91-57-6	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2-Methylphenol	95-48-7	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2-Nitroaniline	88-74-4	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
2-Nitrophenol	88-75-5	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
3 & 4-Methylphenol	108-39-	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
3,3'-Dichlorobenzidine	91-94-1	SW8270C	ND	20	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
3-Nitroaniline	99-09-2	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
4,6-Dinitro-2-methylphenol	534-52-1	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
4-Bromophenyl phenyl ether	101-55-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
4-Chloro-3-methylphenol	59-50-7	SW8270C	ND	20	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
4-Chloroaniline	106-47-8	SW8270C	ND	20	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
4-Chlorophenyl phenyl ether	7005-72-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
4-Nitroaniline	100-01-6	SW8270C	ND	20	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
4-Nitrophenol	100-02-7	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Acenaphthene	83-32-9	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Acenaphthylene	208-96-8	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Anthracene	120-12-7	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benz(a)anthracene	56-55-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benzidine	92-87-5	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benzo(a)pyrene	50-32-8	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benzo(b)fluoranthene	205-99-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benzo(g,h,i)perylene	191-24-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benzo(k)fluoranthene	207-08-9	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benzoic acid	65-85-0	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Benzyl alcohol	100-51-6	SW8270C	ND	20	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Bis(2-chloroethoxy)methane	111-91-1	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Bis(2-chloroethyl)ether	111-44-4	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Bis(2-chloroisopropyl)ether	108-60-1	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

13000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

Date: 22-Jun-00

CLIENT SAMPLE REPORT

Bis(2-ethylhexyl)phthalate	117-81-7	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Butyl benzyl phthalate	85-68-7	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Carbazole	86-74-8	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Chrysene	218-01-9	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Di-n-butyl phthalate	84-74-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Di-n-octyl phthalate	117-84-0	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Dibenz(a,h)anthracene	53-70-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Dibenzofuran	132-64-9	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Diethyl phthalate	84-66-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Dimethyl phthalate	131-11-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Diphenylamine	122-39-4	SW8270C	ND	20	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Fluoranthene	206-44-0	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Fluorene	86-73-7	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Hexachlorobenzene	118-74-1	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Hexachlorobutadiene	87-68-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Hexachlorocyclopentadiene	77-47-4	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Hexachloroethane	67-72-1	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Indeno(1,2,3-cd)pyrene	193-39-5	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Isophorone	78-59-1	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
N-Nitrosodi-n-propylamine	621-64-7	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
N-Nitrosodiphenylamine	86-30-6	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Naphthalene	91-20-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Nitrobenzene	98-95-3	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Pentachlorophenol	87-86-5	SW8270C	ND	50	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Phenanthrene	85-01-08	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Phenol	108-95-2	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
Pyrene	129-00-0	SW8270C	ND	10	µg/L	1	06/12/2000	06/15/2000	RDH	P5231
surr: 2,4,6-Tribromophenol	118-79-6	SW8270C	103	10-123	%	1	06/12/2000	06/15/2000	RDH	P5231
surr: 2-Fluorobiphenyl	321-60-8	SW8270C	92	43-116	%	1	06/12/2000	06/15/2000	RDH	P5231
surr: 2-Fluorophenol	367-12-4	SW8270C	34	21-110	%	1	06/12/2000	06/15/2000	RDH	P5231
surr: 4-Terphenyl-d14	1718-51-0	SW8270C	135	33-141	%	1	06/12/2000	06/15/2000	RDH	P5231
surr: Nitrobenzene-d5	4165-60-0	SW8270C	89	35-114	%	1	06/12/2000	06/15/2000	RDH	P5231
surr: Phenol-d6	13127-88-3	SW8270C	23	10-110	%	1	06/12/2000	06/15/2000	RDH	P5231

Qualifiers: ND - Not detected at the reporting limit; J - Analyte detected below reporting limit; E - Value above quantitation range; S - Spike outside accepted recovery limits; B - Analyte detected in method blank; L - Contract/Client reporting limit exceeded; R - RPD outside accepted recovery limits; Y - Unspiked sample > 4 times amount spiked; Z - Sample > 10 times blank result; M - Maximum contaminant level exceeded; X - Duplicate sample(s) < 5 times limit

Barringer Laboratories, Inc.

15000 W 6th Avenue Suite 300 Golden, Colorado 80401-5047 (800) 654-0506 (303) 277-1687 Fax (303) 277-1689

CLIENT SAMPLE REPORT

lient: Bechtel Nevada Corp.
ork Order: 0006068
oject: CAU 428 SWS

Client Sample ID: 33-8-RINSATE

Tag Number:

Lab Sample ID: 0006068-06C
Date Collected: 06/05/2000
Matrix: Aqueous

alyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
senic, total	7440-38-2	EPA200.7	ND	0.1		mg/L	1	06/09/2000	06/12/2000	SLM	P5205
rium, total	7440-39-3	EPA200.7	ND	0.02		mg/L	1	06/09/2000	06/09/2000	SLM	P5205
dmium, total	7440-43-9	EPA200.7	ND	0.005		mg/L	1	06/09/2000	06/09/2000	SLM	P5205
romium, total	7440-47-3	EPA200.7	ND	0.01		mg/L	1	06/09/2000	06/09/2000	SLM	P5205
ad, total	7439-92-1	EPA200.7	ND	0.05		mg/L	1	06/09/2000	06/09/2000	SLM	P5205
anium, total	7782-49-2	EPA200.7	ND	0.1		mg/L	1	06/09/2000	06/09/2000	SLM	P5205
ver, total	7440-22-4	EPA200.7	ND	0.01		mg/L	1	06/09/2000	06/09/2000	SLM	P5205
ercury, total	7439-97-6	EPA245.1	ND	0.0002		mg/L	1		06/12/2000	BAB	A7428a

lient: Bechtel Nevada Corp.
ork Order: 0006068
oject: CAU 428 SWS

Client Sample ID: 33-8-RINSATE

Tag Number:

Lab Sample ID: 0006068-06D
Date Collected: 06/05/2000
Matrix: Aqueous

alyte	CAS#	Method	Result ± 2 sigma	Limit	Qual	Unit	DF	Prepped	Analyzed	Analyst	Batch
R Hydrocarbons: C10-C22		SW8015B	0.22	0.1		mg/L	1	06/12/2000	06/13/2000	RDH	P5230
rrogate: 4-Terphenyl-d14	1718-51-0	SW8015B	136	30-120	S	%	1	06/12/2000	06/13/2000	RDH	P5230
R Hydrocarbons: C6-C10		SW846 8015B	ND	0.5		mg/L	1		06/14/2000	RDH	A7506
rrogate: Trifluorotoluene	98-08-8	SW846 8015B	103	50-130		%	1		06/14/2000	RDH	A7506

Qualifiers: ND - Not detected at the reporting limit
B - Analyte detected in method blank
Z - Sample > 10 times blank result
J - Analyte detected below reporting limit
L - Contract/Client reporting limit exceeded
M - Maximum contaminant level exceeded
E - Value above quantitation range
R - RPD outside accepted recovery limits
X - Duplicate sample(s) < 5 times limit
S - Spike outside accepted recovery limits
Y - Unspiked sample > 4 times amount spiked

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Water

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 30-MAY-00
Sample Delivery Group: D339
Batch: N788
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-3-TANK	No Nucl Det	0.00E+00	0.0E+00	U	0.0E+00	NA	05-25-00	05-22-00	5.27E+02	ml			05-01	H3027-0-75363
33-3-TANK	U 238	0.00E+00	0.0E+00	U	1.1E+04	pCi/L	05-25-00	05-22-00	5.27E+02	ml			05-01	H3027-0-75363
33-3-TANK	AM241	0.00E+00	0.0E+00	U	3.5E+02	pCi/L	05-25-00	05-22-00	5.27E+02	ml			05-01	H3027-0-75363
QA BKGWater U05	No peaks	0.00E+00	0.0E+00		0.0E+00	NA	05-25-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00307
QA BKGWater U05	CO60	0.00E+00	0.0E+00	U	1.0E+02	pCi/L	05-25-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00307
QA BKGWater U05	AM241	0.00E+00	0.0E+00	U	3.5E+02	pCi/L	05-25-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00307
QA BKGWater U05	CS137	0.00E+00	0.0E+00	U	8.2E+01	pCi/L	05-25-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00307

Comment:

Prepared by: C.D. Castaneda Date: MAY 30 2000

Approved by: _____ Date: _____

Qualification Flags:
E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: Error is the 2.0 Sigma Error

(Level 1)

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Soil, Gross

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 30-MAY-00
Sample Delivery Group: D339
Batch: N789
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-11-NORTH	AC228	1.17E+00	1.9E+00	U	1.3E+00	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
33-11-NORTH	AC228	1.81E+00	7.1E-01		4.2E-01	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
33-11-NORTH	AC228	1.51E+00	5.4E-01		2.7E-01	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
33-11-NORTH	K 40	2.57E+01	4.8E+00		1.2E+00	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
33-11-NORTH	RA226	1.16E+00	4.6E-01		3.0E-01	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
33-11-NORTH	RA226	1.41E+00	3.4E-01		1.5E-01	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
33-11-NORTH	RA226	1.00E+00	2.9E-01		2.0E-01	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
33-11-NORTH	TH228	2.00E+00	3.8E-01		1.4E-01	pCi/g	05-25-00	05-23-00	7.76E+02	gm			05-01	H3028-0-75514
QA BKGEmpty Btl U05	No Nucl Det	0.00E+00	0.0E+00	U	0.0E+00	NA	05-25-00	01-19-00	1.00E+00	sm			05-01	Q0796-0-00308
QA SP:NAS-A9987	AM241	1.61E+01	2.1E+00		2.9E-01	pCi/g	05-25-00	03-01-99	8.35E+02	gm		93.3	05-01	Q0797-4-13124

Comment:

Prepared by: CJ Contreras MAY 30 2000 Date:

Approved by: Date:

Qualification Flags:
E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Inst QC Spike: Soil, 90gm to 835gm

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 30-MAY-00
Sample Delivery Group: D339
Batch: N789
Program: 521

Report No. :

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
QA SP:NAS-A9987	CO60	2.47E+01	2.7E+00		8.5E-02	pCi/g	05-25-00	03-01-99	8.35E+02	gm		98.6	05-01	Q0797-4-13124
QA SP:NAS-A9987	CS137	1.86E+01	2.0E+00		8.2E-02	pCi/g	05-25-00	03-01-99	8.35E+02	gm		96.1	05-01	Q0797-4-13124

Comment:

Prepared by: CS Castaneda Date: MAY 30 2000

Approved by: _____ Date: _____

Qualification Flags:
E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Soil, Gross

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 6-JUN-00
Sample Delivery Group: D356
Batch: N803
Program: 720

Report No.:

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-8-INT	K 40	3.48E+01	5.9E+00		1.1E+00	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-INT	RA226	1.29E+00	3.5E-01		1.9E-01	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-INT	TH228	2.41E+00	4.3E-01		1.4E-01	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-INT	TH232	2.05E+00	6.5E-01		3.6E-01	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-NORTH	K 40	2.72E+01	5.0E+00		9.2E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	RA226	1.10E+00	3.1E-01		1.9E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	RA226	1.31E+00	7.9E-01		1.1E+00	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	TH228	1.96E+00	3.7E-01		1.3E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	TH232	2.04E+00	6.8E-01		3.8E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-SOUTH	K 40	2.87E+01	5.2E+00		1.1E+00	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021

Comment:
Data generated from analyses of five samples submitted to the laboratory on June 5, 2000.

Prepared by:_____ Date:_____

Approved by:_____ Date:_____

Qualification Flags:
E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Soil, Gross

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 6-JUN-00
Sample Delivery Group: D356
Batch: N803
Program: 720

Report No.:

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-8-SOUTH	RA226	1.24E+00	3.3E-01		1.9E-01	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021
33-8-SOUTH	TH228	1.90E+00	3.7E-01		1.3E-01	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021
33-8-SOUTH	TH232	1.84E+00	6.1E-01		3.7E-01	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021
33-8-SOUTH D	K 40	2.82E+01	5.1E+00		9.2E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
33-8-SOUTH D	RA226	1.21E+00	3.3E-01		1.9E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
33-8-SOUTH D	TH228	2.19E+00	4.0E-01		1.3E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
33-8-SOUTH D	TH232	2.02E+00	6.4E-01		3.2E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
QA BKGEmpty Btl U05	No Nucl Det	0.00E+00	0.0E+00	U	0.0E+00	NA	06-05-00	01-19-00	1.00E+00	sm			05-01	Q0796-0-00327

Comment:
Data generated from analyses of five samples submitted to the laboratory on June 5, 2000.

Prepared by:_____ Date:_____

Approved by:_____ Date:_____

Qualification Flags:
E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: Error is the 2.0 Sigma Error

(Level I)

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Water

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 6-JUN-00
Sample Delivery Group: D356
Batch: N804
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-8-RINSATE	U 235	9.76E+01	7.0E+01	U	1.7E+02	pCi/L	06-05-00	06-05-00	4.90E+02	ml			05-01	H3056-0-73024
33-8-RINSATE	U 238	0.00E+00	0.0E+00	U	1.1E+04	pCi/L	06-05-00	06-05-00	4.90E+02	ml			05-01	H3056-0-73024
33-8-RINSATE	AM241	0.00E+00	0.0E+00	U	3.3E+02	pCi/L	06-05-00	06-05-00	4.90E+02	ml			05-01	H3056-0-73024
QA BKGWater U05	No peaks	0.00E+00	0.0E+00		0.0E+00	NA	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA BKGWater U05	CO60	0.00E+00	0.0E+00	U	1.3E+02	pCi/L	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA BKGWater U05	AM241	0.00E+00	0.0E+00	U	3.1E+02	pCi/L	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA BKGWater U05	CS137	0.00E+00	0.0E+00	U	1.1E+02	pCi/L	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA SP:QAW-5	AM241	3.24E+05	2.7E+04		1.7E+03	pCi/L	06-05-00	08-01-90	2.26E+02	ml		104.1	05-01	Q0814-0-13229
QA SP:QAW-5	CO60	3.13E+05	3.0E+04		1.8E+03	pCi/L	06-05-00	08-01-90	2.25E+02	ml		97.4	05-01	Q0814-0-13229
QA SP:QAW-5	CS137	2.73E+05	2.3E+04		6.4E+02	pCi/L	06-05-00	08-01-90	2.25E+02	ml		99.0	05-01	Q0814-0-13229

Comment:
Data generated from analyses of five samples submitted to the laboratory on June 5, 2000.

Qualification Flags:
E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: Error is the 2.0 Sigma Error

Prepared by:_____ Date:_____

Approved by:_____ Date:_____

***** End of Report *****

Recra LabNet - Lionville Laboratory
DIESEL RANGE ORGANICS BY GC
Report Date: 06/20/00 08:55

RFW Batch Number: 0005L461 Client: BECHTEL NEVADA V816 Work Order: 60052-001-001-0001-00 Page:

	Cust ID:	33-11-NORTH	33-11-NORTH	33-11-NORTH	BLK	BLK BS
Sample Information	RFW#:	001	001 MS	001 MSD	00LE0639-MB1	00LE0639-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Surrogate:	p-Terphenyl	95 %	62 %	89 %	115 %	56 %
Diesel Range Organics		4.4 U	83 %	96 %	4.0 U	81 %

LF 6/20/00

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of Advisory limits.

*** Client Information Only ***

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Billed to: BN - Environmental Operations
Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas NV 891938521

Sample Delivery Group: D356
Work Order Number: C7D0-63B-B00
Service Statement Date: 7-JUN-00
Service Statement Number: 1436

Total Amount Due: 1380.00

Base Qty	Analysis Description	Base Rate	BE	DF	PF	Amount
4	Gamma Spec.-20 Minute Scan // Soil, Gross	276.00				1104.00
1	Gamma Spec.-20 Minute Scan // Water	276.00				276.00

Note:
Rate = Base price
BE = Batch equivalent multiplier
(Sample batches of fewer than three are charged as three)
DF = Discount multiplier
PF = Priority multiplier
Client Rep: Ted Redding (702)295-7220

Page Total: 1380.00

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Soil, Gross

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 6-JUN-00
Sample Delivery Group: D356
Batch: N803
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-8-INT	K 40	3.48E+01	5.9E+00		1.1E+00	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-INT	RA226	1.29E+00	3.5E-01		1.9E-01	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-INT	TH228	2.41E+00	4.3E-01		1.4E-01	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-INT	TH232	2.05E+00	6.5E-01		3.6E-01	pCi/g	06-05-00	05-31-00	8.05E+02	gm			05-01	H3054-0-73020
33-8-NORTH	K 40	2.72E+01	5.0E+00		9.2E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	RA226	1.10E+00	3.1E-01		1.9E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	RA226	1.31E+00	7.9E-01		1.1E+00	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	TH228	1.96E+00	3.7E-01		1.3E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-NORTH	TH232	2.04E+00	6.8E-01		3.8E-01	pCi/g	06-05-00	05-31-00	7.28E+02	gm			05-01	H3054-3-73023
33-8-SOUTH	K 40	2.87E+01	5.2E+00		1.1E+00	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021

Comment:
Data generated from analyses of five samples submitted to the laboratory on June 5, 2000. Preliminary data were faxed to the client on June 6, 2000.

Prepared by: C J Castaneda Date: 6/6/00

Approved by: G. Hutchinson Date: 6/7/00

Qualification Flags:
E = Estimated Quantity
H = High Recovery for Sample
J = Result is less than the RDL
L = Low Recovery for Sample
P = Preliminary Results
Q = Bad Instrument Quality Control, Result is OK
R = Results are Unusable, Resampling is Necessary
U = Result is less than Minimum Detectable Activity

Note: Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Soil, Gross

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 6-JUN-00
Sample Delivery Group: D356
Batch: N803
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-8-SOUTH	RA226	1.24E+00	3.3E-01		1.9E-01	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021
33-8-SOUTH	TH228	1.90E+00	3.7E-01		1.3E-01	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021
33-8-SOUTH	TH232	1.84E+00	6.1E-01		3.7E-01	pCi/g	06-05-00	05-31-00	7.75E+02	gm			05-01	H3054-1-73021
33-8-SOUTH D	K 40	2.82E+01	5.1E+00		9.2E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
33-8-SOUTH D	RA226	1.21E+00	3.3E-01		1.9E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
33-8-SOUTH D	TH228	2.19E+00	4.0E-01		1.3E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
33-8-SOUTH D	TH232	2.02E+00	6.4E-01		3.2E-01	pCi/g	06-05-00	05-31-00	7.90E+02	gm			05-01	H3054-2-73022
QA BKGEmpty Btl U05	No Nucl Det	0.00E+00	0.0E+00	U	0.0E+00	NA	06-05-00	01-19-00	1.00E+00	sm			05-01	Q0796-0-00327

Comment:
Data generated from analyses of five samples submitted to the laboratory on June 5, 2000. Preliminary data were faxed to the client on June 6, 2000.

Prepared by: CJ Castruccio Date: 6/6/00

Approved by: J. Hutchinson Date: 6/7/00

Qualification Flags:
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Note: Error is the 2.0 Sigma Error

Bechtel Nevada Corporation

ANALYTICAL SERVICES LABORATORY
P.O.Box 3936, N. Las Vegas, NV 89036

Reported to: Env. Restoration - Ind. Sites
P.O. Box 98521
M/S NTS306
Las Vegas ,NV,89193-8521

Type: Water

Analysis: Gamma Spec.-20 Minute Scan

Report Date: 6-JUN-00
Sample Delivery Group: D356
Batch: N804
Program: 720

Report No. :

Sample ***** Identification *****	Isotope	Result	Error	Qual Flag	MDC	Result Units	Analysis Date	Sample Coll Date	Size	Size Units	Tracer Yield %	Spike Recv %	System Detector	Packet-Item Sample
33-8-RINSATE	U 235	9.76E+01	7.0E+01	U	1.7E+02	pCi/L	06-05-00	06-05-00	4.90E+02	ml			05-01	H3056-0-73024
33-8-RINSATE	U 238	0.00E+00	0.0E+00	U	1.1E+04	pCi/L	06-05-00	06-05-00	4.90E+02	ml			05-01	H3056-0-73024
33-8-RINSATE	AM241	0.00E+00	0.0E+00	U	3.3E+02	pCi/L	06-05-00	06-05-00	4.90E+02	ml			05-01	H3056-0-73024
QA BKGWater U05	No peaks	0.00E+00	0.0E+00		0.0E+00	NA	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA BKGWater U05	CO60	0.00E+00	0.0E+00	U	1.3E+02	pCi/L	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA BKGWater U05	AM241	0.00E+00	0.0E+00	U	3.1E+02	pCi/L	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA BKGWater U05	CS137	0.00E+00	0.0E+00	U	1.1E+02	pCi/L	06-05-00	01-19-00	5.00E+02	ml			05-01	Q0813-1-00325
QA SP:QAW-5	AM241	3.24E+05	2.7E+04		1.7E+03	pCi/L	06-05-00	08-01-90	2.25E+02	ml		104.1	05-01	Q0814-0-13229
QA SP:QAW-5	CO60	3.13E+05	3.0E+04		1.8E+03	pCi/L	06-05-00	08-01-90	2.25E+02	ml		97.4	05-01	Q0814-0-13229
QA SP:QAW-5	CS137	2.73E+05	2.3E+04		6.4E+02	pCi/L	06-05-00	08-01-90	2.25E+02	ml		99.0	05-01	Q0814-0-13229

Comment:
Data generated from analyses of five samples submitted to the laboratory on June 5, 2000. Preliminary data were faxed to the client on June 6, 2000.

Prepared by: C.A. Castaneda Date: 6/4/00

Approved by: J. Hutchison Date: 6/7/00

Qualification Flags:
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Note: Error is the 2.0 Sigma Error

***** End of Report *****

(Level 1)

Bechtel Nevada

ANALYTICAL SERVICES LABORATORY

SERVICES REQUEST & CHAIN OF CUSTODY RECORD

PROJECT/ CLIENT INFORMATION

Project: CAU 428 SWS BN Org#: 2152
Charge No.: C7D063BB ASL Prog.:
Project Manager: WAYNE JOHNSON
Phone: 5-0573 Fax: 5-7761 M/S: NTS306

REPORT INFORMATION

Send Report to: SHANNON PARSONS-DEPRY
Phone: 5-0645 Fax: 5-7761 M/S: NTS306
Turnaround: ( ) Standard - 30 days Non-rad, 60 Days Rad, Other: ______
(X) Rush Preliminary by: 6/21/00 Final by: ______
Final report format: (X) Standard ( ) NTS-WAC ( ) Other: ______

SAMPLE INFORMATION

Sampling Site: AREA 3, SWS 1 & 5
The samples submitted contain (check):
( ) Hazardous ( ) Radioactive ( ) Unknown
contamination. If known, attach a brief narrative summary identifying contaminants. This information will ensure compliance with applicable regulations and allow for the safe handling of the sample materials.

LAB USE ONLY

Rad SGD: D356 Non-Rad SDG: V819
Rad Packet: H3054 - Soil, H3056 - Water Non-Rad Packet: W1863
Client Services Representative:

Will these analyses be performed under a signed SOW? (X) YES ( ) NO
If so, do analyses entered here agree with the SOW? (X) YES ( ) NO ( ) N/A
If not, identify the variation ______
CSR Initials indicating review and approval: ______ Date: ______

SAMPLE RECEIPT INFORMATION

Are all sample containers received intact (X) Yes ( ) No
Comments:

Do the labels agree with this form? (X) Yes ( ) No
Comments:

Was a Material Clearance Tag submitted? (X) Yes ( ) No
Comments:

ANALYSES & METHOD

ITEM	ID / DESCRIPTION	SAMPLING DATE	SAMPLING TIME	MATRIX	VOCs	SVOCs	RCRA METALS	TPH (FULL SCAN)	GAMMA-20	ISOTOPIC U							COMMENTS (Preservative, size/volume, MS/MSD, special analysis, rad matrix code, count time, etc.)
0	TBS3000	5/30	1600	WATER	X												COLD, HCl, 40 ml (3)
1	33-8-INT	5/31	1030	SOIL	X	X	X	X	X	X							COLD, ISOTOPIC U ONLY AFTER ANALYSIS OF GAMMA-20
2	33-8-SOUTH	5/31	1500	SOIL	X	X	X	X	X	X							COLD, ISOTOPIC U ONLY AFTER ANALYSIS OF GAMMA-20
3	33-8-SOUTH D	5/31	1500	SOIL	X	X	X	X	X	X							COLD, ISOTOPIC U ONLY AFTER ANALYSIS OF GAMMA-20
4	33-8-NORTH	5/31	1615	SOIL	X	X	X	X	X	X							COLD, ISOTOPIC U ONLY AFTER ANALYSIS OF GAMMA-20
5	33-8-RINSATE	6/5	0900	WATER	X	X	X	X	X	X							COLD, HCl (40 ml) ANALYSIS N/A
6	LAST ITEM																
7																	
8																	
9																	

Transfer of samples submitted for analyses

Sampled/Relinquished (Signature/Organization)	DATE / TIME	Received by (Signature/Organization)
Donald H. Cox / BN	6/1/00/1530	TO BN REFER.
FROM BN REFER.	6/5/00/1030	Donald H. Cox / BN
Donald H. Cox / BN	6/5/00/1045	[illegible]

Complete for samples shipped to an OFF-SITE Subcontract Laboratory [illegible]

Relinquished (BN Representative Signature)	DATE / TIME	Received (Courier & Tracking Info.)
[illegible]	[illegible]	[illegible]
Relinquished (Courier & Tracking Info.)	**DATE / TIME**	**Received (1st tier Subcontractor Rep)**
Relinquished (1st tier Subcontractor Rep)	**DATE / TIME**	**Received (2nd tier Subcontractor Rep)**

Distribution: Original - To be retained by laboratory performing final analysis
Copy 1 - To be retained by laboratory performing intermediate analysis
Copy 2 - To be retained by Analytical Services Laboratory
Copy 3 - [illegible] etained [illegible] ample[illegible]

SEPTIC TANK 33-11 PHOTOGRAPHS

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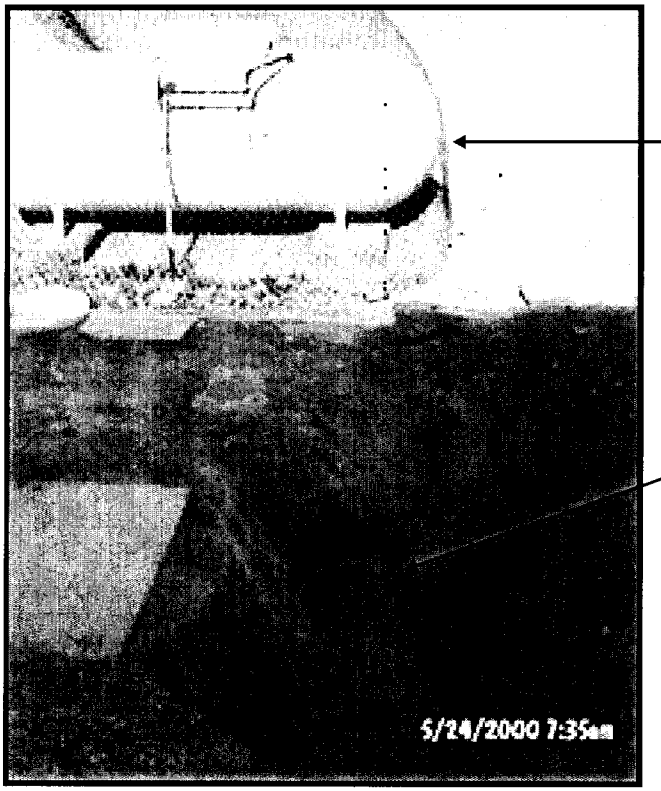
Grout Shown in Septic Tank 33-11, May 23, 2000



Septic Tank 33-11 and Propane Tank, May 24, 2000

APPENDIX B

PROJECT ORGANIZATION

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The following are the DOE/NV project contacts:

Runore C. Wycoff
Director
Environmental Restoration Division
U.S. Department of Energy, Nevada Operations Office
P.O. Box 98518
Las Vegas, NV 89193-8518
(702) 295-0250

Janet L. Appenzeller-Wing
Project Manager
Industrial Sites Project
U.S. Department of Energy, Nevada Operations Office
P.O. Box 98518
Las Vegas, NV 89193-8518
(702) 295-0461

The identification of the project Health and Safety Officer and the Quality Assurance Officer can be found in the appropriate DOE plan. However, personnel are subject to change and it is suggested that the Project Manager be contacted for further information. The Task Manager will be identified in the FFACO Biweekly Activity Report prior to the start of field activities.

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DISTRIBUTION LIST

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DISTRIBUTION LIST

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Division of Environmental Protection
333 W. Nye Lane, Room 138
Carson City, NV 89706-0851

Mike McKinnon, Las Vegas Office — 1 (Controlled)*
Bureau of Federal Facilities
Division of Environmental Protection
555 E. Washington, Suite 4300
Las Vegas, NV 89101-1049

U.S. Department of Energy

Janet Appenzeller-Wing — 1 (Uncontrolled)*
Environmental Restoration Division
U.S. Department of Energy, Nevada Operations Office
P.O. Box 98518 M/S 505
Las Vegas, NV 89193-8518

Kevin Cabble — 1 (Uncontrolled)*
Environmental Restoration Division
U.S. Department of Energy, Nevada Operations Office
P.O. Box 98518 M/S 505
Las Vegas, NV 89193-8518

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U.S. Department of Energy Nevada Operations Office Technical Information Resource Center P.O. Box 98518 M/S 505 Las Vegas, NV 89193-8518	1 (Uncontrolled)
Manager, Southern Nevada FFACO Public Reading Room P.O. Box 98521 M/S NLV040 Las Vegas, NV 89193-8521	1 (Controlled) & 1 (Uncontrolled)
Manager, Northern Nevada FFACO Public Reading Room Nevada State Library and Archives Federal Publications 100 North Stewart Street Carson City, NV 89701-4285	1 (Uncontrolled)

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Las Vegas, NV 89193-8521

Wayne Johnson — 1 (Uncontrolled)*
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Steve Nacht — 1 (Uncontrolled)*
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P.O. Box 98521 M/S NTS306
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Las Vegas, NV 89193-8521

Dan Tobiason — 1 (Uncontrolled)*
Bechtel Nevada
P.O. Box 98521 M/S NTS306
Las Vegas, NV 89193-8521

IT Corporation

Brad Jackson — 1 (Uncontrolled)*
IT Corporation
P.O. Box 93838 M/S 439
Las Vegas, NV 89193-3838

Jeff Johnson — 1 (Uncontrolled)*
IT Corporation
P.O. Box 93838 M/S 439
Las Vegas, NV 89193-3838

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IT FFACO Support Office — 1 (Controlled)
IT Corporation
P.O. Box 93838 M/S 439
Las Vegas, NV 89193-3838

U.S. Air Force

Gerald Carpenter
U.S. Air Force DOE Liaison Office
U.S. Department of Energy, Nevada Operations Office
P.O. Box 98518 M/S 505
Las Vegas, NV 89193-8518

1. Document Title/Number: Corrective Action Plan for Corrective Action Unit 428: Area 3 Septic Waste Systems 1 and 5, Tonopah Test Range, Nevada.
2. Document Date: July 2000
3. Revision Number: 0
4. Originator/Organization: BN
5. Date Comments Due:
6. Reviewer/Organization: NDEP

a. Comment Types: M=Mandatory S=Suggested

7. Comment Number/ Location	8. Type[a]	9. Comment	10. Comment Response	14. Accept
1. Page 21 of 32, last paragraph, last sentence and page 22 of 32, first paragraph, first sentence	M	"...The PAL for arsenic is 3.0 mg/kg. However, recent studies have shown that average concentration in the soil near the TTR are as high as 43 mg/kg... Therefore, 43 mg/kg will be used as the clean-up for arsenic...". *The logic for using 43 mg/kg as the upper limit for clean-up criteria is not clear. Just because there are some published average values "as high as 43 mg/kg" does not necessarily justify using it as an upper limit. Please provide a better logic argument of why this was selected as the upper limit for clean-up criteria for arsenic.*	The section will be changed to read: "...Recent studies have shown natural occurring concentrations of arsenic in the soil near the TTR are as high as 43 mg/kg (Nevada Bureau of Mines and Geology, 1998; DOE, 2000; Sandia National Laboratories, 1999). Previous sampling activities in Area 3 of the TTR showed concentrations of arsenic consistently higher than the PAL, up to 24.1 mg/kg (DOE, 1998). At CAU 428, sample TTR01227 had 68.7 mg/kg and is the only sample that implies contamination (DOE, 2000). The next highest detected arsenic concentration is found in sample TTR01225 with 25.8 mg/kg. Since the arsenic concentration in this sample is not unusual for this portion of the state of Nevada (DOE, 2000), 26 mg/kg will be used as the clean-up criteria for arsenic.	Y

a. Comment Types: M=Mandatory S=Suggested

7. Comment Number/ Location	8. Type[a]	9. Comment	10. Comment Response	14. Accept
2. Page 27 of 32, first paragraph, third sentence	M	"...The DOE will keep the NDEP appraised...". The word should be "apprised."	The typographical error was corrected to read "apprised"	Y

a. Comment Types: M=Mandatory S=Suggested