DOE/ID/12584-244
GJPO-OXN-04

Summary Environmental Site Assessment Report for the U.S. Department of Energy Oxnard Facility, Oxnard, California

February 1996

U.S. Department of Energy
Grand Junction Projects Office

Work Performed Under DOE Contract No. DE-AC04-94AL96907 for the U.S. Department of Energy

DOE/ID/12584-244
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Summary Environmental Site Assessment Report for the U.S. Department of Energy Oxnard Facility Oxnard, California

February 1996

Prepared for
U.S. Department of Energy
Albuquerque Operations Office
Grand Junction Projects Office
Grand Junction, CO

Prepared by
Rust Geotech
Grand Junction, Colorado

Work Performed Under Contract No. DE-AC04-94AL96907

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Contents

Figures

Table

Appendices

1.0 Overview

This report summarizes the investigations conducted by Rust Geotech[1] at the U.S. Department of Energy (DOE) Oxnard facility, 1235 East Wooley Road, Oxnard, California (Figure 1). These investigations were designed to locate, identify, and characterize any regulated contaminated media on the site. The effort included site visits; research of ownership, historical uses of the Oxnard facility and adjacent properties, incidences of and investigations for contaminants on adjacent properties, and the physical setting of the site; sampling and analysis; and reporting.

These investigations identified two friable asbestos gaskets on the site, which were removed, and nonfriable asbestos, which will be managed through the implementation of an asbestos management plan. The California primary drinking water standards were exceeded for aluminum on two groundwater samples and for lead in one sample collected from the shallow aquifer underlying the site; remediation of the groundwater in this aquifer is not warranted because it is not used. Treated water is available from a municipal water system. Three sludge samples indicated elevated heavy metals concentrations; the sludge must be handled as a hazardous waste if disposed. Polychlorinated biphenyls (PCBs) were detected at concentrations below remediation criteria in facility soils at two locations. In accordance with U. S. Environmental Protection Agency (EPA) and State of California guidance, remediation of the PCBs is not required. No other hazardous substances were detected in concentrations exceeding regulatory limits.

2.0 Site Description

The Oxnard facility occupies 13.75 acres (5.6 hectares) in an industrial park (zoned M-2 warehouse-industrial) within the incorporated city limits of Oxnard, California. Seven buildings on the Oxnard facility property enclose approximately 86,000 square feet (7,990 square meters) of covered floor space (Figure 2). Both paved and unimproved open land areas are located on the site. The legal description for the property is presented on reproductions of the property deeds in Appendix A, Section 3.0. Bordering the facility are industrial maintenance, manufacturing, and agricultural packaging operations.

The site was used as farmland until 1949, when Allis-Chalmers built a plant to manufacture farm implements. Activities at the site included founding (foundry casting), forging, machining, welding, cutting, sanding, grinding, painting, and coating. In 1982, DOE assisted Precision Forge (a private company providing specialty nonferrous metalworking products to DOE) in relocating to the Oxnard property. In 1984, DOE acquired Precision Forge and operated the facility through Rockwell International, DOE's Rocky Flats prime contractor. EG&G succeeded Rockwell International as prime contractor at the Rocky Flats facility in 1989. Kaiser-Hill Company has operated the Oxnard facility since the second quarter of 1995. Metalworking at the Oxnard facility has involved stainless steel, titanium, aluminum, copper alloys, tantalum, molybdenum, and tungsten.

[1] Rust Geotech is the prime contractor for DOE at the Grand Junction Projects Office.

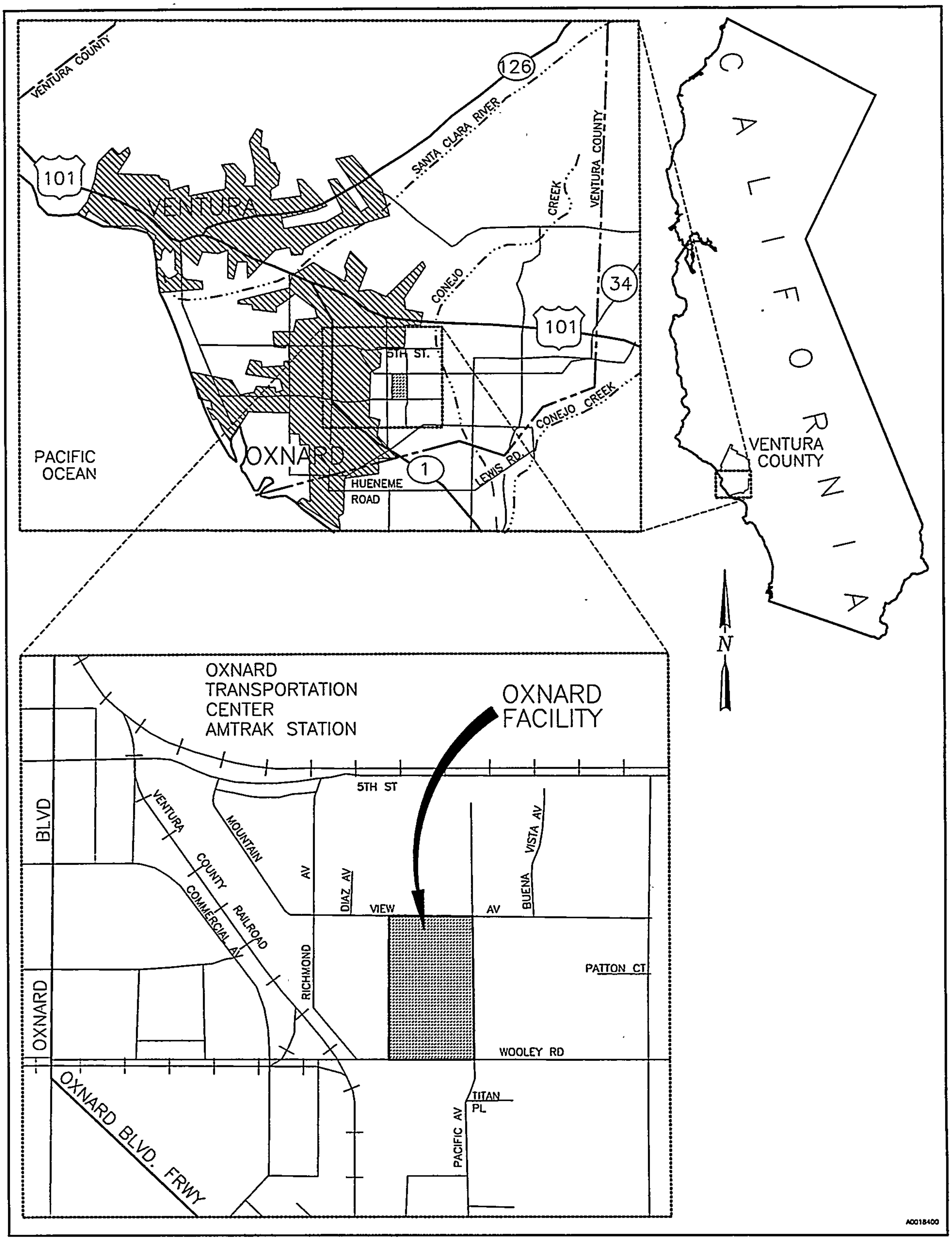
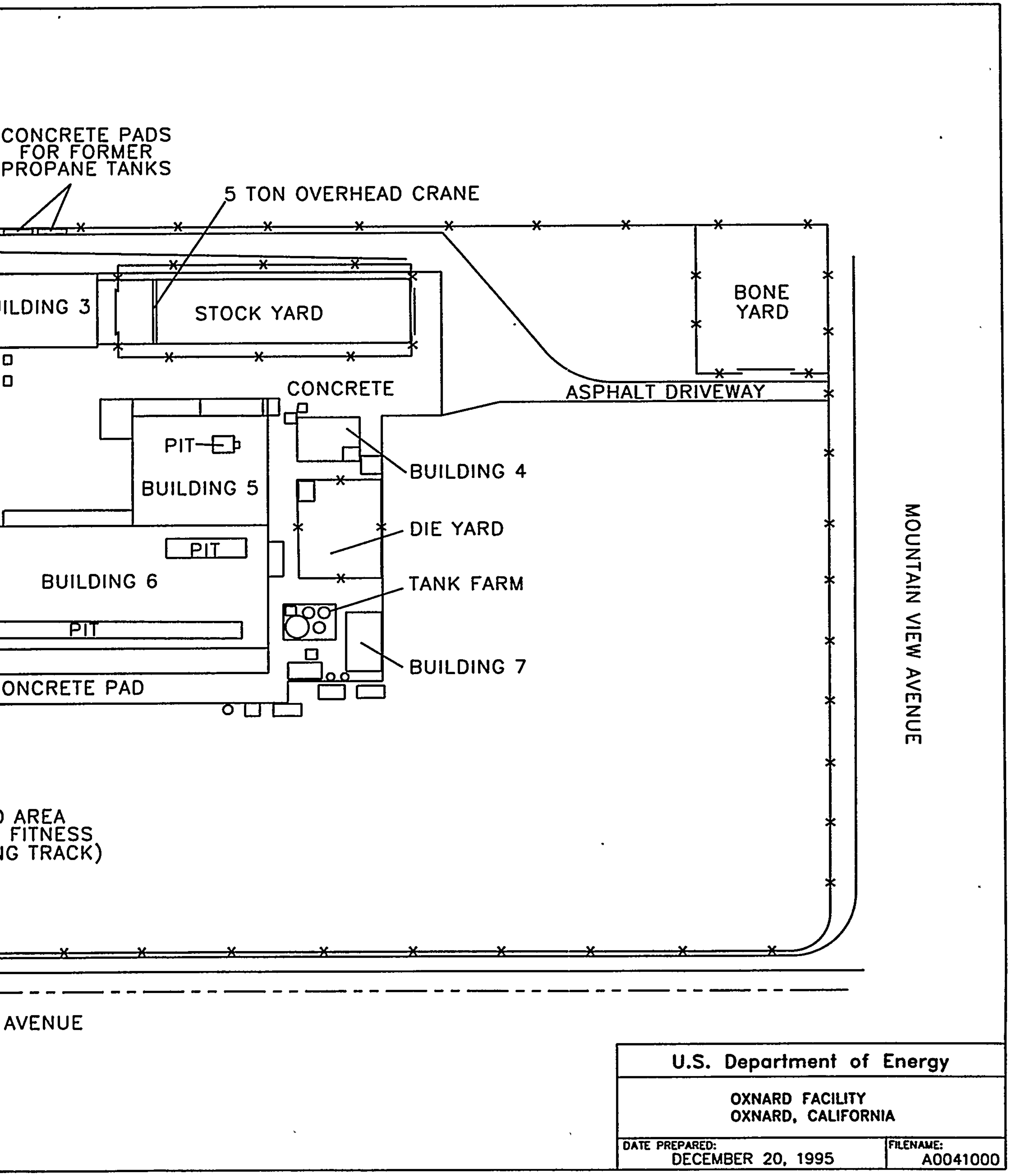


Figure 1. Location of the DOE Oxnard Facility, Oxnard, California



' the DOE Oxnard Facility

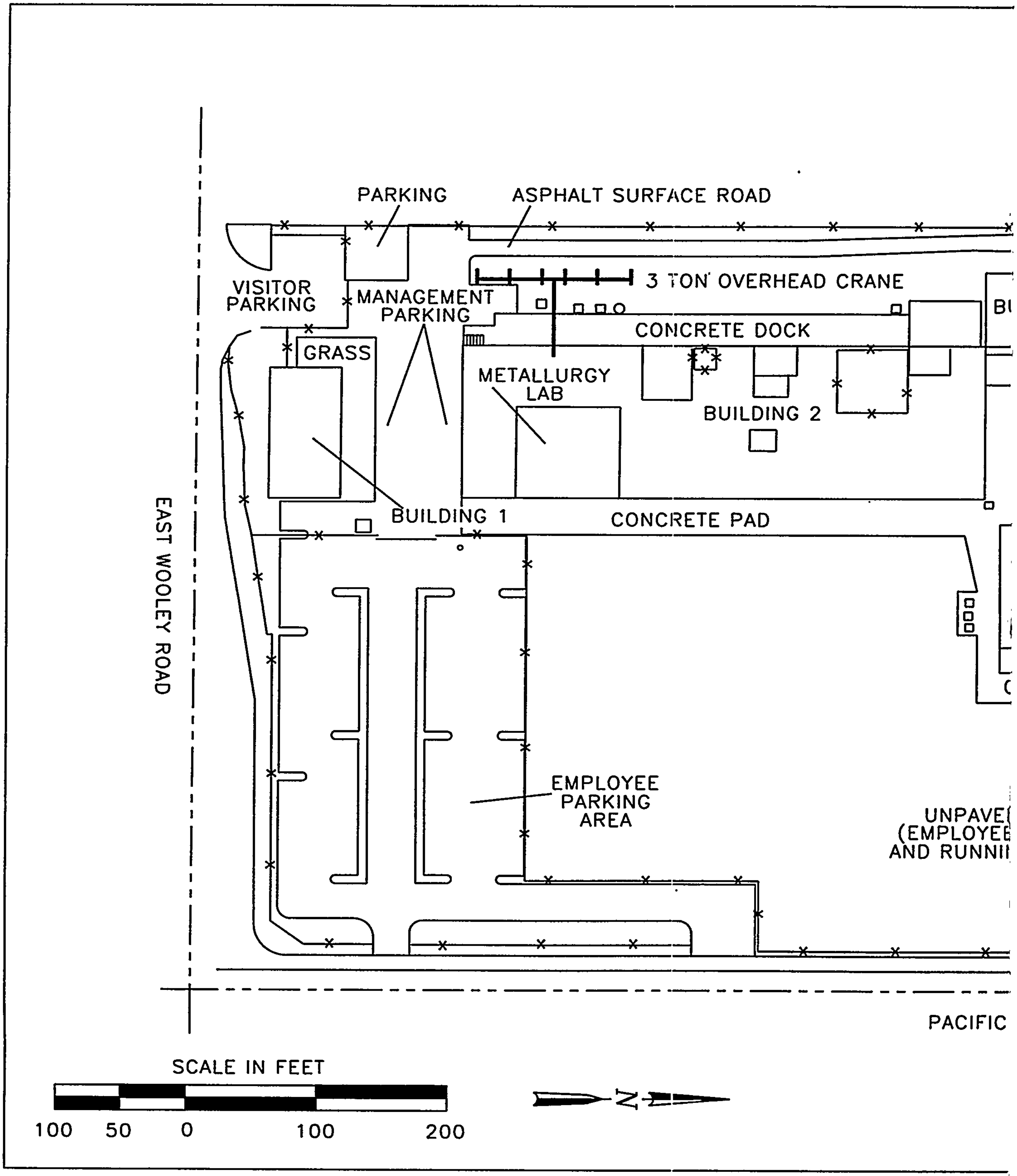


Figure 2. Site Layout o

3.0 Objectives

Potential hazardous wastes were identified on the basis of historical and current activities at the site. The applicable or relevant and appropriate requirements (ARARs) are shown in Table 1.

Table 1. ARARs for the DOE Oxnard Facility

Medium	ARARs
Asbestos	Toxic Substances Control Act, 40 CFR 763 Title 8, CAL/OSHA, Sections 341.15, 341.6, and 1529 Ventura County Air Pollution Control District Rule 62.7
Groundwater	Title 22, CCR[a], Division 4.5, Chapter 15, Section 66265.97 Title 22, CCR, Division 4, Chapter 15, Section 64431 Title 22, CCR, Division 4.5, Chapter 11, Article 3, Section 66261.24
Soil	Title 22, CCR, Division 4.5, Chapter 11, Article 3, Section 66261.24
Sludge/Oil	Title 22, CCR, Division 4.5, Chapter 11, Article 3, Section 66261.24

[a]CCR = California Code of Regulations

All activities conducted by Rust were reviewed for National Environmental Policy Act compliance and were determined to be categorically excluded from requirements to prepare an Environmental Assessment or Environmental Impact Statement.

4.0 Work Performed

Site investigations conducted by Rust began in June 1994 with an Environmental Site Assessment (ESA) Preliminary Evaluation site tour. Results of the Preliminary Evaluation indicated the need for a Phase I and Phase II ESA.

A nonintrusive site inspection and data gathering effort in August 1994 identified "areas of concern" at the facility (Appendix A, Table 6-1). The results of this investigation were presented in the *Phase I Environmental Site Assessment for the EG&G Rocky Flats Oxnard Facility* (Appendix A). The findings of the Phase I ESA indicated the need to conduct sampling and analysis activities to determine whether asbestos was present in the physical plant and whether regulated contaminants were present in the soil, groundwater, and in the oil and sludge collection and treatment systems at the facility.

Results of the Phase II intrusive ESA investigation, conducted in January and February 1995, were presented in the *Phase II Environmental Site Assessment Report for the Kaiser-Hill Company LLC Oxnard Facility, Oxnard, California* (Appendix B). This assessment included sampling and analyses for asbestos, and for hazardous contaminants in groundwater, in the surface and subsurface soils, and in the sludge and oil. Sample locations were selected by identifying locations with the greatest potential for detecting the presence of hazardous substances. Additional investigation was required when detectable concentrations of PCBs were identified in two soil samples.

suggested regulatory action level (Appendix C). Analytical results are presented in Appendix B, Tables D–2 and D–5, and Appendix C, Table 2.

A survey of the shipping and receiving area was conducted for beta-gamma contamination. No above-background activities were detected (Appendix B).

Analytical results of sludge and oil samples indicated levels of chromium and nickel (one sample), lead and zinc (one sample), and lead (one sample) exceeding soluble threshold limit concentrations when tested by the California Waste Extraction Test. The sludge from these locations could be classified as a hazardous waste if removed for disposal from site processes. Analytical results are presented in Appendix B, Tables D-3 and D-4.

6.0 Waste Volumes Generated

Results of analyses of samples collected of soil, groundwater, and monitoring well development water indicated that these materials did not contain hazardous substances in concentrations exceeding regulatory limits. All soil and water samples were disposed of on site following laboratory analysis. Samples collected for identification of asbestos and the associated personal protective equipment will be handled as asbestos-containing material and disposed of properly.

The oil and sludge samples were managed by Truesdail Laboratories.

7.0 Risk Assessment

A risk assessment, modeled after CERCLA guidance, was performed to determine the exposure of site workers to elevated metals detected in the oil/sludge samples and the PCB and metal concentrations in the soils. The pathways of exposure were ingestion, inhalation, and absorption. On-site exposure to groundwater was considered to be an incomplete pathway because treated municipal water is supplied. The risk of off-site exposure to groundwater was considered insignificant because of the low concentrations of detected metals and because the water in the shallow aquifer is not used for domestic purposes and is separated from the underlying potable water source by low-permeability clays.

The Hazard Index (HI) for noncarcinogens was 8.9×10^{-4}. The risk to human health from carcinogens was 3.2×10^{-6} (Appendix C, Section 4.0). These are conservative risk determinations. An HI for noncarcinogens below a value of 1 is considered insignificant. The requirement for action at a site with a risk from carcinogens of between 1×10^{-4} and 1×10^{-6} must be decided on a site-specific basis in concert with EPA.

U.S. Department of Energy, 1995. *Sampling and Analysis Plan for the Phase III Environmental Site Assessment of the Oxnard Facility, U.S. Department of Energy Oxnard, California,* P–GJPO–2204, prepared by Rust Geotech for the U.S. Department of Energy Grand Junction Projects Office, Grand Junction, Colorado, September 1995.

Appendix A

Phase I Environmental Site Assessment for the EG&G Rocky Flats Oxnard Facility

Phase I Environmental Site Assessment for the EG&G Rocky Flats Oxnard Facility

September 30, 1994

Prepared By:

RUST Geotech Inc.
P.O. Box 14000
Grand Junction, Colorado 81502

Prepared for the
U.S. Department of Energy
Grand Junction Projects Office
under DOE Contract No. DE-AC04-86ID12584

Phase I Environmental Site Assessment
for the
EG&G Rocky Flats Oxnard Facility

September 30, 1994

Prepared By:

RUST Geotech Inc.
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Prepared for the
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TABLE OF CONTENTS

1.0 INTRODUCTION

On June 8, 1994, an Environmental Site Assessment (ESA) Preliminary Evaluation (PE) was conducted at the EG&G Rocky Flats Oxnard Facility (Oxnard Facility). (Note: A copy of the PE trip report is found in Appendix A.) The facility is located at 1235 East Wooley Road, Oxnard, California. This PE determined that information had been generated over various years, but that the potential or real presence of environmental contamination on the "real property" was not well documented. The PE trip report (Section 5.0) further recommended the preparation of a Phase I and Phase II ESA.

During the week of August 8, 1994, a "due diligence" Phase I ESA was performed. The Phase I included:

- Determination of site ownership and location
- Property title search
- Review of historical site photographs
- Plant site personnel interviews
- Detailed plant site tour
- Drive-by tour of surrounding facilities
- Record reviews at the following regulatory agencies
    - City of Oxnard - Source Control Program
    - Ventura County Air Pollution Control District (VCAPCD)
    - Ventura County Department of Environmental Health Hazardous Waste & UST (VCDEH)
    - California Environmental Protection Agency Department of Toxic Substances Control (DTSC)

This Phase I ESA was conducted by RUST Geotech Inc., contractor to the U.S. Department of Energy Grand Junction Projects Office (DOE-GJPO). Participants included:

Sam Campbell	Environmental Sciences
Donald Koch	Environmental Standards & Oversight
Jack McCaslin	Technical Support

This Phase I ESA recommends that a full Phase II ESA be conducted to further reduce the uncertainties associated with the areas of concern identified in Section 6.0 of this report. This further investigation should resolve concerns pertaining to two abandoned underground storage tanks, a pit area beneath Building 6 previously used by Allis-Chalmers, asbestos-containing material in the seven on-site buildings, several previously polychlorinated biphenyl (PCB) contaminated areas, and a trench/sump collection system located in the forging and press shops.

2.0 SITE DESCRIPTION

2.1 Site Ownership

The Oxnard facility is a nonferrous metalworking (forging, machining, welding, cutting, grinding, wheelabrating, and painting) facility. The facility is owned by the U.S. Department of Energy (DOE) and is operated by EG&G Rocky Flats.

2.2 Physical Location/Setting

The Oxnard facility occupies 13.75 acres and is located in an industrial park within the incorporated city limits of Oxnard and within the county of Ventura (Figure 2-1). The facility is bordered by industrial maintenance, manufacturing, and agricultural packaging facilities. The City of Oxnard operates a vehicle maintenance garage and trash receptacle storage yard on Pacific Avenue to the east. Deardorff-Jackson Inc. and Boskovich Corp. are vegetable/fruit packers located on Mountain View Avenue to the northwest and northeast, respectively. Kingstone Wheel Corp. (previously Del Manufacturing) is a metal wheel fabricator located on the southwest. A steel fabricator and machinist owned by Gold Coast Steel is located on the northwest. To the south, across Wooley Road, Told Corporation owns property which was previously used as farmland. This property is presently being marketed for commercial development.

The facility is comprised of seven buildings with approximately 86,000 square feet of covered floor space (Figure 2-2). The seven buildings include:

Building #1	Administrative Offices
Building #2	Machine Shop, Engineering, Quality Control, Metallurgical Laboratory, Production Control Office, Maintenance Offices, and lunch room
Building #3	Saw Shop
Building #4	Grinding Shop
Building #5	Press Shop, Wheelabrator Room, Dye Penetrant Room
Building #6	Forge Shop
Building #7	Tank Farm/Lubrication Stores

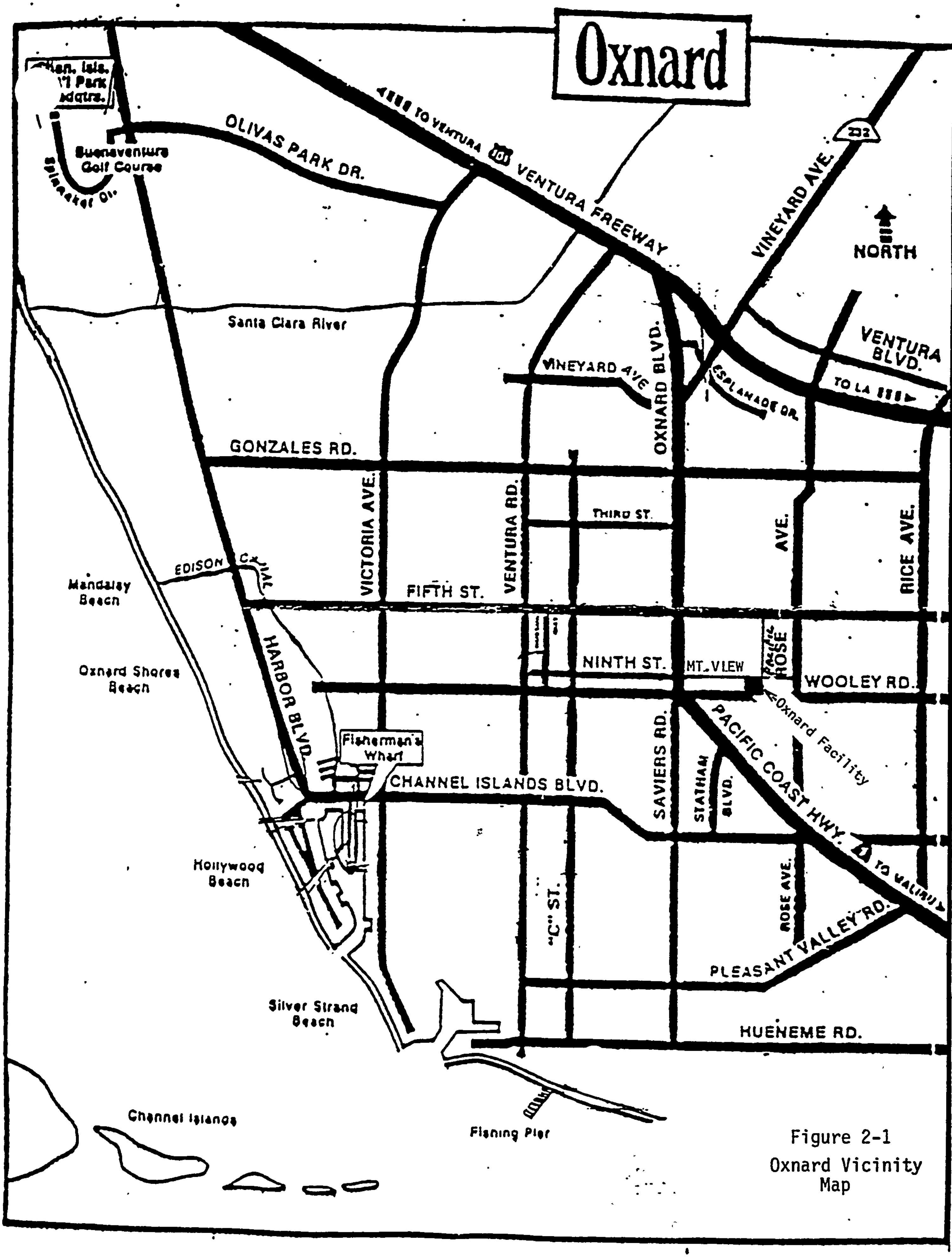


Figure 2-1
Oxnard Vicinity Map

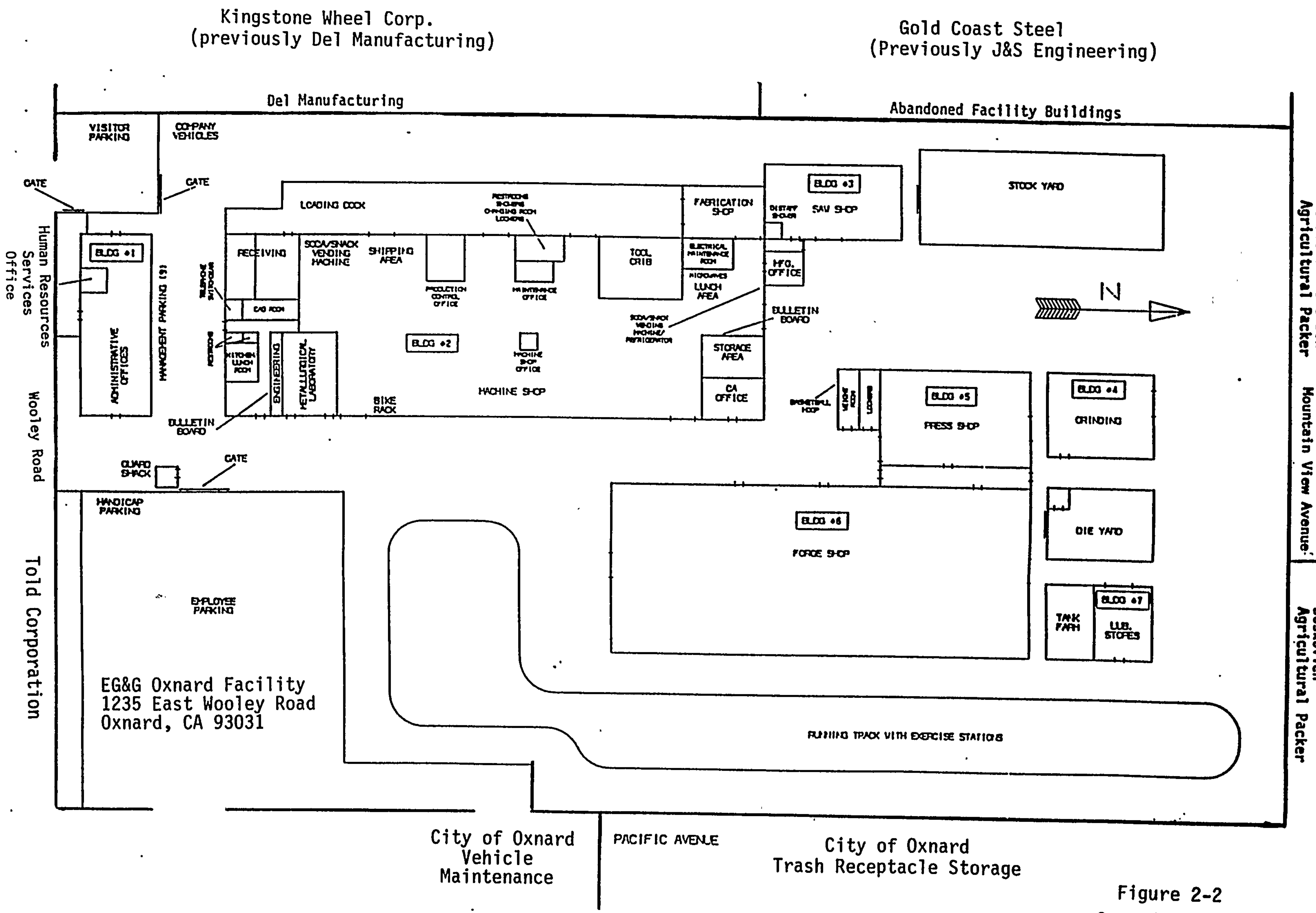


Figure 2-2
Oxnard Facility

2.3 Utilities

The plant's utilities currently operate well below their design potential. Prime utilities were designed during construction to allow for future expansion. Capacity and current supply availability includes:

> Electrical - two 2500 ampere switchboards. Systems exist in place to double this capacity in a short period of time.
>
> Water - An eight-inch supply line furnishes water in excess of either current needs or any reasonable expansion requirements for this facility.
>
> Natural gas - A 5-inch main at 5 pounds per square inch (psi) fed by 223 psi from the street services the plant. The most significant limitation on gas availability and usage is the Ventura County Air Pollution Control District's emission regulations. The District currently permits an annual consumption not to exceed 50 million cubic feet (MMcf) of natural gas in all combustion equipment.

The Oxnard facility currently contracts services with the following utilities:

Electrical:	Southern California Edison P.O. Box 600 Rosemead, CA 91771-0001
Natural Gas:	Southern California Gas Company P.O. Box C Monterey Park, CA 91756
Telephone:	Cellular One P.O. Box 78132 Phoenix, AZ 85062-8132
	GTE California P.O. Box 215 Newbury Park, CA 91319
Water:	City of Oxnard Water Resource Dept. 305 West Third Street Oxnard, CA 93030
Sewer:	City of Oxnard Wastewater Division 6001 South Perkins Road Oxnard, CA 93030

2.4 Geology

Regional Setting

Oxnard is located in the Pacific border physiographic province. The predominant trend of mountain ranges in this province is north-northwest. Oxnard is situated on the west side of the Transverse Ranges, an anomalous east-west trending group of mountains. The bedrock in this region consists mostly of Mesozoic and Cenozoic sediments, volcanics, and metamorphic sequences, tectonically accreted to the western margin of North America.

Local Setting

The Oxnard facility is situated on a flat area of deep alluvial fill known as the Oxnard Plain. The Santa Clara River, and smaller streams draining the Santa Monica Mountains, have deposited alluvium in a prograding alluvial fan. This fan forms the westward bulge in the shoreline from Ventura to Point Mugu. The Quaternary alluvium (less than 2 million years) covers downfaulted rocks similar to those exposed in the adjacent Santa Monica Mountains.

Lithologically, the alluvium of the Oxnard Plain consists of an upper (less than 6 feet below land surface) unit of light brown, silty sand top soil overlying grey, course-grained sands and gravels interbedded with grey, fine-grain sand and clayey silts.

In 1982 Buena Engineers, Inc. under contract with Precision Forge (former owner to the DOE) drilled three borings to identify the immediate geology for the proposed construction of Building 6. A sketch identifying the location of the three borings and the boring logs are provided in Appendix B. The logs show the presence of free water for the shallow unconfined zone to exist between 5 feet and 8.5 feet. Furthermore, boring No. 1 identified trash and debris in the top 5 feet. The trash and debris are believed to be part of a foundry cast disposal pit used by the former owner, Allis-Chalmers.

2.5 Seismology

There are a number of major, northeast-southwest trending faults exposed in the Mountains and hills in the vicinity of the Oxnard facility. These include the Oak Ridge Fault to the north, the Simi Fault to the east, and the Sycamore Canyon Fault to the southeast. The Simi Fault projects beneath the alluvium of the Oxnard Plain, and therefore is most relevant.

The Simi Fault is a north-dipping reverse fault that strikes northeast. Most of the 5,300 feet of displacement on this fault occurred between 16 million to 10,000 years ago. Although no recent (<10,000 years) displacement on the Simi Fault has been recognized, there have been small magnitude ($M<2.5$) earthquakes recorded.

2.6 Groundwater

The Oxnard facility lies about 40 feet above sea level on a silty, sand-soil base. The shallow unconfined groundwater is encountered at a depth of 5 to 10 feet. This shallow unconfined groundwater has been described as perched by previous consultants because of its limited extent and because it is underlain by low permeability clays. Recharge for this perched zone is provided by local precipitation and agricultural irrigation. The potable aquifer lies approximately 120 feet below ground surface. According to Underground Storage Tank (UST) investigations at Gold Coast Steel and the City of Oxnard, the deep aquifer is not in hydraulic communication with the perched zone; and the groundwater was not impacted by leaking underground tanks at both properties. The groundwater flow direction in the perched zone is to the southwest toward the Pacific Ocean.

No evidence exists which would indicate salt water intrusion of either the perched or the potable zone aquifers beneath the Oxnard facility.

2.7 Surface Hydrology

No surface waters are on or within 1,000 yards of the Oxnard facility.

2.8 Demography

The 1990 population census for the City of Oxnard exceeded 150,000. The Ventura County population was about 700,000 including the City of Oxnard.

3.0 TITLE SEARCH

The title search for the Oxnard facility involved a review of applicable files at the County of Ventura's Recorder's Office, Treasurer-Tax Collection Office and Assessor's Office. Research indicates the following:

- On March 20, 1946, Edwin L. Carty and Doris C. Carty granted all real property (Lots 1 and 8 and East 158.65 feet of Lots 2 and 7, Block C, Virginia Parks together with all and singular the tenements, hereditaments and appurtenances) to Allis-Chalmers Manufacturing Company, a Delaware Corporation.

- On May 3, 1946, Edwin L. Carty and Doris C. Carty granted a 6.25/130 interest in a water well, pumping plant and distribution system to Allis-Chalmers Manufacturing Company, a Delaware Corporation.

- On August 3, 1982, PERFCO Leasing Company granted a street right-of-way to the City of Oxnard, a Municipal Corporation.

- On December 3, 1983, PERFCO Leasing Company granted an exclusive easement for waterlines and related appurtenances to the City of Oxnard, a Municipal Corporation.

- On January 18, 1983, PERFCO Leasing Company granted an easement and right-of-way for electrical utility use to Southern California Edison Company, a California Corporation.

- On June 26, 1984, PERFCO Leasing Company granted the same property described in the Deed dated, March 20, 1946, to Charles D. Pearce and K. Thomas Rose as Trustees for Security Pacific Leasing Corporation.

- On June 24, 1984, Charles D. Pearce and K. Thomas Rose as Trustees for Security Pacific Leasing Corporation, granted the same property described by the Deed dated, June 26, 1984, to the United States of America. The above described Real Property was acquired for the Department of Energy.

Concerns noted during the title search include:

- No record could be found identifying a deed transaction between Allis-Chalmers and PERFCO, assuming PERFCO was the next title owner.

- PERFCO Leasing Company could not be determined as a company owned and operated by Precision Forge.

- An unexplained change in the Assessor's Parcel Number occurred in the 1983-84 tax year. The previous number APN201-0-301-02 was changed to APN201-0-301-03.

STATE OF CALIFORNIA }
} SS
COUNTY OF VENTURA }

On this 1st day of March, 1946, before me, the undersigned, a Notary Public in and for said County, personally appeared MARY J. SEXTON, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged that she executed the same.

WITNESS my hand and official seal.

(Notarial Seal)
Ventura Co.

R.W. GRAY
Notary Public in and for said County and State.

RECORDED AT REQUEST OF TITLE INSURANCE & TRUST CO. at 9:00 A.M. May 6, 1946
No. 11000
Fee: $1.00 Folio: 3
G.S.
COMPARED: [illegible]

JOHN S. LOCKE.......RECORDER

---------oOo------

GRANT DEED

-0-

EDWIN L. CARTY and DORIS C. CARTY, husband and wife, of Oxnard, Ventura County, California, hereby grant to

ALLIS-CHALMERS MANUFACTURING COMPANY, a corporation organized and existing under the laws of the State of Delaware, and having its principal place of business in the City of Milwaukee, County of Milwaukee, State of Wisconsin, in consideration of the sum of $15,265.00, receipt of which is hereby acknowledged, all that certain real property in the City of Oxnard, County of Ventura, State of California, bounded and described as follows:

Lots 1 and 8 and east 158.65 feet of Lots 2 and 7, Block C, Virginia Park as shown on "Map of Virginia Park", recorded in Book 11, Miscellaneous (Maps) Records of Ventura County, California, at page 28, and more particularly described as follows:

Beginning at the Northeast corner of Lot 1, Block C, of Virginia Park; thence,

1st: - South 0° 01' West 1231.59 feet along the easterly line of Lots 1 and 8, to the southeasterly corner of Lot 8, of said Block C; thence,

2nd: - North 89° 57' West 489.92 feet along the southerly line of Lot 8 and Lot 7, Block C, to a point; thence,

3rd: - North 0° 01' East 1231.59 feet parallel to the easterly line of Lots 7 and 2, and 158.65 feet therefrom to the northerly line of Lot 2, Block C; thence,

4th: - East 489.92 feet along the northerly line of Lots 2 and 1 to the northeasterly corner of Lot 1, Block C, the place of beginning and containing 13.852 acres.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in anywise appertaining.

WITNESS their hands this 20th day of March, 1946.

U.S.I.R.S. $17.05 Cancelled
T.I. & T. 5/6/46

EDWIN L. CARTY
DORIS C. CARTY

STATE OF CALIFORNIA }
} SS
COUNTY OF VENTURA }

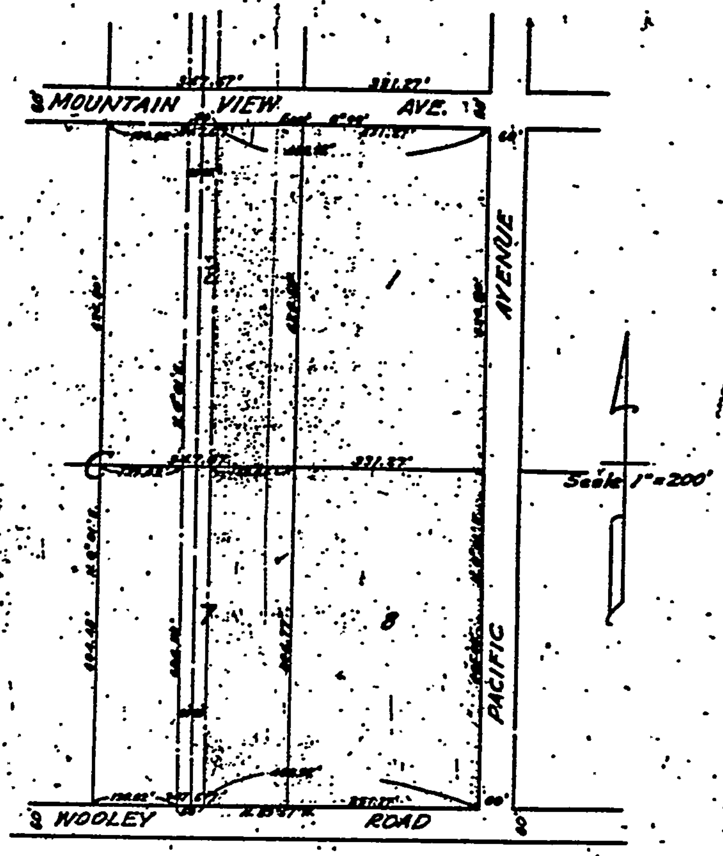
On this 20th day of March, 1946, before me, the undersigned, a Notary Public in and for said County and State, personally appeared EDWIN L. CARTY and DORIS C. CARTY, husband and wife, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same.

WITNESS my hand and official seal.

(Notarial Seal)
Ventura Co.

HELEN R. SMITH
Notary Public in and for said County and State

(See other side for map)



RECORDED AT REQUEST OF TITLE INSURANCE & TRUST CO. at 9:00 A.M. May 6, 1946
No. 11001
Fee: $3.00 Folio: 6
JOHN S. LOCKE.........RECORDER
G.S.
COMPARED: BS

---o0o---

yards, dog kennels, or anything unsightly, incidental or appurtenant thereto, shall be constructed or permitted on said property except as they are screened from the view of building sites higher on the hill by means of trees, vine covered trellises, arbors or walls, or by some other means that shall be effectual and of attractive appearance.

4. That no part of said premises shall ever at any time be sold, conveyed, leased or rented to any person other than one of the white or Caucasian race.

5. That no part of said premises shall ever at any time be used or occupied, or be permitted to be used or occupied, by any person other than one of the white or Caucasian race, except such as are in the employ of the owner or tenants of said premises residing therein.

PROVIDED, that the foregoing restrictions numbered 1 to 5 inclusive, shall in all respects terminate and end and be of no further effect upon and after January 1, 1947.

PROVIDED, that a breach of any of the foregoing conditions shall cause said premises to revert to the said Vendor, its successors, or assigns, each of whom respectively shall have the right of immediate re-entry upon said premises in the event of any such breach.

PROVIDED, also, that a breach of the foregoing conditions or any re-entry by reason of such breach, shall not defeat or render invalid the lien of any mortgage or deed of trust, made in good faith and for value, as to said premises, or any part thereof; but said conditions shall be binding upon and effective against any owner of said premises whose title thereto is acquired by foreclosure, trustee's sale or otherwise, and who violates the same.

IN WITNESS WHEREOF, said McKevett Corporation has this 10th day of September, 1945, hereunto caused its corporate name and seal to be affixed by its President and its Assistant Secretary thereunto duly authorized by its Board of Directors.

McKEVETT CORPORATION, a Corporation.
BY MILTON M. TEAGUE, Its President.
BY I. J. HOSWELL, Its Assistant Secretary.

(CORPORATE SEAL)
McKevett Corp.

U.S.I.R.S. $1.10--Cancelled.
T. I. & T. — 5/4/46

STATE OF CALIFORNIA, (
)ss.
COUNTY OF VENTURA. (

On this 20th day of September, 1945, before me, the undersigned, a Notary Public in and for the said County of Ventura, State of California, residing therein, duly commissioned and qualified, personally appeared Milton M. Teague, known to me to be the President and I. J. Hoswell, known to me to be the Assistant Secretary of McKevett Corporation, the corporation that executed the within and foregoing instrument, and known to me to be the persons who executed the said instrument on behalf of said corporation and they acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, at my office in said County of Ventura, the day and year in this certificate first above written.

GLADYS B. BOYLES
NOTARY PUBLIC in and for the County of Ventura, State of California.
My Commission Expires Oct. 12, 1948.

(NOTARIAL SEAL)
Ventura Co.

RECORDED AT REQUEST OF TITLE INSURANCE & TRUST CO., at 9:00 A.M., MAY 4, 1946.

NO.10963.
Fee: 1.70 Folio: 13.
V.C.W.
COMPARED:

JOHN S. LOCKE............RECORDER.

------°------

** GRANT DEED **

****

IN CONSIDERATION of $1.00, receipt of which is acknowledged,

EDWIN L. CARTY AND DORIS C. CARTY, husband and wife, do hereby grant to

ALLIS-CHALMERS MANUFACTURING COMPANY, a corporation, organized and existing under the laws of the State of Delaware and having its principal place of business in the City of Milwaukee, County of Milwaukee, State of Wisconsin, the real property in the County of Ventura, State of California, described as:

A 6.25/130 interest in and to that certain water well, and the water therein and flowing therefrom, and the pumping plant connected therewith, including the pump, fixtures, connections and appliances, located upon Lots 9 and 10 in Block "B" of Virginia Park, near the Northwest corner of Lot 9 and the Southwest corner of the Easterly 22.50 feet of said Lot 10, together with a like interest in and to the irrigating and distribution system located upon and used for irrigating lands in said Virginia Park, and a necessary and convenient right of way [illegible] said well and pumping plant and distributing system for conducting water [illegible] well to the parcel of land conveyed to said Grantee by Deed from Grantor [illegible] 20th, 1946, recorded concurrently herewith.

Said interest in said well, pumping plant and distribution [illegible] hereby sold and conveyed, subject to the terms, conditions, agreements and [illegible] set forth in Deed from Mary N. Moriarty et al, recorded March 6th, 1946 in Book [illegible] page 283 of Official Records.

Dated this 3rd day of May, 1946.

EDWIN L. CARTY
DORIS C. CARTY

STATE OF CALIFORNIA, }
} ss.
COUNTY OF VENTURA. }

On this 3rd day of May, 1946, before me, the undersigned, a Notary Public in and for said County, personally appeared Edwin L. Carty and Doris C. Carty, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged that they executed the same.

WITNESS my hand and official seal.

(NOTARIAL SEAL)
Ventura Co.

R. W. GRAY
NOTARY PUBLIC in and for said County and State.

RECORDED AT REQUEST OF TITLE INSURANCE & TRUST CO., at 9:00 A.M., MAY 6, 1946.

NO.11002.
Fee: 1.00 Folio: 4.
VCC.W.
COMPARED: OJL

JOHN S. LOCKE.............RECORDER.

- - - - -0- - - - -

* * GRANT DEED * *

* * * * *

BOND R. SHANDS and FRANCES C.SHANDS, husband and wife, In consideration of Ten and No/100 Dollars to them in hand paid, the receipt of which is hereby acknowledged, do hereby grant to

ROBERT D. EVANS and MARY A. EVANS, his wife as joint tenants, all that real property situated in the City of Oxnard, County of Ventura, State of California, described as follows:

Lot 13, Block 3, Oxnard Park Subdivision, Recorded in Book 19, Miscellaneous Maps, Records of Ventura County, California at page 63.

SUBJECT TO: Second installment City and County general and special taxes for fiscal year 1945-46.

Covenants, conditions, restrictions, reservations, rights, rights of way and easements of record;

Deed of Trust as per its terms of record in favor of Bank of America, Culver City, California.

NOTE: Said land lies within the Oxnard Harbor District.

WITNESS our hands this 5th day of March, 1946.

U.S.I.R.S. $3.30--Cancelled.
T.I. &T. -- 5/6/46.

BOND R. SHANDS - FRANCES C. SHANDS

STATE OF CALIFORNIA, } ss.
COUNTY OF VENTURA. }

On this 5th day of March, 1946, before me, the undersigned, Notary Public in and for said County, personally appeared Bond R. Shands and Frances C. Shands, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged that they executed the same.

WITNESS my hand and Official Seal.

(NOTARIAL SEAL)
Ventura Co.

L. MELBY - NOTARY PUBLIC in and for said County and State. My Commission Expires Sept. 27, 1948.

RECORDED AT REQUEST OF TITLE INSURANCE & TRUST CO., at 9:00 A.M., MAY 6, 1946.

NO.11007.
Fee: 1.00 Folio: 3.
V.C.W.
COMPARED: OJL

JOHN S. LOCKE.............RECORDER.

- - - - -0- - - - -

097378

RECORDING REQUESTED BY

CITY OF OXNARD

AND WHEN RECORDED MAIL TO

Name Oxnard City Attorney
Street Address 305 W. Third Street
City & State Oxnard, CA. 93030

MAIL TAX STATEMENTS TO

Name

Street Address

City & State

OFFICIAL RECORDS OF VENTURA COUNTY RECORDER
ROBERT L. HAMM
[illegible] 15 8 30 AM '82

FREE — 3

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Corporation Grant Deed

THIS FORM FURNISHED BY TICOR TITLE INSURERS

A.P.N.

The undersigned grantor(s) declare(s):
Documentary transfer tax is $__________
( ) computed on full value of property conveyed, or
( ) computed on full value less value of liens and encumbrances remaining at time of sale.
( ) Unincorporated area: ( ) City of __________, and
FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

PREFCO LEASING COMPANY

a corporation organized under the laws of the State of California hereby GRANTS to

THE CITY OF OXNARD, a Municiple corporation

the following described real property in the County of Ventura, State of California:

Street, right-of-way for public use on the following described property:

See attached

In Witness Whereof, said corporation has caused its corporate name and seal to be affixed hereto and this instrument to be executed by its __________ President, and __________ Secretary thereunto duly authorized.

Dated: August 3, 1982

PREFCO LEASING COMPANY

By [signature] President

By __________ Secretary

STATE OF CALIFORNIA }
COUNTY OF Los Angeles } ss.

On August 3, 1982 before me, the undersigned, a Notary Public in and for said State, personally appeared JACK A. YORLIN known to me to be the __________ President, and XXXXXXXXXX XXXXXXX of the Corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Signature [signature]

OFFICIAL SEAL
LINDA J. STIMPSON
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Expires OCT. 23, 1982

(This area for official notarial seal)

Title Order No. __________ Escrow or Loan No. __________

MAIL TAX STATEMENTS AS DIRECTED ABOVE

[redacted]

A portion of Lots 7 and 8, Block C, Virginia Park as shown on "Map of Virginia Park", recorded in Book 11, page 28 of Miscellaneous Records of Ventura County, California described as follows:

Beginning at the intersection of the westerly line of Pacific Avenue, 60.00 feet wide, with the northerly line of Wooley Road, 60.00 feet wide; thence from said point of beginning and along the northerly line of Wooley Road,

1st: North 89° 57' 00" West 405.03 feet to the beginning of a tangent curve concave to the northwest and having a radius of 945.00 feet; thence,

2nd: Northeasterly along said curve thru a central angle of 7° 54' 14" an arc distance of 130.36 feet to the beginning of a reverse curve concave to the southeast and having a radius of 1055.0[illegible] feet; thence,

3rd: Northeasterly along said curve thru a central angle of 7° 54' 14" an arc distance of 1[illegible]5.54 feet; thence,

4th: South 89° 57' 00" East 104.97 feet to the beginning of a tangent curve concave to the northwest and having a radius of 25.00 feet; thence,

5th: Northeasterly along said curve thru a central angle of 90° 02' 00" an arc distance of 39.28 feet to a point in the westerly line of said Pacific Avenue; thence along same,

[illegible]

973578

OCT 15

117814

Order No.
Escrow No.
Loan No.
RECORDED AT REQUEST OF:

WHEN RECORDED MAIL TO:

Oxnard City Attorney
300 West Third Street
Oxnard, California 93030

OFFICIAL RECORDS OF VENTURA COUNTY, CALIF.
ROBERT L. HAMM
DEC 16 9 34 1982

FREE - 4

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO:

DOCUMENTARY TRANSFER TAX $
..... Computed on the consideration or value of property conveyed; OR
..... Computed on the consideration or value less liens or encumbrances remaining at time of sale.

Signature of Declarant or Agent determining tax — Firm Name

CORPORATION GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

PREFCO LEASING COMPANY

a corporation organized under the laws of the State of California does hereby

GRANT to THE CITY OF OXNARD, a Municipal Corporation

the real property in the City of Oxnard
County of Ventura , State of California, described as

An exclusive easement for waterlines and related appurtenances for the construction, reconstruction, repair, maintenance, replacement, removal and other related operational activities in, on, over, under and across the following described property:

See Exhibit A
Attached hereto and
made a part hereof.

Dated December 3, 1982

PREFCO LEASING COMPANY

By Jack A. Yoblin
Jack A. Yoblin President

By Ronald G. Peterson
Ronald G. Peterson Secretary

STATE OF CALIFORNIA
COUNTY OF } ss.

On ______ before me, the undersigned, a Notary Public in and for said State, personally appeared ______ known to me to be the ______ President, and ______ known to me to be the ______ Secretary of the corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Signature ______

(This area for official notarial seal)

DEC 16 1982

MAIL TAX STATEMENTS AS DIRECTED ABOVE

1144 (10/80)

[redacted]

SENT BY:STEWART TITLE TSG 08-29-94 09:11AM 8182437215→ 17146607644 # 4

EXHIBIT A

A portion of Lots 1, 2, 7 and 8, Block C, Virginia Park, as shown on "Map of Virginia Park," recorded in Book 11, page 28 of Miscellaneous Records of Ventura County, California, described as follows:

Parcel 1: The westerly 20.00 feet of the easterly 158.65 feet of Lot 2 and the westerly 20.00 feet of the northerly 479.62 feet of the easterly 158.65 feet of Lot 7.

Parcel 2: The northerly 15.00 feet of the southerly 125.00 feet of the easterly 158.65 feet of Lot 7 and the northerly 15.00 feet of the southerly 125.00 feet of Lot 8.

Parcel 3: The southerly 15.00 feet of the northerly 424.59 feet of the easterly 170.00 feet of Lot 1.

Parcel 4: The westerly 15.00 feet of the easterly 255.50 feet of the northerly 215.00 feet of the southerly 340.00 feet of Lot 8.

Parcel 5: The westerly 15.00 feet of the easterly 261.50 feet of the southerly 125.00 feet of Lot 8.

The grantor shall not burden the surface of the easement herein granted with any above ground fences, buildings or structures, which covenant and condition shall be observed by the grantor, its successors or assigns.

117614

6639
2596
IDENTITY
2-2524
MAP
58-68
APPROVED R/W & LAND DEPARTMENT
BY
NTW
DATE
1-13-83

SEE ATTACHED EXHIBIT "A" FOR LEGAL DESCRIPTION.

The Grantor agrees for itself, its successors and assigns not to erect, place or maintain, nor to permit the erection, placement or maintenance of any building, planter boxes, earth fill or other structures except walls and fences on the above described real property. The Grantee, and its contractors, agents and employees, shall have the right to trim or cut tree roots as may endanger or interfere with said systems and shall have free access to said systems and every part thereof, at all times, for the purpose of exercising the rights herein granted; provided, however, that in making any excavation on said property of the Grantor(s), the Grantee shall make the same in such a manner as will cause the least injury to the surface of the ground around such excavation, and shall replace the earth so removed by it and restore the surface of the ground to as near the same condition as it was prior to such excavation as is practicable.

EXECUTED this 18 day of Jan., 1983

PREFCO LEASING COMPANY

By Jack A. Zabel
President

By [signature]
Secretary

STATE OF CALIFORNIA
COUNTY OF VENTURA } ss.

On JANUARY 18, 1983, before me, a Notary Public in and for said State, personally appeared JACK A. ZABLEN, known to me (or proved to me on the basis of satisfactory evidence) to be THE President, and R. S. PETERSON, known to me (or proved to me on the basis of satisfactory evidence) to be THE Secretary, of PREFCO LEASING COMPANY, the corporation that executed the within instrument, and known to me (or proved to me on the basis of satisfactory evidence) to be the persons who executed the within instrument on behalf of the said corporation, and acknowledged to me that such corporation executed the same pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Pamela W. Ford

OFFICIAL SEAL
PAMELA W. FORD
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
VENTURA COUNTY
My Commission Exp. Dec. 28, 198[illegible]

(CORPORATION)

SENT BY:STEWART TITLE 08-29-94 01:57PM → 17146607644 # 1

(3)

007886

RECORDING REQUESTED BY

SOUTHERN CALIFORNIA EDISON COMPANY

WHEN RECORDED MAIL TO

SOUTHERN CALIFORNIA EDISON COMPANY
P. O. Box 4757
Ventura, CA 93004

ATTENTION: R/W Dept.

VENTURA COUNTY RECORDER
RICHARD D. DEAN

Jan 25 1 17 PM '83

FEE $4 2

PAID BY CK

APN 201-0-301-02

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Attn: Diana or Jo

GRANT OF EASEMENT (CORPORATION)

DOCUMENTARY TRANSFER TAX $ / None (no consideration)

D. S. Whitzel — SO. CALIF. EDISON CO.

SIGNATURE OF DECLARANT OR AGENT DETERMINING TAX. FIRM NAME

PREFCO LEASING COMPANY

a corporation (hereinafter referred to as "Grantor"), hereby grants to SOUTHERN CALIFORNIA EDISON COMPANY, a corporation, its successors and assigns (hereinafter referred to as "Grantee"), an easement and right of way to construct, use, maintain, operate, alter, add to, repair, replace, reconstruct, inspect and remove at any time and from time to time underground electrical supply systems and communication systems (hereinafter referred to as "systems"), consisting of wires, underground conduits, cables, vaults, manholes, handholes, and including above-ground enclosures, markers and concrete pads and other appurtenant fixtures and equipment necessary or useful for distributing electrical energy and for transmitting intelligence by electrical means, in, on, over, under, across and along that certain real property in the County of Ventura, State of California, described as follows:

DISTRICT
Ventura
WORK ORDER
6639
2596
SERIAL
2-2524
MAP SIZE
58-68
APPROVED R/W & LAND DEPARTMENT
BY
NTW
DATE
1-13-83

SEE ATTACHED EXHIBIT "A" FOR LEGAL DESCRIPTION

The Grantor agrees for itself, its successors and assigns not to erect, place or maintain, nor to permit the erection, placement or maintenance of any building, planter boxes, earth fill or other structures except walls and fences on the above described real property. The Grantee, and its contractors, agents and employees, shall have the right to trim or cut tree roots as may endanger or interfere with said systems and shall have free access to said systems and every part thereof, at all times, for the purpose of exercising the rights herein granted; provided, however, that in making any excavation on said property of the Grantor(s), the Grantee shall make the same in such a manner as will cause the least injury to the surface of the ground around such excavation, and shall replace the earth so removed by it and restore the surface of the ground to as near the same condition as it was prior to such excavation as is practicable.

EXECUTED this 18 day of Jan., 1983

PREFCO LEASING COMPANY

By Jack A. Zolla President

By [signature] Secretary

STATE OF CALIFORNIA
COUNTY OF VENTURA } ss.

On JANUARY 18, 1983, before me, a Notary Public in and for said State, personally appeared JACK A. ZOLLA, known to me (or proved to me on the basis of satisfactory evidence) to be THE President, and C. S. PETERSON, known to me (or proved to me on the basis of satisfactory evidence) to be THE Secretary, of PREFCO LEASING COMPANY, the corporation that executed the within instrument, and known to me (or proved to me on the basis of satisfactory evidence) to be the persons who executed the within instrument on behalf of the said corporation, and acknowledged to me that such corporation executed the same pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Pamela W. Ford

OFFICIAL SEAL
PAMELA W. FORD
NOTARY PUBLIC CALIFORNIA
PRINCIPAL OFFICE IN VENTURA COUNTY
My Commission Exp. Mar. 30, 1984

(CORPORATION)

Grant of Easement
6639-2596, 2-2524
Page 2

EXHIBIT "A"

A strip of land 8 feet wide lying within Lot 8 of Block C of Virginia Park, as per map recorded in Book 11, page 28 of Miscellaneous Records (Maps), in the office of the County Recorder of said County; the centerline of said strip of land is described as follows:

Beginning at a point in the easterly line of said Lot 8 that is 373 feet northerly of the centerline of Wooley Road, 60 feet wide as it now exists; thence North 89° 59' West 15 feet to a point hereinafter referred to as Point "A".

Also two (2) strips of land, each 6 feet wide; the centerlines are described as follows:

STRIP NO. 1: Beginning at Point "A" hereinbefore referred to; thence North 89° 59' West 160 feet to a point hereinafter referred to as Point "B"; thence continuing North 89° 59' West 10 feet; thence North 45° 00' West 15 feet; thence North 0° 01' East 190 feet to a point hereinafter referred to as Point "C"; thence North 89° 59' West 25 feet; thence North 0° 01' East 37 feet more or less to the exterior wall of a building.

STRIP NO. 2: Beginning at Point "B" hereinbefore referred to; thence North 45° 00' West 15 feet; thence North 0° 01' East 60 feet.

Also a strip of land 56 feet wide, lying 17 feet easterly and 39 feet westerly of the following described line:

Beginning at Point "C" hereinbefore referred to; thence North 0° 01' East 25 feet.

7886

Grant of Easement
6639-2596, 2-2524
Page 2

EXHIBIT "A"

A strip of land 8 feet wide lying within Lot 8 of Block C of Virginia Park, as per map recorded in Book 11, page 28 of Miscellaneous Records (Maps), in the office of the County Recorder of said County; the centerline of said strip of land is described as follows:

Beginning at a point in the easterly line of said Lot 8 that is 373 feet northerly of the centerline of Wooley Road, 60 feet wide as it now exists; thence North 89° 59' West 15 feet to a point hereinafter referred to as Point "A".

Also two (2) strips of land, each 6 feet wide; the centerlines are described as follows:

STRIP NO. 1: Beginning at Point "A" hereinbefore referred to; thence North 89° 59' West 160 feet to a point hereinafter referred to as Point "B"; thence continuing North 89° 59' West 10 feet; thence North 45° 00' West 15 feet; thence North 0° 01' East 190 feet to a point hereinafter referred to as Point "C"; thence North 89° 59' West 25 feet; thence North 0° 01' East 37 feet more or less to the exterior wall of a building.

STRIP NO. 2: Beginning at Point "B" hereinbefore referred to; thence North 45° 00' West 15 feet; thence North 0° 01' East 60 feet.

Also a strip of land 56 feet wide, lying 17 feet easterly and 39 feet westerly of the following described line:

Beginning at Point "C" hereinbefore referred to; thence North 0° 01' East 25 feet.

7886

Security Pacific Leasing Corp.
P.O. Box 7722
San Francisco, CA 94111
Attn: John Votruba, Esq.

30 PAST 1 P.M. JUN 1984
RICHARD D. DEAN, COUNTY RECORDER

PAID BY CK

TRANSFER TAX PAID CODE # 4
SURVEY MON. FUND FEE $10.00

Rockwell International Corporation
P.O. Box 464
Golden, CO 80402
Attn: Mr. W.M. Sharmon

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Corporation Grant Deed

THIS FORM FURNISHED BY TICOR TITLE INSURERS

A.P.N. 201-301-030

201 | 301 | 03

The undersigned grantor(s) declare(s):
Documentary transfer tax is $ 3,520.00
(X) computed on full value of property conveyed, or
( ) computed on full value less value of liens and encumbrances remaining at time of sale.
( ) Unincorporated area: (x) City of Oxnard, and
FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

PREFCO LEASING COMPANY,

a corporation organized under the laws of the State of California, hereby GRANTS to

CHARLES D. PEARCE AND K. THOMAS ROSE AS TRUSTEES FOR SECURITY PACIFIC LEASING CORPORATION

the following described real property in the City of Oxnard,
County of Ventura, State of California:

See Exhibit "A" attached hereto and made a part hereof.

In Witness Whereof, said corporation has caused its corporate name and seal to be affixed hereto and this instrument to be executed by its Vice President and Secretary thereunto duly authorized.

Dated: June 26, 1984

PREFCO LEASING COMPANY

By ______ Vice President

By ______ Secretary

STATE OF CALIFORNIA } ss.
COUNTY OF Los Angeles

On June 26, 1984 before me, the undersigned, a Notary Public in and for said State, personally appeared James M. Nicolai known to me to be the Vice President, and Trischa L. Bennett known to me to be Secretary of the Corporation that executed the within instrument, known to me to be the persons who executed the within instrument on behalf of the Corporation therein named, and acknowledged to me that such Corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

Signature Diana W. Shulman

OFFICIAL SEAL
DIANA W. SHULMAN
NOTARY PUBLIC - CALIFORNIA
LOS ANGELES COUNTY
My Comm. Expires March 4, 1988

OFFICIAL SEAL
DIANA W. SHULMAN
NOTARY PUBLIC - CALIFORNIA
LOS ANGELES COUNTY
My Comm. Expires March 4, 1988

(This area for official notarial seal)

Title Order No. 356438 Escrow or Loan No. ______

MAIL TAX STATEMENTS AS DIRECTED ABOVE

SENT BY:STEWART TITLE 08-23-94 02:18PM 17146607644 # 3

RECORDING REQUESTED BY

TICOR TITLE INS. CO. OF CALIFORNIA - 71

72305

EXHIBIT "A"

LEGAL DESCRIPTION

Parcel A shown on Parcel Map No. 83-2 filed in Book 37 pages 94 and 95 of Parcel Maps in the Office of the County Recorder of Ventura County.

72305

[redacted]

P. O. Box 928
Golden, CO 80401

MAIL TAX STATEMENTS TO

Name Not Applicable

RICHARD D. DEAN, COUNTY RECORDER

SURVEY MON. FUND FEE $10.00

FEE 85

SPACE ABOVE THIS LINE FOR RECORDER'S USE

CAT. NO. NN00582
TO 1923 CA (2-83)

Individual Grant Deed

THIS FORM FURNISHED BY TICOR TITLE INSURERS

A.P.N. 201-301-030

The undersigned grantor(s) declare(s):
Documentary transfer tax is $ exempt
( ) computed on full value of property conveyed, or
( ) computed on full value less value of liens and encumbrances remaining at time of sale.
( ) Unincorporated area: ( ) City of ____________, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, to wit: $3,256,320.00, Charles D. Pearce and K. Thomas Rose as Trustees for Security Pacific Leasing Corporation

hereby GRANT(S) to
the United States of America and its assigns

the following described real property in the City of Oxnard,
County of Ventura, State of California:

Parcel A shown on Parcel Map No. 83-2 filed in Book 37 pages 94 and 95 of Parcel Maps in the Office of the County Recorder of said County.

Being the same property which Prefco Leasing Company, a California corporation, by its deed dated June 26, 1984 and recorded June 29, 1984 as document No. 72305 in the Office of the County Recorder of said County, granted to Charles D. Pearce and K. Thomas Rose as trustees for Security Pacific Leasing Corporation.

The above-described real property is being acquired for the Department of Energy.

Dated: June 24, 1985

Charles D. Pearce and K. Thomas Rose as Trustees for Security Pacific Leasing Corporation

Charles D. Pearce
K Thomas Rose

STATE OF CALIFORNIA
COUNTY OF San Francisco } SS.
On June 24 1985 before me, the undersigned, a Notary Public in and for said State, personally appeared Charles D. Pearce and K. Thomas Rose personally known to me or proved to me on the basis of satisfactory evidence to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.
WITNESS my hand and official seal.

Signature Gail D. Smith

OFFICIAL SEAL
GAIL D. SMITH
Notary Public-California
City and County of SAN FRANCISCO
My Commission Expires May 5, 1989

(This area for official notarial seal)

Title Order No. 363161-JB Escrow or Loan No.

MAIL TAX STATEMENTS AS DIRECTED ABOVE

SENT BY:STEWART TITLE 08-23-94 02:19PM 17146607644 # 5

RECORDING REQUESTED BY

TICOR TITLE INS. CO.
OF CALIFORNIA • 71

AND WHEN RECORDED MAIL TO

069121

VERIFIED-S

RECORDED IN OFFICIAL RECORDS

TOTAL 22,500 1,978.28 COST 3.00

\# DENOTES OWNER OF RECORD AS OF MARCH 1 — 1977-78 ASSESSMENT ROLL COUNTY OF VENTURA

ASSESSED AT 25% OF FULL VALUE

LAND	IMPROVE-MENTS	PERSONAL PROPERTY	INVENTORY	EXEM TYPE	EXEMPTION	NET VALUE	RATES		LEVIES	PENALTIES AND COSTS
15500						15500		1ST	743.35	44.60
ACTMER WILLIAM B-NATALIE S						GEN	9.4002			
RICHMAN ARLEN J-EMILY J						L&I	.1916	2ND	743.35	44.60
1140 E MOUNTAIN VIEW DR						LAND				COST 3.00
OXNARD CALIF 93030 AGENT NUMBER								TOTAL	1,486.70	
\# SEA-CON CORPORATION						TOTAL FULL VALUE		62,000		
9375	2000					11375		1ST	545.52	32.73
FIGUEROA ERNEST-IRENE						GEN	9.4002			
315 E NECTARINE ST						L&I	.1916	2ND	545.52	32.73
OXNARD CALIF 93030 AGENT NUMBER 5200 01300026						LAND		TOTAL	1,091.04	COST 3.00
\# FIGUEROA ERNEST-IRENE						TOTAL FULL VALUE		45,500		
22125	12750					34875		1ST	1,672.56	100.35
EVANS E J						GEN	9.4002			
BANK OF AMERICA EX TR 55946						L&I	.1916	2ND	1,672.56	100.35
P O BOX 3635 TERMINAL ANNEX						LAND				COST 3.00
LOS ANGELES CALIF 90051 AGENT NUMBER								TOTAL	3,345.12	
\# EVANS E J						TOTAL FULL VALUE		139,500		
21250						21250		1ST	1,019.12	61.14
FOREMOST-MC KESSON INC						GEN	9.4002			
ONE POST ST						L&I	.1916	2ND	1,019.12	[illegible]
SAN FRANCISCO CALIF 94104 AGENT NUMBER						LAND		TOTAL	2,038.24	COST [illegible]
\# FOREMOST-MC KESSON INC						TOTAL FULL VALUE		85,000		
26250	31250					57500		1ST	2,757.63	165.45
LEDESMA RAYMOND G-HORTENSE R						GEN	9.4002			
LEDESMA SALVADOR-LUCINA						L&I	.1916	2ND	2,757.63	165.45
P O BOX 629						LAND				COST 3.00
OXNARD CALIF 93032 AGENT NUMBER 0646								TOTAL	5,515.26	
\# LEDESMA RAYMOND G-HORTENSE R						TOTAL FULL VALUE		230,000		
72500	132225	84500	276450	INV	138225	427450		1ST	20,286.69	1,217.20
ALLIS CHALMERS MFG CO						GEN	9.4002			
P O BOX 5246						L&I	.1916	2ND	20,286.69	1,217.20
OXNARD CALIF 93030 AGENT NUMBER						LAND		TOTAL	40,573.38	COST 3.00
\# ALLIS CHALMERS MFG CO						TOTAL FULL VALUE		2,262,700		
30500						30500		1ST	1,459.69	87.58
DIEDRICH INVESTMENTS						GEN	9.3802			
1920 E FIFTH ST						L&I	.1916	2ND	1,459.69	87.58
OXNARD CALIF 93030 AGENT NUMBER						LAND		TOTAL	2,919.38	COST 3.00
\# DIEDRICH INVESTMENTS						TOTAL FULL VALUE		122,000		
30500	250			HOME	1750	29000		1ST	1,389.57	83.37
DIEDRICH JOHN MILTON						GEN	9.3802			
1560 MOUNTAIN VIEW						L&I	.1916	2ND	1,389.57	83.37
OXNARD CALIF 93030 AGENT NUMBER						LAND		TOTAL	2,779.14	COST 3.00
\# DIEDRICH JOHN MILTON						TOTAL FULL VALUE		123,000		

\# DENOTES OWNER OF RECORD AS OF MARCH 1 — 1977-78 ASSESSMENT ROLL COUNTY OF VENTURA

ASSESSED AT 25% OF FULL VALUE

LAND	IMPROVE-MENTS	PERSONAL PROPERTY	INVENTORY	EXEM TYPE	EXEMPTION	NET VALUE	RATES		LEVIES	PENALTIES AND COSTS
DIEDRICH JOHN M-EDWIN J						GEN	9.3802	1ST		
1560 MOUNTAIN VIEW						L&I	.1916	2ND		COST 3.00
						LAND				

F F RECORD AS OF MARCH 1 — 1977-78 ASSESSMENT ROLL COUNTY OF VENTURA

ASSESSED AT 25% OF FULL VALUE

IMPROVE-MENTS	PERSONAL PROPERTY	INVENTORY	EXEM TYPE	EXEMPTION	NET VALUE	RATES			LEVIES	PENALTIES AND COSTS	SPECIAL ASSESSMENTS	
-NATALIE S					15500	GEN	9.4002	1ST	743.35	44.60		201-[illegible]
VIEW DR						L&I	.1916	2ND	743.35	44.60		
93030 AGENT NUMBER						LAND		TOTAL	1,486.70	COST 3.00		STATEMENT NUMBER 845[illegible]
PROBATION					TOTAL FULL VALUE			62,000				
2000 -IRENE					11375	GEN	9.4002	1ST	545.52	32.73		201-[illegible] TRA [illegible]
NE ST						L&I	.1916	2ND	545.52	32.73		
93030 AGENT NUMBER 5200 01300026						LAND		TOTAL	1,091.04	COST 3.00		STATEMENT NUMBER 930934
ERNEST-IRENE					TOTAL FULL VALUE			45,500				
12750					34875	GEN	9.4002	1ST	1,672.56	100.35		201-0-291-200 TRA [illegible]
DA EX TR 55946 TERMINAL ANNEX						L&I	.1916	2ND	1,672.56	100.35		
CALIF 90051 AGENT NUMBER						LAND		TOTAL	3,345.12	COST 3.00		STATEMENT NUMBER 845330
					TOTAL FULL VALUE			139,500				
KESCOM INC					21250	GEN	9.4002	1ST	1,019.12	61.14		201-0-29[illegible] TRA 0[illegible]
						L&I	.1916	2ND	1,019.12	61.14		
CA 94104 AGENT NUMBER						LAND		TOTAL	2,038.24	COST 3.00		STATEMENT NUMBER 845[illegible]
KE INC					TOTAL FULL VALUE			85,000				
31250 ND G-HORTENSE R DOR-LUCINE					57500	GEN	9.4002	1ST	2,757.63	165.45		201-0-291-220 TRA 03001
						L&I	.1916	2ND	2,757.63	165.45		
93032 AGENT NUMBER 0646						LAND		TOTAL	5,515.26	COST 3.00		STATEMENT NUMBER 879945
RAYMOND G-HORTENSE R					TOTAL FULL VALUE			230,000				
138225 E MFG CO	84500	276450	INV	138225	427450	GEN	9.4002	1ST	20,286.69	1,217.20		20[illegible]-320 TRA [illegible]
						L&I	.1916	2ND	20,286.69	1,217.20		
93030 AGENT NUMBER						LAND		TOTAL	40,573.38	COST 3.00		STATEMENT NUMBER 845[illegible]
ERS MFG CO					TOTAL FULL VALUE			2,262,700				
ESTMENTS					30500	GEN	9.3802	1ST	[illegible]	87.5[illegible]		20[illegible] TRA [illegible]
ST						L&I	.1916	2ND	[illegible]	[illegible]		
93030 AGENT NUMBER						LAND		TOTAL	[illegible]	COST 3.00		STATEMENT NUMBER 845[illegible]
INVESTMENTS					TOTAL FULL VALUE			122,000				
250 MILTON			NONE	1750	29000	GEN	9.3802	1ST	[illegible]	[illegible]		201-0-[illegible] TRA 03038
IN VIEW						L&I	.1916	2ND	[illegible]	[illegible]		
93033 AGENT NUMBER						LAND		TOTAL	[illegible]	[illegible]		STATEMENT NUMBER 845334
MILTON					TOTAL FULL VALUE			12[illegible]				

RECORD AS OF MARCH 1 — 1977-78 ASSESSMENT ROLL COUNTY OF VENTURA — PAGE

ASSESSED AT 25% OF FULL VALUE

IMPROVE-MENTS	PERSONAL PROPERTY	INVENTORY	EXEM TYPE	EXEMPTION	NET VALUE	RATES			LEVIES	PENALTIES AND COSTS	SPECIAL ASSESSMENTS	PARCEL NUMBER
M-EDWIN J						GEN	9.3802	1ST				201-0-302-04[illegible] TRA 03035
N VIEW						L&I	.1916	2ND		COST 3.00		STATEMENT
						LAND						

4.0 PRIOR/CURRENT PROCESSES

4.1 Historical Production Processes

Prior to the forging operations by Precision Forge or the DOE, the site was used as farm land until 1949. Allis-Chalmers, a farm implement manufacturing company, purchased the property in 1949 and built a plant consisting of 6 buildings. Production activities included founding (foundry casting), forging, machining, welding, cutting, sanding/grinding and painting/coating. These activities resulted in the manufacture, assembly, and testing of non-motorized farm implements (plows, discs, harrows, bailers, cutters, rakes). The area now used as an exercise track was used by Allis Chalmers as the testing track for the farm equipment. A historical concern is a suspect pit that existed in the area of Building #6. This area allegedly received sand casts, slag and other debris during the Allis-Chalmers tenure. While drilling for geotechnical testing before the construction of Building #6, Buena Engineers, Inc. recorded fill material containing foundry operation debris in the upper five feet of the core.

4.2 Current Basic Production Process

The Oxnard facility is a nonferrous metalworking (SIC 3462 and 3463) (forging, machining, welding, cutting, grinding, Wheelabrating and painting) facility. Historically, Oxnard facility provided metalworking in stainless steel, titanium, aluminum and copper alloys. Presently, all metal working is with stainless steel, tantalum, molybdenum, and tungsten. The basic process involves the following:

- Cut stainless steel bars into specific lengths called billets.
- Grind and sand the billets to deburr the ends
- Wheelabrate to polish
- Coat with a dye lubricant–graphite lubricant or Delta glaze
- Heat with a furnace and forge by high energy rate forging hammers
- Water quench
- Wheelabrate and coat
- Re-forge/water quench
- Inspect

- Grind, sand, and wheelabrate
- Saw forgings/inspect
- Trim press
- Grind, sand or wheelabrate
- Machine
- Pull and test (metallurgical lab)
- Mark per customer finish drawings
- Package/ship

4.3 Current Building Descriptions and Specific Functions

The Oxnard facility occupies 13.75 acres in an industrially zoned park (M-2 warehouse/industrial). The facility possesses seven buildings housing a total of approximately 86,000 square feet of floor space and approximately 14 million dollars in capital equipment (un-depreciated). Figure 4-1 is a sketch of the seven buildings and their respective areas. The specific building functions are as follows:

- Administration Offices (Building #1)

  The Administration Offices house technical and administrative staff (accounting and purchasing), a conference room, human resources services, and reception area. Hazardous substances and wastes are neither stored, manufactured, processed, or otherwise used in the building. The building may contain asbestos containing materials (ACM), including: vinyl asbestos tile/mastic, heating ventilation and air conditioning (HVAC) wrapping, roof tiles, and ACM concrete walls in the plant vault.

- Machine Shop (Building #2)

  Building #2, the largest building, houses shipping and receiving, the production, planning, and control office, the 90-day hazardous waste generator accumulation area, the maintenance office, stock room, electrical maintenance room, lunch area, storage area, QA office, machining floor, metallurgical laboratory, and engineering/computer assisted drafting. Although not housed in Building #2, the loading dock and fabrication shop are attached to the west side of the building. The building may contain ACM, including: vinyl asbestos tile/mastic, HVAC wrapping, and roof tiles.

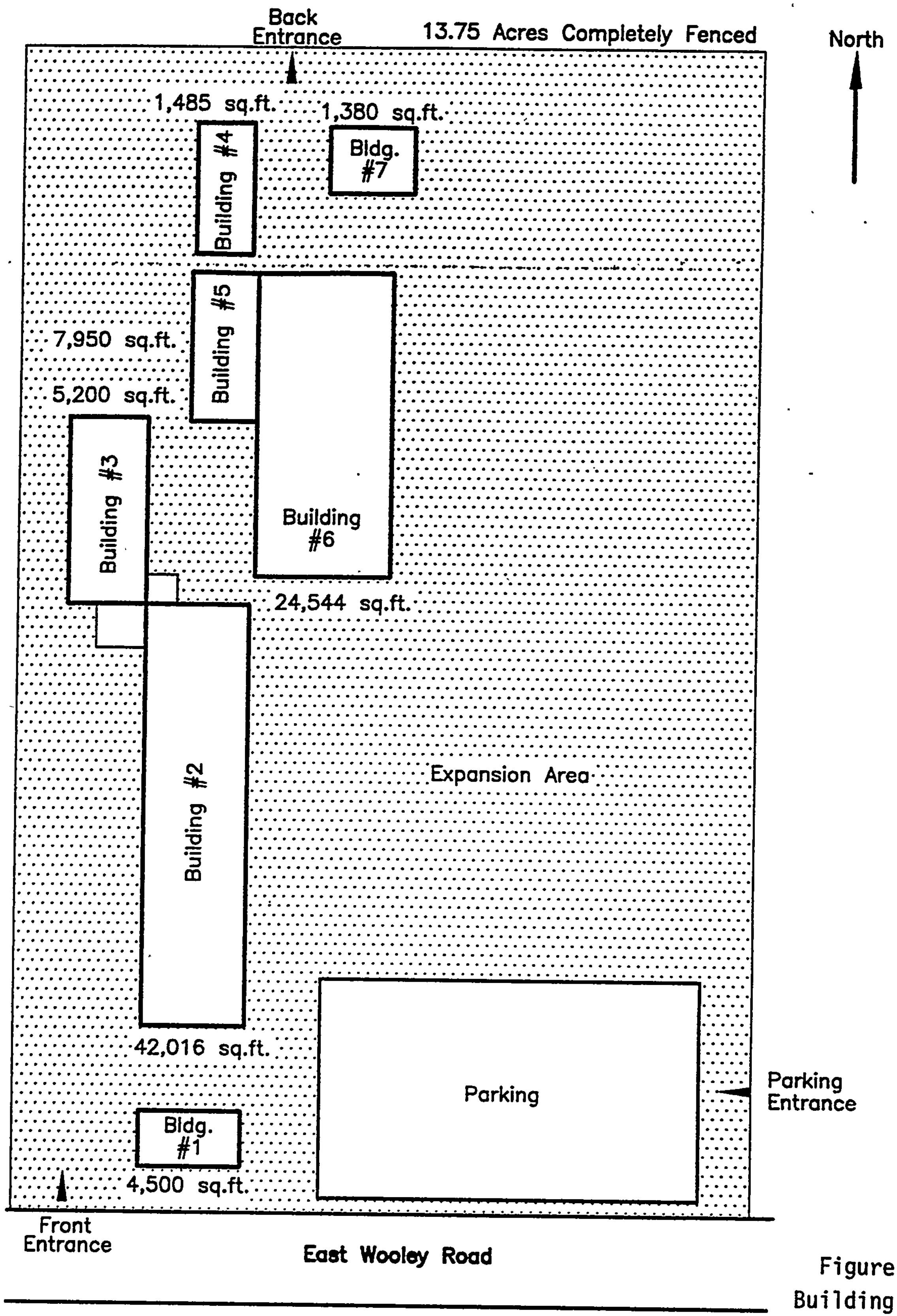


Figure 4-1
Building Plot
Plan

OXFIG4-1

The 90-day generator accumulation area is operated under a VCDEH Waste Producer Permit to Operate issued February 1989 and in accordance with 40 CFR 262.34. The area is curbed and fenced and stores acids from the metallurgical lab, spent synthetic coolants/ lubricating oils from the machine shop, grinding shop cyclone fines, Wheelabrator baghouse fines, and various aerosol paint cans and paint wastes from several plant-wide locations. Waste is shipped off-site to Rollins Environmental, Deer Park, Texas, the Oil Process Co. (OPC), Los Angeles, California, a subsidiary of Rollins Environmental, and Petroleum Recycling Corporation in Signal Hill, California. The staging area for off-site pick-up is the south end of the loading dock. No known spills have been recorded in this area.

The fabrication shop contains a parts washer that uses a water-based detergent called Simple Green™. The shop previously contained a cold solvent degreasing tank that was owned by the Oxnard facility and serviced (drained and refilled periodically) by Safety Kleen of California. The solvent used by Safety Kleen is believed to have been a Stoddard agent. This tank has been removed from service due to a leak and has been disposed appropriately off-site. The flooring immediately beneath the tank showed no sign of staining.

Used oil filters are drained of free flowing oil and then stored in 55-gallon drums located along the west outside wall of the fabrication shop. These filters are sent to Petroleum Recycling Corporation (PRC), Signal Hill, California, for recycling. Historically, Oxnard has also used a company called Black Gold (owner and location unknown). The area where these drums are stored shows no signs of staining; however, the drums were showing signs of deterioration.

The metallurgical lab uses various acids (1-2 liters per month of acetic, nitric, hydrochloric and hydrofluoric) for destructive testing (acid etching of fabricated metal components). Acids were historically sent to the sink drain, which contained an inline calcium carbonate neutralization system upstream of the sewer outfall. This elementary neutralization process was discontinued due to deterioration of the wastewater transfer lines. (Transfer lines were believed to be cast iron.) Known leaks have been recorded in the area surrounding the deteriorated lines.

The machining floor contains various lathes, drill presses, milling and tooling machines, and an optical fabrication inspection station. Many of these machines use two chemical substances that result in two waste streams. These chemical substances include Mobil lubricating oil and a synthetic coolant (hexylene glycol). Minor leaks and preventative maintenance on the machining equipment result in spent lubricating oils which are collected and sent to the 90-day generator accumulation area for off-site disposal. Spent synthetic coolant, generated when machine coolant becomes biologically contaminated, is drained into an appropriate storage container and sent to the 90-day generator accumulation area for off-site disposal. The machining floor showed no signs of spills or leaks. Additionally, machining and tooling generates metal cuttings. These cuttings are collected into recycling bins that sit on the loading dock ramp immediately west of Building #2. Historically, Weston reported that these cuttings were coated with soluble cutting oils which appeared to collect at the bottom of the bins and leaked onto the cement ramp below. Immediately west of this ramp, opposite bay door #13, is a storm water drain that services this area, the fabrication shop, and the area immediately north. During the Phase I tour a slag deposit was observed approximately 100 feet north of drain.

- Saw Shop (Building #3)

  The saw shop houses various band and utility saws used to saw off billets for forging and machining. This building contains a five-ton overhead bridge crane to transport raw materials between the steel stockyard and the shop. Historically, Building #3 housed a 110-gallon capacity tank and three 55-gallon drums of 111-trichloroethane (TCA) for die cleaning. Used or spent TCA was placed into 55-gallon drums, stored in the 90-day generator accumulation area and sent to an off-site recycler. The Weston report states that the tank area had no secondary containment. This report further states that the tank and drums were removed in August 1989. This area was investigated during Phase I and showed no signs of spillage.

- Grinding Shop (Building #4)

  The grinding shop houses numerous grinding stations with a vacuum collection system. This collection system is fitted with an air abatement particle separator (cyclone). This unit generates a very fine metal dust, which is collected in a drum beneath the cyclone. This metallic dust is a hazardous waste due to the presence of chromium (EPA D007). The dust, following containerization, is stored at the 90-day generator accumulation area and sent to Rollins for off-site solidification/stabilization and land disposal. Signs of metallic dust (i.e., presence of fines) were noted along the south outside wall of Building #4.

- Press Shop (Building #5)

  The press shop houses a 1600-ton mechanical press, a 3500-ton hydraulic press, a trim press, and three natural gas-fired furnaces. Beneath each press, is a press cellar pit in which oils (either leaked Shell Tellus-100 or Tellus-46) and metal fines accumulate. Spent oils from the 1600-ton press are containerized and stored in the 90-day generator accumulation area for off-site recycle. Spilled oils beneath the 1600-ton press are pumped out and sent to the oily wastewater treatment plant located at the tank farm and lube stores (Building 7). Oils in the 3500-ton press are self-filtered. The filters are drained, containerized, and sent to the west wall of the saw shop for off-site recycle with PRC. Oils from the pit beneath this press are vacuum pumped and sent to the oily wastewater treatment plant. Because of the age and condition of the pits, no attempt was made to determine pit integrity. These pits and the soil interface beneath warrant further investigation. Design and as-built drawings for these press pits are found in Appendix E.

Located on the west side of the press shop is the Wheelabrator shop which houses four Wheelabrators. The Wheelabrators are enclosed rotating drums with small metallic balls used to polish metal components. Operationally, these machines create metallic fines that must be captured and properly disposed. The air emission/abatement system consists of two baghouse structures and stacks, each servicing two Wheelabrators. The baghouse dust (EPA D007) is collected in drum containers and sent to the 90-day generator accumulation area prior to off-site solidification/stabilization by Rollins Environmental. Bags are replaced when breakthrough occurs and are containerized for off-site disposal. Signs of metallic dust (i.e. presence of fines) were noted along the south outside wall of Building #4.

The dye penetrant and delta glaze room is also located on the west side of the press shop. The dye penetrant is used in quality assurance while the delta glaze is a lubricant coating applied prior to forging.

- Forge Shop (Building #6)

The forge shop houses 6 High Energy Rate Forging (HERF) hammers with 40,000 ft. lb. maximum energy, 3 HERF hammers with 100,000 ft. lb. maximum energy rating, 4 HERF hammers with 225,000 ft. lb. maximum energy rating and 3 HERF hammers with 300,000 ft. lb. maximum energy rating. Additionally, 13 natural gas fired furnaces and 5 mechanical trim presses are housed. The cellars of each hammer and press take the form of a large underground concrete collection trench that slopes north. This trench collects leaking oils from the large presses and is also the repository for the quench water from Buildings #5 and #6. At the northern end, a sump pump is used to vacuum pump oily water to the oily wastewater treatment system located at the tank farm and Building #7.

An investigation of the trench was conducted and photos were taken; however, due to the oily conditions within the trench, neither the integrity nor the construction of the trench could be ascertained. Review of the as-built drawings indicate the floor slab is 2-feet thick concrete, the side walls are 3-feet 7-inches thick concrete and the walls and floor are reinforced with #5 rebar at 1-foot centers. The drawing showed no expansion joints and specifications required water-proofing of all side walls and floor. Design and as-built drawings for Buildings 5 and 6 are found in Appendix E.

- Tank Farm and Lubrication Stores

The tank farm is located north of Building 6. The tank farm consists of five tanks including:

Tank A
- Pit effluent tank (oil and water)
- Capacity = 10,000 gallons
- 12" vertical height = 750 gallons

Tank B
- Back-up Pit effluent tank (oil and water)
- Capacity = 1,500 gallons
- 12" vertical height = 150 gallons
- Tank not in service

Tank C
- Dirty oil tank
- Capacity = 2,000 gallons
- 12" vertical height = 200 gallons

Tank D
- Cleaned oil tank
- Capacity = 3,000 gallons
- 12" vertical height = 300 gallons

Tank E
- Steam cleaner water tank (reusable)
- Capacity = 5,000 gallons
- 12" vertical height = 200 gallons

Hydraulic fluids are collected from the press pits in Building #5 and the trench in Building #6 and pumped to the tank farm (Tank A) for initial treatment (gravity separation). Following separation dirty oil is pumped to Tank C for Treatment in Building #7 by cartridge filtration. The dirty water is sent to Tank E along with steam cleaning waters for treatment in Building #7 by ultra membrane filtration. The concentrate generated by ultra filtration is sent to the water "eater" evaporator for evaporation of free liquids under a DTSC Permit by Rule. The water is ultimately collected in two polyethylene tanks, tested and batch-released to the POTW.

The tank farm is built on a concrete slab surrounded by a 3-foot high concrete berm for secondary containment. Previous consultant reports indicate no tank spills have been recorded or reported. Rainwater collects in the containment; however, its management was not determined. Historically, the western wall of the containment berm leaked at the wall/slab interface and was replaced and sealed in 1989.

Building #7 contains the oil and wastewater filtration systems. These oil and water treatment systems receive oil from Tank C and water from Tank E, respectively, through temporary flex hosing. Discussions with the operator indicate that no recorded or reported spills have occurred during hook-up, fluid transfer or detachment of the hosing, nor have any spills or overflow occurred at the treatment facilities located in Building #7.

- Stockyard

The stockyard is located north of the saw shop near the western boundary of the site. The stockyard is an open air, concrete-paved storage facility that is used for the reception and storage of raw metal (stainless steel bars). No dry or liquid chemicals have been stored in this yard. During the Phase I tour, the concrete was observed to be rust-stained in locations surrounding the legs of the five-ton overhead bridge crane and the billet storage racks. The concrete was in excellent condition showing no signs of cracking, etching or spalling.

- Boneyard

A fenced, unpaved boneyard exists in the northwest corner of the plant site. During the site visits, the boneyard contained numerous steel and poly tanks.. All tanks were observed to be empty. Additionally, various pieces of scrap metal, old machinery and various assorted debris were being stored. Much of the old machinery was contaminated with oily residue and/or sludge. During the PE, several areas of petroleum or discolored soils were observed, even though the yard had overgrown with weeds and grass. During the Phase I, it was observed that the yard had been bladed and that all vegetation had been removed. The determination of a soil herbicide application could not be verified. According to DOE-furnished documentation, the yard historically stored polychlorinated biphenyl containers or articles. Details of the storage could not be found in the plant's records.

Finally, the asphalt road leading to the boneyard was originally a dirt road that may have been periodically oiled for dust control. This yard and surrounding area warrants further investigation.

5.0 REGULATORY AGENCY INFORMATION

5.1 Listing of Agencies/Properties of Concern

Environmental regulatory agencies with jurisdiction over the Oxnard facility were visited to determine and identify legally mandated permits, compliance violations, solid and hazardous material/waste inventories and active/closed corrective actions. The following agencies were visited to interview key personnel (permitting and inspection/enforcement) and review/copy records:

- City of Oxnard - Source Control Program
  6001 Perkins Road
  Oxnard, CA 93033
  Attention: Sally Mechuzak - File Search/Permitting

- Ventura County Air Pollution Control District (VCAPCD)
  702 County Square Drive
  Ventura, CA 93030
  Attention: Sue Megoalik - File Search
  Peter Lawson - Permits
  Dan Searcy - Inspection

- Ventura County Department of Environmental Health (VCDEH)
  Hazardous Waste & UST.
  800 South Victoria Avenue
  Venture, CA 93009
  Attention: Heather Ebersole - File Search
  Craig Cooper - Inspection
  Greg Smith - EH Supervisor

- California Environmental Protection Agency
  Department of Toxic Substances Control (DTSC)
  Region 3 - Burbank
  1011 North Grand Avenue
  Glendale, CA 91201
  Attention: Brenda Alley - File Search
  Scott Simpson - Permitting
  Jim McCamon - Permitting

The Regional Water Quality Control Board refused to be interviewed stating that no files existed for the properties of concern. The agency further noted that they have no interest in the Oxnard facility unless groundwater contamination is discovered during Phase II of the ESA. Each agency was interviewed for information and records pertaining to the following properties:

- **EG&G Rocky Flats Oxnard Facility**
  1235 East Wooley Road
  Oxnard, CA 93030-7330
  (805) 485-4881

- Kingstone Wheel Corporation
  (formerly Del Manufacturing)
  950 Richmond Avenue
  Oxnard, CA 93030-7330
  (805) 486-2601

- City of Oxnard, Vehicle Maintenance Facility
  1060 Pacific Avenue
  Oxnard, CA
  (805) 385-8051

- Gold Coast Steel
  (formerly J&S Engineering)
  1140 Mountain View Avenue
  Oxnard, CA
  (805) 483-1560

- Deardorff-Jackson Company
  1120 Mountain View Avenue
  Oxnard, CA
  (805) 487-7801

- Told Corporation
  1701 Pacific Avenue
  Oxnard, CA
  (805) 487-4300

This section is subdivided by property. Information existed for each property with the exception of Told Corporation and Boskovich Corp.

5.2 EG&G Rocky Flats Oxnard Facility

5.2.1 Solid/Hazardous Waste

The Oxnard facility is a hazardous waste generator (CA9890090401) operating under the 90-day generator accumulation rule. The facility applied for and was granted a Hazardous Waste Producer Permit to Operate #472 by the VCDEH. Under this permit, the facility generates, accumulates and manifests for off-site disposal or recycle the following identified streams:

Waste Stream/Classification	Management
• Waste Acids (hydrochloric, nitric, acetic) Waste Acid Liquid, N.O.S., Corrosive Material NA1760 CA Waste #792, EPA Waste #D002	Neutralization. Rollins Environmental
• Spent Coolant Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #132, EPA Waste #D007	Incineration. Rollins Environmental
• Wheelabrator-Bag House-Dust Grinding shop cyclone fines Hazardous Waste Solid, N.O.S., ORM-E NA9189 CA Waste #172, EPA Waste #D007	Solidification/ stabilization Rollins Environmental
• Oil (used) Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #221	Recycled Petroleum Recycling Corporation
• Wastewater Evaporative Concentrate Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #223	Incineration. Rollins Environmental
• Press Pit Sludge Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #223, EPA Waste #D007, D008	Incineration Rollins Environmental
• Paint Debris Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #352, EPA Waste #D007, D008	Incineration Rollins Environmental
• Paint Rinsate Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #134, EPA Waste #D007, D008	Incineration Rollins Environmental
• Press Pit Oily Water	Oily water treatment system Oxnard Facility
• Used Oil Filters	Recycled Petroleum Recycling Corporation
• Spray Cans Compressed Gas, N.O.S. Flammable Gas UN1954 CA Waste #331, EPA Waste #D001	Incineration Rollins Environmental

- Scrap Metal

On-site Bin Storage
Recycled with
- SOS Metals - LA
- Oxnard Recycling
- Eddie Recycling
- Standard Industries (carbon steel)

The DTSC authorized the Oxnard facility to operate the water "eater" evaporator, a fixed-treatment unit under the Permit by Rule (PBR) (Title 22 CCR 67450.2(b)(5)). This unit removes water from the concentrate generated by the waste water ultra membrane filtration unit. Furthermore, DTSC approved Oxnard's conditional exemption for the treatment of empty containers <110 gallons capacity (HSC25200.3 and 25201.5).

In discussions with DTSC, it appears that the facility submitted an Application for Hazardous Waste Facility Permit Variance on July 27, 1989, for the manual neutralization of used acid before discharge to the sanitary sewer. This application was never acted upon by the state due to the developing PBR. After discussions with the state pertaining to the facility's current operation of 90-day accumulation/ off-site disposal of waste acids, the state suggested that the facility submit a PBR application and treat waste acids on site.

Three Notices of Violation (NOV) under the Permit to Operate #472 were issued to the facility in 1986. The NOVs included violations pertaining to hazardous waste training, storage management (signing and secondary containment) and manifesting. These violations were corrected the same year. No other hazardous waste violations have been issued by VCDEH or DTSC.

5.2.2 Wastewater Discharge

The City of Oxnard, Source Control Program has issued the Oxnard facility Industrial Wastewater Discharge Permit #38C per the Oxnard City Code, Chapter 25. This permit is transferrable provided the new owner submits an updated application, an Industrial User Baseline Monitoring Report, and transfer fee of $1,500. The permit conditions/ provisions require that the facility comply with both local pretreatment standards and federal pretreatment standards (Aluminum Forming Point Source Category, 40 CFR 467 and Non-ferrous Metal Forming Point Source Category, 40 CFR 471). All samples for the self-monitoring reports are collected from the sampling well located east of the tank farm and downstream of the gravity and membrane filtration system.

NOVs have been issued in 1989, 1992, 1993 and 1994. One NOV in 1989 and two in 1993 were issued for late submittal of the self-monitoring report. In December 1992 and July 1994, NOVs were issued for exceedence of the oil/grease standard (100 mg/L). This violation is believed to have occurred due to the use of soaps/detergents. The plant has reviewed its use of soaps/detergents and has discontinued their use. This corrective action appears to have alleviated the problem. In March 1994 the plant received a NOV for failure to quarterly report total toxic organics for December 1993. This violation was closed March 9, 1994, in a letter explaining that no discharge took place in December 1993 making it impossible to test.

5.2.3 Underground Storage Tanks (USTs)

The Oxnard facility previously managed two underground storage containers (USC) as defined by the California Water Resources Control Board. In December 1984 the facility filed two USC registration forms with the Board. One tank was identified as a 550 gallon, single-walled, diesel tank. This tank was constructed of unlined carbon steel and had no cathodic protection. The tank piping was suction only. The second tank was identified as a 1,000 gallon, single-walled concrete vault. No information existed on lining or protection. This second tank held rinse water that might have contained a dye penetrant called Dubl Chek HM406.

Following an application for abandonment in place, the VCDEH granted a permit to abandon the 550 gallon diesel fuel tank in place. The tank was closed by the following method:

> "The tank was pumped empty, rinsed three times with a soapy water solution and vacuumed dry. An inert gas test was performed on the tank at 3-5 psi and found not to be leaking. This was observed by Greg Smith of the Resource Management Agency County of Ventura. All piping was removed from the tank and the tank was pumped full of concrete on March 26, 1986."
> (MHLoe Co., 1986)

On November 30, 1992, the VCDEH issued the facility a letter concurring with EG&G's position that the concrete vault did not store a hazardous material as defined by the Leaking Underground Fuel Tank (LUFT) manual and therefore requires no formal abandonment. The tank was subsequently pumped dry, rinsed, and the fill pipe cement plugged.

5.2.4 Air Emissions

The VCAPCD renewed a Permit to Operate, Number 1203, on October 1, 1993. This permit allows the facility to operate 16 natural gas fired furnaces and one solvent cleaning operation. This permit limits the natural gas consumption for all combustion equipment to 50 MMcf per year.

This permit is fully transferrable as the permit applies to the plant's equipment and its usage. Should the permit not be transferred, a new owner would need to apply for Nitrogen oxide (NO_x) and Reactive Organic Compounds (ROC) emission credits. Generally ROC credits are available from the community bank if plant emissions are less than 5 tons/year. NO_x credits are extremely difficult to acquire. Cost of a permit transfer is $200.00.

A file search and discussions with the permitting section could identify no information pertaining to the two particulate (PM_{10}) abatement systems (the Wheelabrator baghouse and the grinding shop cyclonic particle separator) at the site. The VCAPCD suggested that the facility needs to submit a Letter of Permit Inquiry with an attached process and abatement description.

The Oxnard facility has received one NOV, dated June 7, 1990. This NOV cites the facility for failure to operate its Walker Box Aluminum Forging Furnace (Building #5) within the permitted operating temperature of 1000 °F. This NOV was settled out of court per Rule 29.C. This required that a plan be developed and implemented to prevent firing temperatures from exceeding 1000 °F.

5.2.5 Hazardous Materials

The Oxnard facility has a hazardous materials permit from the City of Oxnard authorizing the storage, use or handling of hazardous materials/waste in accordance with AB 2185-2187; California Health and Safety Code, Chapter 6.95, §25504; and SARA Title III.

The Oxnard facility has filed a revised contingency plan and California Business Plan with the Fire Department, City of Oxnard. Appendix F provides a plant illustration identifying the location of hazardous material storage areas and copies of the hazardous materials chemical descriptions.

5.3 Kingstone Wheel Corp. (Formerly Del Manufacturing)

5.3.1 Solid/Hazardous Waste

Kingstone Wheel Corp. is a hazardous waste generator operating under the 90-day generator accumulation rule. The facility has applied for a Hazardous Waste Producer Permit to Operate. No information exists as to the waste streams presently generated.

The DTSC has no record indicating that the facility presently or under previous ownership had a permitted treatment, storage, and disposal facility (TSDF) on site. Furthermore the site was not permitted under AB 1772 for tiered permitting including PBR, conditional authorization or conditional exemption.

5.3.2 Wastewater Discharge

Kingstone Wheel Corp. has an industrial wastewater discharge permit issued by the City of Oxnard, Source Control Programs. NOVs were issued to the previous owner, Del Manufacturing, for contaminant exceedants.

5.3.3 Underground Storage Tanks (USTs)

The site contains no registered underground containers including tanks, vaults, or sumps.

5.3.4 Air Emissions

The VCAPCD files show that Del Manufacturing operated under two Permits to Operate, Numbers 1120 and 1121. These permits have been withdrawn and the emission inventory banked. The original permits and permitted emission calculation sheets were not available for review.

5.3.5 Hazardous Materials

Kingstone appears to maintain a large liquid chemical and gas tank storage facility based upon its California Business Plan. (Note: Time restraints did not permit the review of this Plan.)

5.4 Deardorff-Jackson, Inc.

5.4.1 Solid/Hazardous Waste

Deardorff-Jackson, Inc. is a hazardous waste generator operating under the 90-day generator accumulation rule. The facility has applied for and was granted a Hazardous Waste Producer Permit to Operator by the VCDEH. Under this permit, the facility generates, accumulates, and manifests for off-site disposal or recycle various solvents and/or mixed oils. The facility has received numerous NOVs since 1983 for storage, improper manifesting, lack of a contingency plan, and improper disposal to ground of solvent and mixed waste oils. The DTSC has no record indicating that the facility is a TSDF or that the facility is permitted under AB 1772 for tiered permitting including PBR, conditional authorization or conditional exemption.

5.4.2 Wastewater Discharge

Deardorff has an industrial wastewater discharge permit issued by the City of Oxnard, Source Control Programs. No NOVs were identified in Deardorff's wastewater discharge file.

5.4.3 Underground Storage Tanks (USTs)

Deardorff presently operates two underground fuel tanks. The largest tank is registered as a 12,000 gallon premium unleaded motor vehicle fuel tank. The smaller tank is registered as a 6,000 gallon regular unleaded motor vehicle fuel tank. Both tanks are single-walled, unlined, and constructed of carbon steel. Tank piping is suction only. The tanks are monitored continuously by a vadose vapor probe system. No leakage or spills have been recorded.

Additional information in the file indicates that the perched zone lies approximately 7.5 feet below ground surface and has a TDS>1000 mg/L. The nearest pumping groundwater well is Well IN/22W-3R1 owned by Oxnard Frozen Foods.

5.4.4 Air Emissions

Although the site owns and operates two underground fuel storage tanks and dispensing islands, the VCAPCD has no record of a permit for either the tanks or the Phase I/II vapor control systems.

5.4.5 Hazardous Materials

No information existed in the VCDEH on Deardorff's Hazardous Materials Registration or California Business Plan.

5.5 Boskovich Corp.

No files existed at VCDEH, DTSC, the City of Oxnard or VCAPCD on this property.

5.6 City of Oxnard Vehicle Maintenance Facility

5.6.1 Solid/Hazardous Waste

The City of Oxnard Vehicle Maintenance Facility (VMF) is a hazardous waste generator operating under the 90-day generator accumulation rule. VMF has applied for and was granted a Hazardous Waste Producer Permit to Operate. Under this permit, VMF generates, accumulates, and manifests for off-site disposal or recycle various solvents, paint wastes, and mixed oils. The DTSC has no record indicating that the facility is a TSDF or that the facility is permitted under AB 1772 for tiered permitting PBR, conditional authorization or conditional exemption.

The VCDEH has issued numerous notices of violations since 1990 citing inappropriate or lack of drum labelling, no contingency plan, no hazardous waste training program, no solvent/oil segregation, release of solvents and oils to the ground, and inadequate roofing for the 90-day accumulation area.

5.6.2 Wastewater Discharge

VMF has an industrial wastewater discharge permit issued by the City of Oxnard, Source Control Programs. NOV information could not be ascertained.

5.6.3 Underground Storage Tanks (USTs)

The City of Oxnard VMF operates four underground fuel tanks. These include a 12,000 gallon regular unleaded gasoline tank, a 10,000 gallon regular unleaded gasoline tank, a 5,000 gallon diesel fuel tank, and a 550 gallon waste oil tank. The three fuel tanks are single-walled, unlined, and constructed of carbon steel. Corrosion protection varies from no protection for the 5,000 gallon diesel to fiberglass reinforced plastic lining for the 12,000 gallon gasoline tank and cathodic protection for the 10,000 gallon gasoline tank. All fuel tanks are monitored by a vadose zone probe system. In 1994 the VCDEH issued a warning notice to the city stating that the vadose zone probe system was inadequate as a vapor monitoring system. The warning further stated that the system was designed for direct liquid contact which would dissolve the wire insulation on the detector subsequently activating an audible and visual alarm. The VCDEH requested that the system be replaced or upgraded.

The 550 gallon used oil tank is single-walled, unlined, and constructed of carbon steel. The tank has no corrosion protection and monitoring is by tank inventory.

In 1993 the piping to one of the gasoline tanks failed. The City of Oxnard hired Fugro-McClellen to investigate and remediate the spill. Records indicate that the line was repaired and that contaminated soils (approximately 700 yd^3) are being bioremediated. Groundwater sampling (7 quarters) indicate that total petroleum hydrocarbons (TPH), benzene, ethyl benzene, toluene, xylene (BETX), and total lead are below detectable levels. The consultant has determined that the leak did not impact either the perch zone or the deep water aquifer at 120 feet below ground surface.

5.6.4 Air Emissions

The City of Oxnard VMF has two air emission permits to operate. Permit 5598 authorizes VMF to operate two underground gasoline storage tanks and Phase I/II vapor control systems. Permitted emissions include reactive organic compounds at a rate not to exceed .27 tons/year. Permit 0855 authorizes VMF to operate an automobile refinishing and metal parts cutting facility consisting of a Bleekers Brothers spray booth with low pressure or electrostatic spray guns. Permitted emissions include reactive organic compounds at a rate not to exceed 3.19 tons/year.

5.6.5 Hazardous Materials

No information existed at VCDEH on VMF's hazardous materials registration or California Business Plan. Information gleaned from other agencies indicate that the City stores considerable amounts of paints, solvents, cleaners, fuels, oils and lubricants.

5.7 Gold Coast Steel (formerly J&S Engineering)

Gold Coast Steel has recently (within the last 2 months) purchased the property previously operated by J&S Engineering. Prior to purchase the property was vacant for approximately six months. No records exist on Gold Coast Steel at any of the regulatory agencies interviewed. The following represents information on J&S Engineering.

5.7.1 Solid/Hazardous Waste

Although it appears that J&S Engineering was a generator of solid/hazardous waste, no records exist at the VCDEH or DTSC that would indicate J&S Engineering as either a generator of solid/ hazardous waste or as a TSDF.

5.7.2 Wastewater Discharge

Although it appears that J&S Engineering discharged industrial wastewaters to the City of Oxnard, no records exist indicating submittal of either an industrial user baseline monitoring report or an application for an industrial wastewater discharge permit.

5.7.3 Underground Storage Tanks (USTs)

J&S Engineering operated a 1,000 gallon diesel tank. The tank was manufactured in 1960 by Buehler Tank and Welding and was single-walled, carbon steel constructed. The tank was unlined and had no corrosion protection. In August and September 1987, the tank was excavated and removed from service. The condition of the tank was identified as extremely poor with numerous holes. J&S Engineering contracted Holquin & Associates, a geotechnical consultant, to remediate the fuel spill. Remediation included sampling and analysis of the surrounding soils and shallow groundwater. Approximately 150 yd^3 of contaminated soils ($\approx$38 ppm on a gasoline fingerprint analysis) were excavated and windrowed under the approval of the VCDEH and VCAPCD. Cleanup was to $<$10 ppm gasoline and $<$100 ppm diesel per the LUFT manual. Following aeration, the soil was replaced into the hole, clean fill was added to bring the level to grade and the soil compacted to 90% compaction. No groundwater remediation was necessary as sampling identified no detectable concentrations of TPH, BETX and the soluble lead concentration was 5 x $<$ the maximum contaminant level (MCL) for lead.

The VCDEH issued a letter dated July 6, 1989, indicating that all appropriate response actions have been completed and that the spill was considered fully remediated.

5.7.4 Air Emissions

Although J&S Engineering previously owned and operated an underground fuel storage tank and dispensing island, the VCAPCD has no record of a permit for either the tank or the Phase I/II vapor control system.

5.7.5 Hazardous Materials

No information existed at the VCDEH indicating that J&S Engineering had made an application for hazardous materials registration or that a California Business Plan had been developed and submitted per AB2185-87.

6.0 SUMMARY OF FINDINGS

6.1 Geology/Hydrogeology

The Oxnard facility lies over unconsolidated sediments of the Oxnard Plain which consists of sands, silts, and clays. A shallow perched groundwater zone is encountered at a depth of 5 to 10 feet; groundwater flow direction is to the southwest. Water from this shallow zone is not used for any purpose. At a depth of approximately 120 ft., lies a potable aquifer that is separated from the shallow perched zone by clay units.

6.2 Off-Site Influences

Data gathering efforts from regulatory agencies were conducted to obtain information on surrounding properties and to determine potential environmental impacts on the Oxnard facility from off-site sources. This review of regulatory agency records showed that remedial activities in response to leaking USTs were conducted at two adjacent properties. Remediation at the Gold Coast Steel property has been completed, and remediation at the City of Oxnard Maintenance Yard is in progress. Records also indicated that degradation of the shallow groundwater system under these sites did not occur. There were no other documented environmental problems at the surrounding properties.

6.3 On-Site Areas of Concern

"Areas of concern" are locations at the facility that have documented historical contamination, suspected historical contamination, or a potential for contaminant release from historical or current operations. Areas of concern are summarized in Table 6-1

Table 6-1. Oxnard Facility - Areas of Concern

Area of Concern	Location	Potential Contaminants
Allis-Chalmers pit	Beneath Building 6	Metals, unknowns
Trench/sump and oil collection system	Building 6	Metals, hydraulic oil, PCBs
Bioremediation area	East of Building 6	Hydraulic oil, PCBs
PCB soil area	East of Building 6	PCBs
PCE soil gas area	East side of facility	PCE
PCE soil gas area	North side of facility	PCE
Oil collection system	Building 5	Metals, hydraulic oil, PCBs
Tank farm	North of Building 6	Metals, hydraulic oil, PCBs
Abandoned diesel UST	Outside of south side of Building 4	Diesel fuel
PCB soil area	East of the boneyard	PCBs
Boneyard	Northwest corner of the facility	PCBs, metals
Dirt road	West side of facility and east of the boneyard	Misc. oils, PCBs
Former TCA above ground storage tank (AGST)	Southwest corner of Building 3	TCA
Metal cuttings in recycling bins	West side of Building 2	Metals, misc. oils
Used oil filter storage area	West side of Building 2	Metals, misc. oils
Metal slag on ground	West of dock next to Building 2	Metals
Loading dock	Outside of Southwest corner of Building 2	Organics, hydraulic oils, unknowns
Metallurgical laboratory	South portion of Building 2	Metals
Cyclone and baghouse	Buildings 4 and 5	Metals
HVAC duct work	Building 1	Asbestos
Vault area	Building 1	Asbestos

6.3.1 Basis for Areas of Concern

Following is a description of the evidence that was used to select the areas of concern listed in Table 6-1.

- Allis-Chalmers Pit Area

A 1973 aerial photograph (Appendix D) of the site shows a dark ring on the east side of Building 5 in the vicinity where the Allis-Chalmers Pit was located.

In 1982 Buena Engineers drilled three borings related to the foundation work during the construction of Building 6. Trash and debris were noted in the top 5 feet of boring No. 1and are believed to be part of a foundry cast disposal pit used by Allis-Chalmers.

A 1988 interoffice memorandum from the Roy F. Weston Company notes that a former pit/dump area was observed east of Building 5 in the vicinity of the current Building 6. This area was noted to have received sand casts prior to the construction of Building 6.

- Trench/Sump and Oil Collection System in Building 6

Piping, trenches, and a sump comprise a hydraulic oil collection system beneath the floor of Building 6. Fluid is drained toward the sump where it is pumped to the tank farm for treatment. The potential for leakage from the concrete trench, concrete sump, and piping system make this an area of concern.

- Bioremediation Area

A known spill of hydraulic oil (verified by EG&G) was removed, bioremediated, and returned to the spill site. This action was completed in April/May of 1994.

- PCB Soil Detections

In 1988, Rockwell collected soil samples from the boneyard, east of the boneyard, and east of Building 6. Concentrations of PCBs ranged nondetect to 221 ppm in these areas.

- PCE Soil Gas Detections

A 1989 EBASCO, Inc. soil gas survey detected PCE in two areas at the Oxnard facility. One area was near the northern portion of the facility, and the other was near the east boundary of the facility.

- Oil Collection System in Building 5

Building 5 contains a hydraulic oil collection system similar to Building 6. All fluids are drained to the cellar beneath the 3500-ton press, which are then pumped to the tank farm for treatment. Potential for leaks in the concrete cellar and the piping system make this an area of concern.

- Abandoned Diesel UST

Underground storage tanks have a potential for leakage, making this an area of concern.

- Boneyard

PCBs were detected in soil samples from this area, and visible oil-stained soil was noted during the PE site tour.

- Former Dirt Road

The Weston memorandum indicates that the road on the west side of the facility was routinely sprayed with oil to minimize dust and that the road running north of Building 4 had several small areas that appeared to have oil dumped on them.

- Former TCA Storage Tank

The Weston memorandum reports the historic storage of a 110-gallon above-ground tank of TCA and three 55-gallon drums of TCA in Building 3 (verified by EG&G personnel). Because there was no secondary containment for the tank or drums, this is an area of concern.

- Metal Cuttings in Recycling Bins

The Weston memorandum reports that metal cuttings coated with cutting oils from the saw shop were drained and then placed in recycling bins on the dock west of Building 2. The collected oil subsequently leaked through the recycling bin.

- Used Oil Filter Storage Area

Used oil filters are drained of free flowing oil and stored in 55-gallon drums on the west side of Building 2. Because the drums showed signs of deterioration, there is a potential for oil to be released to the environment.

- Metal Slag on Ground

A piece of metal slag on the ground west of the loading dock was noted during the site inspection. There is a potential for other materials to have been deposited here during past operations.

- Loading Dock

This is the loading/unloading area for all materials entering or leaving the facility. There is a potential for historical spills at this location.

- Metallurgical Laboratory

EG&G personnel verified that the metal piping from the sink in the Metallurgical Laboratory was corroded because acids were historically dumped down the sink. During the site inspection, it was noted the lines beneath the sink had been replaced with plastic piping.

- Cyclone and Baghouse

Metal fines are generated in the grinding shop and from the wheelabrators in Buildings 4 and 5. The metal fines from the grinding shop are collected by a cyclone, and fines from the wheelabrator are collected by a baghouse unit. Metal fines were noted between Buildings 4 and 5 during the site inspection.

- ACM

Potential ACM in the HVAC system and in the walls of the vault in Building 1 was noted during the site inspection.

7.0 RECOMMENDATIONS

This Phase I ESA identifies areas of concerns that warrant a Phase II ESA intrusive investigation. A drilling and sampling program designed to investigate the areas of concern is recommended. Analyses of representative soil, groundwater, and suspected ACM samples will be used to determine if environmental problems exist at the Oxnard Facility. The analytical program will focus on contaminants that have been or could potentially be released to the environment from past and current on-site operations. Analyses of soil and groundwater samples should include metals, petroleum hydrocarbons, PCBs, and chlorinated solvents.

The first step in the Phase II Environmental Site Assessment will be the preparation of a Sampling and Analysis Plan. Particulars of the Phase II investigation will be specified in the Sampling and Analysis Plan. This plan will designate sampling locations, rationale, well construction methods, sampling and analytical procedures, and the documentation protocol to be used. The Sampling and Analysis Plan will establish quality assurance requirements to ensure that all samples are representative of their original environment and that methods of collection and analyses result in scientifically valid data of known precision and accuracy.

8.0 REFERENCES

The following summarizes the references used to prepare this Phase I ESA:

1. Koch, D. G. "Preliminary Evaluation Trip Report," July, 1994.

2. Noronha, Cliff. "DOE Oxnard Facility Trip Report," Booz. Allen & Hamilton/Belfort, June 8, 1994.

3. "Final Report, Soil Gas Investigation at the Rockwell Oxnard Facility, Oxnard, California," EBASCO Services Incorporated, Newport, California, September 27, 1989.

4. "Tier Two Emergency and Hazardous Chemical Inventory," U.S. DOE, Oxnard, California, 1989-1994.

5. "Toxic Chemical Release Inventory Forms," U.S. DOE, Oxnard, California, 1987-1993.

Appendix A

Environmental Site Assessment
Preliminary Evaluation
Trip Report

(July 28, 1994)

Oxnard Facility Trip Report

1.0 INTRODUCTION

On June 8, 1994, a site visit was conducted at the EG&G Rocky Flats Oxnard Facility. The primary purpose of the visit was to evaluate the potential presence of contamination on the property from current and/or historical uses, to interview key plant personnel, and to request additional EG&G furnished information.

The site visit consisted of a plant-wide tour, including a photo investigation of the underground trench beneath the forging presses, and an exit meeting. This site visit constituted a preliminary evaluation at a screening level only and should not be construed as a Phase I Environmental Site Assessment satisfying "due diligence" requirements.

The participants at the site visit included representatives from the U.S. Department of Energy, RUST Geotech Inc., the Oxnard facility and Booz•Allen & Hamilton. Individuals, personnel titles, organizations and phone numbers follow:

Holly Dumas	EG&G Environmental Engineer	Oxnard Facility	(805) 486-4881
Rick Dumas	EG&G Support Operations Manager	Oxnard Facility	(805) 486-4881
Carl Jacobson	RUST Program Manager	RUST Geotech Inc.	(303) 248-6568
Donald Koch	RUST Environmental Engineer	RUST Geotech Inc.	(303) 248-6594
Ron Kowalewski	DOE-HQ Project Manager	DOE-HQ (EM-451)	(301) 903-7652
John Lyttle	RUST Program Development Manager	RUST Geotech Inc.	(303) 248-6395
Cliff Noronha	Booz•Allen & Hamilton Consultant	Booz Allen/Belfort	(301) 916-7207
Joe Virgona	DOE-GJPO Project Manager	DOE-GJPO	(303) 248-6006

2.0 OWNERSHIP AND SITE LOCATION

The Oxnard Plant is a metalworking (forging, machining, welding, cutting, grinding, wheelabrating, and painting) facility. The facility is owned by the U.S. Department of Energy (DOE) and is operated by EG&G Rocky Flats.

The Oxnard facility is located at 1235 East Wooley Road, Oxnard, California 93030-7330 (Figure 1). The facility is located in an industrial park and is bordered by industrial maintenance, manufacturing, and agricultural packaging facilities. The city of Oxnard operates a vehicle maintenance garage and trash receptacle storage yard on Pacific Avenue to the East. Deardorf-Jackson and Boskovich are fruit packers located on Mountain View Avenue to the Northwest and Northeast, respectively. Del Manufacturing, a subcontractor to the Department of Defense, is located on the Southwest. A steel fabricator owned by Gold Coast Steel is located on the Northwest. To the South, across Wooley Road, Told Corporation owns property which was previously used as farmland. This property is presently being marketed for commercial development (Figure 2).

The facility, occupying 13.75 acres, is comprised of seven buildings (approximately 86,000 square feet of covered floor space). The seven buildings include:

Building #1	Administrative Offices
Building #2	Machine Shop, Engineering, Quality Control, Metallurgical Laboratory, Production Control Office

Building #3	Saw Shop
Building #4	Grinding Shop
Building #5	Press Shop, Wheelabrator Room, Dye Penetrant Room
Building #6	Forge Shop
Building #7	Tank Farm/Lubrication Stores

Each building is described in Section 3.0, Site Description and Characterization.

3.0 SITE DESCRIPTION AND CHARACTERIZATION

The site description and characterization subsections are organized by building number. In addition to the buildings, the stockyard and boneyard are also described.

3.1 Administration Offices (Building #1)

The Administration Offices house technical and administrative staff, a conference room, Human Resources Services, and reception area. Hazardous substances and wastes are neither stored, manufactured, processed, or otherwise used in the building. The building may contain asbestos containing materials (ACM), including: vinyl asbestos tile/mastic, heating ventilation and air conditioning (HVAC) wrapping, roof tiles, and ACM walls in the plant vault.

3.2 Machine Shop (Building #2)

Building #2 houses shipping and receiving, the production, planning, and control office, the 90-day hazardous waste generator accumulation area, the maintenance office, stock room, electrical maintenance room, lunch area, storage area, QA office, machining floor, metallurgical laboratory, and Engineering/Computer Assisted Drafting. Although not housed in Building #2, the loading dock and fabrication shop are attached to the west side of the building. The building may contain ACM, including: vinyl asbestos tile/mastic, HVAC wrapping, and roof tiles.

The 90-day generator accumulation area is operated in accordance with 40 CFR 262.34. The area is curbed and fenced and stores acids from the Metallurgical Lab, spent synthetic coolants/lubricating oils from the machine shop, and various aerosol paint cans and paint wastes from several plant-wide locations. Waste is shipped off-site to Rollins Environmental, Deer Park, Texas, the Oil Process Co. (OPC), Los Angeles, California, a subsidiary of Rollins Environmental, and Petroleum Recycling Corporation. The staging area for off-site pick-up is the south end of the loading dock. Although no known spills have been recorded, the south loading dock area is suspect and warrants further investigation.

The fabrication shop contains a cold solvent degreasing tank that is owned by the Oxnard facility and was previously managed (drained and refilled periodically) by Safety Kleen of California. The solvent used by Safety Kleen is believed to have been a Stoddard agent. The tank is not in service due to a leak and is scheduled for off-site disposal. The flooring immediately beneath the tank showed no sign of staining; however, the area warrants further investigation. The plant has purchased and is using a parts washer that uses a water-based detergent called Simple Green™.

Used oil filters are drained of free flowing oil and then stored in 55 gallon drums located along the west outside wall of the fabrication shop. These filters are sent to Petroleum Recycling Corporation (PRC), Signal Hill, California, for recycling. Historically, Oxnard has also used a company called Black Gold (owner and location unknown). The area where these drums are stored shows no signs of staining; however, the drums were showing signs of deterioration. This area warrants further investigation.

The Metallurgical Lab uses various acids for destructive testing (acid etching of fabricated metal components). Acids were historically sent to the sink drain, which contained an inline calcium carbonate neutralization system upstream of the sewer outfall. This elementary neutralization process was discontinued due to deterioration of the wastewater transfer lines. Known leaks have been recorded in the area surrounding the deteriorated lines and warrants further investigation.

The machining floor contains various lathes, drill presses, milling, and tooling machines, and an optical fabrication inspection station. Many of these machines use two chemical substances that result in two waste streams. These include Mobil lubricating oil and a synthetic coolant (hexylene glycol). Minor leaks and preventative maintenance on the machining equipment result in spent lubricating oils which are collected and sent to the 90-day generator accumulation area for off-site disposal. Spent synthetic coolant generated when machine coolant becomes biologically contaminated, is drained into an appropriate storage container and sent to the 90-day generator accumulation area for off-site disposal. The machining floor showed no signs of spills or leaks.

3.3 Saw Shop (Building #3)

The saw shop houses various band and utility saws used to saw off the initial billets for forging and machining. Historically, Building #3 housed a 110-gallon capacity tank and three 55-gallon drums of 111-trichloroethane (TCA) for die cleaning. Used or spent TCA was placed into 55-gallon drums, stored in the 90-day generator accumulation area and sent to an off-site recycler. The Weston report states that the tank area had no secondary containment. This report further states that the tank and drums were removed in August 1989. This area was not investigated during the trip, as it was occupied by supplies and equipment. This area is suspect and warrants further investigation.

3.4 Grinding Shop (Building #4)

The grinding shop houses numerous grinding stations with a vacuum collection system. This collection system is fitted with an air abatement particle separator (cyclone). This unit generates a very fine metal dust, which is collected in a drum beneath the cyclone. This metallic dust is a hazardous waste due to the presence of chromium. The dust, following containerization, is stored at the 90-day generator accumulation area and sent to Rollins for off-site solidification/stabilization and land disposal. No signs of spillage (i.e., presence of fines) were noted in the area.

3.5 Press Shop (Building #5)

The press shop houses a 1600-ton mechanical press, a 3500-ton hydraulic press, and three natural gas-fired furnaces. Beneath each press, in a press cellar pit, oils (either leaked Shell Tellus-100 or Tellus-46) and metal fines accumulate. Spent oils from the

1600-ton press and/or spilled oils beneath the unit are vacuum pumped, containerized, and stored in the 90-day generator accumulation area for off-site recycle. Oils in the 3500-ton press are self-filtered. The filters are drained, containerized, and sent to the west wall of the saw shop for off-site recycle with PRC. Oils from the pit beneath the unit are vacuum pumped and sent to the oily wastewater treatment plant located at the tank farm and lube stores (Building #7). Because of the age and condition of the pits, no attempt was made to determine pit integrity. Plant personnel indicate that groundwater intrusion into the pits may have occurred historically during high groundwater periods. These pits and the soil interface beneath warrant further investigation.

Located on the west side of the press shop is the Wheelabrator shop which houses four Wheelabrators. The Wheelabrators are enclosed rotating drums with small metalic balls used to polish metal components. Operationally, these machines create metallic fines that must be captured and properly disposed. The air emission/abatement system consists of three bag house structures and stacks, each servicing two Wheelabrators. The bag house dust (EPA D007) is collected in drum containers and sent to the 90-day generator accumulation area prior to off-site solidification/stabilization by Rollins Environmental. Bags are replaced when breakthrough occurs and are containerized for off-site disposal. No signs of spillage (i.e. presence of fines) were noted in the area.

3.6 Forge Shop (Building #6)

The forge shop houses 6 High Energy Rate Forging (HERF) forging hammers with 40,000 ft. lb. maximum energy, 3 HERF forging hammers with 100,000 ft. lb. maximum energy rating, 4 HERF forging hammers with 225,000 ft. lb. maximum energy rating and 3 HERF forging hammers with 300,000 ft. lb. maximum energy rating. Additionally, 13 natural gas fired furnaces and 5 mechanical trim presses are housed. The cellars of each hammer and press take the form of a large underground concrete collection trench that slopes north. This trench collects leaking oils from the large presses and is also the repository for the quench water from Buildings #5 and #6. At the northern end a sump pump is used to vacuum pump oily water to the oily wastewater treatment system located at the tank farm and building 7.

An investigation of the trench was conducted and photos were taken; however, due to time constraints, neither the integrity nor the construction of the trench could be ascertained. Photos of this trench are included as Appendix A. Similar to the press shop pits, plant personnel indicate that groundwater intrusion into the trench may have occurred historically during high groundwater levels. The trench and the soil interface beneath warrants further investigation.

3.7 Tank Farm and Lubrication Stores

The tank farm is located north of Building 6. The tank farm consists of five tanks including:

<u>Tank A</u>

- Pit effluent tank (oil and water)
- Capacity = 10,000 gallons
- 12" vertical height = 750 gallons

Tank B

- Back-up Pit effluent tank (oil and water)
- Capacity = 1,500 gallons
- 12" vertical height = 150 gallons
- Tank not in service

Tank C

- Dirty oil tank
- Capacity = 2,000 gallons
- 12" vertical height = 200 gallons

Tank D

- Cleaned oil tank
- Capacity = 3,000 gallons
- 12" vertical height = 300 gallons

Tank E

- Steam cleaner water tank (reusable)
- Capacity = 5,000 gallons
- 12" vertical height = 200 gallons

Hydraulic fluids are collected from the press pits in Building #5 and the trench in Building #6 and pumped to the tank farm (Tank A) for initial treatment (gravity separation). A full description of the oily wastewater treatment process will be provided in the Phase I report.

The tank farm is built on a concrete slab surrounded by a 3-foot high concrete berm for secondary containment. Previous consultant reports indicate no tank spills have been recorded or reported. Rainwater collects in the containment; however, its management was not determined during the trip. Historically, the western wall of the containment berm leaked at the wall/slab interface and was replaced and sealed in 1989.

Building #7 contains the oil and wastewater filtration systems. These oil and water treatment systems receive oil from Tank C and water from Tank E respectively through temporary flex hosing (no permanent piping exists between the tank farm and Building #7). Discussions with the operator, Ed Sandoval, indicate that no recorded or reported spills have occurred during hook-up, fluid transfer or detachment of the hosing, nor have any spills or overflow occurred at the treatment facilities located in Building #7.

3.8 Stockyard

The stockyard is located north of the saw shop near the western boundary of the site. The stockyard is an open air, concrete-paved storage facility that is used for the reception and storage of raw metal. No dry or liquid chemicals have been stored in this yard. The yard was not walked down during the site visit.

3.9 Bone Yard

A fenced unpaved bone yard exists in the northwest corner of the plant site. During the site visit, the bone yard contained numerous steel and poly tanks. All tanks were observed to be empty. Additionally, various pieces of scrap metal, old machinery and various assorted debris were being stored. Much of the old machinery was contaminated with oily residue and/or sludge. Several areas of petroleum or discolored soils were observed even though the yard has overgrown with weeds and grass. According to DOE-furnished documentation, the yard historically stored polychlorinated biphenyl containers or articles.

Finally, the asphalt road leading to the bone yard was originally a dirt road that may have been periodically oiled for dust control. This yard and surrounding area warrants further investigation.

4.0 MISCELLANEOUS ITEMS

4.1 Generated Wastes/Management

During the exit interview, plant personnel identified the various waste streams generated at the site and the disposition of each. The following identifies the stream's classifications and their management.

Waste Stream/Classification	Management
• Waste Acids (hydrochloric, nitric, acetic) Waste Acid Liquid, N.O.S., Corrosive Material NA1760 CA Waste #792, EPA Waste #D002	Neutralization. Rollins Environmental
• Spent Coolant Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #132, EPA Waste #D007	Incineration. Rollins Environmental
• Wheelabrator Bag House Dust Grinding shop cyclone fines Hazardous Waste Solid, N.O.S., ORM-E NA9189 CA Waste #172, EPA Waste #D007	Solidification/ stabilization Rollins Environmental
• Oil (used) Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #221	Recycled -Petroleum Recycling Corporation
• Wastewater Evaporative Concentrate Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #223	Incineration. Rollins Environmental
• Press Pit Sludge Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #223, EPA Waste #D007, D008	Incineration Rollins Environmental

• Paint Debris Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #352, EPA Waste #D007, D008	Incineration Rollins Environmental
• Paint Rinsate Hazardous Waste Liquid, N.O.S., ORM-E NA9189 CA Waste #134, EPA Waste #D007, D008	Incineration Rollins Environmental
• Press Pit Oily Water	Oily water treatment system Oxnard Facility
• Used Oil Filters	Recycled -Petroleum Recycling Corporation
• Spray Cans Compressed Gas, N.O.S. Flammable Gas UN1954 CA Waste #331, EPA Waste #D001	Incineration Rollins Environmental
• Scrap Metal	On-site Bin Storage Recycled with - SOS Metals - LA - Oxnard Recycling - Eddie Recycling - Standard Industries (carbon steel)
• Degreasing Solvent Hazardous Waste Liquid, N.O.S., ORM-E NA9189 EPA Waste #D001	Recycled Safety Kleen

4.2 Potentially Contaminated Areas

The following lists potentially contaminated areas requiring further investigation. Delineation of these potential areas resulted from previous investigations or observations made during the on-site visit (June 8, 1994).

- Asbestos inspection including bulk analysis for ACM in all buildings.
- A pit/dump area in the vicinity of Building #6 possibly containing sand casts, slag, oily residue, etc. Tierra Tech (1982) report/Weston memorandum (1988).
- Area(s) surrounding deteriorated piping from the sink drains exiting the metallurgical lab for potential pH/metals contamination.
- Loading dock (south end) for potential of spillage during off-site loading of hazardous waste.

- Flooring in the areas of the solvent degreaser (Building #2 - Fabrication shop) and previous 111 - TCA tank and drum storage (Building #3) for potential solvent/metals contamination.

- Used oil filter drum storage area for potential petroleum contamination.

- Biological remediation area west of Building #6 for solvent, petroleum, PCB, and metals contamination.

- Bone yard\discolored soils area east of the bone yard for solvent, petroleum, PCB and metals contamination. (Site visit and Rockwell 1988/89 soil samples.)

- Collection trench (Building #6) and press cellars (Building #5) containing metal shavings, hydraulic oils and quench waters.

5.0 RECOMMENDATIONS

This preliminary evaluation identifies the need to conduct a full Phase I Environmental Site Assessment (ESA) prior to any intrusive investigations, including analytical testing associated with a Phase II Site Characterization. The primary purpose of the Phase I will evaluate the potential or known presence of contamination on "real property" from current or historical uses within the legally defined property boundary. This phase will also define the level of intrusive investigations that should be performed prior to realty transfer. Previous studies appear fragmented providing insufficient information upon which to base either the quantity or location/depth of soil borings or monitoring wells or the indicator chemical(s) or chemical specific analysis to be considered.

The preparation of a Phase I and Phase II environmental assessments is recommended. The Phase I work would require 160-200 hours and would involve the following:

- Planning and Research
- Site visit including environmental agency visits
- Data evaluation
- Preparation of the ESA Report

The proposed sequence of events for the Phase I environmental assessment includes:

1. Obtain and review DOE-furnished information, including a site map showing legal property boundaries.

2. Conduct regulatory list reviews: local, state, and federal. (See #8)

3. Identify government data sources and make data requests. (See #8)

4. Review historical aerial photographs of the site and site vicinity.

5. Arrange site access and interviews through the plant and perform site and site vicinity visual surveys.

6. Visit local tax assessor's office to obtain a copy of chain-of-title information and the recorded legal site map.

7. Visit local building department to obtain copies of permitted building modifications.

8. Conduct site record reviews at the following offices, as required:

   - U.S. Environmental Protection Agency (EPA) Region IX
   - CAL-EPA, Dept. of Toxic Substances Control (Region IV, Long Beach, CA)
   - State Water Resources Control Board (UST)
   - Regional Water Quality Control Board (Region IV, Los Angeles, CA)
   - Integrated Waste Management Board
   - City of Oxnard (Wastewater Division & Water Management Division)
   - Dept. of Health (Ventura County)

9. Evaluate data

10. Prepare the draft ESA report.

11. Schedule internal report reviews, if desired by the DOE.

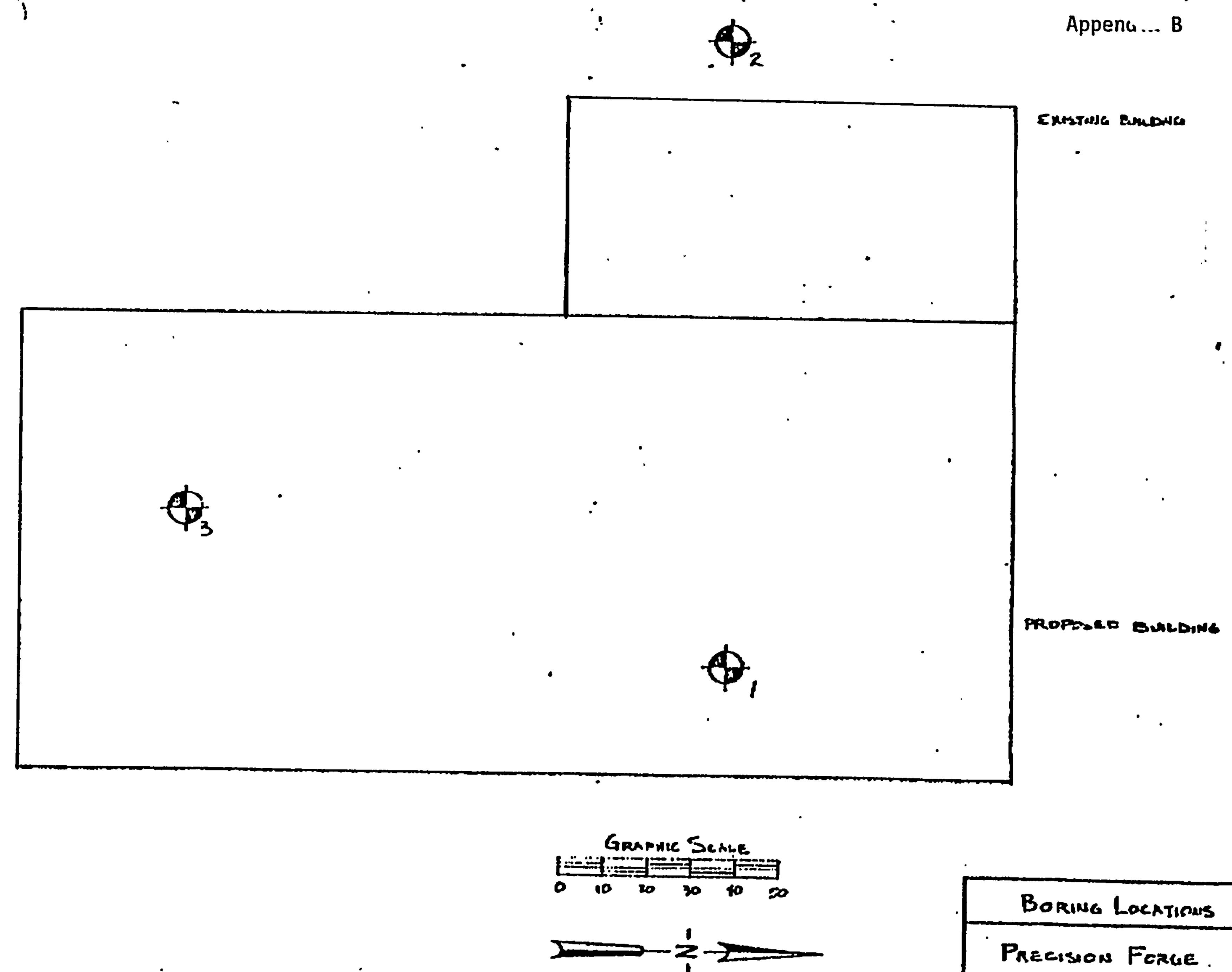
12. Submit final report to the DOE.

Appendix B

Construction Boring Logs

(Buena Engineers, Inc. 1982)

Appenu... B



BORING LOCATIONS	
PRECISION FORGE	
BUENA ENGINEERS, INC.	
DATE 9-3-82	JOB NO 8-12426-41

LOG OF BORING
for
Precision Forge

Job No. 3-12926-V1
Report No.

DATE 8-26-82 | BORING NO. 1 | LOCATION Per plan

Depth (ft)	Symbol	Core	Blows/ft	DESCRIPTION		Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS
0			36	Light brown slightly clayey silty very fine to medium grained sand	1	111.1	4.0	A1	93	Trash and debris in top 5'
			14		3	93.0	12.0		78	
5			150		5	--	17.1		--	
10			26	Grey medium to coarse grained sand with gravel	10	No Return		A2		Free Water at 8.5'
15			38		15	124.3	8.2		100	
20			46	Grey silty very fine to medium grained sand	20	118.7	12.6	A3	99	
25			18	Grey very fine grained sandy very clayey silt	25	101.6	26.4	B1	87	
30			26	A3 as above	30	105.1	25.0	A3	88	
										Total Depth = 31'

Note: The stratification lines represent the approximate boundary between soil types and the transition may be gradual

LOG OF BORING
for
Precision Forge

Job No. . B-12926-V1
Report No.

DATE 8-26-82

BORING NO. 2

LOCATION Per Plan

Depth (ft)	Symbol Core	Blows/ft	DESCRIPTION		Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS
0									
		21	Grey very fine grained sandy very clayey silt	2	100.3	23.6	B1	86	
5		21	Grey medium to coarse grained sand with gravel	5	108.5	7.3	A2	88	Free Water at 7.5'
			Silt (B1) Lens				B1		
10		45	Grey silty very fine to medium sand	10	121.3	10.5	A3	100	
15		38	A2, as above	15	118.4	16.7		96	
20		50		20	119.4	14.8	A2	97	
25									
30		50	B1 as above	25	113.9	24.7	B1	98	
									Total Depth - 35'

Note: The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

for Precision Forge | Report No. | Appendix B

.ATE 8-26-82 | BORING NO. 3 | LOCATION Per Plan

Depth (ft)	Symbol	Core	Blows/ft	DESCRIPTION		Unit Dry Wt. (pcf)	Moisture (Percent)	Soil Type	Relative Compaction (Percent)	REMARKS AND ANALYSIS
0				Light brown slightly clayey silty very fine to medium grained sand	1	95.8	11.1	A1	80	
			14	A3, as below	3	98.2	3.7	A3	82	
5			44		5	110.7	4.8		90	Free Water at 5'
10			12	Grey medium to coarse grained sand with gravel	10	96.5	29.5	A2	78	
15			26		15	118.6	12.6		96	
20			30		20	120.7	13.9		98	Total Depth = 21'

A3: Grey silty very fine to medium grained sand

Note: The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Appendix C

Summary of Hazardous Waste Streams 1989-1993

HAZARDOUS WASTE TOTALS-POUNDAGE AND PERCENTS

YEAR: 1989

WASTE STREAM	ROUTINE?	CWC	POUNDS	PERCENT	ROUTINE %
1,1,1-Trichloroethane	YES	211	2,270.4	5.74%	8.31%
PCB Contaminated dirt	NO		*8,400.0*	*21.23%*	
PCB Contaminated materials	NO		*1,900.0*	*4.80%*	
		261	10,300.0	26.03%	
Sulfuric Acid	NO	551	150.0	0.38%	
Bunker Oil	YES		*4,578.0*	*11.57%*	*16.76%*
Soluble Oil	YES		*7,940.0*	*20.06%*	*29.07%*
		221	**12,518.0**	**31.63%**	**45.84%**
Isopropyl Alcohol	NO	212	64.0	0.16%	
Deltaglaze (alcohol-base)	NO		*78.0*	*0.20%*	
Pennforge 41	NO		*431.2*	*1.09%*	
Turco Protectoil	NO		*385.0*	*0.97%*	
Pb Free Al Forge Compound	NO		*372.7*	*0.94%*	
		331	1,266.9	3.20%	
Spray cans	YES	343	250.0	0.63%	0.92%
Oil Filters	YES		*1,400.0*	*3.54%*	*5.13%*
Oil Sorbent	YES		*4,680.0*	*11.83%*	*17.14%*
		223	**6,080.0**	**15.36%**	**22.26%**
Metal Dusts	YES	172	4,600.0	11.62%	16.84%
Waterforge 1211	NO	141	484.0	1.22%	
D110 Developer	YES	132	1,531.2	3.87%	5.61%
Paint Wastes	YES	461	60.0	0.15%	0.22%

WASTE TOTALS:	39,574.5	100.00%	
ROUTINE WASTE TOTALS:	27,309.6	69.01%	100.00%

89 HAZARDOUS WASTE IN TONS: 19.787

HAZARDOUS WASTE TOTALS-POUNDAGE AND PERCENTS

YEAR: 1990

WASTE STREAM	ROUTINE?	CWC	POUNDS	PERCENT	ROUTINE %
Waste Oil	YES	221	1,950.0	10.46%	11.06%
Spray cans	YES	343	76.0	0.41%	0.43%
Miscellaneous off-spec chemicals	NO	331	416.0	2.23%	
Coolant	YES		*4,590.0*	*24.62%*	*26.03%*
Neutralized acid solution	YES		*1,325.0*	*7.11%*	*7.52%*
		132	5,915.0	31.73%	33.55%
Oil Filters	YES		*900.0*	*4.83%*	*5.10%*
Daraclean 283	YES		*1,080.0*	*5.79%*	*6.13%*
Oil Sorbent	YES		*6,330.0*	*33.96%*	*35.90%*
		223	8,310.0	44.58%	47.13%
Ammonium Hydroxide	NO	123	25.0	0.13%	
Metal Dusts	YES	172	1,200.0	6.44%	6.81%
Miscellaneous off-spec chemicals	NO	141	120.0	0.64%	
PCB Samples	NO	261	450.0	2.41%	
Paint Wastes	YES	461	180.0	0.97%	1.02%

WASTE TOTALS:	18,642.0	100.00%	
ROUTINE WASTE TOTALS:	17,631.0	94.58%	100.00%

90 HAZARDOUS WASTE IN TONS: 9.321

HAZARDOUS WASTE TOTALS-POUNDAGE AND PERCENTS

YEAR: 1991

WASTE STREAM	ROUTINE?	CWC	POUNDS	PERCENT	ROUTINE %
Waste Oil	YES	221	3,147.0	13.21%	15.28%
Spray cans	NO	343	76.0	0.32%	
Coolant	YES		*3,907.0*	*16.40%*	18.97%
Neutralized Acid solution	YES		*539.0*	*2.26%*	2.62%
		132	4,446.0	18.66%	21.59%
Non-neutralized Acid solution	YES	792	460.0	1.93%	2.23%
Oil Filters	YES		*461.0*	*1.93%*	2.24%
Oil Sorbent	YES		*943.0*	*3.96%*	4.58%
		223	1,404.0	5.89%	6.82%
Metal Dusts	YES	172	10,360.0	43.48%	50.30%
Paint Debris	NO	461	428.0	1.80%	
Pallet contaminated w/ oil	NO	223	138.0	0.58%	
Pit Sludge/Debris	NO	223	2,516.0	10.56%	
RCF Blanket contaminated w/oil	NO	223	72.0	0.30%	
Solvent	YES	213	778.0	3.27%	3.78%

WASTE TOTALS:	23,825.0	100.00%	
ROUTINE WASTE TOTALS:	**20,595.0**	**86.44%**	**100.00%**

NOTE: Routine waste information is in bold type.

91 HAZARDOUS WASTE IN TONS: 11.913

HAZARDOUS WASTE TOTALS-POUNDAGE AND PERCENTS

YEAR: 1992

WASTE STREAM	ROUTINE?	CWC	POUNDS	%	ROUTINE %
Waste Oil	**YES**	**221**	**350.0**	**3.47%**	**3.95%**
Coolant	**YES**	**132**	**1,001.0**	**9.93%**	**11.30%**
Acid solution	**YES**	**792**	**548.0**	**5.43%**	**6.18%**
Oil Sorbent	**YES**	**223**	**655.0**	**6.50%**	**7.39%**
Wastewater evap. effluent	**YES**	**223**	**1,465.0**	**14.53%**	**16.53%**
Discontinued die lubricant	NO	223	653.0	6.48%	
Oily Waste	NO	223	544.0	5.39%	
TOTAL FOR ALL CWC 223 WASTES			*3,317.0*	*32.89%*	
Metal Dusts	**YES**	**172**	**3,975.0**	**39.42%**	**44.85%**
Solvent	**YES**	**213**	**868.0**	**8.61%**	**9.79%**
Spray Paint Cans	NO		25.0	0.25%	

WASTE TOTALS:	10,084.0	100.00%	
ROUTINE WASTE TOTALS:	**8,862.0**	**87.88%**	**100.00%**

NOTE: Routine waste information is in bold type.

92 HAZARDOUS WASTE IN TONS: 5.042

HAZARDOUS WASTE TOTALS-POUNDAGE AND PERCENTS

YEAR: 1993

WASTE STREAM	ROUTINE?	CWC	POUNDS	%	ROUTINE %
Waste Oil	**YES**	**221**	**1,890.0**	**18.84%**	**23.81%**
Coolant	NO	132	454.0	4.53%	
Acid Solution	**YES**	**792**	**756.0**	**7.54%**	**9.52%**
Wastewater Evap. Effluent	**YES**	**223**	**1,811.0**	**18.06%**	**22.81%**
Oil Sorbent	NO	223	973.0	9.70%	
Pit Sludge	NO	223	170.0	1.69%	
SP400 (oily waste-outdated chem)	NO	223	375.0	3.74%	
TOTAL FOR ALL CWC 223 WASTES				*33.19%*	
Metal Dusts	**YES**	**172**	**2,442.0**	**24.35%**	**30.76%**
Solvent	**YES**	**213**	**1,039.0**	**10.36%**	**13.09%**
Paint Debris	NO		70.0	0.70%	
Spray Paint Cans	NO		50.0	0.50%	

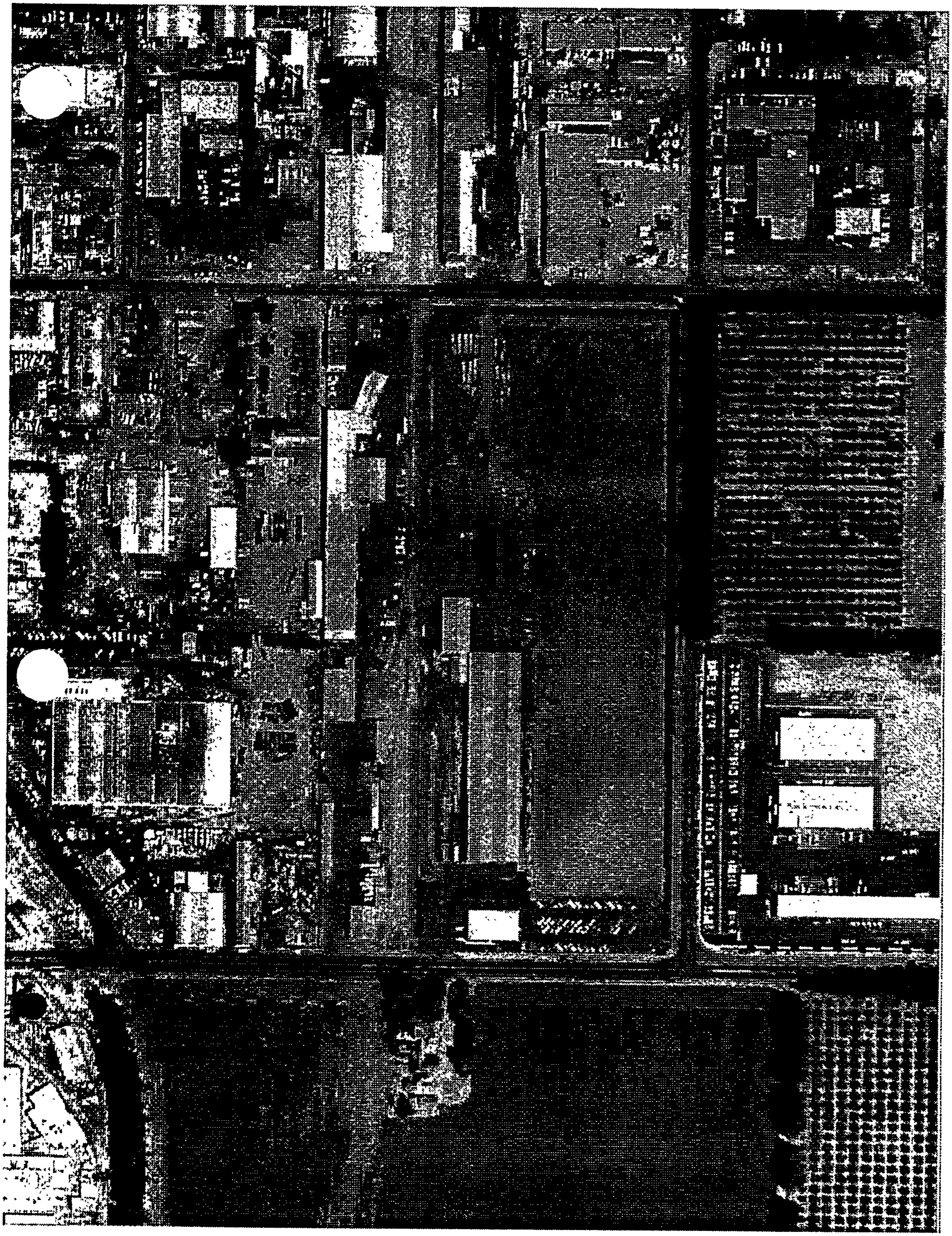
WASTE TOTALS:	10,030.0	100.00%	
ROUTINE WASTE TOTALS:	7,938.0	79.14%	100.00%

NOTE: Routine waste information is in bold type.

93 HAZARDOUS WASTE IN TONS: 5.015

Appendix D

Photo Documentation



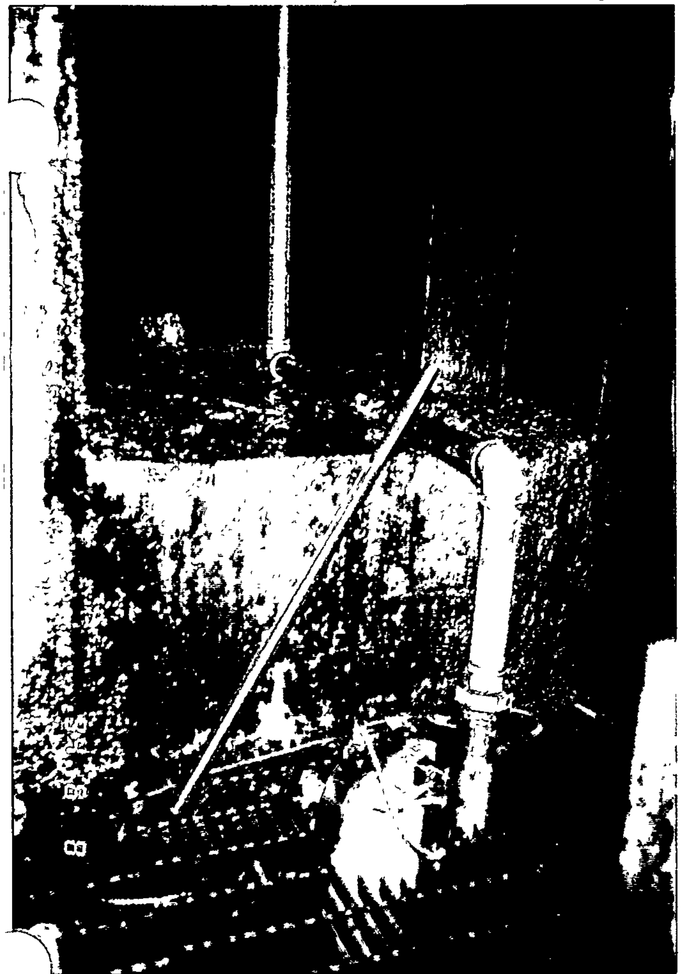
Oxnard Facility - 1973

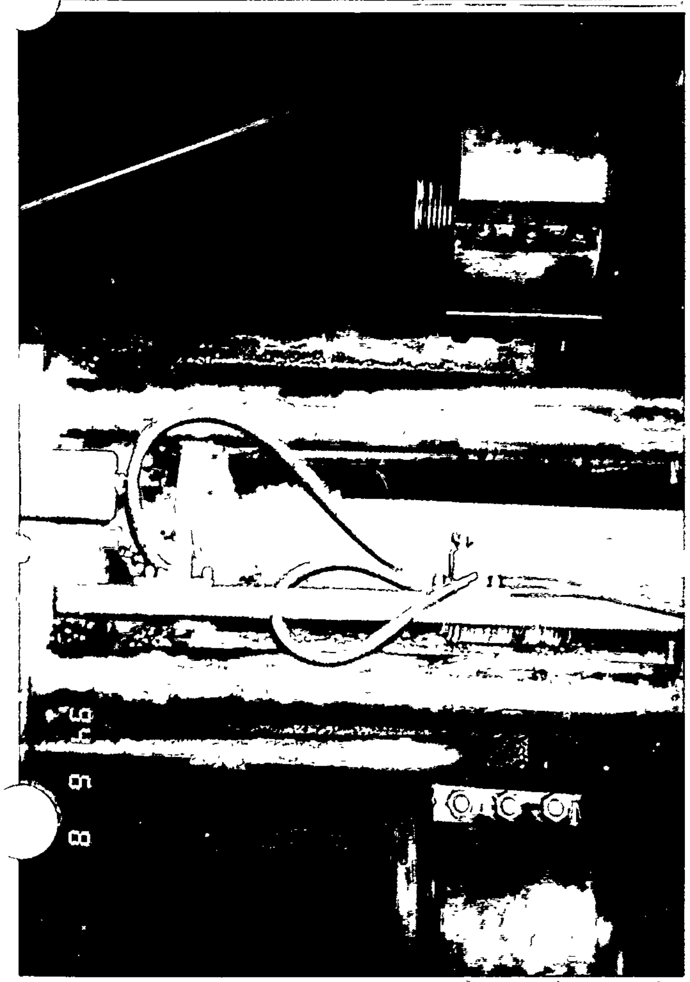
Building #5
3500 ton Press Pit
&
Pump Suction Line

Building #5
3500 ton Press Pit
Side Wall Showing
Metal Hydraulic Oil Sludge

Building #6
Forging Hammer Trench
Hydraulic Hosing
&
Hammer Dampeners

Building #6
Forging Hammer Trench
View Looking North



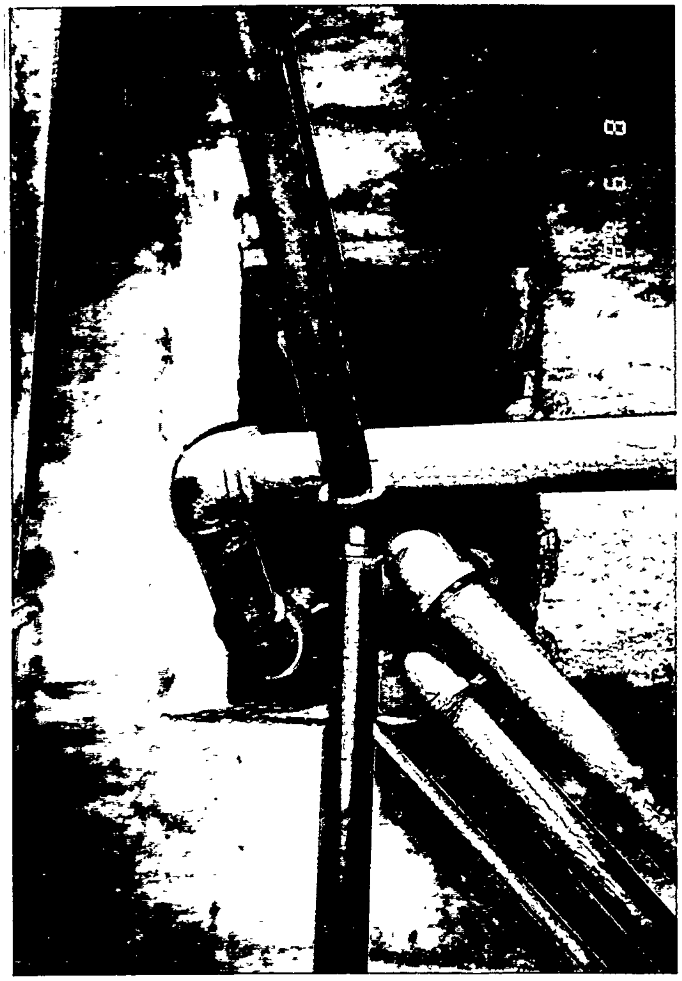


Building #6
Forging Hammer Trench
Forging Hammer Pedestal

Building #6
Forging Hammer Trench
Suction Piping to
Oil/Water Tank Farm

Building #6
Forging Hammer Trench
Oily Water Beneath
Trench Grating

Building #6
Forging Hammer Trench
View Looking North

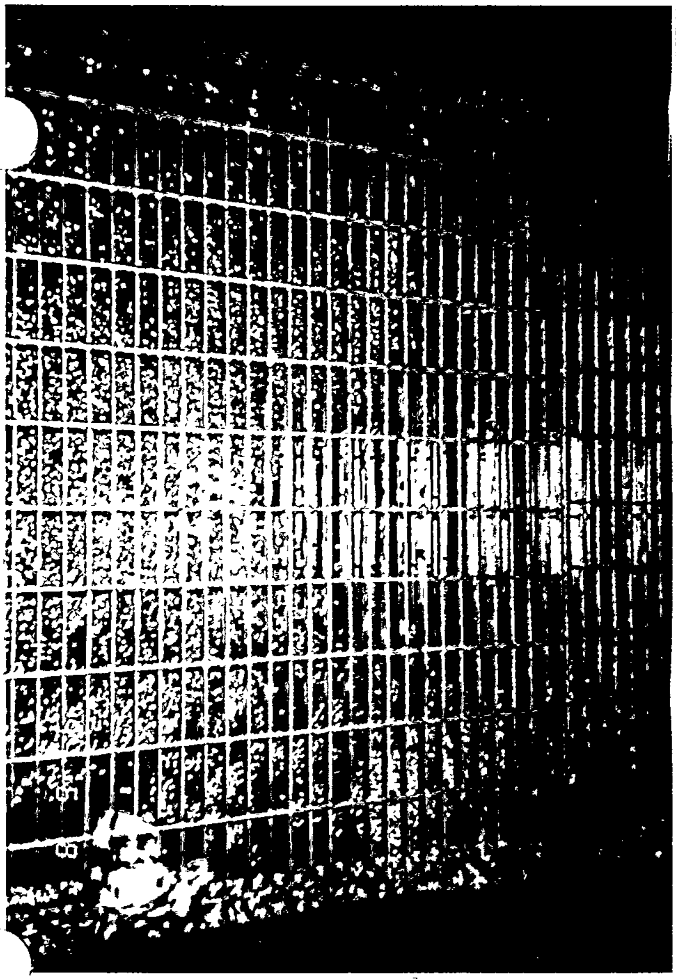



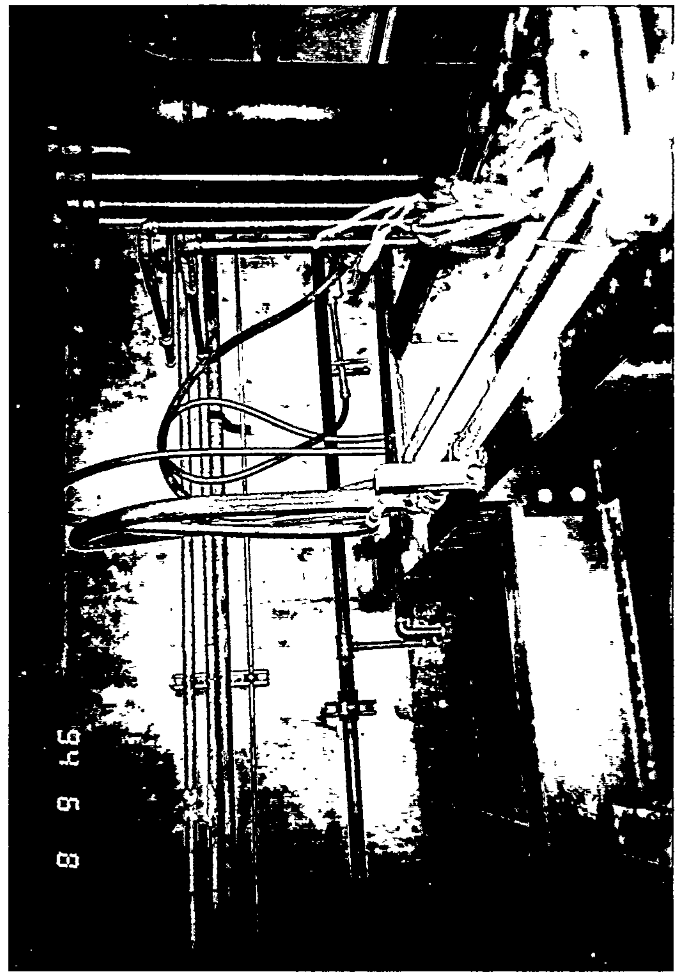
Building #6
Forging Hammer Trench
Metallic Oily Water Sludge
Beneath Grating

Building #6
Forging Hammer Trench
Hammer Dampeners
Sludge Residue
Hydraulic Hosing

Building #6
Forging Hammer Trench
Oily Metal Shavings

Building #6
Forging Hammer Trench
Pipe/Conduit Chase



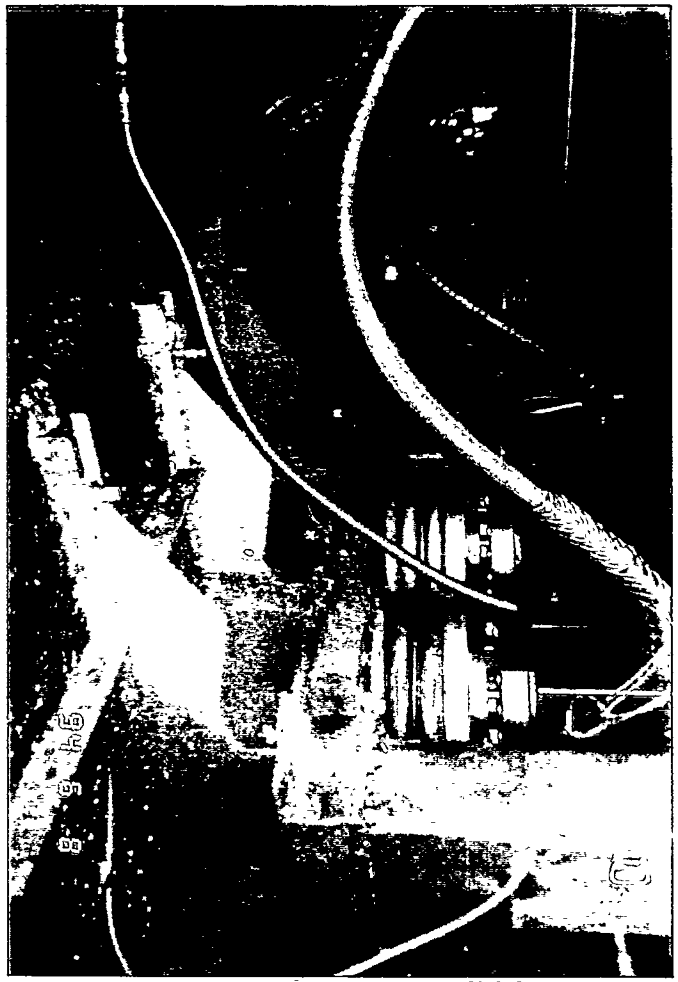


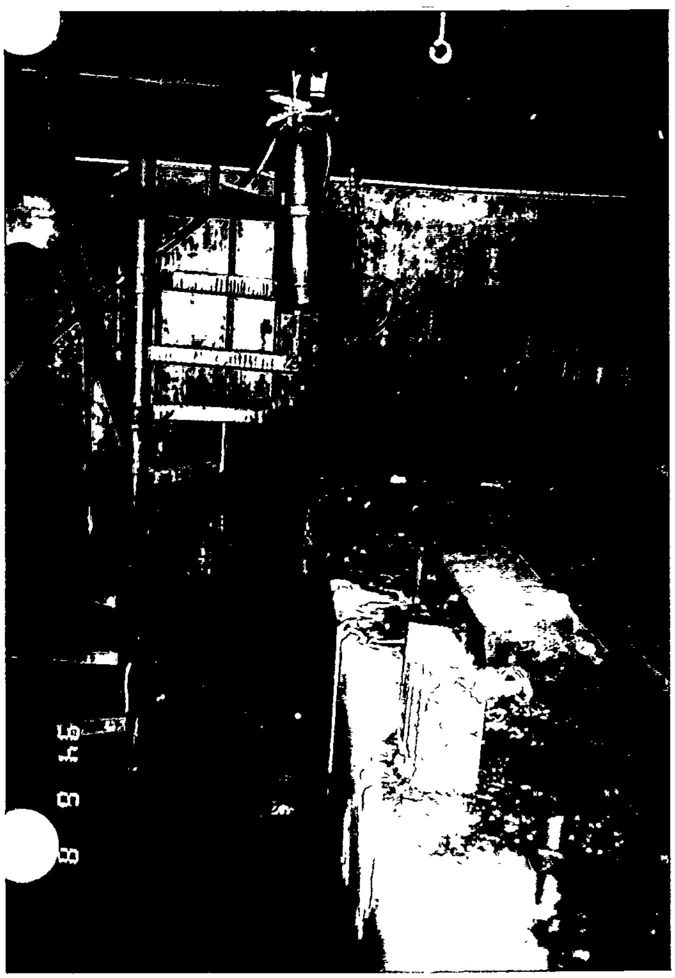
Building #6
Forging Hammer Trench
Hammer Pedestal Bench
Oily Sheen

Building #6
Forging Hammer Trench
Hammer Pedestal Base

Building #6
Forging Hammer Trench
South Stairwell Entrance
Fire Extinguisher
Forced Air Ventilation Tube

Building #6
Forging Hammer Trench
Oily Metal Shavings



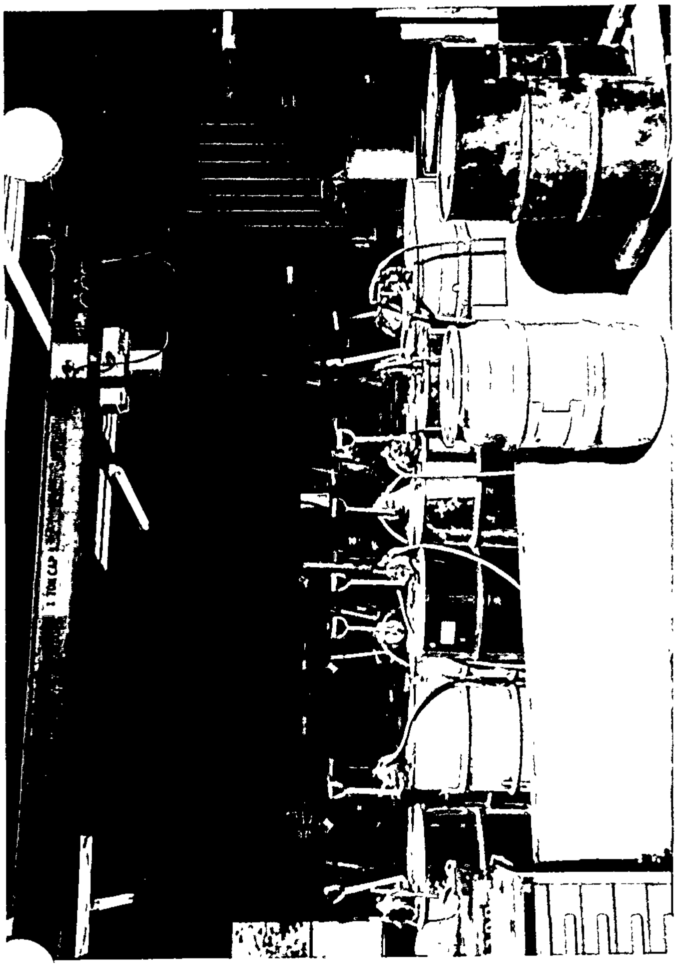


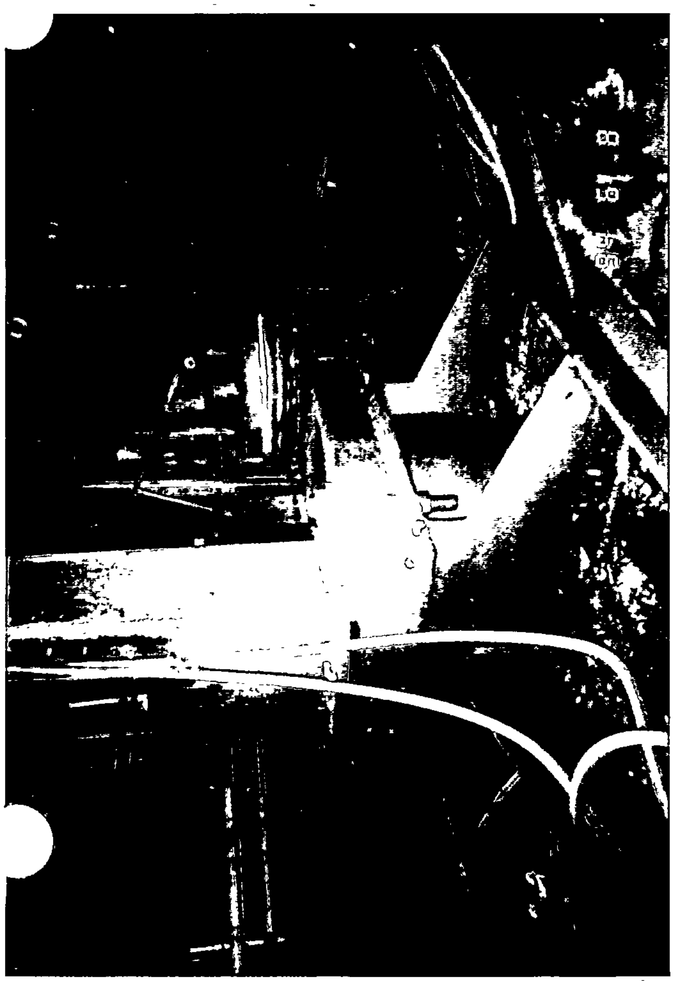
Building #7
Lubrication Stores
Oil/Water Filtration

Boneyard
Used Equipment Storage

Building #6
Forging Hammer Trench
Forging Hammer Pedestal

Building #6
Hydraulic Pump



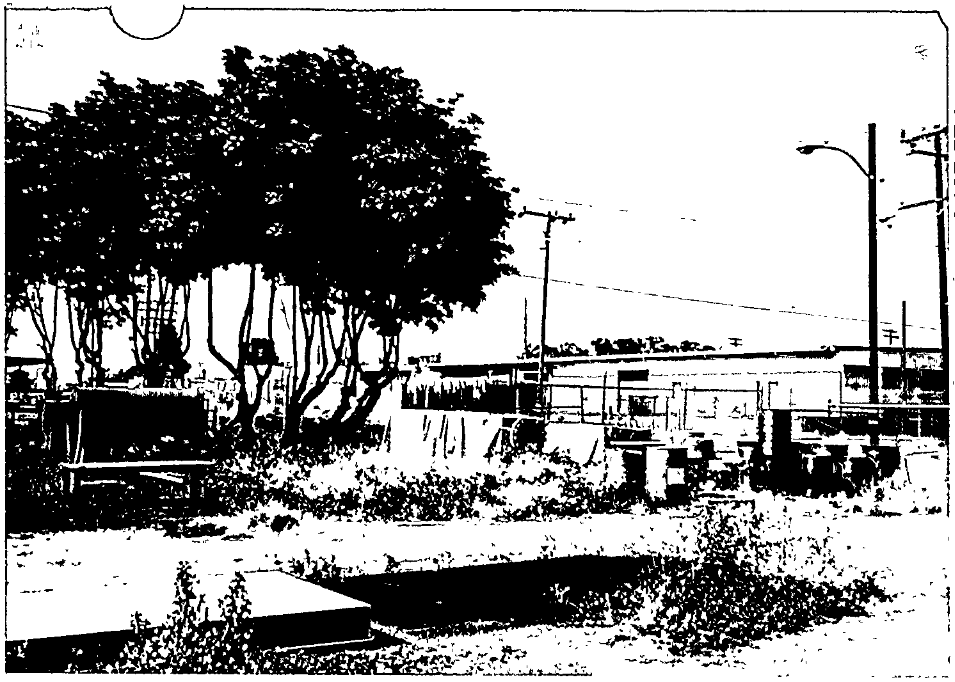



EG&G Oxnard Rocky Flats
Facility
Administration Building

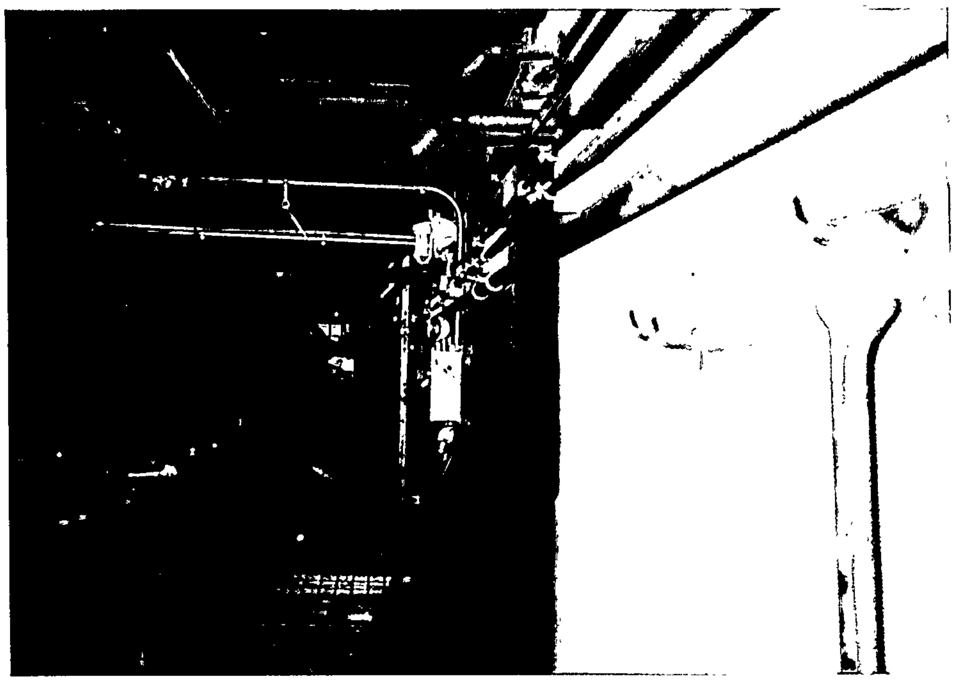
BLANK

Boneyard
Drum Storage Area

Building #6
Forging Hammer Trench
View Looking North




OXNARD FACILITY



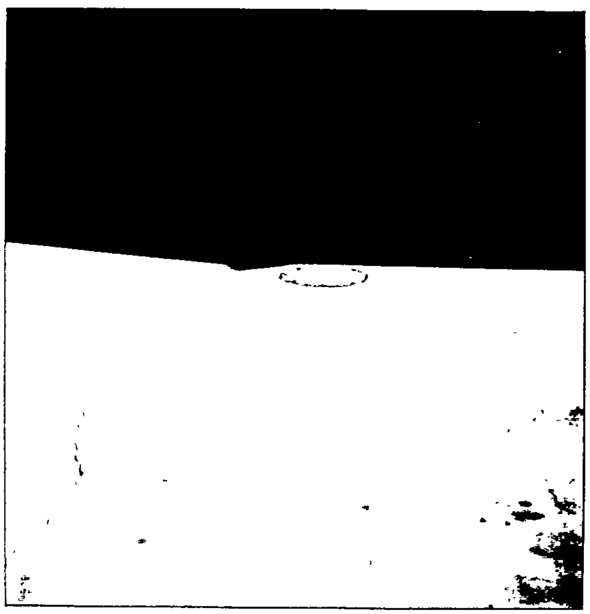
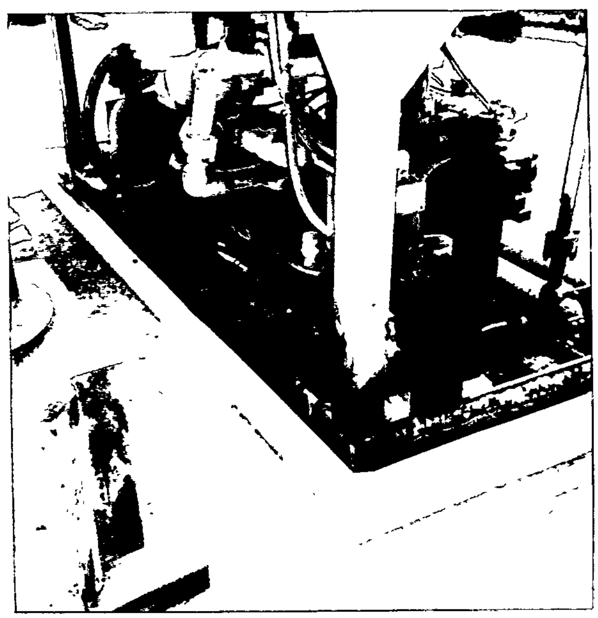
Boneyard
Equipment Storage

Boneyard
Tank/Container Storage

Underground Storage Tank
Zyglo Dye Penetrant

Boneyard
Equipment Storage
Oily Residue in Secondary
Containment Tray



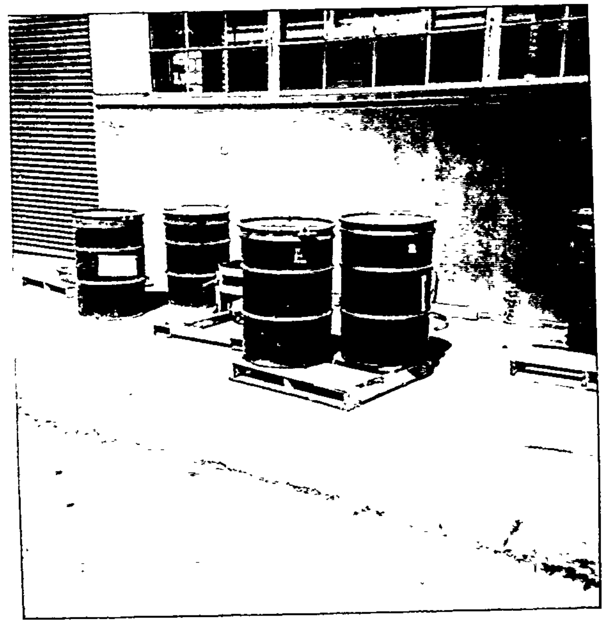
Building #6
Forging Hammer Trench
Vacuum Suction Line to O/W
Tank from North Trench Sump

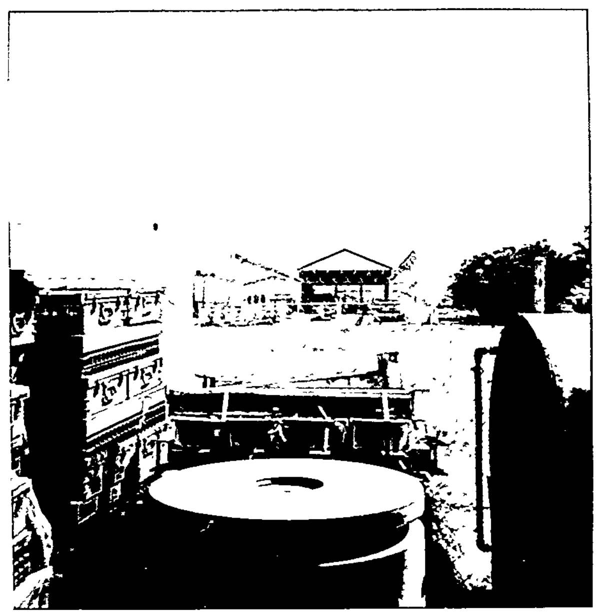
Building #2
West wall - Fabrication Bldg.
Used Oil Filter Storage

Stockyard
View Looking North

Stockyard
View Looking South

BLDG #6 CONNECTION TRENCH 2/3
BETWEEN EAST TRENCH AND
WEST (MAIN) COLLECTION TRENCH.





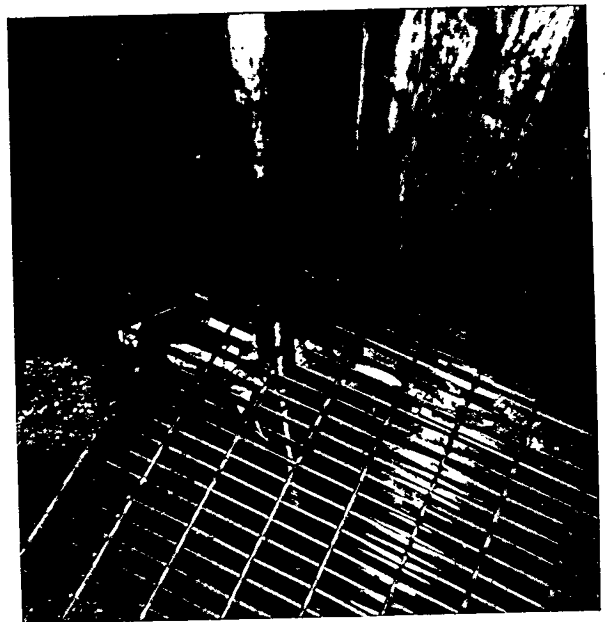
Building #6
Forging Hammer Trench
Vacuum Suction Line to O/W
Tank from North Trench
Sump

Building #6
Forging Hammer Trench
Connection Trench Between
East and West (main)
Collection Trench

Building #6
Forging Hammer Trench
Connection Trench Between
East and West (main)
Collection Trench

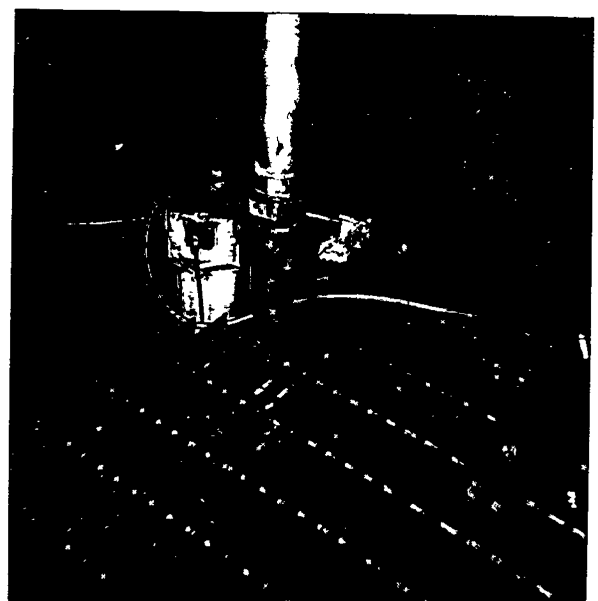
Building #5
3500 Ton Press Pit
Vacuum Suction Line to O/W Tank

HARD Piping - VACUUM SUCTION TO O/W TANK FR. Ni SUMP IN BLDG 6 WEST COLLECTION TRENCH



BLDG #6 HARD Piping - VACUUM SUCTION TO O/W TANK FM Ni SUMP IN BLDG #6 PUMP SUCTION LOC

BLDG #6 CONNECTION TRENCH 1/3 BETWEEN EAST TRENCH AND WEST (MAIN) COLLECTION TRENCH



HARD Piping - VACUUM SUCTION TO O/W TANK FM. 3500 TON PRESS CELLAR.

Underground Storage Tank
Diesel Tank

BLANK

BLANK

BLANK

Appendix E

Design As-Built Drawings
Buildings 5 & 6

GENERAL NOTES

A. GENERAL

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.

2. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE FIELD LAY-OUT OF BUILDING ELEMENTS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

3. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.

4. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

5. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 1979 EDITION OF THE UNIFORM BUILDING CODE.

6. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

   SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED.

   SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NONBEARING PARTITIONS.

   SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS, CHAMFERS, GROOVES, INSERTS, AND FOOTINGS REQUIRED FOR STAIR FRAMING.

   STAIR FRAMING AND DETAILS EXCEPT AS SHOWN.

   FLOOR FINISHES.

7. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING ITEMS WHERE NOT SHOWN ON STRUCTURAL DRAWINGS:

   PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.

   ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.

   CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.

   SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, AND ANCHOR BOLTS FOR MOTOR MOUNTS.

8. SEE PASCOE BUILDING SYSTEMS DRAWINGS FOR METAL BUILDING REQUIREMENTS. CONTRACTOR SHALL VERIFY LOCATION OF ANCHOR BOLTS AND OTHER METAL BUILDING CONNECTIONS AT THE FOUNDATION PRIOR TO CONSTRUCTION AND NOTIFY STRUCTURAL ENGINEER OF ANY DISCREPANCIES OR INCONSISTANCIES.

9. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER 24 HOURS BEFORE PLACING CONCRETE.

10. OPENINGS, CHASES, TRENCHES, ETC., SHALL NOT BE PLACED IN DECKS, BEAMS, JOISTS, COLUMNS, WALLS, ETC., UNLESS SPECIFICALLY DETAILED OR NOTED ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW SUCH OPENINGS, CHASES, ETC.

11. A.S.T.M. SPECIFICATIONS NOTED WITHIN THE GENERAL NOTES SHALL BE OF THE LATEST RE[illegible]IC.

12. HEAVY EQUIPMENT LOADS SHALL BE SPREAD OUT IF TEMPORARILY PLACED ON SLABS.

13. DO NOT INSTALL MACHINERY UNTIL SUPPORTING CONCRETE HAS ACHIEVED DESIGN STRENGTH.

B. FOUNDATION

1. FOUNDATION DESIGN IS BASED ON A SOIL ENGINEERING REPORT PREPARED BY BUENA ENGINEERS, REPORT NO. B-12926-V1, DATED SEPTEMBER 1987.

2. SOIL BEARING DESIGN VALUES ARE 1000 PSF FOR CONTINUOUS FOOTINGS AND 2000 PSF FOR ISOLATED FOOTINGS AT THE 18" DEPTH.

3. SOIL EXPANSION INDEX IS 0-20.

4. CONTRACTOR SHALL PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE.

5. THE CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.

6. EXCAVATIONS FOR FOOTINGS AND CAISSONS SHALL BE APPROVED BY THE FOUNDATION ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. CONTRACTOR SHALL NOTIFY THE FOUNDATION ENGINEER WHEN INSPECTION OF EXCAVATION IS READY. THE FOUNDATION ENGINEER SHALL SUBMIT LETTER OF COMPLIANCE TO THE STRUCTURAL ENGINEER.

7. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT RETAINING WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF SUCH BRACING. SEE DRAWINGS FOR LOCATIONS OF TEMPORARY SHORING.

8. FOOTINGS SHALL BE PLACED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY FOUNDATION ENGINEER, FOOTING ELEVATIONS WILL BE ALTERED AS APPROVED BY THE STRUCTURAL ENGINEER.

9. FOOTING, RETAINING WALL, AND UTILITY TRENCH BACKFILLS WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS, TO THE APPROVAL OF THE FOUNDATION ENGINEER. FLOODING WILL NOT BE PERMITTED.

10. THE CONTRACTOR SHALL SUBMIT FINAL COMPACTION REPORTS FOR ALL ENGINEERED FILLS TO THE STRUCTURAL ENGINEER FOR REVIEW.

C. CONCRETE

1. ALL WORK SHALL CONFORM TO THE AMERICAN CO[illegible] RECOMMENDATIONS FOUND WITHIN ACI-318 (LAT[illegible]

2. ALL CONCRETE SHALL OBTAIN THE FOLLOWING M[illegible] AT 28 DAYS:

   PRECAST CONCRETE..........
   SPREAD FOOTINGS..........
   PIT PADS AND WALLS..........
   TRENCH PADS AND WALLS..........
   MECHANICAL CHASES..........
   ALL OTHER CONCRETE..........

3. PORTLAND CEMENT SHALL CONFORM TO A.S.T.M [illegible] TYPE II.

4. AGGREGATE FOR HARDROCK CONCRETE SHALL CO[illegible] THE MAXIMUM AGGREGATE SIZE SHALL BE ONE [illegible] WALLS AND SECTIONS NOT MORE THAN FIVE IN[illegible] THICKNESS.

5. MAXIMUM CONCRETE SLUMP SHALL BE FOUR INC[illegible]

6. DRYPACK, UNDER BASEPLATES AND WHERE OTHE[illegible] STRUCTURAL DRAWINGS, SHALL BE A NON-SHR[illegible] OR EQUAL.

7. MINIMUM CONCRETE COVERAGE OVER REINFORCE[illegible] NOTED OTHERWISE, SHALL BE AS FOLLOWS:

   CONCRETE POURED DIRECTLY AGAIN[illegible]
   ALL OTHER LOCATIONS..........

8. PROJECTING CORNERS OF BEAMS, WALLS, COL[illegible] BE FORMED WITH A 3/4" CHAMFER, UNLESS N[illegible] ARCHITECTURAL DRAWINGS.

9. ALL CONCRETE SHALL BE THOROUGHLY AND PR[illegible] USING APPROVED MECHANICAL COMPACTORS.

10. CORING OF CONCRETE IS NOT PERMITTED EXC[illegible] NOTIFY THE STRUCTURAL ENGINEER IN ADVAN[illegible] NOT SHOWN ON THE STRUCTURAL DRAWINGS.

11. CURING COMPOUNDS USED ON CONCRETE THAT [illegible] RESILENT TILE FINISH SHALL BE APPROVED [illegible] PRIOR TO USE.

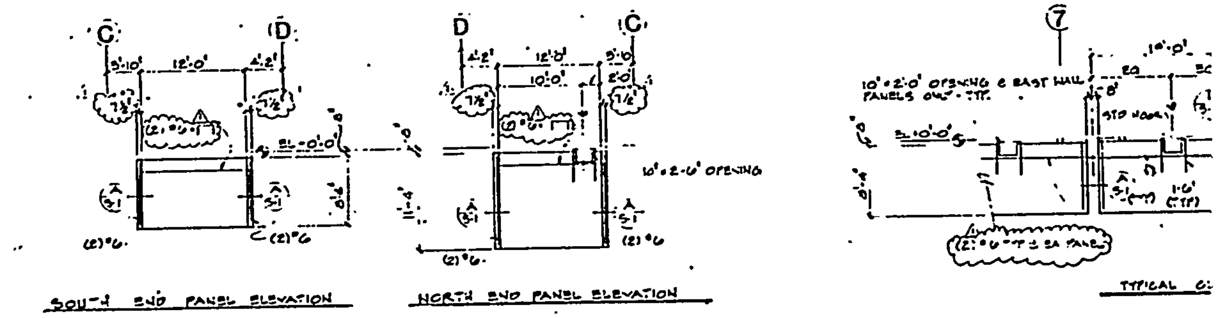
12. APPLY BURKE PRODUCT NON-METALLIC FLOOR [illegible] ON ALL SLABS ON GRADE PER MANUFACTURER'[illegible]

13. CONCRETE SHALL BE PLACED CONTINUOUSLY [illegible] AT EACH CAISSON.

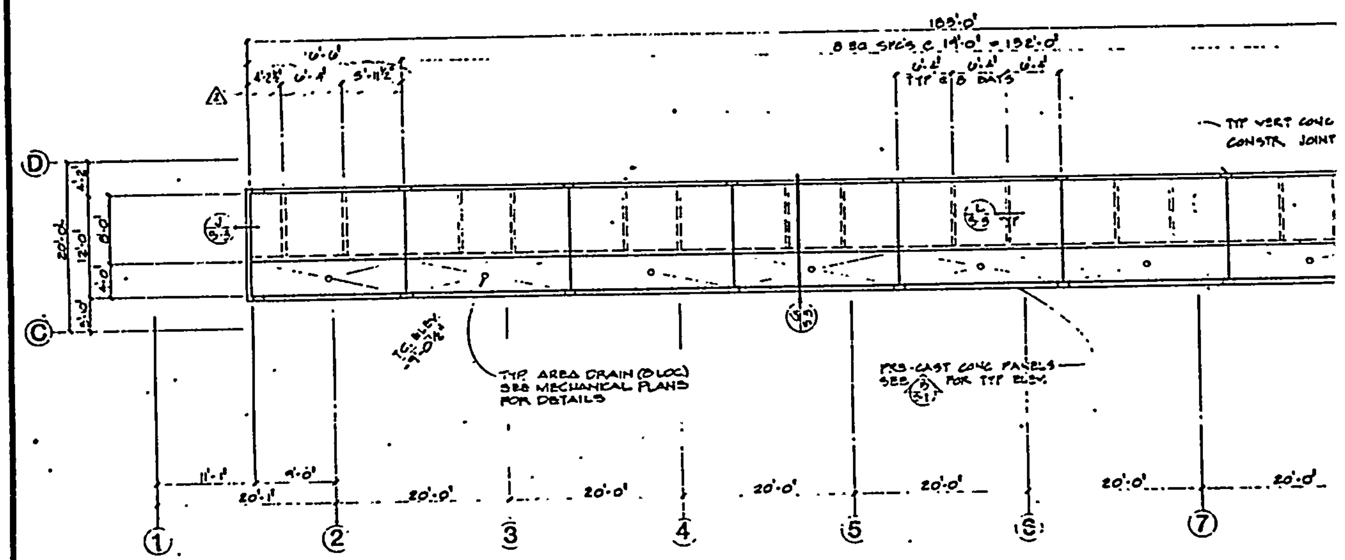
14. SEE INSPECTIONS.

D. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE PLACED [illegible] THE "BUILDING CODE REQUIREMENTS FOR RE[illegible] (ACI 318 LATEST), AND THE "MANUAL OF S[illegible] REINFORCED CONCRETE CONSTRUCTION" (LA[illegible] C.R.S.I. AND THE W.C.R.S.I.



TYPICAL PRE-CAST CONC. PANEL ELEVATIONS - CULVERT



CULVERT FOUNDATION PLAN

2. REINFORCING BARS SHALL CONFORM TO ASTM A-615. MINIMUM REINFORCING YIELD STRENGTHS SHALL BE AS FOLLOWS:

#3 #4 & #5 BARS........................40 GRADE
#6 AND GREATER........................60 GRADE

3. WELDING OF REINFORCEMENT SHALL BE WITH LOW HYDROGEN ELECTRODES IN CONFORMANCE WITH "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL, ETC.", AMERICAN WELDING SOCIETY, AWS-D12.1 (LATEST EDITION). NO FIELD WELDING OF REINFORCEMENT SHALL BE PERMITTED.

4. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.

5. SPLICE REINFORCEMENT AS SHOWN ON THE DRAWINGS, UNLESS NOTED AS CONTINUOUS. LAP ALL CONTINUOUS REINFORCEMENT A MINIMUM OF 32 BAR DIAMETERS.

6. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.

7. SUBMIT REINFORCING MILL REPORTS FOR EACH LOT OF REINFORCEMENT TO THE STRUCTURAL ENGINEER FOR REVIEW.

8. SUBMIT REINFORCEMENT PLACEMENT PLANS TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL.

9. SEE INSPECTIONS.

E. STRUCTURAL AND MISCELLANEOUS STEEL (FOUNDATION)

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (LATEST EDITION).

2. ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A-36, WITH A MINIMUM YIELD STRESS OF 36 KSI, UNLESS OTHERWISE NOTED.

3. ALL BOLTS SHALL CONFORM TO ASTM A-307 GRADE A, UNLESS NOTED OTHERWISE.

4. ALL WELDING SHALL BE PERFORMED WITH E70XX ELECTRODES CONFORMING TO AWS D1.1 (LATEST EDITION).

5. THE STEEL FABRICATORS SHALL SUBMIT SHOP DRAWINGS FOR THE REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER.

6. ALL STRUCTURAL STEEL SURFACES SHALL BE LEFT UNPAINTED, UNLESS NOTED OTHERWISE.

7. SEE INSPECTIONS.

F. WATERPROOFING MEMBRANE

1. ALL BELOW-GRADE WATERPROOFING SHALL BE THE PRODUCT OF ONE MANUFACTURER AND REPRESENT A SYSTEM OF PRODUCTS APPROPRIATE TO THE USE AND CRITERIA.

2. DESIGN IS BASED ON VAPORSEAL 240, A PRODUCT OF THE NOBLE COMPANY AND REPRESENTED BY MARON & ASSOCIATES, TARZANA, CALIFORNIA. ALTERNATE MANUFACTURER'S PRODUCTS OF EQUAL QUALITY AND PERFORMANCE WILL BE CONSIDERED FOR APPROVAL BY THE STRUCTURAL ENGINEER.

3. WATER TEST: AT TIME RECOMMENDED BY THE MANUFACTURER, PROVIDE WATER TEST OF TRENCH AND PIT WATERPROOFING: TEST PER APPROVED MANUFACTURER'S METHODS.

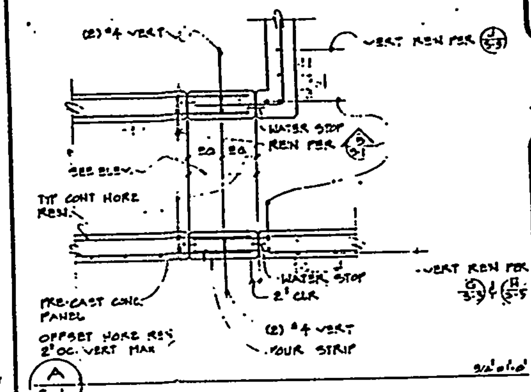
G. WATERSTOPS

1. WATERSTOPS SHALL BE BURKE PRODUCT PVC WATERSTOP R38-9 WITH PREFABRICATED INTERSECTIONS OR EQUAL.

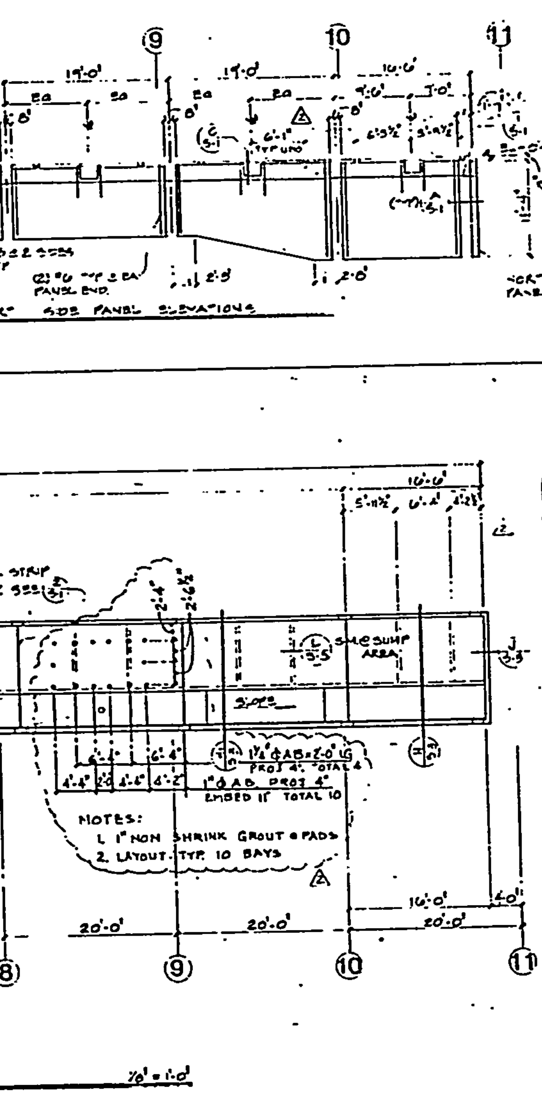
H. INSPECTIONS

1. ALL SPECIAL INSPECTIONS SHALL BE MADE BY AN INSPECTOR APPROVED BY THE STRUCTURAL ENGINEER FOR THE FOLLOWING TYPES OF WORK:
   A. ALL CONCRETE WORK WITH STRENGTH GREATER THAN 2000 PSI.
   B. ALL FIELD WELDING.

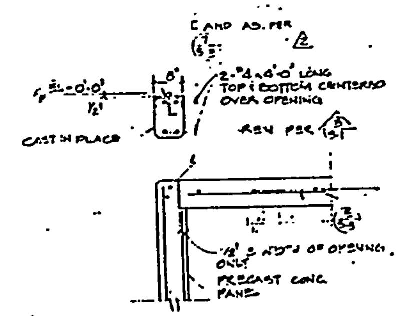
2. A WRITTEN REPORT SHALL BE SUBMITTED FOR THE ITEMS A & B ABOVE TO THE STRUCTURAL ENGINEER.

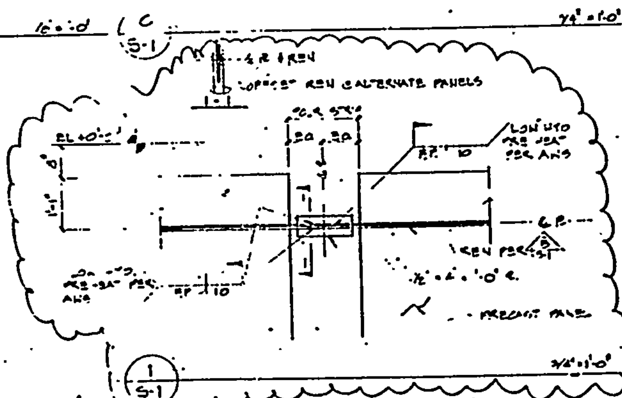


A
S-1
3/4" = 1'-0"

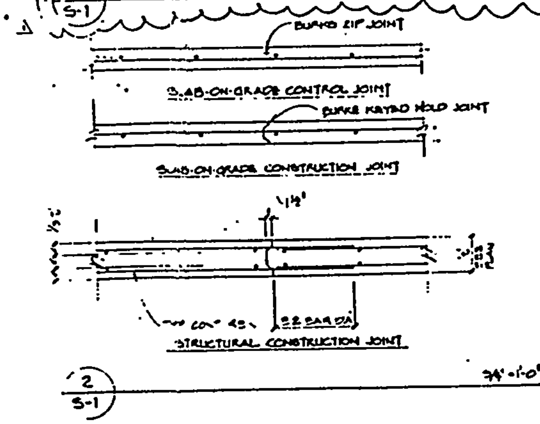


1/8" = 1'-0"





1
S-1
3/4" = 1'-0"



2
S-1
3/4" = 1'-0"

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	description	date
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1	CHANGE ORDER #1	

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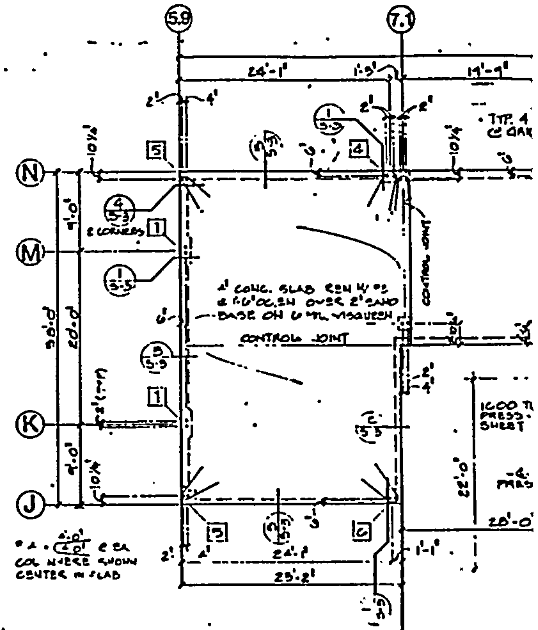
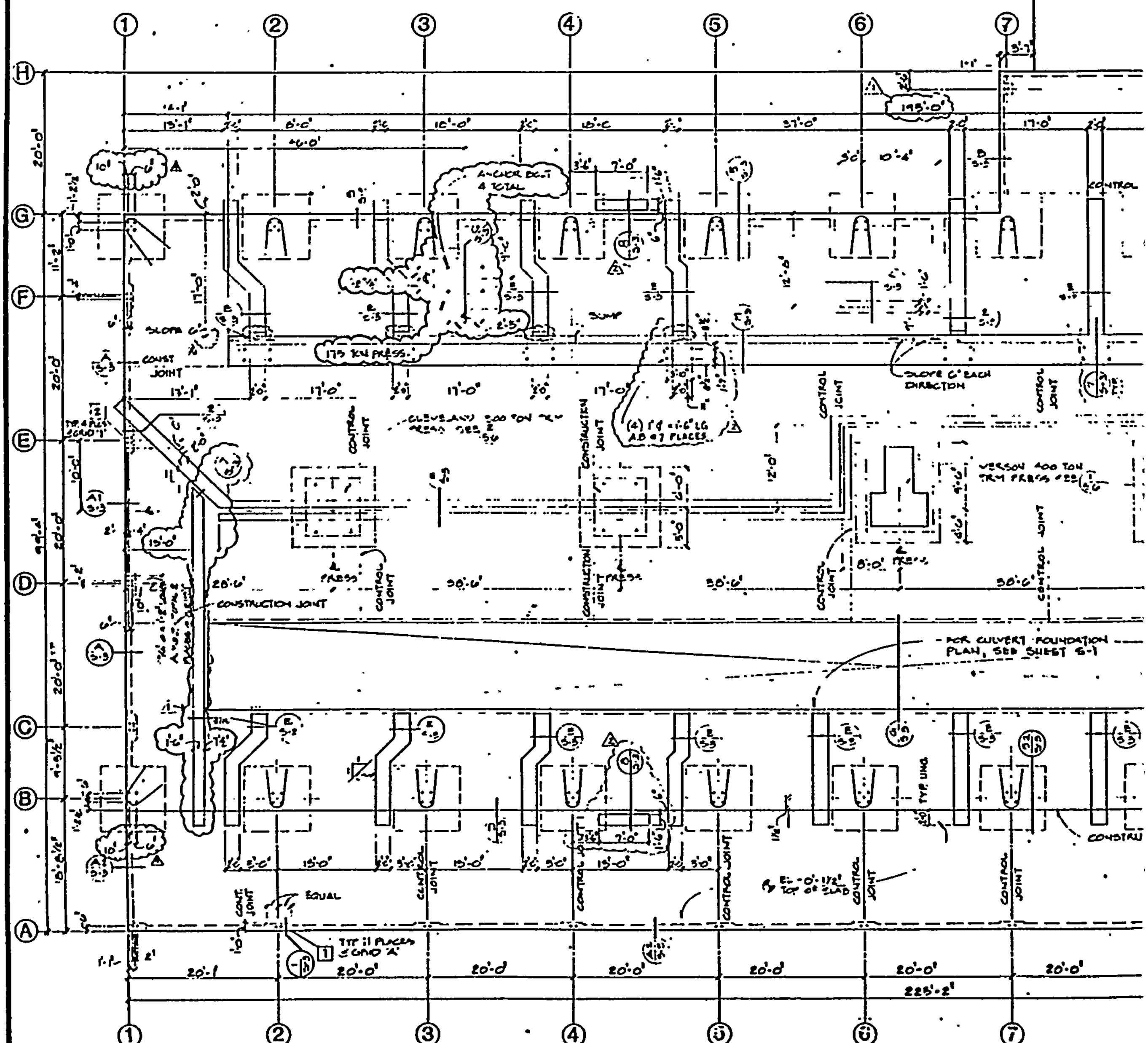
PRECISION FORGE COMPANY
PLANT RELOCATION
1235 E. WOOLEY RD.
OXNARD, CA.

SHEET TITLE
GENERAL NOTES, CULVERT FOUN. PLAN, PANEL ELEV.,

PROJECT NO. 8210130
DATE
SHEET NO. S-1
OF

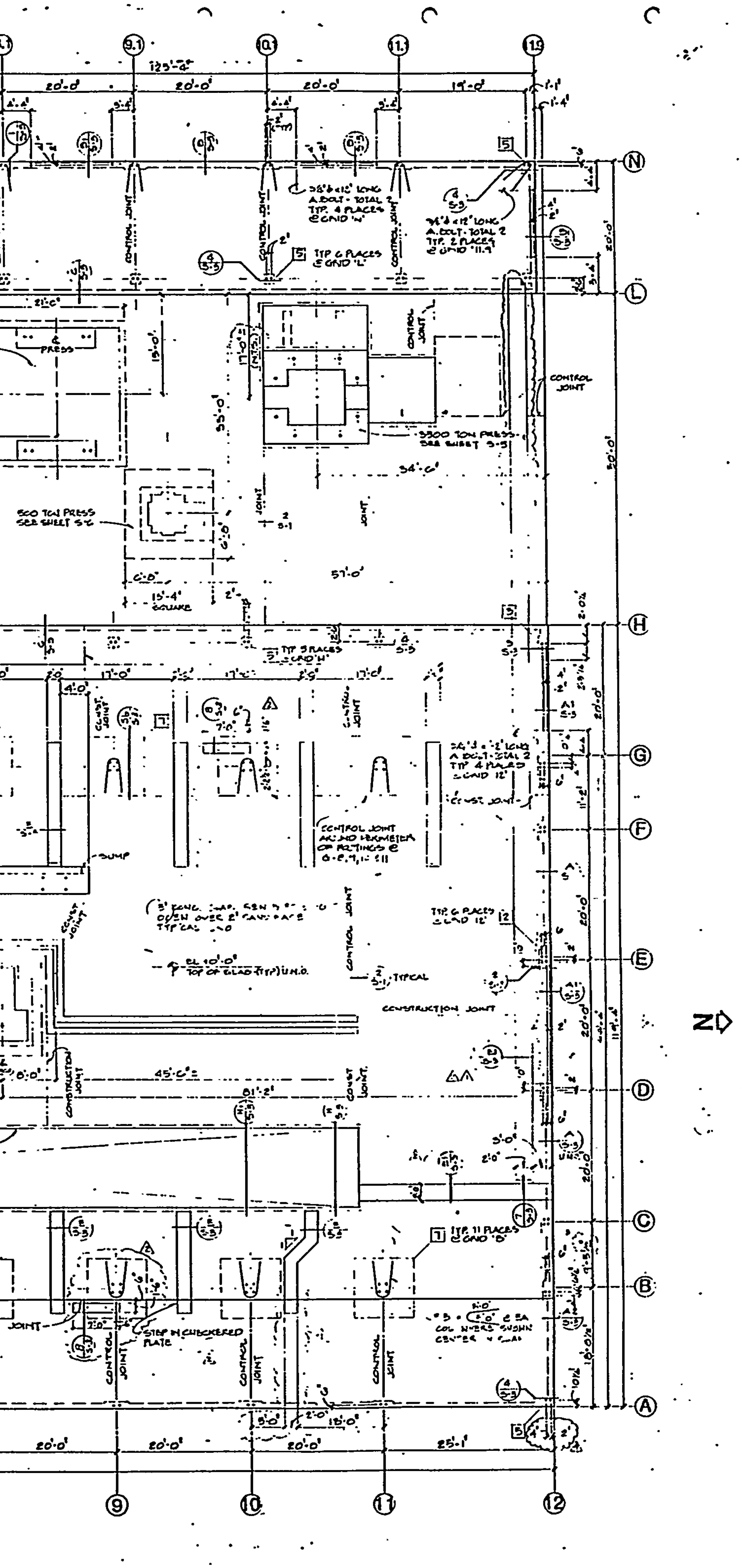
NO.	FOOTING SIZE			REINFORCING	COMMENTS
	LENGTH	WIDTH	THICKNESS		
1	2'-6"	1'-0"	1'-3"	SEE 1/S-3	
2	2'-6"	1'-3"	1'-3"	SEE 2/S-3	
3	2'-6"	1'-0"	1'-3"	SEE 3/S-3	
4	4'-0"	1'-3"	1'-3"	SEE 2/S-3	A.D PLACE. VARIES
5	1'-6"	1'-6"	1'-6"	SEE 4/S-3	
6	1'-9"	1'-9"	1'-6"	SEE 4/S-3	
7	9'-0"	9'-0"	1'-4"	11-#6 EA.WAY	





FOUNDATION PLAN

1/8" = 1'-0"



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3	CHANGE ORDER NO. 3	[illegible]
2	CHANGE ORDER NO 2	[illegible]
1	CHANGE ORDER NO. 1	[illegible]

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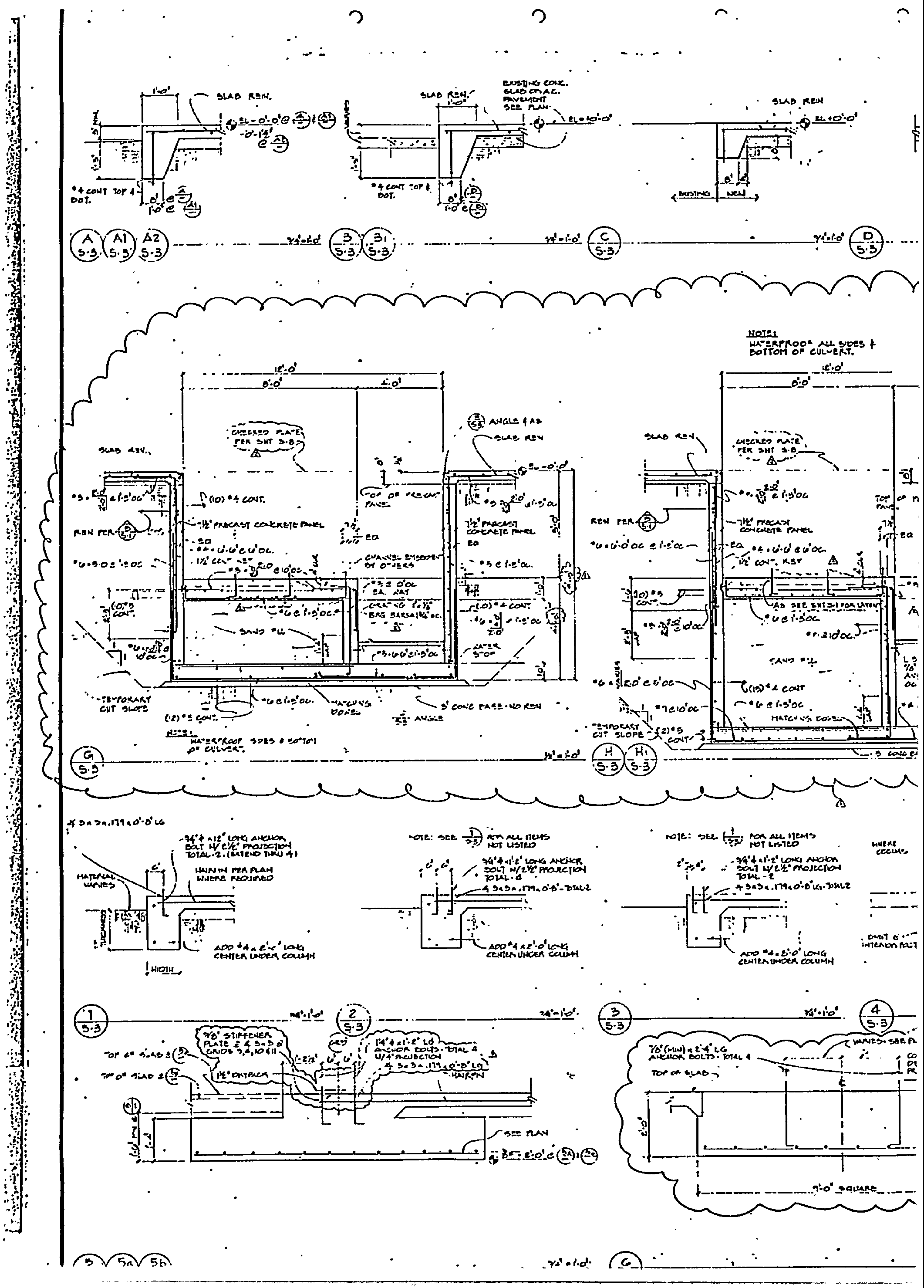
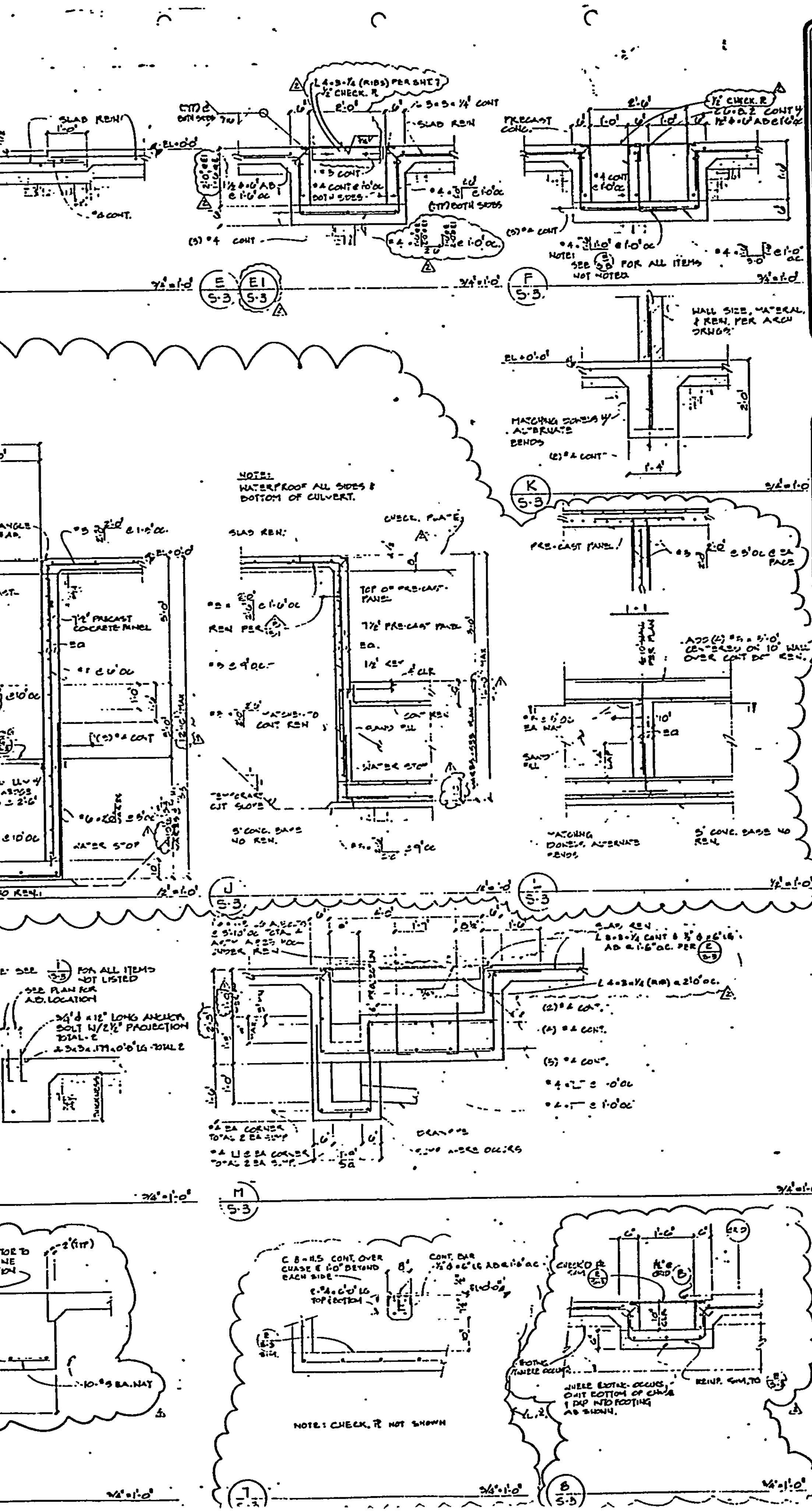
SHEET TITLE
FOUNDATION PLAN

PROJECT NO.	SHEET NO.
8210130	S-2
DATE	OF


SLAB REIN.
EXISTING CONC. SLAB OR A.C. PAVEMENT SEE PLAN
SLAB REIN
EXISTING
NEW
A S-3
A1 S-3
A2 S-3
3 S-3
31 S-3
C S-3
D S-3
NOTE: WATERPROOF ALL SIDES & BOTTOM OF CULVERT.
12'-0"
8'-0"
CHECKED PLATE PER SHT S-8
ANGLE & AB
SLAB REIN
1½" PRECAST CONCRETE PANEL
CHANNEL SUPPORT BY OTHERS
SAND FILL
WATER STOP
TEMPORARY CUT SLOPE
MATCHING DOWEL
3" CONC PASS - NO REIN
ANGLE
NOTE: WATERPROOF SIDES & BOTTOM OF CULVERT.
G S-3
H S-3
H1 S-3
AB SEE SHTS-1 FOR LAYOUT
MATERIAL VARIES
HAUNCH PER PLAN WHERE REQUIRED
NOTE: SEE FOR ALL ITEMS NOT LISTED
ADD #4 x 2'-0" LONG CENTER UNDER COLUMN
1 S-3
2 S-3
3 S-3
4 S-3
7/8" STIFFENER PLATE
1½" DRYPACK
TOP OF SLAB
SEE PLAN
HAIRPIN
9'-0" SQUARE
5
5a
5b
6



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2	CHANGE ORDER #2	02.18
1	CHANGE ORDER #1	01.82

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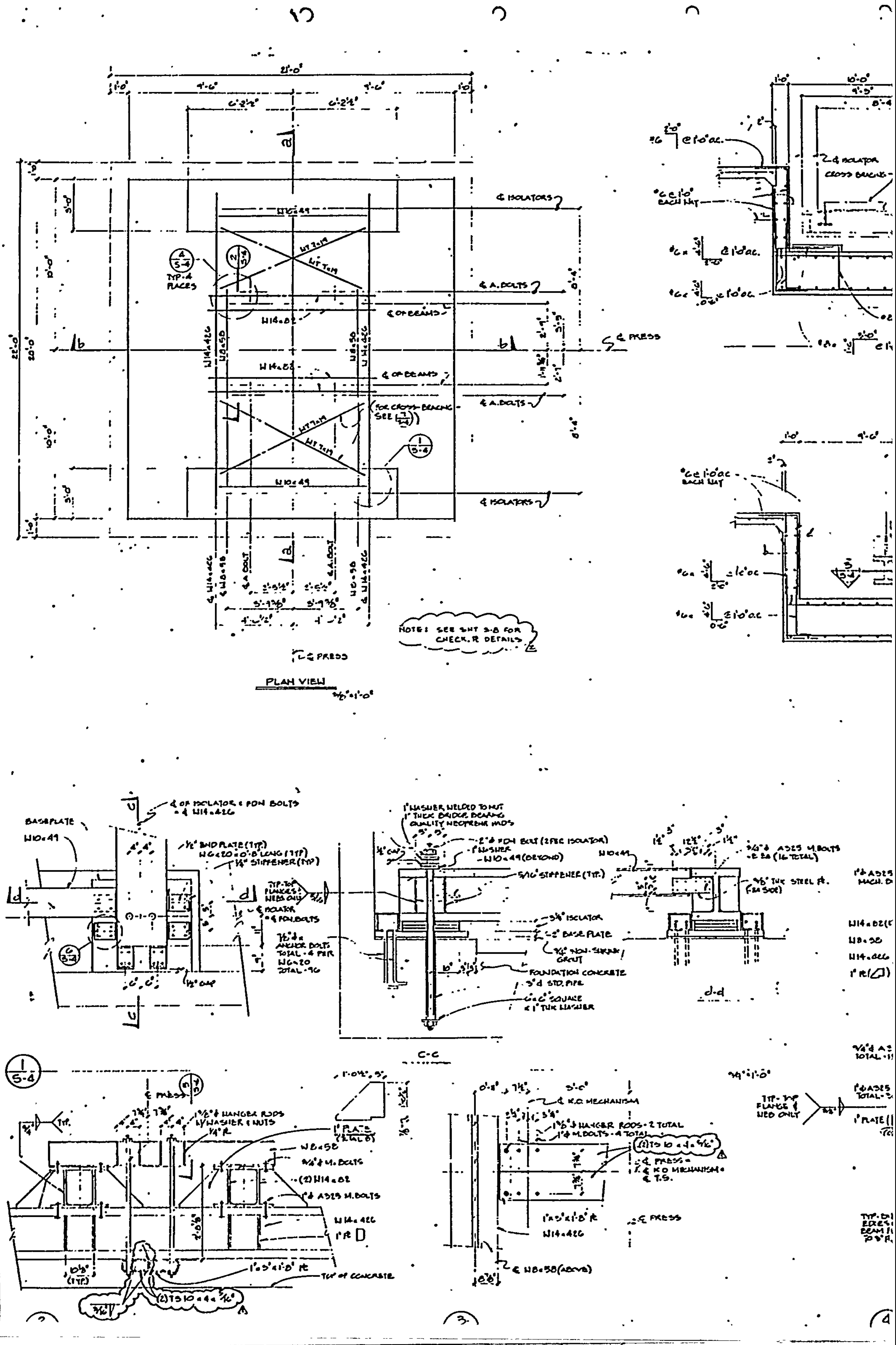
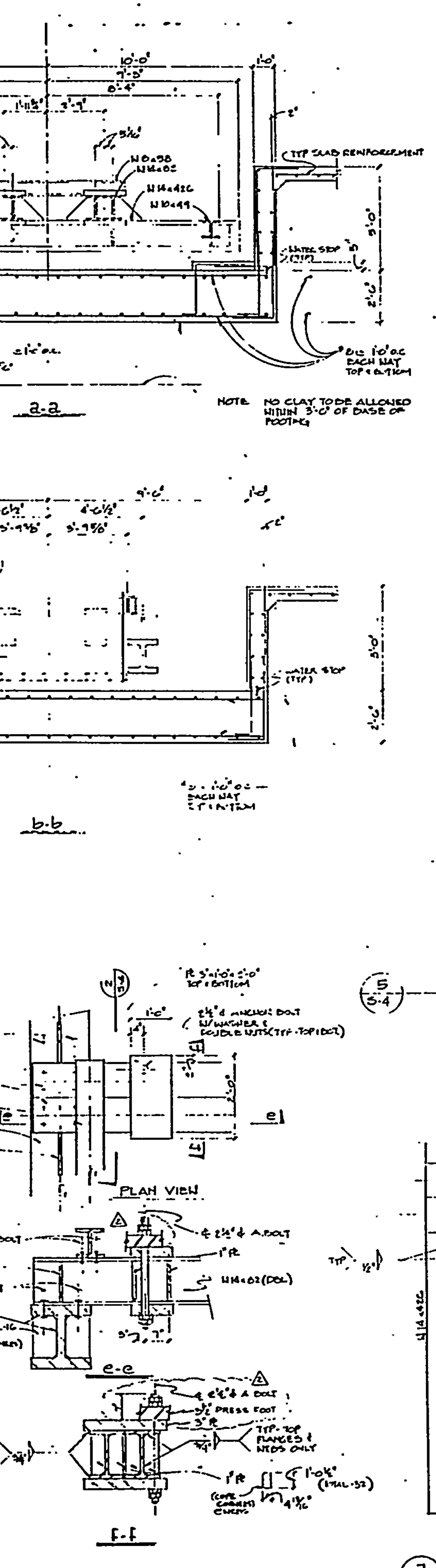
FOUNDATION SECTIONS & DETAILS

PROJECT NO.	SHEET NO.
8210130	S-3
DATE	OF



PLAN VIEW
1/2"=1'-0"
NOTE: SEE SHT S-8 FOR CHECK.R DETAILS
℄ ISOLATORS
℄ A. BOLTS
℄ OF BEAMS
℄ PRESS
W10x49
W14x82
W14x426
W8x58
TYP. 4 PLACES
(FOR CROSS-BRACING SEE 1/S-4)
BASEPLATE
1/2" END PLATE (TYP)
1/2" STIFFENER (TYP)
℄ OF ISOLATOR & FDN BOLTS = ℄ W14x426
3/4" ISOLATOR
2" BASE PLATE
3/4" NON-SHRINK GROUT
FOUNDATION CONCRETE
5"Φ STD. PIPE
6x6" SQUARE x 1" THK WASHER
5/16" STIFFENER (TYP)
c-c
d-d
1-1/2"Φ HANGER RODS W/WASHER & NUTS
3/4"Φ M. BOLTS
(2) W14x82
1"Φ A325 M. BOLTS
TOP OF CONCRETE
1-1/2"Φ HANGER RODS - 2 TOTAL
1-1/4" M. BOLTS - 4 TOTAL
℄ K.O. MECHANISM
℄ PRESS = ℄ K.O. MECHANISM = ℄ T.S.
℄ W8x58 (ABOVE)
ISOLATOR CROSS BRACING
#6 @ 1'-0" o.c. EACH WAY
TYP. TOP FLANGE & WEB ONLY



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SPECIAL NOTES

A. EXCAVATION AND BACKFILL:

1. PROVIDE SHEET-PILING OR OTHER SHORING SYSTEMS TO RETAIN THE SIDES OF THE EXCAVATION. SYSTEM SHALL BE DESIGNED FOR EXCAVATING TO 10 FEET DEEP.
2. THE SYSTEM PROVIDED MUST BE ADEQUATE TO PREVENT MOVEMENT OF THE EXISTING COLUMN FOOTINGS AND WALL WEST OF THE PROPOSED EXCAVATION.
3. LOWER THE GROUNDWATER TO A MINIMUM DEPTH OF 12 FEET BELOW THE EXISTING FLOOR SLAB.
4. EXCAVATE TO A MINIMUM DEPTH OF 7'-6" BELOW THE EXISTING SURFACE.
5. PROBE 3 FEET BELOW THE BOTTOM OF THE EXCAVATION TO DETERMINE THE PRESENCE OF A SILT LENS (SEE TEST BORING #2 OF BURAL ENGINEERING'S SOILS REPORT). IF SILT LENS PRESENT, CONTINUE EXCAVATION TO BELOW SILT LENS, DOWN TO UNDERLYING SAND LAYER THEN BACKFILL WITH GRANULAR MATERIAL (RIVER RUN GRAVEL) TO A DEPTH OF 7'-6" BELOW THE EXISTING SLAB. BACKFILL SHALL BE PROPERLY PLACED AND COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY ASTM TEST PROCEDURE D1557 MODIFIED TO THREE LAYERS.

B. CONCRETE:

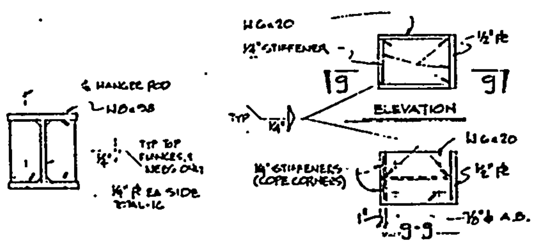
1. DESIGN, DETAILING, FABRICATION AND CONSTRUCTION SHALL BE PER ACI-318.
2. CONCRETE SHALL ATTAIN AN ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
3. REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.

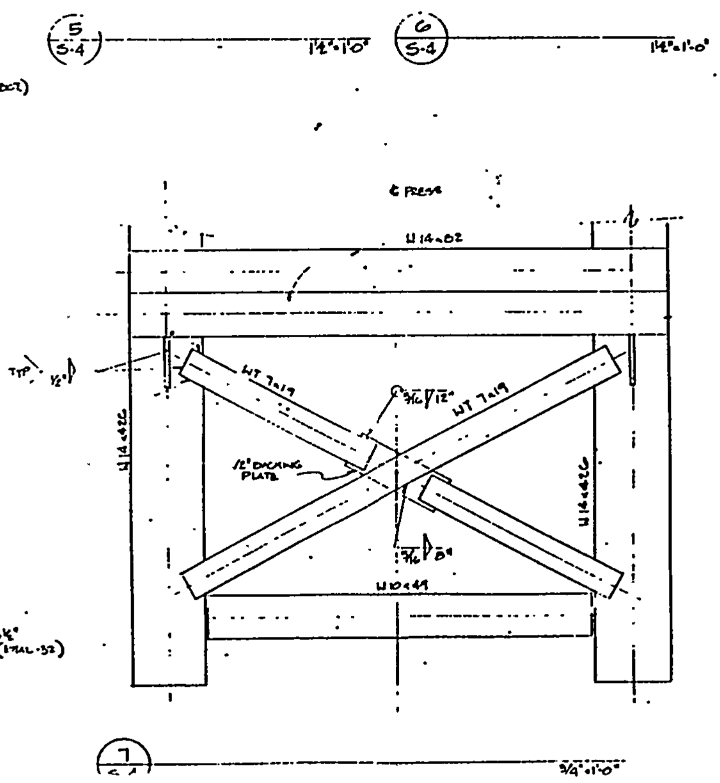
C. STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL BE A36 NORMALIZED STEEL.
2. SUBMERGED ARC WELDING WITH F7X-EXXX FLUX-ELECTRODE COMBINATION (AWS A5.17) IS RECOMMENDED.
3. DO NOT PROVIDE TRANSVERSE WELDS ON TENSION FLANGES.
4. STIFFENERS SHALL BE MILLED AND FITTED TO BEAR ON THE TENSION FLANGES.
5. CUT EDGES OF PLATES AND WELDS SHALL NOT EXCEED A.N.S.I. SURFACE ROUGHNESS VALUE OF 125 MICRO-INCHES.
6. TEN PERCENT (10%) OF WELDS SHALL BE ULTRASONICALLY TESTED BY A QUALIFIED TESTING LABORATORY PER AWS D1.1. IF DEFECTIVE, ALL WELDS SHALL BE TESTED AND CORRECTED FOR COMPLIANCE WITH D1.1. TEST REPORTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER.
7. ALL WELDS SHALL BE VISUALLY INSPECTED BY A SPECIAL INSPECTOR.
8. SHOP DRAWINGS SHALL BE SUBMITTED TO STRUCTURAL ENGINEER PRIOR TO FABRICATION.

D. ISOLATORS:

1. ISOLATORS SHALL BE MANUFACTURED BY INTERACTIVE TECHNOLOGY CORPORATION, LONG BEACH, NEW YORK. ISOLATORS SHALL BE COMPOSED OF NEOPRENE BRIDGE BEARING PADS AND STEEL SPACER PLATES.





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S21984 1-11-82

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Δ	(NEW DESCRIPTION)	date

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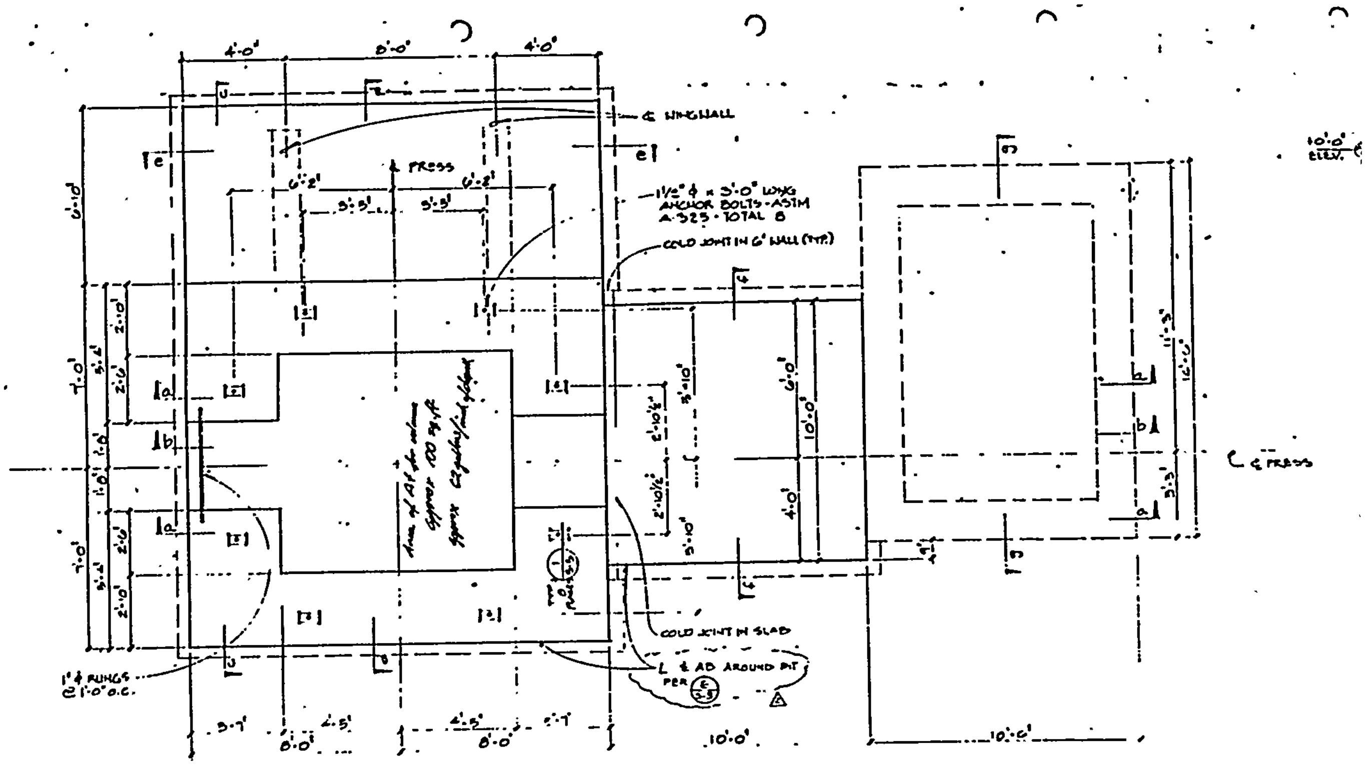
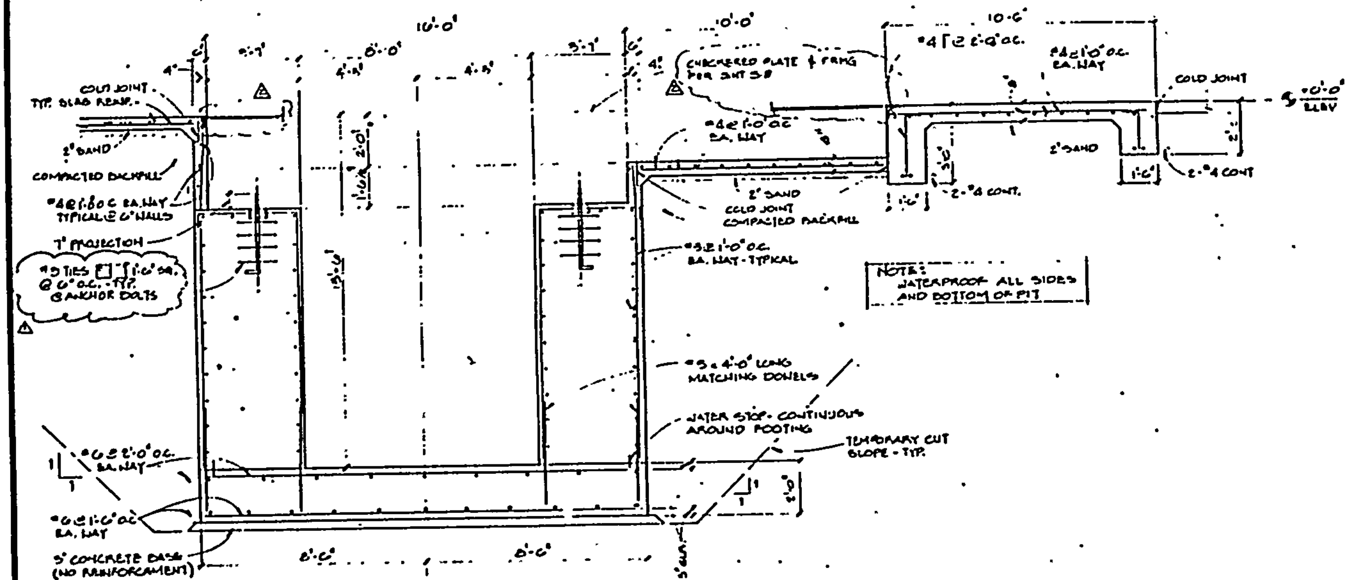
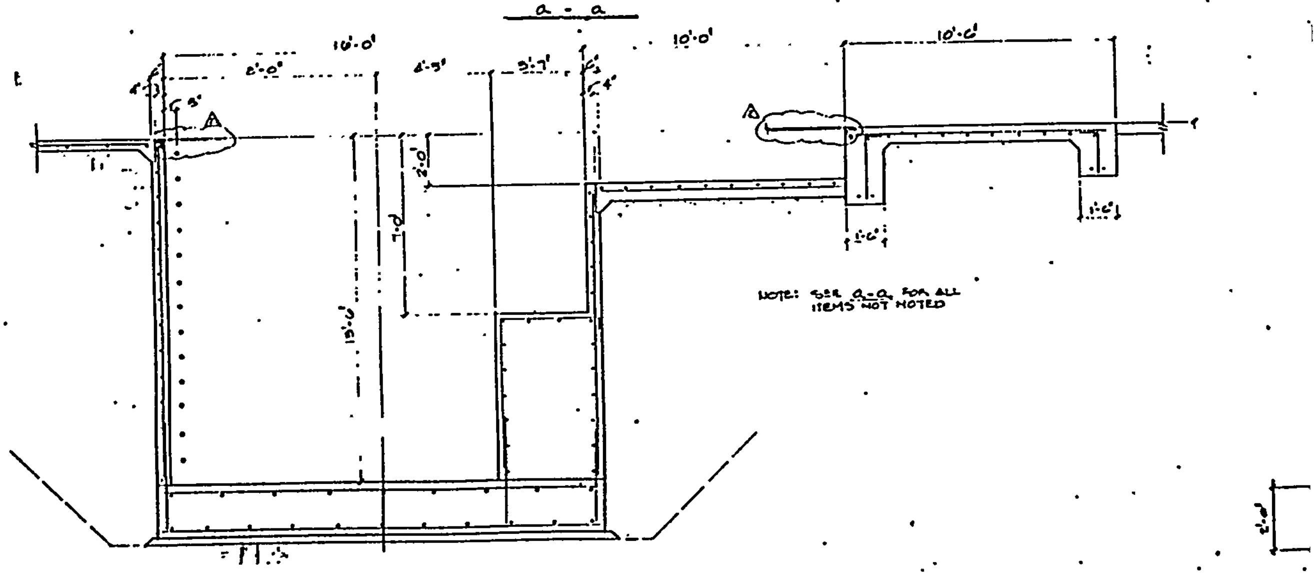
8210130	S-4
DATE	OF

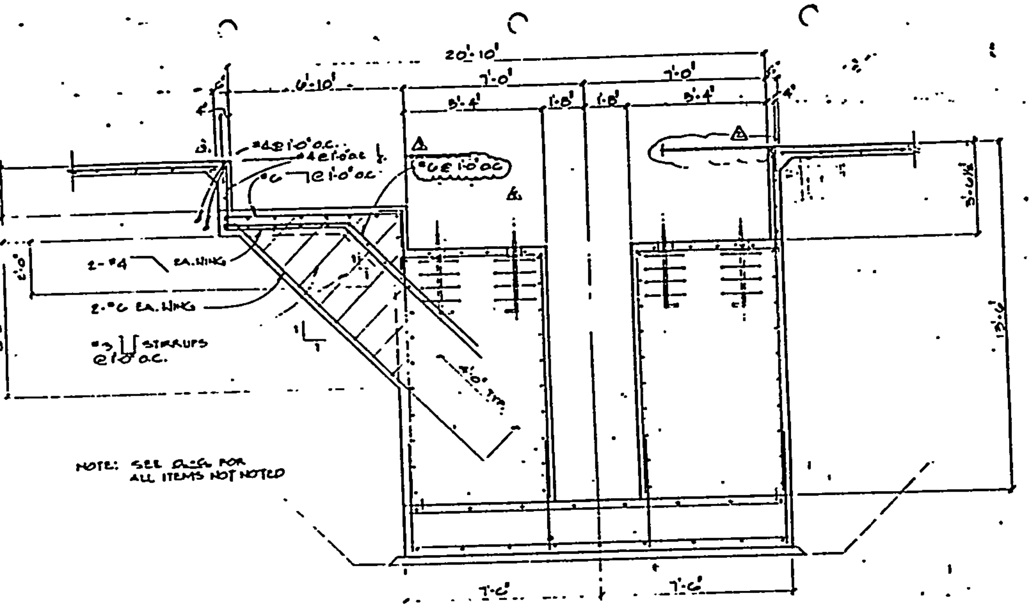


ERIE 3500 TON PRESS   PLAN VIEW   3/8"=1'-0"

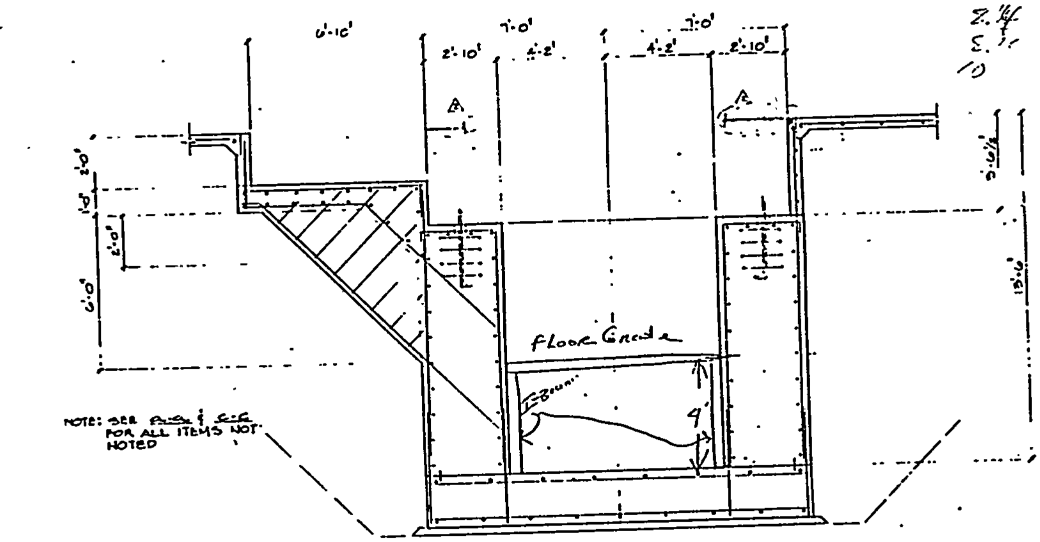


a - a





c-c



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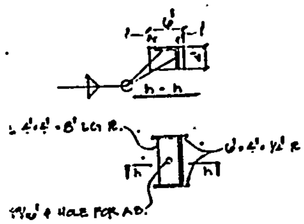
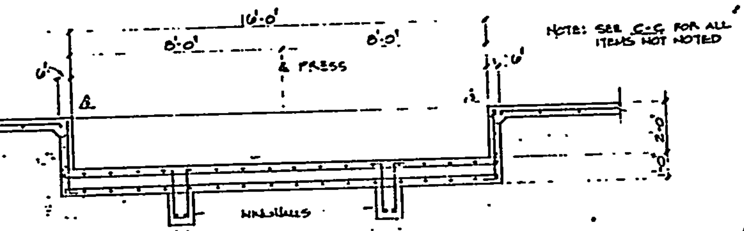
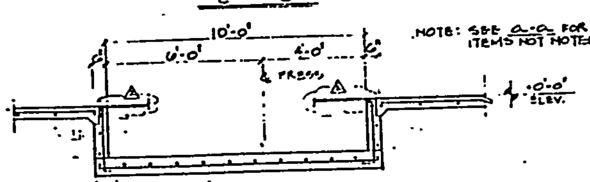


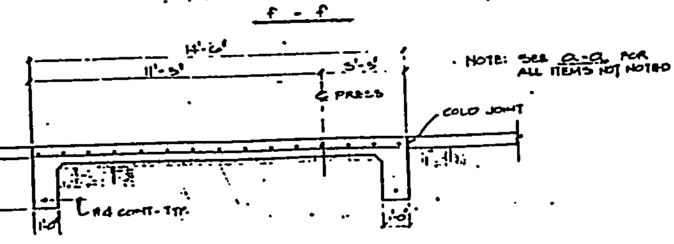


e - e

1/S-5



f - f



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& ASSOCIATES
Consulting Structural Engineers
CAMARILLO, CALIFORNIA

Howard F. Stup
SE 1084
11-11-82

	description	date
3	CHANGE ORDER NO. 3	
2	CHANGE ORDER NO. 2	
1	CHANGE ORDER NO. 1	

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DATE ISSUED
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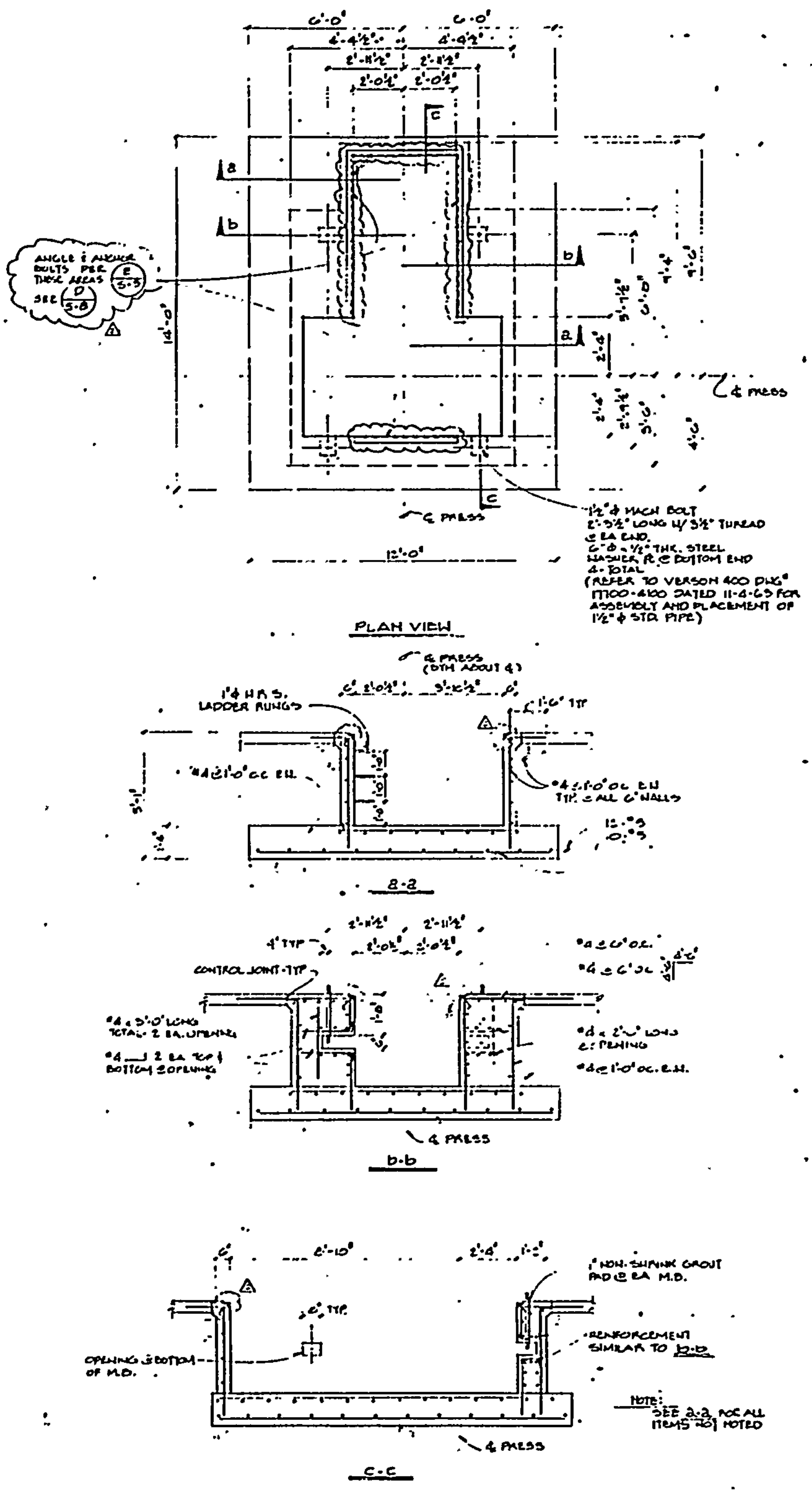
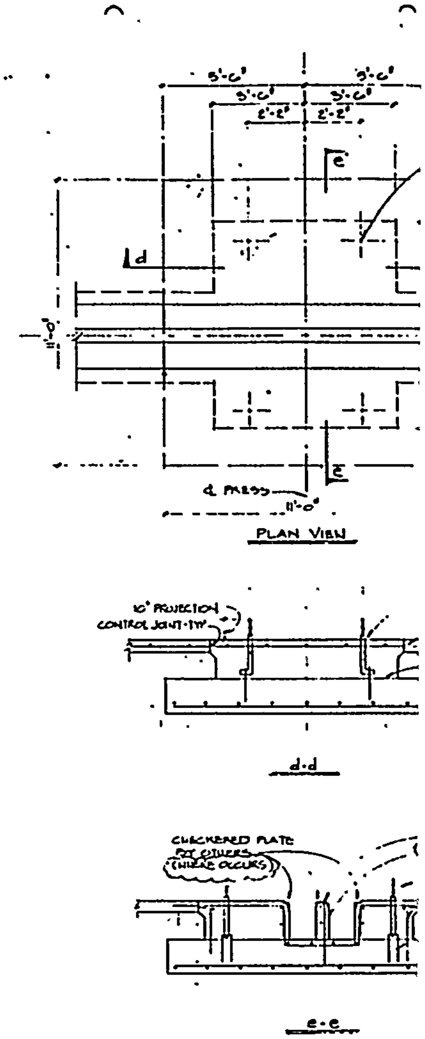
OXNARD, CA.

SHEET TITLE
ERIE 3500 TON PRESS

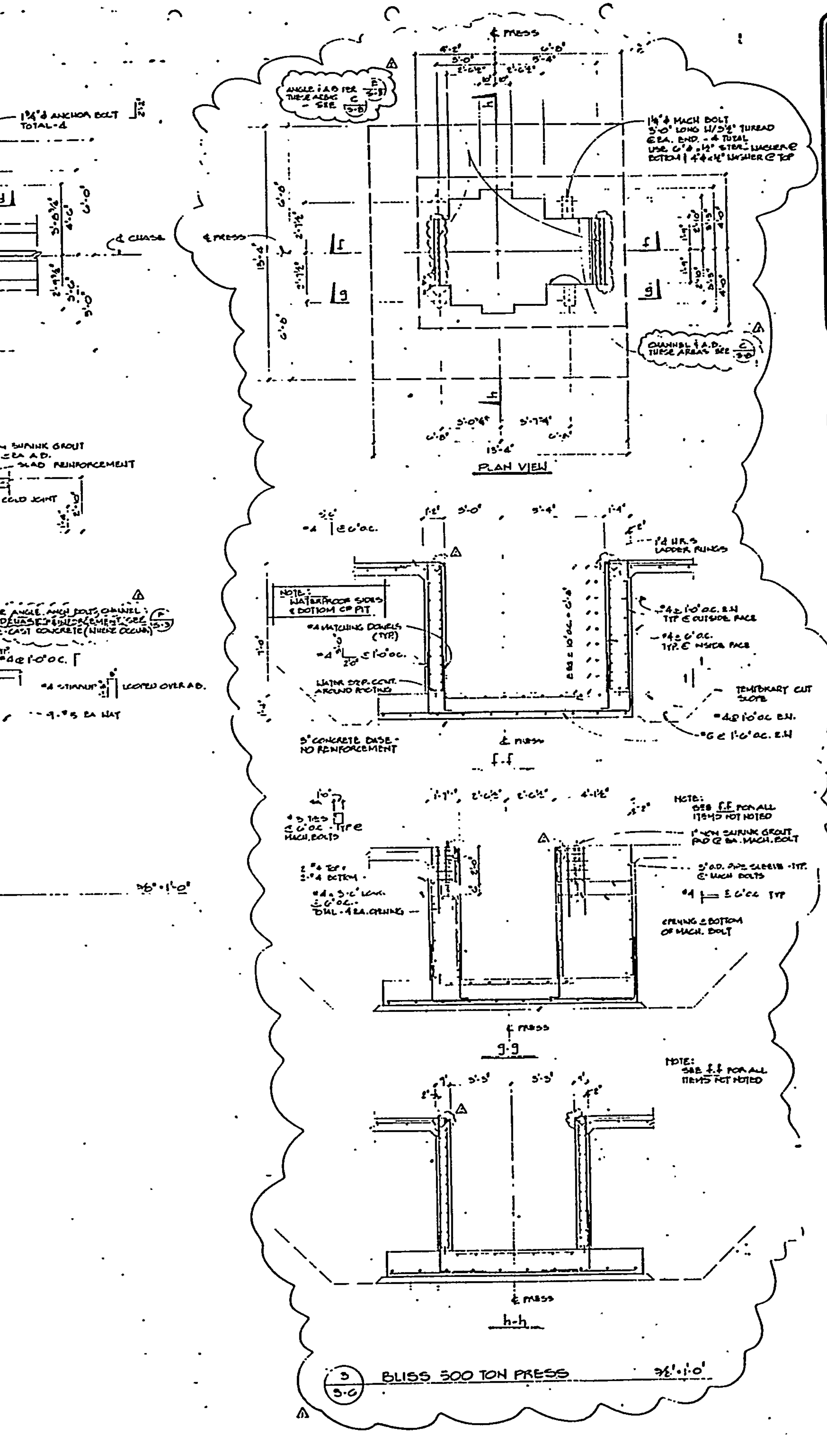
PROJECT NO. 8210130
DATE
SHEET NO. S-5



VERSON 400 TON PRESS



CLEVELAND 300 TON PRES



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job captain: JOHN A MULLER

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& ASSOCIATES
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CAMARILLO, CALIFORNIA

	description	date
2	CHANGE ORDER NO. 2	
1	CHANGE ORDER NO. 1	10-4-82

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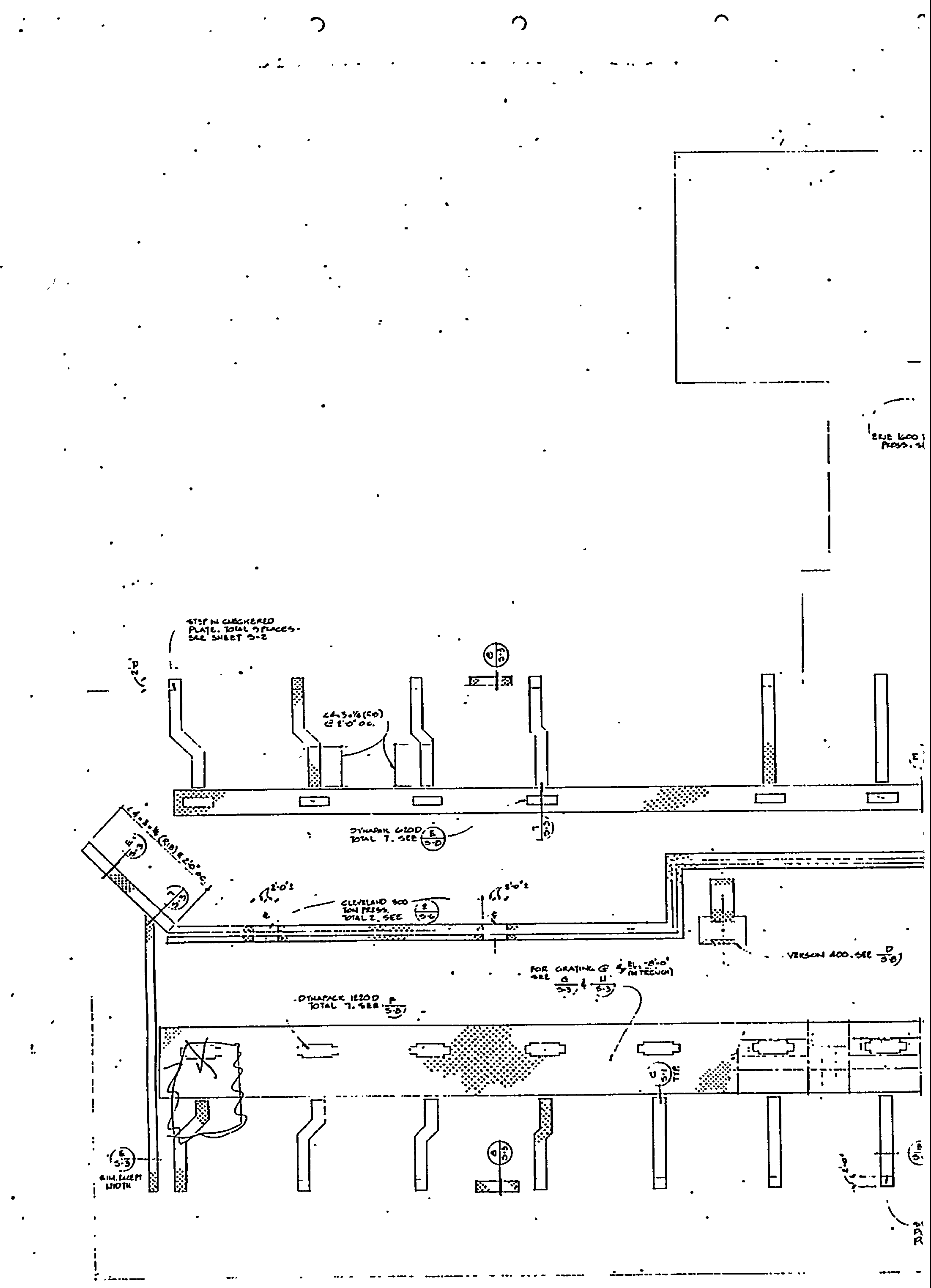
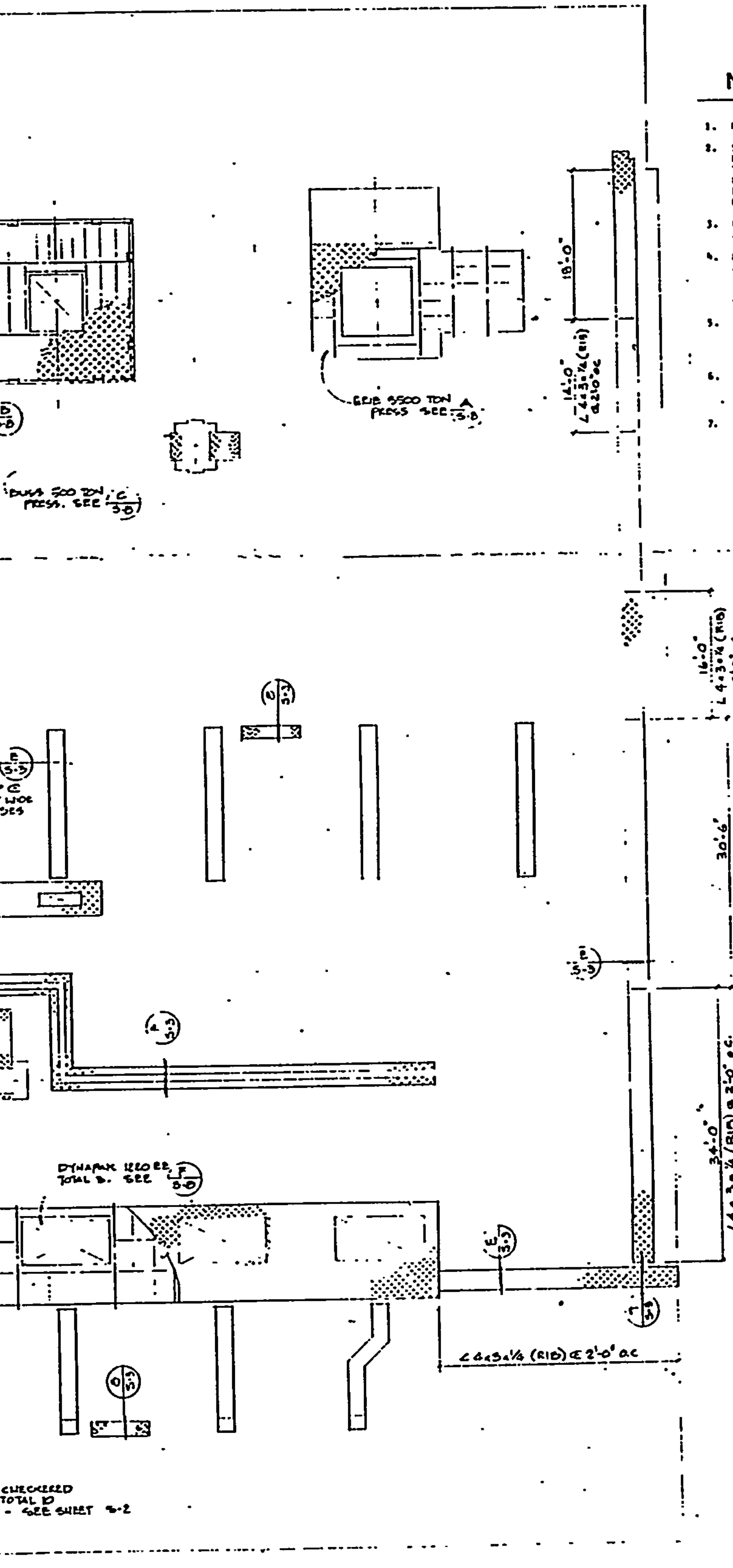
SHEET TITLE
VERSON 400 TON
CLEVELAND 800 TON
BLISS 500 TON

PROJECT NO.	SHEET NO.
8210130	S-6
DATE	OF



STEP IN CHECKERED PLATE. TOTAL 5 PLACES. SEE SHEET 5-2
L4x3x¼ (RIB) @ 2'-0" O.C.
DYNAPAK 620D, TOTAL 7. SEE
CLEVELAND 300 TON PRESS. TOTAL 2. SEE
VERSON 400. SEE
FOR GRATING @ EL. -8'-0" (IN TRENCH) SEE
DYNAPACK 1220D TOTAL 7. SEE
SIM. EXCEPT WIDTH



NOTES

1. REFER TO SHEET S-1 GENERAL NOTES.
2. SUBMIT SHOP DRAWINGS OF CHECKERED PLATE AND CHECKERED PLATE FRAMING TO STRUCTURAL ENGINEER PRIOR TO FABRICATION. DRAWINGS SHALL INCLUDE LOCATION OF ALL PLATE JOINTS AND PLATE BOLTS.
3. PROVIDE 1/2" DIAMETER FLATHEAD BOLTS AT 2'-0" O.C. AT ALL PLATE JOINTS.
4. MAXIMUM GAP BETWEEN CHECKERED PLATE AT JOINTS SHALL BE 1/2" AND AT ALL OTHER EDGES SHALL BE 1/4". ANGLE (RIBS) SHALL EXTEND TO WITHIN 1" OF FACE OF CONCRETE OR STEEL BEAM.
5. CHECKERED PLATE JOINTS SHALL BE SEPARATED AS FAR AS POSSIBLE AND BE LOCATED ONLY AT W-BEAMS AND AT ANGLE (RIBS) WHERE ANGLES ARE PLACED 3"± ON EACH SIDE.
6. CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS TO VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
7. ALL CHECKERED PLATE SHALL BE 1/2" THICK STEEL.

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Howard Stup
SE-0984 8-11-82

△	CHANGE ORDER #2	10/18
△	description	date

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SHEET TITLE
CHECKERED PLATE LAYOUT

PROJECT NO.	SHEET NO.
8210130	S-7
DATE	OF

Appendix F

Hazardous Materials Map
&
Hazardous Materials Chemical Descriptions

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : OXYGEN   CAS # : 7782-44-7
Chemical Name : LIQUID OXYGEN   UN/NA # : 1072/1073

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [X]

Maximum Daily Amount 13,500 # Days on Site : 365
Average Daily Amount 9,000 Largest Container on-sit (Amount): 4,500

STORAGE CODES & LOCATIONS : (use codes provided)

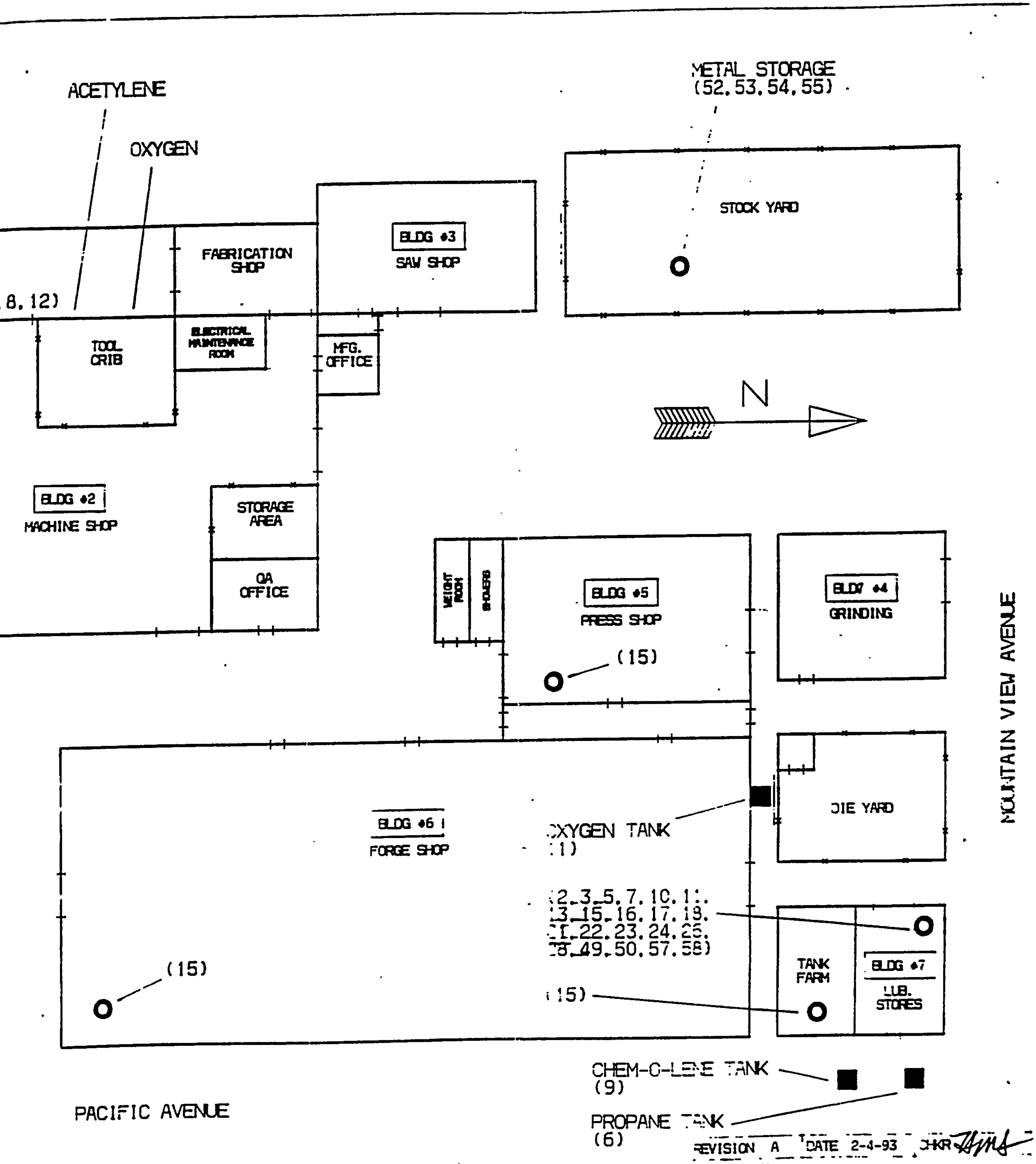
Location #	C	P	T	Location Descriptio
8	L	2	4	WEST SIDE OF BLDG. 2 BY FAB SHOP

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : OXYGEN
CAS # : 7782-44-7   % WT : 100
2 . Name : ____________
CAS # : ____________   % WT : ____________
3 . Name : ____________
CAS # : ____________   % WT : ____________

Certification :   DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

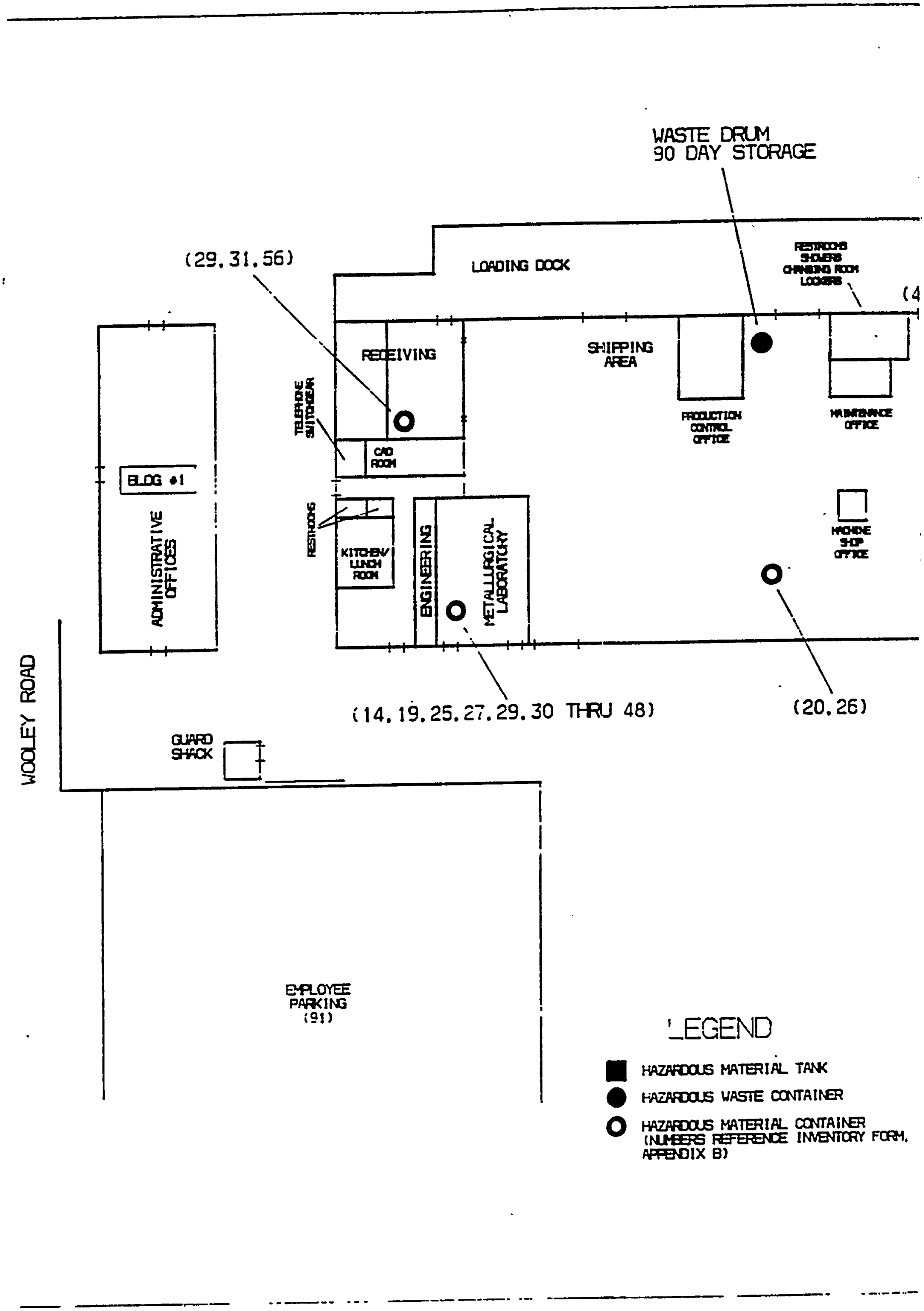


REVISION A DATE 2-4-93 CHKR

SIZE TITLE

B HAZARDOUS MATERIALS MAP

CATIA/AIX VERSION 3 REL.1.0 PTF 3 SCALE N/A


WASTE DRUM
90 DAY STORAGE
(29.31.56)
LOADING DOCK
RESTROOMS
SHOWERS
CHANGING ROOM
LOCKERS
RECEIVING
SHIPPING
AREA
TELEPHONE
SWITCHGEAR
CAD
ROOM
PRODUCTION
CONTROL
OFFICE
MAINTENANCE
OFFICE
BLDG #1
ADMINISTRATIVE
OFFICES
RESTROOMS
KITCHEN/
LUNCH
ROOM
ENGINEERING
METALLURGICAL
LABORATORY
MACHINE
SHOP
OFFICE
WOOLEY ROAD
(14.19.25.27.29.30 THRU 48)
(20.26)
GUARD
SHACK
EMPLOYEE
PARKING
(91)
LEGEND
HAZARDOUS MATERIAL TANK
HAZARDOUS WASTE CONTAINER
HAZARDOUS MATERIAL CONTAINER
(NUMBERS REFERENCE INVENTORY FORM,
APPENDIX B)

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : MOBIL DIESEL FUEL **CAS #** : 68334-30-5

Chemical Name : PETROLEUM DISTILLATE **UN/NA #** : 1268

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365

Average Daily Amount 30 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : PETROLEUM DISTILLATE
CAS # : 8030-30-6 % WT : 100

2 . Name :
CAS # : % WT :

3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :SHELL TELLUS T OIL 100 CAS # : ____________

Chemical Name :PETROLEUM HYDROCARBONS UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 440 # Days on Site : 365

Average Daily Amount 385 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : SOLVENT REFINED HYDROTREATED HEAVY PARAFFINIC DISTILLATE
CAS # : 64742-54-7 % WT : 80-85

2 . Name : SOLVENT REFINED HYDROTREATED RESIDUAL OIL
CAS # : 64742-57-0 % WT : 10-15

3 . Name : ADDITIVE PACKAGE
CAS # : ____________ % WT : <5

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : CARBON DIOXIDE, SOLID   CAS # : 124-38-9
Chemical Name : SAME   UN/NA # : 1845

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ]
If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [X]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [X]

Maximum Daily Amount 280
Average Daily Amount 280
Days on Site : 365
Largest Container on-sit (Amount): 280

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioı
8	L	2	4	WEST SIDE OF BLDG. 2
				NEAR FAB SHOP

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : CARBON DIOXIDE
CAS # : 124-38-9   % WT : 100
2 . Name :
CAS # :   % WT :
3 . Name :
CAS # :   % WT :

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR   SIGNATURE :   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____
FACILITY ID # : ____

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : MOBIL DTE OIL HEAVY   CAS # : ____

Chemical Name : REFINED MINERAL OIL   UN/NA # : ____

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55   # Days on Site : 365

Average Daily Amount 40   Largest Container on-site (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : REFINED MINERAL OILS
CAS # : SEQ-73-1   % WT : >95

2 . Name : ADDITIVES/OTHERS
CAS # : ____   % WT : <5

3 . Name : ____
CAS # : ____   % WT : ____

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : PROPANE CAS # : 74-98-6
Chemical Name : PROPANE UN/NA # : 1075

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [X]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 1,125 # Days on Site : 365
Average Daily Amount 800 Largest Container on-sit (Amount): 1,125

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
3	A	2	4	BEHIND BUILDING 3

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : PROPANE
CAS # : 74-98-6 % WT : 100
2 . Name :
CAS # : % WT :
3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :SHELL OMALA OIL 220 CAS # : ____________

Chemical Name :PETROLEUM HYDROCARBONS UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365

Average Daily Amount 40 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioı
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : SOLVENT REFINED HYDROTREATED HEAVY PARAFFINIC DISTILLATE
   CAS # : 64742-54-7 % WT : 34-40
2. Name : SOLVENT REFINED HYDROTREATED RESIDUAL OIL
   CAS # : 64742-57-0 % WT : 57-63
3. Name : MINOR ADDITIVES
   CAS # : ____________ % WT : <3

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : ARGON   CAS # : 7440-37-1

Chemical Name : LIQUID ARGON   UN/NA # : UN 1006

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [X]

Maximum Daily Amount 336   # Days on Site : 365

Average Daily Amount 336   Largest Container on-sit (Amount): 336

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
8	L	2	4	WEST SIDE OF BLDG. 2 BY FAB SHOP

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : ARGON
CAS # : 7440-37-1   % WT : 100

2 . Name : ____________
CAS # : ____________   % WT : ____________

3 . Name : ____________
CAS # : ____________   % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :CHEM-O-LENE PLUS FUEL GAS CAS # : 74-98-6
Chemical Name :PROPANE MIXTURE UN/NA # : 1954

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Releas [X]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 1,300 # Days on Site : 365
Average Daily Amount 1,150 Largest Container on-sit (Amount): 1,300

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
2	A	2	4	East side of building 7
				Behind drum storage bldg.

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : PROPANE
CAS # : 74-98-6 % WT : ____
2 . Name : ETHANE
CAS # : 74-84-0 % WT : ____
3 . Name : PROPYLENE
CAS # : 115-07-1 % WT : ____

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : MOBIL DTE OIL LIGHT CAS # :
Chemical Name : REFINED MINERAL OILS UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55
Average Daily Amount 30
Days on Site : 365
Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : REFINED MINERAL OILS
CAS # : SEQ-73-1 % WT : >95
2. Name : ADDITIVES/OTHERS
CAS # : % WT : <5
3. Name :
CAS # : % WT :

Certification :

NAME : HOLLY M. SINCLAIR SIGNATURE : DATE : 11/18/93
TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :CUTZOL EDM 30 CAS # : 8030-30-6

Chemical Name :MACHINE SHOP FLUID UN/NA # : 1268

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365

Average Daily Amount 30 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : PETROLEUM SOLVENT
CAS # : 64742-47-8 % WT : 30-60

2 . Name :
CAS # : % WT :

3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : NITROGEN   CAS # : 7727-37-9
Chemical Name : NITROGEN   UN/NA # : 1977

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [X]

Maximum Daily Amount 304   # Days on Site : 365
Average Daily Amount 304   Largest Container on-sit (Amount): 304

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
8	L	2	4	WEST SIDE OF BLDG. 2 BY FAB SHOP

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : NITROGEN
   CAS # : 7727-37-9   % WT : 100
2. Name :
   CAS # :   % WT :
3. Name :
   CAS # :   % WT :

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR   SIGNATURE :   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :LUBRIZOL 5178 CAS # : ____________
Chemical Name :Antiwear Hydraulic Oil Additive UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365
Average Daily Amount 50 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
7	E	1	4	DRUM STORAGE AREA, BLDG. 7

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : Zinc Dithiophosphate
CAS # : 19210-05-1 % WT : 30-60
2 . Name : Butylated Phenol
CAS # : ____________ % WT : 10-30
3 . Name : ____________
CAS # : ____________ % WT : ____________

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : AMMONIUM HYDROXIDE   CAS # : 1336-21-6

Chemical Name : Ammonium Hydroxide   UN/NA # : ____

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ]   If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X]   Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 500   # Days on Site : 365

Average Daily Amount 500   Largest Container on-sit (Amount): 500

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
2	N	1	4	Metlab-across from fumehood
				upper cabinet

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : Ammonium hydroxide
CAS # : 1336-21-6   % WT : 20-30

2 . Name : Water
CAS # : ____   % WT : 70-80

3 . Name : ____
CAS # : ____   % WT : ____

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :SHELL TELLUS T OIL 46 CAS # :
Chemical Name :PETROLEUM HYDROCARBON UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 10,000 # Days on Site : 365
Average Daily Amount 8,000 Largest Container on-sit (Amount): 10,000

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	A	1	4	TANK FARM BETWEEN BLDG. 6 & 7

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : SOLVENT REFINED HYDROTREATED HEAVY PARAFFINIC DISTILLATE
CAS # : 64742-54-7 % WT : >95
2. Name : ADDITIVE PACKAGE
CAS # : % WT : <5
3. Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : SHELL TURBO T OIL 68   CAS # :
Chemical Name : PETROLEUM HYDROCARBONS   UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55   # Days on Site : 365
Average Daily Amount 30   Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : SOLVENT REFINED HYDROTREATED HEAVY PARAFFINIC DISTILLATE
   CAS # : 64742-54-7   % WT : 99
2. Name : MINOR ADDITIVES
   CAS # :   % WT : <1
3. Name :
   CAS # :   % WT :

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR   SIGNATURE :   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : BIOBAN TS   CAS # : ____________

Chemical Name : Substituted Amine   UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55   # Days on Site : 365

Average Daily Amount 50   Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	Drum storage area, bldg. 7

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : 4-(2-Nitrobutyl) Morpholine
CAS # : 2224-44-4   % WT : 31

2 . Name : 4,4'-(2-Ethyl-2Nitrotrimethylene) Dimorpholine
CAS # : 1854-23-5   % WT : 9

3 . Name : Tripropylene Glycol Methyl Ether
CAS # : 20324-33-8   % WT : 55

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : AMMONIUM FLUORIDE   CAS # : 12125-01-8

Chemical Name : Neutral Ammonium Fluoride   UN/NA # : UN 2505

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] grams

Maximum Daily Amount 500   # Days on Site : 365
Average Daily Amount 500   Largest Container on-sit (Amount): 500

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	Metlab-under fumehood, Rt. cabinet

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : Ammonium fluoride
   CAS # : 12125-01-8   % WT : 90-100
2. Name : ____________
   CAS # : ____________   % WT : ____________
3. Name : ____________
   CAS # : ____________   % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :UNOCAL WAY OIL HD 68 CAS # : ____________

Chemical Name :PETROLEUM HYDROCARBONS UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 110 # Days on Site : 365

Average Daily Amount 90 Largest Container on-site (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : INDUSTRIAL OILS
CAS # : ____________ % WT : 100

2. Name : ____________
CAS # : ____________ % WT : ____________

3. Name : ____________
CAS # : ____________ % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

2

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : MOBIL DTE 24 CAS # :

Chemical Name : REFINED MINERAL OILS UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 110 # Days on Site : 365

Average Daily Amount 85 Largest Container on-site (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : REFINED MINERAL OILS
   CAS # : SEQ-73-1 % WT : >95
2. Name : ADDITIVES/OTHERS
   CAS # : % WT : <5
3. Name :
   CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

2

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : SHELL AUTOMATIC TRANSMISSION FLUID DEXRON II   CAS # : ____________

Chemical Name : PETROLEUM HYDROCARBON   UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365

Average Daily Amount 40 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : SOLVENT REFINED HYDROTREATED HEAVY PARAFFINIC DISTILLATE
   CAS # : 64742-54-7 % WT : 35-65
2. Name : SOLVENT REFINED HYDROTREATED MIDDLE DISTILLATE
   CAS # : 64742-46-7 % WT : 0-36
3. Name : SEVERELY HYDROTREATED LIGHT NAPHTHENIC DISTILLATE
   CAS # : 64742-53-6 % WT : 0-36

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

2

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :MOBIL DELVAC 1230 CAS # :
Chemical Name :REFINED MINERAL OILS UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365
Average Daily Amount 30 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	D	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : HEAVY PARAFFINIC DISTILLATES, RESIDUAL OILS, LUBE OILS
CAS # : 64742-54-7 % WT : >90
2 . Name : POLYOLEFIN AMIDE ALKENEAMINE
CAS # : 86-903 % WT : <3
3 . Name : HOMOPOLYMER BUTENE
CAS # : 9003-29-6 % WT : <2

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

2

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :HYDROGEN PEROXIDE 35% CAS # : 7722-84-1

Chemical Name :Hydrogen Peroxide UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 1 # Days on Site : 365

Average Daily Amount 1 Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
2	N	1	4	Metlab-under fume hood
				left cabinet

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : Hydrogen Peroxide
CAS # : 7722-84-1 % WT : 35

2 . Name : Water
CAS # : % WT : 65

3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

2

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :DARACOOL 706LF
CAS # :
Chemical Name :WATER BASED SYNTHETIC METALWORKING FLUID
UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 165
Average Daily Amount 110
Days on Site : 365
Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	E	1	4	DRUM STORAGE BUILDING

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : HEXYLENE GLYCOL
CAS # : 107-41-5 % WT : <5

2 . Name : Water
CAS # : % WT : >95

3 . Name :
CAS # : % WT :

Certification :

NAME : HOLLY M. SINCLAIR SIGNATURE : DATE : 11/18/93 TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :ACETIC ACID, GLACIAL CAS # : 64-19-7

Chemical Name :SAME UN/NA # : UN 2789

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [X] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] liters

Maximum Daily Amount 5 # Days on Site : 365

Average Daily Amount 5 Largest Container on-sit (Amount): 2

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
2	M	1	4	Metlab-under fume hood
				left cabinet

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : ACETIC ACID, GLACIAL
CAS # : 64-19-7 % WT : 90-100

2 . Name :
CAS # : % WT :

3 .Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :SHELL OMALA OIL 680 CAS # :
Chemical Name :PETROLEUM HYDROCARBONS UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 110 # Days on Site : 365
Average Daily Amount 80 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
7	D	1	4	DRUM STORAGE BLDG.

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : SOLVENT DEWAXED RESIDUAL OIL
CAS # : 64742-62-7 % WT : 17-47

2 . Name : SOLVENT REFINED HYDROTREATED RESIDUAL OIL
CAS # : 64742-57-0 % WT : 50-80

3 .Name : MINOR ADDITIVES
CAS # : % WT : <3

Certification :

NAME : HOLLY M. SINCLAIR SIGNATURE : DATE : 11/18/93
TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : ACETONE   CAS # : 67-64-1
Chemical Name : SAME   UN/NA # : UN 1090

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] liters

Maximum Daily Amount 8   # Days on Site : 365
Average Daily Amount 8   Largest Container on-sit (Amount): 2

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
2	M	1	4	STORED IN FLAMMABLE CABINET OUTSIDE
				OF SHIPPING/RECEIVING OFFICE

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : ACETONE
   CAS # : 67-64-1   % WT : 90-100
2. Name : ____________
   CAS # : ____________   % WT : ____________
3. Name : ____________
   CAS # : ____________   % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

2

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : AMMONIUM CHLORIDE — CAS # : 12125-02-9
Chemical Name : SAME — UN/NA # : NA 9085

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] Kg

Maximum Daily Amount 10 — # Days on Site : 365
Average Daily Amount 7 — Largest Container on-sit (Amount): 500 g.

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	M	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : AMMONIUM CHLORIDE
CAS # : 12125-02-9 % WT : 99-100
2 . Name :
CAS # : % WT :
3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : METHYL ALCOHOL CAS # : 67-56-1
Chemical Name : METHANOL UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ] liters

Maximum Daily Amount 3 # Days on Site : 365
Average Daily Amount 2 Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	M	1	4	STORED IN FLAMMABLE CABINET OUTSIDE
				OF SHIPPING/RECEIVING AREA

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : METHANOL
CAS # : 67-56-1 % WT : 100
2 . Name :
CAS # : % WT :
3 . Name :
CAS # : % WT :

Certification :

NAME : HOLLY M. SINCLAIR SIGNATURE : DATE : 11/18/93
TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : OXALIC ACID, CRYSTALS CAS # : 6153-56-6
Chemical Name : ETHANEDIOIC ACID, CRYSTALS UN/NA # :

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 1 # Days on Site : 365
Average Daily Amount 0.5 Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : OXALIC ACID
CAS # : 6153-56-6 % WT : 100
2 . Name :
CAS # : % WT :
3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

3

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :HYDROCHLORIC ACID CAS # : 7647-01-1

Chemical Name :Hydrochloric acid UN/NA # : UN 1789

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [X]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] liters

Maximum Daily Amount 10 # Days on Site : 365

Average Daily Amount 5 Largest Container on-sit (Amount): 2

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
2	M	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : HYDROCHLORIC ACID
CAS # : 7647-01-0 % WT : 33-40

2. Name : water
CAS # : 7732-18-5 % WT : 60-67

3. Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

3

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED: ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :HYDROFLUORIC ACID CAS # : 7664-39-3
Chemical Name :Hydrofluoric acid UN/NA # : UN 1790

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [X]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] ml

Maximum Daily Amount 500 # Days on Site : 365
Average Daily Amount 500 Largest Container on-sit (Amount): 500

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
2	N	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : HYDROFLUORIC ACID
CAS # : 7664-39-3 % WT : 45-55
2 . Name : water
CAS # : 7732-18-5 % WT : 45-55
3 . Name : ____________
CAS # : ____________ % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

3

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____
FACILITY ID # : ____

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : MIRACLE FORGE 7600 CAS # : ____

Chemical Name : Non-Graphite Water Based Lubricant UN/NA # : ____

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365

Average Daily Amount 45 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	E	1	4	DRUM STORAGE AREA

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : ____
CAS # : ____ % WT : ____

2 . Name : ____
CAS # : ____ % WT : ____

3 . Name : ____
CAS # : ____ % WT : ____

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :AMMONIUM BIFLUORIDE CAS # : 1341-49-7
Chemical Name :Ammonium bifluoride UN/NA # : UN 1727

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [X]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] grams

Maximum Daily Amount 2,000 # Days on Site : 365
Average Daily Amount 1,500 Largest Container on-sit (Amount): 500

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
2	M	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : AMMONIUM BIFLUORIDE
   CAS # : 1341-49-7 % WT : 90-100
2. Name :
   CAS # : % WT :
3. Name :
   CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

3

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :NITRIC ACID CAS # : 7697-37-2
Chemical Name :SAME UN/NA # : UN 2031

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [X] Reactive [X] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [X] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] liters

Maximum Daily Amount 10 # Days on Site : 365
Average Daily Amount 5 Largest Container on-sit (Amount): 2

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
2	M	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : NITRIC ACID
CAS # : 7697-37-2 % WT : 65-71
2 . Name : water
CAS # : 6632-18-5 % WT : 29-35
3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : POTASSIUM HYDROXIDE   CAS # : 1310-58-3
Chemical Name : SAME   UN/NA # : UN 1813

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 2   # Days on Site : 0
Average Daily Amount 1   Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS :

(use codes provided)

Location #	C	P	T	Location Descriptioı
2	N	1	4	UPPER METLAB CABINET ADJACENT TO
				FUME HOOD

MIXTURE :

List the three most Hazardous Components (by weight)

1. Name : POTASSIUM HYDROXIDE
   CAS # : 1310-58-3   % WT : 85-100
2. Name : ____________
   CAS # : ____________   % WT : ____________
3. Name : ____________
   CAS # : ____________   % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :POTASSIUM FERRICYANIDE CAS # : 13746-66-2

Chemical Name :SAME UN/NA # :

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 1 # Days on Site : 365

Average Daily Amount 0.8 Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	STORED IN UPPER METLAB CABINET
				ADJACENT TO FUME HOOD

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : POTASSIUM FERRICYANIDE
CAS # : 13746-66-2 % WT : 100

2 . Name :
CAS # : % WT :

3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

3

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : SODIUM HYDROXIDE   CAS # : 1310-73-2
Chemical Name : Sodium Hydroxide   UN/NA # : ____

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] Kg

Maximum Daily Amount 5   # Days on Site : 365
Average Daily Amount 5   Largest Container on-sit (Amount): 2

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioi
2	N	1	4	Metlab-across from fume hood
				upper cabinet

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : Sodium Hydroxide
CAS # : 1310-73-2   % WT : 100
2 . Name : ____
CAS # : ____   % WT : ____
3 . Name : ____
CAS # : ____   % WT : ____

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR   SIGNATURE : ____   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

3

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :ACETYLENE CAS # : 74-86-2

Chemical Name :Acetylene UN/NA # : UN 1001

Solid [ ] Liquid [ ] Gas [X] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [X]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [X]

Maximum Daily Amount 300 # Days on Site : 365

Average Daily Amount 300 Largest Container on-sit (Amount): 300

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
8	L	2	4	Stored outside of Maintenance
				Fabrication Shop, West wall of
				Bldg. 2

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : Acetylene
CAS # : 74-86-2 % WT : 100

2 . Name :
CAS # : % WT :

3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : SODIUM THIOSULFATE CAS # : 7772-98-7

Chemical Name : Sodium Thiosulfate, solutions UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] liters

Maximum Daily Amount 1 # Days on Site : 365

Average Daily Amount 1 Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	Metlab-across from fume hood
				upper cabinet

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : Sodium thiosulfate
   CAS # : 7772-98-7 % WT : 2-3
2. Name : Sodium carbonate, anhydrous
   CAS # : 497-19-8 % WT : <.1
3. Name : water
   CAS # : 7732-18-5 % WT : 97-98

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

4

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :AMMONIUM SULFATE   CAS # : 7783-20-2

Chemical Name :Ammonium sulfate   UN/NA # : ____________

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 1   # Days on Site : 365

Average Daily Amount 1   Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : AMMONIUM SULFATE
CAS # : 7783-20-2   % WT : 100

2 . Name : ____________
CAS # : ____________   % WT : ____________

3 . Name : ____________
CAS # : ____________   % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

4

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : AMMONIUM PERSULFATE CAS # : 7727-54-0

Chemical Name : SAME UN/NA # : ____________

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [X] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 2 # Days on Site : 365

Average Daily Amount 1 Largest Container on-site (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : AMMONIUM PERSULFATE
   CAS # : 7727-54-0 % WT : 100
2. Name : ____________
   CAS # : ____________ % WT : ____________
3. Name : ____________
   CAS # : ____________ % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

4.

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :CUPRIC SULFATE CAS # : 7758-99-8

Chemical Name :SAME UN/NA # :

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked,

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries) Annual Amount Generated : 0

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 1 # Days on Site : 365

Average Daily Amount 0 Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	STOREDIN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : CUPRIC SULFATE
CAS # : 7758-99-8 % WT : 100

2 . Name :
CAS # : % WT :

3 .Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

4

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : ETHYL ALCOHOL   CAS # : 64-17-5
Chemical Name : ETHANOL   UN/NA # : UN 1170

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :
Toxic [ ] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :
PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]
HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :
UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] liters
Maximum Daily Amount 10   # Days on Site : 365
Average Daily Amount 8   Largest Container on-sit (Amount): 2

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	M	1	4	STORED IN FLAMMABLE CABINET OUTSIDE
				OF SHIPPING/RECEIVING OFFICE

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : ETHANOL
CAS # : 64-17-5   % WT : 90-100
2. Name : ISOPROPYL ALCOHOL
CAS # : 67-63-0   % WT : >1
3. Name : METHYL ALCOHOL
CAS # : 67-56-1   % WT : >1

Certification :
DATE : 11/18/93
NAME : HOLLY M. SINCLAIR   SIGNATURE :   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : CUPRIC CHLORIDE, DIHYDRATE   CAS # : 13933-17-0
Chemical Name : SAME   UN/NA # : UN 2811

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 19   # Days on Site : 365
Average Daily Amount 7   Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	N	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : CUPRIC CHLORIDE
   CAS # : 13933-17-0   % WT : 90-100
2. Name : ____________
   CAS # : ____________   % WT : ____________
3. Name : ____________
   CAS # : ____________   % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR   SIGNATURE : ____________   TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : LACTIC ACID CAS # : 50-21-5

Chemical Name : 2-HYDROXYPROPANOIC ACID UN/NA # : ____________

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] ml

Maximum Daily Amount 500 # Days on Site : 365

Average Daily Amount 500 Largest Container on-sit (Amount): 500

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	M	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : LACTIC ACID
CAS # : 50-21-5 % WT : 80-90

2. Name : water
CAS # : 7732-18-5 % WT : 10-20

3. Name : ____________
CAS # : ____________ % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :HYDROGEN PEROXIDE 3% CAS # : 7722-84-1
Chemical Name :SAME UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [ ] Cu. Ft. [ ] ml

Maximum Daily Amount 500 # Days on Site : 365
Average Daily Amount 500 Largest Container on-site (Amount): 500

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
2	M	1	4	STORED IN METLAB CABINET UNDER SINK

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : HYDROGEN PEROXIDE
CAS # : 7722-84-1 % WT : 3
2. Name : Water
CAS # : % WT : 97
3. Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

4

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :DARACLEAN 283 CAS # :
Chemical Name :AQUEOUS ALKALINE CLEANER UN/NA # : UN 1824

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [X] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 110 # Days on Site : 365
Average Daily Amount 70 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	D	1	4	DRUM STORAGE AREA

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : SODIUM HYDROXIDE
CAS # : 1310-73-2 % WT : <2
2 . Name : Water
CAS # : % WT : >98
3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

4

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :ISOGUARD CAS # :

Chemical Name :Cooling Water Treatment Compound UN/NA # :

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365

Average Daily Amount 50 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
7	E	1	4	DRUM STORAGE AREA, BLDG. 7

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : Sodium Nitrate
CAS # : 7632-00-0 % WT : <15

2 . Name : Potassium Hydroxide
CAS # : 1310-58-3 % WT : <2

3 . Name :
CAS # : % WT :

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : STAINLESS STEEL CAS # : ____________

Chemical Name : same UN/NA # : ____________

Solid [X] Liquid [ ] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 500,000 # Days on Site : 365

Average Daily Amount 450,000 Largest Container on-sit (Amount): 0

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
3	R	1	4	STORED IN STEEL YARD BEHIND BLDG. 3
				EXPOSURE INFO IS BASED ON FINELY
				DIVIDED PARTICLES, DUST, FUMES

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : CHROMIUM
CAS # : 7440-47-3 % WT : 10-27

2. Name : NICKEL
CAS # : 7440-02-0 % WT : 0-22

3. Name : IRON
CAS # : 7439-89-6 % WT : 39-81

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : COPPER   CAS # : 7440-50-8
Chemical Name : SAME   UN/NA # : ____________

Solid [X] Liquid [ ] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 480 # Days on Site : 365
Average Daily Amount 480 Largest Container on-sit (Amount): 0

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
3	R	1	4	STORED IN STEEL YARD BEHIND BLDG. 3
				EXPOSURE INFORMATION IS BASED ON
				DUST OR FUME EXPOSURE

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : COPPER
   CAS # : 7440-50-8 % WT : >99
2. Name : LEAD (LEADTEX COATING)
   CAS # : 7439-92-1 % WT : .05
3. Name : ____________
   CAS # : ____________ % WT : ____________

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :ALUMINUM CAS # : 7429-90-5
Chemical Name :Aluminum Alloys UN/NA # : ____________

Solid [X] Liquid [ ] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [X] Corrosive [ ] Reactive [X] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [X] Sudden Pressure Releas [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 2,300 # Days on Site : 365
Average Daily Amount 2,300 Largest Container on-sit (Amount): 0

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptio
3	R	1	4	STORED IN STEEL YARD BEHIND BLDG. 3
				HAZARD DESIGNATIONS ARE FOR CHIPS
				OR FINELY DIVIDED POWDERS.

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : ALUMINUM
   CAS # : 7429-90-5 % WT : 90-99
2. Name : LEAD
   CAS # : 7439-92-1 % WT : ≤.7
3. Name : COPPER
   CAS # : 7440-50-8 % WT : ≤10

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

5

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :CARBON & ALLOY STEELS CAS # :

Chemical Name :steel UN/NA # :

Solid [X] Liquid [ ] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 110,000 # Days on Site : 365

Average Daily Amount 106,000 Largest Container on-sit (Amount): 0

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
3	R	1	4	STORED IN STEEL YARD BEHIND BLDG. 3
				HAZARD DATA BASED ON EXPOSURE TO
				FINELY DIVIDED DUST, FUME.

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : IRON
   CAS # : 7439-89-6 % WT : 86-99
2. Name : CHROMIUM
   CAS # : 7440-47-3 % WT : <.4
3. Name : LEAD
   CAS # : 7439-92-1 % WT : <.1

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : TITANIUM CAS # : 13463-64-7

Chemical Name : Titanium Alloy UN/NA # : ____

Solid [X] Liquid [ ] Gas [ ] Pure [X] Mixture [ ] Waste [ ] If waste is checked, Annual Amount Generated : 0

Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [ ] Lbs. [X] Cu. Ft. [ ]

Maximum Daily Amount 40,000 # Days on Site : 365

Average Daily Amount 36,000 Largest Container on-site (Amount): 0

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
3	R	1	4	STORED IN STEEL YARD BEHIND BLDG. 3
				HAZARD DESIGNATIONS ARE FOR FINELY
				DIVIDED CHIPS RESULTING FROM
				GRINDING, CUTTING OR POLISHING
				WHILE WET.

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : TITANIUM
CAS # : 13463-67-7 % WT : 99

2 . Name : ____
CAS # : ____ % WT : ____

3 . Name : ____
CAS # : ____ % WT : ____

Certification :

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ DATE : 11/18/93

TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : DENATURED ALCOHOL   CAS # : 64-17-5
Chemical Name : Ethyl alcohol, anhydrous, denatured   UN/NA # : ____

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked,
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries) Annual Amount Generated : 0

WASTE CLASSIFICATION :

Toxic [ ] Ignitable [X] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [X] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [X] Delayed Health (Chronic) [X]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 1 # Days on Site : 365
Average Daily Amount 1 Largest Container on-sit (Amount): 1

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Descriptioı
2	M	1	4	Flammable cabinet outside of
				Shipping/Receiving office

MIXTURE : List the three most Hazardous Components (by weight)

1 . Name : methanol
CAS # : 67-56-1 % WT : 5
2 . Name : methyl isobutyl ketone
CAS # : 108-10-1 % WT : 1
3 . Name : ethanol
CAS # : 64-17-5 % WT : 92

Certification :

DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED : ____________
FACILITY ID # : ____________

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name : Mobil DTE 25 CAS # : ____________
Chemical Name : Refined mineral oils UN/NA # : UN 1270

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radioactive : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :

PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]

HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :

UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]

Maximum Daily Amount 55 # Days on Site : 365
Average Daily Amount 40 Largest Container on-sit (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	Drum storage building

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : Refined mineral oil
   CAS # : ____________ % WT : >95
2. Name : Additive package
   CAS # : ____________ % WT : <5
3. Name : ____________
   CAS # : ____________ % WT : ____________

Certification :

DATE : 11/18/93

NAME : HOLLY M. SINCLAIR SIGNATURE : ____________ TITLE : ENVIRONMENTAL ENGINEER

FOR ADMINSTRATIVE AGENCY USE :
DATE RECEIVED :
FACILITY ID # :

INVENTORY FORM

CHEMICAL DESCRIPTION

Common Name :Mobil Vactra #2 CAS # :
Chemical Name :Refined mineral oil UN/NA # : UN 1270

Solid [ ] Liquid [X] Gas [ ] Pure [ ] Mixture [X] Waste [ ] If waste is checked, Annual Amount Generated : 0
Trade Secret [ ] Radioactive [ ] (If radiocative : 0 Curries)

WASTE CLASSIFICATION :

Toxic [X] Ignitable [ ] Corrosive [ ] Reactive [ ] Extremely Hazardous [ ]

PHYSICAL AND HEALTH HAZARD CATEGORIES :
PHYSICAL: Fire [ ] Reactive [ ] Sudden Pressure Release [ ]
HEALTH: Immediate Health (Acute) [ ] Delayed Health (Chronic) [ ]

AMOUNT & TIME AT FACILITY :
UNITS OF MEASURE: Gals. [X] Lbs. [ ] Cu. Ft. [ ]
Maximum Daily Amount 90 # Days on Site : 365
Average Daily Amount 60 Largest Container on-site (Amount): 55

STORAGE CODES & LOCATIONS : (use codes provided)

Location #	C	P	T	Location Description
7	D	1	4	Drum storage building

MIXTURE : List the three most Hazardous Components (by weight)

1. Name : Refined mineral oil
CAS # : % WT : >95
2. Name : Additive package
CAS # : % WT : <5
3. Name :
CAS # : % WT :

Certification :
DATE : 11/18/93
NAME : HOLLY M. SINCLAIR SIGNATURE : TITLE : ENVIRONMENTAL ENGINEER

Appendix B

Phase II Environmental Site Assessment Report
for the
Kaiser-Hill Company LLC Oxnard Facility
Oxnard, California

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DOE\ID\12584-226
GJPO-OXN-01

Phase II Environmental Site Assessment Report for the Kaiser-Hill Company LLC Oxnard Facility, Oxnard, California

July 1995

U.S. Department of Energy
Grand Junction Projects Office

Work Performed Under DOE Contract No. DE-AC04-94AL96907 for the U.S. Department of Energy

Phase II Environmental Site Assessment Report for the Kaiser-Hill Company LLC Oxnard Facility, Oxnard, California

July 1995

Work Performed Under Contract No. DE-AC04-94AL96907

Prepared for
U.S. Department of Energy
Albuquerque Operations Office
Grand Junction Projects Office
P.O. Box 2567
Grand Junction, CO 81502-2567

Prepared by
Rust Geotech
Grand Junction, Colorado

Contents

Contents (continued)

Figures

Tables

1.0 Introduction

The Kaiser-Hill Company LLC Oxnard Facility (Oxnard facility) is a nonferrous metalworking facility occupying 13.75 acres at 1235 East Wooley Road, Oxnard, California (Figure 1). Owned by the U.S. Department of Energy (DOE) and operated by Kaiser-Hill Company LLC, the facility is located in an industrial park within the incorporated city limits of Oxnard and within Ventura County. Seven buildings enclose approximately 86,000 square feet of covered floor space (Figure 2). Bordering the facility are industrial maintenance, manufacturing, and agricultural packaging facilities.

Until Allis-Chalmers (a farm implement manufacturing company) purchased the property in 1949, the site was farmland. Allis-Chalmers built a plant consisting of six buildings and engaged in the activities of founding (foundry casting), forging, machining, welding, cutting, sanding, grinding, painting, and coating. In 1981, DOE helped Precision Forge (a private company that catered to DOE metalworking requirements) move from Santa Monica, California, to the Oxnard facility. By June 1982, Precision Forge completed the transfer to the Oxnard facility. In 1984, DOE acquired Precision Forge, and operated the facility through Rockwell International until 1989 when EG&G took over operations. Kaiser-Hill Company has operated the facility since the second quarter of 1995. Historically, metalworking at the Oxnard facility involved stainless steel, titanium, aluminum, and copper alloys. Presently, all metal working is with stainless steel, tantalum, molybdenum, and tungsten.

Site investigations conducted by Rust Geotech, the prime contractor for the DOE at the Grand Junction Projects Office (GJPO), started in June 1994 with an Environmental Site Assessment (ESA) Preliminary Evaluation site tour. Results of the Preliminary Evaluation indicated the need for a Phase I and Phase II ESA. A nonintrusive site inspection and data gathering effort in August 1994 resulted in a Phase I ESA report entitled *Phase I Environmental Site Assessment for the EG&G Rocky Flats Oxnard Facility* (Phase I ESA) (DOE 1994a). Conclusions and recommendations described in the Phase I ESA report formed the basis for the Phase II intrusive ESA investigation, which was conducted in January and February 1995 and is the focus of this report.

The primary purpose of the Phase II ESA was to investigate areas of the facility considered to be potentially contaminated with regulated substances. These areas required a "due diligence" investigation as described in *Site Auditing: Environmental Assessment of Property* (Marburg Associates and Parkin 1991) so that contaminated media, if present, could be identified and accounted for before real estate transfer. Specific objectives of the investigation were:

- To assess the location and type of asbestos and asbestos-containing material (ACM) at the facility.

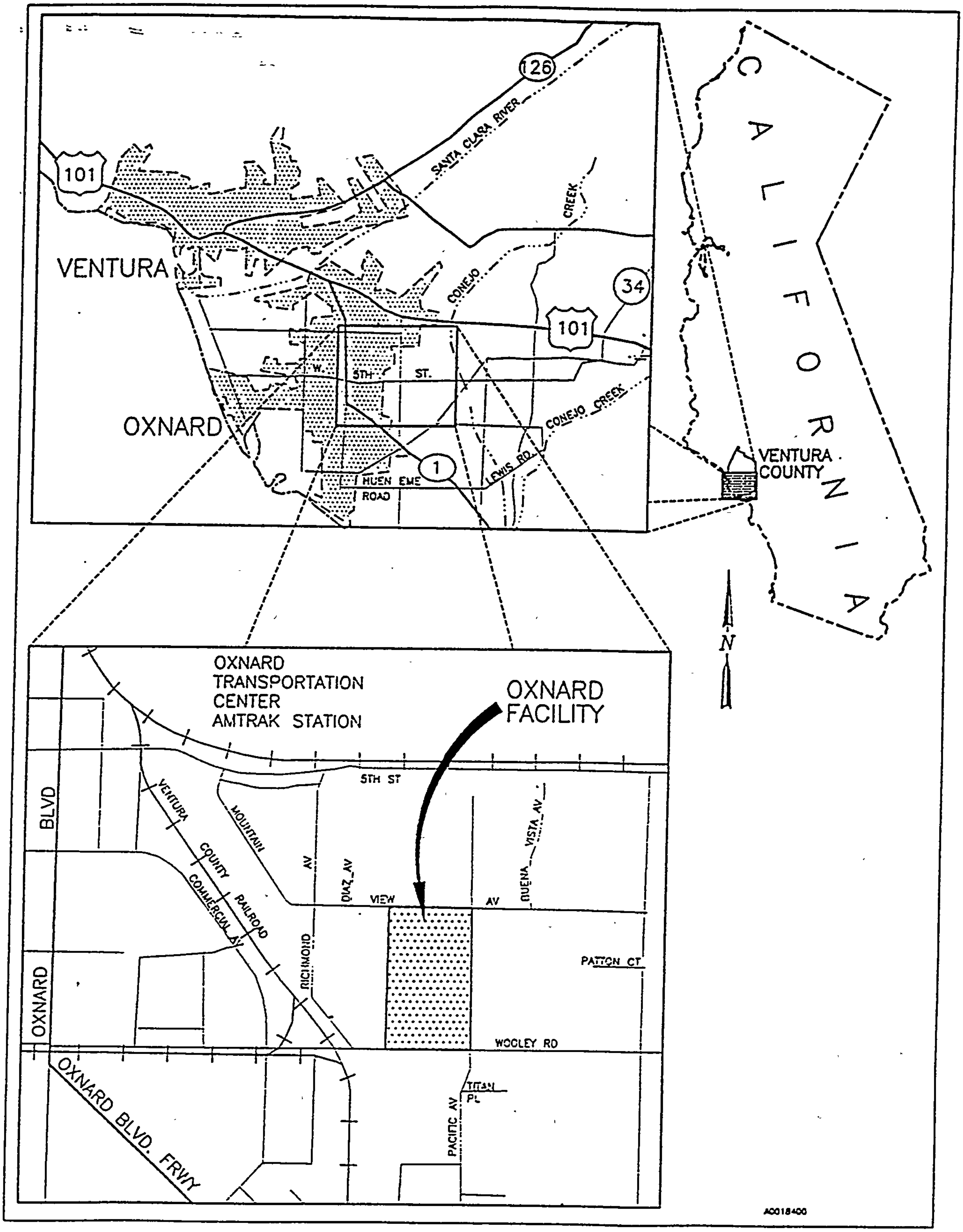

Figure 1. Location of the Oxnard Facility in Oxnard, California

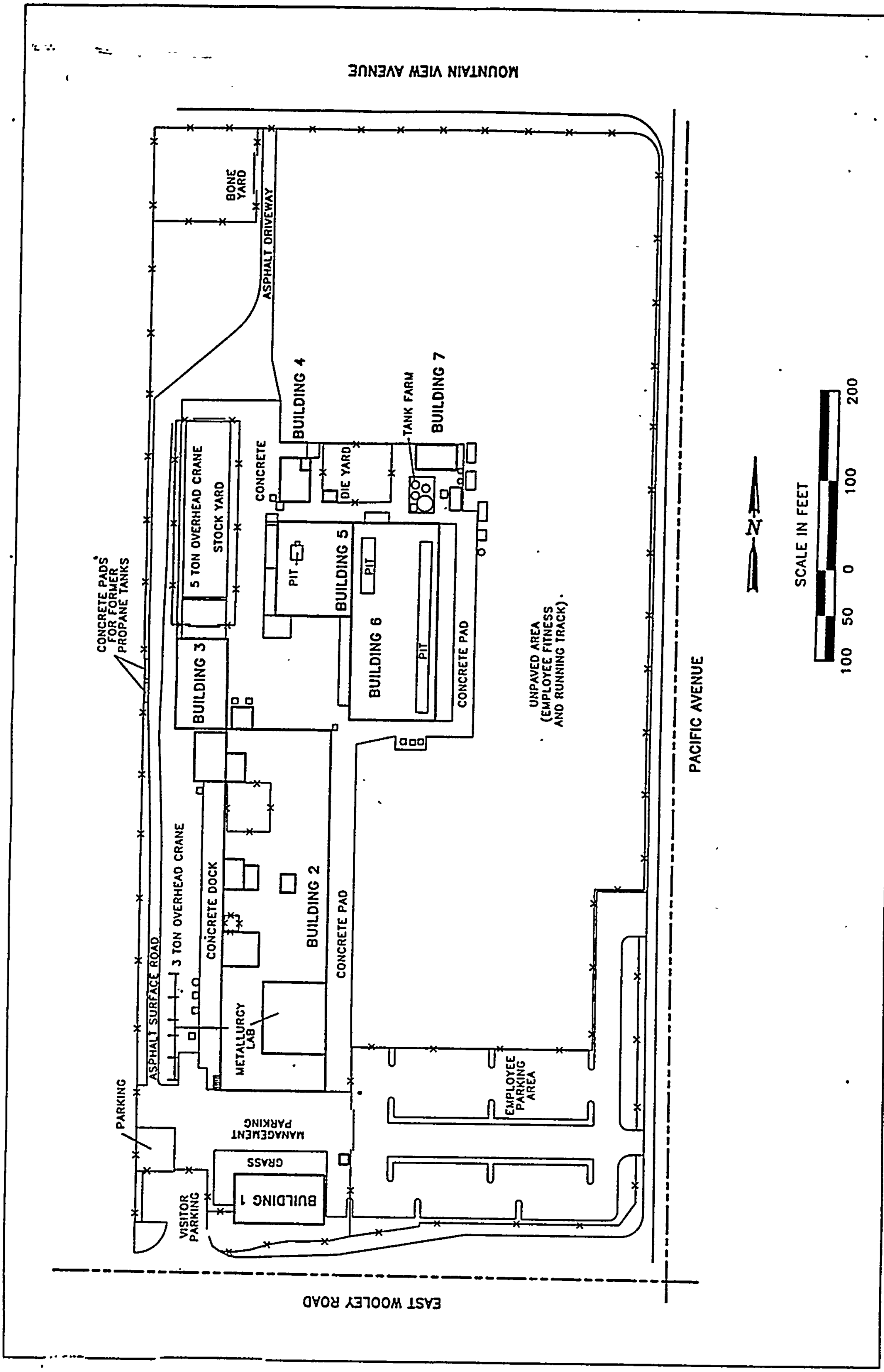

Figure 2. Site Layout of the Oxnard Facility

- To assess if groundwater quality at the facility has been affected by on-site and off-site activities.

- To assess if soils at the Oxnard facility have been affected by on-site activities.

- To assess if radiological contamination has occurred in areas where finished products have been returned from contaminated sites.

- To assess the composition of process oil and sludges formed in various collection systems so that waste disposal options and costs associated with facility decommissioning can be identified.

This report is divided into six sections. Section 1.0 describes the types of work performed at the Oxnard facility and the objectives of this Phase II ESA; Section 2.0 provides the regulatory framework used to make decisions from the collected data; Section 3.0 presents the results of the intrusive field investigation and discusses the results in the context of the regulatory framework; Section 4.0 discusses risk assessment; Section 5.0 provides recommendations for addressing health and environmental issues before real estate transfer; and Section 6.0 is a list of references used in this document.

2.0 Regulatory Framework

The National Environmental Policy Act (NEPA) (DOE 1994b) requires consideration be given to environmental factors in the Federal decision-making process. A NEPA checklist was prepared for Phase II ESA activities, which were determined by the DOE Albuquerque Operations Office to be categorically excluded from the requirement to prepare NEPA documentation in the form of either an environmental assessment or an environmental impact statement.

Laboratory analytical work was performed by Truesdail Laboratories, Inc., in Tustin, California. This laboratory is certified by the California Environmental Laboratory Accreditation Program in the methods used to analyze samples collected during the Phase II ESA.

2.1 Asbestos

The Toxic Substances Control Act, 40 CFR 763 [U.S. Environmental Protection Agency (EPA) 1994a], establishes requirements concerning the inspection, control, storage, and disposal of asbestos and ACM. The State of California regulates asbestos worker certification, safety, registration, and asbestos emissions through: Title 8, CAL/OSHA, Section 341.15, "Certification of Asbestos Consultants and Site Surveillance Technicians" (Bureau of National Affairs [BNA] 1995a); Title 8, CAL/OSHA, Section 1529, "Asbestos" (BNA 1995b); Title 8, CAL/OSHA, Section 341.6, "Registration Requirements" (BNA 1995c); and Ventura County Air Pollution Control District Rule 62.7, "Asbestos Renovation and Demolition" (BNA 1995d). Asbestos inspection activities were conducted in compliance with these regulations.

2.2 Groundwater

Title 22, California Code of Regulations, Division 4.5, Chapter 15, Section 66265.97 (Barclays Law Publishers 1990a), provides guidance for groundwater quality monitoring. Groundwater analytical data were evaluated statistically according to the procedures detailed in this regulation to determine if water quality has been degraded by on-site activities. Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4, Section 64431 (Barclays Law Publishers 1990b), provides standards that were used to evaluate groundwater quality.

Groundwater analytical data also were compared to standards set forth in Title 22, California Code of Regulations, Division 4.5, Chapter 11, Article 3, Section 66261.24 (Barclays Law Publishers 1990c), to determine if the groundwater containerized during monitoring well development and purging is considered hazardous waste.

2.3 Soil

Analytical data from composite soil samples also were compared to standards set forth in Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 (Barclays Law Publishers 1990c), to determine if borehole cuttings containerized during drilling operations are considered hazardous waste.

An assessment of risk to human health that is due to exposure to contaminated soils was conducted according to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) risk assessment process detailed in *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A)* (EPA 1989).

2.4 Sludge/Oil

Sludge/oil analytical data also were compared to standards set forth in Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 (Barclays Law Publishers 1990c), to determine if sludge and oil are considered hazardous waste. An assessment of risk to human health that is due to exposure to sludges and oil was conducted according to the CERCLA risk assessment process detailed in *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A)* (EPA 1989).

3.0 Field Investigation Results

3.1 Asbestos

A preliminary inspection for friable and nonfriable ACM was performed at the Oxnard facility from February 6 through 9, 1995, to determine the presence of ACM. Suspect ACM was sampled for bulk analysis in accordance with the *Work Plan/Sampling and Analysis Plan for the Phase II ESA of the EG&G Rocky Flats Oxnard Facility, Oxnard, California* (Work Plan/SAP) (DOE 1994c) and the regulations listed in Section 2.1 of this report.

3.1.1 Terminology

Asbestos is the asbestiform variety of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite (amosite), anthophyllite, actinolite, or tremolite. ACM includes both friable and nonfriable material that contains more than 1-percent asbestos as determined by the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM)(EPA 1994a).

A friable ACM can be crumbled, pulverized, or reduced to a powder by hand pressure when dry. A nonfriable ACM cannot be crumbled, pulverized, or reduced to a powder by hand pressure in its dry state. Nonfriable ACM is further described as either Category I or Category II. Category I includes asbestos-containing packings, gaskets, resilient floor covering (floor tile, including asphalt and vinyl floor tile and sheet vinyl floor covering), and asphalt roofing products that are not in poor condition and that contain more than 1-percent asbestos. Category I nonfriable ACM is exempted from the majority of the Air Pollution Control District rules as long as the material is removed, loaded, and transported in a manner that prevents the release of fibers and prevents the material from becoming friable. Category II material includes all nonfriable ACM not considered to be Category I.

Asbestos remediation (also known as abatement) includes the removal of ACM, abatement of asbestos-contaminated facility components, or facility renovation. Facility renovation means altering, removing, or stripping one or more facility components and includes retrofitting for fire protection and installing or removing heating, ventilating, and air conditioning (HVAC) systems. Wrecking or removing load-supporting structures is excluded.

Any waste generated by removal of ACM associated with demolition or renovation activities is considered asbestos-containing waste material.

3.1.2 Summary of Inspection Activities

Prior to the inspection of the Oxnard facility, a walk-through was conducted with Oxnard staff and management, and floor plans of the buildings to be included in the survey were examined. A sampling plan for each building was then developed. Surface materials, thermal system insulation (TSI), and miscellaneous materials on the exterior and interior of each building were inspected for the presence of suspect asbestos. The location and description of suspect materials assumed to be ACM were recorded, and the suspect materials were grouped into homogeneous sampling areas.

The Work Plan/SAP specifies criteria for determining the number of samples to be taken per homogeneous sampling area and the general locations necessary to obtain a representative sample. It was not within the scope of this inspection to determine the physical condition or potential for disturbance of ACMs or to conduct a hazard assessment.

The Work Plan/SAP also called for a diagram showing the areas to be sampled for friable and nonfriable ACM. Before sampling, a field inspection log was prepared specifying the project name, site name, location (building number), date and time, matrix sampled, inspection and sampler's name, container type, and number of samples collected. Inspection and sampling activities were recorded daily in the field inspection log.

ACM sampling was initiated by spreading a plastic drop cloth at the marked sampling location, labeling a plastic bag with appropriate information (i.e., identification number, sample name, date and time), and recording the sample information in the field inspection log. The sample location was moistened with amended water solution, and the sample was extracted with a clean knife, linoleum cutter, cork borer, or other appropriate tool. Once removed, the sample was placed into the bag and the bag was sealed; the extraction tools were cleaned, and the hole was filled (or cut) with caulk, tar, spackling or duct tape, as appropriate. Tools were decontaminated after each sample was collected. Decontamination material and personal protective equipment were bagged and stored as ACM at the end of the day.

3.1.3 Results

Laboratory analysis determined that ACM was present on the Oxnard facility. The Asbestos Summary Sheet (Appendix A) itemizes analytical results for each sample by homogeneous material, functional space, and asbestos content. Bulk asbestos sampling locations are shown in Figures A-1 to A-8 in Appendix A. The following subsections provide details of materials that contain asbestos. If results indicated the absence of ACM, the material and sampling location are not addressed.

3.1.3.1 Surfacing Materials

The only functional space with surface ACM is the Accounting Offices in Building 1. The homogeneous ACM is a sprayed-on, textured coating containing 1- to 3-percent chrysotile and 97- to 99-percent minerals, including mica and calcium carbonate. The coating is in excellent condition and is not in a friable or deteriorating state. This coating is on approximately 500 square feet of wall surface.

3.1.3.2 Thermal System Insulation

Six TSI areas exist at the Oxnard facility, specifically in Buildings 1, 2, and 6. This insulation is associated with either the HVAC system, located in Building 1, or the air exchangers associated with specific applications at the facility. TSI in Building 1 on the HVAC system piping immediately above the furnace is the only TSI that contains asbestos. This 2-foot-long piping sleeve is a grey, fibrous solid composed of calcium carbonate and silica, and it contains 24- to 28-percent chrysotile and 4- to 6-percent crocidolite asbestos fibers. It is in excellent condition and is not in a friable or deteriorating state.

3.1.3.3 Miscellaneous Materials

Miscellaneous materials sampled for asbestos at the Oxnard facility varied from floor and ceiling tiles to equipment insulation and tank gaskets.

Two functional spaces, the vault and lobby in Building 1, have 9-inch-square ACM vinyl floor tiles. The vault tile is a black, fibrous tile with 50- to 60-percent binder, 40- to 50-percent mineral, and 3- to 5-percent chrysotile asbestos fiber. The lobby tile is a tan, fibrous tile with 50- to 60-percent binder, 40- to 50-percent mineral, and 1- to 2-percent chrysotile asbestos fiber. The combined area of vinyl asbestos tile is approximately 700 square feet.

Storage cabinets in the metallurgical laboratory contain an interior front door fireproof sheathing—a grey, fibrous solid of 70- to 80-percent calcium carbonate and silica and 20- to 30-percent chrysotile asbestos fiber. Given the number of storage cabinets, the estimated area of sheathing is 500 square feet. Two miscellaneous laboratory materials not sampled were the analytical work benches and oven gloves, which are assumed to be ACM throughout the facility.

Several fibrous gaskets were sampled for asbestos. Two sets of gaskets containing asbestos were identified: the emersion heater gaskets in the lubrication stores building and the Lindberg furnace front door gasket in Building 6. The emersion heater gaskets are small, fibrous gaskets containing 30- to 40-percent binder and 60- to 70-percent chrysotile asbestos fiber. The furnace gasket is a small, green, tubular fibrous gasket containing 5- to 10-percent binder and 90- to 95-percent chrysotile asbestos fiber.

Window caulk in Building 6 is a calcium carbonate solid with 1- to 3-percent chrysotile asbestos fiber content. Although Building 2 window caulk was not identified as ACM, it is suspected to contain asbestos because Building 2 is 10 to 20 years older than Building 6; future bulk analysis of the Building 2 window caulk may be required.

On the basis of age, all electrical wiring insulation is assumed to be ACM. The brakes on the Cleveland presses also are assumed to be ACM on the basis of discussions with Oxnard facility staff.

3.2 Groundwater

3.2.1 Hydrogeology

3.2.1.1 Lithology

Lithologic information was obtained by drilling 16 boreholes (Figure 3) at the Oxnard facility during January and February 1995. Split-barrel samples collected from each borehole were used to describe and to document the lithologic sequence. Descriptions of the lithology were prepared for seven soil borings to a depth of 4.5 to 8 feet and for nine monitoring wells to a depth of 12 feet. Although monitoring wells were drilled to a depth of 18 feet, flowing sands encountered at approximately 12 feet prevented split-barrel sample collection below that point. In general, the shallow lithology beneath the Oxnard facility consists of 2 feet of dark brown, silty-sand topsoil with organic fragments overlying yellowish-brown, medium to coarse-grained, unconsolidated sands intermixed with pebbles and cobbles. Appendix B contains lithologic logs of the boreholes.

3.2.1.2 Groundwater Flow

Water-level elevations were measured in each of the monitoring wells in February 1995 after well development. These water levels were used to prepare the groundwater-elevation contour map in Figure 4. On the basis of this constructed map, groundwater flow in the shallow system is to the southwest, and the lateral hydraulic gradient is 0.002.

Slug testing data from the nine monitoring wells were analyzed by the method of Bouwer and Rice (1976) and Bouwer (1989). The range of hydraulic conductivities for the tests was 17 to 74 feet per day (ft/d); the arithmetic average was 38 ft/d, and the geometric mean was 33 ft/d. An average linear velocity of the shallow groundwater system was calculated as 0.22 ft/d by using an estimated effective porosity of 30 percent and the geometric mean of the hydraulic conductivities.

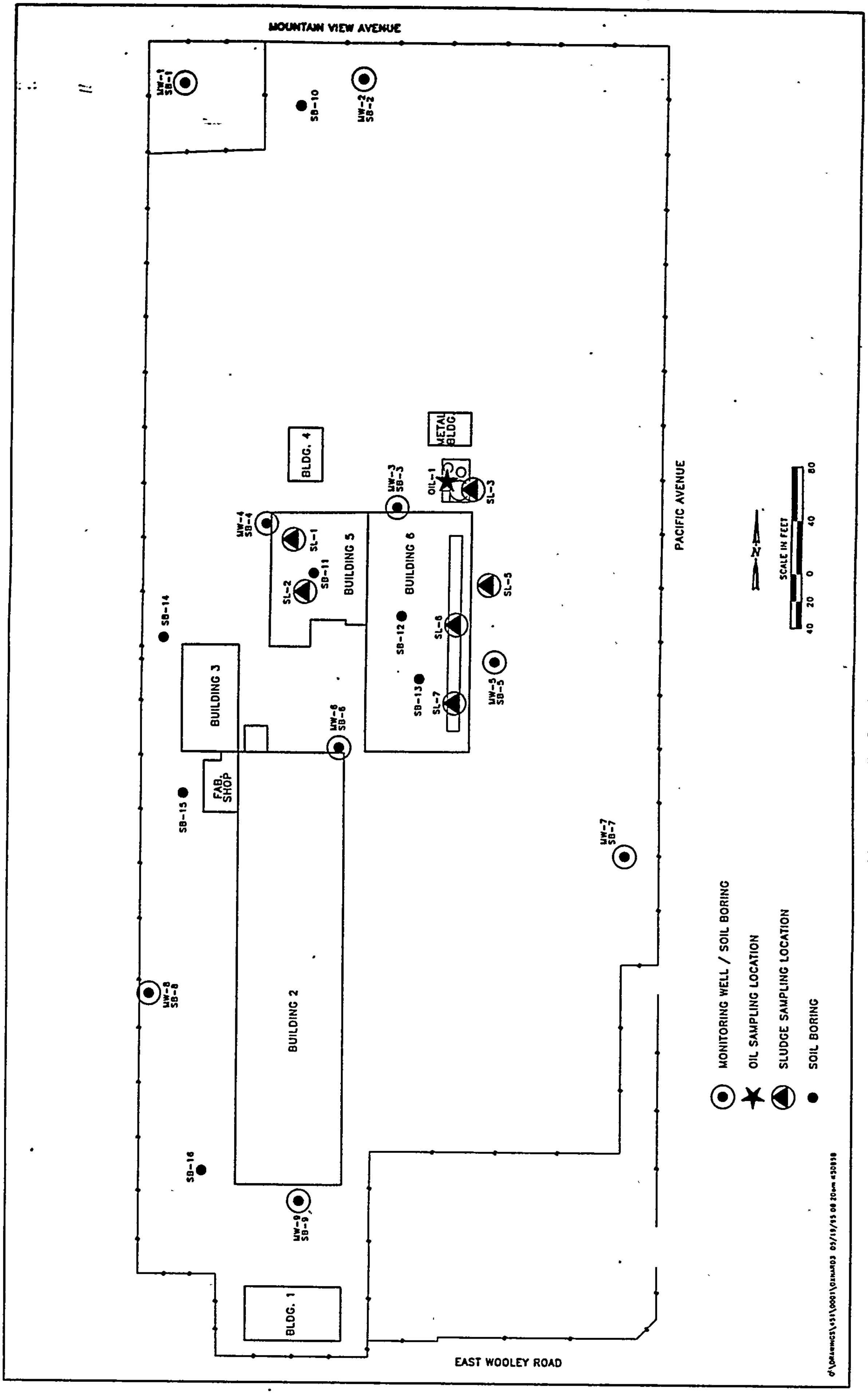

Figure 3. Sampling Locations at the Oxnard Facility

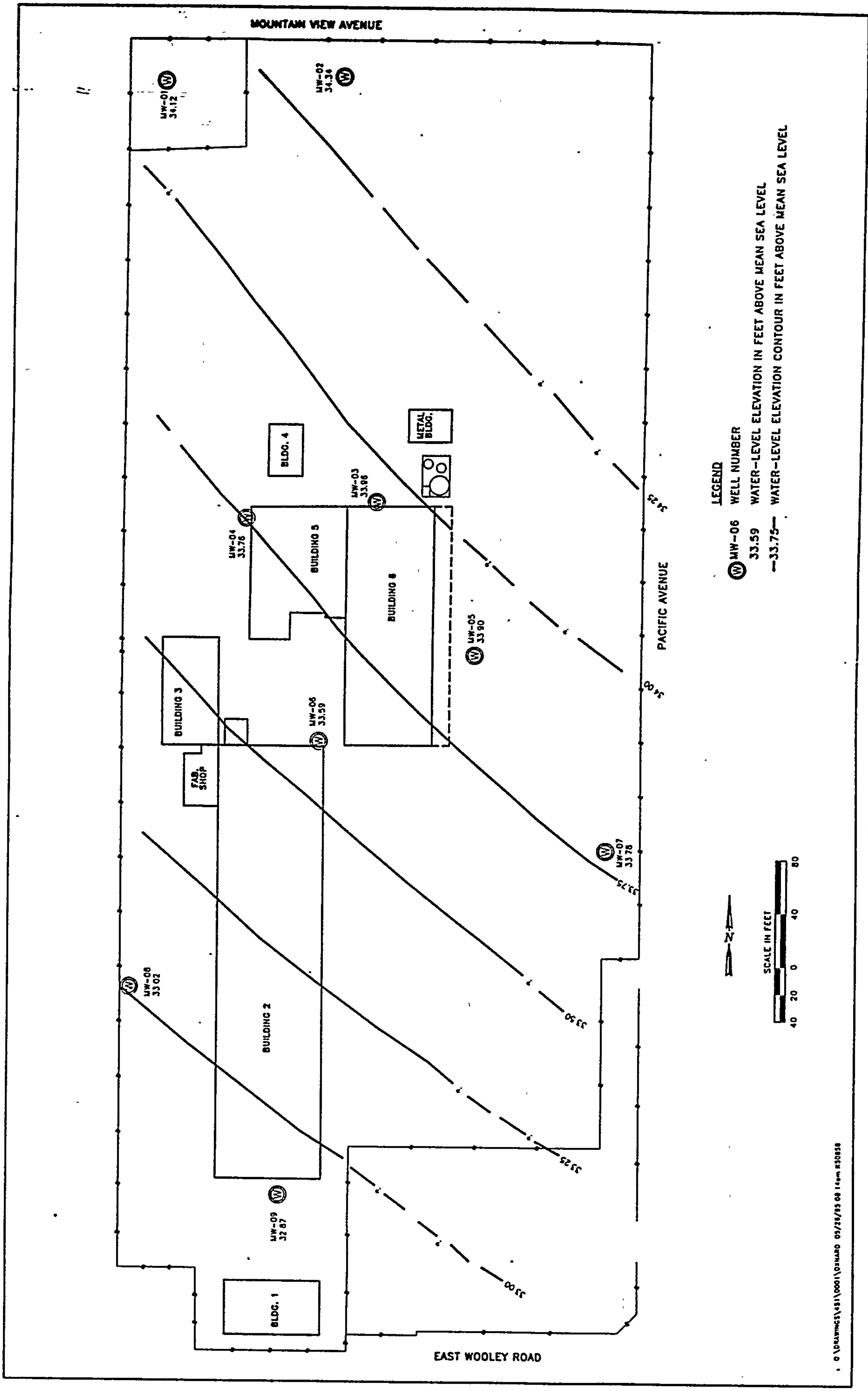

Figure 4. Groundwater Surface Contour Map

3.2.2 Groundwater Quality

The groundwater monitoring network was designed to investigate "areas of concern" identified in the Phase I ESA. Areas of concern are locations at the facility that have documented historical contamination, suspected historical contamination, or a potential for contaminant release from historical or current operations. Areas of concern are listed in Table 1 and are shown in Figure 5. The primary concerns for on-site groundwater impacts are leaking petroleum products from underground trenches, cellars, and tanks, and unknown contaminants from a historical trash pit under Building 6. Off-site sources possibly affecting groundwater are leaking petroleum or solvent tanks upgradient of the Oxnard facility.

Water quality samples were collected from nine monitoring wells (Figure 3) in February 1995. Groundwater samples were collected for inorganic analyses with a submersible pump or peristaltic pump; groundwater samples were collected for organic analyses with a submersible pump or a Teflon bailer. Sampling procedures are described in the Work Plan/SAP. Groundwater samples were analyzed for metals (Target Compound List [TCL] metals and molybdenum), TCL polychlorinated biphenyls (PCBs), TCL volatile organic compounds, and total petroleum hydrocarbons (TPH). A detailed analyte list is displayed in Appendix C. Analytical results of samples collected from groundwater monitoring wells are listed in Table D-1 in Appendix D.

Analytical results for groundwater samples demonstrate that organic compounds are not affecting the water quality of the shallow aquifer beneath the Oxnard facility. Concentrations of PCBs and TPH were below detection levels in all groundwater samples. With the exception of two organic compounds detected in a sample from MW-2, concentrations of volatile organic compounds also were below detection levels. Because groundwater downgradient of areas of concern did not have detectable concentrations of organic compounds, concerns involving on-site sources (such as leaking trenches, sumps, cellars, tanks, historical pits, and above ground storage spills of organics) have been alleviated.

Monitoring wells MW-2 and MW-7 were located in areas upgradient of the facility to investigate historical soil-gas detections of perchloroethylene (also referred to as tetrachloroethene) and to determine the effects of off-site activities. Perchloroethylene was below the detection level in all groundwater samples. Off-site activities apparently are not affecting the groundwater quality at the Oxnard facility. TPH in samples from the upgradient wells was below the detection level, which alleviates concern about leaking fuel tanks upgradient of the facility. Volatile organic compounds were not detected in the sample from MW-7, and only two volatile organic compounds were detected in the sample from MW-2; concentrations of 1,1,1-trichloroethane and 1,1-dichloroethane were detected at 14.5 μg/L and 4.77 μg/L, respectively. Although State of California drinking water standards (Barclays Law Publishers 1990b) are not applicable to the shallow groundwater beneath the Oxnard facility (shallow groundwater

Table 1. Oxnard Facility Areas of Concern

Area of Concern	Location	Potential Contaminants
1. Allis-Chalmers pit	Beneath Building 6	Metals, unknowns
2. Trench/sump and oil collection system	Building 6	Metals, hydraulic oil, PCBs
3. Bioremediation area	East of Building 6	Hydraulic oil, PCBs
4. PCB soil area	East of Building 6	PCBs
5. Perchloroethylene (PCE) soil-gas area	East side of facility	PCE
6. PCE soil-gas area	North side of facility	PCE
7. Oil collection system	Building 5	Metals, hydraulic oil, PCBs
8. Tank farm	North of Building 6	Metals, hydraulic oil, PCBs
9. Abandoned diesel UST	Outside of south side of Building 4	Diesel fuel
10. PCB soil area	East of the boneyard	PCBs
11. Boneyard	Northwest corner of the facility	PCBs, metals
12. Asphalt road	West side of facility and east of the boneyard	Miscellaneous oils, PCBs
13. Former trichloroethane aboveground storage tank	Southwest corner of Building 3	TCA
14. Metal cuttings in recycling bins	West side of Building 2	Metals, miscellaneous oils
15. Used oil-filter storage area	West side of Building 2	Metals, miscellaneous oils
16. Metal slag on ground	West of dock next to Building 2	Metals
17. Loading dock	Outside of southwest corner of Building 2	Organics, hydraulic oils, unknowns
18. Metallurgy laboratory	South portion of Building 2	Metals
19. Cyclone and baghouse	Buildings 4 and 5	Metals
20. Duct work	Building 1	Asbestos
21. Vault area	Building 1	Asbestos

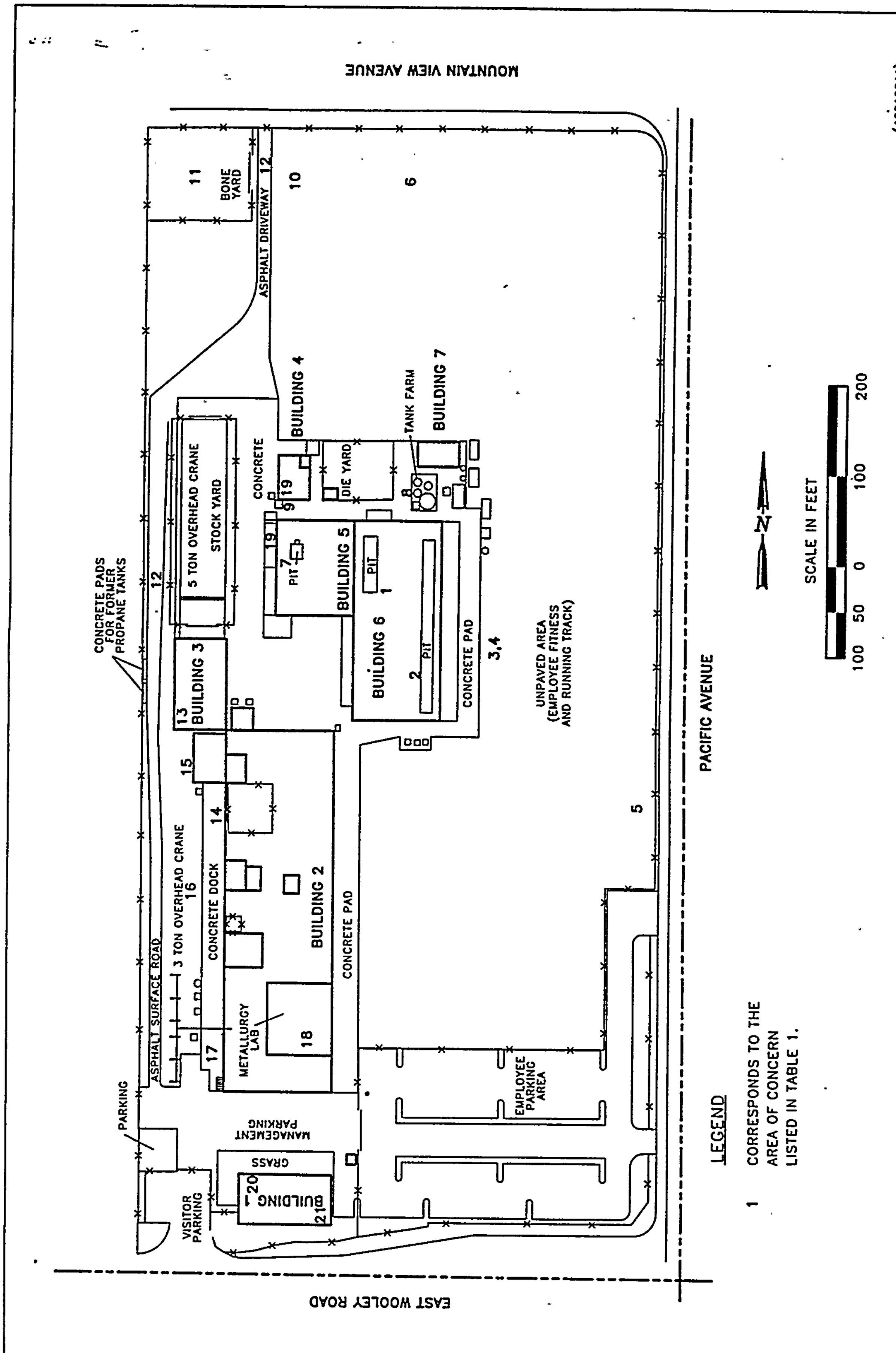

Figure 5. Areas of Concern at the Oxnard Facility

is not used for drinking), they provide a basis for evaluating water quality. The concentrations of the two volatile organic compounds detected are below State drinking water standards and, therefore, do not have a significant effect on water quality.

Analyses of groundwater samples for metals also indicate minimal effect to the shallow aquifer. Silver, arsenic, beryllium, cadmium, cobalt, chromium, copper, mercury, nickel, antimony, selenium, thallium, and vanadium occur in concentrations near or below detection limits and are not considered contaminants in the groundwater. Metals detected in the groundwater (aluminum, lead, iron, zinc) were evaluated statistically using methods described in Section 66265.97 of Title 22 of the California Code of Regulations (Barclays Law Publishers 1990a) to determine if metal concentrations in areas of concern were statistically higher than background metal concentrations. Monitoring wells MW-2 and MW-7 were used as background wells for this analysis. Concentrations of aluminum (MW-1 and MW-6), iron (MW-1 and MW-6), lead (MW-9), and zinc (MW-4 and MW-6) were statistically higher than background concentrations; maximum concentrations of these metals were 2.69 milligrams per liter (mg/L) of aluminum in MW-1, 4.54 mg/L of iron in MW-1, 0.082 mg/L of lead in MW-9, and 0.06 mg/L of zinc in MW-6.

The California primary drinking water standards for aluminum (1 mg/L) was exceeded in samples from MW-1 (2.69 mg/L) and MW-6 (1.87 mg/L), and the standard for lead (0.05 mg/L) was exceeded in a sample from MW-9 (0.082 mg/L). Samples from all wells (except MW-7) in the monitoring network exceeded the California secondary drinking water standard for iron (0.3 mg/L).

Metal concentrations that are statistically higher than background and above drinking water standards may be elevated because of on-site activities; however, a number of sources of variability (i.e., seasonal variation of groundwater quality and variability of the sampling and analytical process) must be taken into account before these elevated metal concentrations in the groundwater can be definitively attributed to on-site activities. An evaluation of groundwater quality and potential groundwater degradation based on comparison to drinking water standards is a conservative approach. In actuality, the risk to human health from groundwater consumption is insignificant because of an incomplete pathway (see Section 4.0, Risk Assessment).

3.3 Soil

Soil samples were collected from 16 boreholes in areas of concern at the Oxnard facility (Figure 3). Soil samples were analyzed for metals, TCL PCBs, TCL volatile organic compounds, and TPH. A detailed analyte list is in Appendix C. Two discrete depth-interval soil samples were collected from each borehole to determine the existence of contamination in soils, and composite soil samples were collected to determine waste disposal options for the borehole cuttings.

Soil samples were collected with a split-barrel sampler from approximately 0- to 2- and 4- to 6-foot depths. The Work Plan/SAP required additional soil sample collection in intervals where stained soil was present or elevated organic vapor readings were detected; however, these phenomena did not occur in any soil samples collected at the Oxnard facility. Split-barrel samplers were equipped with stainless steel sleeves so that volatile organic samples could be collected with minimal loss of the volatile compounds. The bottom stainless steel sleeve (0.5 foot) in the split-barrel sampler was capped immediately after sampling and prepared for submittal to the laboratory for TCL volatile organic compound analysis. The remaining soil in the split-barrel sampler was removed from the stainless steel sleeves, lithologically described, mixed, and then placed in the samples bottles. Soil sampling procedures are detailed in the Work Plan/SAP.

In general, organic compounds were below detection limits or were detected in low concentrations. Organic analytes below detection included TPH and most of the volatile organic compounds. Volatile organic compounds that were detected included acetone, 2-butanone, toluene, and 1,1,1-trichloroethane. Of the 34 samples analyzed, acetone was detected in 15 samples in concentrations ranging from 16.1 to 845 μg/kg; 2-butanone was detected in 15 samples in concentrations ranging from 16.1 to 299 μg/kg; and toluene was detected in 19 samples in concentrations ranging from 2.33 to 19.2 μg/kg. These compounds are common laboratory contaminants and were found in many of the associated laboratory method blanks. 1,1,1-trichloroethane was detected in 9 samples in concentrations ranging from 2.20 μg/kg to 6.36 μg/kg.

PCBs were detected in samples from locations SB-1 (boneyard) and SB-10 (east of the boneyard): aroclor 1254 was detected in a sample from location SB-1 at a concentration of 540 μg/kg, and aroclor 1248 was detected in samples from location SB-10 in concentrations ranging from 60 to 3,900 μg/kg. This data confirms historical investigation results, which indicated the presence of PCBs in these areas. All other soil samples had PCB concentrations below detection limits.

Concentrations of silver, beryllium, and thallium were below detection limits at all soil sampling locations; all other metal analytes were above detection limits in one or more samples. Metal concentrations detected in soil samples were evaluated statistically using methods described in Section 66265.97 of Title 22 of the California Code of Regulations (Barclays Law Publishers 1990a) to determine if metal concentrations in areas of concern were statistically higher than background metal concentrations. Soil borings SB-2 and SB-7 were used as background locations for this analysis. Two locations, SB-14 and SB-15, had metal concentrations that were statistically higher than background; concentrations of antimony, arsenic, chromium, cobalt, copper, iron, lead, manganese, mercury, and nickel were higher than background in one or both of these soil borings. With the exception of mercury, which was elevated in the 4- to 6-foot depth interval, elevated metal concentrations in these two soil borings were found in the 0- to 2-foot depth interval. These locations appear to have been affected by on-site activities. Other locations with elevated metal concentrations relative to background included SB-10 (cadmium), SB-3 and SB-13 (lead), SB-11 (lead and zinc), and SB-12 (copper, lead, and zinc). All other metal concentrations were not statistically higher than background. Analytical results are in Table D-2, Appendix D.

A risk assessment was conducted to determine if heavy metal, PCB, and volatile organic compound concentrations in exposed soil areas (not under concrete or asphalt) pose a risk to human health. There were no carcinogens in exposed soils that were considered chemicals of potential concern (COPC) when compared to background concentrations; therefore, risk was not calculated. A hazard quotient for exposure to noncarcinogens in exposed soils was calculated at 8.4×10^{-4}. Risks from noncarcinogens are considered acceptable if the hazard quotient is less than 1. Risk assessment rationale and calculations are detailed in Section 4.0.

3.4 Radiological Survey

The shipping/receiving area in Building 2 was surveyed with a beta-gamma detection instrument to determine if it was radiologically contaminated from products returned from radiologically contaminated sites. The results of the radiological survey demonstrated that the shipping/receiving area is not radiologically contaminated; all direct survey and smear survey readings were at background levels. Results of the survey are in Appendix E.

3.5 Waste Disposal

3.5.1 Sludge/Oil

Sludge accumulates at the Oxnard facility as a result of gravity drainage of oils and metal fines from the process equipment. Sludge samples were collected from six locations: the trench beneath the forging hammers in Building 6, the cellars beneath the 1,600-ton and 3,500-ton presses in Building 5, the steam cleaning trench east of the tank farm, and the compressor collection trench east of Building 6 (Figure 3). The sewer clarifier/grease trap was not sampled because it did not contain sludge, and the sump at the north end of the collection trench in Building 6 was not sampled because of safety concerns. One oil sample was collected from the tap on the dirty oil tank located in the tank farm (Figure 3). Collection and analysis of sludge and oil samples were conducted to determine options for disposing these wastes should the facility be decommissioned.

Grab samples of sludge were collected using a stainless steel scoop and by following procedures in the Work Plan/SAP. Sludge samples were analyzed for metals and TCL PCBs. The oil sample was analyzed for metals, TCL PCBs, total organic halides, and ignitability. A detailed analyte list is in Appendix C.

Chromium present at the Oxnard facility is believed to be in the form of chromium metal or trivalent chromium compounds. This assumption is based on process knowledge; hexavalent chromium compounds are not presently used at the Oxnard facility, and research of historical records does not indicate use of these compounds. Because hexavalent chromium compounds are not used at the facility, the occurrence of hexavalent chromium is unlikely—chromium metal or trivalent chromium is not oxidized to hexavalent chromium under normal environmental conditions. Therefore, the hazardous waste determination of sludge due to chromium contamination was based on the chromium/trivalent chromium threshold limit value.

Results of sludge and oil sample analysis were compared to threshold limit concentrations listed in Title 22 of the California Code of Regulations (Barclays Law Publishers 1990c) to determine if the oil and sludges are considered hazardous waste. For a waste to be classified as nonhazardous in the State of California, total concentrations must be below the total threshold limit concentration, and soluble concentrations must be below the soluble threshold limit concentration. Total concentrations first were determined for all samples. If analyte concentrations were greater than or "near" the analyte's total threshold limit concentration, the EPA toxicity characteristic leaching procedure (TCLP) and/or the California waste extraction test (WET) procedure were performed to determine soluble concentrations. All sludge and oil analyte concentrations were below their respective total threshold limit concentration. However, sludge and oil samples contained total concentrations of selected metals high enough to require TCLP and/or WET extraction tests.

All TCLP metal concentrations were below their respective soluble threshold limit concentration; however, metal concentrations in samples from three sludge locations exceeded the WET soluble threshold limit concentrations. These excessive concentrations occurred in samples from locations SL-2 (chromium and nickel), SL-5 (lead and zinc), and SL-6 (lead). Therefore, sludge from these locations would be considered hazardous if it were removed from the process. Analytical results of sludge and oil samples collected at the Oxnard facility are in Tables D-3 and D-4 in Appendix D.

The risk (probability of developing cancer) to human health from exposure to carcinogens in the sludge and oil was calculated at 2.7×10^{-6}, and the hazard quotient for exposure to noncarcinogens in the sludge/oil was calculated at 8.9×10^{-4}. Under CERCLA, risks from carcinogens greater than 1×10^{-4} generally require action to reduce the risks; risks less than 1×10^{-6} usually result in no action. When risks are between 1×10^{-6} and 1×10^{-4}, actions are taken on a site-specific basis according to direction from EPA. The calculated risk from carcinogens falls within the range of potential action. However, the risk ranges presented above are for risks to the public, and this risk assessment evaluated risk to the site worker (which was a conservative approach); therefore, the risk due to exposure to carcinogens in the sludge is considered insignificant. Risks from noncarcinogens are considered acceptable if the hazard quotient is less than 1. The calculated hazard quotient of 8.9×10^{-4} is well below 1. Risk assessment assumptions and calculations are detailed in Section 4.0.

3.5.2 Borehole Cuttings

Borehole cuttings generated during drilling operations were containerized and labeled so that proper disposal could be conducted after analytical results were reviewed. Composite soil samples were collected from each borehole and analyzed for metals, fluoride salts, and TCL volatile organic compounds to determine if the borehole cuttings were hazardous waste.

Analytical results from the composite soil samples were compared to threshold limit concentrations listed in Title 22 of the California Code of Regulations (Barclays Law Publishers 1990c) to determine if the drummed borehole cuttings are hazardous waste. All analyte concentrations were below the respective total threshold limit concentrations; however, two samples had total metal concentrations high enough to require TCLP and/or WET extraction tests. The composite soil sample from SB-13 was analyzed for lead following the TCLP extraction procedure and was analyzed for lead and chromium following the WET extraction procedure. Lead also was analyzed in the composite soil sample from SB-12 following the WET extraction procedure. All TCLP and WET analyte concentrations were below the respective threshold limit concentrations. Therefore, the borehole cuttings, with the exception of those from SB-1 and SB-10, are not hazardous waste. Because PCBs were detected in samples from SB-1 and SB-10, the borehole cuttings from these locations may have to be disposed of at a TSCA-approved facility pending negotiations with California EPA. Analytical results of the composite soil samples are in Tables D-3 and D-5 of Appendix D.

3.5.3 Development/Purge Water

Groundwater produced during monitoring well development and groundwater sampling was containerized and labeled so that proper disposal could be conducted after analytical results were reviewed. Groundwater samples were analyzed for metals, TCL PCBs, TCL volatile organic compounds, and TPH to determine if the containerized groundwater was considered hazardous waste.

Analytical results from the groundwater samples were compared to threshold limit concentrations listed in Title 22 of the California Code of Regulations (Barclays Law Publishers 1990c) to determine if the containerized groundwater is considered hazardous waste. All groundwater analyte concentrations were below the respective threshold limit concentrations and, therefore, the containerized groundwater is not hazardous waste. Analytical results of groundwater samples are in Appendix D.

3.5.4 Personal Protective Equipment (PPE)

PPE, which was worn during each sampling activity, was containerized and labeled so proper disposal could be conducted after analytical results were reviewed. Analytical results for sludge, oil, soil, groundwater, and asbestos were reviewed to determine if any of these media, and the PPE used to sample them, were hazardous waste.

Because groundwater is not considered hazardous waste, the PPE used during groundwater sampling is not considered hazardous. PPE used during the sampling of soil borings SB-1 and SB-10 (PCB detections) may have to be disposed of at a TSCA-approved facility pending negotiations with California EPA. Because sludge from locations SL-2, SL-5, and SL-6 was determined to be hazardous, the associated PPE also should be handled and disposed as hazardous waste. PPE was not worn at locations SL-5 because the sample was taken remotely. Because asbestos was detected, PPE worn during the asbestos sampling effort should be treated and disposed of as ACM.

3.6 Quality Assurance

Quality assurance measures implemented during the Phase II ESA activities included following procedures established in the Work Plan/SAP, collecting and analyzing field quality control (QC) samples, and analyzing laboratory QC samples. Field QC samples included five trip blanks, four equipment blanks, and five duplicates. Analytical results of field QC samples are in Table D-6 of Appendix D. Laboratory QC consisted of analyzing method blanks, duplicates, blank spikes, blank spike duplicates, matrix spikes, matrix spike duplicates, and laboratory control samples. Volatile organic compounds were detected in many of the method blanks, which indicated laboratory process contamination.

Data quality determinations for the first round of PCB analysis of soil, sludge, and oil samples could not be made because quality indicators did not meet laboratory performance criteria due to matrix interferences. Although PCBs were not detected in any of these samples, a potential for false negatives existed. The laboratory followed the analytical methods detailed in *Test Methods for the Evaluation of Solid Waste* SW-846 (EPA 1986), which were specified in the Work Plan/SAP. However, SW-846 guidance only suggests methods to clean up samples that have matrix interferences, and no attempt by the laboratory to remedy the matrix interferences was made; therefore, PCB samples from soil, sludge, and oil were reanalyzed in accordance with a detailed set of technical specifications.

All holding times specified in the Work Plan/SAP were met with the exception of the reanalysis of PCBs in soil, sludge, and oil; however, because the samples were stored in the laboratory refrigerator, reanalysis of the samples was acceptable to California EPA despite the expired holding time.

Laboratory analytical data was reviewed, and precision, accuracy, and completeness of the data were calculated for each medium. A general discussion of precision, accuracy, and completeness and a summary of results follows.

3.6.1 Precision

Precision is the agreement between the numerical values of two or more measurements that have been made in an identical manner without any knowledge of the true value. It is determined through the analysis of laboratory and field duplicate samples. Because field duplicate analyses measure both field and laboratory precision, results of the analyses may contain more variability than laboratory duplicate analyses, which measure only laboratory performance.

Precision is expressed as relative percent difference (RPD) according to the following formula:

$$RPD = \frac{\underline{\textit{absolute value of (original sample result - duplicate sample result)}}}{\textit{(original sample result + duplicate sample result)/2}} \times 100\%$$

Field duplicate precision ranged from 0 to 152 percent, and laboratory duplicate precision ranged from 5 to 42 percent. Field and laboratory duplicate RPDs are listed in Appendix F.

3.6.2 Accuracy

Accuracy is the closeness of a measurement to the true value. For soil and water samples, it is usually expressed in percent recovery, which is determined through analyses of reference standards and matrix spike samples. The objective of these analyses is to meet the percent recovery defined by the individual analytical methods.

For soil, groundwater, and sludge samples, accuracy is expressed in terms of percent recovery (%R) during matrix spike sample analysis and RPD of laboratory control samples:

$$\%R = \frac{\underline{\textit{(concentration of spiked sample - concentration of unspiked sample)}}}{\textit{known concentration of spiked compound}} \times 100\%$$

Accuracy for matrix spike recoveries on inorganic samples ranged from 75 to 120 percent. For TPH analyses, matrix spike recoveries ranged from 102 to 110 percent, and blank spikes ranged from 65 to 108 percent. Blank spikes are not an adequate measure of overall accuracy because they do not account for sample matrix interferences. Matrix spikes were not performed on volatile organic compounds; only blank spike analysis was conducted. Blank spike recoveries for volatile organic compounds ranged from 88 to 122 percent. All these recoveries are within the laboratory acceptance criteria. Matrix spike results for the reanalysis of PCBs were not available for review before this report was published. Laboratory control samples also were analyzed for inorganic constituents; recoveries for these analyses ranged from 89 to 110 percent, which is within the laboratory acceptance criteria.

3.6.3 Completeness

The completeness of data collected during this investigation was determined by comparing the number of valid measurements actually obtained to the number of planned measurements and is expressed by the following equation.

$$\%C = \frac{\textit{number of valid measurements}}{\textit{total number of planned measurements}} \; x \; 100\%$$

The completeness calculation did not include asbestos investigation results because the number of planned asbestos samples was unknown. The calculated completeness for the project was 97 percent.

4.0 Risk Assessment

This risk assessment was structured around the CERCLA risk assessment process (EPA 1989), but was simplified considerably over the traditional CERCLA risk assessment. The major differences were a less rigorous data evaluation, a superficial examination of exposure pathways, and the use of only one source for the Toxicity assessment (EPA 1993). The purpose of this risk assessment is to provide a general overview of the potential risks to human health at the Oxnard facility.

4.1 Preliminary Conceptual Site Model

Figure 6 presents the conceptual site model for the Oxnard facility. An industrial scenario is assumed for both the current and future. Because the land adjacent to the facility is currently industrial, there is no indication that a residential scenario would apply at this site in the foreseeable future. Major sources at the facility include maintenance/construction disposal, industrial operations, and storage spills. Potentially contaminated media include groundwater, air, and soil/sludges. The site is supplied with drinking water from the city of Oxnard; therefore, exposure from groundwater is not considered a complete pathway. Inhalation of and dermal contact with contaminated soils/sludges are potentially complete pathways, although exposures resulting from these pathways will likely be insignificant compared to exposures from ingestion.

Chromium present at the Oxnard facility is believed to be in the form of chromium metal or trivalent chromium. This assumption is based on process knowledge; hexavalent chromium compounds are not presently used at the Oxnard facility, and historical records do not indicate use of these compounds. The occurrence of hexavalent chromium is unlikely because chromium metal or trivalent chromium is not oxidized to hexavalent chromium under normal environmental conditions.

4.2 Data Evaluation

The analytical data collected during the Phase II ESA are presented in Appendix D. Because exposure to groundwater is not considered likely, groundwater data were not used in the risk assessment. No air contaminant concentration data were available, but no violations of State Air quality standards have occurred at the facility. The risks of inhaling contaminated air are expected to be insignificant compared to those of ingesting contaminated soil.

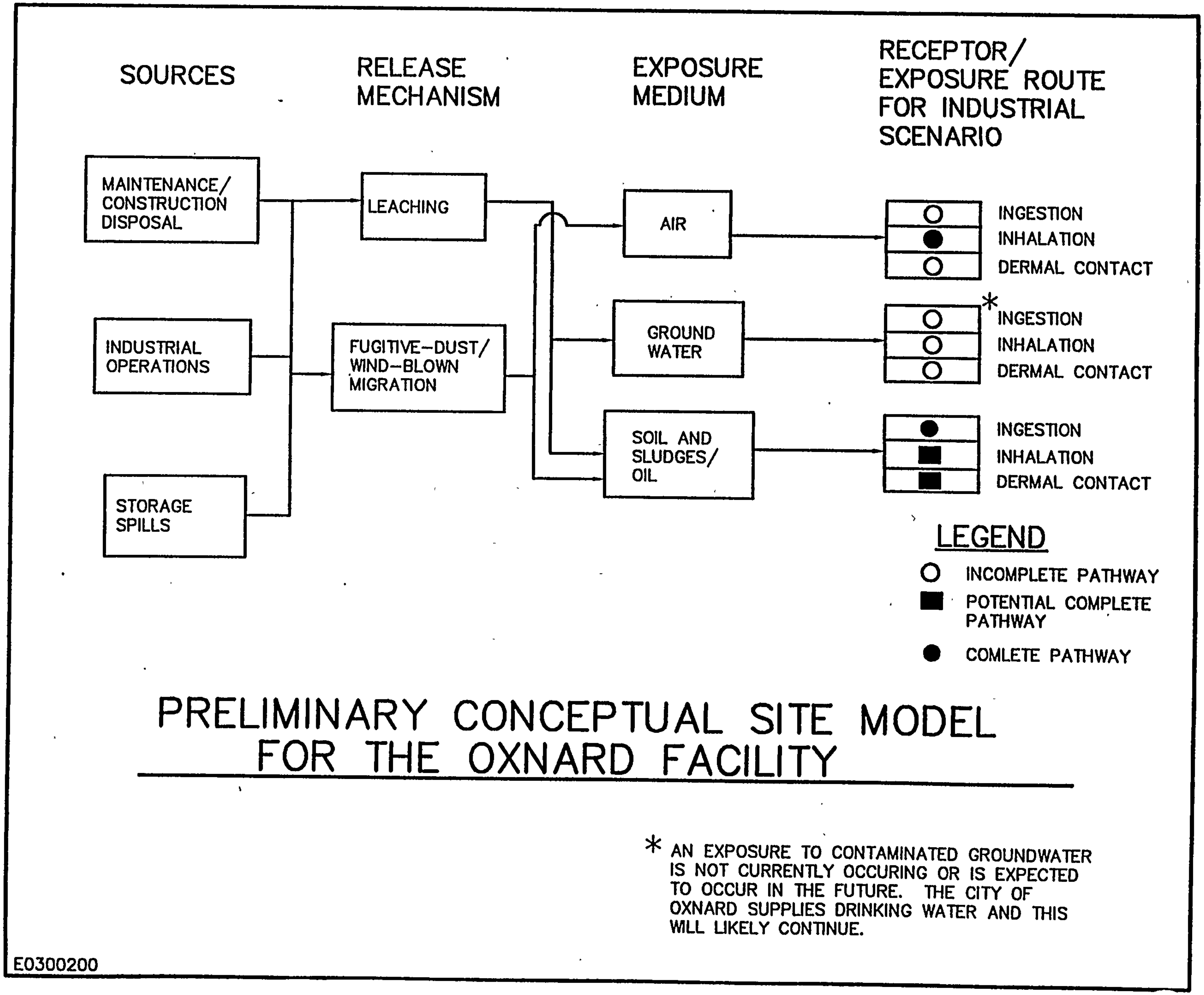

Figure 6. Risk Assessment Pre ary Conceptual Site Model

Data from the locations listed in Table 2 were used in the risk assessment.

Table 2. Risk Assessment Sampling Locations

Sample Locations	Comments
SB-1, SB-5, SB-8, SB-9, and SB-10	Areas where exposure to potentially contaminated soil is likely. All other potentially contaminated soil areas are covered by concrete or asphalt, which eliminates the potential for exposure.
SB-2 and SB-7	Background locations.
Oil-1 and SL-1, SL-2, SL-3, SL-5, SL-6, and SL-7	Data from all of these sample locations were used because maintenance and cleaning personnel exposure could occur at all these points.

Data from areas of concern were compared to background data as presented in Table 3. When a chemical concentration in a background area was equal to or greater than 90 percent of the concentration of that chemical in the area of concern, that chemical was eliminated as a chemical of potential concern (COPC) in accordance with EPA risk assessment guidance for CERCLA sites.

Table 3. Data Summary for Risk Assessment

Element	Soil (mg/kg)[a]	Sludge/Oil (mg/kg)[b]	Background (mg/kg)	COPC[d] Soil/Sludge Oil
Ag	0.40	0.41	0.40	NO
As	3.34	2.58	4.61	NO
Ba	104.92	37.96	93.20	YES/NO
Be	0.40	0.41	0.40	NO
Cd	0.58	12.29	0.40	YES
Co	5.47	39.99	6.22	NO/YES
Cr	19.36	187.07	21.45	NO/YES
Cu	13.30	745.26	11.25	YES
F	4.86	-	2.50	YES/NO
Hg	0.034	0.031	0.016	YES
Mo	0.52	46.06	0.40	YES
Ni	17.02	459.84	16.05	NO/YES
Pb	14.45	171.36	12.65	YES
Sb	0.40	1.54	0.40	NO/YES
Se	0.17	0.05	0.22	NO
Tl	0.40	0.41	0.40	NO
V	31.80	24.41	41.85	NO
Zn	66.06	1283.14	51.60	YES
1,1,1, Trichloroethane	0.003	-	0.002	YES/NO
Acetone	0.178	-	0.008	YES/NO
Toluene	0.003	-	0.002	YES/NO
2-Butanone	0.066	-	0.008	YES/NO
PCBs	0.906	0.03	0.03	YES/NO

[a]These concentrations were calculated by averaging data from sampling locations SB-1, SB-5, SB-8, SB-9, and SB-10. When information on the depth of the sample was given, only data from the 0-2 foot depth was used. Exposures are not likely to occur from soils greater than 2 feet in depth.

[b]These concentrations were calculated by averaging data from sampling locations Oil-1, SL-1, SL-2, SL-3, SL-5, SL-6, and SL-7.

[c]According to U. S. EPA Guidance, compounds not detected are assumed to be one-half of the detection limit.

[d]Based on comparison to background.

4.3 Exposure Assessment

An industrial scenario is the only likely exposure scenario at the facility. Residential use of the facility is not considered likely because of the industrial use of the immediate area. The two possible industrial scenarios are shown in Table 4.

Table 4. Risk Assessment Scenarios

Scenario	Exposure Medium	Comments
Exposure to five potentially contaminated soil areas	soil	This assumes regular exposure to these areas over the entire work year.
Exposure to sludges/oils through maintenance and cleaning activities.	sludges/oil	This assumes exposure will occur infrequently: one week for maintenance and one week for cleaning.

These scenarios do not include exposure to air or groundwater. Air is not included because data are not available. However, exposures are expected to be limited because no State air violations have been recorded. No contact with groundwater is expected because water is supplied by the City. The only viable exposure route is considered to be ingestion of contaminated soils or sludges/oil. Limited exposure may occur from inhalation or dermal contact with these contaminated media, but this is expected to be insignificant compared to exposure from ingestion.

Exposure to the COPCs was estimated through use of the following equation (from "Risk Assessment Guidance for Superfund")(EPA 1989).

$$Intake(mg/kg-day) = \frac{CSxIRxCFxFIxEFxED}{BWxAT}$$

Where:

CS = Chemical Concentration in Soil (mg/kg)
IR = Ingestion Rate (mg soil/day)
CF = Conversion Factor (10^{-6} kg/mg)
FI = Fraction Ingested from Contaminated Source (unitless)
EF = Exposure Frequency (days/years)
ED = Exposure Duration (years)
BW = Body Weight (kg)
AT = Averaging Time (period over which exposure is averaged -- days)

Exposure factors used are presented in Table 5.

Table 5. Exposure Factors

Exposure Parameter	Exposure Factor soil	sludge/oil	Source	Comment
Ingestion Rate	50 mg/day	50mg/day	USEPA 1991	Interim default for adult ingestion of soil and dust in the typical work place.
Fraction Ingested	1	1		Assumes worst case.
Exposure Frequency	250 days	10 days		Soil: Assumes 5 days/week 50 weeks per yr. Sludges/Oil: Assumes one week for cleaning, one week for maintenance. A total of two weeks per year.
Exposure Duration	25 yrs.	25 yrs.	USEPA 1991	This is the 95 percentile for a worker to stay at the same location, according to the Bureau of Labor statistics.
Body Weight	70 kg	70 kg	USEPA 1989	Standard Values
Averaging Time	70 yrs. for carcinogens 25 yrs. for noncarcinogens		USEPA 1989	Standard Values

Sources: US EPA 1991. Human Health Evaluation Manual, Supplemental Guidance: "Standard Default Exposure Factors." OSWER Directive 9285.6-03. US EPA 1989. Risk Assessment Guidance for Superfund, EPA/540/1-89/002 (EPA 1991).

4.4 Toxicity Assessment

This section presents information on toxicity of the chemicals of potential concern. Table 6 presents carcinogenicity status, slope factor, and reference dose for each contaminant of potential concern.

Table 6. Toxicity Assessment Summary

COPC	Effect[a]	Slope Factor (mg/kg-day)$^{-1}$	RFD (mg/kg/day)
Ba	N	--	7×10^{-2}
Cd		--	--
Co		--	--
Cr[b]	N	4.1×10^{1}	2×10^{-2}
Cu	N	--	NA
F	N	--	4×10^{-1}
Hg	N	--	3×10^{-4}
Mo	N	--	5×10^{-3}
Ni	C/N	8.4×10^{-1}	2×10^{-2}
Pb	C/N	NA	NA
Sb	N	--	4×10^{-4}
Zn	N	--	NA
1,1,1 Trichloroethane	N	--	NA
Acetone	N	--	1.0×10^{0}
Toluene	N	--	2.0×10^{0}
2-Butanone		--	NA
PCBs	C	7.7	NA

[a]C = Carcinogen.
N = Noncarcinogen.

[b]Assume chromium and chromium III compounds.

NA = Not Available.

Source: Health Effects Assessment Summary Tables. EPA 540-R-93-058.

Toxicity profiles for the chemicals of potential concern are as follows:

- Barium primarily is toxic to the skin, eye, heart, and lung.
- Cadmium is a metal with a level of toxicity similar to that of lead. It is present in most foods and tissues. The element and its compounds are toxic through inhalation, ingestion, and subcutaneous application. Organs most sensitive to cadmium are the kidney and lung.
- Exposure to cobalt can lead to decreased pulmonary function and skin disorders.
- Chromium exists in several valence states, but only trivalent and hexavalent chromium are of biological importance. Trivalent chromium is an essential nutrient. Hexavalent chromium is a human carcinogen through inhalation.
- Copper is an essential trace metal. At high intakes, it is toxic to the brain, liver, and kidneys.
- Fluoride is added to many public water supplies. In high doses, it can cause respiratory, skin, eye, and gastrointestinal irritation. Fluoride is not a carcinogen.
- Mercury primarily is toxic to the skin, respiratory tract, central nervous system, and kidney.
- Molybdenum is an essential trace metal. At high doses, it is toxic to the blood, liver, and eye.
- Nickel and some of its compounds are carcinogenic to humans, a finding based on epidemiological evidence for nickel refinery workers suffering from lung and nose cancer.
- The toxic effects of lead are widespread, and are found in the central nervous system, the peripheral nervous system, the kidneys, and the blood.
- Antimony is similar in toxicity to arsenic. It can damage the reproductive system, skin, heart, lungs, and gastro-intestinal tract.
- Zinc is an essential trace metal in the human diet. Zinc is not an inherently toxic element; however, some of its compounds are toxic and cause dermatitis and intestinal disorders.
- At high levels of exposure, trichloroethane is moderately toxic and depresses the central nervous system.

- Systemic toxicity in the form of central nervous system depression can occur after ingestion, inhalation, or dermal absorption of acetone.

- At high levels of exposure, toluene is a narcotic and affects the central nervous system, leading to fatigue, weakness, and confusion. In low, chronic exposures, toluene can cause damage to the liver and kidneys.

- Inhalation of 2-butanone can lead to central nervous system depression, narcosis, and cardiorespiratory system failure.

- PCBs are moderately toxic by ingestion and/or skin contact and cause liver and experimental reproductive effects.

In most pathways to human receptors, agents occur in mixtures. When there is a mixture of toxic agents, there exists a potential for interactions among the agents' effects. This potential depends on the components of the mixture, on the carriers along the environmental pathway from source to receptor, and on the way the contaminant enters the body. For carcinogens that lead to the same endpoint (e.g., cancer of the same organ) there is a considerable potential for synergistic or antagonistic interaction. It has been shown, however, that for carcinogens having low cancer probabilities, the interaction generally is antagonistic, which leads to a lower probability of cancer.

4.5 Risk Characterization

Risks were estimated as follows:

Carcinogens: ***Risk = CDI x SF***

where: Risk = a unitless probability (e.g., 2×10^{-5}) of an individual developing cancer;

CDI = Chronic daily intake averaged over 70 years (mg/kg-day); and

SF = slope factor, expressed in $(\text{mg/kg-day})^{-1}$

Noncarcinogens: ***Noncancer Hazard Quotient = E/RfD***

where: E = exposure level (or intake)

RfD = reference dose; and

E and RfD are expressed in the same units and represent the same exposure period (i.e., chronic, subchronic, or shorter-term).

Risk characterization results are presented in Table 7.

Table 7. Risk Characterization Results

COPC	Soil Scenario Carcinogens	Soil Scenario Noncarcinogens	Sludges/Oil Carcinogens	Sludges/Oil Noncarcinogens
Ba		7.33×10^{-4}		Not a COPC
Cd	(No EPA slope factor [SF] or reference dose [RFD] available.)			
Co	(No EPA slope factor [SF] or reference dose [RFD] available.)			
Cr				1.83×10^{-4}
Cu	(No EPA slope factor [SF] or reference dose [RFD] available.)			
F		5.9×10^{-6}	Not measured	
Hg		5.5×10^{-5}		2.0×10^{-6}
Mo		5.1×10^{-5}		1.8×10^{-4}
Ni	Not a COPC		2.7×10^{-6}	4.5×10^{-4}
Pb	(No EPA slope factor [SF] or reference dose [RFD] available.)			
Sb	Not a COPC			7.5×10^{-5}
Zn	(No EPA slope factor [SF] or reference dose [RFD] available.)			
1,1,1 Trichloroethane	(No EPA slope factor [SF] or reference dose [RFD] available.)			
Acetone		8.7×10^{-8}	Not measured	
Toluene		7.3×10^{-10}	Not measured	
2-Butanone	(No EPA slope factor [SF] or reference dose [RFD] available.)			
PCBs	5.8×10^{-8}			
TOTAL		8.4×10^{-4}	2.7×10^{-6}	8.9×10^{-4}

Under CERCLA, risks from carcinogens greater than 1×10^{-4} generally require action to reduce the risks; risks less than 1×10^{-6} usually result in no action. When risks are between 1×10^{-6} and 1×10^{-4} actions are taken on a site-specific basis in accordance with direction from EPA. For noncarcinogens, the individual risks (called Hazard Quotients) are summed to become a Hazard Index (HI). Generally, when the HI is less than one, adverse noncarcinogenic effects during a lifetime are not considered to be excessive, within an adequate margin of safety. (For more information on acceptable risk ranges under CERCLA, see "National Oil and Hazardous Substances Pollution Contingency," 40 CFR Part 300, March 8, 1990).

Risk ranges given are for risks to the public. A CERCLA baseline risk assessment does not include an evaluation of risks to workers because CERCLA focuses on inactive sites. Risks to the general public are expected to be negligible. Therefore, the CERCLA risk interpretation given above provides a worst-case interpretation of the results for this facility.

The risk from carcinogens (2.7×10^{-6}) is in the 1×10^{-6} to 1×10^{-4} range but is close to the lower value of the range and is based on a worst-case assumption of risk to site workers. The risk from noncarcinogens is well below the hazard index threshold of 1.

5.0 Recommendations

All friable asbestos gaskets including the emersion heater and Lindberg furnace gasket should be removed and disposed of in accordance with the Ventura County Air Pollution Control District Rule 62.7, Sections D.2.a, D.3, G, and J. Notification and containment area requirements are not applicable because the total surface area of ACM is less than 100 square feet.

Abatement of the floor tiles (Building 1, Lobby and Vault), window caulk (Building 6), textured wall coating (Building 1, Accounting Offices), laboratory benches and cabinet sheathing, and HVAC sleeve is not necessary because these materials are in excellent condition and are not in a friable state.

In general, ACM floor tiles and mastic are classified as Category I Non-Friable ACM, and the laboratory benches, cabinet sheathing, window caulk, and HVAC sleeve are classified as Category II Non-Friable ACM. As such, these materials are exempt from Rule 62.7 as long as removal procedures prevent the ACM from becoming friable during renovation. The following language is specific to Category I and Category II Non-Friable ACM:

> Use removal, loading, and transportation techniques designed to prevent the release of fibers and to prevent nonfriable ACM from becoming friable. Do not use techniques involving sanding, grinding, chipping, drilling, sawing, abrading, dropping, throwing, sliding, or any other technique that may allow the release of fibers or render the material friable. Keep all areas of ACM that are disturbed during cutting or disjoining operations adequately wet. Cover or contain the material so that no ACM is lost during transportation to an appropriate disposal site.

An asbestos management plan for asbestos that will remain in place will need to be prepared because the facility qualifies as a public building in the State of California. If and when renovation or demolition of buildings or building components is planned, a full asbestos inspection of those areas will be required prior to renovation or demolition. The asbestos inspection will allow the asbestos content of materials, such as the electrical wiring insulation, brakes of the Cleveland presses, and window caulk in Building 2, to be determined.

Significant contamination of the shallow groundwater system beneath the Oxnard facility has not occurred. The absence or low concentrations of organic compounds and most metals in groundwater samples indicates minimal degradation of the shallow aquifer, and groundwater remediation is not warranted. Monitoring wells should be properly abandoned as specified in the well permit issued by the City of Oxnard, which requires wells to be abandoned after the completion of the monitoring program.

Soils at the Oxnard facility show elevated concentrations of heavy metals and PCBs. Heavy metal concentration in several soil boring samples were statistically higher than those in background samples; however, the risk from exposure to soils in these ares is low, and corrective action is not warranted. PCBs were detected in samples from two soil borings. Negotiations with California EPA should be conducted to determine PCB action levels at the Oxnard facility. Once action levels are established, two courses of action are possible: (1) no action (if PCB concentrations are below established action limits and no further characterization is required); or (2) further characterization of PCBs and appropriate corrective action.

Radiological contamination at the Oxnard facility was not found; no action is required.

Containerized groundwater is not hazardous and can be handled and discarded as wastewater in accordance with local regulations. Sludges in the trench beneath Building 6, the cellar beneath the 1,600-ton press in Building 5, and the collection trench east of Building 6 should be treated as hazardous waste if they are removed for disposal. All containerized soils, with the exception of borehole cuttings from SB-1 and SB-10, are not hazardous and can be returned to the soils on the facility. Borehole cuttings from SB-1 and SB-10 should not be disposed of until negotiations with California EPA concerning PCBs are completed. PPE used to collect asbestos samples should be disposed of in accordance with the Ventura County Air Pollution Control District Rule 62.7.

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____________________, 1994a. 40 CFR Part 763, "Subchapter R—The Toxic Substances Control Act, Asbestos", *U.S. Code of Federal Regulations*, July 1, 1994.

____________________, 1994b. 40 CFR Part 300, "National Oil and Hazardous Substances Pollution Contingency", *U.S. Code of Federal Regulations*, July 1, 1994.

Ventura County Air Pollution Control District, 1992. Rule 62.7, "Asbestos Renovation and Demolition," Ventura, CA.

Appendix A
Asbestos Investigation

Asbestos ⁝ ıary Sheet

Sample Numbers	Ticket Book Number	Sample Date	Building and Room	Homogeneous Material Description	Material Type	Quantity Lin/Sq. Ft.	Asbestos Fiber Type	Asbestos Content %
ACM 1-1-1[a] ACM 1-1-2 ACM 1-1-3	NBE 374	2/8/95	Building 1 Hallway	12 X 12 Large Hole Ceiling Tiles	M[b]	± 500 ft.^{2}	NA[c]	ND[d]
ACM 1-2-1 ACM 1-2-2 ACM 1-2-3	NBE 375	2/8/95	Building 1 Lobby and Office	12 X 12 Small Hole Ceiling Tiles	M	± 400 ft.^{2}	NA	ND
ACM 1-3-1 ACM 1-3-2 ACM 1-3-3	NBE 326	2/8/95	Building 1 Accounting Offices	Sprayed on Wall Texture	S[e]	± 1000 ft.^{2}	NA	ND
ACM 1-4-1 ACM 1-4-2 ACM 1-4-3	NBE 327	2/8/95	Building 1 Accounting Offices	Sprayed on Wall Texture	S	± 500 ft.^{2}	Chrysotile	1-3
ACM 1-5-1 ACM 1-5-2 ACM 1-5-3	NBE 330	2/8/95	Building 1 Vault	Plaster Walls	S	± 1000 ft.^{2}	NA	ND
ACM 1-6-1 ACM 1-6-2 ACM 1-6-3	NBE 330	2/8/95	Building 1 Vault	9 X 9 Black Floor Tiles	M	± 300 ft.^{2}	Chrysotile	3-5

[a]Sample designation is as follows: ACM 1-1-1=Asbestos containing material from Building 1, homogeneous material 1, and one sample taken, respectively.
[b]Miscellaneous.
[c]Not applicable.
[d]Not detected.
[e]Surface.

Sample Numbers	Ticket Book Number	Sample Date	Building and Room	Homogeneous Material Description	Material Type	Quantity Lin/Sq. Ft.	Asbestos Fiber Type	Asbestos Content %
ACM 1-7-1[a]	NBE 331	2/8/95	Building 1 Lobby	9 X 9 White Floor Tiles	M[b]	± 400 $ft.^2$	Chrysotile	1-2
ACM 1-7-2								
ACM 1-7-3								
ACM 1-8-1	NBE 329	2/8/95	Building 1 Roof	Composite Roof Materials w/ Tar Underlay	M	± 5000 $ft.^2$	NA[c]	ND[d]
ACM 1-8-2								
ACM 1-8-3								
ACM 1-9-1	NBE 332	2/8/95	Building 1 HVAC	HVAC System Pink Fibrous Insulation	TSI[e]	± 100 lin ft.	NA	ND
ACM 1-10-1	NBE 333	2/8/95	Building 1 HVAC	HVAC Interior Duct Work Wipe Sample	TSI	NA	NA	ND
ACM 1-11-1	NBE 334	2/8/95	Building 1 HVAC	HVAC System Brown Fibrous Insulation	TSI	± 100 lin ft.	NA	ND
ACM 1-11-2								
ACM 1-11-3								
ACM 1-12-1	NBE 335	2/8/95	Building 1 HVAC	HVAC System Joint Insulation	TSI	± 2 lin ft.	Chrysotile Crocidolite	24-28 4-6

[a]Sample designation is as follows: ACM 1-1-1=Asbestos containing material from Building 1, homogeneous material 1, and one sample taken, respectively.

[b]Miscellaneous.

[c]Not applicable.

[d]Not detected.

[e]Thermal system insulation.

Asbestos Summ ?eet (continued)

Sample Numbers	Ticket Book Number	Sample Date	Building and Room	Homogeneous Material Description	Material Type	Quantity Lin/Sq. Ft.	Asbestos Fiber Type	Asbestos Content %
ACM 2-1-1[a]	NBE 364	2/8/95	Building 2 Fabrication Shop (outside)	Air Exchanger Insulation Wrap	TSI[b]	< 4 lin. ft.	NA[c]	ND[d]
ACM 2-2-1	NBE 365	2/7/95	Building 2 Engineering Office Conference Room	Plaster Wallboard. All wallboard in building 2 was the same construction.	S[e]	± 1000 ft.²	NA	ND
ACM 2-2-2								
ACM 2-2-3								
ACM 2-3-1	NBE 366	2/7/95	Building 2 Engineering Office Conference Room	24 X 48 Ceiling Tiles	M[f]	± 1000 ft.²	NA	ND
ACM 2-3-2								
ACM 2-3-3								
ACM 2-4-1	NBE 367	2/7/95	Building 2 Manufacturing Office	9 X 9 Gray-brown Floor Tiles w/ Black Mastic	M	± 100 ft.²	NA	ND
ACM 2-5-1	NBE 368	2/7/95	Building 2 Maintenance Office	9 X 9 Light-brown Floor Tiles w/ Black Mastic	M	± 600 ft.²	NA	ND
ACM 2-5-2								
ACM 2-5-3								

[a]Sample designation is as follows: ACM 1-1-1=Asbestos containing material from Building 1, homogeneous material 1, and one sample taken, respectively.
[b]Thermal system insulation.
[c]Not applicable.
[d]Not detected.
[e]Surface.
[f]Miscellaneous.

Asbestos Summary Sheet (continued)

Sample Numbers	Ticket Book Number	Sample Date	Building and Room	Homogeneous Material Description	Material Type	Quantity Lin/Sq. Ft.	Asbestos Fiber Type	Asbestos Content %
ACM 2-6-1[a] ACM 2-6-2 ACM 2-6-3	NBE 369	2/7/95	Building 2 Maintenance Office	24 X 48 Ceiling Tiles	M[b]	± 600 ft.²	NA[c]	ND[d]
ACM 2-7-1	NBE 370	2/8/95	Building 2 Metallurgical Lab	Laboratory Cabinet Interior Fireproof Sheathing	M	± 500 ft.²	Chrysotile	20-30
ACM 2-8-1	NBE 371	2/8/95	Building 2 Metallurgical Lab	Tan Furnace Brick	M	± 4 ft.²	NA	ND
ACM 2-9-1	NBE 372	2/8/95	Building 2 Shop Area	Window Caulk Calcium Carbonate	M	± 500 ft.²	NA	ND
ACM 2-10-1	NBE 373	2/8/95	Building 2 Shop Area	Drill Press Deflector Guard	M	± 3 ft.²	NA	ND
ACM 4-1-1 ACM 4-1-2 ACM 4-1-3	NBE 351	2/6/95	Building 4 Roof	Asphalt Rolled Roofing Material	M	± 1000 ft.²	NA	ND

[a]Sample designation is as follows: ACM 1-1-1=Asbestos containing material from Building 1, homogeneous material 1, and one sample taken, respectively.
[b]Miscellaneous.
[c]Not applicable.
[d]Not detected.

Asbestos Summ[illegible] [illegible]heet (continued)

Sample Numbers	Ticket Book Number	Sample Date	Building and Room	Homogeneous Material Description	Material Type	Quantity Lin/Sq. Ft.	Asbestos Fiber Type	Asbestos Content %
ACM 5-1-1[a]	NBE 357	2/7/95	DP/DG Room Equipment Insulation	Yellow Fibrous Glass	M[b]	±200 ft.²	NA[c]	ND[d]
ACM 5-2-1	NBE 358	2/7/95	Used Block Storage Area	Brown Silica Brick (furnace)	M	± 300 ft.²	NA	ND
ACM 5-3-1 ACM 5-3-2 ACM 5-3-3	NBE 359	2/7/95	Used Block Storage Area	Tan Silica Brick and Mortar (furnace)	M	± 2000 ft.²	NA	ND
ACM 6-1-1	NBE 360	2/7/95	Building 6 Window Caulking	Window Caulk Calcium Carbonate	M	± 500 ft.²	Chrysotile	1-3
ACM 6-2-1	NBE 361	2/7/95	Lindberg Furnace Front Door Gasket	Grey Fibrous Gasket	M	< 5 lin. ft.	Chrysotile	90-95
ACM 6-3-1	NBE 363	2/7/95	Lindberg Furnace Brick	Brown and Tan Silica Brick (furnace)	M	< 20 ft.²	NA	ND

[a]Sample designation is as follows: ACM 1-1-1 = Asbestos containing material from Building 1, homogeneous material 1, and one sample taken, respectively.
[b]Miscellaneous.
[c]Not applicable.
[d]Not detected.

Asbestos Summary Sheet (continued)

Sample Numbers	Ticket Book Number	Sample Date	Building and Room	Homogeneous Material Description	Material Type	Quantity Lin/Sq. Ft.	Asbestos Fiber Type	Asbestos Content %
ACM 6-4-1[a]	NBE 362	2/7/95	West Outside Wall at Air Exchanger or Air Conditioner	Brown Cellulose TSI Fibrous Material	TSI[b]	< 4 lin. ft.	NA[c]	ND[d]
ACM 7-1-1	NBE 354	2/7/95	Valve Tubing Batch Water Tanks	Black and Red Fibrous Tubing	M[e]	< 3 lin. ft.	NA	ND
ACM 7-3-1	NBE 352	2/7/95	Tank Eyeglass Tubing	Clear Tubing w/ Fiber Reinforcement	M	± 14 lin. ft.	NA	ND
ACM 7-4-1	NBE 355	2/7/95	Felt Gasket Base of Emerson Heater (in storage) Building 7	Gray Fibrous Gasket	M	< 4 ft.^{2}	Chrysotile	60-70
ACM 7-5-1	NBE 356	2/7/95	Tank Farm Pit Effluent Tank Manhole Gasket	Red and White Cellulose Gasket	M	< 25 ft.^{2}	NA	ND

[a]Sample designation is as follows: ACM 1-1-1=Asbestos containing material from Building 1, homogeneous material 1, and one sample taken, respectively.

[b]Thermal system insulation.

[c]Not applicable.

[d]Not detected.

[e]Miscellaneous.

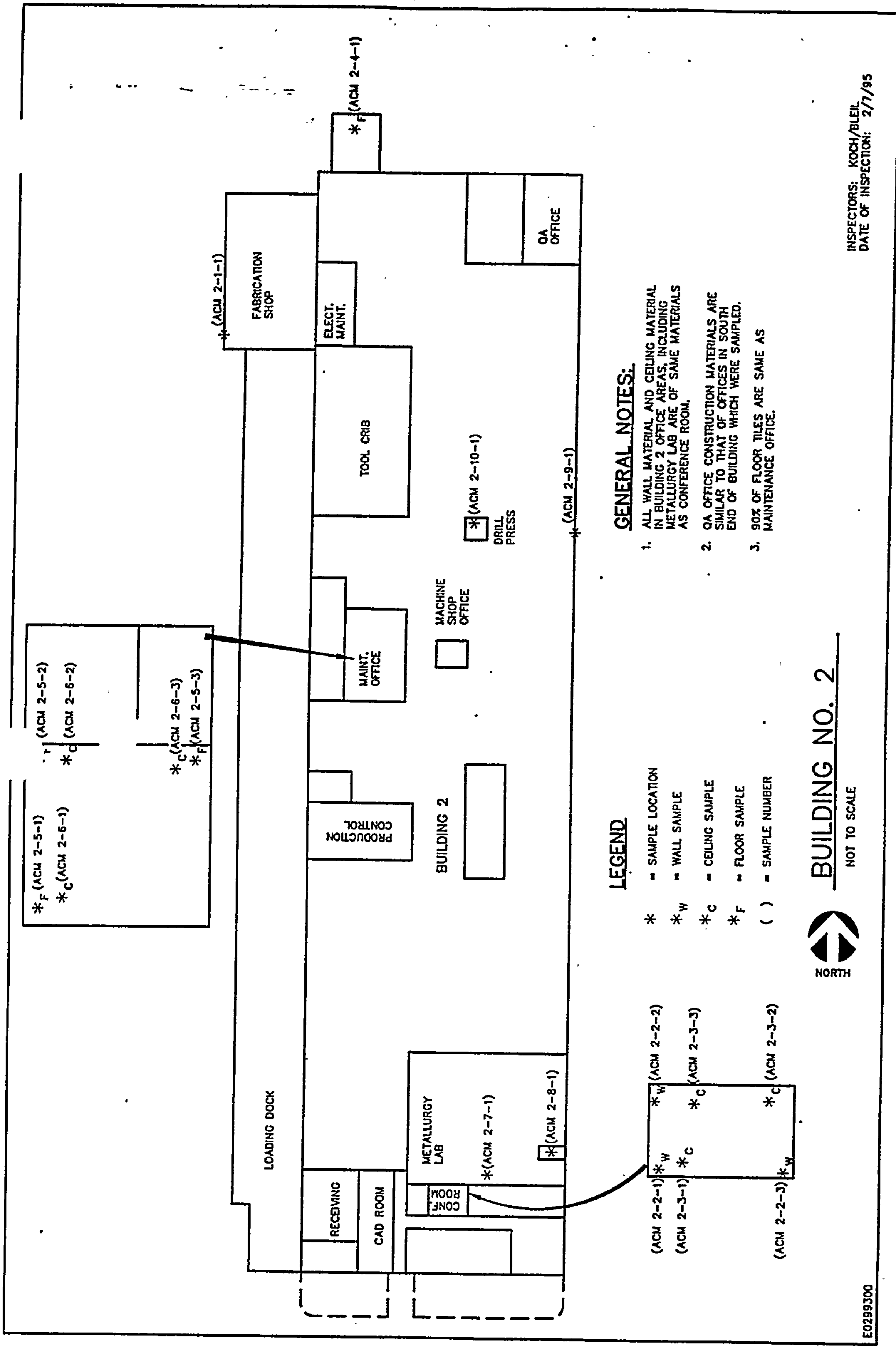


Figure A-1. Asbestos Sampling Locations in Building 2

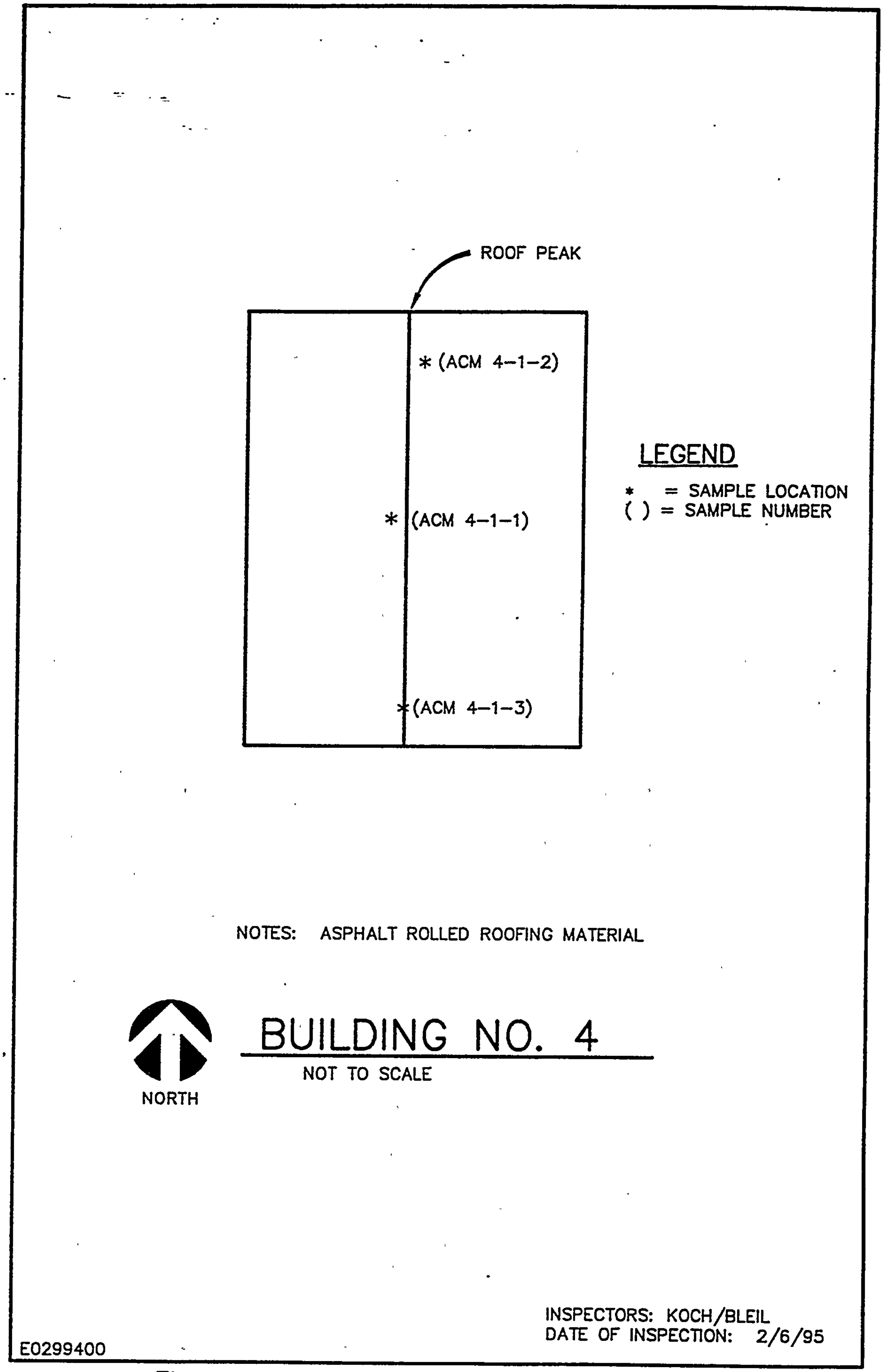


Figure A-2. Asbestos Sampling Locations in Building 4

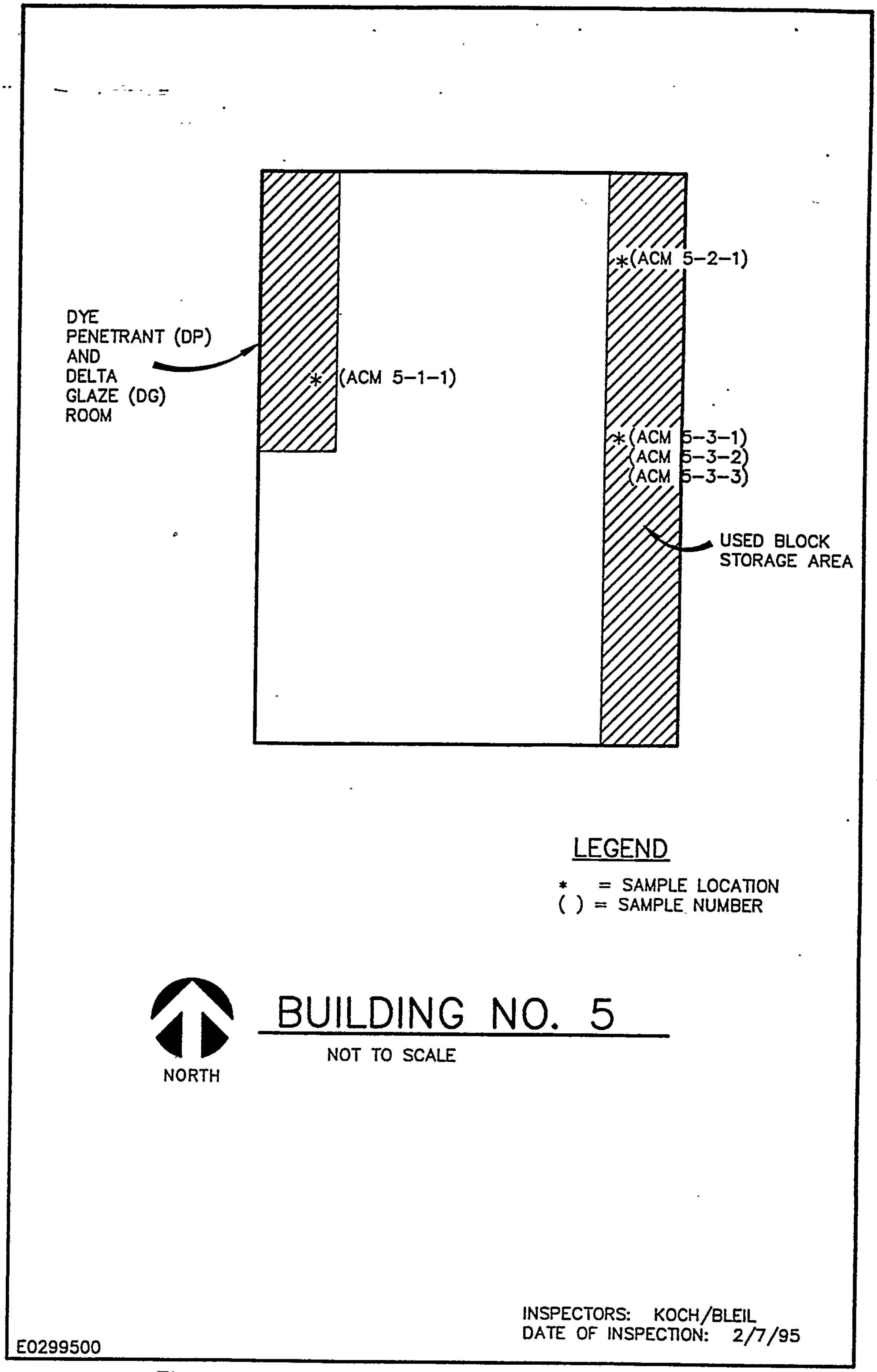


Figure A-3. Asbestos Sampling Locations in Building 5

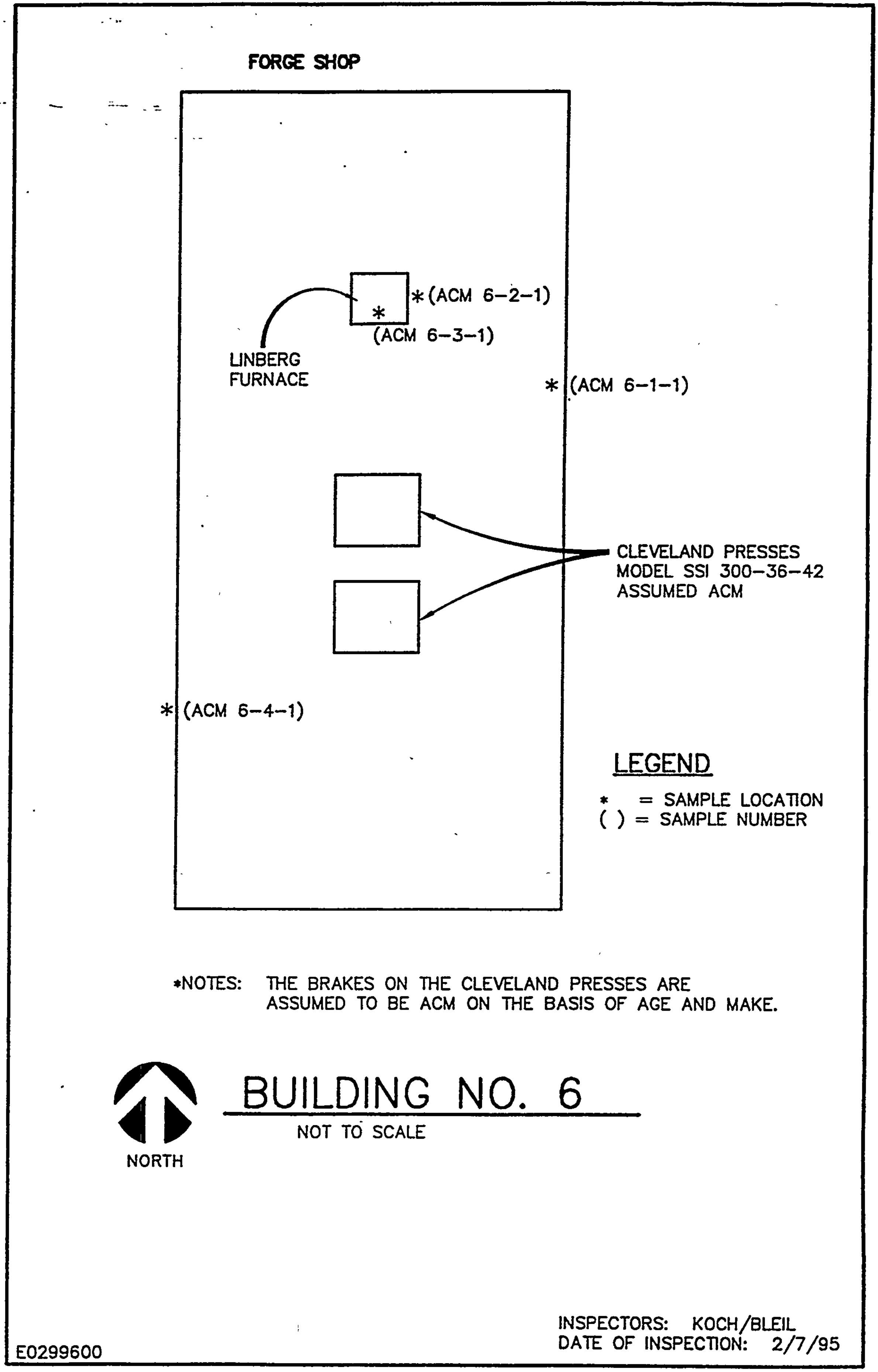


Figure A-4. Asbestos Sampling Locations in Building 6

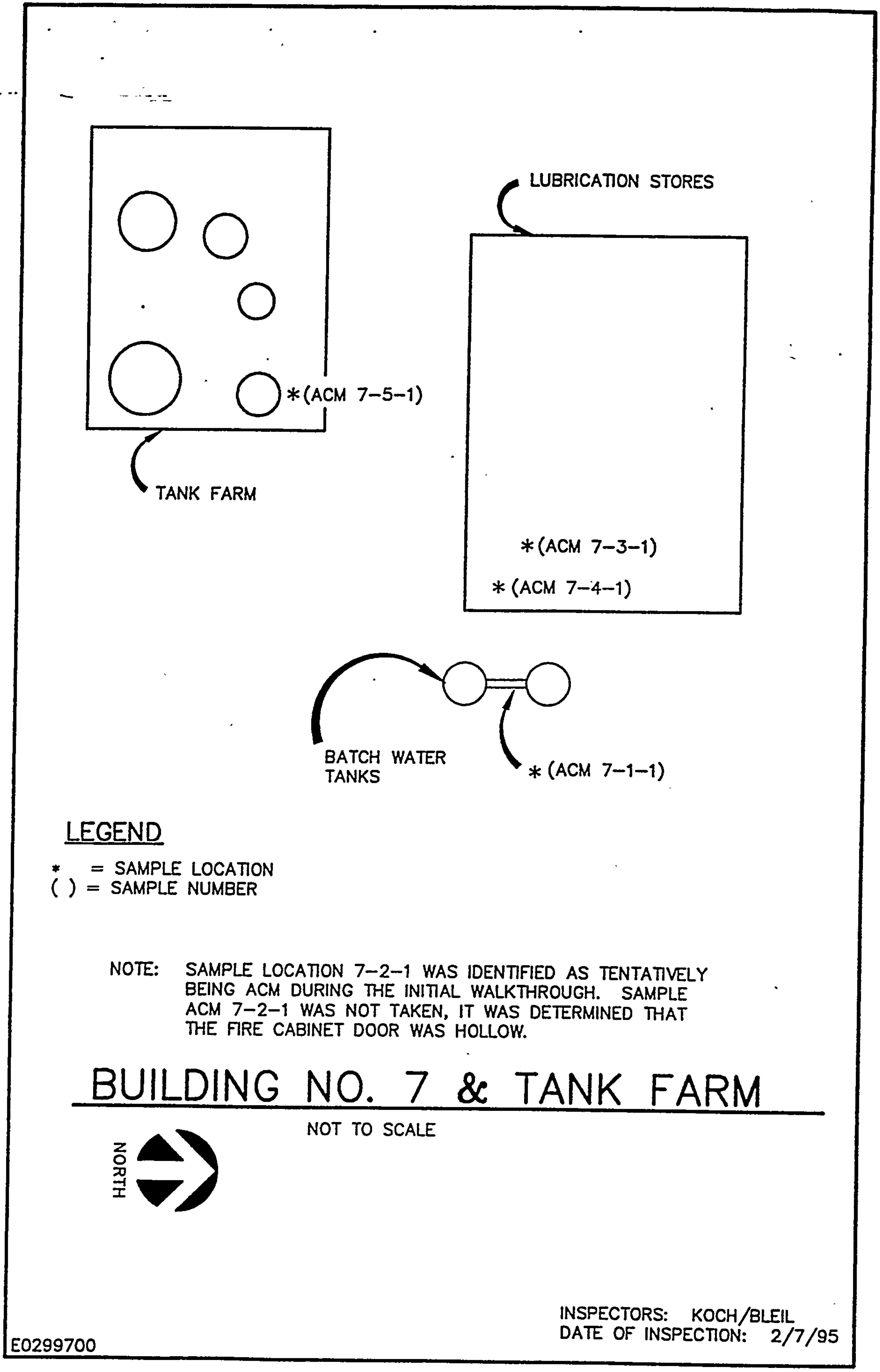


Figure A-5. Asbestos Sampling Locations in Building 7 and Tank Farm

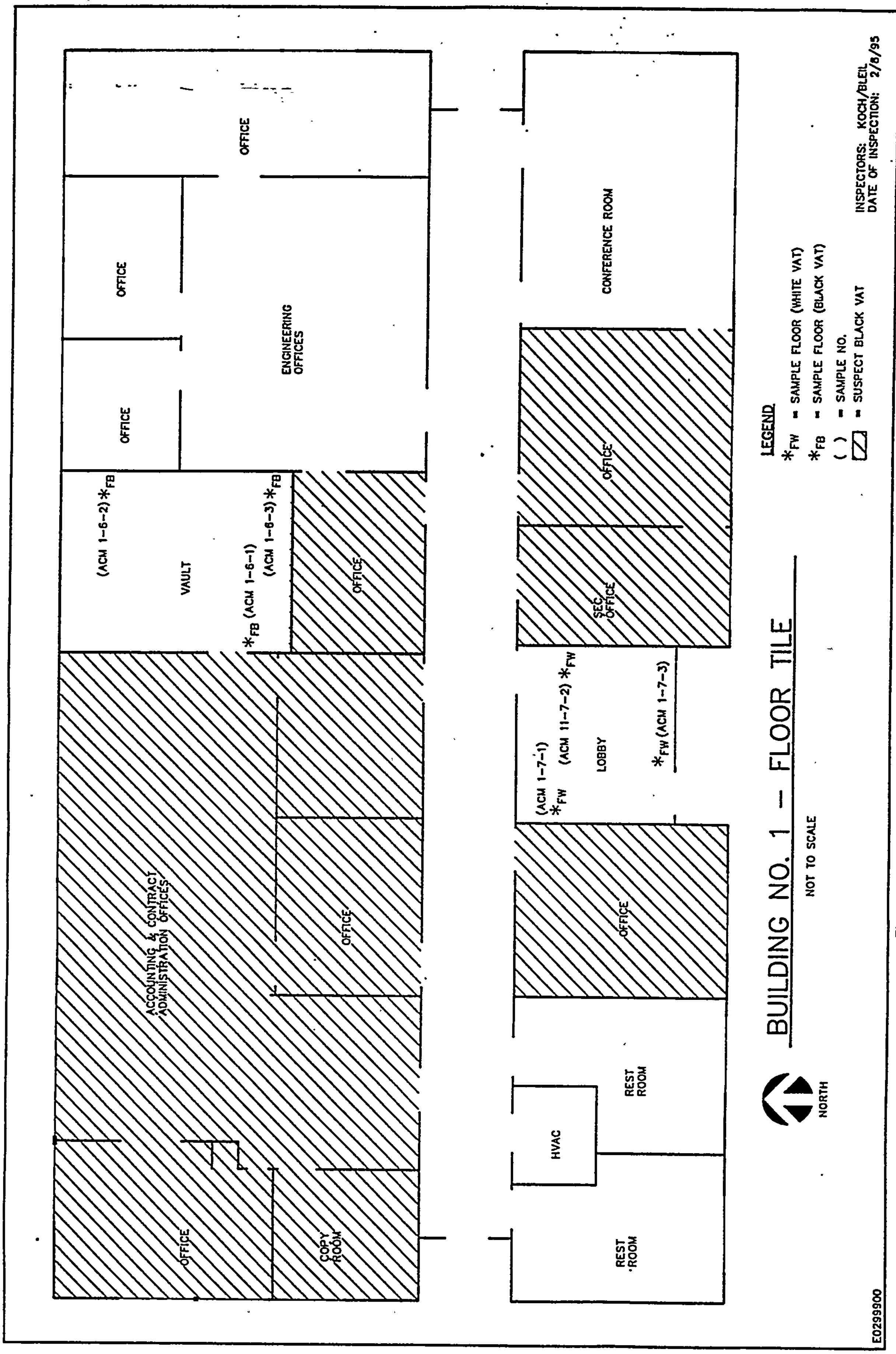


Figure A-6. Asbestos Sampling Locations in Building 1 Floor Tile

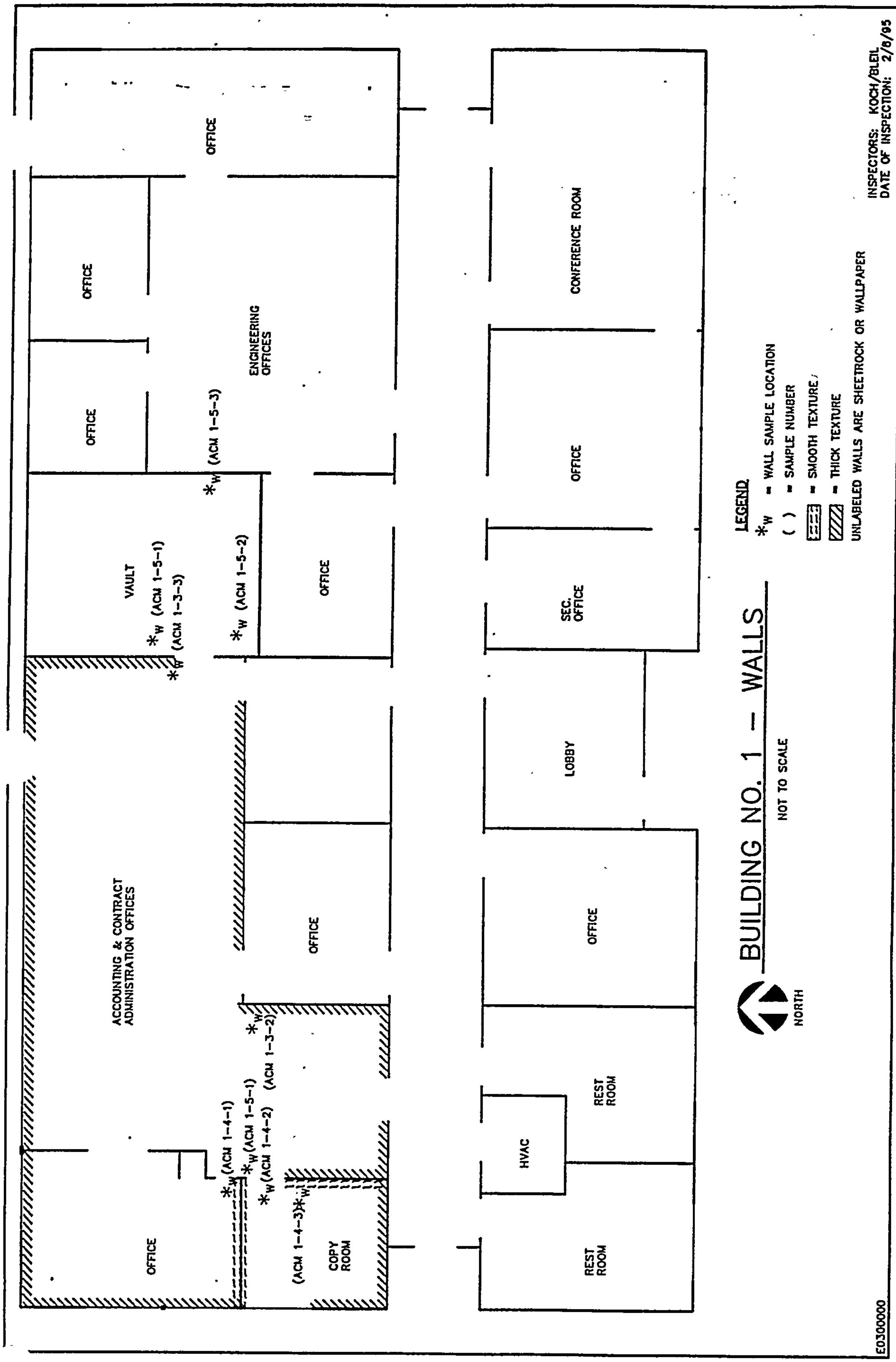


Figure A-7. Asbestos Sampling Locations in Building 1 Walls

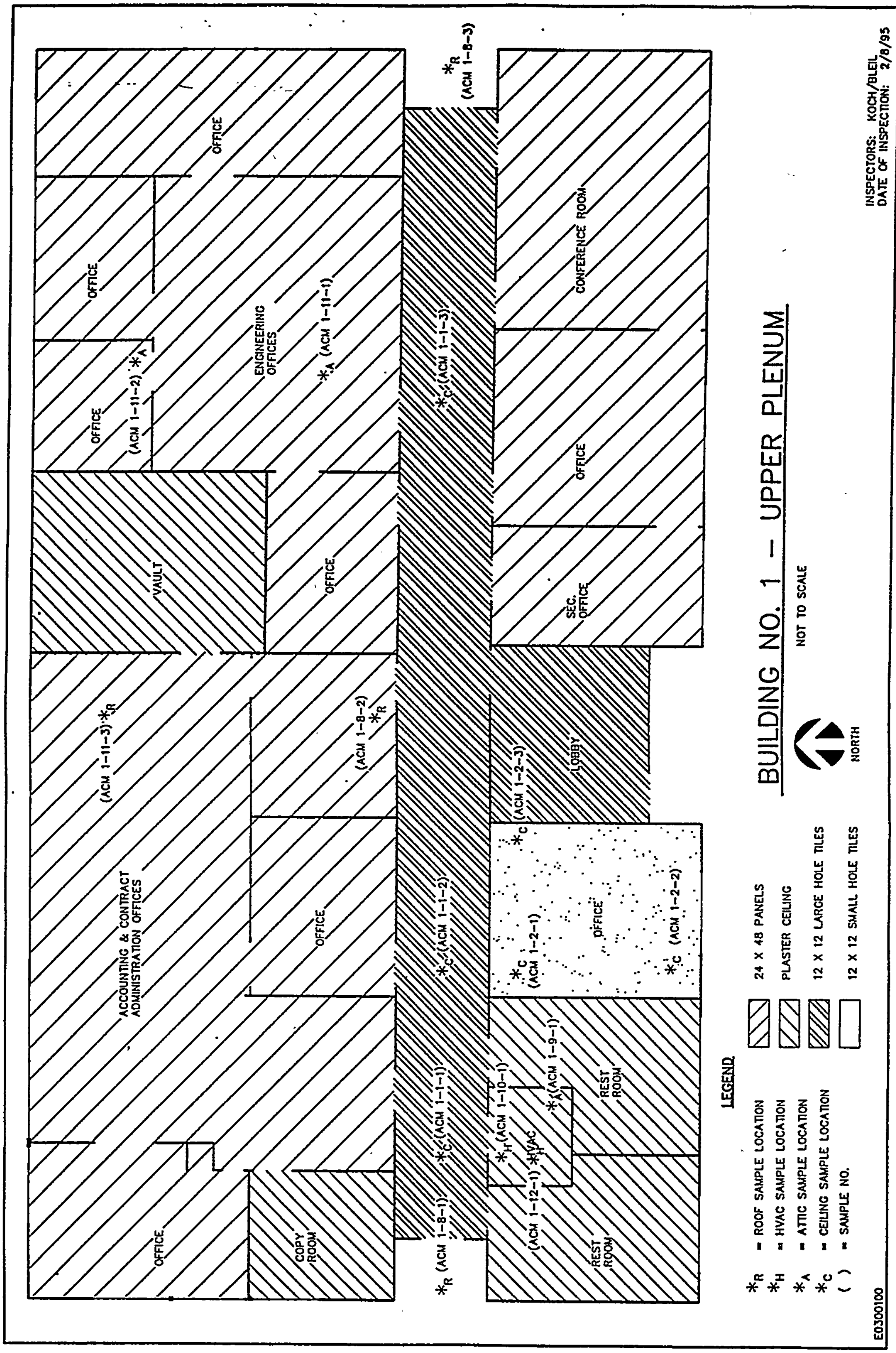


Figure A-8. Asbestos Sampling Locations in Building 1 Upper Plenum

Appendix B
Borehole Lithologic Logs

P.O. Box 14000
Grand Junction, Colorado 81502

Page 1 of 1

Facility: OXNARD DOE FACILITY Site: OXNARD, CA Project: SITE CHARACTERIZATION ~~OXNARD~~

Boring/Well No: MW-01 Location (ft.) N: ______ E: ______ JP 2/4/95

Ground Elev. (ft. AMSL): ______ Auger/Bit Size (in.): 8 1/4 Hole Depth (ft): 18

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	2" PVC	2"	+2 TO 8 (BGL)
Screen:	CONT. WRAP	2"	8 TO 18
Sump/End Cap:	PVC	2" 225	TO
Sand Pack:	LONESTAR	#2 ~~375~~ lbs	6 TO 18
Sealant:	" BENTONITE PELLETS	#16 1/4" 50 lbs 50 lbs	5 2 TO 6 5
Grout:	CEMENT		0 TO 2

No. of Completions: 1

Stick-Up Ht. (ft.): 2

Slot Size: .010

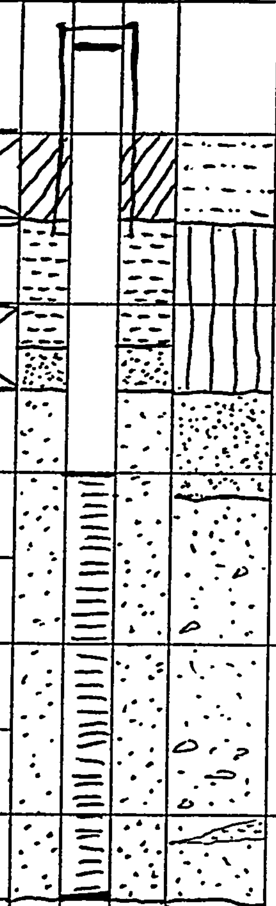
Location Sketch:

Locking Cover Installed: Y / N Padlock No: ______

Drilling Method: AUGER Sampling Method: SPLIT SPOON

Date Drilled: Jan 31, 95 Date Developed: ______ Fluid Level/Date: /

Samplers: PRICE Remarks: ______



DEPTH[a] (ft)	BLOWS/6"	HNU, SIP ppm	SAMPLE NO.: INTERVAL	DESCRIPTION
				REQUIRED INFORMATION: Typical name: Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	2,6,7,7	0	X	TOPSOIL, DARK ~~Yellowish~~ brown (10 YR 3/3) not firm, some gravel
2	2,3,4,4	0		ML, yellowish brown (10 YR 5/3), firm, ~~fair amount of fine sand.~~
4	2,3,3,4	0	X	
6	2,2,3,4	0		~~SW~~ SP, yellowish brown (10 YR 5/4), very wet, ~~fine to medium grained.~~
8	5,6,17,20	0		~~SP~~ SW yellowish brown (10 YR, 5/4), very wet, med. to coarse sand, a few pebbles to 1".
10	3,11,14	0		SAME, more pebbles
12				(Driller reports more cobbles @ 15' and a clay silt lense @ 16, maybe .5' thick.) (END SAMPLING @ 12' Because of ~~RUN~~ FLOWING SAND.)
14				
16				
18				T.D. = 18'

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: Gary L. Thompson 2-4-95

Facility: OXNARD - DOE FACILITY Site: OXNARD CA Project: SITE CHARACTERIZATION

Boring/Well No: MW-02 Location (ft.) N: E:

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): 8 1/4 Hole Depth (ft): 18

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	2" PVC		+2 TO 8
Screen:	Cont. Wrap PVC	2"	8 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	LONESTAR #2	175 lbs	6 TO 18
	LONESTAR #16	50 lbs	5 TO 6
Sealant:	BENTONITE PELLETS	50 lbs	2 TO 5
Grout:	CEMENT		0 TO 2

No. of Completions: 1
Stick-Up Ht. (ft.): 2
Slot Size: .010"

Location Sketch:

Locking Cover Installed: (Y) N Padlock No:

Drilling Method: AUGER Sampling Method: SPLIT SPOON

Date Drilled: Jan 31, 95 Date Developed: Fluid Level/Date: /

Samplers: PRICE Remarks:

DEPTH[a] (ft)	BLOWS/ 6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	2,3,4,7	0				ML, Topsoil Dark yellowish brown; loose to slightly firm.
2	3,3,3,2	0				SP, Slightly moist sand, light yellowish brown (6/4 2.5Y)
4	2,2,3,5	0				ML, Silty clay, a few sand stringers, lt. yellowish brown (2.5Y 6/4)
6	2,4,6,7	0				SP, Saturated, some Fe staining, light yellowish brown (10 YR 6/4), fine grained.
8	8,12,15,15	0				Same, more med. grained, saturated
10	8,12,21,14					SP, SW, Coarse sand, saturated, light yell. brn. (10YR 6/4).
12		0				
14						(END SPLIT SPOON SAMPLING @ 12'; Flowing SANDS. LITH. seems the same to total Depth.
16						
18						

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: [signature] 2-4-95

P.O. Box 14000
Grand Junction, Colorado 81502

Facility: Oxnard
Site: Oxnard DOE Facility
Project: Site Char.

Boring/Well No: ~~SB-03~~ JP MW-03
Location (ft.) N: ____ E: ____

Ground Elev. (ft. AMSL): ____
Auger/Bit Size (in.): 8 1/4
Hole Depth (ft): 18 (BGL)

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	PVC	2"	~~+~~ .25 TO 8
Screen:	Cont. Wrap PVC	2"	8 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	Lonestar #2 ~~Lonestar 1C~~	200 lbs 50 lbs	7 TO 18 6 TO 7
Sealant:	Bentonite Pellets	50 lbs	3 TO 6
Grout:	Cement		0 TO 3

No. of Completions: 1
Stick-Up Ht. (ft.): ~~2~~ -.25'
Slot Size: .010

Location Sketch:

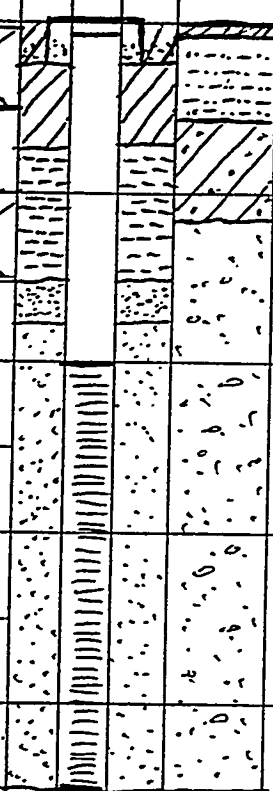
Locking Cover Installed: Y / N
Padlock No: ____

Drilling Method: Auger
Sampling Method: Split Spoon

Date Drilled: 2/1/95
Date Developed: ____
Fluid Level/Date: /

Samplers: Price
Remarks: ____

DEPTH[a] (ft)	BLOWS/ 6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	4,10,19, 19	0	X			6" Concrete Surface Silty Clay, dark brown (10YR 3/3), moist, very firm, some sand, probably fill.
2	7,4,4,5	0				SC, brown (10YR 5/3), mod. firm, moist, looks native.
4	2,11,5,7	0	X			SP, brown (10YR 5/3), slightly moist, few cobbles.
6	7,11,11,9	0				Same, more cobbles, saturated at about 6½'.
8	3,10,19, 21	0				Same, cobbles to 2".
10	3,5,14, 17	0				Same.
12						(Flowing sand problem, last sample at 10-12'.) (Driller reports similar material to T.D.)
14						
16						
18						



[a] All Depths From Ground Surface.

COMPLETED BY: Jeff Price
VERIFIED BY: [signature] 2-4-95

P.O. Box 14000
Grand Junction, Colorado 81502

Page 1 of 1

SITE CHAR.

Facility: OXNARD   Site: OXNARD DOE FACILITY   Project: OXNARD JP 2/4/95

Boring/Well No: MW-04   Location (ft.) N: E:

Ground Elev. (ft. AMSL):   Auger/Bit Size (in.): 8 1/4   Hole Depth (ft): 18

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	PVC	2"	.25 TO 8
Screen:	Continuous Wrap PVC	2"	8 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	Lonestar #2	200 lbs	7 TO 18
	~~Lonestar 1C~~	~~50 lbs~~	6 TO 7
Sealant:	Bentonite Pellets	75 lbs	3 TO 6
Grout:	Cement		0 TO 3

No. of Completions: 1

Stick-Up Ht. (ft.): -.2

Slot Size: .010"

Location Sketch:

Locking Cover Installed: Y / N   Padlock No:

Drilling Method: Auger   Sampling Method: SPLIT SPOON

Date Drilled: 2/2/95   Date Developed: Fluid Level/Date: /

Samplers: PRICE   Remarks:

DEPTH[a] (ft)	BLOWS/ 6"	HNU, SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION.
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	3,4,5, 7	5 5				6" of Concrete ~~SC, very dark gray (10YR 3/1)~~ Sand & gravel fill. SC, very dark gray (10YR 3/1), firm, damp.
2	2,3,3,3	0				SC, brown (10YR 5/3), moist,
4	2,3,4,9	0				~~SW~~ SP yellowish brown (10YR 5/4), slightly moist, med. grained.
6	11,17,17, 15	0				SP, yellowish brown (10YR 5/4), slightly moist, w/ few pebbles to 1".
8	8,12,19, 30	0				Same, fewer pebbles, SATURATED.
10	13,14,17 23	0				Same
12	9,14,17 23	0				Same (Stop split spoon sampling, flowing sand trouble.) (Driller reports similar material to T.D.)
14						
16						
18						

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE   VERIFIED BY: [signature] 2-4-95

P.O. Box 14000
Grand Junction, Colorado 81502

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR.

Boring/Well No: MW-05 Location (ft.) N: E:

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): 8 1/4 Hole Depth (ft): 19

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	PVC	2"	+2 TO 8
Screen:	CONT. WRAP PVC	2"	8 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	LONESTAR #2 ~~LONESTAR 1C~~	200 lbs ~~50 lbs~~	6 TO 18 ~~5 TO 6~~
Sealant:	BENTONITE PELLETS	50 lbs	2 TO 5
Grout:	CEMENT		0 TO 2

No. of Completions: 1
Stick-Up Ht. (ft.): 2
Slot Size: .010

Location Sketch:

Locking Cover Installed: Y / N Padlock No:

Drilling Method: AUGER Sampling Method: SPLIT SPOON

Date Drilled: 2/1/95 Date Developed: Fluid Level/Date: /

Samplers: PRICE Remarks:

DEPTH[a] (ft)	BLOWS/ 6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	4,4,5, 6	0				TOPSOIL, dark yellowish brown (10 YR 3/4), moist,
2	2,2,6, 4	0				SM, yellowish brown (10YR 5/4), moist (grading into SP)
4	6,9,13, 14	0				~~SP~~ SW, yellowish brown (10YR 5/4), moist, few pebbles.
6	6,8,19, 13	0				SAME, more pebbles; saturated at about 6 1/2'
8	10,12,13, 17	0				Same, a little silt @ 9 1/2'.
10	7,12,5, 21	0				Same, grading almost into a GW.
12						(Stop split spoon at 12', sand flowing sand problem.)
14						(Driller reports similar material to T.D.)
16						
18						

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: Gail Thompson 2-1-95

P.O. Box 14000
Grand Junction, Colorado 81502

Facility: OXNARD   Site: OXNARD DOE FACILITY   Project: SITE CHAR.

Boring/Well No: MW-06   Location (ft.) N: ______   E: ______

Ground Elev. (ft. AMSL): ______   Auger/Bit Size (in.): 8 1/4"   Hole Depth (ft): 18' (BGL)

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	2" PVC	2"	.25' TO 8
Screen:	CONT. WRAP PVC	2"	8 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	LONESTAR #2 ~~LONESTAR 1C~~	225 lbs ~~50 lbs~~	7 TO 18 ~~6 TO 7~~
Sealant:	BENTONITE PELLETS	50 lbs	3 TO 6
Grout:	CEMENT		0 TO 3

No. of Completions: ______
Stick-Up Ht. (ft.): -..
Slot Size: .010"

Location Sketch:

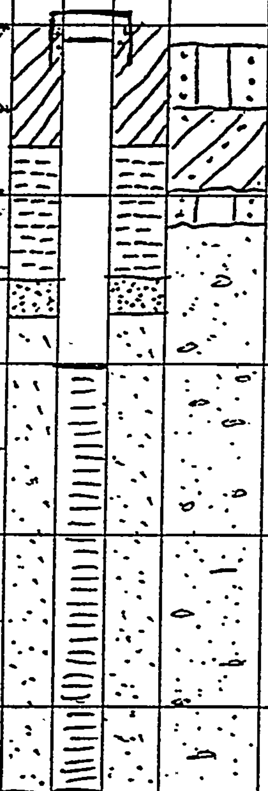
Locking Cover Installed: Y / N   Padlock No: ______

Drilling Method: AUGER   Sampling Method: SPLIT SPOON

Date Drilled: 2/2/95   Date Developed: ______   Fluid Level/Date: ___ / ___

Samplers: PRICE   Remarks: ______

DEPTH[a] (ft)	BLOWS/6"	HNU, SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	0,0,2,2	0	X			CONCRETE
						SM, dark yellowish brown (10YR 4/4), moist.
2	0,0,22	0				SC, brown (10YR 5/3), moist, not very firm.
4	3,7,4,18	0	X			~~SM, brown (10YR 5/3), moist.~~
						SW, brown (10yr 5/3), moist, pebbles to 1".
6	1,10,14,18	0				Same, saturated at 7'.
8	9,15,18,26	0				Same, more pebbles.
10	3,7,14,18	0				Same.
12						(Stop split sampling at 12'; flowing sand trouble.)
14						
16						(Driller reports similar material on down to total depth.)
18						



[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE   VERIFIED BY: [signature] 2-4-95

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Facility: OXNARD   Site: OXNARD DOE FACILITY   Project: SITE CHAR.

Boring/Well No: MW-07   Location (ft.) N: ______   E: ______

Ground Elev. (ft. AMSL): ______   Auger/Bit Size (in.): 8 1/4"   Hole Depth (ft): 18'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	PVC	2"	+2 TO 8 (BGL)
Screen:	CONT. WRAP PVC	2"	8 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	LONESTAR #2	200 lbs	6 TO 18
	LONESTAR 1C	50 lbs	5 6
Sealant:	Bentonite Pellets 1/4"	50 lbs	2 TO 5
Grout:	CEMENT		0 TO 2

No. of Completions: 1

Stick-Up Ht. (ft.): 2'

Slot Size: .010"

Location Sketch:

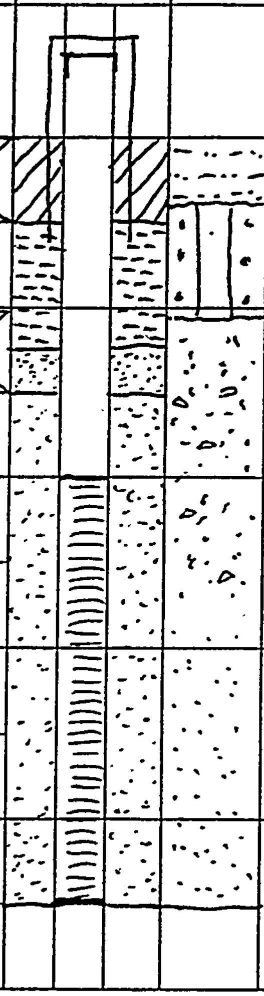
Locking Cover Installed: Y / N   Padlock No: ______

Drilling Method: AUGER   Sampling Method: SPLIT SPOON

Date Drilled: 2/1/95   Date Developed: ______   Fluid Level/Date: /

Samplers: PRICE   Remarks: ______

DEPTH[a] (ft)	BLOWS/6"	HNU, SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	0,22,1	0				TOPSOIL, Dark Yellowish brown (10 YR 3/4), moist, not firm, numerous organic frags.
2	2,2,3,4	0				SM, dark yellowish brown (10 YR 4/4), moist, some roots, not firm.
4	2,4,10,17	0				SW ~~SP~~, brown (10 YR 4/3), moist, ~~some roots~~, ~~not firm~~, a few cobbles.
6	9,14,17,30	0				SAME, more cobbles to 1 1/2", wet at 7'.
8	4,11,19,21	0				SAME
10	10,12,12,15	0				same, fewer cobbles.
12						(END split spoon sampling @ 12; flowing sand trouble. will plug bit @ 12' and drill to 18'.)
14						
16						(Driller reports similar material to T.D.)
18						



[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE   VERIFIED BY: Gary L Thompson 2-4-95

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Page 1 of 1

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR.

Boring/Well No: MW-08 Location (ft.) N: E:

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): 8 1/4" Hole Depth (ft): 18 (BGL)

	TYPE	DIA. (in. I.D.) Vol. (cf, gal)	INTERVAL (ft.)
Blank Casing:	PVC	2"	+2 TO 8
Screen:	CONT. WRAP PVC	2"	8 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	LONESTAR #2 / ~~LONESTAR 1C~~	225 lbs / 50 lbs	6 TO 18 / 5 TO 6
Sealant:	Bentonite Pellets	75 lbs	3 2 TO 5
Grout:	CEMENT		0 TO 2

No. of Completions:
Stick-Up Ht. (ft.): 2
Slot Size: .010"
Location Sketch:

Locking Cover Installed: Y / N Padlock No:

Drilling Method: AUGER Sampling Method: SPLIT SPOON

Date Drilled: 2/2/95 Date Developed: Fluid Level/Date: /

Samplers: PRICE Remarks:

DEPTH[a] (ft)	BLOWS/ 6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	1,2,2,2	0				SM, (Topsoil) dark yellowish brown (10YR 3/4), damp.
2	1,2,2,2	0				Same, less organics - more fine sand.
4	3,7,14,15	0				SP yellowish brown (10YR 5/4); damp, med grained.
6	3,5,7,10	0				SW, yellowish brown (10YR 5/4), damp. SP, yellowish brown (10YR 5/4), saturated at 7'.
8	7,11,22,24	0				SW, yellowish brown (10YR 5/4), pebbles to 1 1/2".
10	3,7,10,14	0				Same, more pebbles.
12						(Stop split spoon sampling at 12', flowing sand problem).
14						
16						(Driller reports similar material to T.D.)
18						

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: Gary Thompson 2-4-95

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Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR

Boring/Well No: MW - 09 Location (ft.) N: ____ E: ____

Ground Elev. (ft. AMSL): ____ Auger/Bit Size (in.): 8 1/4 Hole Depth (ft): 18

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	PVC	2"	.25 TO 8
Screen:	CONT. WRAP PVC	2"	9 TO 18
Sump/End Cap:	PVC	2"	TO
Sand Pack:	LONESTAR #2 ~~LONESTAR 1C~~	250 lbs 50 lbs	7 TO 18; 6 TO 7
Sealant:	BENTONITE PELLETS	75 lbs	3 TO 6
Grout:	CEMENT	150 lbs (dry)	0 TO 3

No. of Completions: 1
Stick-Up Ht. (ft.): ~~2~~ -.25 JP 2/3/95
Slot Size: .010

Location Sketch:

Locking Cover Installed: Y / N Padlock No: ____

Drilling Method: AUGER Sampling Method: SPLIT SPOON

Date Drilled: 2/3/95 Date Developed: ~~N/A~~ 2/4/95 JP Fluid Level/Date: ~~N/A~~ / JP 2/4/95

Samplers: PRICE Remarks: ____

DEPTH[a] (ft)	BLOWS/ 6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	2,3,5,4	0				Topsoil, dark brown (10YR 3/3),
2	0,1,2,3	0				SW, dark yellowish brown (10YR 4/4), moist, fine to med. grain sand.
4	5,7,11,13	0				SP, dark yellowish brown (10 YR 4/4), moist, med. grained sand.
6	3,6,9,10	0				Same, fewer fines. Same, saturated at ~~7~~ 6 1/2 JP 2/3/95
8	2,3,5,7	0				
10	3,11,12,8	0				Same, a few SW stringers w/pebbles.
12	2,3,2,4	0				
14	7,9,15,17	0				SW, dark grayish brown (10YR 4/2), a few pebbles w/ associated clay clasts.
16		0				
18						

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: [signature] 2-4-95

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Page 1 of 1

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR

Boring/Well No: SB-10 Location (ft.) N: E:

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): Hole Depth (ft): 6'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	N/A		TO
Screen:	N/A		TO
Sump/End Cap:	N/A		TO
Sand Pack:	NAT. DIRT		0 TO 6"
Sealant:	BENTONITE PELLETS	100 lbs	6" TO 6'
Grout:	N/A		TO

No. of Completions: N

Stick-Up Ht. (ft.): N/A

Slot Size: N/A

Location Sketch:

Locking Cover Installed: Y / N Padlock No:

Drilling Method: Auger Sampling Method: SPLIT SPOON

Date Drilled: 2/4/95 Date Developed: N/A Fluid Level/Date: N/A /

Samplers: PRICE Remarks:

DEPTH[a] (ft)	BLOWS/ 6"	HNU SIP ppm	SAMPLE NO.; INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	1,2,5,7	0	X			TOPSOIL, very dark brown (10YR 2/2), moist, lots of organic frags.
2	1,2,1,2	0				ML, dark yellowish brown (10YR 4/4), moist, not firm.
4	5,2,4,5	0	X			
6						

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: [signature] 2-4-95

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Grand Junction, Colorado 81502

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR

Boring/Well No: SB-11 (No WELL) Location (ft.) N: E:

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): ~~8 1/4~~ 3" JP 2/3/95 Hole Depth (ft): 6'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	N/A		TO
Screen:	N/A		TO
Sump/End Cap:	N/A		TO
Sand Pack:	LONESTAR #2	40 lbs	6" TO 1
Sealant:	BENTONITE PELLETS	50 lbs	1 TO 6
Grout:	CONCRETE	100 lbs (dry)	0 TO 6"

No. of Completions: N/A
Stick-Up Ht. (ft.): N/A
Slot Size: N/A
Location Sketch:

Locking Cover Installed: Y / N Padlock No:

Drilling Method: HAND AUGER Sampling Method: 3" Auger (HAND) 1" Drive Tube

Date Drilled: 2/3/95 Date Developed: N/A Fluid Level/Date: N/A /

Samplers: PRICE Remarks:

DEPTH[a] (ft)	BLOWS/ 6"	HNU, SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0		0				CONCRETE SURFACE 6" SM, dark yellowish brown (10 YR 3/4) moist.
2		0				ML, dark yellowish brown (10 YR 4/4), moist, fairly plastic, mod. amount of silt.
4		0				SM, yellowish brown (10 YR 5/4), moist, med. grain
6						SP, yellowish brown (10 YR 5/4), moist, few pebbles to 1/2".

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: [signature] 2-5-95

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Grand Junction, Colorado 81502

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR.

Boring/Well No: SB-12 (No Well) Location (ft.) N: E:

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): 8 1/4 Hole Depth (ft): 8'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal).	INTERVAL (ft.)
Blank Casing:	N/A		TO
Screen:	N/A		TO
Sump/End Cap:	N/A		TO
Sand Pack:	N/A		TO
Sealant:	BENTONITE PELLETS	150 lbs	1 TO 8
Grout:			TO

No. of Completions: N/A

Stick-Up Ht. (ft.): N/A

Slot Size: N/A

Location Sketch:

Locking Cover Installed: Y / N Padlock No: N/A

Drilling Method: 2/4/95 Sampling Method: SPLIT SPOON

Date Drilled: AUGER Date Developed: N/A Fluid Level/Date: N/A /

Samplers: PRICE Remarks: WILL NOT CONCRETE SURFACE UNTIL OXNARD PERSONNEL DETERMINE STATUS OF SEVERED CONDUIT; CONDUIT at 6" (BGL).

DEPTH[a] (ft)	BLOWS/6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	1,16,32,33	0				CONCRETE SURFACE.
						SM, very dark brown (10YR 4/6), slightly damp, gravel, (fill material)
2	8,9,13	0				ML, yellowish brown (10YR 5/4), moist, fairly stiff. Looks native.
4	9,11,23,29	0				SM, dark yellowish brown (10YR 4/4), moist
6	7,9,12,23	0				SW, dark brown (10YR 4/3), moist, moderate amount of pebbles; SATURATED AT 7½'.
8						

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: Gay L. Dryman 2-4-95

P.O. Box 14000
Grand Junction, Colorado 81502

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SIDE CHAR

Boring/Well No: SB-13 Location (ft.) N: ____ E: ____

Ground Elev. (ft. AMSL): ____ Auger/Bit Size (in.): 8 1/4" Hole Depth (ft): 4 1/2'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	N/A		TO
Screen:	N/A		TO
Sump/End Cap:	N/A		TO
Sand Pack:	LONESTAR #2	25 lbs.	.5 TO 1
Sealant:	BENTONITE PELLETS	50 lbs	1 TO 4 1/2
Grout:	CEMENT	100 lbs	0 TO ~~X~~ .5' JP 2/4/95

No. of Completions: N/A
Stick-Up Ht. (ft.): N/A
Slot Size: N/A
Location Sketch:

Locking Cover Installed: Y / N Padlock No: ____

Drilling Method: AUGER Sampling Method: SPLIT SPOON

Date Drilled: 2/4/95 Date Developed: N/A Fluid Level/Date: N/A /

Samplers: PRICE Remarks: N/A

DEPTH[a] (ft)	BLOWS/ 6"	HNU, SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	6,11,22,13	24				CONCRETE SURFACE 6"
2	6,2,2	2				SM, dark brown (10YR 3/3), damp, some gravel & sand (FILL MATERIAL)
4						SAME
6			This SAMPLE NOT TAKEN			(TAKE ANALYTICAL SAMPLE from 2 1/2 - 4') #255
8						WE HAVE AUGER REFUSAL @ 4 1/2 (BGL), DRILLER THINKS IT'S A PIPE.

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: Gayl. Morgan 2-4-95

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR

Boring/Well No: SB-14 (No WELL) Location (ft.) N: E: 2/4/95 -JP

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): 9 1/4 Hole Depth (ft): 4'6'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	N/A		TO
Screen:	N/A		TO
Sump/End Cap:	N/A		TO
Sand Pack:	LONESTAR #2 SLUF/NAT SAND	50 lbs —	6" 5' 5' TO 6'
Sealant:	BENTONITE PELLETS	50 lbs	2 TO 5'
Grout:	CONCRETE	100 lbs (dry)	0 TO 6"

No. of Completions: N
Stick-Up Ht. (ft.): N/A
Slot Size: N/A
Location Sketch:

Locking Cover Installed: Y / N Padlock No: N/A

Drilling Method: AUGER Sampling Method: SPLIT SPOON

Date Drilled: 2/3/95 Date Developed: N/A Fluid Level/Date: N/A /

Samplers: PRICE Remarks:

DEPTH[a] (ft)	BLOWS/ 6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	6,7,8,8	1	X			ASPHALT ROAD BASE (1st Split Spoon = 1-3')
						MORE FILL, sandy silt, gravel.
2	1,2	1				SM, yellowish brown (10YR 5/4), moist, maybe fill
						SMX 2/3/95 yellowish brown (10YR 5/4), fairly m native material.
4	7,8,13 19	0	X			SP, yellowish brown (10YR 5/4), med. grain, damp
6						SW, brown (10YR 5/3), damp, some pebbles to 2".

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: [signature]

P.O. Box 14000
Grand Junction, Colorado 81502

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR

Boring/Well No: SB-15 (No Well) Location (ft.) N: ______ E: ______ JP 2/4/95

Ground Elev. (ft. AMSL): ______ Auger/Bit Size (in.): 9 1/4 Hole Depth (ft): ~~4~~ 6'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	NONE		TO
Screen:	NONE		TO
Sump/End Cap:	NONE		TO
Sand Pack:	LONESTAR #2	(NONE USED)	TO
Sealant:	BENTONITE PELLETS	100 lbs	6" ~~4~~ TO ~~6"~~ 4' (JP 2/4/95)
Grout:	CEMENT	100 lbs (dry)	0 TO 6"

No. of Completions: NONE
Slick-Up Ht. (ft.): N/A
Slot Size: N/A
Location Sketch:

Locking Cover Installed: Y / N Padlock No: ______

Drilling Method: ~~2/3/95~~ JP 2/3/95 Auger Sampling Method: SPLIT SPOON

Date Drilled: 2/3/95 Date Developed: N/A Fluid Level/Date: N/A /

Samplers: PRICE Remarks: ______

DEPTH[a] (ft)	BLOWS/ 6"	HNU, SIP ppm	SAMPLE NO.: INTERVAL	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	1,1,2,1	0	X			CONCRETE SURFACE 6"
						Fill, mostly sandy silt w/gravel.
2	2,2,3,2	0				SM, dark yellowish brown (10YR 4/4), moist
4	3,5,7,16	0	X			SP, yellowish brown (10YR 5/4), moist, medium grain.
6						SW, yellowish brown (10YR 5/4), moist, some pebbles to 3/4".
						(Interval from 4'-6' is native/cave in sand!)

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: [signature] 2-4-95

Facility: OXNARD Site: OXNARD DOE FACILITY Project: SITE CHAR

Boring/Well No: SB-16 (No Well) Location (ft.) N: E: 2/4/95 JP

Ground Elev. (ft. AMSL): Auger/Bit Size (in.): 8 1/4" Hole Depth (ft): (4') 6'

	TYPE	DIA. (in. I.D.) Vol. (cf. gal)	INTERVAL (ft.)
Blank Casing:	NONE		TO
Screen:	NONE		TO
Sump/End Cap:	NONE		JP TO 2/4/95
Sand Pack:	LONESTAR #2	25 lbs	6" ~~2~~ TO ~~4~~ 2'
Sealant:	BENTONITE PELLETS	50 lbs	2 ~~X~~ TO ~~2~~ 4½
Grout:	ASPHALTIC CONCRETE	50 lbs	0 TO 1
	NAT. SAND SLUF	—	4½ to 6

No. of Completions: N
Stick-Up Ht. (ft.): N/A
Slot Size: N/A
Location Sketch:

Locking Cover Installed: Y / N Padlock No:

Drilling Method: Auger Sampling Method: Split Spoon

Date Drilled: 2/2/95 Date Developed: N/A Fluid Level/Date: N/A /

Samplers: PRICE Remarks:

DEPTH[a] (ft)	BLOWS/6"	HNU SIP ppm	SAMPLE NO.: INTERVAL	~~WELL CONSTRUCTION~~ BACKFILL INFORMATION	GRAPHIC LOG	DESCRIPTION
						REQUIRED INFORMATION: Typical name: Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated).
0	8,11,8, 8	0				ASPHALTIC CONCRETE SURFACE SM, dark brown (10YR 4/3), damp, probably fill material.
2	2,2,5, 2	0				SM, yellowish brown (10YR5/6), damp, mostly sand, look like native mat.
4	3,4,7, 9	0				SP, yellowish brown (10YR5/6), saturated 5'.
6						
8						(TOTAL DEPTH of Auger = 4'; SPLIT SPOON PENETRATION to 6')

[a] All Depths From Ground Surface.

COMPLETED BY: JEFF PRICE VERIFIED BY: [signature] 2-4-95

Appendix C
Analytes, Laboratory Reporting Limits, and Analytical Methods

Table C-1. Analytes, Laboratory Reporting Limits, and Analytical Methods for Groundwater Sampling

Analytical Parameters	Quantitation Limit (μg/L)[a]	Analytical Method
TCL Metals		EPA Method 7060 for As, 7740 for Se, 7470 for Hg, 7421 for Pb, and 6010 for all other metals
Aluminum	200	
Antimony	60	
Arsenic	10	
Barium	200	
Beryllium	5	
Cadmium	5	
Calcium	5000	
Chromium	10	
Cobalt	50	
Copper	25	
Iron	100	
Lead	3	
Magnesium	5000	
Manganese	15	
Mercury	0.2	
Nickel	40	
Potassium	5000	
Selenium	5	
Silver	10	
Sodium	5000	
Thallium	10	
Vanadium	50	
Zinc	20	
Molybdenum	50	EPA Method 6010
TCL PCBs		EPA Method 8080
Aroclor 1016	1.0	
Aroclor 1221	2.0	
Aroclor 1232	1.0	
Aroclor 1242	1.0	
Aroclor 1248	1.0	
Aroclor 1254	1.0	
Aroclor 1260	1.0	

[a]μg/L= microgram per liter.

Table C-1 (continued). Analytes, Laboratory Reporting Limits, and Analytical Methods for Groundwater Sampling

Analytical Parameter	Quantitation Limit (μg/L)[a]	Analytical Method
TCL VOCs		EPA Method 8240 or 8260
Acetone	100	
Benzene	5	
Bromodichloromethane	5	
Bromoform	5	
Bromomethane	10	
2-Butanone	100	
Carbon disulfide	100	
Carbon tetrachloride	5	
Chlorobenzene	5	
Chlorodibromomethane	5	
Chloroethane	10	
Chloroform	5	
Chloromethane	10	
1,1-Dichloroethane	5	
1,2-Dichloroethane	5	
1,1-Dichloroethene	5	
trans-1,2-Dichloroethene	5	
1,2-Dichloropropane	5	
cis-1,3-Dichloropropene	5	
trans-1,3-Dichloropropene	5	
Ethyl benzene	5	
2-Hexanone	50	
Methylene chloride	5	
4-Methyl-2-pentanone	50	
Styrene	5	
1,1,2,2-Tetrachloroethane	5	
Tetrachloroethene	5	
Toluene	5	
1,1,1-Trichloroethane	5	
1,1,2-Trichloroethane	5	
Trichloroethene	5	
Vinyl acetate	50	
Vinyl chloride	10	
Xylene	5	
TPH	500	**California Modified EPA Method 8015**

[a]μg/L= microgram per liter.

Table C-2. Analytes, Laboratory Reporting Limits, and Analytical Methods for Soil Sampling

Analytical Parameter	Quantitation Limit (mg/kg)[a]	Analytical Method
TCL Metals		EPA Method 7060 for As, 7740 for Se, 7471 for Hg, 7421 for Pb, and 6010 for all other metals.
Aluminum	40.0	
Antimony	12.0	
Arsenic	2.0	
Barium	40.0	
Beryllium	1.0	
Cadmium	1.0	
Calcium	1,000	
Chromium	2.0	
Cobalt	10.0	
Copper	5.0	
Iron	20.0	
Lead	0.6	
Magnesium	1,000	
Manganese	3.00	
Mercury	0.04	
Nickel	8.0	
Potassium	1,000	
Selenium	1.0	
Silver	2.0	
Sodium	1,000	
Thallium	2.0	
Vanadium	10.0	
Zinc	4.0	
Molybdenum	10.0	EPA Method 6010
TCL PCBs	(μg/kg)[b]	EPA Method 8080
Aroclor 1016	33	
Aroclor 1221	67	
Aroclor 1232	33	
Aroclor 1242	33	
Aroclor 1248	33	
Aroclor 1254	33	
Aroclor 1260	33	

[a]mg/kg = milligram per kilogram.
[b]μg/kg = microgram per kilogram.

Table C-2 (continued). Analytes, Laboratory Reporting Limits, and Analytical Methods for Soil Sampling

Analytical Parameter	Quantitation Limit ($\mu g/kg$)[a]	Analytical Method
TCL VOCs		EPA Method 8240 or 8260
Acetone	100	
Benzene	5	
Bromodichloromethane	5	
Bromoform	5	
Bromomethane	10	
2-Butanone	100	
Carbon disulfide	100	
Carbon tetrachloride	5	
Chlorobenzene	5	
Chlorodibromomethane	5	
Chloroethane	10	
Chloroform	5	
Chloromethane	10	
1,1-Dichloroethane	5	
1,2-Dichloroethane	5	
1,1-Dichloroethene	5	
trans-1,2-Dichloroethene	5	
1,2-Dichloropropane	5	
cis-1,3-Dichloropropene	5	
trans-1,3-Dichloropropene	5	
Ethyl benzene	5	
2-Hexanone	50	
Methylene chloride	5	
4-Methyl-2-pentanone	50	
Styrene	5	
1,1,2,2-Tetrachloroethane	5	
Tetrachloroethene	5	
Toluene	5	
1,1,1-Trichloroethane	5	
1,1,2-Trichloroethane	5	
Trichloroethene	5	
Vinyl acetate	50	
Vinyl chloride	10	
Xylene	5	
TPH	10 mg/kg[b]	California Modified EPA Method 8015

[a]$\mu g/kg$ = microgram per kilogram.
[b]mg/kg = milligram per kilogram.

Table C-3. Analytes, Laboratory Reporting Limits, and Analytical Methods for Sludge and Oil Sampling

Analytical Parameter	Quantitation Limit	Analytical Method
TOTAL Metals	**(mg/Kg)[a]**	EPA Method 7060 for As, 7740 for Se, 7471 for Hg, 7421 for Pb, and 6010 for all other metals.
Antimony	12.0	
Arsenic	2.0	
Barium	40.0	
Beryllium	1.0	
Cadmium	1.0	
Chromium	2.0	
Cobalt	10.0	
Copper	5.0	
Lead	0.6	
Mercury	0.04	
Molybdenum	10.0	
Nickel	8.0	
Selenium	1.0	
Silver	2.0	
Thallium	2.0	
Vanadium	10.0	
Zinc	4.0	
TCL PCBs	**(mg/kg)[a]**	EPA-600/481-045
Aroclor 1016	0.05	
Aroclor 1221	0.05	
Aroclor 1232	0.05	
Aroclor 1242	0.05	
Aroclor 1248	0.05	
Aroclor 1254	1.0	
Aroclor 1260	1.0	
Following is for oil sample analysis only.		
Total Organic Halides	25 mg/kg[a]	EPA Method 9076
Ignitability	1 °C	EPA Method 1010

[a]mg/kg = milligram per kilogram.

Table C–4. Analytes, Laboratory Reporting Limits, and Analytical Methods for Soil Sampling for Waste Disposal Determination

Analytical Parameter	Quantitation Limit	Analytical Method
TOTAL Metals	**(mg/Kg)[a]**	EPA Method 7060 for As, 7740 for Se, 7471 for Hg, 7421 for Pb, and 6010 for all other metals.
Antimony	12.0	
Arsenic	2.0	
Barium	40.0	
Beryllium	1.0	
Cadmium	1.0	
Chromium	2.0	
Cobalt	10.0	
Copper	5.0	
Lead	0.6	
Mercury	0.04	
Molybdenum	10.0	
Nickel	8.0	
Selenium	1.0	
Silver	2.0	
Thallium	2.0	
Vanadium	10.0	
Zinc	4.0	
Fluoride Salts	5.0	EPA Method 300.0 modified for soils

[a]mg/kg = milligram per kilogram.

Table C–4 (continued). Analytes, Laboratory Reporting Limits, and Analytical Methods for Soil Sampling for Waste Disposal Determination

Analytical Parameter	Quantitation Limit (μg/kg)[a]	Analytical Method
TCL VOCs		EPA Method 8240 or 8260
Acetone	100	
Benzene	5	
Bromodichloromethane	5	
Bromoform	5	
Bromomethane	10	
2-Butanone	100	
Carbon disulfide	100	
Carbon tetrachloride	5	
Chlorobenzene	5	
Chlorodibromomethane	5	
Chloroethane	10	
Chloroform	5	
Chloromethane	10	
1,1-Dichloroethane	5	
1,2-Dichloroethane	5	
1,1-Dichloroethene	5	
trans-1,2-Dichloroethene	5	
1,2-Dichloropropane	5	
cis-1,3-Dichloropropene	5	
trans-1,3-Dichloropropene	5	
Ethyl benzene	5	
2-Hexanone	50	
Methylene chloride	5	
4-Methyl-2-pentanone	50	
Styrene	5	
1,1,2,2-Tetrachloroethane	5	
Tetrachloroethene	5	
Toluene	5	
1,1,1-Trichloroethane	5	
1,1,2-Trichloroethane	5	
Trichloroethene	5	
Vinyl acetate	50	
Vinyl chloride	10	
Xylene	5	

[a]μg/kg = microgram per kilogram.

Appendix D
Laboratory Analytical Data

Table D-1. Oxnard Groundwater Data

Inorganics[a]

Sample Location	Ticket Number	Ag (mg/L)	Al (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Ca (mg/L)	Cd (mg/L)	CDT (μmhos/cm)	Co (mg/L)	Cr (mg/L)
MW-1	NBD-712	<0.02	2.69	<0.0025	0.06	<0.001	238	<0.001	2210	<0.02	<0.02
MW-2	NBD-216	<0.02	0.95	<0.0025	0.05	<0.001	288	<0.001	2730	<0.02	<0.02
MW-3	NBD-220	<0.02	0.29	0.0025	0.03	<0.001	228	<0.001	2130	<0.02	<0.02
MW-4	NBD-221	<0.02	0.28	<0.0025	0.03	<0.001	262	0.001	2380	<0.02	<0.02
MW-5	NBD-218	<0.02	0.32	0.0040	0.04	<0.001	157	<0.001	1421	<0.02	<0.02
MW-6	NBD-217	<0.02	1.87	<0.0025	0.05	<0.001	181	<0.001	1819	<0.02	<0.02
MW-7	NBD-713	<0.02	0.10	<0.0025	0.03	<0.001	179	<0.001	1710	<0.02	0.02
MW-8	NBD-224	<0.02	0.17	<0.0025	0.03	<0.001	105	0.001	1248	<0.02	<0.02
MW-8 (Dup)	NBD-225	<0.02	0.33	<0.0025	0.03	<0.001	104	<0.001	No Data	<0.02	<0.02
MW-9	NBD-222	<0.02	0.13	<0.0025	0.03	<0.001	133	0.003	1340	<0.02	<0.02

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-1 (continued). Oxnard Groundwater Data

Inorganics[a]

Sample Location	Ticket Number	Cu (mg/L)	Fe (mg/L)	H20 Depth (feet)	Hg (mg/L)	K (mg/L)	Mg (mg/L)	Mn (mg/L)	Na (mg/L)	Ni (mg/L)	Pb (mg/L)
MW-1	NBD-712	<0.02	4.54	9.91	<0.0005	4.5	73.5	0.12	167	<0.02	0.003
MW-2	NBD-216	<0.02	1.03	9.90	<0.0005	6.3	91.4	1.00	228	<0.02	<0.001
MW-3	NBD-220	<0.02	0.63	7.45	0.0008	4.8	70.8	0.66	164	<0.02	0.001
MW-4	NBD-221	<0.02	0.85	7.78	<0.0005	5.4	76.2	0.81	180	<0.02	0.005
MW-5	NBD-218	<0.02	1.02	9.56	<0.0010	3.37	49.9	0.50	88.5	<0.02	<0.001
MW-6	NBD-217	<0.02	2.89	7.84	<0.0005	5.32	56.6	0.59	132	<0.02	<0.001
MW-7	NBD-713	<0.02	0.14	9.54	<0.0005	3.7	64.3	0.47	115	<0.02	<0.001
MW-8	NBD-224	<0.02	0.27	9.34	<0.0005	4.2	35.8	0.33	112	<0.02	0.011
MW-8 (Dup)	NBD-225	<0.02	0.44	No Data	<0.0005	4.2	35.6	0.34	111	<0.02	0.004
MW-9	NBD-222	<0.02	0.54	6.92	<0.0005	2.8	44.8	0.35	95.8	<0.02	0.082

[a] A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-1 (continued). Oxnard Groundwater Data

Inorganics[a]

Sample Location	Ticket Number	pH ()	Sb (mg/L)	Se (mg/L)	Temp (deg C)	Tl (mg/L)	Turb (NTU)	V (mg/L)	Zn (mg/L)
MW-1	NBD-712	6.88	0.03	<0.0025	19.8	<0.001	4.85	<0.02	0.04
MW-2	NBD-216	7.04	<0.02	<0.0025	20.1	<0.001	2.45	<0.02	0.04
MW-3	NBD-220	7.06	0.02	0.0028	18.0	<0.001	4.17	<0.02	0.03
MW-4	NBD-221	7.01	0.03	<0.0025	19.3	<0.001	3.90	<0.02	0.05
MW-5	NBD-218	7.11	<0.02	<0.0025	19.0	<0.001	4.20	<0.02	0.03
MW-6	NBD-217	7.04	<0.02	<0.0025	19.7	<0.001	2.62	<0.02	0.06
MW-7	NBD-713	6.95	<0.02	<0.0025	18.3	<0.001	1.29	<0.02	0.03
MW-8	NBD-224	7.17	<0.02	<0.0025	21.1	<0.001	3.26	<0.02	0.02
MW-8 (Dup)	NBD-225	No Data	<0.02	<0.0025	No Data	<0.001	No Data	<0.02	0.03
MW-9	NBD-222	7.14	0.02	<0.0025	20.3	<0.001	4.73	<0.02	0.04

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Detected Volatile Organics

Sample Location	Ticket Number	Analyte	Result	Measurement Unit
MW-2	NBD-216	1,1,1-Trichloroethane	14.5	µg/L
MW-2	NBD-216	1,1-Dichloroethane	4.77	µg/L

Groundwater Detected PCBs: None.

Groundwater Detected Total Petroleum Hydrocarbons: None.

Table D-2. Oxnard Soil Data

Inorganics[a]

Sample Location	Ticket Number	Ag (mg/kg)	Al (mg/kg)	As (mg/kg)	Ba (mg/kg)	Be (mg/kg)	Ca (mg/kg)	Cd (mg/kg)	Co (mg/kg)	Cr (mg/kg)	Cu (mg/kg)
SB-01:0-2	NBD-680	<0.8	9482	3.472	124	<0.8	10466	<0.8	5.9	19.2	15.9
SB-01:4-6	NBD-681	<0.8	19233	4.87	141	<0.8	21602	0.9	9.0	31.4	18.1
SB-02:0-2	NBD-677	<0.8	14189	4.83	111	<0.8	9911	<0.8	7.13	25.9	13.9
SB-02:4-6	NBD-678	<0.8	18280	7.76	134	<0.8	17578	<0.8	8.6	30.1	19.3
SB-03:0-2	NBD-689	<0.8	7651	3.437	82.3	<0.8	9318	<0.8	5.6	18.7	14.0
SB-03:4-6	NBD-690	<0.8	2842	1.205	31.2	<0.8	8924	<0.8	2.3	6.3	3.5
SB-04:0-2	NBD-692	<0.8	8474	4.40	98.3	<0.8	15493	<0.8	5.8	14.1	11.6
SB-04:4-6	NBD-694	<0.8	2782	1.36	34.6	<0.8	6577	<0.8	1.7	4.9	3.1
SB-04:4-6 (Dup)	NBD-693	<0.8	3200	1.67	35.2	<0.8	11623	<0.8	2.2	5.4	3.9
SB-05:0-2	NBD-686	<0.8	9682	5.45	88.5	<0.8	6092	<0.8	5.7	19.3	10.5
SB-05:4-6	NBD-687	<0.8	3552	1.795	43.6	<0.8	8671	<0.8	2.5	6.7	4.1
SB-06:0-2	NBD-699	<0.8	7600	2.60	84.6	<0.8	6963	<0.8	4.8	12.5	9.8
SB-06:4-6	NBD-700	<0.8	3657	1.93	42.4	<0.8	6786	<0.8	2.5	5.9	3.8
SB-07:0-2	NBD-683	<0.8	9775	4.38	75.4	<0.8	5763	<0.8	5.3	17.0	8.6
SB-07:4-6	NBD-684	<0.8	6382	1.613	97.0	<0.8	8271	<0.8	3.6	13.0	5.5
SB-08:0-2	NBD-233	<0.8	9135	3.89	96.8	<0.8	11434	<0.8	5.7	18.6	14.1
SB-08:4-6	NBD-234	<0.8	3504	2.16	35.3	<0.8	5272	<0.8	2.1	6.2	3.3
SB-09:0-2	NBD-248	<0.8	8991	3.152	92.3	<0.8	4502	<0.8	4.74	15.4	9.02
SB-09:4-6	NBD-249	<0.8	3533	1.558	60.5	<0.8	5317	<0.8	2.04	5.86	3.33
SB-10:0-2	257	<0.8	8561	0.720	123	<0.8	10332	1.3	5.3	24.3	17.0
SB-10:4-6	258	<0.8	10820	3.263	108	<0.8	14236	<0.8	6.4	18.4	13.6
SB-10:4-6 (Dup)	262	<0.8	13390	4.334	113	<0.8	16344	1.1	7.1	21.7	14.5
SB-11:0.5-2.5	NBD-245	<0.8	10780	3.061	92.9	<0.8	8325	0.80	5.6	19.0	14.6
SB-11:4-6	NBD-246	<0.8	11171	3.448	107	<0.8	10557	<0.8	6.18	17.8	12.0
SB-12:0-2	251	<0.8	10695	4.733	96.0	<0.8	7793	<0.8	6.1	24.9	21.6
SB-12:4-6	252	<0.8	7090	3.670	71.5	<0.8	7005	<0.8	5.0	29.3	46.0
SB-13:0-2	254	<0.8	7679	4.216	73.0	<0.8	7491	<0.8	5.1	27.1	18.0
SB-13:4-6	255	<0.8	10330	4.089	86.9	<0.8	9296	<0.8	6.6	39.3	19.6
SB-14:0-2	NBD-242	<0.8	8222	14.7	80.0	<0.8	12342	<0.8	19.4	107	222
SB-14:4-6	NBD-243	<0.8	5078	3.10	69.6	<0.8	7807	<0.8	3.9	14.0	17.0
SB-15:0-2	NBD-239	<0.8	8806	8.48	90.5	<0.8	11466	0.8	11.4	52.5	73.6
SB-15:4-6	NBD-240	<0.8	4191	1.88	53.3	<0.8	5971	<0.8	3.2	6.7	4.7
SB-16:0-2	NBD-236	<0.8	5403	2.59	79.8	<0.8	16744	<0.8	4.4	10.2	7.8
SB-16:4-6	NBD-237	<0.8	3732	1.60	42.7	<0.8	7538	<0.8	2.1	6.0	3.4

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-2 (continued). Oxnard Soil Data

Inorganics[a]

Sample Location	Ticket Number	Fe (mg/kg)	Hg (mg/kg)	K (mg/kg)	Mg (mg/kg)	Mn (mg/kg)	Na (mg/kg)	Ni (mg/kg)	Pb (mg/kg)	Sb (mg/kg)	Se (mg/kg)
SB-01:0-2	NBD-680	20099	0.037	3106	5355	291	136	18.1	20.5	<0.8	<0.098
SB-01:4-6	NBD-681	27874	0.044	3676	9244	371	755	23.8	5.5	<0.8	0.257
SB-02:0-2	NBD-677	20454	<0.032	4038	6398	293	206	19.5	14.8	<0.8	0.319
SB-02:4-6	NBD-678	28634	0.052	3323	8980	545	676	24.8	6.0	<0.8	0.230
SB-03:0-2	NBD-689	18351	<0.033	2542	5173	256	256	17.9	20.9	<0.8	0.288
SB-03:4-6	NBD-690	6812	0.033	619	2042	116	173	6.4	2.4	<0.8	<0.099
SB-04:0-2	NBD-692	16859	<0.0325	2595	5635	253	178	16.5	4.6	<0.8	0.321
SB-04:4-6	NBD-694	5993	<0.0315	587	1609	108	139	5.6	0.9	<0.8	0.295
SB-04:4-6 (Dup)	NBD-693	7137	<0.0303	660	2108	262	110	6.4	1.6	<0.8	0.166
SB-05:0-2	NBD-686	17452	<0.033	2538	4604	244	151	15.5	14.3	<0.8	0.177
SB-05:4-6	NBD-687	8206	<0.033	655	2466	141	209	7.4	3.7	<0.8	0.106
SB-06:0-2	NBD-699	14799	0.0332	2316	4350	220	116	14.4	4.8	<0.8	0.188
SB-06:4-6	NBD-700	7515	<0.0323	716	2045	133	111	6.7	2.0	<0.8	0.143
SB-07:0-2	NBD-683	15047	<0.033	2672	4027	208	118	12.6	10.5	<0.8	0.119
SB-07:4-6	NBD-684	11664	<0.030	1273	3061	144	148	8.9	3.7	<0.8	0.339
SB-08:0-2	NBD-233	21883	<0.0323	2419	4914	318	152	17.2	11.1	<0.8	0.189
SB-08:4-6	NBD-234	6748	<0.0275	715	2031	90.2	149	5.3	1.9	<0.8	<0.101
SB-09:0-2	NBD-248	13774	0.0342	2234	4082	206	179	13.0	6.04	<0.8	0.2473
SB-09:4-6	NBD-249	6493	0.0335	754	1644	93.0	123	5.33	3.01	<0.8	<0.0996
SB-10:0-2	257	17272	0.0669	3363	4869	283	150	21.3	20.3	<0.8	0.164
SB-10:4-6	258	19416	0.0353	2701	6326	262	288	18.1	3.8	<0.8	0.262
SB-10:4-6 (Dup)	262	21475	<0.0294	3154	7073	284	314	19.1	3.9	<0.8	0.232
SB-11:0.5-2.5	NBD-245	17438	0.0498	2697	4834	262	275	16.5	25.0	<0.8	0.2883
SB-11:4-6	NBD-246	18907	0.0558	2469	6094	260	519	16.4	5.42	<0.8	0.1971
SB-12:0-2	251	20028	0.0379	2823	4706	314	254	17.8	47.6	<0.8	0.195
SB-12:4-6	252	20167	0.0314	1574	3299	239	300	15.1	136	<0.8	0.113
SB-13:0-2	254	25924	0.0459	1948	3753	295	198	16.6	87.5	<0.8	0.116
SB-13:4-6	255	19911	0.0480	2426	4842	346	265	18.1	142	<0.8	0.201
SB-14:0-2	NBD-242	142697	<0.0314	2266	4488	1188	405	121	51.8	<0.8	<0.099
SB-14:4-6	NBD-243	16200	<0.0325	1140	2638	172	269	13.8	12.7	<0.8	<0.098
SB-15:0-2	NBD-239	52065	0.0880	2765	4349	702	472	43.2	48.0	56.4	<0.098
SB-15:4-6	NBD-240	8518	<0.0286	1452	2439	131	250	8.1	2.8	<0.8	0.110
SB-16:0-2	NBD-236	11201	0.0421	1115	5915	241	235	10.5	4.8	<0.8	<0.101
SB-16:4-6	NBD-237	6388	<0.0292	755	1820	66.6	137	5.3	1.7	<0.8	<0.100

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-2 (continued). Oxnard Soil Data

Inorganics[a]

Sample Location	Ticket Number	Tl (mg/kg)	V (mg/kg)	Zn (mg/kg)
SB-01:0-2	NBD-680	<0.8	33.5	67.1
SB-01:4-6	NBD-681	<0.8	61.6	69.7
SB-02:0-2	NBD-677	<0.8	49.6	62.7
SB-02:4-6	NBD-678	<0.8	57.0	66.1
SB-03:0-2	NBD-689	<0.8	27.2	50.9
SB-03:4-6	NBD-690	<0.8	9.8	15.5
SB-04:0-2	NBD-692	<0.8	26.3	48.3
SB-04:4-6	NBD-694	<0.8	9.7	14.9
SB-04:4-6 (Dup)	NBD-693	<0.8	11.5	16.1
SB-05:0-2	NBD-686	<0.8	35.4	52.2
SB-05:4-6	NBD-687	<0.8	14.5	20.7
SB-06:0-2	NBD-699	<0.8	23.0	42.5
SB-06:4-6	NBD-700	<0.8	7.4	18.9
SB-07:0-2	NBD-683	<0.8	34.1	40.5
SB-07:4-6	NBD-684	<0.8	25.7	26.3
SB-08:0-2	NBD-233	<0.8	32.1	78.0
SB-08:4-6	NBD-234	<0.8	11.6	17.7
SB-09:0-2	NBD-248	<0.8	28.4	41.8
SB-09:4-6	NBD-249	<0.8	13.5	16.3
SB-10:0-2	257	<0.8	29.6	91.2
SB-10:4-6	258	<0.8	33.5	52.9
SB-10:4-6 (Dup)	262	<0.8	39.9	56.2
SB-11:0.5-2.5	NBD-245	<0.8	33.4	396
SB-11:4-6	NBD-246	<0.8	41.1	50.2
SB-12:0-2	251	<0.8	34.7	54.1
SB-12:4-6	252	<0.8	26.7	101
SB-13:0-2	254	<0.8	28.0	46.6
SB-13:4-6	255	<0.8	33.9	56.6
SB-14:0-2	NBD-242	<0.8	57.9	69.5
SB-14:4-6	NBD-243	<0.8	18.9	28.1
SB-15:0-2	NBD-239	<0.8	45.5	78.4
SB-15:4-6	NBD-240	<0.8	14.9	21.5
SB-16:0-2	NBD-236	<0.8	21.6	30.7
SB-16:4-6	NBD-237	<0.8	12.6	15.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-2 (continued). Oxnard Soil Data

Detected Volatile Organics

Sample Location	Ticket Number	Analyte	Result	Measurement Unit
SB-10:0-2	257	2-Butanone	299	µg/kg
SB-10:0-2	257	Acetone	845.	µg/kg
SB-10:4-6	258	Acetone	17.1	µg/kg
SB-11:4-6	NBD-246	2-Butanone	55.8	µg/kg
SB-11:4-6	NBD-246	Toluene	9.44	µg/kg
SB-12:0-2	251	Acetone	125.	µg/kg
SB-12:4-6	252	2-Butanone	21.3	µg/kg
SB-12:4-6	252	Toluene	6.24	µg/kg
SB-13:4-6	255	2-Butanone	35.5	µg/kg
SB-13:4-6	255	Acetone	21.9	µg/kg
SB-13:4-6	255	Toluene	5.14	µg/kg
SB-14:0-2	NBD-242	1,1,1-Trichloroethane	4.29	µg/kg
SB-14:0-2	NBD-242	2-Butanone	65.7	µg/kg
SB-14:0-2	NBD-242	Toluene	12.4	µg/kg
SB-14:4-6	NBD-243	2-Butanone	51.9	µg/kg
SB-14:4-6	NBD-243	Acetone	23.2	µg/kg
SB-14:4-6	NBD-243	Toluene	2.33	µg/kg
SB-15:4-6	NBD-240	2-Butanone	23.8	µg/kg
SB-15:4-6	NBD-240	Toluene	3.03	µg/kg
SB-16:0-2	NBD-236	2-Butanone	41.6	µg/kg
SB-16:0-2	NBD-236	Toluene	6.67	µg/kg
SB-16:4-6	NBD-237	Toluene	2.67	µg/kg

Detected PCBs

Sample Location	Ticket Number	Analyte	Result	Measurement Unit
SB-01:0-2	NBD-680	Arochlor 1254	540	µg/kg
SB-10:0-2	257	Arochlor 1248	3900	µg/kg
SB-10:4-6	258	Arochlor 1248	60	µg/kg
SB-10:4-6 (Dup)	262	Arochlor 1248	370	µg/kg

Soil Detected Total Petroleum Hydrocarbons: None.

Table D-2 (continued). Oxnard Soil Data

Detected Volatile Organics

Sample Location	Ticket Number	Analyte	Result	Measurement Unit
SB-01:0-2	NBD-680	1,1,1-Trichloroethane	6.36	µg/kg
SB-01:0-2	NBD-680	Acetone	20.6	µg/kg
SB-01:0-2	NBD-680	Toluene	4.35	µg/kg
SB-01:4-6	NBD-681	1,1,1-Trichloroethane	5.37	µg/kg
SB-02:4-6	NBD-678	1,1,1-Trichloroethane	3.70	µg/kg
SB-02:4-6	NBD-678	Toluene	2.80	µg/kg
SB-03:0-2	NBD-689	2-Butanone	31.5	µg/kg
SB-03:0-2	NBD-689	Acetone	48.3	µg/kg
SB-03:4-6	NBD-690	Acetone	43.7	µg/kg
SB-04:0-2	NBD-692	2-Butanone	16.1	µg/kg
SB-04:0-2	NBD-692	Acetone	42.9	µg/kg
SB-04:4-6	NBD-694	1,1,1-Trichloroethane	4.40	µg/kg
SB-04:4-6	NBD-694	2-Butanone	35.4	µg/kg
SB-04:4-6	NBD-694	Acetone	84.2	µg/kg
SB-04:4-6	NBD-694	Toluene	8.78	µg/kg
SB-04:4-6 (Dup)	NBD-693	Acetone	57.2	µg/kg
SB-05:0-2	NBD-686	1,1,1-Trichloroethane	4.97	µg/kg
SB-05:0-2	NBD-686	Toluene	4.41	µg/kg
SB-05:4-6	NBD-687	Acetone	16.7	µg/kg
SB-05:4-6	NBD-687	Toluene	2.34	µg/kg
SB-06:0-2	NBD-699	2-Butanone	68.5	µg/kg
SB-06:4-6	NBD-700	2-Butanone	42.8	µg/kg
SB-06:4-6	NBD-700	Acetone	16.1	µg/kg
SB-06:4-6	NBD-700	Toluene	19.2	µg/kg
SB-07:0-2	NBD-683	1,1,1-Trichloroethane	3.23	µg/kg
SB-07:0-2	NBD-683	Toluene	3.28	µg/kg
SB-07:4-6	NBD-684	1,1,1-Trichloroethane	2.82	µg/kg
SB-07:4-6	NBD-684	Toluene	2.71	µg/kg
SB-08:4-6	NBD-234	1,1,1-Trichloroethane	2.20	µg/kg
SB-08:4-6	NBD-234	2-Butanone	28.4	µg/kg
SB-08:4-6	NBD-234	Acetone	30.7	µg/kg
SB-08:4-6	NBD-234	Toluene	2.97	µg/kg
SB-09:0-2	NBD-248	Toluene	5.74	µg/kg
SB-09:4-6	NBD-249	2-Butanone	29.6	µg/kg
SB-09:4-6	NBD-249	Acetone	50.8	µg/kg
SB-09:4-6	NBD-249	Toluene	4.90	µg/kg

Table D-3. Oxnard WET Test and TCLP Data[a]

Sample Location	Ticket Number	Cd^b (mg/L)	Cd^c (mg/L)	Cr^b (mg/L)	Cr^c (mg/L)	Cu^b (mg/L)	Ni^b (mg/L)	Pb^b (mg/L)	Pb^c (mg/L)	Zn^b (mg/L)
Oil-1	NBD-711	No Data	No Data	No Data	No Data	No Data	No Data	<0.16	No Data	No Data
SB-12:T.D.	253	No Data	No Data	No Data	No Data	No Data	No Data	2.0	No Data	No Data
SB-13:T.D.	256	No Data	No Data	0.2	No Data	No Data	No Data	3.4	<0.1	No Data
SL-1	NBD-707	No Data	No Data	1.7	<0.1	<0.1	5.0	1.4	<0.1	No Data
SL-1 (Dup)	NBD-708	No Data	No Data	1.3	<0.1	<0.1	4.6	4.5	<0.1	No Data
SL-2	NBD-709	No Data	No Data	5.7[d]	<0.1	<0.1	21.7[d]	0.4	<0.1	No Data
SL-3	NBD-701	No Data	No Data	4.2	<0.1	<0.1	No Data	0.2	No Data	No Data
SL-5	NBD-702	0.1	<0.1	No Data	No Data	<0.1	No Data	9.5[d]	0.3	252.1[d]
SL-6	NBD-705	No Data	No Data	1.3	<0.1	3.8	6.0	6.9[d]	0.1	No Data
SL-7	NBD-704	0.6	<0.1	1.6	No Data	0.6	7.8	4.8	No Data	No Data

[a] A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b] Hazardous Waste evaluation per Title 22 California Administrative Code of Regulations (Waste Extraction (WET) test).
[c] Hazardous Waste evaluation per Title 22 California Administrative Code of Regulations (Toxicity Characteristic Leaching Procedure (TCLP) test).
[d] The elements identified with this footnote exceed the limits for hazardous classification.

Table D-4. Oxnard Sludge and Oil Data

Inorganics[a]

Sample Location	Ticket Number	Ag (mg/kg)	As (mg/kg)	Ba (mg/kg)	Be (mg/kg)	Cd (mg/kg)	Co (mg/kg)	Cr (mg/kg)	Cu (mg/kg)	Hg (mg/kg)	Ignit (deg F)
Oil-1	NBD-711	<1.0	<0.1244	2.8	<1.0	2.8	<1.0	2.8	86.8	<0.0005	>212
SL-1	NBD-707	<0.8	3.249	62.0	<0.8	2.3	92.6	381	1831	0.0314	No Data
SL-1 (Dup)	NBD-708	<0.8	10.41	52.0	<0.8	3.2	160	279	892	0.0304	No Data
SL-2	NBD-709	<0.8	7.496	51.6	<0.8	4.8	80.2	572	1411	0.061	No Data
SL-3	NBD-701	<0.8	1.298	90.6	<0.8	6.4	11.1	131	531	0.0441	No Data
SL-5	NBD-702	<0.8	3.971	37.8	<0.8	40.6	12.1	33.1	266	<0.0311	No Data
SL-6	NBD-705	<0.8	1.071	13.1	<0.8	6.7	69.4	129	765	0.0277	No Data
SL-7	NBD-704	<0.8	0.935	7.8	<0.8	22.4	14.0	60.6	326	0.0389	No Data

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Sample Location	Ticket Number	Mo (mg/kg)	Ni (mg/kg)	Pb (mg/kg)	Sb (mg/kg)	Se (mg/kg)	Tl (mg/kg)	TOX (mg/kg)	V (mg/kg)	Zn (mg/kg)
Oil-1	NBD-711	1.3	14.8	73.4	<1.0	<0.1244	<1.0	54	<1.0	421
SL-1	NBD-707	97.9	611	226	<0.8	<0.098	<0.8	No Data	51.7	999
SL-1 (Dup)	NBD-708	122	476	209	<0.8	<0.098	<0.8	No Data	44.6	817
SL-2	NBD-709	43.7	1543	441	<0.8	<0.098	<0.8	No Data	42.4	871
SL-3	NBD-701	73.8	149	76.4	<0.8	<0.100	<0.8	No Data	29.9	998
SL-5	NBD-702	16.4	91.1	120	8.3	<0.098	<0.8	No Data	20.1	3735
SL-6	NBD-705	72.3	550	201	<0.8	<0.100	<0.8	No Data	20.1	1497
SL-7	NBD-704	17.0	260	61.7	<0.8	<0.100	<0.8	No Data	6.2	461

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Sludge and Oil Detected PCBs: None.

Table D-5. Oxnard Composite Soil Data

Inorganics[a]

Sample Location	Ticket Number	Ag (mg/kg)	As (mg/kg)	Ba (mg/kg)	Be (mg/kg)	Cd (mg/kg)	Co (mg/kg)	Cr (mg/kg)	Cu (mg/kg)	F (mg/kg)	Hg (mg/kg)
SB-01:T.D.	NBD-682	<0.8	1.51	47.5	<0.8	<0.8	3.1	9.3	6.0	9.2	<0.032
SB-02:T.D.	NBD-679	<0.8	1.658	54.8	<0.8	<0.8	3.4	9.9	5.5	<5.0	<0.031
SB-03:T.D.	NBD-691	<0.8	2.054	41.2	<0.8	<0.8	3.1	7.8	6.5	5.1	<0.032
SB-04:T.D.	NBD-696	<0.8	4.82	53.4	<0.8	<0.8	1.6	4.8	3.6	<5.0	0.0300
SB-04:T.D. (Dup)	NBD-697	<0.8	2.18	54.5	<0.8	<0.8	3.0	9.9	6.0	5.5	0.0334
SB-05:T.D.	NBD-688	<0.8	1.487	33.4	<0.8	<0.8	2.1	6.8	4.3	<5.0	<0.031
SB-06:T.D.	NBD-232	<0.8	1.87	52.9	<0.8	<0.8	3.1	8.8	4.9	5.4	<0.0296
SB-07:T.D.	NBD-685	<0.8	2.222	44.6	<0.8	<0.8	2.9	8.9	4.7	<5.0	<0.031
SB-08:T.D.	NBD-235	<0.8	2.75	50.5	<0.8	<0.8	2.5	7.0	4.1	<5.0	<0.0333
SB-09:T.D.	NBD-250	<0.8	0.7633	43.6	<0.8	<0.8	2.2	6.5	3.8	<5.0	<0.0272
SB-10:T.D.	259	<0.8	3.928	115	<0.8	0.9	6.4	28.7	21.8	7.6	0.0438
SB-11:T.D.	NBD-247	<0.8	2.559	106	<0.8	0.82	5.9	20.2	13.0	8.2	0.0415
SB-12:T.D.	253	<0.8	3.163	82.6	<0.8	<0.8	4.2	19.3	19.1	11.0	0.0297
SB-13:T.D.	256	<0.8	2.732	81.8	<0.8	<0.8	5.6	50.0	21.6	9.8	0.0560
SB-14:T.D.	NBD-244	<0.8	9.10	86.4	<0.8	<0.8	9.6	40.2	85.2	8.3	<0.0305
SB-15:T.D.	NBD-241	<0.8	3.59	89.0	<0.8	<0.8	5.9	17.8	14.6	10.2	0.0341
SB-16:T.D.	NBD-238	<0.8	2.03	61.1	<0.8	<0.8	2.9	8.4	4.9	<5.0	0.0355

[a] A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-5 (continued). Oxnard Composite Soil Data

Inorganics[a]

Sample Location	Ticket Number	Mo (mg/kg)	Ni (mg/kg)	Pb (mg/kg)	Sb (mg/kg)	Se (mg/kg)	Tl (mg/kg)	V (mg/kg)	Zn (mg/kg)
SB-01:T.D.	NBD-682	<0.8	8.4	2.3	<0.8	0.344	<0.8	18.5	25.1
SB-02:T.D.	NBD-679	<0.8	8.1	2.4	<0.8	0.172	<0.8	20.3	25.1
SB-03:T.D.	NBD-691	<0.8	9.3	6.5	<0.8	0.191	<0.8	14.3	26.1
SB-04:T.D.	NBD-696	<0.8	5.0	2.0	<0.8	1.68	<0.8	8.6	15.5
SB-04:T.D. (Dup)	NBD-697	<0.8	10.2	1.3	<0.8	0.231	<0.8	18.1	26.4
SB-05:T.D.	NBD-688	<0.8	6.9	2.2	<0.8	0.152	<0.8	13.2	18.3
SB-06:T.D.	NBD-232	<0.8	7.7	2.7	<0.8	0.224	<0.8	17.6	24.4
SB-07:T.D.	NBD-685	<0.8	8.0	3.3	<0.8	0.237	<0.8	20.1	22.3
SB-08:T.D.	NBD-235	<0.8	7.0	1.4	<0.8	0.135	<0.8	15.5	19.7
SB-09:T.D.	NBD-250	<0.8	7.0	2.3	<0.8	0.1496	<0.8	14.3	19.0
SB-10:T.D.	259	1.0	21.4	11.7	<0.8	0.172	<0.8	36.8	65.5
SB-11:T.D.	NBD-247	<0.8	15.8	19.6	<0.8	0.1844	<0.8	35.9	131
SB-12:T.D.	253	0.8	12.8	53.3	<0.8	0.153	<0.8	24.5	46.0
SB-13:T.D.	256	8.3	18.0	211	<0.8	0.168	<0.8	29.6	59.1
SB-14:T.D.	NBD-244	2.6	44.7	23.7	<0.8	0.116	<0.8	33.2	60.4
SB-15:T.D.	NBD-241	0.8	16.6	9.1	<0.8	0.177	<0.8	27.2	41.5
SB-16:T.D.	NBD-238	<0.8	7.7	2.3	<0.8	0.192	<0.8	18.7	21.9

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-5 (continued). Oxnard Composite Soil Data

Detected Volatile Organics

Sample Location	Ticket Number	Analyte	Result	Measurement Unit
SB-03:T.D.	NBD-691	Acetone	15.5	µg/kg
SB-04:T.D.	NBD-696	2-Butanone	17.0	µg/kg
SB-04:T.D.	NBD-696	Acetone	46.4	µg/kg
SB-04:T.D. (Dup)	NBD-697	Acetone	58.9	µg/kg
SB-05:T.D.	NBD-688	Acetone	17.5	µg/kg
SB-09:T.D.	NBD-250	Toluene	4.59	µg/kg
SB-10:T.D.	259	Acetone	24.4	µg/kg
SB-12:T.D.	253	Acetone	68.3	µg/kg
SB-14:T.D.	NBD-244	2-Butanone	28.4	µg/kg
SB-14:T.D.	NBD-244	Acetone	144.	µg/kg
SB-14:T.D.	NBD-244	Toluene	2.15	µg/kg
SB-15:T.D.	NBD-241	Acetone	33.9	µg/kg
SB-16:T.D.	NBD-238	2-Butanone	23.0	µg/kg

Table D-6. Oxnard Quality Control Data

Inorganics[a]

Type	Ticket Number	Ag (mg/L)	Al (mg/L)	As (mg/L)	Ba (mg/L)	Be (mg/L)	Ca (mg/L)	Cd (mg/L)	Co (mg/L)	Cr (mg/L)
Equipment Blank (Groundwater)	NBD-714	<0.02	0.05	<0.0025	<0.02	<0.001	<0.04	<0.001	<0.02	<0.02
Equipment Blank (Sludge)	NBD-710	<0.02	<0.02	<0.0025	<0.02	<0.0001	0.08	<0.0001	<0.02	<0.02
Equipment Blank (Soil)	261	<0.02	<0.02	<0.0025	<0.02	<0.0001	<0.04	<0.0001	<0.02	<0.02
Equipment Blank (Soil)	NBD-698	<0.02	0.10	<0.0025	<0.02	<0.0001	0.21	<0.0001	<0.02	<0.02

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Type	Ticket Number	Cu (mg/L)	Fe (mg/L)	Hg (mg/L)	K (mg/L)	Mg (mg/L)	Mn (mg/L)	Na (mg/L)	Ni (mg/L)	Pb (mg/L)
Equipment Blank (Groundwater)	NBD-714	<0.02	0.07	<0.0010	<0.04	<0.04	<0.02	<0.04	<0.02	0.003
Equipment Blank (Sludge)	NBD-710	0.02	0.05	<0.0005	0.36	0.14	<0.02	2.19	<0.02	0.0014
Equipment Blank (Soil)	261	<0.02	0.05	<0.0005	<0.04	<0.04	<0.02	<0.04	<0.02	<0.0010
Equipment Blank (Soil)	NBD-698	0.04	0.15	<0.0005	<0.04	<0.04	<0.02	0.09	<0.02	<0.0010

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Type	Ticket Number	Sb (mg/L)	Se (mg/L)	Tl (mg/L)	V (mg/L)	Zn (mg/L)
Equipment Blank (Groundwater)	NBD-714	<0.02	<0.0025	<0.001	<0.02	0.03
Equipment Blank (Sludge)	NBD-710	0.03	<0.0025	<0.003	<0.02	0.03
Equipment Blank (Soil)	261	<0.02	<0.0025	<0.003	<0.02	<0.02
Equipment Blank (Soil)	NBD-698	0.03	<0.0025	<0.003	<0.02	0.04

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).

Table D-6 (continued). Oxnard Quality Control Data

Detected Volatile Organics

Type	Ticket Number	Analyte	Result	Measurement Unit
Equipment Blank (Groundwater)	NBD-714	Chloroform	3.30	µg/L
Equipment Blank (Soil)	261	Chloroform	2.01	µg/L
Trip Blank	NBD-219	1,2-Dichloroethane	2.24	µg/L
Trip Blank	NBD-215	Chloromethane	6.65	µg/L
Trip Blank	NBD-219	Chloromethane	8.27	µg/L

Equipment Blank Detected PCBs: None.

Equipment Blank Detected Total Petroleum Hydrocarbons: None.

Appendix E
Radiological Survey

Radiological Survey Map

RWP No. N/A Purpose Contamination Survey OH&S Technician Candice Burns / Candice Burns Date 02.06.95

Address/Building No. Building 2 - Loading/Receiving OH&S Lead Technician Tom Maveal / Tom Maveal (print and sign) Date 3-3-95

Date/Time 02.06.95/1100 Site ID No. Oxnard Project

No.	Instrument Model	Serial No.	Probe Model	Probe Serial No.	Calibration/Correction Factor
1	L·12	510429	44.9	512694	4·21·95 4·24·95/ECF=10 ACF=6.7
2	L·12	568316	44.9	510718	7·3·95 5·16·95/ECF=10 ACF=6.7
3	N/A	N/A	N/A	N/A	N/A

Standarized Symbols for Surveys

- ☐ = Tape press (4"x4") (no. inside)
- ○ = Smears (no. inside)
- ○L = Large area smears
- △ = Air samples (no. inside)
- ▭ = Neutron readings in mrem/hr unless otherwise noted
- — = Gamma readings in mrem/hr unless otherwise noted (beta readings also)
- * = Contact readings (dose rate)
- HS = Hot spot
- SOP = Step-off pad
- K = Reading at knee level (when sources from overhead)
- H = Reading at head level (when sources from overhead)
- ····· = Contaminated area
- XXXXX = Radiation area
- ·x·x·x· = Contaminated/radiation area
- RM = Radioactive material area
- ⊗ = Floor drain
- ccpm or ncpm = Corrected or net cpm (gross back-ground) for direct frisk, alpha or beta/gamma specified
- # = Direct frisk

Highest Dose Rates

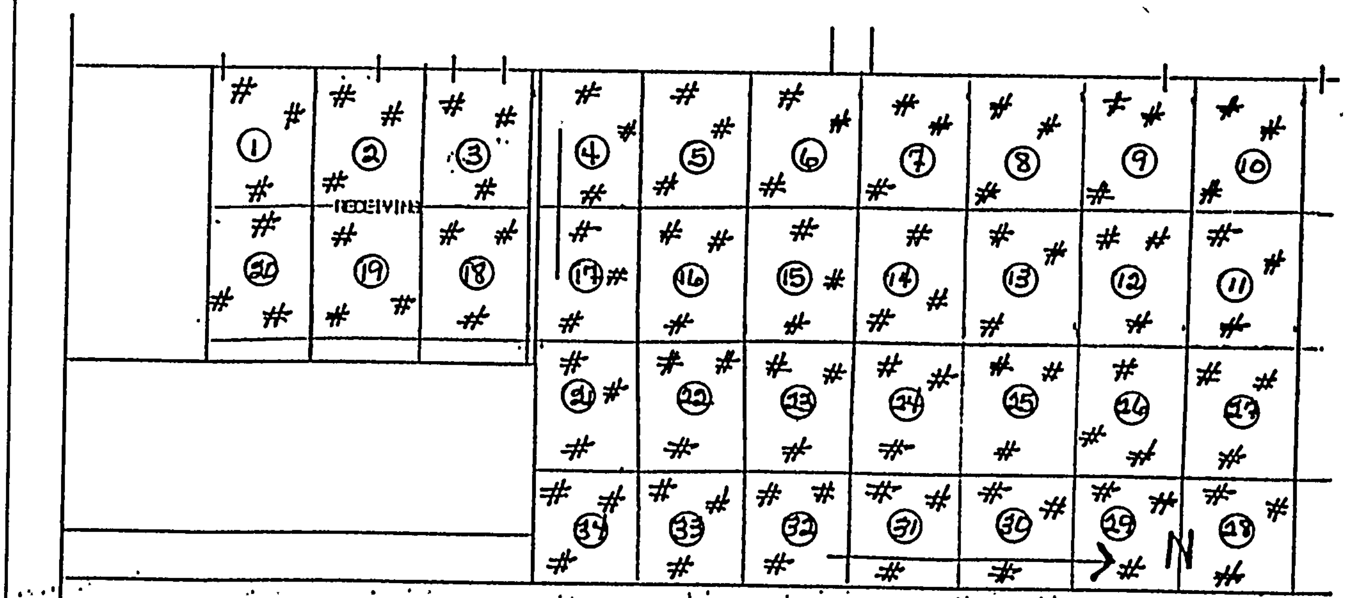
General Area N/R

Contact N/R

Highest Contamination Level

Fixed ≤Bkgd

Loose ≤Bkgd



#= direct frisk ≤ Bkgd

Bkgd= 80 cpm

9' grids

Radiological Survey Map (continued)

Item Surveyed	Location Surveyed	Direct Survey: Gross Count Rate (cpm)	Direct Survey: Net Count Rate (cpm)[a]	Direct Survey: Total Activity[b] (dpm/100 cm^2)	Smear Survey: Gross Count Rate (cpm)	Smear Survey: Net Count Rate (cpm)[a]	Smear Survey: Total Activity[b] (dpm/100 cm^2)	Release (Yes/No) (C/UC)[c]	Inst. No. Used	Remarks (Released to)
Receiving	1 through 34	← See Page 1 of 2 →			80	0	≤Bkgd	N/A	1, 2	See below
					N/A CB					

Remarks Comprehensive survey of receiving area of Bldg. 2 utilizing 9' grids. Each smear number represents three smears within designated grid. Walls in area were surveyed to a height of 6 feet with all readings ≤Bkgd. N/A

[a]Net count rate = gross count rate minus background count rate. [b]See Table : alth and Safety Manual, Volume 2. [c]C = conditional release; UC = unconditional release.

GJPO 1553

Appendix F
Duplicate-Sample Precision

Table F-1. Field Duplicates Relative Percent Difference Values[a]

Analyte		MW-8	SB-04:4-6	SB-04:T.D.	SB-10:4-6	SL-1
1,1,1-Trichloroethane	Value		4.40			
	Dup		<2.0			
	%RPD		75			
2-Butanone	Value		35.4	17.0		
	Dup		<15.0	<15.0		
	%RPD		80.95	12.5		
Acetone	Value		84.2	46.4	17.1	
	Dup		57.2	58.9	<15.0	
	%RPD		38.19	23.74	13.08	
Aluminum	Value	0.17	2782		10820	
	Dup	0.33	3200		13390	
	%RPD	64	13.98		21.23	
Arsenic	Value		1.36	4.82	3.263	3.249
	Dup		1.67	2.18	4.334	10.41
	%RPD		20.46	75.43	28.2	104.85
Barium	Value	0.03	34.6	53.4	108	62.0
	Dup	0.03	35.2	54.5	113	52.0
	%RPD	0	1.72	2.04	4.52	17.54
Cadmium	Value	0.001			<0.8	2.3
	Dup	<0.001			1.1	3.2
	%RPD	0			31.58	32.73
Calcium	Value	105	6577		14236	
	Dup	104	11623		16344	
	%RPD	.96	55.45		13.79	
Chromium	Value		4.9	4.8	18.4	381
	Dup		5.4	9.9	21.7	279
	%RPD		9.71	69.39	16.46	30.91
Cobalt	Value		1.7	1.6	6.4	92.6
	Dup		2.2	3.0	7.1	160
	%RPD		25.64	60.87	10.37	53.37
Copper	Value		3.1	3.6	13.6	1831
	Dup		3.9	6.0	14.5	892
	%RPD		22.86	50	6.41	68.97
Fluoride	Value			<5.0		
	Dup			5.5		
	%RPD			9.52		
Iron	Value	0.27	5993		19416	
	Dup	0.44	7137		21475	
	%RPD	47.89	17.43		10.07	
Lead	Value	0.011	0.9	2.0	3.8	226
	Dup	0.004	1.6	1.3	3.9	209
	%RPD	93.33	56	42.42	2.6	7.82

[a]Where both the value and the duplicate value were below detection limits, data are not shown. If one value was below detection limits, the detection limit was used in the calculation of RPD.

Table F-1 (continued). Oxnard Relative Percent Difference Values[a]

Analyte		MW-8	SB-04:4-6	SB-04:T.D.	SB-10:4-6	SL-1
Magnesium	Value	35.8	1609		6326	
	Dup	35.6	2108		7073	
	%RPD	.56	26.85		11.15	
Manganese	Value	0.33	108		262	
	Dup	0.34	262		284	
	%RPD	2.99	83.24		8.06	
Mercury	Value			0.0300	0.0353	0.0314
	Dup			0.0334	<0.0294	0.0304
	%RPD			10.73	18.24	3.24
Molybdenum	Value					97.9
	Dup					122
	%RPD					21.92
Nickel	Value		5.6	5.0	18.1	611
	Dup		6.4	10.2	19.1	476
	%RPD		13.33	68.42	5.38	24.84
Potassium	Value	4.2	587		2701	
	Dup	4.2	660		3154	
	%RPD	0	11.71		15.47	
Selenium	Value		0.295	1.68	0.262	
	Dup		0.166	0.231	0.232	
	%RPD		55.97	151.65	12.15	
Sodium	Value	112	139		288	
	Dup	111	110		314	
	%RPD	.9	23.29		8.64	
Toluene	Value		8.78			
	Dup		<2.0			
	%RPD		125.79			
Vanadium	Value		9.7	8.6	33.5	51.7
	Dup		11.5	18.1	39.9	44.6
	%RPD		16.98	71.16	17.44	14.75
Zinc	Value	0.02	14.9	15.5	52.9	999
	Dup	0.03	16.1	26.4	56.2	817
	%RPD	40	7.74	52.03	6.05	20.04

[a]Where both the value and the duplicate value are below detection limits, data are not shown.

Table F-2. Labratory Duplicates Relative Percent Difference Values[a]

Analyte		252	NBD-215	NBD-238	NBD-286
2-Butanone	Value	21.3		<15.0	55.8
	Dup	<15.0		23.0	58.7
	%RPD	34.71		42.11	5.07
Chloromethane	Value		6.65		
	Dup		7.38		
	%RPD		10.41		
Toluene	Value	6.24			9.44
	Dup	5.21			7.66
	%RPD	17.99			20.82

[a]Where both the value and the duplicate value are below detection limits, data are not shown.

Appendix C

Phase III Environmental Site Assessment Report
for the
U.S. Department of Energy Oxnard Facility
Oxnard, California

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DOE/ID/12584-242
GJPO-OXN-03

Phase III Environmental Site Assessment Report for the U.S. Department of Energy Oxnard Facility, Oxnard, California

December 1995

U.S. Department of Energy
Grand Junction Projects Office

Work Performed Under DOE Contract No. DE-AC04-94AL96907 for the U.S. Department of Energy

Phase III Environmental Site Assessment Report for the U. S. Department of Energy Oxnard Facility, Oxnard, California

December 1995

Work Performed Under Contract No. DE-AC04-94AL96907

Prepared for
U.S. Department of Energy
Albuquerque Operations Office
Grand Junction Projects Office
P.O. Box 2567
Grand Junction, CO 81502-2567

Prepared by
Rust Geotech
Grand Junction, Colorado

Contents

Figures

Tables

1.0 Introduction

The U.S. Department of Energy (DOE) Oxnard Facility (Oxnard facility) is a nonferrous metalworking facility occupying 13.75 acres at 1235 East Wooley Road, Oxnard, California (Figure 1). Owned by the DOE and operated by Kaiser-Hill Company LLC, the facility is located in an industrial park within the incorporated city limits of Oxnard and within Ventura County. Seven buildings enclose approximately 86,000 square feet of covered floor space (Figure 2). Bordering the facility are industrial maintenance, manufacturing, and agricultural packaging facilities.

Until Allis-Chalmers (a farm implement manufacturing company) purchased the property in 1949, the site was farmland. Allis-Chalmers built a plant consisting of six buildings and engaged in the activities of founding (foundry casting), forging, machining, welding, cutting, sanding, grinding, painting, and coating. In 1981, DOE helped Precision Forge (a private company that catered to DOE metalworking requirements) move from Santa Monica, California, to the Oxnard facility. By June 1982, Precision Forge completed the transfer to the Oxnard facility. In 1984, DOE acquired Precision Forge and operated the facility through Rockwell International until 1989 when EG&G took over operations. Kaiser-Hill Company has operated the facility since the second quarter of 1995. Historically, metalworking at the Oxnard facility involved stainless steel, titanium, aluminum, and copper alloys. Presently, all metal working utilizes stainless steel, tantalum, molybdenum, and tungsten.

Site investigations conducted by Rust Geotech, the prime contractor for the DOE at the Grand Junction Projects Office (GJPO), started in June 1994 with an Environmental Site Assessment (ESA) Preliminary Evaluation site tour. Results of the Preliminary Evaluation indicated the need for a Phase I and Phase II ESA. A nonintrusive site inspection and data gathering effort in August 1994 culminated in a Phase I ESA report entitled *Phase I Environmental Site Assessment for the EG&G Rocky Flats Oxnard Facility* (Phase I ESA) (DOE 1994). Conclusions and recommendations described in the Phase I ESA report formed the basis for the Phase II intrusive ESA investigation, which was conducted in January and February 1995 and culminated in a Phase II report entitled *Phase II Environmental Site Assessment Report for the Kaiser-Hill Company LLC Oxnard Facility, Oxnard, California* (DOE 1995a). Conclusions and recommendations described in the Phase II report formed the basis for the Phase III investigation, which is the focus of this report.

The primary purpose of the Phase III ESA was to investigate and characterize areas of the facility where polychlorinated biphenyls (PCBs) were detected during the Phase II investigation. These areas required a "due diligence" investigation as described in *Site Auditing: Environmental Assessment of Property* (Marburg Associates and Parkin 1991) so

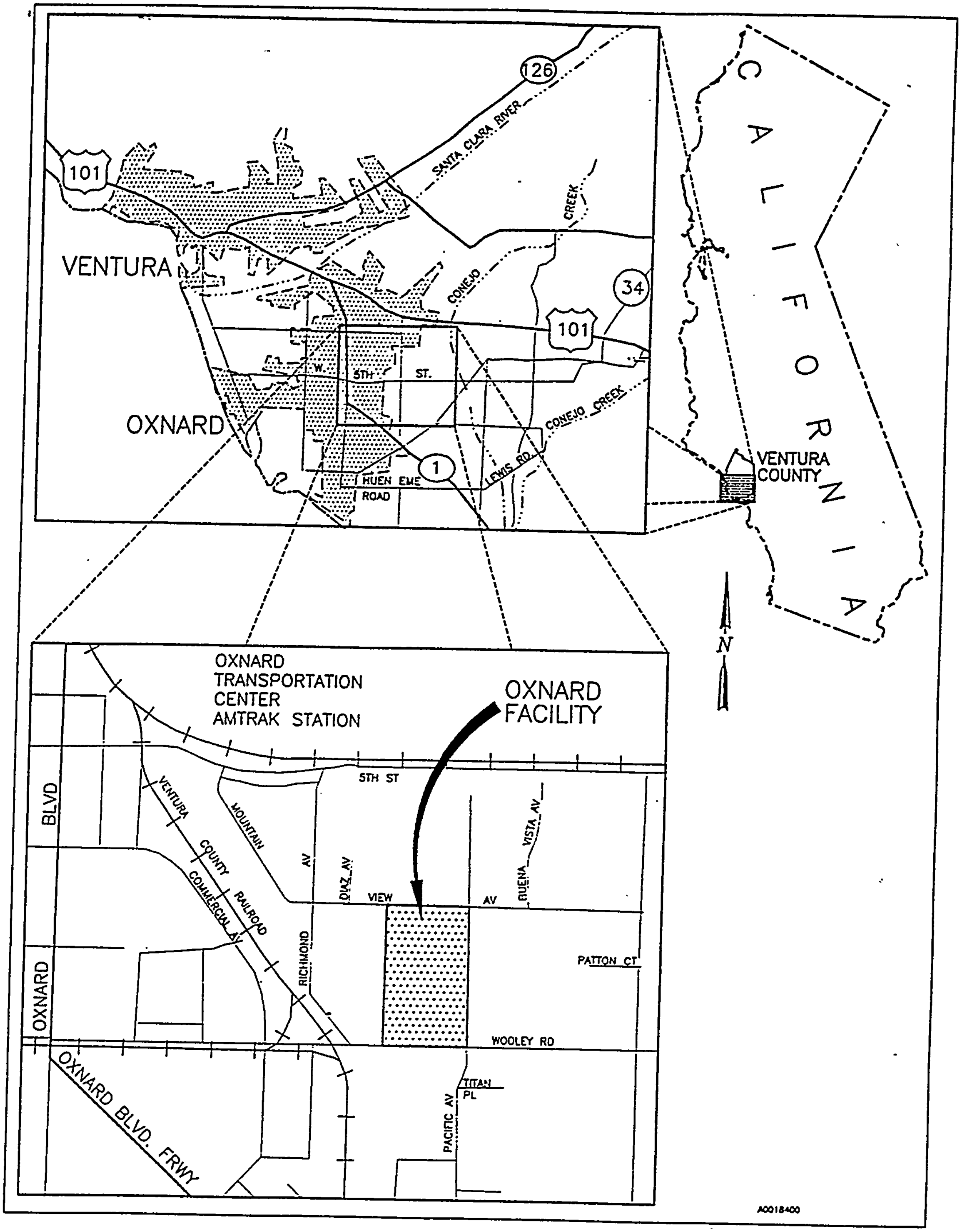


Figure 1. Location of the Oxnard Facility in Oxnard, California

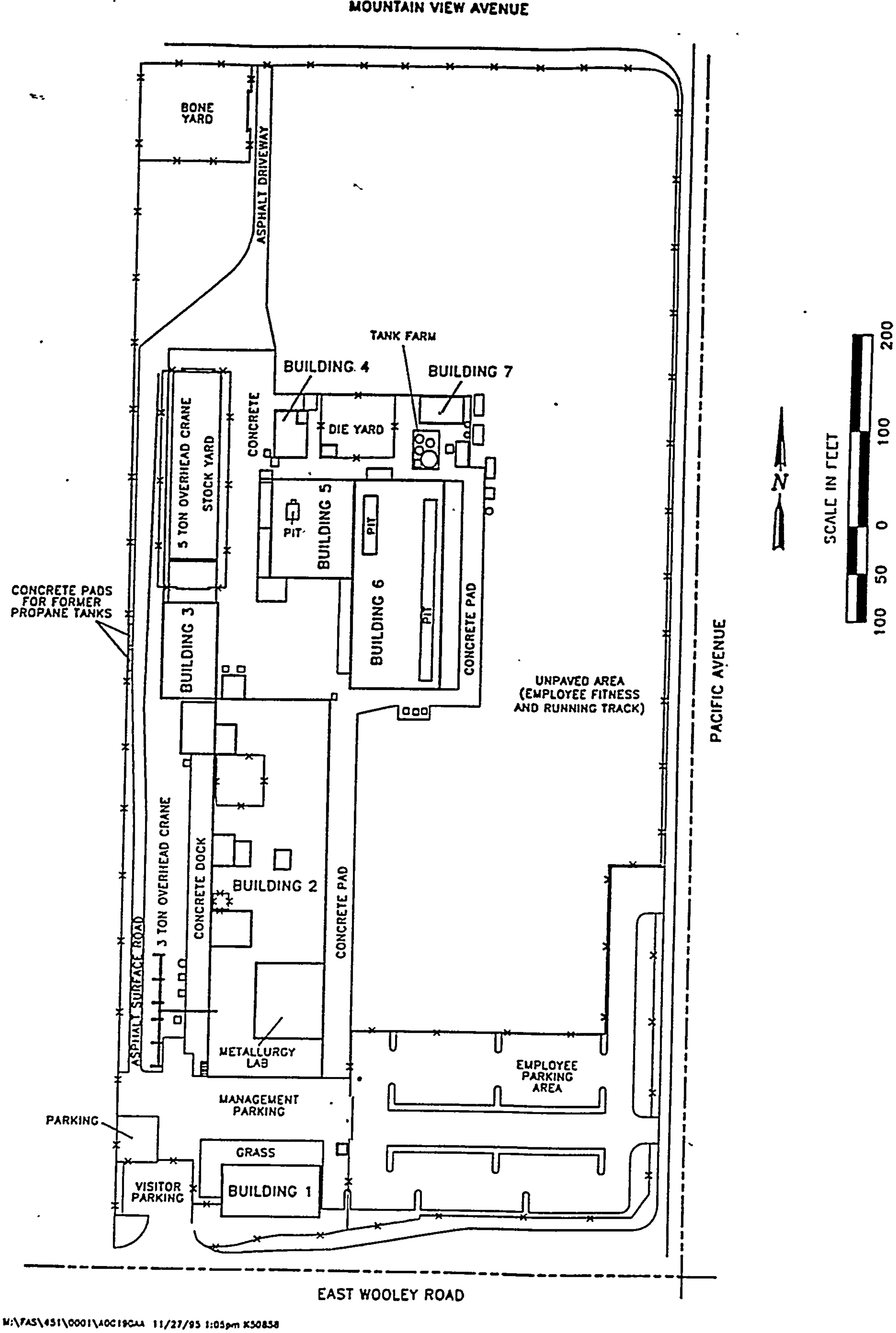


Figure 2. Site Layout of the Oxnard Facility

that contaminated media, if present, could be identified and accounted for before real estate transfer. Specific objectives of the investigation were:

- To delineate the vertical and horizontal extent of PCBs in the soil.
- To determine if corrective action is required on the basis of a comparison of PCB concentrations in soils to action levels.
- If corrective action is required, to determine the volume of contaminated material so that decisions concerning remediation and disposal options can be made.

This report is divided into five sections. Section 1.0 describes the types of work performed at the Oxnard Facility and the objectives of this Phase III ESA; Section 2.0 provides the regulatory framework used to make decisions from the collected data; Section 3.0 presents the results of the investigation and discusses the results in the context of the regulatory framework; Section 4.0 provides recommendations for addressing health and environmental issues before real estate transfer; and Section 5.0 lists references used in this document.

2.0 Regulatory Framework

On the basis of the U. S. Environmental Protection Agency (EPA) guidance, *A Guide to Remedial Actions at Superfund Sites with PCB Contamination* (EPA 1990), which recommends soil action levels of 10–25 ppm for industrial sites, a criterion of 10 ppm of PCBs in soil was established for this characterization.

Use of the 10-ppm criterion is supported by the State of California's *Preliminary Endangerment Assessment Guidance Manual* (Guidance Manual)(State of California Environmental Protection Agency 1994), which provides risk-based guidance for determining if a release of a hazardous substance presents a risk to human health or the environment. The Guidance Manual makes use of equations equipped with default values for a *residential* exposure scenario to determine risk. According to EPA risk assessment guidance (EPA 1991), remedial action is generally not warranted if risks are less than 10^{-4}, which corresponds to a PCB soil concentration of 8 ppm when using the equations supplied in the Guidance Manual. Although the Oxnard facility will likely remain an industrial site, the Guidance Manual provides a conservative estimate of risk that confirms the 10-ppm criterion suggested by EPA.

Laboratory analytical work was performed by Truesdail Laboratories, Inc. in Tustin, California. This laboratory was certified by the California Environmental Laboratory Accreditation Program in EPA method 8080, which was used to analyze selected samples collected during the Phase III ESA.

3.0 PCB Characterization Results

3.1 Field Test Results

To define the extent of PCBs in the shallow soil, samples were collected with an auger and analyzed in the field using EnSys RISc PCB immunoassay field test kits configured for 1- and 10-ppm detection levels. The sampling network consisted of a statistically based hexagonal design that served two purposes: it allowed delineation of PCB contamination on a small scale, and it allowed a search for PCB-contaminated areas in and adjacent to the Bone Yard. The search for contaminated areas resulted in a certainty of at least 90 percent that PCB-contaminated areas at least 20 feet in diameter in the sampling area were located and subsequently delineated. A complete description of the technical approach used to characterize PCBs for this Phase III ESA is found in the *Sampling and Analysis Plan for the Phase III Environmental Site Assessment of the U. S. Department of Energy Oxnard Facility, Oxnard, California* (DOE 1995b).

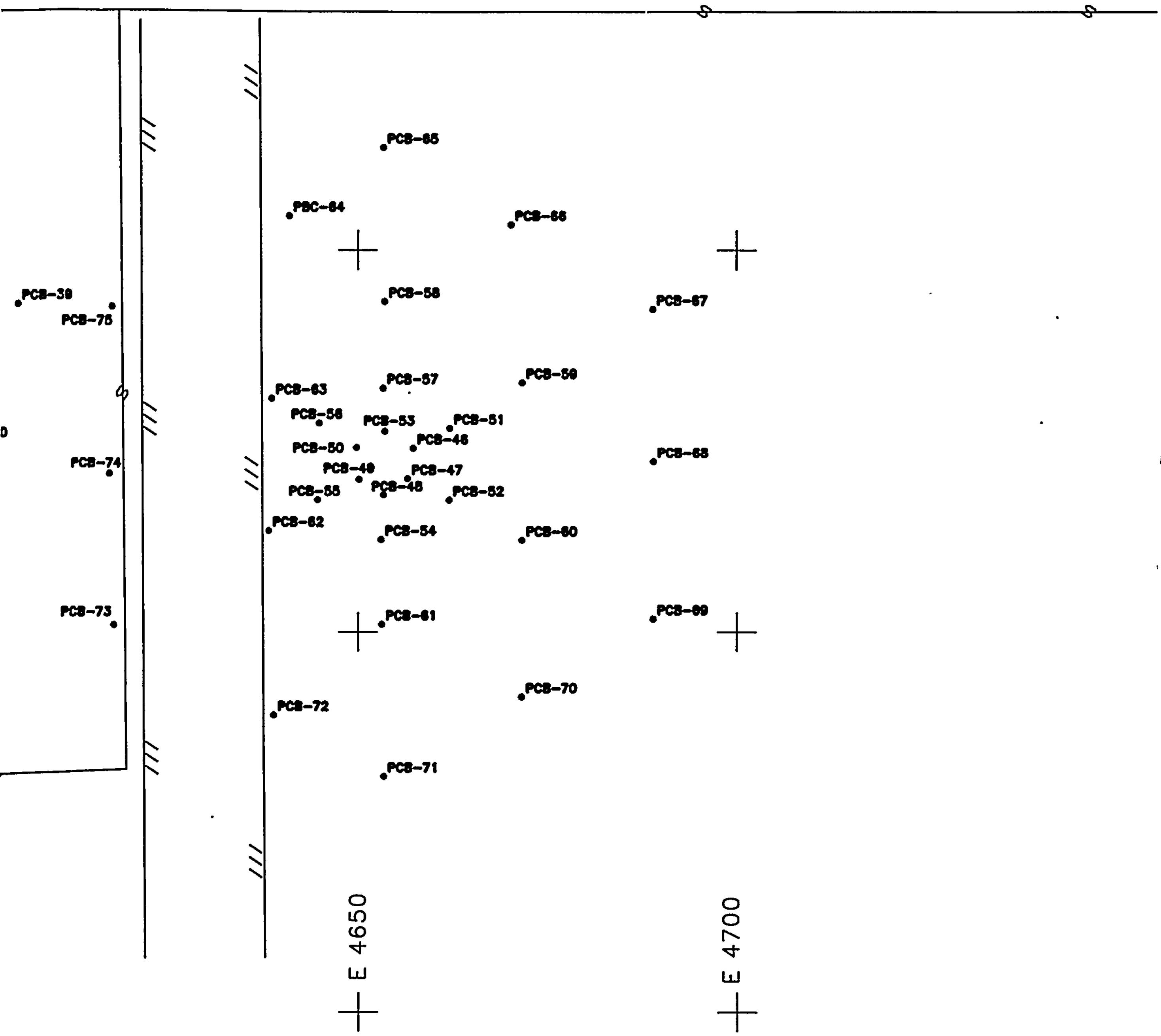
PCB field tests were conducted at 75 sampling locations within and east of the Bone Yard as shown in Figure 3. A total of 121 field tests were performed, consisting of 112 sample tests, 6 field duplicates, and 3 method blanks (see Table 1 for results). The depth interval of the sample is indicated at the end of the sample identification number. For example, sample PCB-46:2-3 was collected from the 2- to 3-foot depth interval.

On the basis of field test results, only two sampling locations, PCB–10 and PCB–12, had PCB concentrations above the 10-ppm criterion established for the project. Sampling location PCB–10 had a PCB concentration greater than 10-ppm in the 0- to 1-foot interval; PCB–12 had PCB concentrations greater than 10 ppm in the 0- to 1-, 1- to 2-, and 2- to 3-foot intervals. Results of the PCB field tests in the 0- to 1-foot interval are shown in Figure 4.

3.2 Laboratory Results

Twenty-six confirmation samples were submitted to Truesdail Laboratories for PCB analysis using EPA Method 8080. Samples submitted to the laboratory included four samples with PCB field test concentrations over 10 ppm, seven samples with PCB field test concentrations greater than 1 ppm but less than 10 ppm, seven samples with PCB field test concentrations less than 1 ppm, two laboratory duplicates, and six equipment blanks.

All laboratory results were below the 10-ppm criterion established for the project. The highest PCB concentration detected was in sample number PCB–57:0–1, with a concentration of 6.4 ppm. Laboratory results are displayed in Table 2.



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U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION PROJECTS OFFICE, COLORADO

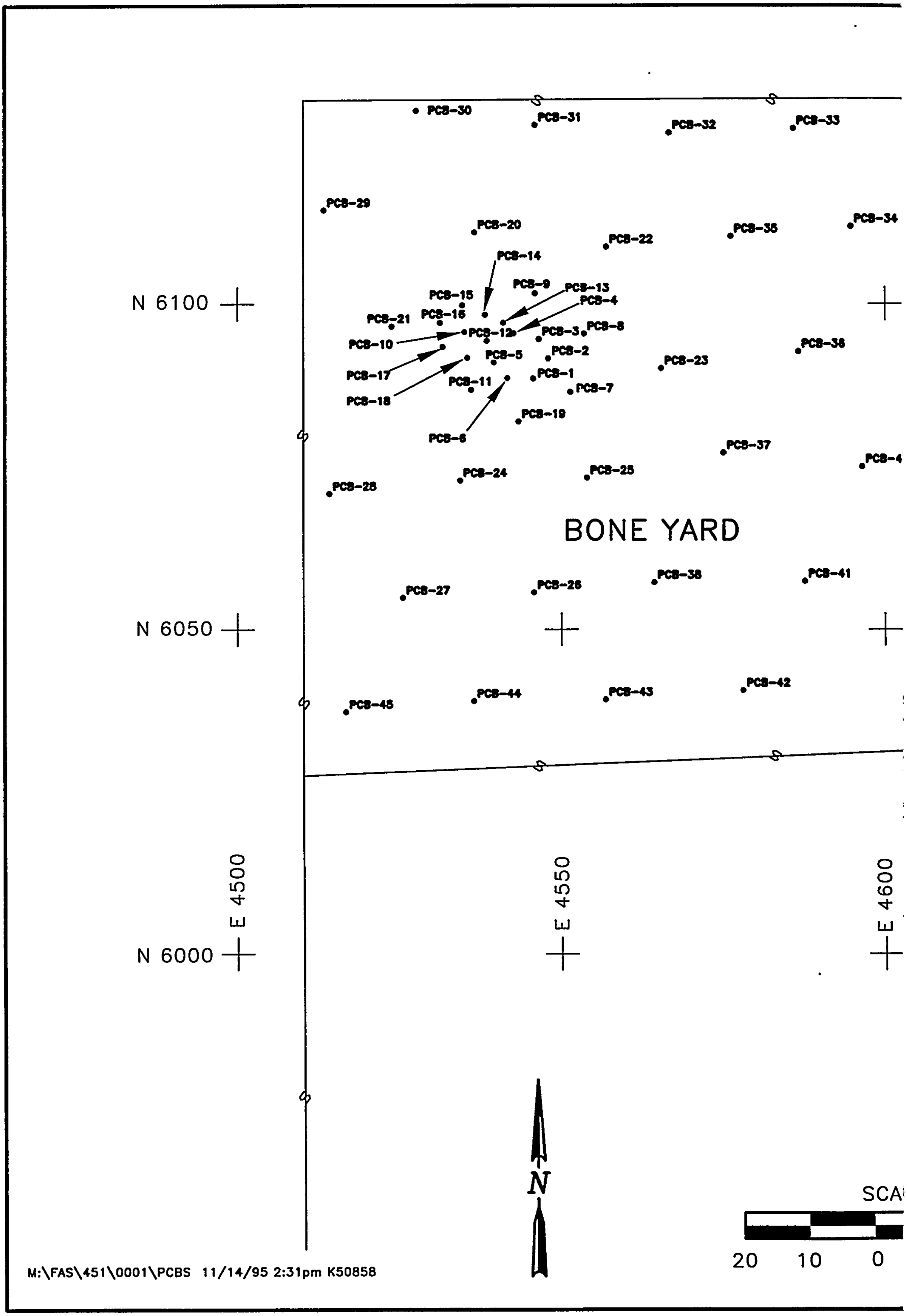
DESIGNED | DATE
DRAWN
CHECKED
PROJ. ENGR.
SUBMITTED

FIGURE 3. PCB SAMPLING LOCATIONS AT THE OXNARD FACILITY

APPROVAL | DATE | APPROVAL DOE | DATE

RUST Rust Geotech
A WMX Technologies Company

DOE ID NO. OXNARD
DWG. NO.
SHT. OF



PCB-30
PCB-31
PCB-32
PCB-33
PCB-29
PCB-20
PCB-22
PCB-35
PCB-34
PCB-14
PCB-9
PCB-13
PCB-15
PCB-4
N 6100
PCB-21
PCB-16
PCB-12
PCB-3
PCB-8
PCB-10
PCB-2
PCB-5
PCB-36
PCB-23
PCB-17
PCB-1
PCB-11
PCB-7
PCB-18
PCB-19
PCB-6
PCB-37
PCB-24
PCB-25
PCB-28
BONE YARD
PCB-27
PCB-26
PCB-38
PCB-41
N 6050
PCB-45
PCB-44
PCB-43
PCB-42
E 4500
E 4550
E 4600
N 6000
N
20
10
0
M:\FAS\451\0001\PCBS 11/14/95 2:31pm K50858

Table 1. PCB Field-Test Results

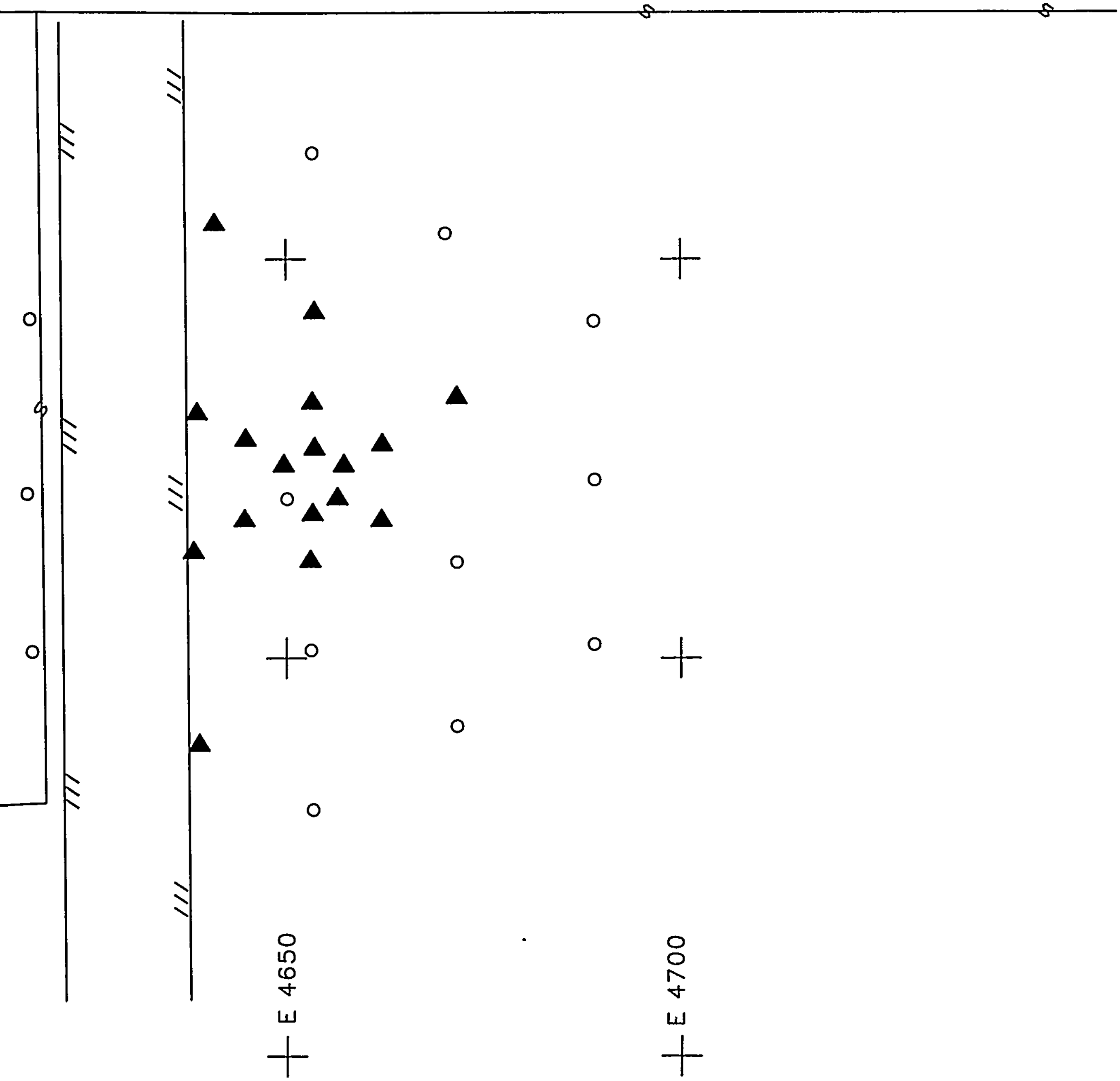
Sample Number	Collect Date	Dup	PCB<1	1<PCB<10	PCB>10
PCB-01:0-1	1995/09/11		x		
PCB-02:0-1	1995/09/11		x		
PCB-03:0-1	1995/09/11			x	
PCB-03:1-2	1995/09/11		x		
PCB-04:0-1	1995/09/11		x		
PCB-05:0-1	1995/09/11		x		
PCB-06:0-1	1995/09/12		x		
PCB-07:0-1	1995/09/11		x		
PCB-08:0-1	1995/09/12		x		
PCB-09:0-1	1995/09/12		x		
PCB-10:0-1	1995/09/12				x
PCB-10:1-2	1995/09/12		x		
PCB-11:0-1	1995/09/12			x	
PCB-11:1-2	1995/09/12		x		
PCB-12:0-1	1995/09/12				x
PCB-12:1-2	1995/09/12				x
PCB-12:1-2	1995/09/12	x			x
PCB-12:2-3	1995/09/12				x
PCB-12:3-4	1995/09/12		x		
PCB-13:0-1	1995/09/12			x	
PCB-13:1-2	1995/09/12		x		
PCB-14:0-1	1995/09/12			x	
PCB-14:1-2	1995/09/12		x		
PCB-15:0-1	1995/09/12		x		
PCB-16:0-1	1995/09/12		x		
PCB-17:0-1	1995/09/12		x		
PCB-18:0-1	1995/09/12		x		
PCB-19:0-1	1995/09/12		x		
PCB-20:0-1	1995/09/12		x		
PCB-21:0-1	1995/09/12		x		
PCB-22:0-1	1995/09/12		x		
PCB-23:0-1	1995/09/12		x		
PCB-24:0-1	1995/09/13			x	
PCB-25:0-1	1995/09/13		x		
PCB-26:0-1	1995/09/13		x		
PCB-27:0-1	1995/09/13		x		
PCB-28:0-1	1995/09/13		x		
PCB-29:0-1	1995/09/13			x	
PCB-29:1-2	1995/09/13			x	
PCB-29:2-3	1995/09/13			x	
PCB-30:0-1	1995/09/13		x		
PCB-31:0-1	1995/09/13			x	
PCB-31:1-2	1995/09/13		.	x	
PCB-32:0-1	1995/09/13			x	
PCB-32:1-2	1995/09/13		x		
PCB-33:0-1	1995/09/13			x	
PCB-33:1-2	1995/09/13		x		
PCB-34:0-1	1995/09/13			x	
PCB-34:1-2	1995/09/13		x		
PCB-35:0-1	1995/09/13		x		
PCB-36:0-1	1995/09/13		x		

Table 1 (continued). PCB Field-Test Results

Sample Number	Collect Date	Dup	PCB<1	1<PCB<10	PCB>10
PCB-37:0-1	1995/09/13		x		
PCB-38:0-1	1995/09/13		x		
PCB-39:0-1	1995/09/13		x		
PCB-40:0-1	1995/09/13		x		
PCB-41:0-1	1995/09/13		x		
PCB-42:0-1	1995/09/13		x		
PCB-43:0-1	1995/09/13		x		
PCB-44:0-1	1995/09/13		x		
PCB-45:0-1	1995/09/13		x		
PCB-45:0-1	1995/09/13	x	x		
PCB-46:0-1	1995/09/14			x	
PCB-46:1-2	1995/09/14			x	
PCB-46:2-3	1995/09/14		x		
PCB-47:0-1	1995/09/14			x	
PCB-47:1-2	1995/09/14			x	
PCB-47:2-3	1995/09/14		x		
PCB-48:0-1	1995/09/14			x	
PCB-48:1-2	1995/09/14			x	
PCB-48:2-3	1995/09/14		x		
PCB-49:0-1	1995/09/14		x		
PCB-50:0-1	1995/09/14			x	
PCB-50:1-2	1995/09/14		x		
PCB-51:0-1	1995/09/14			x	
PCB-51:1-2	1995/09/14		x		
PCB-52:0-1	1995/09/14			x	
PCB-52:1-2	1995/09/14			x	
PCB-52:2-3	1995/09/14		x		
PCB-53:0-1	1995/09/14			x	
PCB-53:1-2	1995/09/14		x		
PCB-54:0-1	1995/09/14			x	
PCB-54:1-2	1995/09/14			x	
PCB-54:2-3	1995/09/15		x		
PCB-55:0-1	1995/09/14			x	
PCB-55:1-2	1995/09/15		x		
PCB-56:0-1	1995/09/14			x	
PCB-56:1-2	1995/09/15		x		
PCB-57:0-1	1995/09/14			x	
PCB-57:1-2	1995/09/15			x	
PCB-57:2-3	1995/09/15			x	
PCB-57:3-4	1995/09/15		x		
PCB-58:0-1	1995/09/14			x	
PCB-58:1-2	1995/09/15		x		
PCB-58:1-2	1995/09/15	x	x		
PCB-59:0-1	1995/09/14			x	
PCB-59:1-2	1995/09/15		x		
PCB-59:1-2	1995/09/15	x	x		
PCB-60:0-1	1995/09/14		x		
PCB-61:0-1	1995/09/15		x		
PCB-62:0-1	1995/09/15			x	
PCB-62:1-2	1995/09/15		x		
PCB-63:0-1	1995/09/15			x	

Table 1 (continued). PCB Field-Test Results

Sample Number	Collect Date	Dup	PCB<1	1<PCB<10	PCB>10
PCB-63:1-2	1995/09/15		x		
PCB-64:0-1	1995/09/15			x	
PCB-65:0-1	1995/09/15		x		
PCB-66:0-1	1995/09/15		x		
PCB-67:0-1	1995/09/15		x		
PCB-68:0-1	1995/09/15		x		
PCB-69:0-1	1995/09/15		x		
PCB-70:0-1	1995/09/15		x		
PCB-71:0-1	1995/09/15		x		
PCB-72:0-1	1995/09/15			x	
PCB-72:0-1	1995/09/15	x		x	
PCB-72:1-2	1995/09/15		x		
PCB-73:0-1	1995/09/15		x		
PCB-73:0-1	1995/09/15	x	x		
PCB-74:0-1	1995/09/15		x		
PCB-75:0-1	1995/09/15		x		
PCB-MB	1995/09/12		x		
PCB-MB	1995/09/13		x		
PCB-MB	1995/09/15		x		



< 10ppm

NO.	DATE	REVISIONS	BY	CK.	A.E.	APP.	NO.	DATE	REVISIONS	BY	CK.	A.E.	APP.

RESIDENCE–NO. OF OCCUPANTS

NON–RESIDENCE–MAN–HRS./WK.

INSTRUMENT NO. | SURVEYOR

SURVEY DATE | TIME

VERIFICATION | DATE

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION PROJECTS OFFICE, COLORADO

		DATE
DESIGNED	JC	12-20-95
DRAWN	JP	12/95
CHECKED	JC	12-20-95
PROJ. ENGR.		
SUBMITTED		

FIGURE 4.
PCB FIELD–TEST CONCENTRATIONS IN THE 0–1 FOOT INTERVAL

APPROVAL | DATE | APPROVAL DOE | DATE

RUST Rust Geotech
A WMX Technologies Company

DOE ID NO. OXNARD

DWG. NO.

SHT. OF

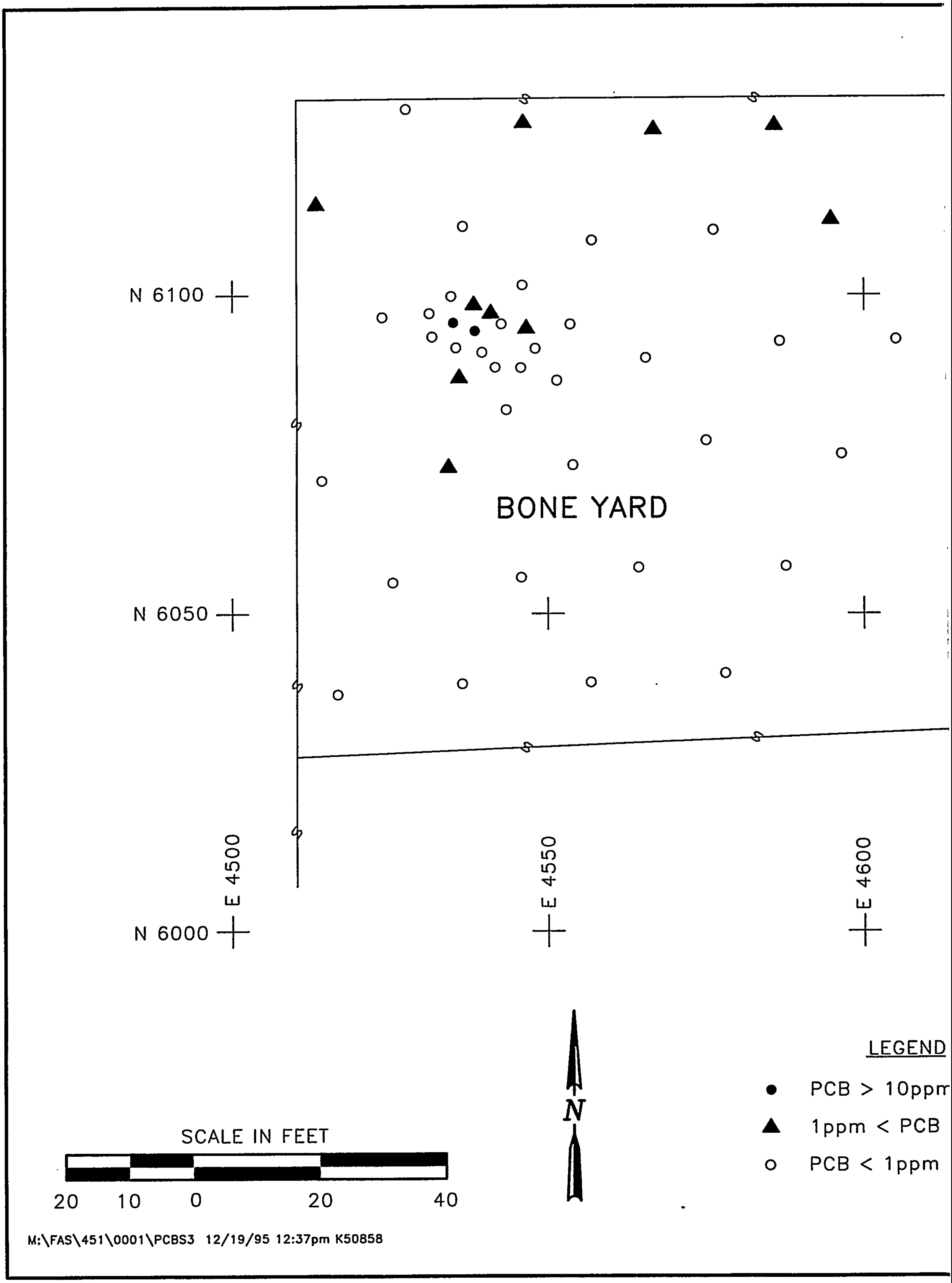

N 6100
N 6050
N 6000
E 4500
E 4550
E 4600
BONE YARD
N
LEGEND
PCB > 10ppm
1ppm < PCB
PCB < 1ppm
SCALE IN FEET
20 10 0 20 40
M:\FAS\451\0001\PCBS3 12/19/95 12:37pm K50858

Table 2. PCB Laboratory Data[a]

Sample Number	Ticket Number	Aroclor-1016 (µg/kg)	Aroclor-1221 (µg/kg)	Aroclor-1232 (µg/kg)	Aroclor-1242 (µg/kg)	Aroclor-1248/1254 (µg/kg)	Aroclor-1260 (µg/kg)
PCB-03:0-1	NBD-326	<68	<68	<68	<68	2000	<68
PCB-10:0-1	NBD-327	<500	<500	<500	<500	Trace[b]	<500
PCB-11:0-1	NBD-328	<800	<800	<800	<800	Trace[b]	<800
PCB-12:0-1	NBD-329	<270	<270	<270	<270	460	<270
PCB-12:0-1 (Dup)	NBD-330	<400	<400	<400	<400	Trace[b]	<400
PCB-12:1-2	NBD-331	<47	<47	<47	<47	<47	150
PCB-12:2-3	NBD-332	<46	<46	<46	<46	<46	150
PCB-18:0-1	NBD-334	<240	<240	<240	<240	Trace[b]	<240
PCB-27:0-1	NBD-335	<47	<47	<47	<47	700	<47
PCB-33:0-1	NBD-336	<340	<340	<340	<340	<340	<340
PCB-47:0-1	NBD-337	<47	<47	<47	<47	3200	<47
PCB-54:0-1	NBD-340	<47	<47	<47	<47	2800	<47
PCB-54:0-1 (Dup)	NBD-338	<37	<37	<37	<37	840	<37
PCB-54:2-3	NBD-348	<83	<83	<83	<83	240	<83
PCB-57:0-1	NBD-341	<84	<84	<84	<84	6400	<84
PCB-58:0-1	NBD-342	<37	<37	<37	<37	2700	<37
PCB-63:1-2	NBD-349	<110	<110	<110	<110	340	<110
PCB-66:0-1	NBD-344	<42	<42	<42	<42	1700	<42
PCB-68:0-1	NBD-345	<83	<83	<83	<83	<83	<83
PCB-72:1-2	NBD-715	<340	<340	<340	<340	<340	<340

Sample Number	Ticket Number	Aroclor-1016 (µg/L)	Aroclor-1221 (µg/L)	Aroclor-1232 (µg/L)	Aroclor-1242 (µg/L)	Aroclor-1248/1254 (µg/L)	Aroclor-1260 (µg/L)
Equipment Blank	NBD-333	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Equipment Blank	NBD-339	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Equipment Blank	NBD-343	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Equipment Blank	NBD-346	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Equipment Blank	NBD-347	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Equipment Blank	NBD-350	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

[a] A "<" symbol indicates that the maximum concentration was below the detection limit (number shown is detection limit); 1000 µg/kg=1 ppm

[b] Trace = PCBs present in low concentrations but not quantified.

Comparison of field test data versus laboratory data is shown Table 3. The field test kit predicted the laboratory concentration in 11 out of 18 samples and predicted a higher concentration than the laboratory result (false positive) in 6 of the samples. Only one sample had a test kit result lower than the laboratory result (false negative). However, this false negative had a field result (<1 ppm) and a laboratory result (1.7 ppm) that were similar in magnitude.

Field screening using the PCB test kits was considered effective. In 17 out of 18 cases, the field concentration was equal to or greater than the laboratory concentration (i.e. the test kit results were consistently more conservative than laboratory results).

Although the PCB field test kits performed adequately to meet the goals of the project, the correlation between field and laboratory data was not ideal. The correlation was obscured when the field test predicted concentrations above 10 ppm. In each case, the laboratory results were below 1 ppm. Possible reasons for the imperfect correlation are

1. The PCB test kits were conservatively configured for aroclor 1248. This means that the higher aroclors detected by the laboratory (aroclors 1254 and 1260) would cause the detection levels of the test kit to change from 1 ppm and 10 ppm to 0.4 ppm and 4 ppm. Therefore, samples having concentrations greater than 10 ppm on the field test actually had concentrations greater than 4 ppm.

2. Immunoassay tests are adjusted by EnSys so that the response of the test-kit standard is below the detection level. This adjustment results in a conservative test that rarely gives a false negative result (< 5 percent); however, some false positives are expected.

3. Laboratory precision for EPA method 8080 can contribute to discrepancies between field-test and laboratory data. Precision of the laboratory duplicate analyzed for this project was 25 percent (relative percent difference).

4) Aliquots taken for field and laboratory analysis may have actually differed in PCB concentration because of heterogeneous soil even though procedures were implemented to homogenize the soil.

Table 3. Comparison of PCB Field-Test Results with Laboratory Analytical Results

Ticket Number	Sample Number	Field Result (ppm)	Lab Result (ppm)
NBD-337	PCB-47:0-1	1<PCB<10	3.2
NBD-340	PCB-54:0-1	1<PCB<10	2.8
NBD-341	PCB-57:0-1	1<PCB<10	6.4
NBD-342	PCB-58:0-1	1<PCB<10	2.7
NBD-344	PCB-66:0-1	PCB<1	1.7
NBD-345	PCB-68:0-1	PCB<1	ND
NBD-348	PCB-54:2-3	PCB<1	0.24
NBD-349	PCB-63:1-2	PCB<1	0.34
NBD-715	PCB-72:1-2	PCB<1	ND
NBD-326	PCB-03:0-1	1<PCB<10	2.0
NBD-327	PCB-10:0-1	PCB>10	Trace
NBD-328	PCB-11:0-1	1<PCB<10	Trace
NBD-329	PCB-12:0-1	PCB>10	0.46
NBD-331	PCB-12:1-2	PCB>10	0.15
NBD-332	PCB-12:2-3	PCB>10	0.15
NBD-334	PCB-18:0-1	PCB<1	Trace
NBD-335	PCB-27:0-1	PCB<1	0.7
NBD-336	PCB-33:0-1	1<PCB<10	ND

ND = Not Detected

4.0 Recommendations

Results of this PCB characterization indicate that soils in the vicinity of the Bone Yard at the Oxnard facility are not significantly contaminated with PCBs. The highest confirmed PCB concentration in soil was 6.4 ppm, which is below the 10-ppm remediation criterion recommended by the EPA for industrial sites and below the 8-ppm risk-based concentration derived from the State of California guidance. In addition, when risk was assessed using a 6.4 ppm PCB soil concentration and the equations and assumptions from the Phase II ESA report (DOE 1995a), risk from exposure to carcinogens at the Oxnard facility remained essentially unchanged, increasing only slightly from 2.8×10^{-6} (Phase II ESA) to 3.2×10^{-6}. Therefore, remediation of PCBs in soil at the Oxnard facility is not recommended.

5.0 References

Marburg Associates and William P. Parkin, 1991. *Site Auditing: Environmental Assessment of Property*, Specialty Technical Publishers, Inc., Vancouver, British Columbia, Canada.

State of California Environmental Protection Agency, 1994. *Preliminary Endangerment Assessment Guidance Manual*, Department of Toxic Substances Control, Sacramento, CA.

U.S. Department of Energy, 1994. *Phase I Environmental Site Assessment for the EG&G Rocky Flats Oxnard Facility*, Grand Junction Projects Office, Grand Junction, CO

______________, 1995a. *Phase II Environmental Site Assessment Report for the Kaiser-Hill Company LLC Oxnard Facility, Oxnard, California*, Grand Junction, CO.

______________, 1995b. *Sampling and Analysis Plan for the Phase III Environmental Site Assessment of the U. S. Department of Energy Oxnard Facility, Oxnard, California*, Grand Junction, CO

U. S. Environmental Protection Agency, 1990. *A Guide on Remedial Actions at Superfund Sites with PCB Contamination*, Directive 9355.4-01FS, Office of Solid Waste and Emergency Response, Washington DC.

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Appendix D

Asbestos Operation and Maintenance Plan
DOE Oxnard Facility

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ASBESTOS OPERATIONS & MAINTENANCE PLAN

DOE OXNARD FACILITY
1235 EAST WOOLEY ROAD, OXNARD, CA

Submitted to:

Rust Geotech
USDOE Grand Junction Projects Office
POB 14000
Grand Junction, CO 81502-5504

Prepared By:

SCA Environmental, Inc.
2500 Overland Ave.
Suite 100
Los Angeles, CA 90064
TEL: (310) 842-9167
FAX: (310) 842-9168

ASBESTOS OPERATIONS & MAINTENANCE PLAN

DOE OXNARD FACILITY

1235 EAST WOOLEY ROAD, OXNARD, CA

Conducted for

Rust Geotech
USDOE Grand Junction Projects Office
POB 14000
Grand Junction, CO 81502-5504

January 23, 1996

SCA Project No. L-1421

Prepared by:

Leopoldo for Andy Hilliard

Andy Hilliard, CIH, CHMM
Cal-OSHA Certified Asbestos Consultant No. 92-0097

Reviewed by:

Leopoldo for Chuck Siu

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INTRODUCTION and EXECUTIVE SUMMARY

Throughout the document, each section will have a box like this one which will give a brief summary of the section's contents.

The document you are reading, the Asbestos Operations and Maintenance Plan, contains guidance for controlling asbestos-containing materials located at the DOE Oxnard Facility in Oxnard, CA (hereafter referred to as "the Oxnard Facility"). This document is specifically written to address asbestos occurring in and on the seven structures located at the Oxnard Facility. Understanding and following the guidelines in this document is essential to maintaining a safe workplace and avoiding asbestos exposure to building employees and the public.

This Operations and Maintenance Plan, or "O&M Plan," includes by reference a survey for asbestos-containing materials which was performed at the site by Rust Geotech in July, 1995. The survey was conducted to estimate the extent of asbestos contamination at the Oxnard facility for purposes of negotiating the transfer or sale of the property. It should not be construed, interpreted or otherwise considered a full asbestos inspection under California statutes and regulations. Because the risk to human health and the environment posed by the type and volume of asbestos identified was negligible, the O&M Plan was written to minimize the potential need for abatement prior to the transfer or sale. This plan is intended to be transferrable to any new title owner or leaser, provided the transfer does not violate federal, state, or county regulations.

This survey identified asbestos in the following materials:

- Sprayed-on wall texture in the Building 1 Accounting Offices;
- 9" x 9" black floor tiles in the Building 1 Vault;
- 9" x 9" white floor tiles in the Building 1 Lobby;
- "HVAC Joint Insulation" in the Building 1 mechanical room (this material is a cement-asbestos flue from the gas heater in the closet);
- Laboratory cabinet interior fireproof sheathing in the Building 2 Metallurgy Lab;
- Window caulk in Building 6;
- Gaskets on the Lindberg Furnace in Building 6;
- Brakes on the Cleveland Presses (assumed asbestos) in Building 6; and
- Gaskets on the Emerson Heater in Building 7.

Since the survey by Rust Geotech was "non-destructive," there is also a potential for concealed asbestos-containing materials to exist at the site. In general, these materials may include vapor barriers, tar papers, window caulking, glues, and mastics. Whenever construction or maintenance activities involve disturbing these materials, then trained personnel should be engaged to sample these materials and determine their asbestos content.

POLICY STATEMENT

Building asbestos policy. All employees who may potentially encounter asbestos in their work should be given this policy statement as part of their training.

Policy Statement:

It is the intent of DOE to have an effective Asbestos Control Program. The purpose of this program is to ensure that employees, visitors and the public are adequately protected from exposure to asbestos fibers in the Oxnard Facility buildings, or as a result of work performed at these buildings by employees or contractors.

This goal will be accomplished by ensuring that all asbestos abatement work, and all maintenance and construction work (including asbestos and demolition) conducted near asbestos, is performed in a safe manner, which minimizes the release of asbestos fibers outside of regulated areas.

An effective Asbestos Control Program requires that individuals at the site fulfill their responsibilities. These responsibilities are summarized in Section 1 of this document.

Asbestos Impacting Maintenance Work:

No building employee may remove, repair, or otherwise work on or with any material containing asbestos. No contractor may remove or repair asbestos materials unless specifically licensed and trained to do so, and approved by the Asbestos Program/ Site Manager. Further, untrained personnel shall not enter areas containing damaged friable asbestos or where an airborne asbestos hazard may exist. All asbestos hazards will be labelled in accordance with federal and state regulations.

As approved by the Asbestos Program/ Site Manager, appropriately trained and equipped contractor personnel are authorized to:

1. Perform small-scale, short-duration removal of asbestos material as necessary for emergency repair work, limited to less than three square feet of material (as defined by OSHA regulations).

2. Perform abatement (removal) of asbestos-containing material following all local, State, and Federal regulations.

Work Evaluation/Permit System:

Work which may impact asbestos shall be conducted following the Work Evaluation/Permit System. This system includes determining the presence of asbestos, if any, in areas where construction work is planned to occur. This determination must be performed by a person with EPA Building Inspector training and any required state and county certifications.

Any construction work conducted at the Oxnard Facility should first be reviewed by the Asbestos Program Manager to determine whether the work will impact asbestos-containing materials (ACM).

Written

Procedures:

Any work which may disturb asbestos shall be performed using specification documents incorporating the latest asbestos regulations as well as state of the art practices, and approved by the Asbestos Program/ Site Manager. Specification documents are typically prepared by an outside consultant with asbestos certification issued by California OSHA.

Whenever asbestos-disturbing work is conducted, clearance inspections and air testing shall be performed as specified in the specification documents listed above.

Whenever asbestos-disturbing work is conducted, an independent industrial hygienist or other trained person approved by the Asbestos Program/ Site Manager shall be present to ensure that work procedures are followed. This industrial hygienist shall have stop work authority if s/he believes that the work operation is creating a hazard for the building personnel or the public.

New Construction Materials:

As part of this policy, asbestos-containing materials shall not be used when acceptable substitute materials of lower toxicity are available. All construction specifications should include this requirement in writing. The following new materials may contain asbestos:

1) Roofing felts;
2) Vapor barriers, tar paper, and pipe trench liners;
3) Resilient flooring materials;
4) Gaskets;
5) Industrial equipment and vehicle brake pads;
6) Miscellaneous heat shields and protective surfaces;
7) Cement-fiber composite materials (cement-asbestos or "Transite" materials);
8) Other materials incorporating a fibrous binder; and
9) Laboratory tools and equipment.

Construction inspectors and supplies purchasers should examine these new materials in their original packaging to verify that they are labelled "asbestos-free." If the materials are not labelled, the manufacturer should be contacted and asked to provide documentation regarding the composition of the material.

Authority and Enforcement:

Employees found to be operating outside of these policies and procedures will be disciplined. Disciplinary procedures will be consistent with those of other serious offenses.

RESPONSE TO UNPLANNED ASBESTOS RELEASE

Actions to take, and people to contact, if there is an accidental disturbance of asbestos materials.

Reporting:

In the event of an actual or suspected unplanned release of asbestos materials, evacuate the area immediately, then obtain the following information before making any phone calls:

- The precise location in the building where the release occurred.
- The exact type of material released (roofing material or some other newly-discovered material)
- Why/how the material was released (fire, aging, a water leak, etc.)
- How you know the material contains asbestos (i.e., the material was surveyed previously, the material looks like a typical asbestos-containing material).
- The number of people in the area where the release occurred, and the use of the area (office, shop, lobby, etc.).
- Equipment and supplies which may have asbestos material on them, such as desks, books, equipment, etc.
- Potential to evacuate the immediate area of the release.
- Potential to shut off the ventilation system(s) in the area.

Then, contact the following individual:

1. Asbestos Program/ Site Manager

   Holly Dumas (805) 486-4881

Procedures:

The following are general procedures to be followed for an asbestos release. They may not apply in all cases. The contacts listed above can give you guidance for your particular situation.

1) Evacuate the immediate area/room where the release occurred. Avoid tracking through asbestos material and spreading it to other areas.
2) Isolate the area, by closing doors, closing windows, setting up barrier tape, or other means.
3) Turn off ventilation systems serving the area.
4) Post warning signs at all possible entrances.
5) Contact appropriate local, state and federal agencies.

TABLE OF CONTENTS

SECTION 1 - ASBESTOS CONTROL PROGRAM REQUIREMENTS, ROLES, AND RESPONSIBILITIES

This section of the report gives a brief overview of the Asbestos Control Program, including who the players are, and what the elements of the Program are. For more details on responsibilities of individuals, you may wish to read the Management Implementation Plan.

Roles and Responsibilities:

This is a general overview of roles and responsibilities of the Asbestos Control Program participants.

- **Asbestos Program/ Site Manager**

  Note that typically these two roles are separate, with the Asbestos Program Manager being an individual at the Corporate Health and Safety level, who sets overall policy for asbestos-related work; and the Asbestos Site Manager being at the facility level, and having purchasing authority for small-scale projects.

  Because of the nature of the Oxnard Facility, and it's staff (including a full-time Environmental Engineer) the goals of the Asbestos Control Program are best served if these two functions are consolidated.

  The Asbestos Program/ Site Manager's responsibilities include:
  * maintain contracts with asbestos consultants and contractors;
  * approve project-specific asbestos abatement specifications;
  * manage the work of asbestos consultants and asbestos abatement contractors; and
  * develop an Asbestos Information Notice Program;
  * develop a periodic surveillance program;
  * develop a response action recordkeeping program;
  * develop a work permitting system;
  * develop an asbestos awareness training program;
  * develop work procedures for Asbestos Operations and Maintenance activities;
  * develop and implement a labelling and posting system for ACBM;
  * enforce Work Evaluation Permit System for activities which may disturb ACBM;
  * supervise Asbestos Operations and Maintenance activities;
  * verify that posting and labelling in building is current and complete;
  * perform periodic and ongoing surveillance of ACBM;
  * maintain on-site records of Asbestos Control Program activities.

- **Building Maintenance, Custodial, and Operations Staff**
  * perform Asbestos Operations and Maintenance activities, where applicable; and
  * alert Asbestos Program/ Site Manager to accidental releases or deterioration of ACBM.

Note that, given the relatively small amount of asbestos-containing materials identified at the Oxnard Facility, it may not be cost-effective to train Building Maintenance, Custodial, or Operations Staff to perform abatement, even for small scale projects.

- **Asbestos Consultant (typically an outside firm)**
  * prior to construction or other activity potentially disturb ACBM or suspect ACBM, provides Asbestos Inspectors to perform inspection of the work area, including collecting bulk samples for asbestos;
  * issues report detailing known ACBM in the work area;
  * provides Project Designers to creates specifications and bid documents, assists in selection of qualified contractors to perform abatement work;
  * performs construction management services during abatement, including air sampling and quality control review of Abatement Contractor's work activities.

- **Asbestos Abatement Contractor (typically an outside firm)**
  * bids on asbestos abatement tasks;
  * performs abatement activities, including small-scale repair of damaged materials, area cleanup and decontamination, and large-scale removal;
  * removes asbestos materials in compliance with all applicable regulations and specification requirements;
  * disposes of asbestos waste materials and supplies copies of completed waste manifests to building owner.

This is a general overview of roles and responsibilities of the Asbestos Control Program participants. Depending upon the organization of a given facility or building, the roles and responsibilities may be differently distributed.

Elements of the Asbestos Control Program:

Several elements must be present for an effective Asbestos Control Program:

1) Trained and equipped personnel:

   - Asbestos Program/ Site Manager
   - Building Maintenance, Custodial, and Operations Staff
   - Asbestos Consultants and Industrial Hygienists
   - Accredited Analytical Laboratories
   - Asbestos Abatement Contractor

2) Building Surveys

3) Asbestos Operations and Maintenance Plan

4) Asbestos Information Notification System

5) Respiratory Protection Program

6) Medical Surveillance Program

7) Training

   - Written Work Procedures
   - Emergency Procedures
   - Hazard Communication - labels, notices, awareness training;
   - Recordkeeping System; and

- Surveillance/Reinspection

8) Work Evaluation Permit System

9) Equipment and Supplies

10) Cal-OSHA Carcinogen Registration, as applicable

11) Proper Posting and Labelling

12) Ongoing Surveillance Program

These elements of the Asbestos Control Program are explained in detail elsewhere in this document.

SECTION 2 - ASBESTOS SURVEY DATABASE AND REPORTS

This section details limitations of the asbestos survey data.

Introduction: The first step in an Asbestos Control Program is the survey of buildings which may contain asbestos. The buildings at Oxnard Facility were surveyed in July, 1995.

While reading this section, you should have a copy of the asbestos survey reports for Oxnard Facility. If additional asbestos sampling has been performed, you should have that information available also.

Although ACM was generally evaluated for potential risk in the original July, 1995 survey, it should be noted that the condition of friable ACM was not assessed for each and every location where ACM was identified, as assessment was not within the scope of the initial survey. The condition of ACM should be assessed for all friable ACM remaining at the facility (or identified in the future) in order to properly manage it under this plan.

Limitations of the Survey: The survey conducted in the Oxnard Facility was performed as part of a Phase II environmental site assessment (ESA) conducted by Rust Geotech. However, the survey did not include sampling or assessment of concealed materials, for example, vapor barriers inside wall chases. This type of concealed material, and many others, are commonly asbestos-containing in buildings.

The limitations of an asbestos survey can be partially compensated for by vigilance on the part of building maintenance, custodial, and operations staff and construction personnel. Work which disturbs building materials and has the potential to uncover concealed asbestos materials should be performed with the knowledge that these materials may be discovered. All personnel working in this capacity should understand the mechanism for reporting suspect asbestos materials.

Lastly, it cannot be overemphasized that there are limitations to any survey's data. The user should always be skeptical when reviewing the data, and must not accept the data as infallible. Project designers, especially, should accept the data only after they have verified it by means of a site visit and thorough review of the data; satisfaction with the laboratory performing the analysis is critical.

Since Project Designers are wholly responsible for the accuracy of their design, deficiencies in the survey data should not constitute an acceptable excuse for errors and omissions in the designed project.

SECTION 3 - NOTIFICATION AND LABELLING PROCEDURES FOR OXNARD FACILITY

This section describes the policy and procedures for notifying employees, contractors, tenants, regarding asbestos in buildings.

A number of regulations require notification of the presence of asbestos. The Connelly Bill (Asbestos Notification Act) requires building owners to notify employees, tenants, and contractors of the presence of asbestos within a building.
reference: California Health and Safety Code sections ¶ 25915 through 25919

Federal OSHA regulations require building owners to notify employees and contractors who may disturb asbestos-containing material.
reference: 29 CFR 1926.1101

Federal and California OSHA regulations for Hazard Communication require employers to notify employees of hazardous materials and conditions which may be encountered in the workplace.
reference: 29 CFR 1910.1200

Attachment A of this document contains sample notification forms for building owners/managers to provide to employees, tenants, and contractors.

Note that all asbestos survey and air sampling results are public information. Documents pertaining to asbestos surveys, sampling, and abatement should be made available to the public, however, all inquiries about the status of asbestos in the buildings should be referred to the Asbestos Program/Site Manager so that the latest information is made available. This applies to questions from tenants, contractors, employees, the public, the media, or any other parties.

A variety of strategies exist for labelling asbestos materials in buildings. The intent of the strategies is all the same: to ensure that accidental disturbance of these materials, and asbestos exposure to building occupants, does not occur. For the Oxnard Facility, the following is recommended:

1) Labeling of acoustical sprayed wall material is not recommended; affixing a label to the material would disturb it with potential fiber release, and attaching labels to it would be aesthetically undesirable. Written notices should be used to inform employees and others.

2) Labelling of the the following asbestos materials is practical:

   a) fireproof sheathing material in the Building 2 Metallurgy Laboratory cabinets (the cabinet exteriors should be labelled); and

   b) cement-asbestos flue in the Building 1 mechanical room.

   These materials should be labelled with OSHA-approved warning labels.

3) Labelling of other materials noted, such as floor tiles and gaskets, is not practical. Written notices should be used to inform employees and others.

California Code of Regulations, Title 8, Section 5208 (n) requires the following information to be placed on asbestos labels, where it is practical to use them:

DANGER **Contains Asbestos Fibers - Avoid Creating Dust** **CANCER AND LUNG DISEASE HAZARD**

SECTION 4 - MANAGEMENT IN PLACE, PERIODIC ASSESSMENT (SURVEILLANCE) AND ASBESTOS MATERIAL SAMPLING AT OXNARD FACILITY

This section of the report discusses:

1) When it is acceptable to perform "management in place" of asbestos materials, as opposed to abatement of materials.

2) Periodically checking the condition of asbestos materials in the building to identify any new damages or deterioration, known as "ongoing surveillance."

3) When it is advisable to collect more samples for asbestos in a building which has already been surveyed for asbestos.

<u>Management In Place:</u>

This section discusses when it is acceptable to perform management in place of ACM or PACM. Note that this section has fairly generic examples.

Management in place for ACM or PACM is acceptable when the following conditions are met:

1) When a material is nonfriable, or when a material is friable and relatively undamaged;

2) When the material is not in danger of being disturbed by normal operations of the facility;

3) When the material is not in danger of being disturbed by a planned renovation or repair action; and

4) When management in place meets the economic and health and safety goals of the facility.

In order to make an informed decision between abatement of materials and management in place, it is important to understand the costs and risks associated with each option.

Abatement of asbestos involves immediate costs (contract costs, disposal and documentation costs, and costs of "lost use" of portions of a building during abatement). Abatement projects also involve risks of employee exposures, environmental releases, liability associated with waste disposal, etc.

Management of asbestos in place involves costs over time; these costs include record-keeping, training, surveillance, etc. There are also risks associated with management in place, including accidental disturbance or damage.

The decision between abatement and management in place should be made by personnel familiar with asbestos management, building management, and construction issues.

Performing Ongoing Surveillance:

Surveillance means watching the status of asbestos materials in a building over time. Like other parts of a building, asbestos materials are dynamic, and are affected by aging, water damage, accidental disturbance, etc. The goal of surveillance is to catch changes in the asbestos materials early enough so that there is minimal health disturb to employees and the public.

Surveillance involves looking for materials which have been damaged or which may endanger employees, or the public. Building maintenance staff are ideally suited for this task, since they know their buildings very well, and can often observe the condition of asbestos materials as part of a routine of checking other equipment in the building (such as lights, air conditioning system, fire extinguishers, etc.).

The frequency of ongoing surveillance will vary by building. However, in general it is recommended that building-wide surveillance be conducted at least once a year.

Asbestos surveillance involves going through the building and visually assessing each asbestos material, comparing it against the survey report to verify that it has not become more damaged.

Additional Bulk Sampling:

This section discusses when it is advisable to collect additional bulk samples. Note that this situation has fairly generic examples, which may not apply entirely to the Oxnard Facility buildings.

Additional sampling should be performed in any of the following situations:

1) When there is a potential to disturb "assumed asbestos" or "Presumed Asbestos-Containing Materials" (PACM), a decision should be made whether to collect bulk samples of the material, or to merely treat the material as asbestos. Unless the disturb to the material is very minor, it is usually cost-effective to collect samples.

   Example: a sheetrock ceiling needs to have several holes drilled into it to hang new lights. No previous sampling has been performed of this material.

   The drilling work can either be done using trained personnel under asbestos procedures. Or, samples can be collected of the sheetrock ceiling in the disturbed area; if the samples indicate that the material is non-asbestos, the work can proceed without asbestos procedures. Note that samples should be collected by specially trained personnel (see Section 9).

   Warning: because sheetrock, plaster, and other finish materials may appear very similar and yet have different installation dates, it is not usually appropriate to use results from one area of a building to represent the entire building. In the example above, negative results from samples in one location could not be used to state that similar materials in another part of the building were non-asbestos. Determining that sheetrock or plaster has no asbestos throughout an entire building requires a comprehensive sampling strategy, and assumptions based on Building Drawings and history, devised by a person trained in the EPA Building Inspector course, and with experience in this area.

2) When a suspect material is discovered which is not included in the building's asbestos survey report, the material should either be treated as PACM or sampled.

   Example: while cutting into a pipe chase to repair a leak, an employee realizes that there is a vapor barrier material lining the pipe chase. The asbestos survey report does not address the material.

   The vapor barrier should be treated as PACM, and the work conducted under asbestos procedures; or, the material should be sampled by a trained individual.

3) When a construction project is being planned which will disturb asbestos materials, PACM, or concealed spaces which may contain asbestos, additional investigation must be performed.

   This includes any project which involves moving or replacing a wall (including a non-load-bearing wall). The work control permit system procedures must be used in these cases (see Section 5).

Considerations for Bulk Sampling:

The actual act of collecting a bulk sample is fairly simple. However, collecting the sample in accordance with EPA and OSHA requirements, and properly documenting the sample, is fairly complex. Consequently, only individuals who have undergone training to become an EPA accredited Asbestos Inspector should collect bulk samples. This is a requirement of Federal OSHA regulations, 29 CFR 1926.1101 (k) (4) (ii) (B), as well as USEPA and local (Ventura County Air Pollution Control District) regulations .

Bulk sampling and documentation can be conducted fairly rapidly for a small number of samples. However, laboratory analysis of the samples can take a week or longer, depending upon the means used to ship samples to the laboratory, and the turnaround time which the laboratory has agreed upon. Quick sample results (<24 hours) can be achieved through use of couriers to ship the samples, and paying a premium to the laboratory for a "rush" analysis.

In emergency situations, these expenses are well justified. For more routine or foreseeable events, the sampling should be conducted early to allow economical shipping and analysis.

Summary:

To summarize this section:

1) Management in place and abatement are two options for dealing with ACM or PACM. It is important for the Asbestos Program/ Site Manager, and other decision-makers, to have an understanding of the costs and risks associated with each option.

2) Ongoing surveillance, performed every year or less by building staff, checks for damage to known asbestos materials.

3) Asbestos bulk samples need to be collected in a variety of circumstances, including damaged suspect materials, disturbance to "assumed asbestos" materials, and newly discovered materials. Asbestos bulk sampling requires EPA accreditation as a Building Inspector and specialized training in the use of forms for documentation. For outside (consulting) personnel, accreditation by Cal/OSHA as Certified Site Surveillance Technician or Certified Asbestos Consultant is required as well.

SECTION 5 - WORK CONTROL PERMIT SYSTEM

This section lists the "sign-offs" and approvals necessary to perform work which may disturb asbestos. Two types of work permit exist: maintenance work and construction work.

Purpose of the Work Evaluation Permit System:

After a building has been surveyed for asbestos, it is essential that the survey information be used to avoid unplanned disturbances of ACM and PACM. There are many negative consequences of maintenance work or construction work which disturbs ACM or PACM without using asbestos procedures:

1) Most importantly, employees and the public may be exposed to asbestos unknowingly, and thus suffer a risk to their long-term health.

2) Parts of the building may have to be evacuated, resulting in disruptions to the operations conducted in the building.

3) Money which is intended for building improvement and maintenance may have to be diverted to expensive emergency cleanup work.

How is the Work Evaluation Permit System intended to avoid these problems? The system operates on the principle that any work done in the building must first be compared to the locations of known or presumed ACM.

- For maintenance work, it is essential that all work be approved by the Asbestos Program/ Site Manager prior to beginning. For the Oxnard Facility, this should include any work on the building interior or roof and any work which may disturb concealed materials. In addition, any work on equipment which may have asbestos gaskets or brakes should be approved by the Asbestos Program/ Site Manager.

- For construction work, it is essential that all work be approved by the Asbestos Program/ Site Manager prior to beginning. The Asbestos Program/ Site Manager, needs to determine whether the work has the potential to disturb asbestos. If so, then the Asbestos Program/ Site Manager will engage the services of a qualified consultant to collect additional samples, prepare a scope of work for an abatement contractor, etc.

  Construction work as used in this section means non-routine work which may be performed by building maintenance staff, other staff, or outside contractors.

Responsibilities:

For maintenance or construction work, the Asbestos Program/Site Manager has the responsibility to determine whether the work will disturb known or presumed asbestos materials.

Permit Form:

The Work Evaluation Permit System for construction work should be built into the contract system. No contract for construction work should be approved until the Asbestos Program/ Site Manager completes an Asbestos Work Review form (Attachment B), or similar approved form.

For the Oxnard Facility, this Asbestos Work Review form should be integrated into the other Contractual Forms (such as the existing Work Control Forms and Work Order Packages).

General Elements of Work Evaluations:

The work evaluations conducted for maintenance and construction work involve collecting the following data:

1) the time and location of the work to be performed;

2) description of the work; and

3) any known information about the presence of ACM (quantity, type, condition).

Once the data has been collected, the steps below are taken:

1) Review data: The reviewer will examine the Asbestos Survey and any other records to determine whether or not any ACM or PACM will be affected by the job.

2) Visit the site: The reviewer will make a visit to the location of the proposed work to verify whether ACM is present and likely to be disturbed. The reviewer will collect additional samples if unrecorded ACM is present, or if PACM is present and the reviewer wants to attempt to rebut its status as PACM. (Note that sample collection may only be performed by an EPA accredited Asbestos Inspector).

3) Record information: Using forms as described above, and as located in Attachment B, record the project's potential disturb to ACM and/or PACM. Maintain a record of these forms along with other asbestos records.

4) Plan work practices: Depending upon the scope and nature of the work, this may include bidding for specialty contractors to perform asbestos work, giving Connelly information to contractors regarding location of asbestos, etc.

5) Visit worksite during work: The reviewer, or reviewer's representative, should visit the location again during the set-up phase of the work, and possibly several times again during the project. The purpose of the visit should be to ensure that the project is proceeding as planned, and that no last minute changes have occurred which might cause an
to ACM or PACM.

SECTION 6 - WORK PRACTICES FOR OXNARD FACILITY EMPLOYEES PERFORMING MINOR REPAIR OR REMOVAL OF ASBESTOS

NOTE: The known asbestos materials at the Oxnard Facility are primarily low-maintenance materials. It is not considered practical to have on-site employees trained and equipped to perform minor repair or removal work. Any work which involves cutting, drilling, tearing, or removing asbestos-containing materials should be performed by an outside contractor with asbestos licensing.

Note that California OSHA regulations require extensive training, medical examinations, and air monitoring for personnel who are assigned to work with asbestos. In addition, a one-time facility permit as a carcinogen user must be obtained through Cal/OSHA.

SECTION 7 - RECORDKEEPING

All documentation regarding asbestos should be maintained by the Asbestos Program/ Site Manager. This includes Connelly notifications, sampling results, waste manifests, etc. It is preferable to create a single place to store all asbestos-related data, rather than combining it with other project or tenant records.

Note that forms related to air sampling and employee training are required to be stored for 30 years by OSHA regulations. It is generally good practice to store all asbestos-related documentation for this same time period. For liability control reasons, it is recommended that the records be stored beyond the 30 year period (i.e, stored indefinitely).

Since these forms are legal documents which verify compliance with regulations and state of the art practices, it is essential that they are completed legibly, and that the personnel completing them are trained to do so properly.

SECTION 8 - WORKER PROTECTION

NOTE: Because the only known asbestos materials at the Oxnard Facility are low-maintenance materials, it is not considered practical to have employees trained and equipped to perform minor repair or removal work. Any work which involves cutting, drilling, tearing, or removing asbestos-containing materials should be performed by an outside contractor with asbestos licensing.

Consequently, the typical worker protection elements for building employees (training, protective equipment, medical surveillance, engineering controls, and administrative controls) are not entirely applicable.

Outside contractors who are hired to perform work should be required to show proof of adequate worker protection practices (see Section 14 for more details).

SECTION 9 - TRAINING FOR OXNARD FACILITY EMPLOYEES

This section details asbestos training requirements.

NOTE: Because Oxnard Facility employee contact with asbestos is expected to be minimal, the majority of this section does not apply. However, it is presented for informational purposes, as well as an assistance when hiring outside contractors and consultants.

Note that Oxnard Facility employees would be required to receive hazard communication training for asbestos materials, per 29 CFR 1910.1200.

The following table lists recommended training protocols for different staff who take part in the Asbestos Control Program. The training programs abbreviated in this table are explained in more detail later in this section.

	Recommended Training Requirements for Oxnard Facility (as applicable)							
Staff	**1. CN**	**2. AAT**	**3. OM**	**4. AAW**	**5. C/S**	**6. WP**	**7. RP**	**8. AI**
Custodial, Maintenance, and Facility Staff with potential for accidental asbestos contact	√	√						
Asbestos Program/ Site Mgr		√						
Maintenance Staff performing Class II work*	√			√		√	√	
Maintenance Supervisors for Class II work*	√				√	√	√	
Maintenance Staff performing Class III work*	√		√			√	√	
Maintenance Staff performing Class IV work*	√	√				√	√	
Asbestos Consultant Staff performing asbestos inspections and monitoring monitoring	√				√	√	√	√
All building tenants and others not listed above	√							

*Note that Federal OSHA has divided asbestos work into four categories. Each category requires a different level of training for employees. The categories are described below. A detailed description of each category is contained in Appendix E:

OSHA Work Category	Description
I (typically only performed by outside contractors)	Activities involving the removal of Surfacing and TSI materials which are asbestos or presumed asbestos (ACM or PACM). This involves primarily **friable** materials.
II (typically only performed by outside contractors)	Activities involving the removal of asbestos or presumed asbestos (ACM or PACM) materials which are not surfacing or TSI. This involves primarily **nonfriable** materials.
III	Repair and maintenance activities which may disturb ACM or PACM (including small-scale removal of less than one glovebag or waste bag of friable materials).
IV	Maintenance and custodial activities involving contact with ACM or PACM; as well as cleanup of waste and debris containing ACM or PACM.

Following is a summary table of the training programs referenced above. Note that the more general Federal OSHA and EPA regulations are cited, instead of the state regulations (Ventura County Air Pollution Control District regulations are also cited).

Code	Training Title	Length	Taught By	Description & Regulatory Reference
1. CN	Connelly Notification	varies	N/A; Written notice only	California Health and Safety Code ¶ 25915 through 25919
2. AAT	Asbestos Awareness Training	2 hours	staff, approved staff, or qualified consultant	Health effects of asbestos; locations in building; work practices for Class IV work; housekeeping requirements and response to fiber release episodes. **Federal:** 29 CFR 1926.1101 (k) (8), 1910.1001 (j) (7), 1910.1200
3. OM	Operations and Maintenance Training (per EPA Model Accreditation Plan, or "MAP")	16 hours	staff, approved staff, or qualified consultant	Same as AAT + work practices for Class III activities **Federal:** 29 CFR 1926.1101 (k) (8), 1910.1001 (j) (7), 1910.1200, Sec. 15, PL 101-637
4. AAW	Asbestos Abatement Worker Training (per EPA Model Accreditation Plan)	32 hours	EPA-approved AHERA training facility	Same as OM + work practices for Class II activities **Federal:** 29 CFR 1926.1101 (k) (8), 1910.1001 (j) (7), 1910.1200, Sec. 15, PL 101-637
5. C/S	Asbestos Abatement Supervisor Training (per EPA MAP), also called "Competent Person" Training	40 hours	EPA-approved AHERA training facility	Same as AAW + additional detail regarding safety inspections **Federal:** 29 CFR 1926.1101 (k) (8), 1910.1001 (j) (7), 1910.1200, Sec. 15, PL 101-637
6. WP	Work practice-specific training	varies	staff, approved staff, or qualified consultant	Detailed training regarding procedures for performing specific Class II, III, or IV activities. **No regulatory requirement**
7. RP	Respiratory Protection Training	approx. 2 hours	staff, approved staff, or qualified consultant	Respirator selection, terminology, fit testing, use, maintenance, and limits. **Federal:** 29 CFR 1910.134 (d)
8. AI	Asbestos Inspector Training (per EPA MAP)	24 hours	EPA-approved AHERA training facility	**Federal:** 29 CFR 1926.1101 (k) (4), 1910.1001 (j) (8), Sec. 15, PL 101-637 **Regional:** Ventura County Air Pollution Control District, rule 62.7

SECTION 10 - RESPIRATORY PROTECTION FOR OXNARD FACILITY EMPLOYEES

NOTE: Because Oxnard Facility employee contact with asbestos is expected to be minimal, the majority of this section does not apply.

OSHA regulations stipulate that respiratory protection is required if personal exposures are in excess of 0.1 fiber of asbestos per cubic centimeter of air (0.1 f/cc). This level is not expected to be exceeded by Oxnard Facility employees under foreseeable conditions.

If it is determined that persons employed at Oxnard Facility should have respiratory protection, OSHA regulations will require the employees to have the following typical tests and documentation:

- respirator fit test, provided by a competent person, every 6 months
- medical examination provided by occupational health physician, every 12 months
- training in use of respirator, every 12 months
- if asbestos will be disturbed, a minimum 2-hour asbestos awareness training is required every 12 months. This training is typically provided by an outside asbestos consultant.

Note that asbestos exposures require a specific type of respirator cartridge.

Reference: 29 CFR 1926.1101

SECTION 11 - MEDICAL SURVEILLANCE FOR OXNARD FACILITY EMPLOYEES

NOTE: Because work which disturbs asbestos will be performed by outside specialty contractors, no medical surveillance for asbestos will be required for Oxnard Facility employees.

OSHA regulations stipulate that medical surveillance is required if personal exposures are in excess of 0.1 f/cc, and/or if respirators are used to control asbestos exposure. This level is not expected to be exceeded by Oxnard Facility employees under foreseeable conditions.

Reference: 29 CFR 1926.1101 (m)

SECTION 12 - EXPOSURE MONITORING

NOTE: Because work which disturbs asbestos will be performed by outside specialty contractors, no exposure monitoring for asbestos will be required for Oxnard Facility employees.

OSHA regulations stipulate that exposure monitoring is required if personal exposures are likely to be in excess of 0.1 f/cc, and/or if respirators are used to control asbestos exposure. This level is not expected to be exceeded by Oxnard Facility employees under foreseeable conditions.

In the case of accidental damage to asbestos material, and resultant fiber release, qualified industrial hygiene personnel should perform air monitoring to assess the seriousness of the release, and to formulate response strategies.

Reference: 29 CFR 1926.1101

SECTION 13 - ASBESTOS WASTE MANAGEMENT

Asbestos waste is generated by outside contractors performing abatement work in the building. Specific procedures must be followed.

Definition:

Asbestos waste is regulated by a variety of agencies, including California and Federal EPA, California and Federal OSHA, and the Ventura County Air Pollution Control District (VCAPCD).

General Requirements:

In general, asbestos waste must be stored in sealed, impermeable containers. It must be labelled according to the requirements of the agencies listed above.

For most asbestos waste, a manifest is required. This is a document with several copies. The copies are used to track the waste's transportation and disposal, in order to verify that it winds up in an appropriate landfill and not by the side of the road somewhere.

See Attachment C for a diagram of the various waste manifest parts, and the respective parties whom they are sent to.

Generator ID Numbers:

California EPA assigns a unique number to every facility which generates asbestos waste. To obtain this ID number, the Asbestos Program/ Site Manager should contact the local office of the California EPA. In addition, the Asbestos Program/ Site Manager will need to obtain a tax ID number from the local office of the Board of Equalization.

Note that these numbers are not required until waste is generated, i.e. until an abatement project takes place.

Disposal of Asbestos Waste from Abatement Activities:

When abatement activities generate asbestos waste, the abatement contractor typically handles the storage and disposal requirements. The contractor will need to receive the Generator ID number (as well as the Tax ID number) from the Asbestos Program/ Site Manager.

Manifest Handling:

Although the asbestos abatement contractor disposes of the asbestos waste from abatement, the manifest must be signed by a representative of the "generator," i.e. the building where the waste is from. Manifests are fairly complex documents, with precise requirements. Fines for not filling them out correctly can be very high.

It is strongly recommended that the manifests be signed only by the Asbestos Program/ Site Manager, or by an outside consultant approved by these programs.

SECTION 14 - QUALIFICATIONS FOR ASBESTOS ABATEMENT CONTRACTORS

Minimal qualifications for contracting asbestos abatement work with outside firms.

In the absence of similar company or federal procurement practices, the documentation and submittals outlined in this section are recommended when asbestos work is being performed by outside contractors:

- The prospective Abatement Contractor should provide documentation of current and valid licensing in the State of California in accordance with the provisions of Chapter 9, Division 3 (as amended) of the Business and Professions Code.
- The prospective Abatement Contractor should provide documentation of current and valid certification in the State of California to perform asbestos-related work by the Contractor's State License Board.
- The prospective Abatement Contractor shall provide documentation of current and valid registration with the California Department of Industrial Relations - Division of Occupational Safety and Health to perform asbestos-related work as well as registration for carcinogen usage.
- The prospective Abatement Contractor should submit documentation of successful completion of asbestos work involving at least three jobs similar in work and extent. Documentation should include the following:
    1. Agency or Company for which the work was done.
    2. Type of work.
    3. Name of the agency or company representative responsible for performance inspections.
    4. Results of any air monitoring, including laboratory analytical reports.
    5. Results of any inspections by other agencies (e.g., Environmental Protection Agency (EPA), Federal Occupational Safety and Health Administration (OSHA), California Department of Industrial Relations - Division of Occupational Safety and Health (DOSH), Air Pollution Control Agency, etc.)
- Prospective Abatement Contractors should submit a statement, signed by an officer of the Company, containing the following information:
    1. A record of any citations issued by federal, state, or regulatory agencies related to asbestos abatement activity. Such records shall include identification of the project, dates and resolutions or other information.
    2. A list of penalties incurred through non-compliance with asbestos abatement project specifications, including liquidated damages, overruns in scheduled time limitations, and resolutions.
    3. A description of the situations in which an asbestos-related contract has been terminated, including projects, dates, and reasons for terminations.

4. A list of asbestos-related legal proceedings/claims in which the Abatement Contractor (or employees scheduled to participate in this project) has participated or is currently involved.

- The prospective Abatement Contractor should also submit the following information:

1. Evidence of adequate insurance coverage, specifically insurance with pollution coverage.

2. Names and resumes of the project manager(s) and job superintendent(s) for the abatement project.

3. A proposed schedule for completion of the work, including work hours and number of days required to complete the work.

4. Examples of the "Certificate of Completion" the Abatement Contractor intends to provide at the completion of asbestos abatement described in these specifications.

5. Where the asbestos will be disposed and certified that the facility is authorized to accept asbestos.

NOTE: Abatement, maintenance, and repair of asbestos should be accomplished during off-peak work hours whenever possible.

Attachment A

Connelly Notification Forms and Procedures

(Optional Forms - use of these specific forms is not required by regulation; similar forms can be used)

STEP-BY-STEP DIRECTIONS FOR COMPLIANCE WITH CONNELLY NOTIFICATION REQUIREMENTS

1. Appoint Asbestos Site Manager and Asbestos Program Manager (see Operations and Maintenance Plan for description of duties)

2. Compile information about asbestos in building.

3. Prepare notices for employees, lessees, and contractors.

4. Distribute notices to each employees or tenants listed above. Obtain written verification of receipt from each employee or tenants.

5. Distribute notices to lessees, agents, and contractors. Remind them that they have to forward the notices to their own employees, agents, lessees, and contractors.

6. Distribute supplemental notices on the following occasions:

   a. Asbestos information known at this time (original notification).
   b. Asbestos information which becomes known during a 90-day period (quarterly notification); supplemental notice wihtin 15 days of the end of the 90 day period.
   c. All asbestos information to new employees within 15 days of the date they begin work.
   d. All asbestos information to new lessees, agents, and contractors within 15 days of the date they begin the new relationship.
   e. All asbestos information to all employees, lessees, and agents on an annual basis.

NOTICE TO EMPLOYEES - ASBESTOS IN BUILDINGS

(INITIAL NOTICE) FOR PERIOD BEGINNING: ________________

OR

(SUPPLEMENTAL NOTICE) FOR QUARTER ENDING: ____________

FOR BUILDING LOCATED AT: ______________________________

In January of 1989, Assembly Bill 3713 was signed into law and added to the California Health and Safety Code. This bill provides for written notice to employees concerning specific matters related to working in a building with asbestos-conttaining construction materials. It applies to buildings built before 1979 where the owner knows that the building contains asbestos-containing materials; it does not require that a building be surveyed to determine the presence of asbestos.

WHAT IS ASBESTOS?

Asbestos is a naturally-occurring group of fibrous minerals which have been used extensively in public buildings, apartments, and homes. Asbestos was incorporated into pipe insulation, acoustic plaster, acoustic tile, duct and furnace insulation, floor tiles, textiles, roofing, and hundreds of other building materials.

WHERE DOES ASBESTOS OCCUR IN MY BUILDING?

See the attached excerpt from the asbestos survey report for your building for information about which materials contain asbestos.

WHY IS ASBESTOS HAZARDOUS?

Asbestos is a concern because of the potential health risks associated with breathing asbestos fibers. It is important for you to know that most people with asbestos-related diseases were asbestos workers before 1972. These workers were repeatedly exposed to high levels of asbestos each working day with little or no protection. Asbestos workers today are required to follow specific work procedures and wear appropriate protection to minimize exposure.

Significant exposure to asbestos fibers can lead to asbestosis and certain forms of cancer. Asbestosis is one of the many dust-related lung diseases. It is associated with chronic exposure to relatively high levels of asbestos and is characterized by the permanent deposition of asbestos fibers in the respiratory tract. The earliest and most prominent clinical finding, breathlessness upon exertion, rarely becomes apparent until after at least a decade of exposure.

In addition to asbestosis, the association of asbestos and lung cancer has been well established over the past two decades. Scientists have studied insulation and shipyard workers who were exposed to HIGH AIRBORNE LEVELS of asbestos. These studies indicate that asbestos workers were about five times as likely to get lung cancer as non-asbestos workers who did not smoke. Asbestos workers who also smoke were found to be at much greater risk (about 50 times) of dying of lung cancer than nonsmoking, non-asbestos workers. Mesothelioma, a rare form of cancer of the chest or abdominal cavity, occurs among occupational groups exposed to certain types of asbestos.

ASBESTOS SAMPLING RESULTS

A summary of the results of recent bulk sampling or air sampling is attached to this notice (if no new sampling has been performed beyond the original asbestos survey, then the asbestos survey executive summary will be attached).

REGULATIONS

A number of standards exist for allowable airborne levels of asbestos in the workplace. Most of these standards require medical monitoring, respirators, and specialized training if airborne levels exceed a certain concentration in air.

Source	Level	Nature	Comments
Cal/OSHA[1]	0.1 f/cc 1.0 f/cc	Occupational & mandatory	8-hour Time Weighted Average (TWA) Permissible Exposure Level (PEL) Excursion Limit (EL) for 30 minutes period
NIOSH[2]	0.1 f/cc	Recommended	Occupational PEL
ACGIH[3]	0.2 f/cc	Recommended	Occupational Threshold Limit Value (TLV) for chrysotile asbestos
Calif. Prop 65[4]	vague	Mandatory	Standard and monitoring method are unclear, but generally interpreted as comparable to outside ambient air or 100 fibers per day, whichever is greater
Industry Standard, adopted from AHERA regulations	0.01 f/cc (PCM) 70 str/mm^2 (TEM)	Primary Clearance Criteria Secondary Clearance Criteria	• Perimeter action level. • Clearance standard for small scale, short duration abatement zones. TEM clearance criterion; if failed, then compare against ambient level outside of work area. Originating from AHERA[5] regulations

1 California Department of Industrial Relations, Division of Occupational Safety and Health, 1995
2 National Institute of Occupational Safety and Health
3 American Conference of Governmental Industrial Hygienists, 1994-5
4 California Proposition 65
5 Asbestos Hazard Emergency Response Act (AHERA); 40 CFR Part 763, applicable to schools but adopted for larger scale projects or where warranted

GENERAL PROCEDURES AND HANDLING RESTRICTIONS

As you can see, the concern is with asbestos fibers in the air. When asbestos materials are in good condition, it is unlikely that fibers will be released into the air. Do not cut into, drill into, nail, or pin anything onto, sand, move, bump, rub against, or otherwise disturb any asbestos-containing materials. If you should discover any damaged asbestos-containing material, do not touch it; do not attempt to clean it up. Contact your supervisor or building representative/manager immediately and report the situation.

Work that requires disturbance of asbestos materials is performed by outside contractors working under specifications which include work practice procedures, removal techniques, clean up, and clearance air sampling.

If any construction, maintenance, or remodeling is conducted in an area of the building where there is the potential for employees to come in contact with, or release and disturb asbestos-containing building materials, it is required that the area be posted with a clear and conspicuous warning sign. The warning sign must read:

"CAUTION, ASBESTOS
CANCER AND LUNG DISEASE HAZARD
DO NOT DISTURB WITHOUT TRAINING AND EQUIPMENT"

Much of this information may be new to you. If you have questions, or if you wish to read or photocopy the full text of the asbestos survey report for the building, you may contact the designated contact person at your site:

Name:________________________ Phone Number: ________________________

Between the hours of ____________ and __________________

This written announcement fulfills the asbestos notification requirement of Division 20, Chapter 10.4, Section 25915 of the California Health and Safety Code (Assembly Bill 3713).

NOTICE TO OWNERS, LESSEES, SUBLESSEES, AGENTS, AND CONTRACTORS - ASBESTOS IN BUILDINGS

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OR

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FOR BUILDING LOCATED AT: ______________________________

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1 California Department of Industrial Relations, Division of Occupational Safety and Health
2 National Institute of Occupational Safety and Health
3 American Conference of Governmental Industrial Hygienists, 1994-5
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As you can see, the concern is with asbestos fibers in the air. When asbestos materials are in good condition, it is unlikely that fibers will be released into the air. Do not cut into, drill into, nail, or pin anything onto, sand, move, bump, rub against, or otherwise disturb any asbestos-containing materials. If you should discover any damaged asbestos-containing material, do not touch it; do not attempt to clean it up. Contact your supervisor or building representative/manager immediately and report the situation.

Work that requires disturbance of asbestos materials is performed by outside contractors working under specifications which include work practice procedures, removal techniques, clean up, and clearance air sampling.

If any construction, maintenance, or remodeling is conducted in an area of the building where there is the potential for employees to come in contact with, or release and disturb asbestos-containing building materials, it is required that the area be posted with a clear and conspicuous warning sign. The warning sign must read:

**"CAUTION, ASBESTOS
CANCER AND LUNG DISEASE HAZARD
DO NOT DISTURB WITHOUT TRAINING AND EQUIPMENT"**

Much of this information may be new to you. If you have questions, or if you wish to read or photocopy the full text of the asbestos survey report for the building, you may contact the designated contact person at your site:

Name:_______________________ Phone Number: _____________________

Between the hours of___________ and ________________

This written announcement fulfills the asbestos notification requirement of Division 20, Chapter 10.4, Section 25915 of the California Health and Safety Code (Assembly Bill 3713).

IMPORTANT NOTE:

Lessees, sublessees, agents, and contractors are responsible for providing copies of this notification to their own sublessees, agents, contractors, and employees.

Attachment B
Work Evaluation Form

(Optional Form - use of this specific form is not required by regulation; a similar form can be used)

BUILDING: ______________________________

BUILDING #: ______________________________

EVALUATION PERFORMED BY /DATE: ______________________________ (signature/date)

EVALUATION REQUESTED BY /JOB ORDER #: ______________________________

ATTACHED DOCUMENTS

- ☐ Floorplans
- ☐ Asbestos Information Notice
- ☐ Other, ______________________________

DESCRIPTION OF WORK:

(reference the construction plans or job order used to determine the scope of the intended work)

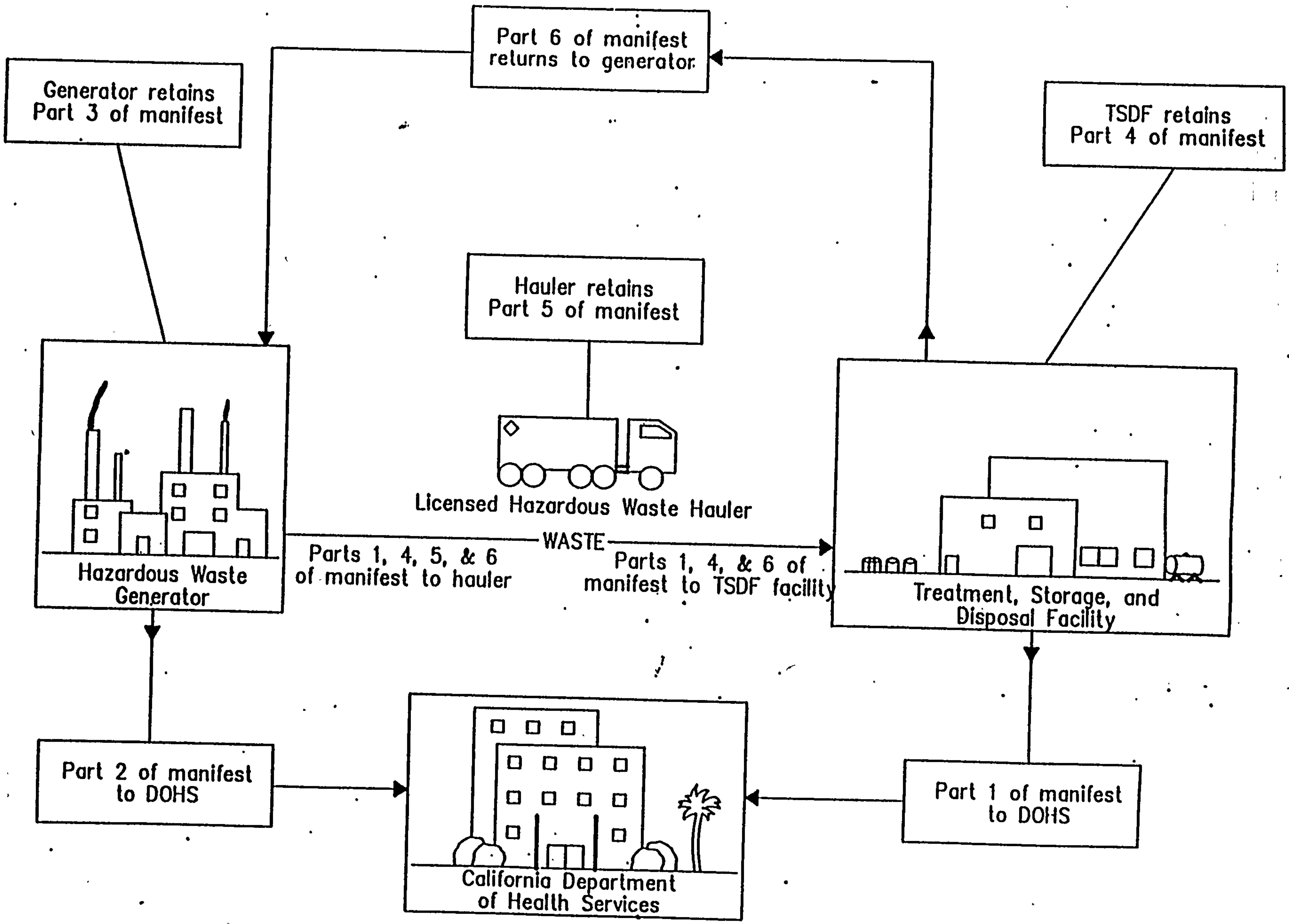
FINDINGS:

____Asbestos is not present in the vicinity of the work.

____Asbestos is present in the vicinity of the work, but disturbance is not expected. If the scope of the work changes, further evaluation is needed and asbestos abatement may be required.

____Asbestos is present in the vicinity of the work and may be disturbed.

Attachment C
Waste Manifest System



CALIFORNIA'S HAZAR WASTE MANIFEST SYSTEM

Attachment D
Not Used

Attachment E
Summary of Requirements for Asbestos Abatement Classes 1 - 4

Summary of Asbestos Abatement Procedures for Abatement Class Activities

	Abatement Class I	Abatement Class II	Abatement Class III	Abatement Class IV
Activities:	Removal of TSI or surfacing material that is ACM or PACM	Removal of ACM, not including TSI or surfacing material (e.g. wallboard, flooring, roofing, siding, gaskets and mastic)	Repair and maintenance of small amounts of TSI or surfacing ACM or PACM (not exceeding one 60" glovebag or waste bag)	Maintenance and custodial activities contacting ACM or PACM (including clean-up of ACM or PACM dust and debris)
Regulated Area:	Yes	Yes	Yes	No (unless PEL exceeded)
Personnel Air Sampling Requirements:	Daily for each shift and activity; 8 hr TWA and 30 min STEL	Daily for each shift and activity; 8 hr TWA and 30 min STEL	Sufficient to document expected exposure	Sufficient to document expected exposure
Procedural Requirements:				
a. wet methods	Yes	Yes	Yes	Yes
b. HEPA vacuum	Yes	Yes	Yes	Yes
c. prompt clean-up	Yes	Yes	Yes	Yes
d. negative pressure enclosure	Disturbances of >25LF or >10SF ACM or PACM requires >0.02" negative pressure differential; >4 air changes/hr; air movement away from workers towards HEPA unit; and electrical circuits off unless using GFI	Indoors when ACM or PACM is not removed substantially intact or when PEL may be exceeded	If PEL may be exceeded; isolate area when feasible or use glovebags and/or mini-enclosures with vacuum	No (unless PEL exceeded)
e. dropcloths	Yes	Yes	Yes	Yes
Control Methods:	Negative pressure enclosure; glovebag system; negative pressure glovebag; glove box; water spray system ; and/or mini-enclosures	Specific to material removed	Glovebag, and/or mini-enclosure	N/A
Decontamination:	3-chamber personal decon with shower	Minimum of dropcloth, HEPA-vacuuming coveralls, and bucket or Hudson sprayer for hands, face, and equipment	Minimum of dropcloth, HEPA-vacuuming coveralls, and bucket or Hudson sprayer for hands, face, and equipment	Minimum of dropcloth, HEPA-vacuuming coveralls, and bucket or Hudson sprayer for hands, face, and equipment

Appendix E

Condition Assessment Survey
for the
Kaiser-Hill LLC Oxnard Facility

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DOE/ID/12584-232
GJPO-OXN-02

Condition Assessment Survey for the Kaiser-Hill Company LLC Oxnard Facility

September 1995

U.S. Department of Energy
Grand Junction Projects Office

Work Performed Under DOE Contract No. DE-AC04-94AL96907 for the U.S. Department of Energy

DOE/ID/12584-232
GJPO-OXN-02

Condition Assessment Survey for the Kaiser-Hill Company LLC Oxnard Facility

September 1995

Work performed under DOE Contract No. DE-AC04-94AL96907

Prepared for
U.S. Department of Energy
Albuquerque Operations Office
Grand Junction Projects Office

Prepared by
Rust Geotech
Grand Junction, Colorado

TABLE OF CONTENTS

CONDITION ASSESSMENT SURVEY
OXNARD FACILITY

1.0 INTRODUCTION

The Condition Assessment Survey (CAS) process consisted of a thorough non-intrusive assessment of the Kaiser-Hill Company LLC-operated Oxnard Facility and its seven buildings' systems, structures and components. The buildings were assessed for physical condition of plumbing, electrical, architectural and structural by a U.S. Department of Energy (DOE)-approved and certified CAS inspection team from Rust Geotech, Grand Junction Projects Office (under DOE Contract No. DE-AC04-94AL96907), Grand Junction, Colorado. The CAS process began on September 12, 1995, and was completed on September 20, 1995. Uniform Building Codes (UBC), National Fire Protection Association (NFPA) standards, and Occupational Safety and Health Administration (OSHA) standards are the principal references used in this assessment and referenced by *DOE CAS Program Deficiency Standards and Inspections Methods Manuals* (Volumes 1 through 12). Environmental assessment is not a part of the scope of this CAS process; however, obvious contamination or presence of asbestos is noted as suspected.

The Data Collection Devices were not used in this assessment as the Project Manager selected the option of a documented process versus the automated/documented process; however, the documentation as such includes the details and deficiency codes in accordance with the *DOE CAS Program Deficiency Standards and Inspections Methods Manuals* necessary to upload this information into the Condition Assessment Information System (CAIS), if desired, at a later date.

The report furnished with this assessment includes copies of the field notes taken by inspectors, a summary of the overall condition for each building and/or major system, and an overall condition of the facility in general, emphasizing the facility's immediate code/safety/ maintenance and repair concerns.

The Oxnard site description, addressing the site ownership, physical location/setting, building size, utilities, geology, seismology, demography, history, current use, etc., is available in numerous other documents including the *Phase 1 Environmental Site Assessment* document, dated September 30, 1994, and therefore, will not be duplicated in this report.

The DOE-certified CAS Inspectors participating in this assessment are as follows:

Kyle Brannon	CAS Administrator/Lead Inspector #GJ50714	(970) 248-6610
Ronald Hall	Electrical Inspector #GJ50573	(970) 248-6610
Thomas Masias	Architectural/Structural Inspector #GJ50417	(970) 248-6605
Joel Swetnam	Mechanical Inspector #GJ50687	(970) 248-6610

2.0 SITE DESCRIPTION

2.1 Site Ownership

The Oxnard facility is owned by the DOE and is operated by Kaiser-Hill Company LLC.

2.2 Physical Location/Setting

The Oxnard facility sits on 13.75 acres located in an industrial park within the city limits of Oxnard, county of Ventura. Various industrial facilities surround the Oxnard facility such as Deardorff-Jackson Inc. and Boskovich Corp. (vegetable/fruit packing house); Kingstone Wheel Corp. (metal wheel fabrication); Gold Coast Steel (machining); and the City of Oxnard, which operates a vehicle maintenance garage immediately to the east of this facility.

The facility consists of seven buildings with approximately 86,000 square feet of covered floor space and approximately 89,500 square feet of roof area. The seven buildings include:

Building 1	Administrative Offices
Building 2	Machine Shop, Engineering Office, Quality Control Office, Metallurgical Laboratory, Production Control Office, Maintenance Offices, and Lunch Room
Building 3	Saw Shop
Building 4	Grinding Shop
Building 5	Press Shop, Wheelabrator Room, Dye Penetrant Room
Building 6	Forge Shop
Building 7	Tank Farm and Lubrication Storage/Waste Water Filtration and Separator

3.0 DEFINITION OF RATING

3.1 Condition

Condition ratings used are as follows:

- Excellent: No defects or deficiencies
- Fair: Minor deficiencies/overall condition of the inspection unit (IU)
- Good: Minor defects or deficiencies but better than poor condition
- Poor: Numerous minor deficiencies and/or major deficiencies normally requiring attention within 1 year or immediately
- Fail: Major safety and/or code violations that have immediate potential of injury. This should be immediately identified as "DO NOT OPERATE."

3.2 Purpose

Purpose indicators are used as follows:

- Maintenance: The condition is a maintenance issue and does not necessarily violate code or affect the operation of the unit yet.

- Functional: The condition is determined to have or will soon have an affect on the performance and/or function of this IU.

- Code: This condition is in violation of the UBC, National Building Code, OSHA, NFPA, or known directive/regulation usually requiring action within 1 year.

- Safety: This condition directly affects or will soon affect the safety of personnel and should be corrected immediately in most cases.

3.3 Urgency

Urgency codes are recommendations for response to the identified deficiencies based on the inspectors knowledge and experience with identical/similar conditions. Safety deficiencies should be resolved immediately, and maintenance issues should be evaluated and prioritized using a graded approach. In some cases, the inspector cannot make an accurate assessment during a non-intrusive type assessment but believes that the potential exists for an underlying condition. In this case, they may use a condition rating of FAIR and an urgency of < 1 Year.

4.0 CONDITION ASSESSMENT SURVEY SUMMARY OF THE OXNARD FACILITY

In general, the Oxnard facility is in fair condition considering the age, environment, and history of the structures and their components and systems. Some of the electrical systems are outdated and do not comply with new construction codes but, in most cases, are adequate for their current use. Wall penetrations that serve utility lines, piping, water lines, etc. are not sealed or escutcheons in place throughout the facility. Piping has been removed from service but exists in various locations, as noted in the CAS Field Reports. Backflow protection for domestic water systems is lacking throughout most of the facility, which offers the potential for water contamination and human ingestion of such contamination. Electrical equipment is typically outdated throughout the facility. In most cases, labeling of electrical equipment/systems, piping, and equipment is not compliant with OSHA or DOE Order 5480.19, *Conduct of Operations*, requirements. Other than the conditions noted, the buildings are functionally adequate for their intended use. It is also noted that the facility has been well maintained and, considering the age and environment, the buildings are cosmetically appealing.

Due to the age, environment, and numerous deteriorating conditions found on the facility, it is recommended that a CAS be performed annually of this facility at least for the next 3 years. It is also recommended that engineering studies be performed immediately on the deteriorating concrete columns.

Building 1 CAS Summary

Administration Office: Technical and Administrative staff, Accounting, Purchasing, Human Resources, etc.

Size: 4,500 square feet

Year Built: 1950

The general condition of this building is good. On the exterior of the building, paint was found peeling, chipping and cracking, and the stucco cracking in some locations. Window units displayed cracked and weathered glazing, and lead-based paint is suspected to be present on fascia and other trim.

The interior of the building is also in good condition with some dropped ceiling panels displaying water stains indicating leaking at the roof. Asbestos containing material is suspected in various locations throughout the building's interior including flooring and vinyl asbestos tile. While in the attic, it was discovered that the interior roofing member supports are not sufficient, and collar ties are missing. Two leaks in the roof were found at northwest center section.

Mechanically, this building is in good condition. Backflow protection is lacking in four outside hose bibs and on the janitor's closet faucet. A 2 ½-inch gate valve is leaking on the supply side of the double-check backflow prevention device. The water heater relief valve is improperly plumbed.

Electrically, the assessed condition of this building is fair. In some cases, outdoor electrical raceways are installed using fittings designed for indoor applications. A questionable condition exists as to the heat load in the attic. Three 10 KVA transformers reside in the attic with minimal ventilation. This condition should be evaluated and modifications made, as necessary. In some cases, GFCI protection is not adequate according to OSHA and UBC codes.

See attached CAS Field Reports for additional deficiencies.

Building 2 CAS Summary

Machine Shop: Shipping and Receiving, Production, Planning and Control office, Maintenance office, electrical maintenance room, stock room, Quality Assurance office, machining floor, Metallurgical Laboratory, and Engineering/Computer Assisted Drafting office

Size: 42,016 square feet

Year Built: 1950

The general condition of this building is fair with some major deficiencies as follows:

- Column E-8 supports the east end of the 5-ton Gantry crane and is the load-bearing wall support for this side of the building. The concrete column is disintegrating and may be deteriorating from the inside, which makes it difficult to know the extent of the degradation. This is a major concern and should be evaluated immediately.
- Concrete support columns bearing the weight of the external Gantry crane, rail, and supports have significant impact damage. Anchors are broken, structural rebar is exposed, and corrosion is evident. These columns are numbered G1W, G2W, G4W, and G5W.
- Concrete Column E-7 also has exposed rebar and displays spalling.

Mechanically, the assessed condition of this building is good with one exception:

- Backflow prevention is lacking in this building, which presents a potential for domestic water contamination.

Electrically, the assessed condition of this building is good with the following exceptions:

- There are exposed wires visible in the locker room at Column W11.
- The Fabrication Shop has several 110-volt outlets that require GFCI protection.
- A battery-powered floodlight, located between Columns A10 and A11, is inoperative. Corrosion is noted in various locations.

See attached CAS Field Reports for additional deficiencies.

Building 3 CAS Summary

Saw Shop: Various saws, 5-ton overhead bridge crane

Size: 5,200 square feet

Year Built: 1949

The general condition of this building is poor. The concrete poured-in-place south wall is cracking and displays efflorescence on exterior. The crane rail support pad, located at the west wall Column 3W20, has been cosmetically repaired after the original concrete disintegrated. The other concrete support pads are showing the same type of disintegration. An engineering study is recommended.

Electrical assessment indicates fair condition. Minor code violations, corrosion, and outdated electrical equipment exist.

Mechanical condition is assessed as fair. Vacuum breakers are missing in various locations, as noted on the attached field reports.

See attached CAS Field Reports for additional deficiencies.

Building 4 CAS Summary

Grinding Shop: Numerous grinding stations, air-abatement particle separator
Size: 1,485 square feet
Year Built: 1950

The general condition of this building is poor. The building requires a major facelift and would probably be more practical to tear down and rebuild. Structural supports have been cut out and modified for a monorail system that is no longer used. The metal siding is damaged, pieced together, and requires full replacement.

Electrically, minor code violations were found, but overall, the assessed condition of the building is good. Outdated electrical equipment is also noted.

Mechanically, the assessed condition of this building is fair. Labeling is either non-existent or non-compliant.

See attached CAS Field Reports for additional deficiencies.

Building 5 CAS Summary

Press Shop: 1,600-ton mechanical press, 3,500-ton hydraulic press, trim press, natural gas-fired furnaces

Size: 7,950 square feet

Year Built: 1950

The general condition of this building is assessed as fair. Some of the structural supports (swaybraces), located on the interior of the building, have been removed for the convenience of installing a large piece of manufacturing equipment. The missing supports are located at Columns 5E26 through 5E24 and should be reinstalled immediately.

Mechanically, the building is assessed as fair. Hanging piping is not properly suspended and supported with required hardware. Piping labeling is non-compliant. The natural gas odor appears to be excessive. Leak tests should be performed and the ventilation modified accordingly.

Electrically, the condition is assessed as fair. Rubber raceway used, in various applications, is not adequate and requires proper hard-wiring.

See attached CAS Field Reports for additional deficiencies.

Building 6 CAS Summary

Forge Shop: 16 High Energy-Rated Forging (HERF) hammers of various energy ratings, gas-fired furnaces, mechanical trim presses, a pit area, tank farm

Size: 24,544 square feet

Year Built: Mid-1980's

The general condition of the building is assessed as good with a few maintenance and code issues as follows:

- Numerous 110-volt outlets are located in the pit area and are not GFCI protected.
- East side exterior under awning has five 110-volt outlets that are not GFCI protected.

Labeling is non-existent/non-compliant.

See attached CAS Field Reports for additional deficiencies.

Building 7 CAS Summary

Oil/Waste Water Filtration System: Tanks, drums, 3-wall structure
Size: 1,380 square feet
Year Built: 1950

The general condition of this building is good. A concern about the tank containment area exists. It appears that the tank containment area received some demolition work but was left unfinished, thereby affecting the integrity of the containment area.

- All 110-volt outlets should be GFCI protected.
- Backflow protection is inadequate or non-existent.

See attached CAS Field Reports for additional deficiencies.

Oxnard CAS Field Notes

Building 1

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Structural Bldg #: 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: South east exterior wall - Stucco is cracking, spalling at lower level due to lawn sprinkler focussing water Deficiency Code: D03-01.07.00	Condition - Fail Purpose - Maintenance Urgency - <1 Year
Description: East Window Units (4 each) putty/glazing is cracking Deficiency Code: D25-01.01.00	Condition - Good Purpose - Functional Urgency - NA
Description: East Facia paint is peeling and cracking, also suspect lead based paint in this area Deficiency Code: F09-01.04.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Structural Bldg #: 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: South east exterior wall - Stucco is cracking, spalling at lower level due to lawn sprinkler focussing water **Deficiency Code:** D03-01.07.00	Condition - Fail Purpose - Maintenance Urgency - <1 Year
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Oxnard Condition Assessment Survey Field Report

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Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Structural Bldg #: 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Interior hallway suspect (ACM) **Deficiency Code:** F15-01.11.00	Condition - Good Purpose - Functional Urgency - NA
Description: Lobby area, numerous loose ceiling tiles (VAT Flooring Suspected) **Deficiency Code:** F15-01.11.00	Condition - Good Purpose - Maintenance Urgency - NA
Description: Engineering/Purchasing/Payroll offices (VAT flooring Suspected) **Deficiency Code:** F15-01.11.00	Condition - Good Purpose - Maintenance Urgency - NA

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Structural Bldg #: 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Attic area interior roof framing supports inadequate. Rafters require collar ties/braces **Deficiency Code:** C17-01.02.00	Condition - Poor Purpose - Maintenance, Functional, Code / Safety Urgency - <1 Year
Description: Roof leaks (2) in middle section, north wast wall **Deficiency Code:** E05-01.05.00	Condition - **Poor** Purpose - Maintenance, Functional Urgency - <1 Year, Immediate
Description: Trim on doors and baseboards need repainting/upgrading throughout **Deficiency Code:** F09-01.02.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Structural Bldg #: 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Women's rest room (suspected ACM) Not ADA Accessible **Deficiency Code:** F15-01.11.00	Condition - Good Purpose - Maintenance Urgency - NA
Description: Safety office - west wall ceiling moulding/trim loose (12 LF) **Deficiency Code:** F28-07.07.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: Walls in accounting office require painting due to stains/discoloration **Deficiency Code:** F07-01.03.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Air conditioning condenser unit located in SW corner - H.D. 60 Amp disconnect shows heavy corrosion **Deficiency Code:** I02-03.06.01	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year
Description: Lens missing in Men's restroom Light, S.W. Entry Light **Deficiency Code:** I04-01.09.03	Condition - Fair Purpose - Maintenance Urgency - <1 Year
Description: In the accounting computer room, an improper panel cover is installed on panel 1B. **Deficiency Code:** Code	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: A questionable condition exists in the attic - 3 air cooled transformers (10 KVA) are mounted in the attic and the ventilation should be evaluated to ensure sufficient air flow is present. **Deficiency Code:** Noted	Condition - Unknown Purpose - Maintenance, Functional, Code / Safety Urgency - < 1 year
Description: Communication board power supply plug is not adequate. Single wires are used. Knockout hole needs plugged **Deficiency Code:** I02-08.01.05	Condition - Poor Purpose - Code Urgency - <1 Year
Description: 30 Amp disconnect located in the attic, serving the refridgerated air unit (West end) - interlock is inoperable **Deficiency Code:** I03-03.06.01	Condition - Poor Purpose - Functional, Code Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Improper fittings are used on the 1/2 inch pipe run, sprinkler electric feed in SE corner of the building Deficiency Code: I02-08.01.02	Condition - Poor Purpose - Code Urgency - >1 Year
Description: Improper fittings are used on the 1 inch pipe run on the North wall outside. Deficiency Code: I02-08.01.02	Condition - Poor Purpose - Code Urgency - >1 Year
Description: Deficiency Code:	Condition - Excellent / Fair / Good / Poor / Fail Purpose - Maintenance / Functional / Code / Safety Urgency - 2-5 years / >1 Year / <1 Year / Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Accounting office - North wall - STO cord is being used as a raceway for wiring of surface outlets. This is not appropriate for the location. **Deficiency Code:** I02-08.02.08	Condition - Poor Purpose - Code Urgency - <1 Year
Description: In the Purchasing office, West wall, the work station cord is used as a raceway running up the wall and into the ceiling. This is not appropriate for the location. **Deficiency Code:** I02-08.02.08	Condition - Poor Purpose - Code Urgency - <1 Year
Description: Purchasing office, East computer room - ceiling heater is improperly installed. It is wired with cord, no connector. Also, the raceway is not appropriate for the location. **Deficiency Code:** I02-08.02.08	Condition - Poor Purpose - Code Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: 2 1/2 inch flanged gate valve, located on the supply side of the double check backflow protection device, is leaking. (Domestic Water) **Deficiency Code:** H01-06.02.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year
Description: 1/4" - 3/4" anti-syphon missing vacuum breaker (4 each). Domestic water. Locations: 1/ NE corner of building 2/ NW corner of building 3/ SW corner of building 4/ SE corner of building **Deficiency Code:** H01-11.16.00	Condition - Poor/Fail Purpose - Functional Code / Safety Urgency - Immediate
Description: 3/4 inch by 4 inch galvanized pipe/nipple corroded and leaking - Domestic water. Location - outside NW corner of building. **Deficiency Code:** H01-05.02.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Domestic Water - Vacuum breaker missing on the janitor's mop sink - Men's room closet **Deficiency Code:** H01- 11.16.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: Domestic water - 3/4 inch fittings show slight corrosion - Janitors closet in men's room **Deficiency Code:** H01-05.02.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: Duct work in attic missing and/or damaged insulation. Approximately 15 sq. feet **Deficiency Code:** H01-05.02.00	Condition - Poor Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 1 (Admin Offices) Date: 9/12/95	Condition/Purpose/Urgency
Description: Condensing unit on SW corner outside, has worn pipe insulation. The insulation is 1/2 inch rubber. Approximately 10 LF. **Deficiency Code:** H26-01.04.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year
Description: Toilet Seats should be open front - Mens and Womens restrooms **Deficiency Code:** H01-12.07.00	Condition - Good Purpose - Code Urgency - >1 Year
Description: Relief valve on water heater is improperly piped (wrong pipe size) - Located in the Janitors closet. **Deficiency Code:** H01-05.07.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard CAS Field Notes

Building 2

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Loading dock area SW 1/2 from column W-7 has large stress cracks. 80% - Approx. 6000 Sq. Ft. Deficiency Code: B01-01.08.06	Condition - Fair Purpose - Functional Urgency - 2-5 years
Description: Framework for structural columns test positive for lead based paint Deficiency Code: Noted	Condition - Poor/Fail Purpose - Maintenance Urgency - NOTE
Description: Loading dock area NW from column W-7 - concrete stress cracking requires filling. Some spalling and settlement. Approx. 6000 Sq. Ft. Deficiency Code: B01-01.08.06	Condition - Good Purpose - Functional Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: West end steel exterior windows - Glazing deteriorated - Entire window units. Corrosion on frames. 645 each **Deficiency Code:** D25-01.01.00	Condition - Fail Purpose - Maintenance Urgency - >1 Year
Description: Mtc siding corrugated - 6' X 12' cracking paint, checking Approximately 2880 Sq. Ft. **Deficiency Code:** F07-01.05.00	Condition - Good Purpose - Functional Urgency - 2-5 years
Description: Concrete stem walls West End shows impact damage and is cracking at the jambs. Approx. 2400 Sq. Ft. **Deficiency Code:** C01-01.06.00	Condition - Good Purpose - Functional Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Overhead doors on West side of building show impact damage and paint peeling. 5 each @ 10'W X 12' H and 1 each @ 16' W. Protective coating/paint gone. **Deficiency Code:** D16-03.01.01	Condition - Good Purpose - Functional Urgency - 2-5 years
Description: North end partial CMU addition. NW corner holes and soiling. W-17 spalling and leaching. Approx. 528 Sq. Ft. **Deficiency Code:** D02-01.08.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: North end from W-17 window units grazing deterioration **Deficiency Code:** D25-01.01.00	Condition - Fail Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: North end overhead doors (2) 10' X 12' (1) fixed - Paint coating peeling Deficiency Code: D16-03.01.01	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: North exterior stem wall shows impact damage, holes and anchors. Approx. 125 Sq. Ft. Deficiency Code: C01-01.06.00	Condition - Good Purpose - Functional Urgency - 2-5 years
Description: NE corner corrugated metal - Paint is peeling - Approx. 100 Sq. Ft. Suspect lead paint Deficiency Code: F07-01.05.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: East stem wall shows impact damage, spalling Deficiency Code: C01-01.06.00	Condition - Poor Purpose - Functional Urgency - >1 Year
Description: East window wall section - 580 each windows - spackling deterioration Suspect ACM in putty Deficiency Code: D25-01.01.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: Overhead doors (6 each) on East side of building - 10' X 12' - Paint peeling. Deficiency Code: D16-03.01.01	Condition - Fair Purpose - Maintenance Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Roof gutter leaks @ column location B-4. Seal @ joint (Galvanized) North end column A-14 and A-15 **Deficiency Code:** E09-01.11.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: West end Overhead Gantry Crane @ door 11, column W-6 and south to W-1 - Corrosion on crane unit. **Deficiency Code:** K16-01.01.00	Condition - Fair Purpose - Functional Code / Safety Urgency - >1 Year
Description: SE corner corrugated siding - peeling paint - Approx. 84 Sq. Ft. **Deficiency Code:** F07-01.05.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Concrete at East loading dock shows stress cracks, settlement, spalling Approx. 10,500 Sq. Ft. **Deficiency Code:** B01-01.08.06	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: South end Center entrance - paint peeling on corrugated siding. Approx. 105 Sq. Ft. **Deficiency Code:** D11-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: South end, West stem wall cracking/footer spalling - Approx. 200 Sq. Ft. **Deficiency Code:** D01-01.05.00	Condition - Fair Purpose - Functional Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Maintenance office area 18' X 30', T-111 showing impact damage and soiling of exterior walls. **Deficiency Code:** D12-01.03.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: SE Exit door of maintenance office requires CAUTION STEP strip. **Deficiency Code:** D14-03.18.00	Condition - Fail Purpose - Code / Safety Urgency - <1 Year
Description: Interior drywall of maintenance office shows impact damage, soiling at east wall entry way. 14' X 8' and 12' X 8' admin area. **Deficiency Code:** D31-01.02.00	Condition - Fair Purpose - Maintenance Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: SW corner of building, shipping and receiving area floor shows cracking at columns W-1 to W-8 and A-1 to A-8. Approximately 7380 Sq. Ft. Deficiency Code: C01-01.03.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: Electrical shop interior. No Comments Deficiency Code:	Condition - Purpose - Urgency -
Description: Stock room 24' X 20', T-11 siding soiling, impact damage, holes - interior good condition. Deficiency Code: D12-01.03.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Floor area, Column E-8 and North to E-17, has Epoxy floor covering 19' - Concrete crack checking. Approximately 6470 Sq. Ft. **Deficiency Code:** C01-01.03.00	Condition - Good/ Poor Purpose - Maintenance Urgency - >1 Year
Description: East interior wall at Column E-8, Concrete wall failure, cracking, disintegrating approximately 11' X 5'. **Deficiency Code:** C02-01.03.00	Condition - Poor/Fail Purpose - Functional Code / Safety Urgency - <1 Year Immediate
Description: Column E-8 Concrete support is spalling. **Deficiency Code:** B02-02.05.00	Condition - Fail Purpose - Functional Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Holes missing anchors at East concrete wall between Column E-10 and E-11. Deficiency Code: C01-01.11.00 & C02-01.01.00	Condition - Poor Purpose - Functional Urgency - >1 Year
Description: Impact damage and holes at concrete wall at column E-11. Deficiency Code: C01-01.11.00 & C02	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: Anchor/holes cracking at wall Column E15 to E-14 Deficiency Code: C01-01.11.00 & C02001.01.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Exterior siding of anchor holes - impact damage & loose fastners, also soiling. (QC Inspection area) **Deficiency Code:** D12-01.03.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Door #19 - misaligned (QC Inspection area) **Deficiency Code:** D15-03.14.01	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year
Description: South entry door in manufacturing area, interior, has broken hardware. **Deficiency Code:** D14-02.01.03	Condition - Fail Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Manufacturing office interior staining of walls. **Deficiency Code:** D29-01.03.00	Condition - Good Purpose - Maintenance Urgency - > 1 Year
Description: NW corner ceiling area, Manufacturing office - leak damage **Deficiency Code:** F23-01.11.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: North office door (Manufacturing office) interior - Passage set missing. **Deficiency Code:** D14-01.01.03	Condition - Fail Purpose - Maintenance Functional Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Metal Laboratory - Ceiling panels water stained - indicates a leak in the roof - Approximate tile replacement necessary - 2,560 Sq. Ft. **Deficiency Code:** F23-01.12.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Metal Laboratory - Drywall on walls damaged and soiled **Deficiency Code:** F03-01.04.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: East wall exterior is spalling and has rebar exposed at Column E-7 **Deficiency Code:** C01-01.10.00	Condition - Poor Purpose - Maintenance, Functional Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: SE Corner of building next to copier - Improper Starter Fitting for Plugmold strip (Suspect improper grounding). Suggest this be intrusively inspected. Deficiency Code: I02-08.04.01	Condition - Fair Purpose - Maintenance Code / Safety Urgency - >1 Year
Description: Outlets in fabrication shop near the sink are not GFCI Protected. Deficiency Code: I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate
Description: Improper cover plate for industrial on the SE Wall of the Fabrication shop. Should be single duplex. Deficiency Code: I16-03.04.00	Condition - Fair Purpose - Code Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Mop closet in men's locker room - Outlet near sink is not GFCI Protected Deficiency Code: I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate
Description: On beam in shower area - electrical pipe with exposed wires hanging (on beam) Deficiency Code: I02-02.02.01	Condition - Poor Purpose - Code / Safety Urgency - Immediate
Description: A-8/11 between Columns A-10 and A-11 offices - Emergency battery pack for flood light is not working. Deficiency Code: I04-01.03.05	Condition - Poor Purpose - Maintenance Urgency - Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Moderate corrosion on main service to building looks to be 20 plus years old. A more indepth inspection of this panel is recommended. Effective grounding is questionable. Deficiency Code: I01-03.06.01	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Disconnects E11 A, B raceway ran into plastic cap on W.T. Disconnect between Columns 12 and 11 East. There is no grounding carried to this disconnect due to this condition. Deficiency Code: I03-08.02.03	Condition - Poor Purpose - Code Urgency - >1 Year
Description: Improper raceway for the application as follows: Sterling Grinder 2-wheeled grinder (South) Sander #8 Grinder #7 Deficiency Code: I02-08.01.02	Condition - Poor Purpose - Code Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: West Crane has corrosion on Motor J boxes, etc. (Moderate) Deficiency Code: I03-08.04.02 & I02-05.09.02	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Raceway is inappropriate for location/application as rubber cord is being used to wire exposed lighting throughout building . Deficiency Code: I02-08.02.08	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Moderate corrosion found on wireway in the center of the building. Deficiency Code: I02-08.04.02	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: The following Disconnects have inoperative Interlocks South Mezzanine - 4E-4D 42 Fan 2 & 4E-36 38 Fan 1 4E-20 22 24 Column A6 A6N/A6 480 V & Column A7 A7/Al 480 V Column A8 Transformer Disconnect 2/A8 Column A10 Disconnect A10/A10 480 V Spare Column B12 Disconnect B12 480V & Column E15 Disconnect E15 480V Fabrication shop Disconnect W15 Disconnect #8 Dp2A/W17 480V (Also needs knockout Seal Deficiency Code: I03-03.06.03	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: The following disconnects have evidence of corrosion Column B2 480V DPD 2D 2E8 (Heavy) & Column C-2 480V DPD 2D 2E8 (Heavy) Column C2 480V DPD 2D 2E8 (Heavy) & Column A-2 480V Hoist CJE (Heavy) Column A8 Transformer Disconnect 2/A8 (Moderate) Column B-12 480V Disconnect B12 (Moderate) & Column E15 480V Disc. B12 (Moderate) Fabrication shop: West wall, WW14, #2 DP2A (Heavy) & DP2A (Moderate) South wall, 440V outlet (Moderate) East wall, Disconnect W15, 480V #8, DP2A/W17 (Moderate) Deficiency Code: I03-03.06.01	Condition - Fail Purpose - Maintenance Urgency - >1 Year
Description: Conduit is not labeled as required by OSHA and Conduct of Operations throughout. Deficiency Code: I03-08.02.09	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Fabrication Shop - Knockout seal missing on WP Box for outside light south door. Deficiency Code: I02-08.01.05	Condition - Fair Purpose - Code Urgency - >1 Year
Description: 3/4 HP, 3Phase Motor requires a means of diconnection within sight of and within 50' of the exhaust fan. Deficiency Code: NFPA 70 Code	Condition - Fair Purpose - Code / Safety Urgency - <1 Year
Description: Raceway is not appropriate for location in numerous areas of this building. Rubber cord is used for lighting and numerous other applications. Deficiency Code: I02-08.02.08	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Securing hardware for electrical conduit and pipe runs is either inadequate or non-existant in many cases throughout the building and is not supported within 3 feet of the end of the run. Deficiency Code: I03-08.02.10 & 08.02.07	Condition - Fair Purpose - Code Urgency - <1 Year
Description: Deficiency Code:	Condition - Excellent Fair/Good Poor/Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: Deficiency Code:	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. #2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Noted: West side, outside - exhaust fan is out of service Deficiency Code: H19-02.01.00	Condition - Purpose - Urgency -
Description: Drain waste and vent outside of Womens Restroom is not according to code-also, 1 1/2 inch line needs capped. Deficiency Code: H02-12.05.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: Pipe labels missing valve tags - in some cases they are not close enough together - compressed air - domestic water. Deficiency Code: H01-05.06.00	Condition - Fair Purpose - Code Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Domestic water vacuum breaker is missing in various locations as follows: Outside S. Side (2) Inside SW Corner (1) Inside Columns W5 (1), A5 (1), A12 (1) **Deficiency Code:** H01-06.08.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: NE outside corner of the building - atleast 6 ea. hangers/supports missing from drain lines **Deficiency Code:** H02-09.04.00	Condition - Fair Purpose - Maintenance Urgency - <1 Year
Description: Window refridgerated air unit is missing hangers and supports. Also displays moderate corrosion. Exterior north end. **Deficiency Code:** H27-07.03.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Condensate drainhose drains into waterheater pan and is corroding the bottom of the water heater - located south mezzanine. **Deficiency Code:** H02-06.10.00	Condition - Poor Purpose - Functional Urgency - <1 Year Immediate
Description: Domestic water heater displays moderate corrosion on bottom from above deficiency. **Deficiency Code:** H01-02.10.00	Condition - Fair Purpose - Code / Safety Urgency - <1 Year
Description: Abandoned pipes need to be removed throughout.(E12,South Mezzanine B15) Also, escutchens missing throughout. **Deficiency Code:** H01-05.05.00 & H02-06.05.00	Condition - Fair / Good Purpose - Maintenance Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Domestic water systems are not protected by backflow prevention devices. A 3" reduced pressure backflow prevention device is required and protection At each water source. **Deficiency Code:** H01-06.08.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: 1/2" Ball valve is missing handle from compressed air in the metal laboratory. **Deficiency Code:** H03-06.10.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Metal laboratory sink is without a vacuum breaker and the faucet used is improper for the application. **Deficiency Code:** H01-11.16.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: PVC drain pipe in metal laboratory needs air gap. Deficiency Code: HO2-01.04.00	Condition - Fair Purpose - Code / Safety Urgency - <1 Year
Description: Faucet inside hood in metal laboratory needs vacuum breaker Deficiency Code: HO1-11.16.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: Drains waste vent located at column A-12 drain, must be trapped before tied to the sewer. Deficiency Code: HO2-06-10-00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Handle on domestic water 1/2" ball valve is missing in Column A-12 **Deficiency Code:** H01-06.11.00	Condition - Fair Purpose - Maintenance Urgency - <1 Year
Description: 1 1/2" black natural gas pipe in the mid east side, is missing the escutcheon at the wall penetration. **Deficiency Code:** HO1-04.05.00	Condition - Fair Purpose - Maintenance Urgency - <1 Year
Description: 3/4" brass valve handle is broken on compressed air unit. **Deficiency Code:** HO3-06.10.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/12/95	Condition/Purpose/Urgency
Description: Filters and drier (canisters dirty) on compressed air unit, asset wide have improper drainage. **Deficiency Code:** HO3-04.07.00	Condition - Good Purpose - Maintenance Urgency - <1 Year
Description: Galvinized 3/4" X 1 1/2" domestic water pipe in Column A-15 are severely corroded. **Deficiency Code:** HO1-05.03.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: The domestic water backflow preventers in Column A-15 are missing at water softener. **Deficiency Code:** HO1-11.16.00	Condition - Fair Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Window refrigeration frame and fin damage near break room. **Deficiency Code:** H25/H26-0104.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Back siphon possible in fabrication shop's domestic water/mop sink. **Deficiency Code:** HO1-11.16.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: No escutcheon or p-trap (code) in mop sink in fabrication shop. **Deficiency Code:** HO2-06.10.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Fitting shows corrosion in the southwest corner of fabrication shop. Needs labeled / painted **Deficiency Code:** HO7-07.10.00 / HO7-07.03.00	Condition - Good Purpose - Maintenance Urgency - 2-5 Years
Description: Domestic water heater not accessable. Should be accessable and lighted. **Deficiency Code:** Code	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: Some corrosion around outlet of domestic water wash basin. **Deficiency Code:** HO1-11.09.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Hangers loose on domestic water lavatory hung on wall. **Deficiency Code:** HO1-12.06.00	Condition - Fair/Poor Purpose - Maintenance Urgency - <1 Year
Description: Toilet in the 2nd stall of the toilet & shower room needs open front seat. **Deficiency Code:** Code	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: **Deficiency Code:**	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 2 (Admin/Machine Shop) Date: 9/19/95	Condition/Purpose/Urgency
Description: Domestic water pipe fitting at Column A-5 leaking. Deficiency Code: HO1-05.02.00	Condition - Poor Purpose - Maintenance, Safety Urgency - <1 Year, Immediate
Description: Direct connection between domestic water and sewer. This should not exist under any condition. Deficiency Code: HO1-11.16.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate
Description: Deficiency Code:	Condition - Excellent, Fair / Good, Poor / Fail Purpose - Maintenance, Functional, Code / Safety Urgency - 2-5 years, >1 Year / <1 Year, Immediate

Oxnard CAS Field Notes

Building 3

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Upper SE Corner of concrete structure displays stress cracks. Movement will cause broken concrete to fall. (Potential safety hazard) **Deficiency Code:** C01-01.02.05	Condition - Poor / Fail Purpose - Functional Code / Safety Urgency - <1 Year
Description: Exterior East wall area of structural concrete is cracking and crazing **Deficiency Code:** C01-01.02.06	Condition - Fair Purpose - Functional Urgency - >1 Year
Description: Window caulking/glazing cracked and deteriorating and metal frames are showing surface corrosion. (360 each) **Deficiency Code:** D24-01.10.00 & D24-01.15.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: East Side column 3E20 (exterior) anchor is missing bolts and has loose anchors **Deficiency Code:** Co1-01.11.00	Condition - Good Purpose - Functional Urgency - >1 Year
Description: East exterior wall has peeling paint. **Deficiency Code:** D29-01.07.00	Condition - Good / Poor Purpose - Maintenance Functional Urgency - >1 Year
Description: The NE Column 3E22, displays impact damage, missing anchors, holes and cracking. **Deficiency Code:** C01-01.11.00 & C02-01.01.00	Condition - Poor / Fail Purpose - Maintenance Functional Code/Safety Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: NW Column Cracking, crazing, and displays impact damage. Deficiency Code: C01-01.02.06	Condition - Fair Purpose - Functional Urgency - >1 Year
Description: Center Column to the West 3W20 requires concrete repairs. Deficiency Code: C01-01.06.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: SW concrete structural walls display efflorescence. Deficiency Code: C01-01.09.00	Condition - Poor / Fail Purpose - Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: SW Wall Colum 3N17B displays holes from anchors, and also has several anchors missing. Deficiency Code: C01-01.11.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: West window wall concrete structure is cracking and checking. Deficiency Code: C01-01.02.06	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: West Overhead door displays impact damage and holes. 18' X 14' Deficiency Code: D18-03.12.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: West exterior wall displaying stress cracking Deficiency Code: D01-01.05.00	Condition - Good Purpose - Functional Urgency - >1 Year
Description: West wall windows display deteriorating caulking/glazing and rust on the framing. Deficiency Code: D24-01.10.00 & D24-01.15.00	Condition - Poor Purpose - Maintenance Functional Urgency - >1 Year
Description: West exterior wall paint peeling. Deficiency Code: D29-01.07.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Concrete supporting Right side of West Exterior Overhead door is broken and has spalling. Deficiency Code: D01-01.03.00	Condition - Poor / Fail Purpose - Maintenance Functional Safety Urgency - <1 Year
Description: South Exterior wall has paint peeling and Cracking. Deficiency Code: D29-01.07.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: South window wall has deteriorating caulking/glazing and displays surface rust. 212 ea. Deficiency Code: D24-01.10.00 & D24-01.15.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Overhead gantry crane rails show signs of corrosion. Deficiency Code: C03-01.04.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: North of Bldg. 3 - Overhead gantry crane rail system (5 ton) displays corrosion along the entire length of the system. Deficiency Code: C03-01.01.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: East Overhead door displays impact damage and peeling paint. 11' X 14' Deficiency Code: D16-03.12.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: East personnel entry door (3-0 6-8) is missing closure/passage set. Deficiency Code: D15-01.01.06 and D15-01.01.03	Condition - Fail Purpose - Maintenance Functional Urgency - <1 Year
Description: Deficiency Code:	Condition - Excellent Fair/Good Poor/Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: Deficiency Code:	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Moderate corrosion found on 8" X 10" junction box west exterior. Deficiency Code: I03-08.04.02	Condition - Fair Purpose - Functional Urgency - >1 Year
Description: 3/4" EMT damaged; lack of proper support of EMT on West wall. Deficiency Code: I03-08.02.07 and 08.04.02	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: Moderate corrosion found on panel boards DP3B (480V 7 Circuit) by Column 3E21. This board is 20 plus years old. Deficiency Code: I03-07.07.03	Condition - Fair Purpose - Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Corrosion found on the following disconnects at the column locations: 3W20; DP3B7 (480V) and DP3A7 - Moderate 3N17B; DP3A6 - Heavy 3E20; DP3B 2 - Moderate DOE #1639 and 1640 3E21; DP3B 3 - Heavy **Deficiency Code:** I03-03.06.01	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Disconnect interlocks inoperable at the following column locations: 3W20; DP3B 7 3W19; DP3A 6 - west wall 3N17B; DP3A 6 - South wall 3N17A; DP3A 4 **Deficiency Code:** I03-03.06.03	Condition - Fair Purpose - Maintenance Urgency - <1 Year
Description: All panels display corrosion at various degrees due to climate. The panel boards appear to be 20 plus years old and should be replaced on a schedule rather than all at one time. **Deficiency Code:** I02-07.07.03	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Vacuum breaker on domestic water missing in the following aeras: 1. Southwest corner of stock yard. - 1 2. Southwest corner outside Building 3. - 1 3. Southwest corner inside Building 3. -1 4. East inside wall. - 1 Deficiency Code: HO1-11.16.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: 3/4" galvanized pipe on west side needs to be demolished if not in service. 1 1/4" galvanized pipe on south side needs demolished and wall penetrations plugged. Deficiency Code: Noted	Condition - Fair Purpose - Maintenance Urgency - 2-5 years
Description: 2" brass domestic water valves are severely corroded. Deficiency Code: HO1-06.11.00	Condition - Poor Purpose - Functional Urgency - <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Compressed air filters & driers drain to floor asset wide. **Deficiency Code:** HO3-04.07.00	Condition - Fair/Good Purpose - Safety Urgency - >1 Year
Description: Domestic water pipes not labeled. Drain, waste & vent pipes not labeled. Compressed air line pipes not labeled in stock yard. **Deficiency Code:** HO1-05.06.00/HO2-01.05.00/HO3-05.06.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: 2" ball valve trd handle missing on compressed air unit. **Deficiency Code:** HO3-06.10.00	Condition - Fair Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 3 (Saw Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: 2" galvanized line on compressed air unit to stock yard needs labeled. **Deficiency Code:** Code Noted	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Compressed air unit tank very dirty but in good shape. **Deficiency Code:** Noted	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Domestic water lavoratory in womens rest room cracked. (Rest room may be in Builing 2.) **Deficiency Code:** HO1-12.02.00	Condition - Fair/Poor Purpose - Safety Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

	Condition/Purpose/Urgency
	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: **Wall penetrations, inside and outside, should be caulked or have an escutcheon installed.** **Deficiency Code:** **NFPA**	Condition - Excellent Fair/Good Poor/Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: **All gas heaters in ceiling space should be evaluated for proper ventalation due to some new B.T.U. changes in code.** **Deficiency Code:** **Code Compliance**	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard CAS Field Notes

Building 4

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 4 (Grinding Shop) Date: 9/13/93	Condition/Purpose/Urgency
Description: North exterior raised-panel siding displays impact damage and repair areas not completed. **Deficiency Code:** D11-01.03.00	Condition - Poor Purpose - Maintenance Urgency - 2-5 years
Description: North exterior galvanized metal soffit/siding is peeling paint. **Deficiency Code:** D11-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: West exterior wall displays impact damage, and raised galvanized panels have holes. **Deficiency Code:** D11-01.03.00	Condition - Poor / Fail Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: West wall window unit displays deteriorating caulking/glazing and Presence of corrosion on frame. **Deficiency Code:** D25-01.15.00	Condition - Good Purpose - Maintenance Urgency - <1 Year
Description: Concrete stem wall displays efflorescence, impact damage and spalling. **Deficiency Code:** C01-01.09.00 & C01-01.02.06	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year
Description: East exterior wall galvanized raised-panel siding displays impact damage, holes. **Deficiency Code:** D11-01.03.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: East exterior galvanized raised-panel siding has peeling paint. **Deficiency Code:** D11-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: SE Corner concrete stemwall is spalling. **Deficiency Code:** C01-01.06.00	Condition - Poor Purpose - Functional Urgency - <1 Year
Description: Interior structureal steel coating is rusting, peeling at all columns and Purlins 4W thru 4E. **Deficiency Code:** D11-01.01.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: South wall displays impact damage and holes to metal siding. **Deficiency Code:** D11-01.03.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: South wall has paint peeling/cracking of galvanized raised-panel siding. **Deficiency Code:** D11-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: Interior ceiling panels display corrosion. **Deficiency Code:** D11-01.01.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: South wall window units display deteriorating caulking/glazing. (3 ea) **Deficiency Code:** D25-01.15.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year
Description: East wall window units display deteriorating caulking/glazing. (2 ea) **Deficiency Code:** D25-01.15.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year
Description: Epoxy coated floor is slippery over entire surface presenting a slipping hazard. **Deficiency Code:** Noted	Condition - Good Purpose - Safety Urgency - Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: The over-head rail system placed on the existing building is no longer in Use. Engineering data is required. **Deficiency Code:** Noted	Condition - Poor / Fail Purpose - Maintenance Urgency - >1 Year
Description: **Deficiency Code:**	Condition - Excellent Fair/Good Poor/Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: **Deficiency Code:**	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: 2" EMT South exterior of building - raceway is not adequately secured to the mounting surface. **Deficiency Code:** I03-08.02.07	Condition - Poor Purpose - Maintenance Code Urgency - <1 Year
Description: Various conduits on interior of building - are not adequately secured to the mounting surface and/or are not secured within three feet of the box. **Deficiency Code:** I03-08.02.07 and 08.02.10	Condition - Poor Purpose - Maintenance Code Urgency - <1 Year
Description: Disconnect enclosure displays moderate corrosion at Column 4W33, DP4A #15. (480V) at north west corner and interlock inoperable. **Deficiency Code:** I03-03.06.01 & I03-03.06.03	Condition - Fair Purpose - Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 4 (Grinding Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Disconnect enclosure displays moderate corrosion at Column 4E30, DP6A **Deficiency Code:** I03-03.06.01	Condition - Fair Purpose - Functional Urgency - > Year
Description: **Deficiency Code:**	Condition - Excellent Fair/Good Poor/Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: **Deficiency Code:**	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Compressed air unit relief valve on tank south of Building 4 needs piped to 6" above ground. Eschutcheon missing at Building - HO3-05.05.00 Deficiency Code: HO3-06.11.00	Condition - Fair/Good Purpose - Code/Safety Urgency - <1 Year
Description: Vacuum breaker on domestic water missing on side. Escutcheon missing at building. Deficiency Code: HO1-11.16.00	Condition - Poor Purpose - Code/Safety Urgency - <1 Year
Description: 3/4" plug galvanized air fittings need installed in 3/4" ball valve on northeast corner inside. No numbers to describe deficiency. Escutcheon missing on northwest side of outside. Deficiency Code: HO3-05.05.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 4 (Grinding Shop) Date: 9/13/95	Condition/Purpose/Urgency
Description: Driers and filters on the compressed air unit should not drain to the floor. **Deficiency Code:** HO3-04.07.00	Condition - Good Purpose - Maintenance Urgency - <1 Year
Description: Gas hangers and supports exceed distances between each other. **Deficiency Code:** HO5-05.04.00	Condition - Good Purpose - Maintenance Urgency - <1 Year
Description: Need updated labels on domestic water, compressed air, natural gas, and all pipes. Check on distance between pipes. **Deficiency Code:** OSHA & H05.04.00	Condition - Good Purpose - Maintenance Code Urgency - >1 Year

Oxnard CAS Field Notes

Building 5

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/13/95	Condition/Purpose/Urgency
Description: SE Corner column 5E24 doorway is less than 6-8 - overhead too low. Deficiency Code: D15-03.14.02	Condition - Poor Purpose - Functional Code Urgency - >1 Year
Description: South Overhhead door displays impact damage at the bottom rail. Deficiency Code: D16-03.11.02	Condition - Poor/Fail Purpose - Maintenance Urgency - >1 Year
Description: South window wall units displays deteriorating caulking. Deficiency Code: D25-01.01.00	Condition - Fail Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/13/95	Condition/Purpose/Urgency
Description: The concrete stem wall at the personnel door, column 5E24 displays holes and voids. 8' X 25' area **Deficiency Code:** B02-02.05.00	Condition - Fair Purpose - Functional Urgency - >1 Year
Description: Concrete Column at 5E27 displays impact damage, spalling and cracking. **Deficiency Code:** B02-02.09.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Concrete wall from column 5E28 to column 5E27 south displays anchor holes and various cracking is present. **Deficiency Code:** B02-02.07.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/13/95	Condition/Purpose/Urgency
Description: Anchors are missing and concrete is spalling at Column 5E26. Deficiency Code: B02-02.07.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Roof leaking at high area column 5W26, 5W27 at stack covering pentrations. The leak is located just above the 3500 Ton Hydraulic press. Deficiency Code: C15-01.09.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: Structural steel supports are missing in the steel truss system of this building at column 5E26 thru 5E24 across entire span. Deficiency Code: C05-01.04.00	Condition - Poor Purpose - Functional Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) Date: 9/13/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Structural steel cross arm supports are not bolted (Welded) above southh overhead door. **Deficiency Code:** C05-01.04.00	Condition - Poor Purpose - Functional Code / Safety Urgency - <1 Year
Description: South exterior entrance concrete wall displays impact damage. **Deficiency Code:** C01-01.04.00	Condition - Good Purpose - Maintenance Urgency - <1 Year
Description: South exterior paint on corrugated siding is peeling. **Deficiency Code:** D11-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) Date: 9/13/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Paint on metal facia peeling at south building entrance. Deficiency Code: D11-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: Concrete wall at locker room area displays anchor holes. Deficiency Code: B02-02.07.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Drywall in locker room areas displays impact damage, peeling, soiling. 8' X 25' area. Deficiency Code: F03-01.01.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/13/95	Condition/Purpose/Urgency
Description: Door from Restroom to locker room is missing lockset. 3-0 6-8 L/H Deficiency Code: D15-01.01.03	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Exterior locker room gym area, displays peeling paint on channel of metal siding. Deficiency Code: D11-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: SW corner of pascoe, corner of metal building displays impact damage. Deficiency Code: D11-01.03.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/13/95	Condition/Purpose/Urgency
Description: West exterior sliding door displays impact damage. Deficiency Code: D21-03.11.02	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: West side exterior is soiled and rusted from cleaner usage. Deficiency Code: D11-01.01.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Concrete floor throughout is displaying cracks. Deficiency Code: C10-01.05.06	Condition - Good Purpose - Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) Date: 9/13/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Exterior Door #37 display holes and impact damage Deficiency Code: D21-03.12.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Door between wheelabrator area and bath area is bolted shut. This door should be removed and the opening framed in and sheeted. Deficiency Code: Noted	Condition - Fail Purpose - Functional Urgency - >1 Year
Description: Paint is peeling on the overhang corrugated metal decking. Deficiency Code: D11-01.04.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 5 (Press/Wheelabrator) Date: 9/13/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Wall anchor plates for the metal siding attachment displays corrosion throughout the perimeter of building area wheelabrator and west addition. Deficiency Code: D11-01.01.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: Deficiency Code:	Condition - Excellent Fair/Good Poor/Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: Deficiency Code:	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/14/95	Condition/Purpose/Urgency
Description: 2" Rigid conduit at the north exterior of the building is not adequately Secured to the mounting surface. Deficiency Code: I03-08.02.10	Condition - Fair Purpose - Maintenance Code Urgency - <1 Year
Description: Lens missing from the light in the single room restroom at West corner. Deficiency Code: I04-01.09.03	Condition - Fair Purpose - Maintenance Urgency - <1 Year
Description: Panel MS5C Moderate corrosion present. Deficiency Code: I03-03.06.01	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/14/95	Condition/Purpose/Urgency
Description: 4" X 4" Gutter is without support and displays heavy corrosion at the south east awning between buildings 5 and 6. **Deficiency Code:** I03-08.02.07	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Unit #1463 at south east side (exterior) under awning, the receptacle box is not GFCI protected. **Deficiency Code:** I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: South east under awning, 2 exterior outlets (6B10) are without GFCI Protection. **Deficiency Code:** I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/14/95	Condition/Purpose/Urgency
Description: Light Bulb cover missing from MS5C 7 Press. **Deficiency Code:** I16-03.03.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year
Description: Knockout seal missing from #168, MS5B/B #6 in the west room. **Deficiency Code:** I03-08.01.05	Condition - Poor Purpose - Maintenance Code Urgency - <1 Year
Description: Conduit support is lacking in many instances throughout this building. **Deficiency Code:** I03-08.02.10 and 08.02.07	Condition - Fair Purpose - Maintenance Code Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 5 (Press/Wheelabrator) Date: 9/14/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Corrosion present on electrical disconnects at follows: MS5B/B #6 3 Ph/30A/Moderate (Under awning) MS5B/B #6 3Ph/30A/Moderate Deficiency Code: I02-03.06.01	Condition - Fair Purpose - Functional Urgency - >1 Year
Description: Improper raceway used to feed lights interior and exterior. Rubber cord is not adequate for the application. Deficiency Code: I02-08.01.02	Condition - Fair Purpose - Maintenance Code Urgency - <1 Year
Description: Light Bulb cover is missing from the big press located in the North west corner. 1" conduit north west end of press. Deficiency Code: I16-03.01.00	Condition - Poor Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/14/95	Condition/Purpose/Urgency
Description: Interlock missing or inoperable on unit 1458 under awning at the south east corner of building. Deficiency Code: I03-03.06.03	Condition - Fair Purpose - Maintenance Code Urgency - >1 Year
Description: Pit - glass jar cover broken. Deficiency Code: I04-01.09.03	Condition - Poor Purpose - Maintenance Code / Safety Urgency - <1 Year
Description: Deficiency Code:	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 5 (Press/Wheelabrator) Date: 9/14/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Pipe labels missing or not close enough asset wide. West side 6 North side 5 HO1-05.06.00 Water HO2-01.05.00 Drain Waste Vent HO3-05.06.00 Compress Air HO5-04.06.00 Gas Deficiency Code: H01-05.06.00	Condition - Poor Purpose - Code Urgency - >1 Year
Description: Oil lines show signs of leakage located at 1516 & 1463. Deficiency Code: Noted	Condition - Fair / Good Purpose - Maintenance Urgency - <1 Year
Description: Improper supports (hanging pipe from pipe). West side Building 6 North inside 5 Asset Wide HO1-08.04.00 Domestic Water HO2-09.04.00 Drain Waste Vent HO3-08.04.00 Compressed Air (Oil ?) HO5-05.04.00 Gas	Condition - Fair Purpose - Code / Safety Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 5 (Press/Wheelabrator) Date: 9/14/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Escutheons missing - West side Building 6 and South side Building 5 Asset Wide HO1-05.05.00 Water HO2-06.05.00 Drain Waste Vent HO5-04.05.00 Gas HO3-05.05.00 Compress Air	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Vacuum breaker missing on domestic water. North end of Building 5. Hose bib missing on west inside Building 5. Deficiency Code: HO1-11.16.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: 3/4" gas valve missing handle on north end Building 5. No building isolation valve. Deficiency Code: HO5-02.09.00	Condition - Poor Purpose - Functional Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 5 (Press/Wheelabrator) (Dye Penetrant Room) Date: 9/14/95	Condition/Purpose/Urgency
Description: 1 1/2" brass gate valve on compressed air unit missing handle. West wall inside Building 5. Deficiency Code: HO3-06.10.00	Condition - Poor Purpose - Functional Code / Safety Urgency - <1 Year
Description: Compressed air filters and driers drain to floor. Deficiency Code: HO3-04.07.00	Condition - Fair / Poor Purpose - Safety Urgency - <1 Year
Description: Strong gas smell is sometimes present in this building. Deficiency Code: Concern Noted	Condition - Poor / Fail Purpose - Safety Urgency - <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 5 (Press/Wheelabrator) Date: 9/14/95 (Dye Penetrant Room)	Condition/Purpose/Urgency
Description: Relief valve on compressed air unit needs to be piped to floor. **Deficiency Code:** HO3-06.07.00	Condition - Fair Purpose - Code Urgency - <1 Year
Description: Ball valve on compressed air unit needs plugged. South end inside Building 5. **Deficiency Code:** Noted	Condition - Good Purpose - Safety Urgency - <1 year
Description: Bathroom in good condition. Some light corrosion on drains under lavoratories. **Deficiency Code:** HO1-12.03.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard CAS Field Notes

Building 6

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: South wall interior with side overhead door displays holes in the metal siding, escutchen missing from pipe penetration and protective cover needed. Deficiency Code: D11-01/08/00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: South side metal siding falnge displays corrosion at the base of the interior. Deficiency Code: D11-01.01.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: South overhead door displays impact damage, a loose door panel on exterior of #32. Deficiency Code: D16-03.11.02	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Impact dammage displayed inside sound-proof booth at lower areas of walls. Also soiling of metal panels and slick floor surfaces. Deficiency Code: D10-01.04.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: Interior east wall column 6E19 display holes in metal siding from equipment that has been removed. Deficiency Code: D11-01.08.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Interior of east wall Column 6E25 displays holes in metal siding from removed equipment. Deficiency Code: D11-01.08.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: East interior wall at Column E6-25 and E6-26 displays hole caused from impact approx. Sise of wall area is 12' X 14'. **Deficiency Code:** D11-01.03.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: North interior at overhead door #33, west end, displays a hole in the siding from equipment that has been removed. **Deficiency Code:** D11-01.08.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: SW interior Restroom ceiling support damage/ at ceiling drywall above partitions. **Deficiency Code:** C17-01.09.00	Condition - Poor Purpose - Maintenance Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: SW restroom area exterior soiling and interior displays impact damage. **Deficiency Code:** D10-01.09.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: West interior metal wall at column 6W20 and 6W21 displays a hole from equipment that has been removed. **Deficiency Code:** D11-01.08.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Upper storage area at Column 6W22 exterior drywall displays impact damage at north wall and displays soiling on interior and exterior walls. Also displays holes from equipment that has been removed. **Deficiency Code:** D10-01.09.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Interior concrete floor displays cracking and stress movement throught building. Deficiency Code: C10-01.05.06	Condition - Good Purpose - Functional Urgency - 2-5 years
Description: CMU office area at column location 6W22 soiling and displays impact Damage at NE corner interior at Columns 6W22 and 6W21. Deficiency Code: D02-01.10.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: Metal West interior wall area at Column 6W23 displays holes from equipment that has been removed / office area. Deficiency Code: D11-01.08.00	Condition - Good Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: West interior wall at Column 6W26 door is missing - metal 3/0 6/8 RH. Deficiency Code: D15-03.25.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: Construction damage from Air conditioner installation at Column Location 6W22. Deficiency Code: D11-01.08.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: East overhang is without a gutter down spout. Deficiency Code: E09-01.04.00	Condition - Poor Purpose - Functional Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: South exterior metal siding has peeling paint Deficiency Code: D01-01.04.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: East overhang above equipment canopy has peeling paint. Deficiency Code: C05-01.06.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: East canopy under side of metal roof framing has peeling paint and Corrosion. Deficiency Code: C05-01.06.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: East side equipment canopy is without gutter down spout **Deficiency Code:** E09-01.04.00	Condition - Good Purpose - Maintenance Functional Urgency - 2-5 years
Description: East side canopy Column EE17 displays impact damage. **Deficiency Code:** B04-01.04.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: East side main building exterior metal siding has paint peeling at Column location EE21EE **Deficiency Code:** D11-01.04.00	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: East side main building exterior metal siding displays abrasion and peeling paint at Columns EE17 and EE18. **Deficiency Code:** D11-01.04.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years
Description: East canopy area at roof line displays impact damage between columns EE18 and EE19. **Deficiency Code:** C15-01.03.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: North wall metal siding displays peeling paint from double overhead door to the single overhead door. **Deficiency Code:** D11-01.04.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: North exterior at NE Corner displays impact damage to the metal siding from the overhead door to east side. Deficiency Code: D11-01.03.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: North exterior siding missing anchors at main building corner. Deficiency Code: D11-01.08.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: West building overhang is without gutter down spout. Deficiency Code: E09-01.04.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Overhead door #35 displays impact damage. Deficiency Code: D16-03.11.02	Condition - Fair Purpose - Maintenance Urgency - 2-5 years
Description: West building overhang paint is peeling from under side of the roof Decking. Deficiency Code: C05-01.06.00	Condition - Poor Purpose - Maintenance Functional Urgency - >1 Year
Description: West side conopy metal framing is displaying peeling paint and corrosion. Deficiency Code: J01-01.09.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: West side metal siding has paint peeling at the lean-to section, door. **Deficiency Code:** D01-01.04.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year
Description: West side canopy paint is peeling just underneath of canopy. **Deficiency Code:** J01-01.09.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: West side canopy gutter down spout is missing. **Deficiency Code:** E09-01.04.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: West side canopy overhang facia at door #30 displays impact damage. **Deficiency Code:** J01-01.07.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year
Description: South West canopy main building, metal siding displays peeling paint. **Deficiency Code:** J01-01.09.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: East side canopy at north corner column location EE28 has anchor bolts left in place which creates a tripping hazard. **Deficiency Code:** C10-01.09.00	Condition - Poor / Fail Purpose - Maintenance Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: South west canopy overhang displays impact damage at corner facia. **Deficiency Code:** J01-01.07.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: East side concrete apron at canopy column location EE-20 is spalling and has exposed rebar. **Deficiency Code:** C10-01.02.00 and C10-01.05.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year
Description: North east canopy area at column location EE28 displays concrete spalling and settlement expansion. **Deficiency Code:** C10-01.05.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Electrical disconnects for pumps #1557 and 1515 are not labeled as to what they operate. Missing or insufficient data. Deficiency Code: I03-03.09.02	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Moderate corrosion is displayed at pump controller, distribution panel #6AE. Deficiency Code: I03-07.07.03	Condition - Fair Purpose - Functional Urgency - >1 Year
Description: Air compressor (#1498) located at the NE corner exterior - Disconnect #1498, 6EE/27, 480V, displays heavy corrosion. Deficiency Code: I03-03.06.01	Condition - Fair Purpose - Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: SE outside plywood support for the compressor disconnect is inadequate. Deficiency Code: I03-03.06.02	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: 1 1/2" EMT feed for the compressor main disconnect is not supported within 3 feet of the end of the run. Deficiency Code: I03-08.02.10	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: No GFCI protection on receptacles 6D2 located at the SE exterior under awning and 6D4, 6D4 center, East exterior, 6D2 NE exterior, 6D4 NE corner exterior. Deficiency Code: I16001.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: NE corner exterior disconnect DPGA #15 (480V) displays heavy corrosion and the interlock is either missing or inoperative. **Deficiency Code:** I03-03.06.01	Condition - Fair Purpose - Functional Urgency - >1 Year
Description: 2" EMT is not supported within 3 feet of end of run at NE corner under awning exterior. **Deficiency Code:** I03 08.02.10	Condition - Fair Purpose - Maintenance Code Urgency - >1 Year
Description: Greasy/oily substance present on nearly all busway connection boxes. **Deficiency Code:** I03-01.03.01	Condition - Fair Purpose - Maintenance Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: SW corner disconnect enclosure interlock not working or missing at Disconnect #DD6C #4 (480V) **Deficiency Code:** I03-03.06.03	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Pit area - Quartz light is missing glass lens. **Deficiency Code:** I04-01.09.03	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Pit area - Outlets are not GFCI protected. **Deficiency Code:** I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Asset wide - all building penetrations should be caulked and / or have an escutcheon. Interior walls also. HO1-05.05.00 Water HO2-06.05.00 Drains Deficiency Code: NFPA	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Pipes being supported by 4" pvc pipe outside Building 6 - chilled lines. Pipes not labeled. Deficiency Code: H30-04.06.00 Labels / H30-07.04.00	Condition - Fair / Poor Purpose - Code / Safety Urgency - >1 Year
Description: Relief valves on compressed air unit need piped to code. 1 - 1/2" S.E. outside corner 1 - 3/4" S.E. outside corner 1 - 3/4" N.E. outside corner 1 - 1/2" N.E. outside corner/ equipment #1681, 1499, 1498 Deficiency Code: HO3-06.11.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Pipes missing labels: Compressed Air HO3-05.06.00 Hydraulic Lines Oxygen Water HO1-05.06.00 Natural Gas HO5-04.06.00 Sprinkler HO7-07.10.00 Vacuum HO4-06.06.00 Deficiency Code: See above	Condition - Fair / Poor Purpose - Maintenance Safety Urgency - <1 Year
Description: Some pans leaking (liners #1515, 1557, 1471) / most pans contain some oil - indicating "some leakage" outside Building 6. Hydraulic pump stations are dirty but appear to be in good over-all condition. Deficiency Code: Noted	Condition - Fair / Good Purpose - Maintenance Urgency - >1 Year
Description: Compressor #1499 leaks oil. Under repair - lock-out - tag-out in effect. Deficiency Code: HO3-01.01.00	Condition - Good Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Trench drain on east side, oily and dirty. Drain contains dirt and oil but appears to be in good condition over-all. **Deficiency Code:** Noted	Condition - Fair / Good Purpose - Maintenance Functional Urgency - >1 Year
Description: 1/2" trd brass ball valve on domestic water missing handle at or near eye wash. **Deficiency Code:** HO1-06.11.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year
Description: Domestic water is dripping in men's north lavoratory. **Deficiency Code:** HO1-11.10.00	Condition - Fair Purpose - Maintenance Functional Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Relief on compressed air tank needs piped to code - east wall center. **Deficiency Code:** HO3-06.11.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: No access to domestic water heater. Water heater in good conition. Access should be considered. **Deficiency Code:** Noted	Condition - Fair Purpose - Maintenance Functional Code / Safety Urgency - >1 Year
Description: One bent sprinkler head in long pit. I saw no extra sprinkler heads (spares). **Deficiency Code:** HO8-09.07.00	Condition - Good Purpose - Maintenance Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. # 6 (Forge Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Air compressor #1681 shows signs of leakge. Deficiency Code: Noted	Condition - Fair / Good Purpose - Maintenance Safety Urgency - <1 Year
Description: All pipes not in service should be capped, plugged, or demolished. Compound wide. Deficiency Code: Noted	Condition - Fair/Good Purpose - Maintenance Code Urgency - 2-5 years
Description: Potential hazard exists with gas regulators venting into the inside of the building. Suggestions: 1. Vent to outside of building. 2. Vent to pilot (in the burner). *** All hoses need replaced with approved material *** Deficiency Code: Noted - safety	Condition - Fair / Poor. Purpose - Safety Urgency - <1 Year

Oxnard CAS Field Notes

Building 7

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. #7 (Tank Farm/Lube Shop) Date: 9/14/95	Condition/Purpose/Urgency
Description: SE exterior corner of building displays impact damage. **Deficiency Code:** C15-01.03.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: Interior south wall displays holes left after equipment removal. **Deficiency Code:** C05-01.04.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: South interior wall displays soiling and staining. **Deficiency Code:** C05-01.03.00	Condition - Good Purpose - Maintenance Urgency - 2-5 years

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. #7 (Tank Farm/Lube Shop) Date: 9/14/95	Condition/Purpose/Urgency
Description: Interior ceiling area displays corrosion and unprotected metal surfaces. **Deficiency Code:** E03-01.02.00	Condition - Good Purpose - Maintenance Urgency - >1 Year
Description: West exterior concrete floor, outside of containment, is broken and chipped. **Deficiency Code:** C15-01.01.00	Condition - Good Purpose - Maintenance Functional Urgency - >1 Year
Description: Interior concrete floor of containment is cracking in the SW and NE sections. **Deficiency Code:** C10-01.05.03	Condition - Good Purpose - Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. #7 (Tank Farm/Lube Shop) Date: 9/14/95	Condition/Purpose/Urgency
Description: Interior concrete retaining wall and floor are without protective coating. **Deficiency Code:** D30-01.09.00	Condition - Good Purpose - Maintenance Functional Urgency - <1 Year
Description: West side overhead structural beam displays corrosion. **Deficiency Code:** C05-01.06.00	Condition - Good Purpose - Maintenance Urgency - <1 Year
Description: Roof drainage at the downspout, SW Corner of the building, displays Impact damage. **Deficiency Code:** E09-01.09.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. #7 (Tank Farm/Lube Shop) Date: 9/14/95	Condition/Purpose/Urgency
Description: Exterior Tank Containment exterior paint is peeling, cracking at ground location around perimeter. Deficiency Code: D30-01.07.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: Interior containment paint is peeling and cracking at ground locations around entire perimeter. Deficiency Code: D30-01.07.00	Condition - Poor Purpose - Maintenance Urgency - >1 Year
Description: SW corner of interior concrete containment is spalling by the tanks. Hydraulic fluid, oil and water are stored/present here. Containment is effected. Deficiency Code: C10-01.12.00	Condition - Poor Purpose - Maintenance Functional Code Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Arch/Struct Bldg. #7 (Tank Farm/Lube Shop) Date: 9/14/95	Condition/Purpose/Urgency
Description: The interior tank containment area is ineffective as concrete removal has taken place at the NE corner of the containment floor/wall. **Deficiency Code:** C10-01.09.00	Condition - Fail Purpose - Functional Code / Safety Urgency - <1 Year
Description: **Deficiency Code:**	Condition - Excellent Fair/Good Poor/Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate
Description: **Deficiency Code:**	Condition - Excellent Fair / Good Poor / Fail Purpose - Maintenance Functional Code / Safety Urgency - 2-5 years >1 Year / <1 Year Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. #7 (Tank Farm/Lube Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Three electrical disconnects that are mounted on plywood surface do not identify their function as to what they feed. **Deficiency Code:** I03-03.09.02	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Exterior plug located at SE of tank farm in the field, is not GFCI Protected. **Deficiency Code:** I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate
Description: All 110V outlets in the tank farm shed should be GFCI protected. **Deficiency Code:** I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. #7 (Tank Farm/Lube Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Plywood stand supporting 3 disconnects and a gutter, is not adequate. This is located at the SE area of the tank farm and needs to be replaced. Deficiency Code: I03-03.06.02	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: Outlet under plywood stand (as addressed above) are not GFCI protected. Deficiency Code: I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate
Description: SE Tank Farm area - conduits running into 4" X 6" X 2' gutter are not supported within 3 feet of run. There are 4 ea. 3/4" and 3 ea. 1" conduits, all which are feeding disconnects on board. Deficiency Code: I03-08.02.10	Condition - Fair Purpose - Maintenance Code Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Electrical Bldg. #7 (Tank Farm/Lube Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: North end of building has an outlet that is not GFCI protected. Deficiency Code: I16-01.03.00	Condition - Poor Purpose - Code / Safety Urgency - Immediate
Description: 12" X 12" X 6" junction box, located at the SE Tank Farm area, is not properly support with hardware. Deficiency Code: I03-08.02.07	Condition - Fair Purpose - Maintenance Urgency - >1 Year
Description: The 30A, 480V, 3Ph disconnect for the oil reclaim system displays Moderate corrosion. (Tank Heaters 1 and 2) Deficiency Code: I03-03.06.01	Condition - Fair Purpose - Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. #7 (Tank Farm/Lube Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Domestic water vacuum breaker missing. 2 - Hose bibs south outside of Building 7 2 - Hose bibs north inside Building 7 1 - Hose bib south inside Building 7 Deficiency Code: HO1-11.16.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year
Description: Two 1" trd domestic water gate valves and two 1" trd ball valves missing handles. Deficiency Code: HO1-06.11.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year
Description: 2" trd ball valve handle missing on drain of the evaporative condenser unit south of Building 7. Deficiency Code: HO2-07.10.00	Condition - Fair Purpose - Maintenance Functional Urgency - >1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. #7 (Tank Farm/Lube Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Eye wash drains need to be piped to floor sink. Drain pipe missing. Drain pipe could easily be piped to the near-by floor sink. Deficiency Code: Noted	Condition - Fair / Poor Purpose - Functional, Code / Safety Urgency - >1 Year
Description: 1" di-electric union and 4" nipple on domestic water are severely corroded near evaporative condenser. Deficiency Code: HO2-05.03.01	Condition - Poor Purpose - Maintenance, Functional Urgency - <1 Year
Description: Drains have improper air gap at floor sink near evaporative condenser unit. Deficiency Code: HO2-01.05.00	Condition - Poor Purpose - Code / Safety Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. #7 (Tank Farm/Lube Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Chilled chemical pot feeders - rusty but good. Chemical pot feeders belonging to the evaporative condenser are rusty, but in good over-all condition. Deficiency Code: Noted	Condition - Good Purpose - Maintenance Urgency - None
Description: Domestic water hose bib handle broken. Deficiency Code: HO1-06.11.00	Condition - Poor Purpose - Maintenance Functional Urgency - <1 Year
Description: All hoses should be replaced by approved piping. Deficiency Code: Code - Noted	Condition - Poor Purpose - Code Urgency - <1 Year

Oxnard Condition Assessment Survey Field Report

Assessment Discipline: Mechanical Bldg. #7 (Tank Farm/Lube Shop) Date: 9/18/95	Condition/Purpose/Urgency
Description: Emergency eyewash drains to the floor inside Building 7 are missing. (Drain pipe could be ran to the outside of the building.) Deficiency Code: Noted	Condition - Fair / Poor Purpose - Maintenance Safety Urgency - <1 Year
Description: All wall penetrations (inside and out) should be caulked and / or have an escutcheon. Water HO1-05.05.00 Compressed Air Oil Lines Deficiency Code: NFPA	Condition - Fair Purpose - Maintenance Code Urgency - >1 Year
Description: All piping in and around Building 7 should be properly labeled. Water HO1-05.06.00 Non-Potable Water Oil Drain HO2-06.06.00 Etc.	Condition - Good Purpose - Maintenance Safety Urgency - <1 Year