WORK PLAN
TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION
ALAMEDA, CALIFORNIA

Contract No. N62474-93-D-2151
Delivery Order No. 0043

Submitted to:

Department of the Navy
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive, Building B-208
San Bruno, California 94066-2402

Submitted by:

IT Corporation
4585 Pacheco Boulevard
Martinez, California 94553

Revision 1

November, 1995

Issued to: DARLENE HARRIS Date: 11/01/95

Copy #:_____ ☐ Controlled ☒ Uncontrolled

N00236.001259
ALAMEDA POINT
SSIC NO. 5090.3

WORK PLAN
TEMPORARY STORAGE AND TREATMENT AREA

ORIGINAL VERSION IS NOT ON FILE

EXTENSIVE RESEARCH WAS PERFORMED BY NAVFAC SOUTHWEST TO LOCATE THE ORIGINAL VERSION. THIS PAGE HAS BEEN INSERTED AS A PLACEHOLDER AND WILL BE REPLACED SHOULD THE MISSING ITEM BE LOCATED.

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ALAMEDA POINT
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ADDENDUM TO WORK PLAN IMPERMEABLE COVER FOR STOCKPILED SOILS TEMPORARY STORAGE AND TREATMENT

DATED 24 NOVEMBER 1999

IS FILED AS ADMINISTRATIVE RECORD NO.
N00236.001260

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ALAMEDA, CALIFORNIA

Contract No. N62474-93-D-2151
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Revision 1

November, 1995

Approved by: _____ Date: 11/01/95
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Louis E. Stout
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WORK PLAN
TEMPORARY STORAGE AND TREATMENT AREA
REVISION 2

DATED 01 OCTOBER 1996

IS FILED AS ADMINISTRATIVE RECORD NO.
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Table of Contents

1.0 Introduction

This work plan has been prepared to present preliminary design details and construction plans for a Temporary Storage and Treatment Area (TSTA) at the Naval Air Station (NAS) in Alameda, California. The work plan is based on the Scope of Work (September 11, 1995) provided by Mr. Myles Jones of the Department of the Navy, Engineering Field Activity (EFA)-West and discussions held with representatives of EFA-West subsequent to the issue of the scope of work. The basis of the TSTA design is the State of California Code of Regulations, Title 26, Division 22, "Corrective Action Management Units and Temporary Facilities." Although originally envisioned to contain soil from Sites 15, 16 and 18, the TSTA is currently planned for the storage and treatment of contaminated soils from only Site 15 at NAS Alameda.

As a result of time constraints for removal of the soils from IR Site 15, the design and construction schedule for the TSTA has been expedited. Preliminary designs for the TSTA were included in the draft work plan. The preliminary designs have been revised based on field conditions and Navy and regulatory agency comments and are presented in this final work plan.

2.0 Site Description

The site of the planned TSTA is located in the former Naval Aviation Depot (NADEP) Farm. The site is bordered to the north by the Oakland Inner Harbor, to the south by the right-of-way of Perimeter Road, to the west by an underground fuel storage tank farm, and to the west by a concrete building. The location of the site is shown on Figure 1.

The area formerly housed different operations including welding, carpentry, sheetmetal work, sandblasting, and equipment painting. All above-ground structures have been removed from the site. Currently, the site is partially paved with asphaltic pavement and contains several concrete pads. The unpaved areas of the site are covered with loose fill material and minor construction debris. Remaining site facilities are limited to utilities which include: two electrical transformers, a sanitary sewer lift station, fire hydrants, and storm water drains which discharge into the Oakland Inner Harbor. Chain link fencing is present on the

northern, eastern, and a portion of the western boundaries of the site. Details of the existing site features are shown on the attached Site Plan (Figure 2).

The surface of the site is relatively flat with a maximum variation in elevation of less than 2-1/2 feet. Depth to groundwater at the site is expected to be approximately 3 to 5 feet below grade. The elevation of the groundwater at the site would be expected to vary by up to one-foot due to tidal fluctuation in the nearby Oakland Inner Harbor.

3.0 TSTA Design

The TSTA has been designed to accommodate the storage of approximately 6,300 cubic yards of PCB- and lead-contaminated soils from IR Site 15 at NAS Alameda. The TSTA design includes facilities to control and collect leachate from the interior of the soil storage stockpile. At this time, no facilities for storage of drummed or liquid wastes, other than soil stockpile leachate, are provided at the TSTA.

The TSTA work plan includes details for the preconstruction inspection of the physical conditions at the site, site operation and maintenance, and closure of the facility. Baseline samples of the site ground water and soils have been collected and analyzed for contaminants, including PCBs and lead, as part of previous facility investigations and the basewide Environmental Baseline Survey. Operation and maintenance will be performed at the facility including daily and weekly site inspections and reporting. Upon completion of the storage and treatment operations at the site, all waste materials will be removed from the site. The layout of the site facilities included in the TSTA design are shown on Figure 3.

4.0 Preconstruction Inspection Report

Prior to the start of construction, a preconstruction inspection will be conducted to document the physical conditions at the site prior to the installation of the berms, drainage system, HDPE liner, stockpile, and ancillary equipment. Baseline samples of the site ground water and soils have been collected and analyzed for contaminants, including PCBs and lead, as part of previous facility investigations and the basewide Environmental Baseline Survey. The

results of the preconstruction inspection will be documented in the preconstruction inspection report, which will include the following information:

- Description of the former use of the site.
- Photographic documentation of the physical features of the site prior to construction.
- Summaries of analytical results for soil and groundwater sampling conducted prior to construction at the site and figures showing the sample locations.
- Any visual observations of potential soil contamination during construction activities.

5.0 Soil Storage Area Design

Soil Stockpile Design

The soil stockpile will have an area of approximately 16,875 square feet and a soil capacity of approximately 7,000 cubic yards, assuming a stockpile height of 12 feet.

The soil stockpile will consist of a containment cell containing a synthetic liner and a positive drainage system for leachate collection. The soil within the stockpile area will be covered with a single layer of 20-mil HDPE, which will be weighted down. The interior cover will be contained within the berms. The entire stockpile will covered with a custom made landfill cover which will extend out over the berms, and will be anchored outside the berms into the subgrade. The landfill cover will prevent rain water from entering the stockpile, and is designed to shed rain water off the stockpile.

Details of the soil stockpile design are shown on Figure 4. The area will be graded as shown on Figure 4 to provide a crown sloped at approximately 1.6 percent toward the drainage trenches. The center point of the stockpile area will be approximately one foot higher in elevation than the drainage trenches. This elevation difference will promote positive drainage of any leachate in the soil stockpile toward the drainage trenches.

One-foot wide drainage trenches will be constructed around the soil stockpile within the berms. The drainage trenches will be sloped to drain toward the sump. The trenches will vary in depth from 0.6 feet to 2 feet deep, depending on location. The trenches will be filled

with pea gravel, overlain by a woven geotextile fabric to prevent fines from collecting in the trench. The woven geotextile in the trenches will be overlain by a protective layer of pea gravel.

Two layers of 20-mil thick high density polyethylene (HDPE) liner will be installed over an imported sand fill layer approximately 4 to 6 inches thick. Each HDPE layer will be joined by overlapping joints three feet and using spray adhesive to join the layers. Joints in the two sheets will be off-set. Joint integrity will be verified using visual observations. The HDPE liner will be continued into the drainage trenches and will be extended over the straw bales. The HDPE liner will be keyed into an anchor trench around the exterior of the straw bale berm, as shown on Figure 4. The entire stockpile area will be constructed prior to transporting contaminated soil from Site 15.

A 2-foot square by 2-feet deep precast concrete collection sump will be installed in one corner of the stockpile area to allow for collection of leachate from the soil stockpile and any rainwater that may infiltrate under the stockpile landfill cover. The drainage trenches will provide positive drainage of any liquid within the stockpile area toward the sump. The leachate collection system is shown on Figure 5. A 50 gpm sump pump will be installed in the sump and will be equipped with a float switch to automatically pump any accumulation of water in the sump to the 5,000 gallon tank. A high water failsafe will be installed in the storage tank. When the water level in the storage tank reaches a pre-determined level, the failsafe system will interrupt power to the sump pump to prevent tank overflow. The failsafe system will activate a warning light mounted on the tank. In case of heavy rainfall in the winter months where a potential exists for significant amounts of rain to infiltrate under the stockpile cover and enter the stockpile drainage system, a 20,000 gallon Baker tank can be mobilized on 4 hours notice. Accumulated water in the 5,000 gallon tank can be pumped into the Baker tank.

The stockpile cover system is shown in Figure 6. The soil within the stockpile area will be covered with a single layer of 20-mil HDPE, which will be weighted down. The interior cover will be contained within the berms. The entire stockpile will be covered with a custom-made landfill cover which will extend over the berms, and will be anchored outside the berms into the subgrade. The landfill cover will be anchored at 10-foot intervals around the stockpile. The landfill cover will prevent rain water from entering the stockpile, and is

designed to shed rain water off the stockpile. The provision of the double covering over the stockpile will prevent rain water from entering the stockpile and the inner HDPE cover will prevent contact of water and the soil. However, water that enters the stockpile drainage system will be treated as leachate until analytical results indicate that it is not contaminated and can be discharged as storm water.

6.0 TSTA Construction

Project Plans and Permits

Prior to mobilization preconstruction project plans will be submitted for Navy review. The plans include a Site Health and Safety Plan, Environmental Protection Plan, and Contractor Quality Control Plan.

Preconstruction Meetings

A coordination/mutual understanding meeting and a preconstruction meeting with involved project participants will be scheduled prior to major construction activities at the site.

Utility Location and Site Survey

Navy personnel will be contacted for location of underground utilities at the site. To supplement the information available from the Navy, a geophysical line locating subcontractor will be retained to aid in identifying underground facilities at the site. Public utility companies will be notified of the planned work to allow for their identification of utility locations.

Due to the fast-track nature of this project, the geophysical survey was performed on October 23, 1995 prior to finalization of the workplans. Based on the information obtained from the geophysical survey, the stockpile design was altered to avoid encountering utilities that may be affected by either the construction or stockpile. Two electrical conduits were located at the western edge of the proposed stockpile area, and are buried at a depth of about 3 feet. These two conduits are not expected to be affected by the soil stockpile loading. A water line was located at the eastern edge of the original proposed stockpile area which could potentially be affected by the stockpile and associated construction. The dimensions of the stockpile were decreased to avoid placing the stockpile over the water line.

Mobilization

Prior to construction, the necessary equipment, materials, and personnel will be mobilized to the project site. Existing office and storage facilities at nearby Site 15 will be utilized during the project. Construction equipment required for the project consists of a front-end loader, backhoe, dump trucks, and water truck. Hand tools and small equipment will be obtained as needed for the work. Portable sanitary facilities for job site personnel will be installed.

Site Preparation

Site preparation will consist of grading to create the crown and positive drainage for the soil storage area, excavation of the drainage trenches and placement and grading of the sand fill in this area. The sand fill will be compacted by the loader since it is provided solely to protect the liner from penetration by underlying rocks or soil projections.

Liner Installation

The liner for the containment cell will be installed as two layers of 20-mil HDPE. Joints in the layers will be off-set to minimize the potential for leakage. The 20-mil liner material will be joined by overlapping the joints a minimum of three feet. The joints will be sealed together using a spray adhesive. The entire liner will be seamed and installed following placement of the sand blanket. The HDPE liner will be continued into the drainage trench, and will extend over the straw bales. The liner will be keyed into an anchor trench around the perimeter of the straw bales to secure the liner in place.

Drainage Trench Installation

Following liner installation, the pea gravel will be placed in the drainage trenches to within several inches of the surface. A layer of woven geotextile fabric will be placed over the pea gravel, and an additional thin layer of pea gravel will be placed over the geotextile.

Contaminated Soil Placement

During placement of contaminated soils in the stockpile area, a section of the eastern berm will not be installed and a temporary soil ramp will be placed to allow truck access to the edge of the stockpile liner. Contaminated soil from Site 15 will be transported to the stockpile and dumped into the stockpile. A rubber-tired front end loader will be used to push the soil toward the west end of the stockpile. Once the front-end loader has spread soil to form a protective layer 2- to 3-feet thick over the liner, trucks may enter the stockpile area to dump soil, and will be decontaminated when exiting the stockpile. The front-end loader will

be used to pile the soil in the stockpile. A temporary equipment decontamination area will be set up adjacent to the soil stockpile area, and all equipment will be appropriately decontaminated when exiting the exclusion zone.

Leachate Collection System

A leachate collection sump will be installed in the soil stockpile area as shown on Figure 4. The sump for the collection system will consist of a precast, water tight concrete vault or equivalent. The liner will be overlapped into the sump and secured. The sump will be provided with a sump pump equipped with a float switch. When water in the sump reaches a pre-determined level, the float switch will activate the pump and the sump contents will be pumped through Schedule 40 PVC piping to a 5,000-gallon storage tank. The storage tank will be equipped with a high level float switch which will activate a failsafe system in the event the tank contents reach a pre-determined level. The failsafe system will interrupt the power supply to the sump pump and light a red warning light mounted on the tank.

Electrical Installation

A licensed electrical contractor will be retained to complete the electrical connection of the sump pump. A 240 volt power supply will be provided to the sump location. An electrical panel with disconnect will be installed at the storage area. Power supply for the panel will be obtained from the existing electrical transformers present at the site. Direct burial cable will be used to connect power from the panel to the sump pump. All materials and installations shall conform to the requirements of the National Electrical Code.

Demobilization

Demobilization from the project will consist of the disposition of government-owned property, removal of temporary storage and construction facilities, return of rental equipment and the cleanup and removal of any debris or materials utilized by IT Corporation during the project.

Post Construction Reports

Post construction reports will consist of the provision of as-built drawings prepared and maintained during the course of construction. The as-builts will include the location of any utilities encountered during the course of the work. Specifications and operation manuals for all purchased equipment will be provided as a part of the post construction reports.

7.0 Operation and Maintenance

The TSTA is currently planned to operate for a period of one year, and operation may be extended by the Navy to a second year.

7.1 Daily Site Inspections

Operation and maintenance activities are expected to include daily inspections by the base compliance staff and record-keeping of the inspections. Inspection checklists are provided in Attachment A. Daily inspections will include the following:

- Check 5,000-gallon tank shutoff alarm.
- Structural integrity of the berms.
- Integrity and security of the stockpile landfill cover.
- Contents level in the 5,000 gallon storage tank.
- Presence of contaminated soil outside the stockpile.

Should the daily inspection detect any problem or situation requiring attention, the base compliance personnel will immediately notify the San Francisco Bay ROICC office, who will contact IT.

ATTACHMENT A

DAILY SITE INSPECTION CHECKLIST

SOIL STOCKPILE AREA, FORMER NADEP FARMS SITE

Observation Required	Yes	No	Remarks
5,000 gallon holding tank full (check shutoff alarm)			
Stockpile berms in good condition			
Rips or tears in stockpile landfill cover			
Stockpile landfill cover tied down securely and anchors secure in ground			
Any visual indication that soil has migrated outside the stockpile area and is on ground			
Fencing around perimeter of site in good condition			
Wind conditions during inspection			

7.2 Weekly Site Inspections

The site will be inspected weekly by IT, and the findings of the inspection will be documented on the field activity daily log and inspection checklist provided in Attachment B. The following inspections will be conducted on a weekly basis:

- Berms - Inspect the structural integrity of the berms. If damage is detected, the project manager will be contacted to evaluate the conditions and implement the necessary repairs.

- Leachate Collection System - Inspections will be conducted by inspecting the leachate collection sump for the presence of any leachate, and measuring the contents present in the 5,000-gallon storage tank.

- Covers for Soil Stockpile - The inspector will make visual observations of the condition of the inner and outer stockpile covers, looking for evidence of material deterioration, ripping or other potential failure. The tie down system for the covers will be inspected and tightened as necessary.

In the event that winter storms are expected to occur on or prior to a weekend, IT will perform site inspections to verify the integrity of the stockpile covers and berms, and assess the water level in the leachate collection tank. If deemed necessary, a 20,000-gallon Baker tank will be mobilized to the site, and contents of the 5,000-gallon tank will be transferred through an additional submersible pump. The 20,000-gallon tank will provide sufficient storage capacity for major winter rain events.

ATTACHMENT B

WEEKLY SITE INSPECTION CHECKLIST

SOIL STOCKPILE AREA, FORMER NADEP FARMS SITE

DELIVERY ORDER 0043

Observation Required	Yes	No	Remarks
5,000 gallon holding tank full (check shutoff alarm)			
Measure the current liquid level in the tank			
Liquid present in stockpile sump			
Stockpile berms in good condition			
Rips or tears in stockpile landfill cover			
Stockpile landfill cover tied down securely and anchors secure in ground			
Inner stockpile cover in good condition and securely weighted in place			
Any visual indication that soil has migrated outside the stockpile area and is on ground			
Fencing around perimeter of site in good condition			
Wind conditions during inspection			

7.3 Monthly Site Inspections

The monthly inspection checklist is provided in Attachment C. IT will conduct the following inspections on a monthly basis:

- Leachate Collection Sump - The sump pump and other ancillary equipment in the leachate collection sump will be inspected and tested once each month. Testing for operability will be conducted in accordance with the manufacturer's recommended procedures. During the inspection and testing, the piping from the sump to the holding tank will be inspected for punctures, and the integrity of the holding tank will also be inspected. The leachate collection system will also be inspected following major precipitation events.

- Stockpile Settlement - The stockpile area will be inspected for visible signs of settlement, such as sinking of the soil stockpile, differential movement of the berms, stress in the HDPE liner, etc. If any deleterious effects on the stockpile are noted due to settlement, a repair program will be designed and implemented as part of the ongoing maintenance program.

ATTACHMENT C
MONTHLY SITE INSPECTION CHECKLIST
SOIL STOCKPILE AREA, FORMER NADEP FARMS SITE
DELIVERY ORDER 0043

Observation Required	Yes	No	Remarks
5,000 gallon holding tank full (check shutoff alarm)			
Measure the current liquid level in the tank			
Liquid present in stockpile sump			
Test sump pump operation			
Check integrity of piping from sump pump to tank and integrity of holding tank			
Check for visible signs of settlement - sinking of soil stockpile, differential movement of berms, stress or tearing of liner material			
Stockpile berms in good condition			
Rips or tears in stockpile landfill cover			
Stockpile landfill cover tied down securely and anchors secure in ground			
Inner stockpile cover in good condition and securely weighted in place			
Any visual indication that soil has migrated outside the stockpile area and is on ground			
Fencing around perimeter of site in good condition			
Wind conditions during inspection			

7.4 Maintenance

Repairs to the stockpile area will be performed as required, based on the results of the regular inspections.

7.5 Reporting

A monthly operation and maintenance report will be provided to the Navy that will contain the weekly inspection reports, a brief summary of the activities performed during the month, and any recommendations for repairs as appropriate.

8.0 TSTA Closure Plan

Upon completion of storage and treatment at the facility, all contaminated soils and other materials will be removed from the stockpile area and removed off-site. A final inspection will be made of the site after the stockpile is removed to ensure that final closure has been accomplished and that the site has been restored to the same condition observed during the pre-construction inspection. A Closure Inspection Report will be prepared to document the post-closure condition of the site.

The protective sand blanket under the stockpile area will either be subjected to on-site treatment and re-used at the NAS or analyzed for contaminants of concern and disposed of at an appropriate off-site facility. The collection sump and equipment will be removed, cleaned, and if appropriate placed in government inventory. Synthetic liners and materials which cannot be adequately cleaned will be transported to a Class I disposal facility.

The storage tank used to contain leachate will be triple rinsed and wipe tested to verify the absence of contaminants. Wipe test samples will be analyzed for PCBs and lead.

9.0 Project Organization

A Project Manager will be the point of contact for the Navy and will be responsible for the project execution, continuity, reporting. The Site Management Team will consist of a Contractor Quality Control (CQC) Manager, Site Health and Safety Officer, and Site

Superintendent. Support for the project will be provided by a Project Administrator and the Program Management Office staff.

10.0 Management Approach

The project will be implemented using management personnel located in the Martinez office of IT. Construction personnel will generally be assigned from IT's Martinez and San Jose office to minimize the need for travel and per diem costs.

Project costs will be accrued on a weekly basis and provided for the review of the Project Manager. Using this data, the Project Manager will evaluate the progress of the project and maintain continual updates of the project schedule. In accordance with the contract, IT will provide this data to the Navy via monthly status reports.

11.0 Health and Safety

A Site Health and Safety Officer will be assigned to the site during field construction activities to ensure implementation of the requirements of the Health and Safety Plan. Contaminants are not expected to be encountered during the construction activity. Therefore, it is assumed that a majority of the work at the site can be performed in Level D personal protective equipment or Level D modified. Air monitoring will be performed during intrusive construction activities in the event that contaminants are encountered at the site.

For more specific guidance, refer to the Site Health and Safety Plan.

12.0 Quality Control

A representative of the Site CQC Manager will be present at the site during construction activities to oversee sampling, testing, and inspections and to maintain the level of quality control required under the terms of the contract. The CQC representative will prepare Daily Quality Control Reports as required by the contract for submittal to the Navy ROICC. In addition, all submittals during the project will be reviewed by the CQC representative and statused on the Submittal Register (Form 4288) prior to transmittal to the Navy.

13.0 Project Administration

A Project Administrator and site administration representative will be assigned to provide administrative support to the Project Superintendent and Senior Project Manager. The Project Administration team performs the activities necessary for the implementation and performance of the project within applicable contractual and regulatory requirements. These functions include: acquisition and coordination of all materials, supplies, and equipment, assisting in the mobilization and setup of site construction facilities, establishing and maintaining project record files, oversight of hourly timesheet preparation and verification of compliance with the Davis-Bacon Act, control and tracking of government property, and assisting in the preparation of vouchers and project closeout documentation.

14.0 Project Schedule

The project schedule anticipates that mobilization can start on October 23, 1995, with the preconstruction meeting scheduled for October 25. Construction of the soil storage area and placement of the contaminated soil from Site 15 is expected to require approximately 2 weeks without weather delays.

FIGURES
WORK PLAN

TEMPORARY STORAGE AND TREATMENT AREA
WORK PLAN
REVISION 1

DATED 01 NOVEMBER 1995

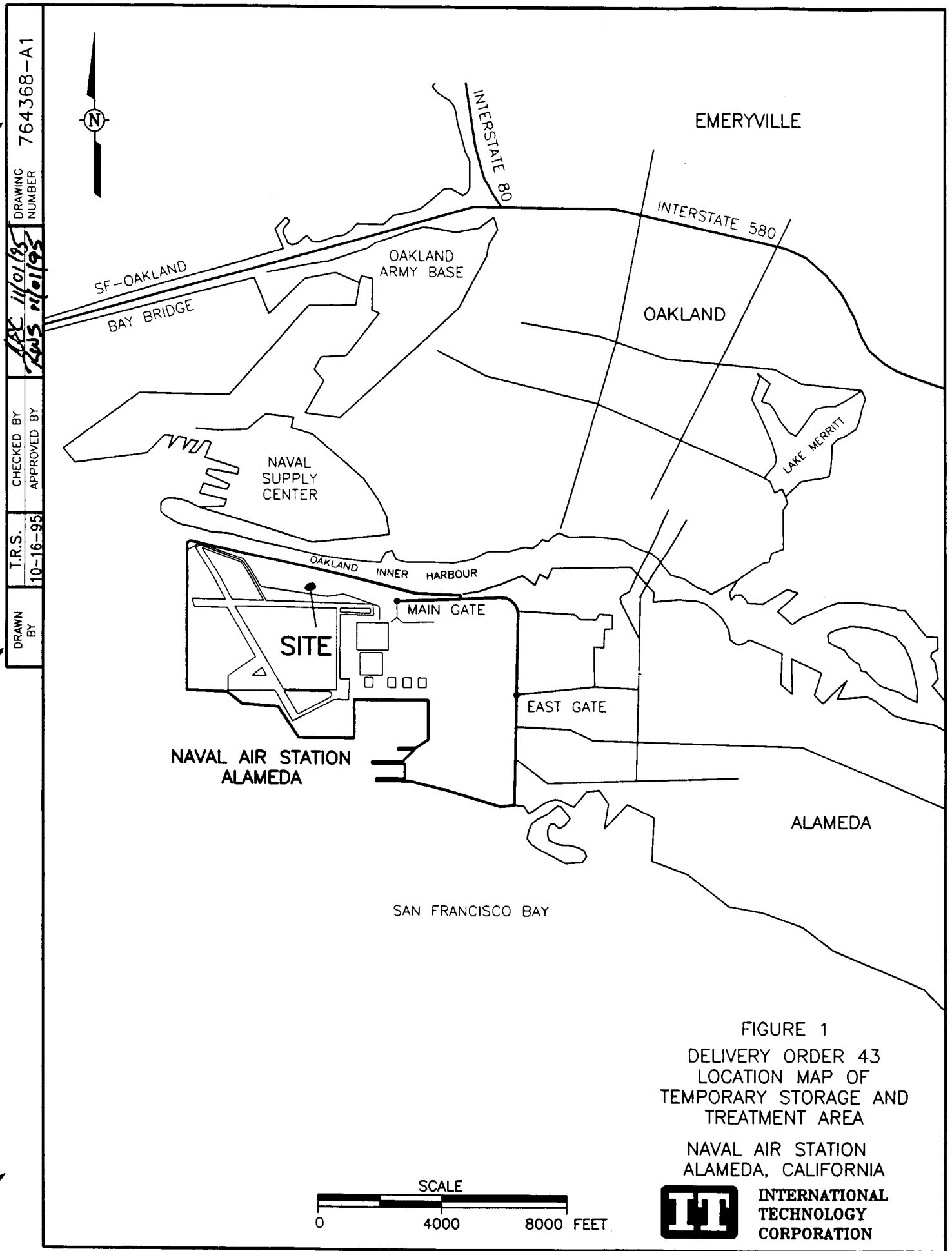


FIGURE 1
DELIVERY ORDER 43
LOCATION MAP OF
TEMPORARY STORAGE AND
TREATMENT AREA

NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL
TECHNOLOGY
CORPORATION

AN-LMS15(AN84)

DRAWING NUMBER 764368-B1

DRAWN BY		
MLWH	10-16-95	
CHECKED BY		
APPROVED BY		

OAKLAND INNER HARBOUR

250'

430'

UNPAVED

CONCRETE PAD

40'

HYDRANT

UNDERGROUND FUEL STORAGE TANK AREA

STORM DRAINS

EXISTING CHAIN LINK FENCE

ASPHALT PAVEMENT

UNPAVED

ELECTRICAL TRANSFORMER

FIRE HYDRANT

140'

UNPAVED

SANITARY SEWER LIFT STATION

EXISTING BUILDING

85'

ASPHALT PAVEMENT

390'

20'

UNPAVED

POWER POLE

80'

CONCRETE PAD

80'

STORM DRAINS

STORM DRAINS

UNPAVED

165'

HYDRANT

PERIMETER ROAD

SCALE: 1" = 50'

FIGURE 2
SITE PLAN OF EXISTING STRUCTURES
TEMPORARY TREATMENT AND STORAGE AREA
DELIVERY ORDER 43
PREPARED FOR
ALAMEDA NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

AL-SPTT(AN84)

DRAWN BY	MLWH 10-26-95	CHECKED BY	APPROVED BY	DRAWING NUMBER 764368-B5
1 10/30/95 T.R.S. REVISED SOIL STORAGE AREA				

OAKLAND INNER HARBOUR

250'

430'

UNPAVED

CONCRETE PAD

40'

HYDRANT

UNDERGROUND FUEL STORAGE TANK AREA

STORM DRAINS

EXISTING CHAIN LINK FENCE

UNPAVED

ASPHALT PAVEMENT

ELECTRICAL TRANSFORMER

FIRE HYDRANT

140'

UNPAVED

SANITARY SEWER LIFT STATION

EXISTING BUILDING

390'

85'

ASPHALT PAVEMENT

UNPAVED

20'

POWER POLE

5000 GAL. RUNOFF STORAGE TANK

80'

CONCRETE PAD

80'

STORM DRAINS

STORM DRAINS

UNPAVED

SEE FIGURE 4 FOR DESIGN DETAILS OF SOIL STORAGE AREA

16,875 SQ. FT. SOIL STORAGE AREA

165'

HYDRANT

PERIMETER ROAD

ADDITIONAL CHAIN LINK FENCING

SCALE

0 50 100FEET

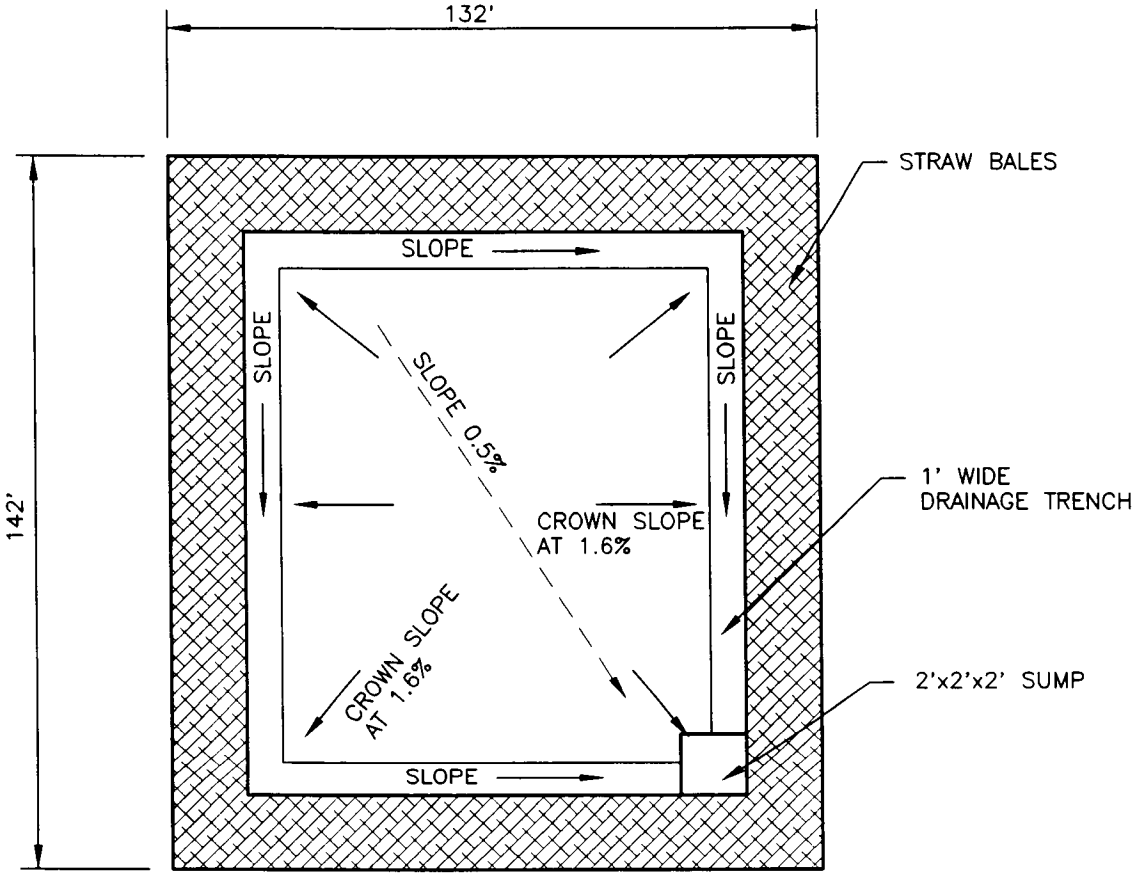
FIGURE 3
PRELIMINARY SITE LAYOUT
TEMPORARY TREATMENT AND STORAGE AREA
DELIVERY ORDER 43
PREPARED FOR
ALAMEDA NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

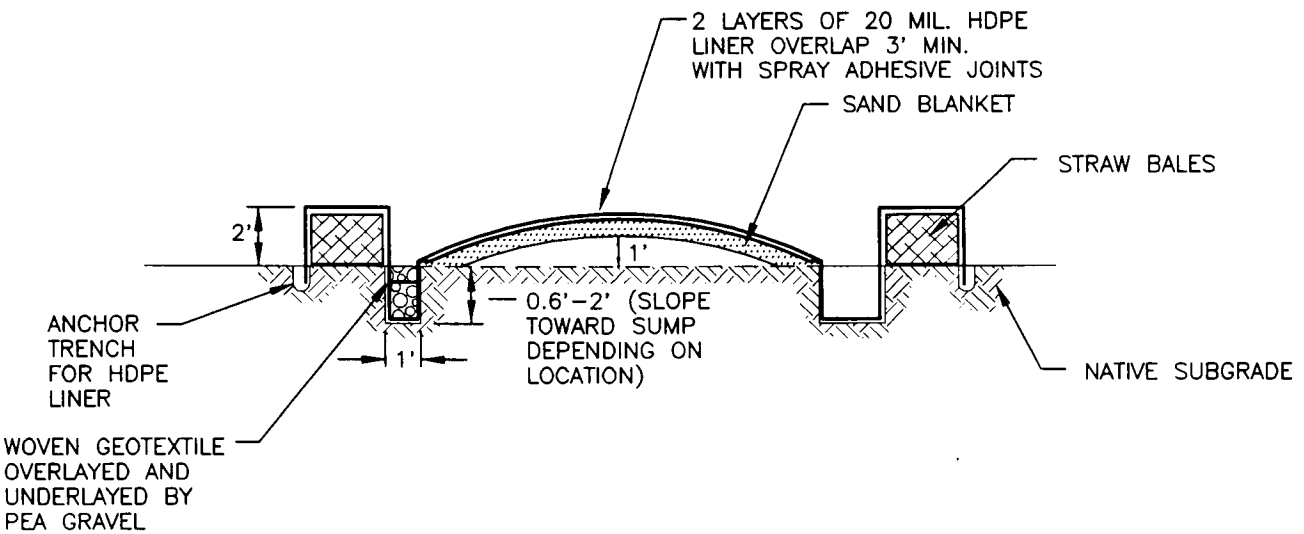
AL-SPTT3(AN84)

1

DRAWN BY	T.R.S. 10-30-95	CHECKED BY	DRAWING NUMBER 764368-A2
		APPROVED BY	



STORAGE AREA PLAN



STORAGE AREA CROSS SECTION

NOT TO SCALE

FIGURE 4

DELIVERY ORDER 43
TEMPORARY STORAGE AND TREATMENT AREA

PREPARED FOR

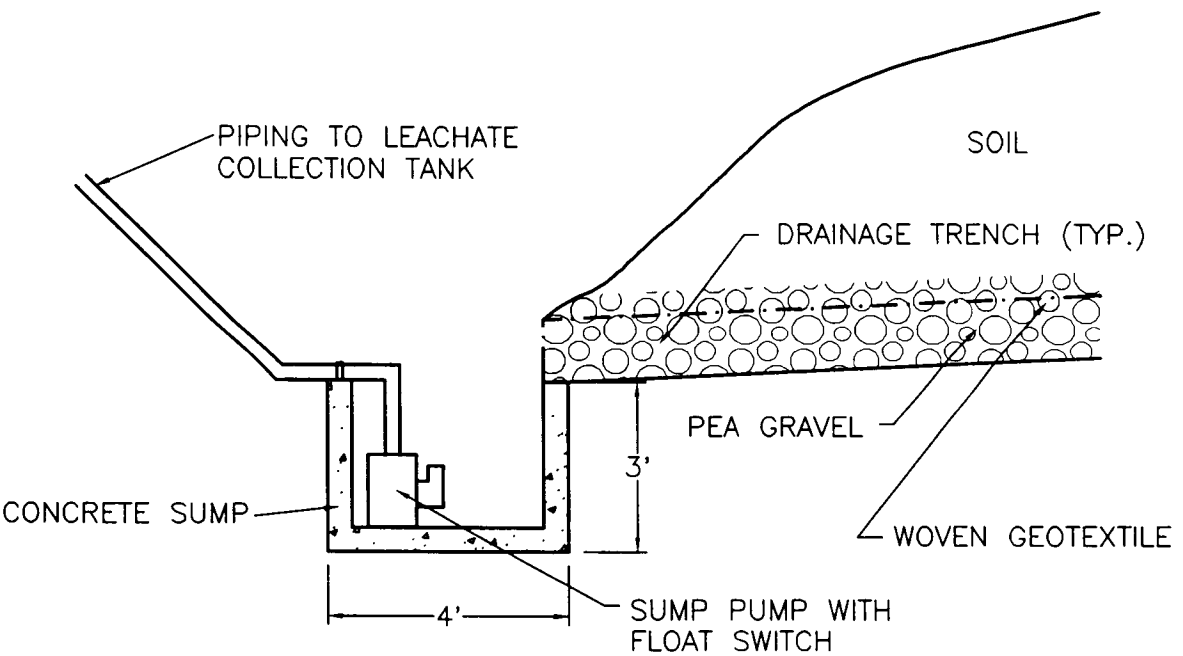
NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

AN-TSTA(AN84)

DRAWN BY	CHECKED BY	DRAWING NUMBER
SJZ 10-16-95	APPROVED BY	764368-A2

1 10/27/95 T.R.S. REMOVED CROSS SECTION, ADD DRAINAGE TRENCH



LEACHATE COLLECTION SUMP DETAIL

NTS

FIGURE 5

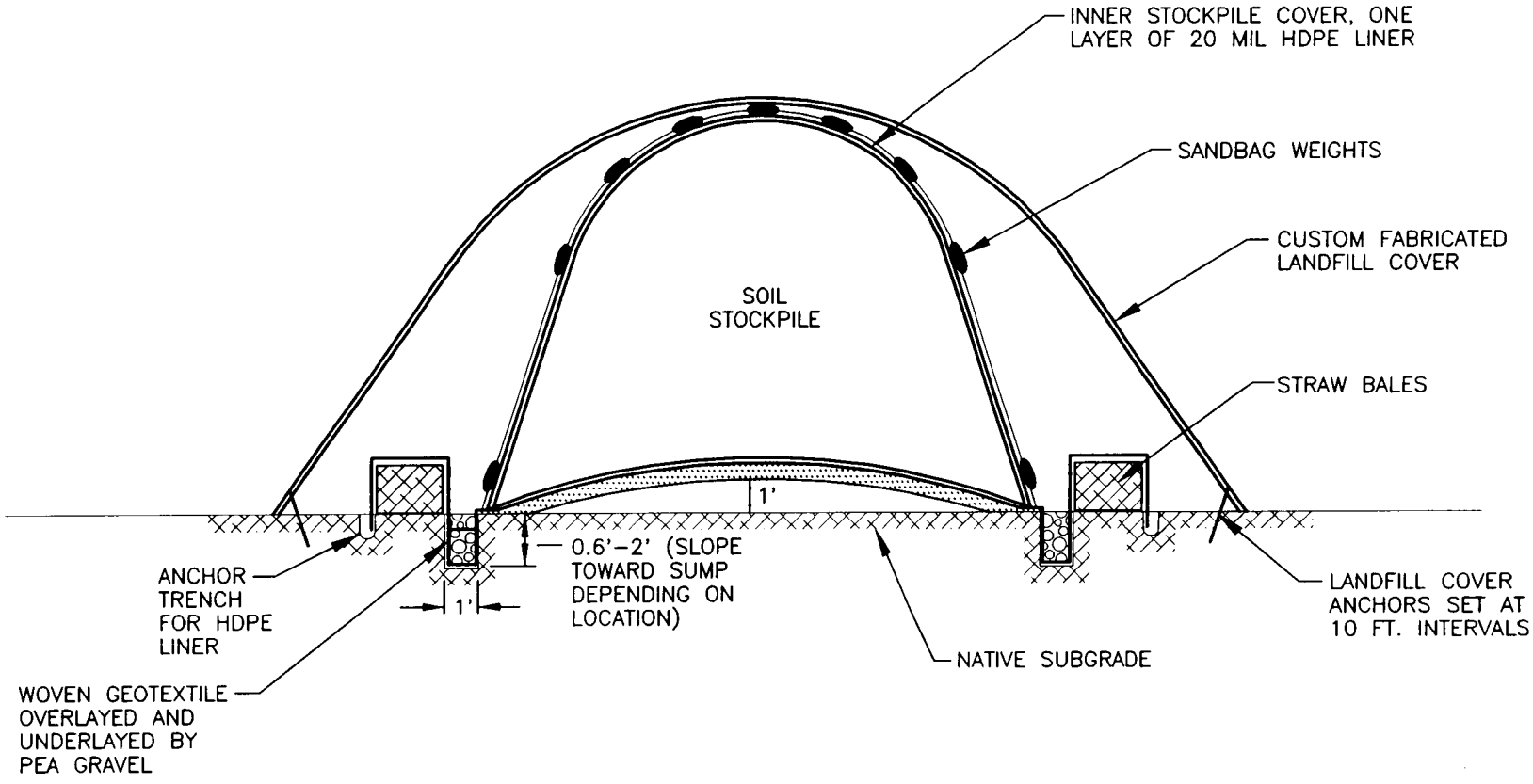
DELIVERY ORDER 43
TEMPORARY STORAGE AND TREATMENT AREA

NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

AL-43F5A(AN84)

DRAWN BY	BJ	CHECKED BY	MSC 11/01/95	DRAWING NUMBER	764368-A3
	10-31-95	APPROVED BY	KWS 11/01/95		



STOCKPILE COVER CROSS SECTION

NOT TO SCALE

FIGURE 6

DELIVERY ORDER 43
TEMPORARY STORAGE AND TREATMENT AREA
PREPARED FOR
NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

AN-SCXS(AN96)

ENVIRONMENTAL PROTECTION PLAN
TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION
ALAMEDA, CALIFORNIA

Contract No. N62474-93-D-2151
Delivery Order No. 0043

Submitted to:

Department of the Navy
Engineering Field Activity West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-2402

Submitted by:

IT Corporation
4585 Pacheco Boulevard
Martinez, California 94553

Revision 1

November 1995

Issued to: Darlene Hann Date: 11/1/95

Copy #:_____ ☐ Controlled ☒ Uncontrolled

ENVIRONMENTAL PROTECTION PLAN
TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION
ALAMEDA, CALIFORNIA

Contract No. N62474-93-D-2151
Delivery Order No. 0043

Revision 1

November 1995

Approved by: _____ Date: 11-01-95
Robert W. Swatek
IT Program Contractor Quality Control Manager

Approved by: _____ Date: 11/01/95
Valerie Crooks
Delivery Order Project Manager

Approved by: _____ Date: 11/01/95
Louis E. Stout
IT Program Manager

Table of Contents

List of Figures

List of Attachments

Attachment	Title
1	Photographic Documentation

1.0 Introduction

This Environmental Protection Plan has been specifically developed to meet the requirements of performing work in a manner that protects the environment during the contract period. Environmental Protection, for the purpose of this project is defined as maintaining the environment in its natural state to the greatest extent possible during project construction, and the enhancement of the appearance of disturbed sites in its final condition.

To accomplish environmental protection, consideration will be given to air, water, and land resources including management of visual aesthetics, natural, historical, and archaeological resources; noise; and other solid waste, as well as other pollutants. The IT Corporation (IT) project manager will implement the Environmental Protection Plan so that all work is performed in a manner that minimizes the pollution of air, water, and land resources, and complies with federal, state, and local regulations.

1.1 Project Scope of Work

The project work consists of the design and construction of a Temporary Storage and Treatment Area (TSTA). A soil storage area is being developed to store soils removed from IR Site 15.

1.2 Conformance with Laws, Regulations, and Permits

The project superintendent will verify that all work is performed in accordance with all applicable, relevant, and appropriate requirements which will include, but not be restricted to the following laws, rules, and regulations.

- 40 CFR Part 110, 112, 113, and 114 - discharge of oil
- 40 CFR Part 50 - air quality standards
- 40 CFR Part 261 - identification and listing of hazardous waste
- 40 CFR Part 264 - standards for owners and operators of Haz Waste Treatment, storage, and disposal facilities
- Title 26, Division 22 - corrective action management units and temporary facilities

- Title 26, Division 23 - construction, operation, and maintenance of remediation waste storage or treatment units

2.0 Preconstruction Condition Survey

On September 27, 1995, a preconstruction condition survey was performed by IT Corporation representatives. The survey was performed to determine preconstruction conditions of landscape features, ground cover, shrubs and trees in and immediately adjacent to the work areas, storage areas, and access routes. The intention of this survey was to document prework site conditions and to identify potential environmentally sensitive areas that might be adversely impacted by construction activities. Photographic documentation of the preconstruction site conditions was collected during the survey. The photos are included in Attachment 1.

The site of the planned TSTA is located in the former Naval Aviation Depot (NADEP) Farm. The site is bordered to the north by the Oakland Inner Harbor, to the south by the right-of-way of Perimeter Road, to the west by an underground fuel storage tank farm, and to the west by a wood frame building. The location of the site is shown on Figure 1.

The area formerly housed different operations including welding, carpentry, sheetmetal work, sandblasting, and equipment painting. All above-ground structures have been removed from the site. Currently, the site is partially paved with asphaltic pavement and contains several concrete pads. The unpaved areas of the site are covered with loose fill material and minor construction debris. Remaining site facilities are limited to utilities which include: two electrical transformers, a sanitary sewer lift station, fire hydrants, and storm water drains which discharge into the Oakland Inner Harbor. Chain link fencing is present on the northern, eastern, and a portion of the western boundaries of the site. Details of the site features are shown on the attached Site Plan (Figure 2).

3.0 Protection of Environmental Resources

3.1 Protection of Air Resources

All construction activities associated with this project will be conducted in a manner to minimize the release of airborne particulates within or outside of the project boundary. Realtime air monitoring will be employed to verify the effectiveness of the program.

3.1.1 Air Monitoring

Air Monitoring will be conducted according to provisions of the air monitoring program described in the project Health and Safety Plan (H&S Plan). This includes real-time air monitoring to assure that site workers and off-site receptors will not be exposed to harmful levels of airborne toxic chemicals in particulate form.

Real-time monitoring will be performed prior to commencement of work in order to establish the baseline conditions existing at the site. IT will provide monitoring during the active cleanup operations both on site near each active work zone, adjacent to soil staging and loading operations, and at perimeter air monitoring locations.

IT will initiate mitigative action at any time that monitored levels are found to be in excess of the respirable dust action level as defined in the health and safety plan. IT's health and safety officer and the ROICC will consider any departures from the general background levels and determine the required mitigative action. All real-time information will be recorded daily on data sheets which will be provided to the ROICC.

3.1.2 Dust, Particulates, and Odor Control

Construction activities associated with this project may result in release of respirable particulates. The work procedure will be designed to control, prevent, and minimize these releases. All work will be performed in accordance with applicable California and federal air pollution regulations, as cited earlier.

Control measures will be implemented for dust particles, aerosols, and gaseous by-products from all construction activities including during weekends, holidays, and hours when work is not in progress. If real-time monitoring for these constituents indicate levels greater than the action levels at the downwind site perimeter, control and response activities will be

initiated for abatement of the on-site source of the air pollution as detailed in the H&S Plan.

Control of fugitive particulates will involve containerization of waste materials and dust control measures such as watering down dry or barren areas and roadways. In addition, soil, decontamination sediment, concrete, asphalt, and other debris will be stored in roll-off containers or covered stockpiles while awaiting final disposal off site.

Procedures will be developed for decontamination of all vehicles leaving the exclusion zone. All vehicles will be inspected for general cleanliness of frame and tires and will be approved by the health and safety officer. No vehicle or roll-off will leave the site unless they are in a broom clean condition, free of dirt on the tailgates, axles, wheels, etc. Vehicles that cannot be broom cleaned will be washed.

IT will transport and dispose of materials off site in accordance with the Work Plan approved by the ROICC. IT will keep all streets used for entering or existing the job site free of excavated material, debris, and any foreign material resulting from construction operations.

Odors will be controlled on site by containerization of any wastes being held on site awaiting disposal. Odor suppressants will be initiated to control odors, if necessary.

3.1.3 Burning

Burning will not be permitted on the job site.

3.1.4 Noise

IT will keep construction activities under surveillance and control to minimize damage to the environment by noise. IT will comply with all OSHA and applicable local noise standards.

3.2 Protection of Water Resources

All construction activities for this project will be conducted in a manner to minimize the impact to water resources within and outside the project boundaries. The main area of concern with regards to water resources is run-off into the Oakland Inner Harbor.

3.2.1 Surface and Groundwater Protection

All project activities will be conducted in compliance with appropriate federal, state, and local laws regarding potential and actual contamination of surface and groundwater and in a manner to prevent the discharge of pollutants into the adjacent waterway. Contaminated wastewater will be collected, stored, and disposed of as described in Section 4.0. All on-site toilet facilities will be of the portable type and disposal will be to an off-site facility.

3.2.2 Noncontaminated Runoff

IT will control the rate of runoff from the construction site to retard and divert runoff away from the Oakland Inner Harbor and from storm drains which discharge directly to the waterway. The materials used will include, but not be limited to, diversion ditches, benches, berms, silt fences, straw or hay bales, burlap, and filter fabric.

3.2.3 Containment Area Water and Leachate Control

Precipitation, decontamination water, and leachates will be collected and stored on site to allow for analysis and appropriate off-site treatment and disposal. Treatment areas and haul routes within the site will be covered with either concrete or asphalt pavement and isolated with berms and curbs to prevent run-off from reaching storm drain structures during periods of activity at the site. Water which accumulates in these areas will be collected in sumps and transferred to on-site storage tanks.

3.3 Protection of Land Resources

All construction activities associated with this project will be conducted in a manner to minimize the impact to land resources within and outside of the project boundaries. In particular, damage to existing trees, shrubs, and ground cover will be minimized to the extent possible. All project activities will be coordinated with the ROICC in order to minimize the impact to land resources.

3.3.1 Monuments and Markers

IT personnel will identify and protect all monuments and markers prior to any construction activity at the site. Location of these monuments and markers will be reviewed with the ROICC at the preconstruction site visit aforementioned. IT will convey to its site personnel the locations of these monuments and markers and the purpose of marking and protecting these items.

3.3.2 Historical and Archaeological Finds

Any and all items discovered during construction which may have an apparent historical or archaeological interest will be carefully preserved in an undisturbed state. The project superintendent will immediately report the find to the ROICC so that proper authorities may be notified.

3.4 Soil Erosion and Sediment Control

A fabric silt fence will be installed around the perimeter at any loose stockpiled backfill material on site. Silt fence is judged to be adequate to control runoff of any silt laden storm water from such small areas. All erosion control will be placed quickly to minimize the duration of exposure of unprotected soils. If necessary, diversion ditches or dikes will be installed and regrading conducted to control sediment migration. Soil will be compacted and graded to minimize erosion. Any installed erosion and sediment control measures will be properly maintained throughout the duration of the project.

4.0 Materials Handling

Wastes, both contaminated and noncontaminated, may be generated by activities associated with project activities. These wastes will be properly managed to mitigate environmental impacts and comply with applicable regulations. All disposal activities will be conducted in accordance with the requirements of the contract document.

4.1 Waste Disposal

During construction activities (prior to storage of contaminated soils), it is not expected that contaminated wastes will be encountered. Excess soil, asphalt and concrete pavement, and debris generated during site preparation will be transported for off-site disposal at an appropriate recycling or landfill facility. Any stockpiles of debris required to be maintained on site will be covered to prevent dust emissions.

If site monitoring during construction indicates that contaminated materials have been encountered, the ROICC will be notified of the conditions observed. Appropriate sampling and analysis will be performed to evaluate the contaminants and to determine appropriate removal and disposal actions. Excavated contaminated soils will be stored in roll-off bins prior to off-site disposal.

Decontamination water, leachate and contaminated run-off will be collected in on-site storage tanks. The accumulated water will be analyzed for contaminants of concern and appropriate disposal methods will be determined. It is assumed that if water is determined to be non-hazardous, existing treatment facilities at the NAS can be utilized for disposal. It is not anticipated that hazardous wastes will be generated during the project. However, if generated, hazardous waste will be stored in containers in accordance with 49 CFR 178. Hazardous waste will be identified in accordance with 40 CFR 261 and 40 CFR 262 and disposed of in accordance with 40 CFR 263 and 40 CFR 265.

4.2 Waste Disposal Facilities

IT will be responsible for locating disposal facilities for both hazardous and nonhazardous materials. IT will provide the names and addresses of the recommended off-site disposal facilities for selection by the Remediation Project Manager (RPM) of EFA-WEST and the Base Environmental Compliance Officer.

4.2.1 Waste Disposal Permits

IT will submit copies of analytical test results to the disposal facility in order to obtain disposal permits.

4.3 Record Keeping

IT will provide all documentation required by the disposal facilities. The documents will include the following:

- Copies of completed Waste Manifests or Bills of Lading for each shipment will be maintained by IT and provided as records to the ROICC,
- IT will obtain and prepare manifest forms, obtain waste code numbers, and complete the waste shipment records as required for verifying the waste type and quantity of each load transported off-site. The manifest form will be verified by the ROICC and copies of each manifest retained by the ROICC following shipment. Any manifest discrepancies will be reported immediately to the ROICC and resolved by IT,
- The Government will provide a hazardous waste generator identification number for use on the manifest,

- IT will notify the ROICC and Base Environmental Office at least 48 hours in advance of the request of signing the manifest,

- The Base Environmental Compliance Officer (Randy Cate) will sign the hazardous waste manifest on behalf of the generator,

- Waste is to be transported from the site only to those facilities listed on the manifest,

- IT will originate, maintain, and provide the ROICC with copies of waste shipment manifest records for all waste materials transported off-site. IT will verify the nature and quantity of wastes shipped on each load. The manifest forms and records shall be consistent with the requirements of RCRA, DOT regulations, and state requirements,

- IT will provide the ROICC with written documentation verifying receipt of each load at the designated treatment or disposal facility and verification of proper treatment or disposal,

- IT will notify the ROICC immediately if IT fails to receive "Notification of Receipt" of any waste shipment within a predetermined time frame approved by the ROICC. IT will undertake whatever actions are necessary to determine the status of the shipment and remedy the situation.

5.0 Noncompliance/Corrective Action

If IT is notified that it is in noncompliance with a federal, state, or local environmental regulation, IT will investigate the nature of the noncompliance notification and will respond, if appropriate, with a proposed corrective action. Once the proposed corrective action is approved, IT will implement this corrective action and notify the appropriate parties when the corrective action is completed. After the noncompliant situation has been eliminated, the project manager will send written notification to the ROICC of the results of the corrective action.

6.0 Training of Personnel in Environmental Cleanup

IT will train personnel in all phases of environmental protection and every on-site worker will have successfully completed OSHA's 40-hour Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120) training course prior to work. The training includes methods of detecting and avoiding pollution, familiarization with pollution

standards (both statutory and contractual), and installation of care of facilities and equipment, including instruments required for monitoring purposes to ensure adequate and continuous environmental pollution control. IT will submit evidence of training to the ROICC as part of the H&S Plan.

7.0 Post Construction Cleanup

Upon project completion and subject to instruction by the ROICC, IT will perform the final site cleanup which will include the following:

- Decontamination of all contractor equipment and materials within the exclusion and contamination reduction zones and removal from site,
- Collection and disposal of all contractor generated contaminated material, debris, and rubbish,
- Removal of support area facilities,
- Removal of excess stockpile and construction materials,
- Removal of equipment decontamination pads and disposal at an approved off-site facility,
- Removal of temporary fences and signs installed under this contract,
- Mechanical broom sweeping of all work areas and haul routes,

FIGURES
ENVIRONMENTAL PROTECTION PLAN

TEMPORARY STORAGE AND TREATMENT AREA
WORK PLAN
REVISION 1

DATED 01 NOVEMBER 1995

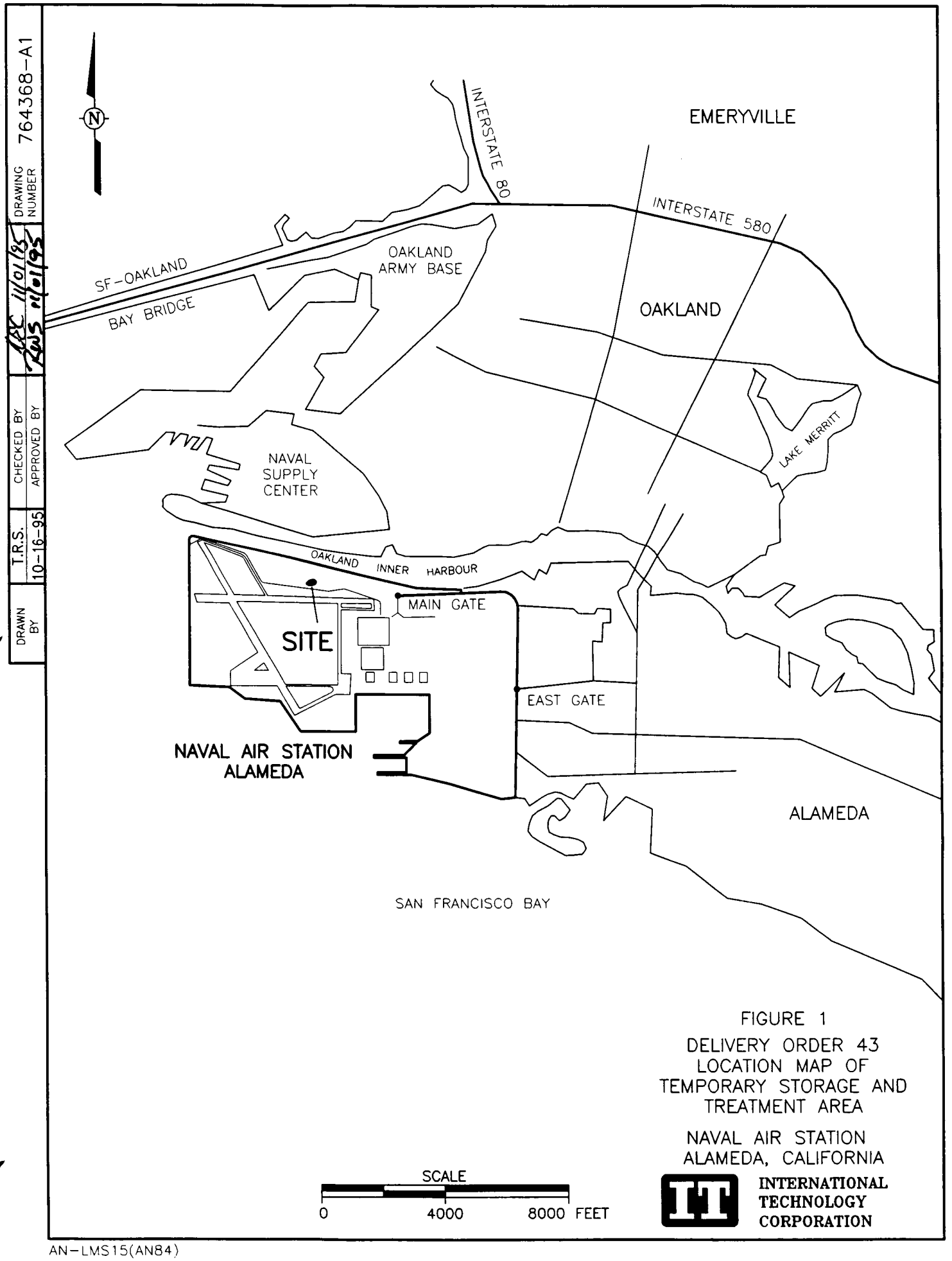


FIGURE 1

DELIVERY ORDER 43
LOCATION MAP OF
TEMPORARY STORAGE AND
TREATMENT AREA

NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

AN-LMS15(AN84)

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
MLWH 10-16-95			764368-B1

OAKLAND INNER HARBOUR

250'

430'

UNPAVED

CONCRETE PAD

40'

HYDRANT

UNDERGROUND FUEL STORAGE TANK AREA

STORM DRAINS

EXISTING CHAIN LINK FENCE

UNPAVED

ASPHALT PAVEMENT

ELECTRICAL TRANSFORMER

FIRE HYDRANT

140'

UNPAVED

SANITARY SEWER LIFT STATION

EXISTING BUILDING

85'

390'

20'

UNPAVED

ASPHALT PAVEMENT

80'

CONCRETE PAD

POWER POLE

80'

STORM DRAINS

STORM DRAINS

UNPAVED

165'

HYDRANT

PERIMETER ROAD

SCALE: 1" = 50'

FIGURE 2
SITE PLAN OF EXISTING STRUCTURES
TEMPORARY TREATMENT AND STORAGE AREA
DELIVERY ORDER 43
PREPARED FOR
ALAMEDA NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

AL-SPTT(AN84)

ATTACHMENT 1
PHOTOGRAPHIC DOCUMENTATION

TEMPORARY STORAGE AND TREATMENT
WORK PLAN
REVISION 1

THE ABOVE IDENTIFIED ATTACHMENT
IS NOT AVAILABLE.

EXTENSIVE RESEARCH WAS PERFORMED BY NAVFAC SOUTHWEST TO LOCATE THIS ATTACHMENT. THIS PAGE HAS BEEN INSERTED AS A PLACEHOLDER AND WILL BE REPLACED SHOULD THE MISSING ITEM BE LOCATED.

QUESTIONS MAY BE DIRECTED TO:

DIANE C. SILVA
RECORDS MANAGEMENT SPECIALIST
NAVAL FACILITIES ENGINEERING COMMAND SOUTHWEST
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92132

TELEPHONE: (619) 532-3676

CONTRACTOR QUALITY CONTROL PLAN
TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

Contract No. N62474-93-D-2151
Delivery Order No. 0043

Submitted to:

Department of the Navy
Engineering Field Activity West
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-2402

Submitted by:

IT Corporation
4585 Pacheco Boulevard
Martinez, California 94553

Revision 1

November, 1995

Issued to: Darlene Harris Date: 11-1-95

Copy #:_____ ☐ Controlled ☒ Uncontrolled

CONTRACTOR QUALITY CONTROL PLAN
TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

Contract No. N62474-93-D-2151
Delivery Order No. 0043

Revision 1

November, 1995

Approved by: _____ Date: 11/01/95
Robert W. Swatek
IT Program Contractor Quality
Control Program Manager

Approved by: _____ Date: 11/01/95
Valerie E. Crooks, P.E.
Delivery Order Project Manager

Approved by: _____ Date: 11/01/95
Louis E. Stout
IT Program Manager

Introduction

This Contractor Quality Control Plan (CQCP) has been prepared to describe those QC actions which will be implemented during the construction, operation and maintenance of a Temporary Storage and Treatment Area (TSTA) for Delivery Order No. 0043.

The CQCP will be used in conjunction with the Program Contractor Quality Control Plan (PCQCP), Revision 1, and Standard Quality Procedures (SQP)/Standard Operating Procedures (SOP), Revision 0, as applicable and described below:

Contractor Quality Control Program Plan

Section 0.0 - Policy Statement; Applicable in its entirety

Section 1.0 - Introduction; Applicable in its entirety

Section 2.0 - Organization and Responsibilities; Applicable with the following:

add: 2.2.8 Project Superintendent
The Project Superintendent reports to the Project Manager and is responsible for the daily supervision of the field work and directing of field crews. He/she will also provide oversight of subcontractors and their daily activities, coordinate construction remediation activities and schedules with the ROICC and CQC Manager, and prepare daily contractor production reports.

Section 3.0 - Quality Control Management; Applicable with the following:

delete subsections 3.4 in its entirety

Section 4.0 - Document Control and Records Management; Applicable in its entirety

Section 5.0 - Instructions, Procedures and Drawings; Applicable in its entirety

Section 6.0 - Procurement; Applicable in its entirety

Section 7.0 - Inspections; Applicable with the following modifications:

delete subsection 7.3 in its entirety

Section 8.0 - Calibration and Maintenance of Measuring and Test Equipment; Applicable in its entirety

Section 9.0 - Test Control; Applicable in its entirety

Section 10.0 - Non-conformance Control and Corrective Actions; Applicable in its entirety

Section 11.0 - Change Control; Applicable in its entirety

Section 12.0 - Audits and Surveillance; Applicable with the following modification:

delete subsections 12.1 through 12.8 entirety

Standard Quality Procedures

The following Standard Quality Procedures (SQP) have been determined to be applicable:

SQP-1.1	Contractor Quality Control Program
SQP-3.1	Project Self Assessment
SQP-4.1	Document Control
SQP-4.2	Records Management
SQP-5.1	Preparation, Revision and Approval of Plans and Procedures
SQP-7.1	Quality Inspections and Inspection Records
SQP-8.2	Calibration and Maintenance of Measuring and Test Equipment
SQP-10.1	Non-conformance Control
SQP-10.2	Corrective Action
SQP-10.3	Stop Work Order
SQP-11.1	Field Work Variance/Request For Information
SQP-12.3	Quality Surveillance
SQP-13.1	Coordination of Subcontracted Analytical Laboratories

Standard Operating Procedures

The following Standard Operating Procedures (SOP) have been determined to be applicable:

SOP-10.1	Soil Organic Vapor Sampling
SOP-12.1	Soil Stockpiling

TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

DELIVERY ORDER 0043

CQC MANAGER
LETTER OF DESIGNATION

October 2, 1995

Mr. Mike Uchida:

This letter will serve to assign you as IT Corporation's site CQC Manager for the above captioned delivery order. In the role of CQC Manager, you have the responsibilities and authorities designated in Section 2.1.3 of the Contractor Quality Control Program Plan, Revision 0. Additionally, you will also have Stop Work authority and will exercise this authority consistent with the CQC Program Plan, Section 10.4 and SQP-10.3. You are granted the authority to approve submittals which have been designated as government information and certified by qualified submittal reviewers as identified on the CQC Organization Chart for this delivery order. Additionally, your authority includes assuring the quality of the work, and as necessary, directing the removal and/or replacement of nonconforming materials or work. In this capacity, you will report directly to me and will administer the established requirements of the delivery order CQC Plan.

If you have any questions or require additional information, please contact me at (510) 372-9100.

Sincerely,
IT CORPORATION

Valerie Crooks

for Robert Swatek
CQC Program Manager

cc: Lou Stout
Valerie Crooks

TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

DELIVERY ORDER 0043

ALT-CQC MANAGER
LETTER OF DESIGNATION

October 2, 1995

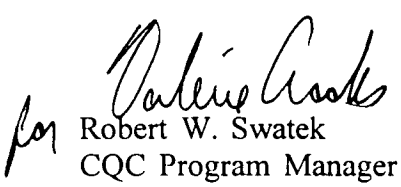
Mr. Dan Brennan:

This letter will serve to assign you as IT Corporation's alternate site CQC Manager for the above captioned delivery order. In the case where the designated CQC Manager, Mr. Mike Uchida, is unable to perform the CQC Manager's duties, you will serve in that capacity. In this role, you will have the responsibilities and authorities designated in Section 2.1.3 of the Contractor Quality Control Program Plan, Revision 0. Additionally, you will also have Stop Work authority and will exercise this authority consistent with the CQC Program Plan, Section 10.4 and SQP-10.3. You are granted the authority to approve submittals which have been designated as government information and certified by qualified submittal reviewers as identified on the CQC Organization Chart for this delivery order. Additionally, your authority includes ensuring the quality of the work, and directing the removal and/or replacement of nonconforming materials or work. You will be authorized to act as an alternate for 14 consecutive working days or 30 nonconsecutive working days at a maximum. In the case where it is believed that these time periods will be exceeded, you must notify me so that I may arrange with EFA-West and the ROICC to have this position replaced. You will report directly to me and will administer the established requirements of the delivery order CQC Plan.

If you have any questions or require additional information, please contact me at (510) 372-9100.

Sincerely,

IT CORPORATION



for Robert W. Swatek
CQC Program Manager

cc: Louis Stout
Valerie Crooks

MZ/10-17-95/WESTDIV/PLANS/CQCPLNC.043

FIGURES
CONTRACTOR QUALITY CONTROL PLAN

TEMPORARY STORAGE AND TREATMENT AREA
WORK PLAN
REVISION 1

DATED 01 NOVEMBER 1995

DRAWN BY	SJZ	CHECKED BY	10/16/95	DRAWING NUMBER	763358-A2
	10-16-95	APPROVED BY	10/16/95		

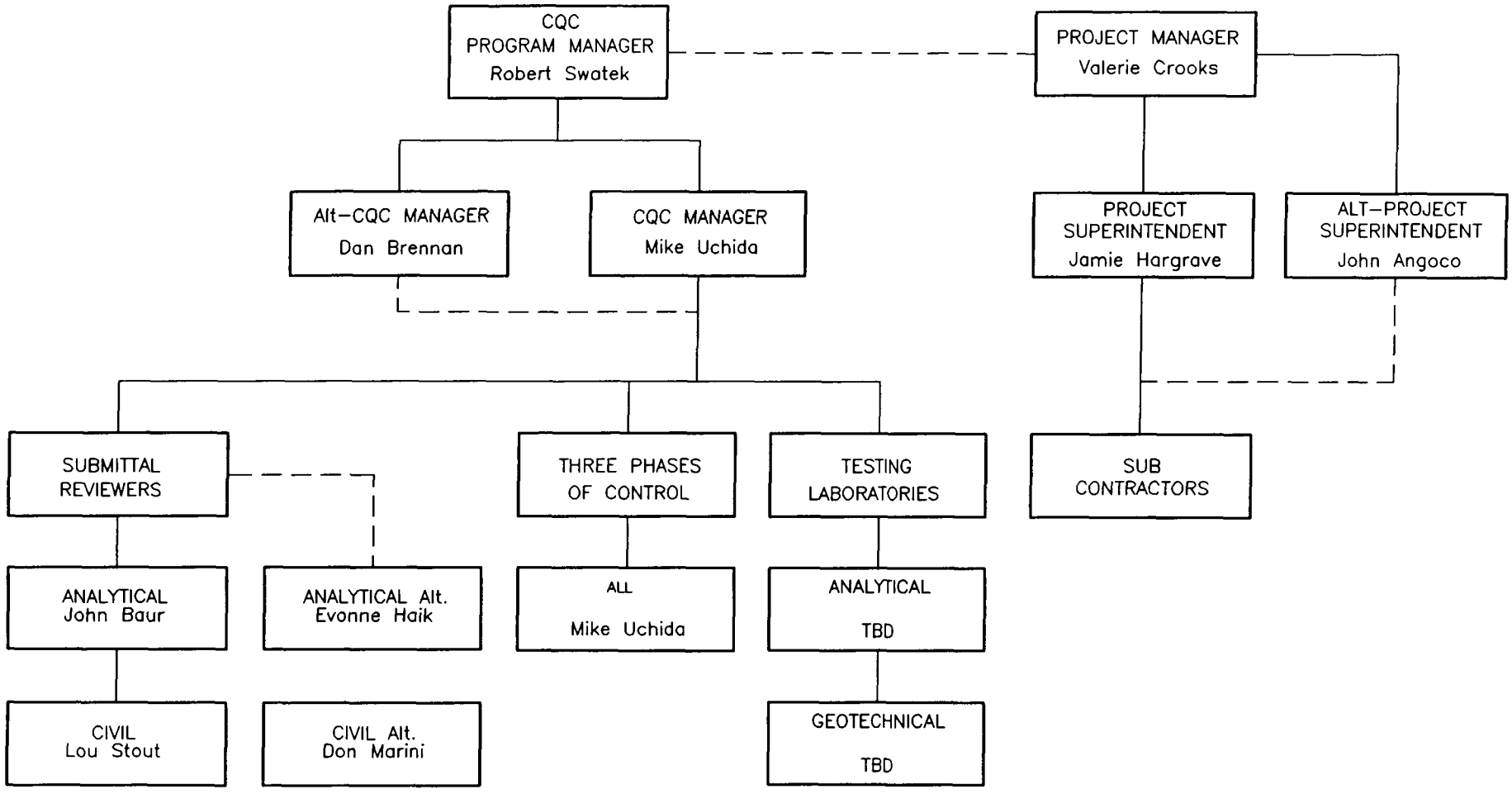


FIGURE 1

QUALITY CONTROL ORGANIZATIONAL CHART

TEMPORARY STORAGE
& TREATMENT AREA
NAS ALAMEDA, CALIFORNIA
DELIVERY ORDER #0043
PREPARED FOR
DEPARTMENT OF THE NAVY
EFA WEST

IT INTERNATIONAL TECHNOLOGY CORPORATION

WD-QCOC4/WD8

TEMPORARY STORAGE AND TREATMENT AREA
NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA

DELIVERY ORDER #0043

DEFINABLE FEATURES OF WORK MATRIX

Spec. Section	Para. No.	Feature of Work	Prep		Initial		Followup	Remarks
			Req	Date	Req	Date	Req	
Work Plan		Underground Utility Locating	X		X		X	
Work Plan		Soil Containment Cell Constructing	X		X		X	
Work Plan		Fence Installing	X		X		X	
Work Plan		Facility Operation & Maintenance	X		X		X	

TESTING PLAN AND LOG

CONTRACT NO. N62474-93-D-2151 DELIVERY ORDER 043	PROJECT TITLE AND LOCATION Temporary Storage and Treatment Area Naval Air Station Alameda	CONTRACTOR IT Corporation

SPECIFICATION SECTION AND PARAGRAPH NUMBER	TEST PROCEDURE	TEST NAME	ACCREDITED/ APPROVED LAB YES NO	SAMPLED BY	LOCATION OF TEST ON SITE OFF SITE	FREQUENCY	DATE COMPLETE	DATE FORWARDED TO CONTR. OFF	REMARKS

SUBMITTAL REGISTER

CONTRACT NO. N62474-93-D-2151 D.O. No. 0043

TLE AND LOCATION

Temporary Storage and Treatment Area, NAS Alameda, Alameda, California

CONTRACTOR

IT Corporation

SPECIFICATION SECTION Basic Contract

TRANSMITTAL NO. a	ITEM NO. b	SPECIFICATION PARAGRAPH NO. c	DESCRIPTION OF ITEM SUBMITTED d	TYPE OF SUBMITTAL										CLASSIFICATION		REVIEWER p	CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		REMARKS(1) y
				DATA e	DRAWINGS f	INSTRUCTIONS g	SCHEDULES h	STATEMENTS i	REPORTS j	CERTIFICATES k	SAMPLES l	RECORDS m		INFORMATION ONLY n	GOVERNMENT APPROVED o		SUBMIT q	APPROVAL NEEDED BY r	MATERIAL NEEDED BY s	CODE t	DATE u	SUBMIT TO GOVERNMENT v	CODE w	DATE x	
	001	2.1/6.14.5	As-Build Record- Drwg.		X										X										Submit upon completion of D.O.
	002	2.1/6.14.5	As-Built Record - Material		X									X											Submit upon completion of D.0.
	003	3.2.2	Site Health & Safety Plan						X					X											Submit 15 days after D.O. award
	004	4.3.1	Environmental Protection Report						X						X										Submit 14 days after meeting
	005	4.3.1	Environmental Conditions Report						X						X										Submit 15 days after D.O. award
	006	5.5.1	CMS Status Report						X					X											Submit monthly
	007	5.5.1	CMS Required Sorts						X					X											Submit monthly
	008	6.3.1.1	CQC Plan Addenda						X						X										Submit 15 days after D.O. award
	009	6.4	CQC Meeting Minutes					X						X											Submit 2 days after each meeting
	010	6.4/6.14.4	Non Compliance Checkoff List										X	X											Initial - 30 days after mob./Subsequent - monthly
	011	6.4	Test Result Summary										X	X											Submit monthly
	012	6.4/6.14.2	CQC Daily Report						X					X											Submit daily/Submit weekly for non-work periods
	013	7.3.1	Submittal Status Log										X		X										Submit 15 days after D.O.
	014	4.9.5	Manifests										X	X											Government Signs
	015	5.4.1	Work Plan						X						X										Submit Prior to Work
	016	6.4/6.14.3	Testing Plan and Log										X		X										Submit Monthly
	017	6.13.2	Invoice Certification							X				X											Submit with Invoice
	018	6.13.3	QC Completion Certification							X				X											Submit upon Completion

(1) Days are based on five-day work week.

SUBMITTAL REGISTER

CONTRACT NO. N62474-93-D-2151 D.O. No. 0043

TITLE AND LOCATION

Temporary Storage and Treatment Area, NAS Alameda, Alameda, California

CONTRACTOR

IT Corporation

SPECIFICATION SECTION Basic Contract

TRANSMITTAL NO. a	ITEM NO. b	SPECIFICATION PARAGRAPH NO. c	DESCRIPTION OF ITEM SUBMITTED d	TYPE OF SUBMITTAL: DATA e	DRAWINGS f	INSTRUCTIONS g	SCHEDULES h	STATEMENTS i	REPORTS j	CERTIFICATES k	SAMPLES l	RECORDS m	CLASSIFICATION: INFORMATION ONLY n	CLASSIFICATION: GOVERNMENT APPROVED o	REVIEWER p	CONTRACTOR SCHEDULE DATES: SUBMIT q	APPROVAL NEEDED BY r	MATERIAL NEEDED BY s	CONTRACTOR ACTION: CODE t	DATE u	SUBMIT TO GOVERNMENT v	GOVERNMENT ACTION: CODE w	DATE x	REMARKS[1] y
	019	N/A	20 Mil HDPE Liner Data	X									X											
	020	N/A	HDPE Liner Adhesive Data	X									X											
	021	N/A	Prefabricated Concrete Sump Data	X									X											
	022	N/A	Sump Pump Data	X		X							X											
	023	N/A	Bedding Sand-Analytical Data	X						X			X											Warranty
	024	N/A	Electrical Sketch-connection from panel to sump pump	X	X								X											
	025	N/A	5000 Gal Tank	X									X											Warranty if available
	026	N/A	Preconstruction Inspection Report						X					X										Submit 30 days after analytical data received.
	027	N/A	Closure Inspection Report						X					X										Submit 45 days after removal of stockpile materials.

[1]Days are based on five-day work week.

SITE HEALTH AND SAFETY PLAN
NAVAL AIR STATION ALAMEDA
TEMPORARY STORAGE AND TREATMENT AREA

Contract No. N62474-93-D-2151
Delivery Order No. 0043

Submitted to:

Department of the Navy
Engineering Field Activity, West
Naval Facilities Engineering Command
900 Commodore Drive, Building B-208
San Bruno, California 94066-2402

Submitted by:

IT Corporation
4585 Pacheco Boulevard
Martinez, California 94553

Revision 1

November 1995

Issued to: Darlene Harris Date: 11-1-95

Copy #:_____ ☐ Controlled ☒ Uncontrolled

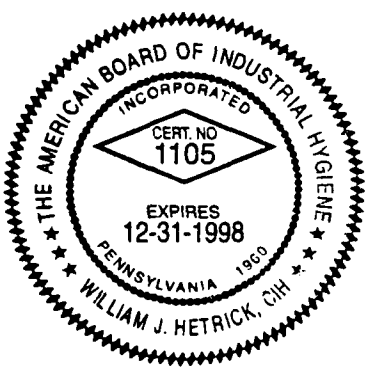
SITE HEALTH AND SAFETY PLAN
NAVAL AIR STATION ALAMEDA
TEMPORARY STORAGE AND TREATMENT AREA

Revision 1

November 1995

Approved by: _____ Date: 11/01/95
Louis E. Stout
IT Program Manager

Approved by: _____ Date: 11/1/95
William Hetrick
IT Program CIH



Project Health and Safety Plan Acknowledgment

I have read, understand, and agree to abide by the provisions as detailed in this Project Health and Safety Plan for the activities described in the Project Work Plans. Failure to comply with these provisions may lead to disciplinary action which may include dismissal from the work site, termination of employment or, for subcontractors, termination of the work contract.

Printed Name	Company	Signature	Date

Disclaimer

This Project Health and Safety Plan is for use by IT Corp. personnel, subcontractors and visitors who will be working on the NAS Alameda TSTA Project in Alameda, California. This Project Health and Safety Plan was developed with the goal of providing the best available and most current industrial health, safety and regulatory information. The recommendations and guidance provided herein are based on currently accepted industrial hygiene principles and safety practices. All such advice and instruction is intended to reflect the present level of health and safety efforts consistent with prevailing professional standards. This representation is in lieu of all warranties either expressed or implied, and no responsibility is assumed for the misapplication of any materials, advice or instruction provided herein.

Any reference contained in the Project Health and Safety Plan to products and manufacturers is intended only for purposes of illustration and is not meant to be, and should not be, construed as an endorsement by International Technology Corporation or its subsidiaries.

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List of Appendices

List of Acronyms

ABIH	American Board of Industrial Hygiene
AIDS	Acquired Immune Deficiency Syndrome
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
bpm	Beats Per Minute
BCSP	Board of Certified Safety Professionals
°C	Degrees Celsius
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CET	Certified Environmental Trainer
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CPR	Cardiopulmonary Resuscitation
CSP	Certified Safety Professional
CRZ	Contamination Reduction Zone
dBA	Decibels, A-weighted
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
EMR	Environmental Medical Resources, Inc.
EPA	Environmental Protection Agency
EZ	Exclusion Zone
°F	Degrees Fahrenheit
FADL	Field Activity Daily Log
FID	Flame Ionization Detector
FM	Factory Mutual
FR	Federal Register
HAZWOPER	Hazardous Waste Operations and Emergency Response
HBV	Hepatitis B Virus
HEPA	High Efficiency Particulate
HIV	Human Immunodeficiency Virus
HS	Health and Safety
IDLH	Immediately Dangerous to Life and Health
IIPP	Injury and Illness Prevention Plan
IT	IT Corporation
LEL	Lower Explosive Limit
MSDS	Material Safety Data Sheet
NIOSH	National Institute of Occupational Safety and Health
NRR	Noise Reduction Rating
OSHA	Occupational Safety and Health Administration

List of Acronyms (Continued)

OVA	Organic Vapor Analyzer
PEL	Permissible Exposure Limit
PHSP	Program Health and Safety Plan
PID	Photoionization Detector
SPM	Senior Project Engineer/Manager
PPE	Personal Protective Equipment
ppm	Parts per Million by Weight
PS	Project Superintendent
SEIR	Supervisor's Employee Injury Report
SHSO	Site Health and Safety Officer
SIR	Safety Inspection Report
SSHP	Site Safety and Health Plan
TSM	Tailgate Safety Meeting
UL	Underwriter's Laboratory
USA	Underground Services Alert
USACE	U.S. Army Corps of Engineers
UST	Underground Storage Tank
VOC	Volatile Organic Compound

1.0 Introduction

1.1 Objective

The objective of this Site Health and Safety Plan (SSHP) is to ensure that safe working conditions exist during the NAS Alameda Phase II Project. The safety procedures outlined have been established based on preliminary analysis of potential hazards within the Site. This HASP describes the health and safety requirements and procedures to be used while conducting field work and includes:

- Responsibilities of persons on site;
- Training Program;
- Medical Surveillance Program;
- Hazard Analysis;
- Hazard Control Program;
- Personal Control Program;
- Decontamination Procedures;
- Industrial Hygiene Monitoring Program; and
- Certain Specific Work Precedures.

This document, in combination with all SSHP Addenda and IT's Corporate Health and Safety Policy manual, also serves as the company's Injury and Illness Prevention Plan (IIPP) and Code of Safe Work Practices.

1.2 Site and Facility Description

The Temporary Storage and Treatment Area (TSTA) will be located at the Naval Avaition Depot (NADEP) Farm, an area which formerly housed different operations including welding, carpentry, sheetmetal work, sandblasting, and equipment painting. The TSTA will be used for storage and treatment of wastes and contaminated soils at NAS Alameda.

The site has been cleared of non-essential structures with an asphalt paved surface, located on a parcel west of the Construction Battalion Unit on Perimeter Road. To the north is the Oakland/Alameda estuary, and to the south an active flight line runway (see Appendix for Site Location Maps).

1.3 Policy Statement

It is the policy of IT Corporation (IT) to provide a safe and healthful work environment for all its employees and subcontractors. IT considers no phase of operation or administration to be of greater importance than injury or illness prevention. Safety takes precedence over expediency or shortcuts, and every reasonable step to reduce the possibility of injury, illness, or accident will be taken.

This Site Safety and Health Plan (SSHP) prescribes the procedures that must be followed during field work associated with the project. Operational changes which could affect the health or safety of personnel, the community, or the environment will not be made without the prior approval of the IT Senior Project Engineer/Manager, and the Program Certified Industrial Hygienist (CIH).

The provisions of this SSHP are mandatory for all IT personnel and subcontractors assigned to the project. IT requires all visitors to the work site to abide by the requirements of this SSHP. The Program CIH will provide written addenda to this SSHP when changes warrant. No changes to the plan will be implemented without prior approval of the Program CIH or his authorized representative.

1.4 References

This SSHP complies with Federal Occupational Safety and Health Administration (OSHA), California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), United States Environmental Protection Agency (EPA), California Environmental Protection Agency (Cal/EPA), and California Department of Toxic Substances Control (DTSC), and U.S. Army Corps of Engineer (USACE) regulations. This SSHP follows the guidelines established in the following documents:

- Standard Operating Safety Guidelines (EPA, November 1984);

- Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities National Institute of Occupational Health and Safety (NIOSH 86-116);

- Title 29 of the Code of Federal Regulations (CFR), Parts 1910 and 1926 including Part 1910.120 (Hazardous Waste Operations and Emergency Response);

- Title 8 of the California Code of Regulations (CCR), (Cal/OSHA construction and General Industry Safety Orders);

- U.S. Army Corps of Engineers Safety and Health Requirements Manual (USACE 385-1-1, October 1992).

The contents of this SSHP are consistent with, or supplement the following IT Health and Safety Policies and Procedures:

- HS001 Safety Policy
- HS003 Philosophy for Corporate Procedures
- HS010 Employee Safety and Health Work Rules
- HS011 Contractor Safety and Health Rules
- HS012 Chemical Hygiene Plan and Safety Manual
- HS013 Health and Safety Procedure Variances
- HS018 Safety Councils
- HS019 Injury and Illness Prevention Program
- HS020 Accident Prevention Program: Reporting, Investigation, and Review
- HS021 Accident Prevention Program: Management Safety Audits and Inspections
- HS022 Accident Prevention Program: Review of New Proposals, Projects, Operations and Construction
- HS040 Stop Work Authority

- HS041 Embryo-Fetus Protection Program
- HS050 Training Requirements
- HS051 Tailgate Safety Meetings
- HS052 Health and Safety Plans
- HS060 Hazard Communication Program
- HS090 OSHA Regulatory Inspections
- HS091 Serious Injury and Fatality Reporting Requirements
- HS100 Medical Policies and Procedures
- HS101 Drug and Alcohol Testing
- HS102 Access to Employee Exposure and Medical Records
- HS104 Employee Notification of Industrial Hygiene Monitoring Results
- HS105 Occupational Injuries/Illnesses Procedures
- HS106 First Aid Kits
- HS300 Confined Spaces, Industrial
- HS303 Hydroblasting
- HS304 Compressed Gas
- HS306 Handling Known Compressed Gas Cylinders
- HS307 Excavation and Trenching
- HS309 Underground Storage Tank Removal
- HS310 Hazardous Waste Operations at Uncontrolled Waste Sites
- HS311 Emergency Response Operations
- HS312 Hazardous Waste Operations at TSD Facilities

- HS313 TSD Facilities - Minimum Staffing Requirements
- HS314 Hot Work in Hazardous Locations
- HS315 Control of Haardous Energy Sources (Lockout/Tagout)
- HS316 Drill Rig Operations
- HS317 Unexploded Ordnance (UXO)
- HS400 Working in Hot Environments
- HS401 Cold Stress
- HS402 Hearing Conservation Program
- HS500 OSHA Regulated Toxic and Hazardous Substances
- HS501 Handling of PCBs in the Laboratory
- HS512 Handling of Blood or Other Potentially Infectious Materials
- HS600 Personal Protective Equipment
- HS601 Respiratory Protective Program
- HS604 Use and Maintenance of Portable Electrical Equipment
- HS700 Radiation Protection Program
- HS800 Motor Vehicle Operation: General Requirements
- HS810 Commercial Motor Vehicle Operation and Maintenance
- HS811 DOT 24-Hour Emergency Number
- HS820 Forklift Operation
- HS822 Mobil Crane Inspection
- HS900 Emergency Response Program.

The requirements of these corporate policies apply to all work conducted on this project.

2.0 Responsibilities

2.1 All Personnel

Each person is responsible for his/her own health and safety, for completing tasks in a safe manner and for reporting any unsafe acts or conditions to his/her supervisor and the Project Superintendent (PS). All persons on-site are responsible for continuous adherence to health and safety procedures during the performance of any project work. In no case may work be performed in a manner which conflicts with the intent of, or the inherent safety precautions expressed in, this SSHP. After due warning, persons who violate procedure and work rules may be dismissed from the site, terminated, or have their contract revoked. Blatant disregard or repeated infractions of health and safety policies are grounds for disciplinary action up to, and including, dismissal, and/or removal from the work area.

All IT and subcontractor personnel are required to read and acknowledge their understanding of this SSHP. All project personnel are expected to abide by the requirements of this SSHP and cooperate with project management in ensuring a safe and healthful work site. Site personnel are required to immediately report any of the following to the PS:

- Accidents and injuries, no matter how minor;
- Unexpected or uncontrolled release of chemical substances;
- Any signs or symptoms of chemical exposure;
- Any unsafe or malfunctioning equipment; and
- Any changes in site conditions which may affect the health and safety of project personnel.

2.2 Senior Project Engineer/Manager

The Senior Project Engineer/Manager (SPM) has overall responsibility for the health and safety of all personnel on the project. His/her responsibility with regard to health and safety is to maintain company policy and resolve health and safety issues with the assistance and guidance of the Program CIH. The SPM will provide the Program CIH with the company name and representatives of those contractors being considered for hire, as well as those hired, to allow required preliminary information to be collected in a timely manner.

The SPM is responsible to:

- Notify the Program CIH when field operations begin so that field support can be scheduled;
- Ensure that the SSHP is read and signed by all field personnel on the project, including subcontractors. The SSHP must also be signed by the Program CIH and the SPM;
- Ensure that all provisions of the SSHP are followed. Contact the Program CIH for any variances or modifications desired;
- Demonstrate a personal commitment to safety on the project;
- Ensure that tailgate safety meetings are conducted daily, signed by all field workers and reviewed by the PS and the SPM. The SPM must have completed the Hazardous Waste Supervisor Course;
- Ensure that Field Activity Daily Log (FADL) forms are completed for each day of operations, signed and dated by the author, and that all persons listed have signed the SSHP and tailgate form;
- Have supervisors inspect the project at least weekly, with inspections and corrective actions documented on FADL forms. The SPM is to inspect the project for safety hazards periodically;
- Ensure correction of any reported or observed safety hazard;
- Ensure employees are trained on the hazards of any hazardous substances used. MSDSs must be on-hand for all hazardous materials (other than wastes) and containers must be properly labelled;
- Ensure that project safety equipment is inspected regularly (monthly for fire extinguishers);
- Report all near-miss, injury, illness and vehicle accident incidents to the Program CIH within 24 hours and ensure that a Supervisor's Employee Injury Report (SEIR) form is initiated;
- Notify the Program CIH when field work lasts more than six months so that the SSHP can be reviewed and updated as needed;
- Immediately notify the Program CIH upon receiving notice of any regulatory agency inspection; and

- Ensure that the project files receive copies of:

  - all internal and external HS correspondence
  - all air sampling records (including "none-detected")
  - all accident reports and Accident Review Board documentation
  - documentation of audits and corrective actions
  - air monitoring equipment calibration records
  - all FADLs.

The SPM will lead at least one site safety audit team per quarter while field activities are conducted and will ensure that all accidents, incidents and/or near-misses are investigated in a timely manner. The SPM will ensure that management performs an investigation of all incidents or accidents which had the potential to cause a lost-time or hospitalization incident or fatality within 24 hours of the incident.

The SPM for this job is Richard Johns.

2.3 Program Certified Industrial Hygienist (CIH)

The Program CIH is responsible for the preparation and modification (as necessary) of this SSHP. The Program CIH will approve changes and update the SSHP as warranted by altered site conditions and shall have the only authorization to effect such changes (except those changes outlined in the Emergency Response Plan). The Program CIH will advise the SPM on health and safety issues which may have an impact on project operations. In addition, the Program CIH is responsible to:

- Oversee and review the work if the Site Health and Safety Officer (SHSO);
- Administer the general health and safety program;
- Provide technical assistance to the SPM and the PS;
- Investigate significant accidents, illnesses and near-misses. Recommend corrective actions as appropriate. Review all Accident/Incident Investigation Reports;
- Establish the required personal protective equipment for each work area;
- Assist the PS and SHSO in establishing decontamination area locations;

- Evaluate and approve contractors regarding health and safety compliance both prior to accepting the contract and upon completion of the project, as appropriate; and

- Establish proper employee exposure monitoring and assess the appropriateness of protective measures.

The Program CIH is William Hetrick. Mr. Hetrick is certified by the American Board of Industrial Hygiene (ABIH).

2.4 Project Superintendent

The Project Superintendent (PS) reports to the SPM and is responsible for field enforcement of the SSHP. This includes communicating project health and safety requirements to all on-site project personnel (both IT and subcontractor personnel), consulting with the Program CIH regarding changes to the SSHP, and conducting periodic health and safety inspections with the SHSO. The PS is responsible for informing the Program CIH and the SPM of any changes to the workplan, prior to implementation, so that health and safety issues introduced by those changes may be properly addressed. The PS will be on-site during all project related activities or will delegate his responsibilities to qualified supervisory personnel [i.e., person(s) having 8-hours of hazardous waste operations supervisory training per 29 CFR 1910.120 (e) (4)], as appropriate.

Other responsibilities include:

- Reading and being familiar with the Project SSHP, as well as appropriate IT Policies and Procedures;

- Directing work so as to ensure personnel safety and protection of property and the environment;

- Providing all required safety supplies to work crews prior to each task;

- Demonstrating a personal commitment to safety on the project;

- Observing project personnel for signs of chemical or physical trauma;

- Conducting jobsite safety audits with the SHSO at least weekly;

- Immediately notifying the SPM and Program CIH upon receiving notice of any jobsite inspection by a regulatory agency;

- Correcting any hazards disclosed by project workers or the SHSO;

- Rendering appropriate disciplinary action to individuals who do not strictly adhere to the project SSHP;

- Immediately notifying the SPM and Program CIH of any illnesses, accidents, injuries, or near-misses related to the project, and submitting appropriate documentation to the Program CIH with 24 hours.

- Assist the Program CIH and/or SHSO in establishing appropriate site control zones.

The Project Superintendent is Jamie Hargrave.

2.5 Site Health and Safety Officer

The Site Health and Safety Officer (SHSO) will represent the Program CIH on-site during field activities. As such, he/she will be responsible for providing independent surveillance of the routine implementation of the project SSHP. The SHSO may not, however, authorize changes to or variances from the SSHP. Any modifications of the project SSHP must be approved by the Program CIH.

Other duties of the SHSO include:

- Immediately stopping work if Immediately Dangerous to Life or Health (IDLH) or other extremely hazardous conditions are encountered.

- Verifying that all personnel have the necessary training and medical clearance prior to entering the site;

- Identifying all site personnel with medical restrictions to the PS;

- Determining that monitoring equipment is properly calibrated and used, and that results are properly recorded and filed;

- Informing the Program CIH of significant changes in either the environment or work procedures which may require modification of the SSHP;

- Observing work party members for symptoms of on-site exposure or stress;

- Overseeing implementation of the SHSP, reporting any deviations from the Plan to the PS and the Program CIH;
- Immediately notifying the PS of any unsafe conditions observed, and providing technical guidance to the PS for the correction of the condition;
- Recording daily maximum and minimum temperatures;
- Conducting employee exposure monitoring for workplace contaminants, noise and/or heat stress as outlined in Section 8;
- Monitoring the use of required protective clothing and safe work practices;
- Recording on FADL forms the names of all personnel who enter the EZ or CRZ;
- Determining and posting routes to capable medical facilities and emergency telephone numbers (including poison control facilities), and arranging emergency transportation to medical facilities;
- Notifying local public emergency officers of the nature of the operations, and posting of their telephone numbers in an appropriate location;
- Conducting and documenting required project specific training;
- Conducting job site safety audits at least daily;
- Ensuring that all personnel have been given the proper medical clearance, have met appropriate training requirements, and have provided the appropriate documentation;
- Ensuring that training and medical records are maintained on-site for all IT and subcontractors personnel;
- Monitoring project personnel to ensure ongoing compliance with the SSHP;
- Assisting the PS in establishing appropriate Work Zones;
- Presenting tailgate safety meetings and maintaining attendance records;
- Monitoring that decontamination procedures are meeting established criteria;
- Acting as Project Hazard Communication Coordinator as required by 29 CFR 1910.1200 and T8 CCR 5194;

- Responding to employee's/contractor's health and safety concerns; and
- Periodically auditing subcontractor qualifications to ensure only properly qualified personnel are allowed in the work area.

The Site Health and Safety Officer is Korene Mangelsen.

2.6 Subcontractor Management and Personnel

Subcontractor management is responsible for the compliance of their personnel with this Project SSHP. Since subcontractors are hired for their specific expertise, they must assume primary responsibility for the health and safety of their personnel. The subcontractor's Field Supervisor or Crew Leader will also be responsible for performing a weekly safety inspection of their operations. A copy of this inspection must be submitted to the PS each week. The subcontractor's Field Supervisor must have successfully completed 8 hours of Supervisory training per 29 CPR 1910.120 (e)(4) and T8 CCR 5192 (e)(4) if the subcontractor personnel will be performing work within either the Exclusion Zone (EZ) or Contamination Zone (CRZ).

Subcontractors must also:

- Comply with all applicable Occupational Safety and Health Administration (OSHA) regulations as defined in Title 29 Code of Federal Regulations Parts 1910 and 1926 (29 CFR 1910 and 1926), as well as the United States Army Corps of Engineers "Safety and Health Requirements Manual" (EM 385-1-1).
- Perform all work in California in Compliance with applicable Cal/OSHA standards, found in Title 8 of the California Code of Regulations.
- Provide documentation for each on-site worker of successful completion of either 24 or 40 hours training (depending on the work to be conducted) in health and safety practices for hazardous waste operations per 29 CFR 1910.120 and T8 CCR 5192. This must be received prior to the employee arriving on-site.
- Provide documentation for each on-site worker of a doctor's approval for the worker to perform hazardous waste remediation work based on an annual medical exam and work history review prior to the worker arriving on site.

- Provide updated documentation as on-site individuals complete annual HAZWOPER refresher training and/or receive annual medical examinations. Such documentation must be provided prior to the expiration date of the previous year's training/physical examination.

- Provide their own personal protective equipment (including safety boots, safety glasses, hard hats, respirators, protective clothing and the like).

- Report all incidents/accidents/injuries/near-misses immediately to the PS. Provide input to IT's investigation of any mishap or near miss. Provide documentation to IT of the subcontractor's internal investigation of the mishap/near miss.

- Provide proof of additional (non-HAZWOPER) training upon request (e.g., documentation of forklift training).

- Provide awareness level training to affected IT workers regarding any material, equipment or operation which may pose a hazard to the IT employees.

- Provide a Material Safety Data Sheet (MSDS) to IT for all materials used on the project which are regulated by the Hazard Communication Standard (29 CFR 1910.1200) and T8 CCR 5194. MSDSs shall be approved by IT Corporation prior to the material being brought on site.

- Notify IT in writing prior to bringing any radioactive materials or devices (e.g., nuclear density gauges) onto the jobsite. Such notification must identify by name the subcontractor's Radiation Safety Officer and list the company's radioactive material license number.

- Provide own first aid kits and first aid trained individual.

- Submit personnel to "reasonable cause" drug and alcohol testing when directed to do so by the Senior Project Engineer/Manager (in accordance with IT Policy HS101). Results of such testing are to be provided to IT Corporation immediately upon receipt.

- Remove any worker from the project who tests positive for either drugs or alcohol.

- Have in place an active and effective Drugfree Workplace Program in compliance with the Federal Drugfree Workplace Act.

- Provide written notification to subcontractor's own employees of the results of any industrial hygiene monitoring conducted by IT on those employees.

- Immediately inform the IT Project Superintendent of the presence, or anticipated presence, of regulatory agency officials at the jobsite. Provide documentation to IT of any citations or notices of violation issued to the subcontractor for work on, or associated with the project. Such documentation shall include a copy of the written citation and a summary of the subcontractor's corrective action plan.

2.7 On-Site Personnel and Visitors

No visitor will be allowed within the Work Zones without authorization from the SPM and the PS. Visitors requesting authorization to enter the Contamination Reduction Zones (CRZs) or Exclusion Zones (EZs) must meet the requirements established for Project Personnel, including appropriate medical exams and training. On-site Navy personnel will also be held to these requirements.

3.0 Project Hazard Analysis

3.1 Scope of Work

This project will be limited to the construction of a temporary storage and treatment area (TSTA) with a subsequent monitoring program established. The TSTA will be a consolidation point for the soils excavated from, but not limited to, Site 15.

3.2 Hazard Analysis

The job safety analysis identifies potential safety, health, and environmental hazards and provides for the protection of personnel, the community, and the environment. Because of the complexity and constant change of remediation projects, supervisors must continually inspect the work site to identify hazards which may harm site personnel, the community, or the environment. The PS must be aware of these changing conditions and discuss them with the SPM and the Program CIH. The Project PS will keep supervisors for subcontractors informed of the changing conditions.

3.2.1 Materials Handling

Loading and unloading materials and setting up and dismantling equipment presents a variety of hazards. These include cuts, abrasions and lacerations from sharp objects; back injuries from poor lifting techniques; crushing injuries from falling or moving loads; pinch points; and being struck by moving equipment or loads. Cylinders are pressurized systems and present the additional hazard of rapid explosive motion if damage occurs.

3.2.2 Vehicle Traffic

The project worksite is located within an active military base with both industrial and personal vehicle traffic nearby. Work in such areas presents a risk of being stuck by a vehicle. Collisions between vehicles are also possible unless safe driving practices are used.

3.2.3 Chemical Hazards

Personnel working on the site may also be exposed to diesel and gasoline exhaust from the trucks and machinery in use during project activities. As the area is outside and therefore well ventilated, exhaust levels should not reach concentrations capable of causing any

adverse health effects. Symptoms of exposure to high levels of exhaust include nausea, headache, dizziness, coughing and irritation of the eyes and upper respiratory system.

Activities required during the project may result in some slight exposure of site workers and visitors to substances that have been determined by the State of California to cause cancer, birth defects or other reproductive harm. The State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) requires notification to all persons who may be exposed to such chemicals. These substances are described in Tables 1 and 2 of this SSHP. These contaminants will not be present during the construction of the TSTA, but will eventually be brought to the TSTA from Sites 15 and 16.

The contaminants which may be present on site that have been determined by the State to cause cancer include:

- PCBs

In addition, the following contaminants on site have been determined by the State to cause reproductive harm:

- Lead

Lead is present in the soil in various forms as both inorganic and organic lead compounds. The routes of exposure include inhalation, injection, and skin or eye contact. Exposure may cause weakness, lassitude, anorexia weight loss malnutrition, abdominal pain colic, anemia, tremor, paralysis, encephalopathy, nephropathy, hypotension, gingival lead line, and reproductive harm. The target organs for lead exposure are the gastrointestinal tract, central nervous system, kidneys, blood, and gingival tissue.

PCBs are present in the soil in various concentrations. The routes of exposure include inhalation, absorption, ingestion and skin or eye contact. The inhalation hazard will be primarily due to PCB contaminated dust particles. Exposure may cause irritation to the eyes, chloracne, liver damage and is a carcinogen. The target organs for PCB exposure are the skin, eyes and liver.

3.2.4 Trenching and Excavation Hazards

Excavation of soil is generally accomplished using heavy earthmoving equipment. This introduces loud noise levels which may cause hearing loss. Such equipment also presents a risk of being struck by the machinery. Earthmoving equipment can also tip over if mishandled.

If workers must enter the excavation, they risk being buried or otherwise injured by moving soil unless the excavation is properly shored or sloped. Contaminant vapors can also accumulate in deep excavations.

3.2.5 Maintenance/Troubleshooting

Equipment and machinery maintenance and troubleshooting work associated with the groundwater remediation plumbing can expose project workers to contaminated materials and other hazards. Troubleshooting electrical and mechanical equipment can expose workers to shock hazards, and crushing or pinch hazards.

3.2.6 Hand Tools

Use of hand tools may expose workers to cuts, lacerations or puncture wounds if inadequate hand protection is worn or tools are improperly stored. Damaged hand tools may also expose employees to injuries from shattered tools and flying debris.

3.2.7 Power Tools

Power tools present many potential hazards, including shock and electrocution, injuries from accidental activation and injuries from using damaged or malfunctioning equipment.

3.2.8 Confined Space Entry

It is not anticipated that any work conducted during this project will require entry into a confined space. A confined space is defined as an enclosure which is large enough for an employee to enter, but which has limited means of access and egress and is not designed for continuous employee occupancy.

A permit-required confined space is a confined space as defined above which also contains one or more health and/or safety hazards. This can include chemical, mechanical, electrical, or other hazards.

3.2.9 Noise

Some of the equipment used on the project generates loud noise. Exposure to sound levels above 85 dBA can cause temporary impairment of hearing. Prolonged and repeated exposure to sound levels above 85 dBA can cause permanent hearing damage. The risk and severity of hearing loss increases with the intensity and duration of the exposure. In addition to damaging hearing, noise can impair voice communication, thereby increasing the risk of incidents.

3.2.10 Heat and Cold Stress

3.2.10.1 Heat Stress

Wearing personal protective equipment (PPE) can put site personnel at considerable risk of heat stress and heat related illnesses if proper precautions are not implemented. Heat related illnesses range from transient heat fatigue to heat stroke and death. Heat related illnesses are caused by a number of interacting factors which include environmental conditions, clothing, work load, and characteristics of the individual worker.

Individuals vary in their susceptibility to heat stress. Factors that influence an individuals tolerance for heat include physical fitness, diet, alcohol/drug use, sleeping habits, acclimation, genetics, medical condition, age and weight.

The signs of heat stress disorders are given below.

Heat Cramps. Heat cramps are caused by heavy sweating and inadequate electrolyte replacement. Signs and symptoms include muscle spasms and pain in the hands, feet and abdomen.

Heat Exhaustion. Heat exhaustion occurs from increased stress on various body organs. Signs and symptoms include:

- Pale, cool, moist skin;
- Heavy sweating;
- Dizziness, nausea; and/or

- Fainting.

Heat Stroke. Heat stroke is the most serious form of heat stress and should always be treated as a medical emergency. The body's temperature regulation system fails, and the body temperature rapidly rises to critical levels. Immediate action must be taken to cool the body before serious injury or death occurs. Signs and symptoms of heat stroke include:

- Red, hot unusually dry skin;
- Lack of, or reduced perspiration;
- Nausea;
- Dizziness and confusion;
- Strong, rapid pulse and/or
- Coma.

Sunburn. Operations will require IT and subcontractor employees to work outside during daylight hours, typically seven to nine hours per day. Under these conditions, workers are at great risk for developing sunburn on unprotected skin.

Sunburn is a burn to the skin caused by overexposure to ultra-violet light (sunshine). The symptoms of exposure are not usually apparent until two to four hours after the exposure ceases. Depending upon the severity of the exposure the symptoms can range from reddening of the skin accompanied by mild discomfort, to painful deep burns and blisters. Although light-haired, fair-skinned, blue-eyed personnel are at the greatest risk of sunburn, all complexion types can develop sunburn if the exposure is long and intense enough.

Sunscreen products with sun protection factor ratings of 15 or higher will be available to project personnel. Areas or primary concern include; nose, cheeks, ears and the back of the neck. Sunscreen will be applied as necessary and reapplied after each break.

3.2.10.2 Cold Stress

Cold stress is not an anticipated concern. However, workers should be aware that most cold-related worker fatalities have resulted from failure to escape low environmental air

temperatures, or from immersion in low temperature water. The single most important aspect of life-threatening hypothermia is a fall in the deep core temperature of the body.

In the event that the weather becomes unusually cold (temperatures below 45°F) project workers should be protected from exposure to cold so that the deep core temperature does not fall below 36 degrees Celsius (°C). Lower body temperatures will very likely result in reduced mental alertness, reduction in rational decision making, or loss of consciousness with the threat of fatal consequences.

3.2.11 Fire

During dry weather, the potential for fire exists in any unpaved grassy perimeter regions of the site. Where VOC levels are high, both a fire and explosion hazard exist. Sparks from operating equipment, or even contact with hot catalytic converters can cause ignition.

3.2.12 Environmental Hazards

Poisonous or stinging insects, spiders and/or snakes may be a concern for project personnel during sampling and other site activities. Disease vectors, such as ticks, may also be present. Poison oak or other noxious flora may be present on or near the site, and can cause severe skin irritation on contact. Physical hazards are also posed by native vegetation in the area, including thistles and other thorny weeds.

3.2.13 Dust

Remediation and demolition activities can create airborne dust. Excessive generation of dust can limit visibility, cause irritation to workers and create airborne chemical contamination which spreads the overall extent of contamination and puts nearby unprotected personnel at risk of overexposure.

3.2.14 Slip, Trip and Fall Hazards

Poor housekeeping results in a workplace which is laden with slip, trip and fall hazards. Such accidents can cause serious injuries, including broken bones, contusions, and/or deep lacerations.

4.0 Hazard Control Program

4.1 Buddy System

Project staffing during hazardous waste operations shall meet the requirements and intent of the "buddy system," as outlined below.

- At least two persons are required to be at the work area when work is conducted in the exclusion zone which might result in worker contamination.
- The PS, or qualified designee, is permitted in the work area without a buddy when his/her role is limited to administrative duties or other tasks presenting no potential chemical exposure or other significant hazard. However, notification to the SPM is required prior to and after entry.

The buddy system is a method of organizing employees into work groups and is designed to provide those employees with assistance when needed. Each employee in a work group is designated to be observed by at least one other person. Assignment of designated partners should take place during the Tailgate Safety Meeting (TSM).

The responsibility of the buddy is to:

- Provide assistance if needed;
- Maintain line of sight contact or verbal contact with workers in the EZ;
- Observe for signs of chemical or physical trauma or heat/cold stress such as:
  - changes in complexion and skin discoloration,
  - changes in coordination or demeanor,
  - excessive saliva and pupillary response,
  - changes in speech pattern;
- Periodically verify the integrity of all protective clothing; and
- Notify the SHSO if emergency help is needed.

Entry to or exit from the EZ under the conditions described earlier without a designated partner is prohibited.

4.2 Vehicular Traffic

All IT employees who will be driving restricted-visibility vehicles (e.g., trucks, vans and pick-ups) at the project site shall have successfully completed IT's Safe Driver Training Course. Vehicle operators will check carefully for nearby traffic before proceeding at a cautious pace on facility roadways. Unless otherwise marked, speeds should be held to 15 mph or less while on site.

Care should be taken to ensure that trucks, equipment and materials are placed in a manner that keeps obstruction of local traffic to a minimum. During work activities, it may become necessary to move equipment in order to accommodate traffic and site activities.

Workers on foot should not wander into the active roadways. If work in active traffic areas is required, workers will wear bright orange safety vests, and the work zone will be marked with barricades, cones or tape to warn traffic.

Where traffic control is necessary, base representatives will be contacted to ensure minimal disruption of base activities. When the base cannot provide traffic control officers, project workers may do so using high visibility road vests, hand-held stop signs and traffic cones.

4.3 Chemical Hazards

During on-site activities, all personnel will wear appropriate protective clothing whenever the possibility for contact with contaminated soil or groundwater exists (see Section 5.0). If respiratory protection is required, only NIOSH approved respirators may be worn. Disposable respirators are not permitted.

Material Safety Data Sheets (MSDSs) will be provided on-site for each hazardous material (other than work) brought on-site. MSDSs are found in Appendix C.

4.4 Excavation Safety

The following rules will be enforced for all excavations within the work site:

- The location of any underground utilities will be identified prior to commencing excavation activities and workers will be informed of these locations.

- Prior to the initiation of excavation activities, underground utility lines shall be located and protected from damage or displacement.

- The PS will inspect the area for signs of weakness or structural defects at the start of each shift or when environmental or work conditions change.
- Personnel will be trained in the specific hazards associated with excavation and trenching prior to entering the work area.

- No one shall be permitted to enter the trench at any time.

- Crossing directly over the trench shall be permitted only where approved walkways with handrails are provided. All other traffic is to be directed around the trench, at a safe distance from the trench edges.

- The spoil shall be removed at least two feet away from the edges of the trench. At least four feet is strongly recommended wherever possible.

- Barricades or barriers will be placed around the excavation site to prevent unauthorized entry and to warn equipment operators.

- Heavy equipment not being used in the excavation and trenching operations shall be placed a sufficient distance from the trench so that their weight does not weaken the trench walls.

- Blades and buckets on the front ends of heavy equipment shall be lowered during transport and whenever the operator leaves the machine.

- Construction equipment shall be given the right-of-way during field activities.

- Heavy equipment shall have a reverse signal alarm that operates automatically with backward movement.

- Work is to be completed during those hours when the subcontractor is not operating heavy equipment or machinery.

- All heavy equipment shall be equipped with a fire extinguisher.

- The operator shall check the condition of equipment each day before operating. This check shall include brakes, clutches, steering mechanisms, hydraulic and electrical systems, and signs of abnormal wear.

- No worker shall use a piece of equipment unless they have been trained and are familiar with its operation.

- Personnel are not allowed to work off machine implements or to use them as ladders or scaffolds.
- Heavy equipment shall be operated from the operators seat only.
- Unauthorized riding on equipment or riding parts of equipment not intended for occupancy by either operator or passenger is prohibited.
- Barriers will be erected around the excavation site to prevent unauthorized personnel from entering the area.
- The trench will be completely filled in upon completion of the work.

4.5 Use of Hand Tools

The following safe work practices apply to the use of hand tools:

- Only use a tool for its designed use.
- Do not use damaged tools.
- Driving faces of hammers, chisels, drift pins, bars, and similar tools must be inspected to eliminate mushroomed heads, broken faces and other defects.
- Tools must be returned to their proper storage place.
- Sharp tools must not be carried in pockets.
- Wood handles must be sound and securely wedged or fastened to the tool. Tape must not be used to cover defects such as cracks.
- When hand tools are being used overhead, those working or standing below must be notified.
- Pipe wrenches must be inspected regularly. Replace the heel and jaw sections if found to be defective or worn out.
- Pipe wrenches must not be used to bend, raise or lift pipe.
- Always wear safety glasses to protect the eyes.

4.6 Use of Power Tools

When using power tools, the following precautions shall be followed:

- Eye protection (safety glasses or goggles) must be worn whenever operating power tools.
- Power tools must be grounded or of the double-insulated type.
- Power tools shall not be used in wet locations.
- All power tools must be protected by a Ground Fault Circuit Interrupter (GFCI).
- Splicing, cutting or "repairing" electrical wire by unauthorized personnel is prohibited.
- Plugs and cords must be protected from damage.
- Grounding plugs are never to be removed.
- Electrical tools are not to be used inside a confined space without prior approval by the SHSO or Program CIH.
- All electrical tools must be turned off before connecting or disconnecting the power supply.
- Extension cords must be visually inspected each time they are used. Cords must be disconnected from the power source before coiling for storage.
- Extension cords used with portable electric tools shall be of three-wire type and shall be rated for hard or extra-hard usage (Types S, ST, SO, STO, SJ, SJO, SJT, or SJTO).

4.7 Lockout/Tagout Procedures

Whenever employees or subcontractors are working on equipment or in areas where the activation of the equipment or the charging of hazardous materials lines might endanger the worker's safety, lockout and tagout procedures (IT Policy HS315) are required. Must the project extend more than 30 days with lockout/tagout planned for more than seven calendar days, or when locking/tagging out specialized equipment having its own lockout requirements, the Program CIH shall be notified for an addendum to this SSHP.

General Lockout/Tagout Requirements

Lockout and tagout procedures are required during maintenance of powered tools or equipment, during valve changeouts and other work on hazardous waste or materials lines, and during confined space entries. Other tasks may also required lockout and tagout procedures if use of nearby equipment or material transfer lines could harm employees. The requirements of lockout and tagout include:

- Locks and tags are to be used when a machine, equipment or piping system is capable of being locked out. Tags alone are allowed only when the equipment will not accept locks. When only tag is used because machine or equipment can't be locked out, the following steps must be taken: Remove fuses, block machine, etc. and complete the "Lockout/Tagout Procedure for Specific Equipment" form (Attachment 8) and give to the site supervisor for the record.

- Authorized padlocks shall be assigned to each authorized employee. Each group's lock will be individually keyed and the shift supervisor shall maintain the master keys.

- All new equipment installed must be designed to accept a lockout device.

- Where multiple items must be locked out, a group lock box must be used.

- Where multiple locks must be placed on an item, a multiple lock hasp must be used.

- Only the protected employee may remove his/her personal lock. When the employee is no longer present and the lock must be removed, only that employee's immediate supervisor may remove the lock and tag, and only after ensuring that the employee is out of harm's way.

- All locks must be accompanied by a tag indicating the name of the employee applying the lock, the date the lock was applied, equipment name or number, the reason for the lockout and a warning against the potential hazard of activation.

- A legend must be displayed warning against activation and stating that the lock and tag may be removed only by authorized personnel.

- Tags must be single-use, hand-attachable, legible and designed to withstand the environment where they are in use.Tags must be self-locking and non-releasable with a minimum unlocking strength of 50 pounds.

- A "Lockout Log" (HS315 Attachment 3) shall be maintained by the site supervisor as part of the SSHP.

- The SPM or PS is responsible for informing the client of the lockout/tagout procedure to be used at the jobsite. This must be documented on Field Activity Daily Logs (FADLs).

- Subcontractors are to use IT's lockout/tagout procedure. Their own procedure may be used only after it has been reviewed and approved by the Project CIH.

- If the client has their own lockout/tagout requirements, these shall be implemented only after IT's requirements have been met.

- The SPM and PS shall assure that locks, hasps and other equipment and site specific training are provided.

Lockout/tagout procedures are not required when work is conducted on equipment where an employee has direct control over the cord(s) or plug(s) connected to the associated equipment.

Lockout/Tagout Checklist

Where lockout/tagout procedures are required, the following steps shall be followed:

- Check equipment file for specific lockout/tagout procedures.

- Determine the requirements for lockout. Document each energy source to the equipment.

- Conduct a survey to locate and identify all isolation devices that apply to the equipment.

- Use the equipment type-specific procedures if applicable (HS315 Attachments 4-7). Complete the "Lockout/Tagout Procedure for Specific Equipment" form (HS315 Attachment 8), logging all data, and return to supervisor.

- Shut off energy source(s) to affected equipment.

- Affix lock(s) and tag(s) to each energy source controlling the device.

- Identify work on process lines or vessels and determine isolation requirements.

- Blind, blank, disconnect or double-valve and vent all hazardous materials lines (including steam). Identify isolation points with tags.

- When a tag only is used because the equipment can't be locked out, complete the following:

  - Remove fuses, block machine, etc.
  - Complete HS315 Attachment 8 and give to site supervisor.

- Relieve all stored energy (e.g., capacitor banks, springs, compressed air, hydraulic and steam).

- Verify that isolation of energy has occurred by attempting to activate equipment at the on/off switch.

- Return the control switch to the off position before proceeding.

Before returning any equipment to service following lockout and tagout, the following procedures are required:

- Ensure that all nonessential items (e.g., tools and cleaning rags) are removed from the equipment.

- Ensure that equipment components are intact.

- Check work area to ensure that all employees are safely positioned or removed from the area.

- Notify all affected employees and site supervisor before re-energizing the equipment.

- Remove lockout/tagout device.

- Re-energize equipment or open valves and restore flow in process line; place back into service.

Where equipment must be locked out for longer than one work shift, the individual lock(s) of the outgoing shift working on equipment will be removed and replaced by the on-coming shift's individual lock(s). The authorized employees of the on-coming shift must inspect and "try" the system to ensure de-energization. The site supervisor shall re-audit the system as necessary.

4.8 Confined Space Entry

A confined space is defined as any work area which is large enough to enter, but which has limited means of access and egress and is not designed for continuous occupancy.

Routine confined space entry is not anticipated on this project. Must these operations become necessary, more detailed health and safety requirements will be established as addenda to this SSHP (see Appendix E).

In the event that entry into a confined space is required, the Program CIH must be notified and IT Procedure HS300: "Confined Space-Industrial" followed. Prior to entry, the confined space will be certified by an IT Qualified Person. Initial monitoring for combustibility, toxicity, and oxygen content will be conducted to determine the atmospheric class and subsequent protection level required. In addition, personnel entering the confined space must have completed training specifically for confined space entry.

4.9 Hearing Conservation Program

All on-site IT and subcontractor personnel shall wear hearing protection, with a Noise Reduction Rating (NRR) of at least 25, when noise levels exceed 85 dBA (or wherever voices must be raised in order to be understood at arms length). The SHSO will perform sound level monitoring or noise dosimetry on operations which require hearing protection. All site personnel who may be exposed to noise shall also receive baseline and annual audiograms and training as to the causes and prevention of hearing loss, in accordance with IT Procedure HS402.

Whenever possible, equipment that does not generate excessive noise levels will be selected for this project. If the use of noisy equipment is unavoidable, wherever possible, barriers or increased distance will be used to minimize worker exposure to noise.

Blasting or use of explosives is not permitted without written permission from the Navy's Contracting Officer and the Program CIH, and then only during designated times.

4.10 Heat Stress/Cold Stress Prevention

4.10.1 Heat Stress

Heat stress is a major hazard to personnel working in impermeable protective clothing. Therefore, measures will be taken in preventing heat stress, including:

- Site workers will be encouraged to drink plenty of water throughout the day. They will be advised to slightly increase their salt intake by lightly salting their food.
- On-site drinking water will be kept cool to encourage personnel to drink frequently.
- All personnel will be advised of the dangers and symptoms of heat stroke, heat exhaustion and heat cramps.
- All employees shall be informed of the importance of adequate rest, acclimation and proper diet in the prevention of heat stress disorders.

One or more of the following control measures can be used to help control heat stress and are mandatory if any site worker has a heart rate (measured immediately prior to rest period) in excess of 110 beats per minute:

- A work regimen that will provide adequate rest periods for cooling down will be established, as required.
- Cooling devices such as vortex tubes or cooling vests must be used when personnel must wear impermeable clothing in conditions of extreme heat.
- Employees must be instructed to monitor themselves and coworkers for signs of heat stress and to take additional breaks as necessary.
- A shaded rest area must be provided. All breaks must take place in the shaded rest area.
- Employees shall not be assigned to other tasks during breaks.
- Employees shall remove impermeable garments during rest periods. This includes white Tyvek-type garments.

Monitoring Program

For each day of field operations, the daily maximum and minimum temperatures on-site will be recorded. Additional heat stress monitoring shall be initiated by the SHSO whenever ambient temperatures on site exceed 85°F (or 78°F when workers are wearing impermeable clothing). At the discretion of the Program CIH, environmental and/or physiological monitoring will be carried out. Environmental monitoring shall consist of the determination of Wet Bulb Globe Temperatures (WBGTs) when ambient temperatures exceed the values listed above. Physiologic monitoring may consist of pulse rate and/or body temperature determinations. Monitoring and interpretation of monitoring results will be in accordance with IT Procedure HS400, "Working in Hot Environments."

Reporting

Individuals experiencing the symptoms of heat stress shall notify the PS. The distressed individual shall immediately halt field activities and be treated for heat stress. Early detection and treatment of heat stress will prevent further serious illness or injury and lost work-time. Proper and effective heat stress treatment can prevent the onset of more serious heat stroke or exhaustion conditions. Individuals having progressed to heat exhaustion or stroke become more sensitive and predisposed to additional heat stress situations. Regardless of ambient temperature, physiological monitoring will be implemented if heat stress is experienced.

If symptoms of heat stress are observed, the following procedures will be implemented:

- Instruct the affected person to lie down in a cool, shaded area or air-conditioned room and elevate feet. Abbreviated decontamination procedures may be followed.

- Summon medical support, if appropriate. This is required in all cases of heat stroke or unconsciousness.

4.10.2 Cold Stress

Due to the moderate climate at the job site, cold stress is not a serious concern; however, all personnel must be aware that prolonged exposure to cold without proper clothing may impair their ability to work safely. To prevent such occurrence, the following measures must be implemented:

- Project workers must be provided with warm clothing, such as mittens, heavy socks, etc., when the air temperature is below 45°F. Protective clothing, such as Tyvek or other disposable coveralls, may be used to shield employees from the wind.

- When the air temperature is below 35°F, clothing for warmth, in addition to chemical protective clothing, will be provided to employees. This should include:

  - Insulated suits, such as whole body thermal underwear
  - Wool socks or polypropylene socks to keep moisture off the feet
  - Insulated gloves
  - Insulated boots
  - Insulated head cover such as hard hat, winter liner, or knit cap
  - Insulated jacket, with wind and water resistant outer layer.

- At air temperatures below 35°F, the following work practices must be implemented:

  - If the clothing of a site worker might become wet on the job site, the outer layer of clothing must be water impermeable.
  - If a project worker's underclothing becomes wet in any way, the worker must change into dry clothing immediately. If the clothing becomes wet from sweating (and the employee is not uncomfortable), the employee may finish the task at hand prior to changing into dry clothing.
  - Project workers must be provided with a warm (65°F or above) break area.
  - Hot liquids such as soups or warm, sweet drinks shall be provided in the break area. The intake of coffee and tea should be limited, due to their circulatory and diuretic effects.
  - The buddy system shall be practiced at all times on site. Any site worker observed with severe shivering shall leave the work area immediately.
  - Project workers should dress in layers, with thinner lighter clothing worn next to the body.
  - Project workers should avoid overdressing when going into warm areas or when performing strenuous activities.
  - Employees handling liquids with a high vapor pressure, such as gasoline, methanol, or hexane, shall take special precautions to avoid soaking of gloves and clothing with those materials.

4.11 Fire Prevention

Smoking or open flames are prohibited except in designated smoking areas. Vehicles and equipment will not be left idling or parked in or around areas where catalytic converters may cause a fire. Equipment and vehicles should stay on the paved areas.

All flammable liquids will be stored in Underwriters Laboratory (UL) or Factory Mutual (FM) approved storage cabinets. Small quantities of most flammable liquids (five gallons or less) may be stored in work areas, or carried in vehicles, providing those materials will be used that day and will be contained in a safety can or other approved container. Class IA flammable liquids should be limited to two gallons in an approved safety can. Any flammable wastes will be stored or disposed of in metal containers, clearly marked as containing flammable materials. Storage of combustible materials, in work areas, will be kept to a minimum.

A fire extinguisher, rated not less than 10B, shall be provided within 50 feet of wherever more than 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas are being used on the job site (excluding the integral fuel tanks of motor vehicles). Portable fire extinguishers shall be inspected monthly and serviced at least annually by a person licensed or registered by the State Fire Marshal.

Within occupied trailers, only UL approved electrical extension cords may be used. When outdoors, only double insulated or grounded electrical power tools may be used.

An IT Hot Work permit must be completed and posted prior to any hot work (such as welding or cutting) on site, including hot work performed by subcontractors. The base fire department must also be contracted to determine if other permits are required prior to hot work.

Dry chemical fire extinguishers, with minimum 5A, 30BC ratings will be provided at all field work areas. All vehicles shall be equipped with minimum 1A, 5BC rated fire extinguisher. Any trailers used as office or work space shall be provided with at least one 2A, 30BC rated fire extinguisher.

In the case of a fire on the site, the PS will assess the situation and direct fire fighting activities. IT personnel trained in the use of extinguisher may attempt to extinguish the fire with available extinguishers, if safe to do so.

4.12 Noxious Flora and Fauna

Site workers should inspect protected areas (e.g., boreholes, pits and storage areas) prior to reaching into them or entering them in any way. Stinging insects and their nests shall be avoided wherever possible, and workers shall wear long pants and gloves if necessary to protect them from insect bites and sharp or irritating plants.

4.13 Sanitation

Break Area

A designated break area shall be established in the support zone. The break area shall contain drinking water and be arranged to provide shade to workers during hot weather (›85°F).

Potable Water

The following rules apply for all field operations:

- An adequate supply of potable water shall be provided;
- Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap;
- All containers used for drinking water shall be clearly marked and not used for any other purpose; and
- Disposable cups will be supplied; both a sanitary container for unused cups and a receptacle for disposing of used cups shall be provided.

Outlets for nonpotable water shall be identified to clearly indicate that the water is unsafe and is not to be used for drinking or washing. There shall be no cross connection (open or potential) between potable and nonpotable water systems. Nonpotable and potable water systems shall be physically separated so as to minimize confusion and possible cross contamination.

Toilet Facilities

A minimum of one separate toilet facility shall be provided for each 20 employees, or fraction thereof, of each sex. Such facilities may include both urinals and toilets, with the provision that the number of toilets is at least half of the minimum required number of facilities. Where there are less than five employees, separate toilet facilities for each sex are not required provided the toilet facilities can be locked from the inside and contain at least one toilet.

Toilet facilities on the site are to be kept clean, maintained in good working order and provided with an adequate supply of toilet paper.

Food Handling and Storage

There shall be no handling of food in the contaminated work areas of the work area. Food may be stored in refrigerators, however, those refrigerators may only be used for storage of foods, and beverages. Refrigerators used for sample or chemical storage should be clearly marked as such.

Trash Collection

Trash generated by project personnel will properly be disposed of in trash receptacles. These receptacles will be emptied regularly.

4.14 Dust Control

Project personnel will take all reasonable precautions to minimize the generation of dust at the worksite. Such precautions include operating vehicles in a slow and deliberate manner and working materials in a wet state whenever possible. Where dust generation is significant, the Program CIH will be contacted to establish an air monitoring program and dust reduction measures (up to and including misting of the dust cloud or ceasing operations) shall be implemented.

Additional dust control measures include:

- The soil may be treated with dust superannuates if necessary.
- Dry brooming and dry power brooming are prohibited. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming.

- Air blowing shall not be permitted for cleaning surfaces.
- Only wet cutting is permitted for cutting concrete blocks and concrete.

4.15 Housekeeping

To minimize slip trip and fall hazards caused by poor housekeeping, the following measures shall be taken:

- Work areas shall be inspected daily for adequate housekeeping and findings recorded on daily inspection reports.
- All stairways, passageways, gangways, and accessways shall be kept free of materials, supplies, and obstructions at all times.
- Loose or light material shall not be stored or left on roofs or floors that are not closed in, unless safely secured.
- Tools, materials, extension cords, hoses, or debris shall not be placed where they may cause tripping or other hazards.
- Tools, materials, and equipment subject to displacement or falling shall be adequately secured.
- Scrap lumber and debris shall be cleared from work areas and accessways.

5.0 Personal Protective Equipment

Based upon the job hazard analysis, it is expected that project personnel will utilize Level D protective clothing for most project activities. Level C or Level B protective clothing may be required for entry into confined spaces or other operations depending upon the levels of contaminants as measured at the time of entry. It is anticipated that ventilation of any confined spaces will result in atmospheres with no hazardous levels of contaminants. If conditions warrant higher levels of protection, site work will be suspended until such conditions can be rectified. Specific requirements for personal protective equipment (PPE) to be used during confined space entry will be specified in the SSHP Addendum for confined space work, if necessary.

5.1 Levels of Protection

Levels of protection have been assigned to each task in accordance with Table 3.

5.1.1 Level D

The minimum level of protective equipment to be worn on site during this project is:

- Hard hat, American National Standards Institute (ANSI) approved
- Safety glasses, ANSI approved
- Steel-toed boots or shoes, ANSI approved
- Long pants, shirt, or work uniform.

If noise levels exceed 85 dBA, then hearing protection with a U.S. EPA NRR of at least 25 dBA shall be used.

5.1.2 Level C

Level C protection will not be used on this project without contacting the Program CIH for an addendum to this SSHP.

5.1.3 Level B

Level B protection will not be used on this project without contacting the Program CIH for an addendum to this SSHP.

5.1.4 Level A

Level A protection will not be used.

5.2 Respiratory Protection Program

The IT respiratory protection program (HS601) will apply to all activities requiring the use of respirators at the site. Basic requirements are as follows:

- All site personnel will have an assigned respirator face piece.
- All site personnel will have been medically qualified, fit tested, and qualified in the use of the appropriate respirator within the past 12 months.
- Only properly cleaned, maintained, NIOSH-approved respirators are to be used on this site with HEPA filters.
- If air-purifying respirators are used, the respirator cartridge is to be disposed of at the end of each work shift, or when load-up or breakthrough occurs.
- Contact lenses are not to be worn when a respirator is required.
- All site personnel will be clean shaven in facial areas which touch the sealing surface of the respirator.
- Respirators will be regularly inspected; a positive and negative pressure test will be performed prior to each use.
- When respirators are being used, they shall be cleaned at the end of the work shift using mild soap and warm water, and left to air dry. After drying, the respirator will be stored in a clean plastic bag.

5.3 Using Personal Protective Equipment

All persons entering the EZ shall don the required PPE in accordance with the entries listed in Table 3. When leaving the EZ, PPE will be removed in accordance with the procedures listed, in order to minimize the spread of contamination.

5.3.1 Donning Procedures

These procedures are mandatory, only if Level C or higher PPE is required for the project:

- Remove bulky outerwear.
- Put on the required chemical protective coveralls.
- Put on chemical protective boots.
- Tape the legs of the coveralls to the boots with duct tape.
- Put on chemical protective gloves.
- Tape the wrists of the protective coveralls to the gloves.
- Don respirator if required, and perform appropriate fit check.
- Put hood or head covering over head and respirator straps.
- Don remaining PPE, such as safety glasses or goggles and hard hat.

If these procedures are instituted, one person shall remain outside the work area to ensure that each person entering has the proper protective equipment. No persons shall be allowed to enter an EZ if they are not wearing the required PPE.

5.3.2 Doffing Procedures

Whenever a person leaves a work site requiring Modified Level D or higher PPE, the following decontamination sequence will be followed:

- Upon entering the CRZ, rinse contaminated materials from the boots.
- Clean reusable protective equipment.
- Remove protective garments, equipment, and respirator (if worn). All disposable clothing should be placed in plastic bags, which are labeled with contaminated waste labels.
- Wash face and neck.
- Proceed to clean area and dress in clean clothing.

- Clean and disinfect respirator for next use.

All disposable equipment, garments, and PPE shall be bagged in plastic bags, and properly labeled for disposal.

5.4 Selection Matrix

The level of personal protection selected will be based upon real-time air monitoring of the work environment and an assessment by the Program CIH or SHSO of the potential for skin contact with contaminated materials. The PPE selection matrix is given in Table 3.

5.5 Personal Protective Equipment for Visitors

An adequate supply of hard hats, safety glasses and other personal protective equipment shall be maintained on-site for use by government personnel and other visitors. Visitors are not to be supplied with chemical protective clothing without prior approval by the SHSO, and proper training documentation. Respirators will not be issued to non-IT personnel under any circumstances.

6.0 Site Control

Only personnel who have completed 40 hours of hazardous waste operations as defined under 29 CFR 1910.120 and T8 CCR 5192, have completed their 40-hour training or refresher training within the past 12 months, and have been certified as fit for hazardous waste operations by a physician within the past 12 months shall be allowed within a site area designated as an EZ or CRZ. Personnel without such training may only enter the designated support zone. Only properly trained personnel will be allowed within the EZ or CRZ.

6.1 Hazard Briefing

No person will be allowed on the site during site operations without first being given a site hazard briefing. In general, the briefing will consist of a review of the tailgate safety meeting. All persons on the site, including visitors, must sign the site-specific tailgate safety meeting form. Tailgate safety meetings shall be held daily, involving all personnel on site.

6.2 Documentation of Certification

A subcontractor training and medical file will be established for the project and kept on site during all site operations. The 40-hour training, update, and specialty training (first-aid/cardiopulmonary resuscitation [CPR]) certificates, as well as the current annual medical clearance for all subcontractor personnel, will be maintained within that file. All IT and subcontractor personnel must provide their training and medical documentation to the SHSO prior to the start of field work. Documentation will be maintained at the project home office.

6.3 Entry Log

The SHSO at the site shall record on their Field Activity Daily Log (FADL) the names of all personnel who enter the CRZ or EZ. These FADLs shall be incorporated into the project file.

6.4 Entry Requirements

In addition to the entry requirements listed above, no personnel will be allowed in any EZ or CRZ unless they are wearing the minimum PPE as described in Chapter 5.0.

7.0 Decontamination

The project area will be divided into three work zones: exclusion zone (EZ), a contamination reduction zone (CRZ), and a support zone. The PS and Program CIH or SHSO shall together be responsible for designation of the work zones.

The EZ will include any area where chemical contamination may occur and will be marked with barrier tape or other means to warn personnel of the hazards. Only IT personnel and authorized visitors who can provide documentation of 40-hour hazardous waste training and medical exams, and who are wearing the required PPE, will be allowed within this zone.

Immediately adjacent to the EZ, a CRZ with a decontamination area for equipment and personnel will be established. This area will also be delineated with traffic cones and/or barrier tape.

The remainder of the IT project area will be designated as the support zone. No special markings or warning labels are required for this area.

7.1 Personnel Decontamination

All personnel working in the EZ must undergo personnel decontamination prior to entering the support zone. The personnel decontamination area shall consist of the following steps.

Step 1. Personnel leaving the contaminated zone will remove any gross contamination from their outer clothing and boots.

Step 2. Personnel will remove their Tyvek™ coveralls and gloves. Personnel will remove their respirators (if used), hard hats, and boots.

Step 3. Personnel will thoroughly wash their hands and face before leaving the decontamination zone. Respirators will be sanitized and then air dried Respirators are to be stored in a clean plastic ziplock bag.

7.2 Equipment Decontamination

Any vehicles with visible contamination will be decontaminated prior to leaving the decontamination zone. If the level of contamination is removable by normal washing, decontamination for vehicles will be limited to rinsing of tires and any other affected parts with water. The SHSO or Program CIH will determine if steam cleaning or pressure washing of vehicles and equipment will be required.

7.3 Personal Protective Equipment Decontamination

Whenever possible, single use, external protective clothing shall be used for work within the EZ or CRZ. This protective clothing shall be disposed of in marked containers.

Reusable protective clothing will be rinsed at the site with detergent and water.

8.0 Site Monitoring

8.1 Air Monitoring

Air monitoring is essential to ensure that all field personnel are adequately protected from airborne contaminants. The levels of organic vapors in the work area will be monitored using a photoionization detector (PID) or flame ionization detector (FID) whenever work that might generate hazardous airborne concentrations of contaminants.

If visible dust generation results from site activities, airborne dust concentration will be monitored using an mini-ram at the direction of the Program CIH.

Combustible gas readings shall be conducted in the work areas if flammable contaminants are anticipated. All air monitoring results shall be documented in project logs.

The Program CIH may direct the SHSO to conduct integrated personal exposure monitoring. Integrated air samples will be analyzed through a laboratory accredited by the American Industrial Hygiene Association (AIHA).

8.1.1 Locations to be Monitored

All personal, integrated air monitoring samples and direct reading instrumentation readings taken for the purpose of determining appropriate health and safety precautions shall be collected/taken in the approximate "breathing zone" of site personnel.

If entry into a confined space is deemed necessary, combustible gas, oxygen, and total organics readings will be collected and recorded from the top, middle, and bottom of the excavation prior to initial entry. Once the IT entry supervisor and/or SHSO has reviewed this information, determined the PPE necessary for entry, and the entry has been initiated, readings shall be taken in the approximate "breathing zone" of the IT employee(s) working within the confined space. Readings may also be taken in other locations to determine areas of localized contamination or combustibility within the confined space. Work shall stop and all personnel shall exit the confined space when readings exceed acceptable values at any location within the space.

8.1.2 Frequency

Breathing zone air monitoring shall be conducted periodically throughout the day following the delivery of contaminated soils in the EZ regardless of the level of protection being worn. Such readings must be documented on FADL forms even if contaminant concentrations are "nondetectable."

8.1.3 Monitoring Equipment Maintenance and Calibration

All PIDs will be calibrated in accordance with the manufacturer's instructions. Preventive maintenance and repairs will be conducted in accordance with the respective manufacturers' procedures.

All other air monitoring equipment (e.g., combustible gas/oxygen meters and aerosol monitors) will be maintained and calibrated in accordance with the specific manufacturers' procedures.

All personal sampling pumps shall be calibrated in accordance with OSHA sampling protocols and NIOSH methods for the analyte of interest.

All direct reading instrumentation calibrations should be conducted under the approximate environmental conditions the instrument will be used. All air monitoring equipment calibrations and maintenance activities shall be documented on the IT FADL, or equivalent.

When applicable, only manufacturer-trained and/or authorized IT personnel will be allowed to perform instrument repairs or preventive maintenance (e.g., repairs on the hydrogen handling or electrical components of an organic vapor analyzer [OVA]).

8.2 Noise Monitoring

Noise monitoring may be performed by the SHSO under the direction of the Program CIH if high noise levels are routinely encountered. High noise levels are considered to be noise levels which make normal conversation difficult to understand at arm's length. The PS is to contact the SHSO or Program CIH if this situation is routinely present.

8.3 Heat Stress

Heat stress monitoring shall be initiated whenever ambient temperatures on site exceed 85°F. At the discretion of the Program CIH, environmental and/or physiologic monitoring will be carried out. Environmental monitoring shall consist of the determination of Wet Bulb Globe Temperatures (WBGTs). Physiologic monitoring may consist of pulse rate and/or body temperature determinations.

8.4 Safety Reviews

Jobsite safety reviews (audits) shall be conducted by all levels of project management. Specifically:

- The SHSO shall inspect the jobsite at least daily. Findings shall be documented on FADLs and communicated to the PS.
- The PS shall conduct a safety audit with the SHSO at least weekly. Findings shall be documented on FADLs and communicated to project workers, the SPM and Program CIH.
- The SPM shall conduct an on-site safety audit at least monthly. Findings shall be documented on Safety Inspection Report (SIR) forms and copied to the Program CIH. Whenever possible, the Program CIH shall be included in these audits.
- The Program CIH may conduct unannounced jobsite safety audits at anytime. Findings will be documented on SIRs and copied to the SPM and Program Manager.

8.5 Monitoring Records

The SHSO shall ensure that site monitoring records are complete and incorporated into the project file. Any personnel or area air monitoring results will be incorporated into the host office health and safety files. The Program CIH will be responsible for establishing, maintaining, and forwarding to other IT offices (as necessary) all required monitoring information as described below for placement in individual employee files:

- Employee name, social security number, payroll number
- The date, time, pertinent task information, exposure information
- Description of the analytical methods, equipment used, and calibration data

- Type of PPE worn
- Engineering controls used to reduce exposure.

8.6 Notification

The Program CIH will ensure that each employee is informed in writing of the results which represent that employee's exposure. Monitoring results representative of an employee's exposure shall be reported in writing to the affected employee, with copies retained in the project file and the employee's medical file.

Whenever the results indicate that the representative employee exposure exceeds the Permissible Exposure Limit (PEL), the notification shall state that the PEL was exceeded, and shall provide a description of the corrective action taken to reduce exposure to a level below the PEL.

IT may conduct industrial hygiene monitoring on subcontractor employees. Notification of subcontractor personnel of industrial hygiene monitoring results is the responsibility of the subcontractor.

9.0 Employee Training

9.1 General

All personnel entering the EZ or CRZ shall have completed at least 40 (or, for certain tasks, 24) hours of hazardous waste operations-related training, as required by 29 CFR 1910.120 and T8 CCR 5192. All field employees must have received a minimum of three days of actual field experience under the direct supervision of a trained, experienced supervisor. Those personnel who completed the 40-hour training more than 12 months prior to the start of the project shall have completed an 8-hour refresher course within the past 12 months. The PS, SPM, and Program CIH shall have completed an additional 8 hours of relevant supervisory health and safety training. With the exception of subcontractor personnel who will be working only in the support zone, subcontractor personnel must meet the above training requirements (Appendix B), with subcontractor supervisors also required to have the 8-hour hazardous waste supervisor training.

A copy of each training certificate will be maintained at the project job site. Subcontractors must provide certificates of training for the project file for all employees assigned to the project, if they will be working in either the EZ or CRZ Training certificates for both subcontractor and IT personnel shall be maintained on-site.

9.1.1 Tailgate Safety Meetings

Prior to the start of the project, all personnel will participate in an initial tailgate safety meeting. During the initial tailgate safety meeting, the SSHP will be discussed. The PS will ensure that the anticipated site hazards are summarized and explained to all personnel, and that those personnel are aware of the precautions they must take to minimize their exposure to those hazards. Tailgate safety meetings will be held at the start of each work shift. All new employees must attend the meeting and be familiar with this SSHP.

Attendance records and meeting notes shall be maintained with the project files.

9.1.2 Material Safety Data Sheets

The SSHP includes MSDS and occupational health guidelines for chemical substances known to be on site (see Appendix C). The SSHP is maintained on site and is accessible to

all site employees. Each employee is required to review and sign the SSHP before starting work on the site. The SHSO will provide training to project personnel covering the hazards of any and all materials for which an MSDS has been obtained.

9.1.3 Site-Specific Health and Safety Plan

The SHSO presents the SSHP (including all attached MSDSs) and discusses it with all personnel assigned to the project. All workers and visitors must read and sign the SSHP acknowledging acceptance of site rules and understanding of site hazards before the start of the site work.

9.2 Site Workers' Basic Course

Each site worker shall have received training (either HAZWOPER or site-specific) on the following subjects prior to performing field work:

- General site safety
- Physical hazards (fall protection, noise, heat stress, cold stress)
- Names and titles of key personnel responsible for site health and safety
- Safety, health, and other hazards typically present at hazardous waste sites
- Use of PPE
- Work practices by which employees can minimize risks from hazards
- Safe use of engineering controls and equipment on site
- Medical surveillance requirements including recognition of symptoms and signs which might indicate overexposure to hazards
- Worker right-to-know (Hazard Communication, 29 CFR 1910.1200) and T8 CCR 5194.
- Routes of exposure to contaminants
- Engineering controls and safe work practices
- Components of the site health and safety program

- Decontamination practices for personnel and equipment
- Confined-space entry procedures
- Emergency response plan.

9.3 Supervisors' Course Content

Management and supervisors must receive an additional eight hours of training that includes:

- General site safety and health programs;
- PPE programs;
- Air monitoring techniques;
- Spill containment techniques.

9.4 Site-Specific Training

Site-specific training will be accomplished through an initial review of this SSHP by the SHSO and through the daily tailgate safety meetings. All such training shall include signatures of all attendees and shall be documented to the project files.

9.5 First Aid and Cardiopulmonary Resuscitation (CPR)

At least two employees current in first aid/CPR will be assigned to the work crew and at least one of these will be on the site whenever operations are ongoing. First aid and CPR training courses are offered to all IT employees. Refresher training in first aid and CPR is required to maintain the currency of the certificate. The SHSO shall be current in first aid/CPR training.

9.6 Instructors

All HAZWOPER training courses for IT employees must either be taught by IT instructors, or by outside firms which have been approved by the Program CIH.

Initial training of project workers on the SSHP shall be conducted by the SHSO or Program CIH.

Daily Tailgate Safety Meetings and other on-the-job training shall be routinely conducted by either the SHSO or the PS. The PS shall not delegate all safety-related training to the SHSO.

10.0 Medical Surveillance Program

10.1 Physical Examinations

All on-site project personnel shall within the past 12 months have completed a comprehensive medical examination that meets the requirements of 29 CFR 1910.120 and T8 CCR 5192. The annual medical typically includes the following elements:

- Medical and occupational history questionnaire
- Physical examination
- Complete blood count, with differential
- Liver enzyme profile
- Chest X-ray, once every three years, for non-asbestos workers
- Pulmonary function test
- Audiogram
- Electrocardiogram (EKG) for persons older than 35 years of age, or if indicated during the physical examination
- Drug screening
- Visual acuity
- Follow-up examinations, at the discretion of the examining physician or the corporate medical director.

The examining physician provides the employer with a letter confirming the worker's fitness for work and ability to wear a respirator. A copy of this letter for all personnel, including subcontractors, will be kept on site during all project site work.

Subcontractors will certify that all their employees have successfully completed a physical examination by a qualified physician on the Certification Form (Appendix B). The physical examinations shall meet the requirements of 29 CFR 1910.120, 29 CFR 1910.134,

T8 CCR 5192, T8 CCR 5144, HS100 and HS101. Subcontractors will supply copies of the medical examination certificate for each on-site employee.

10.1.1 Preplacement Examination

All employees will receive a preplacement medical examination prior to assignment to field operations.

10.1.2 Annual Examination

Each year subsequent to the placement examination, all employees and subcontractors must undergo an annual examination and drug screen similar in scope to the preplacement examination. IT employees hired prior to 1985 are not required to submit to drug screening. Chest X-rays are taken every third year. The medical and occupational history is updated with each examination.

10.1.3 Exit Examination

IT employees receive an exit examination upon leaving the company if they have not been examined within the previous six months. The exit examination consists of the annual examination without drug screen. The employee's immediate supervisor is to notify the Program CIH within a reasonable time before the termination to allow for the necessary arrangements.

10.2 First-Aid and Medical Treatment

All persons on site must report any near-miss incident, accident, injury, or illness to their immediate supervisor or the Field Supervisor. First aid will be provided by the designated site first aider. Injuries and illnesses requiring medical treatment will be accompanied by an "Authorization for Treatment" Form. The employee's supervisor or the Field Supervisor will complete the "Supervisor's Employee Injury Report" and conduct an accident investigation as soon as emergency conditions no longer exist and first-aid and/or medical treatment has been rendered. The investigation should follow the Accident/Injury Investigation Report. These two reports must be completed and submitted to the SHSO within 24 hours after the incident.

First-aid kits are kept at the CRZ and in all IT vehicles. If treatment beyond first aid is required, the injured should be transported to the medical facility listed in Chapter 12.0 of

this SSHP and the PS should immediately contact IT's contract physicians, Environmental Medicine Resources (EMR) at (800) 229-3674. The PS should describe to EMR the circumstances leading to the injury or illness. If the injured is not ambulatory or shows any sign of not being in a comfortable and stable condition for transport, then an ambulance/paramedics should be summoned. If there is any doubt as to the injured worker's condition, it is best to let the local paramedic or ambulance service examine and transport the worker.

10.3 Medical Restriction

When a medical care provider identifies a need to restrict work activity, the employee's home office HS Assistant will communicate the restriction to the employee, their supervisor, and the Program CIH. The terms of the restriction will be discussed with the employee and his supervisor. Every attempt will be made to keep the employee working, while not violating the terms of the medical restriction.

10.4 Medical Records

Medical and personal exposure monitoring records will be maintained according to the requirements of 29 CFR 1910.120, T8 CCR 5192 and HS103, and shall be kept for 30 years post employment. Employee confidentiality shall be maintained. Employees and their authorized representatives have access to these records through the HS Assistant.

11.0 Bloodborne Pathogen Exposure Control Plan

This section serves as a Bloodborne Pathogen Exposure Control Plan for IT workers who may serve as voluntary first aid and CPR care providers. At all times, at least one person on site will be adequately trained in first aid and CPR, in the requirements of the Bloodborne Pathogens Standard as listed in 8 CCR 5193, IT Procedure HS512, and in the contents of this plan.

11.1 Definitions

Bloodborne Pathogens

Bloodborne pathogens are those agents (i.e., bacteria, virus, fungi) found in blood, blood components, certain body fluids, and other materials, objects, or surfaces that have had contact with blood that are capable of causing human disease or death to unprotected people who came into contact with blood or blood-affected items. Diseases caused by bloodborne pathogens include, but are not limited to, hepatitis B virus (HBV), human immunodeficiency virus (HIV), hepatitis C, malaria, and syphilis. The most significant and of greatest concern are HBV and HIV.

Hepatitis B

HBV is the major bloodborne pathogen hazard that first aid/CPR care providers are more likely to encounter. The HBV can remain infectious for up to 10 days even in dried blood. The virus adversely affects 8,000 to 10,000 workers annually resulting in approximately 200 deaths each year. Hepatitis means "inflammation of the liver" causing severe liver damage or cirrhosis. Exposure symptoms include fever, fatigue, nausea, vomiting, muscle aches, loss of appetite, and jaundice (yellowing of the eyes or skin). Hepatitis diagnosis is difficult because some symptoms are similar to the flu and may remain mild for an extended period of time. Presently, no cure exists for hepatitis, but it can be prevented with a vaccination.

Human Immunodeficiency Virus

HIV attacks and deteriorates the body's immune system and eventually weakens it to the point that infection sets in causing the disease Acquired Immune Deficiency Syndrome (AIDS). HIV is primarily transmitted through sexual contact, but may also be transmitted

through contact with blood and body fluids. HIV is not transmitted by touching or working with people who are HIV-positive.

Human Immunodeficiency Virus Exposure Symptoms

HIV leads to AIDS-related illnesses which eventually cause neurological problems, cancer, pneumonia, and death. People may carry the virus for many years of their lives without experiencing any symptoms. Upon development, symptoms may include weight loss, skin lesions, dry cough, fever, fatigue, diarrhea, or swelling of the lymph glands.

Presently, no cure exists for HIV or AIDS and no vaccination is currently available.

11.2 Exposure Determination

Persons in any job classifications at IT may be exposed to bloodborne pathogens when administering first aid or CPR, or during decontamination of equipment/surfaces contaminated by blood or other potentially infectious materials during an incident.

IT employees could be subject to bloodborne pathogens exposure due to:

- Punctures through the skin with a contaminated sharp object (i.e., scissors)
- Contact or absorption of blood or blood-contaminated objects through open or broken skin (i.e., cuts, scratches, rashes)
- Blood splashes to their eyes, nose, or mouth or other mucous membranes.

Workers can reduce their risk of contacting HBV or HIV by implementing the proper work practices (outlined in this plan) before, during, and after responding to emergency medical incidents involving personal injuries.

11.3 Measures for Prevention

The establishment of work practice controls is an integral part of an effective exposure control plan in preventing accidental infection of employees. These work practices are designed to protect employees from reasonably foreseeable occupational exposures to bloodborne pathogens from blood and other potentially infectious material. The work practice controls outlined in this section are applicable to the administration of first aid in emergency situations and subsequent cleanup only.

Universal Precautions

Universal precautions is an approach to infection control which operates on the assumption that all human blood and bodily fluids are to be treated as if they are known to be contaminated with HIV, HBV, or other infectious diseases. Universal precautions shall be implemented whenever there exists a foreseeable potential for contact with blood or bodily fluids.

Engineering Controls

Due to the remote location of the worksite, the nature of work in outdoor locations with potential exposure to airborne chemical contaminants, and the potential for exposure being limited to emergency situations, the implementation of engineering controls is not feasible. Exposure control shall be accomplished through implementation of work practice controls and use of personal protective equipment.

Work Practice Controls

Work practice controls shall be instituted whenever foreseeable potential contact with, or exposure to, blood and bodily fluid exists. Examples of situations in which these controls are to be implemented include, but are not limited to, accidents or injuries in which administration of first aid is required, application of bandages to minor cuts and abrasions of another person, and contact with sores, wounds, or broken skin.

Following are specific work practice controls that shall be implemented:

- Open wounds or cuts will be promptly bandaged.
- Wash hands and face as soon as possible after administering first aid or CPR. If wash facilities are not readily available, stock disposable one-time use towelettes.
- No eating, drinking, or smoking is allowed in any work area where a potential exists for occupational exposure to blood borne pathogens.
- Non-disposable equipment or materials that have or may have blood or infectious fluid contact must be washed immediately after their use. (A 1 to 10 solution of bleach and water is recommended proper decontamination.)
- Any clothing that becomes contacted with blood or infectious fluids shall be removed as soon as possible after administering first aid or CPR.

- No personal clothing that becomes contacted with blood or infectious fluids shall be laundered off-site.

- Ensure that first-aid kits on-site are equipped with a pair of surgical gloves and CPR mouth pieces.

Direct contact with blood and bodily fluids should be kept to an absolute minimum, as required in a particular situation. In situations where direct contact is likely, personal protective equipment shall be worn to help prevent infection.

Based upon professional judgment, an employee may choose to temporarily forego the use of PPE if he determines that the use of PPE will further jeopardize his well-being or that of the injured worker. This limited application must be carefully evaluated by the employee. If this does occur, IT is obligated to investigate and document the circumstances in an effort to provide alternative means to avoid further occurrence.

Personal Protective Equipment

The following are specific personal protective equipment items that shall be implemented:

- Always wear hand (i.e. latex or nitrile surgical gloves) and eye (i.e. safety glasses, goggles) protection to administer or apply first aid or CPR.

- Always use CPR mouthpieces or ventilation devices.

- Inspect PPE prior to use to ensure it is in good working order and without flaws.

- Do not reuse gloves once removed.

- After use, remove gloves from top to bottom inside-out, not allowing unprotected skin to contact the exterior of the gloves.

Waste Handling and Disposal

Disposable items that have or may have blood contact must be bagged separately from other trash. These wastes must be placed in leak proof containers or bags and labeled. A collection container for contaminated articles will be available on-site. Wastes used in medical emergency treatment (i.e. gloves, towels, gauze) shall be disposed in the infectious waste container(s). The container will be replaced as needed and not be overfilled.

The waste will remain on site in approved container(s) until an approved disposal facility capable of receiving medical wastes is identified. If emergency medical teams who respond to an incident are unable to accept blood-contaminated waste, the Program CIH shall be contacted to arrange for proper disposal.

11.4 Medical Requirements

Hepatitis B Vaccination

All potentially exposed employees will have made available to them at no cost a Hepatitis B vaccination. The employee will also receive training as to the vaccine's efficacy, safety, benefits, and consequences prior to administration. The vaccination series shall be initiated within 24 hours of providing first aid/CPR in an incident and shall be administered under the supervision of a licensed physician. Employees may at their own discretion decline the vaccination, in which case documentation of declination will be completed and employees may be assigned immediately. If an employee covered by this exposure plan decides to accept the vaccination at a later date, the vaccination will be offered at that time at no cost to the employee.

Post-Exposure Procedures and Evaluation

Subsequent to all reported exposure incidents, a confidential medical evaluation and follow-up shall be made available to each employee exposed in the incidents.

Documentation Procedures

Documentation of the exposure incident shall be recorded as soon as possible, and include the route(s) of exposure, the circumstances surrounding the incident, and the identification of the source individual. Additionally, each incident shall be placed on the "first aid incident list" attached to the location OSHA Log of Occupational Injuries and Illnesses.

Blood Testing

As soon as feasible, the source individual in an exposure incident will be asked to consent to a blood test to determine HBV and HIV infectivity. Where applicable laws require employee consent, documented consent shall be obtained prior to testing. If an employee refuses the blood test, documentation of the refusal will be made. Documentation of the test results shall be made available to the exposed employee(s). All results should be kept

confidential, as criminal and civil penalties may be charged against persons negligently or wilfully releasing such information.

Exposed employees will be asked to consent to a blood test for HBV and HIV serological status. If consent to HIV testing is denied, the blood sample will be preserved for 90 days, within such time the employee may elect to consent to the HIV test.

Post-Exposure Medical Evaluations

Exposed employees shall receive a healthcare professional's written opinion for post-exposure evaluations. The written opinion shall include the results of the evaluation and any medical conditions resulting from the exposure incident which requires further medical treatment.

11.5 Bloodborne Pathogen Hazard Communication

- Containers used for disposal of blood contaminated supplies and waste will be labeled in accordance with the word "biohazard."
- Warning signs are not applicable, as there are no designated areas for medical treatment on site. In cases of potential exposure observers and non essential personnel should be verbally warned to keep a safe distance from injured personnel.
- All associates who are first aid/CPR trained and may provide assistance shall be trained in the requirements of HS512 and this SSHP.

11.6 Recordkeeping

Training Records

All employees on the project shall review this plan and sign it to document their review. In addition, all employees who attend Bloodborne Pathogen training shall sign the class Training Attendance Form. The training record will contain the date; training outline; name and qualifications of the trainer, and names and job titles of attendees. All participants must take and pass the training quiz. The training records will be maintained by the IT Training Department for at least three years from the training date.

Medical Records

Medical records necessary for IT employees must include documentation on HBV vaccination status, medical follow-up, post-exposure testing, and a medical professional's written evaluation. The employee medical records will be forwarded to EMR (see Chapter 12.0) for inclusions in the employee's medical file.

IT shall maintain the employee medical records for the duration of the employee's employment plus 30 years thereafter. If, for whatever reason, IT no longer does business and no successor exists, IT will notify the Director of NIOSH in writing three months prior to the disposal of records. If so directed, the records shall be transferred to the Director of NIOSH.

Incident Recording

An incident that occurs as a result of rendering emergency medical care will be recorded on the OSHA 200 log as OSHA defines work-related injuries and illnesses. All injuries involving the release of blood or other bodily fluids must be immediately reported to the Health and Safety Department to ensure proper reporting and followup.

12.0 Emergency Response Plan

12.1 General

The SHSO will establish evacuation routes and assembly areas for each site. All personnel entering the site will be informed of these routes and assembly areas. A map of the evacuation routes and muster points will be posted at the jobsite.

In the case of site evacuation, the following procedures shall be observed:

- Stop working, secure equipment, and return to the CRZ for decontamination.
- Walk to the designated muster point.
- Notify the SPM and SHSO.
- Remain at the muster point until further information is received.

Personnel should not stand in driveways or in front of gates, as these locations may be traffic routes for emergency and support vehicles entering the site.

Each site activity will be evaluated for the potential for fire, explosion, chemical release, or other catastrophic events. Unusual events, activities, chemicals, and conditions will be immediately reported to the PS and SHSO.

12.2 Emergency Procedures

If an incident (personal or vehicle accident, property damage, or near-miss) occurs, the following procedures will be used:

- The PS will evaluate the incident, assess the need for assistance, and notify the client.
- The PS will call for outside assistance as needed.
- The PS will act as liaison between outside agencies and on-site personnel.
- The PS will ensure the Senior Project Engineer/Manager and SHSO are notified immediately of the incident.

- The PS will take appropriate measures to stabilize the incident scene.
- The SHSO will provide technical guidance to the PS as needed.
- The SPM will ensure that any injured employee's supervisor completes a Supervisor's Employee Injury Report (SEIR) Form and forwards the form to the Program CIH within 24 hours of the incident.

12.3 Safety Signals

While working on site, the following hand signals will be used for communication when necessary.

Hand Signal	Meaning
Hand gripping throat	Out of air, can't breath
Both hands around waist	Leave area immediately
Wave hands over head	Need assistance
Thumbs up	Okay, I am all right, I understand
Thumbs down	No, negative

Vehicle or portable air horns will be used for alarm signals as follows:

- One long blast: Emergency evacuation of the site
- Two short blasts: Clear working area around powered or moving equipment.

12.4 Medical Emergency

All employee injuries must be promptly reported to the PS. The Field Coordinator will:

- Ensure that the injured employee receives prompt first aid and medical attention.
- Contact EMR, Inc. (1-800-416-3669) whenever medical attention is required to ensure that appropriate services are provided.

- Complete the appropriate form or forms and submit them to the Program CIH within one business day of an incident. Forms include:
  - Supervisor's Employee Injury Report (SEIR, form HS020A, to be completed by the employee's supervisor)
  - Vehicle Accident Report (form HS020B)
  - General Liability, Property Damage and Loss Report (form HS020C)

- Ensure that the SPM and Program CIH are immediately notified of the incident.

- Initiate an investigation of the incident, with the assistance of an HS representative.

Chemical Inhalation

Any employee complaining of symptoms of chemical overexposure will be removed from the work area and transported to the designated medical facility for examination and treatment. The PS must contact EMR, the SHSO, and the Program CIH as soon as possible.

Eye Contact

Project personnel who have had contaminants splashed in their eyes or who have experienced eye irritation while in the contaminated zone, shall immediately proceed to the eyewash station, set up in the decontamination zone. Do not decontaminate prior to using the eyewash. Remove whatever protective clothing is necessary to use the eyewash. Thoroughly flush the eye with clean water. Arrange prompt transport to the designated medical facility.

This eye wash station shall contain enough clean solution to provide at least 15 minutes flushing to both eyes. The units may be pressurized or gravity feed.

Skin Contact

Project personnel who have had skin contact with contaminants will, unless the contact is severe, proceed through the decontamination zone, to the wash-up area. Personnel will remove any contaminated clothing, and then wash the affected area with water. The worker should be transported to the medical facility listed below, if they show any sign of skin reddening, irritation, or if they request a medical examination.

Personal Injury Accident

In the event of a personal injury accident, the PS will assess the nature and seriousness of the injury. In the case of serious or life-threatening injuries, normal decontamination procedures may be abbreviated or bypassed. Less serious injuries such as strains, sprains, minor cuts, and contusions may only be treated after the employee has been decontaminated. Following decontamination, an IT project team member qualified in first aid and CPR will administer suitable first aid. The PS will then, if necessary, arrange transport to the appropriate medical facility.

12.5 Fire

In the case of a fire on the site, the PS or SHSO will assess the situation and determine the proper response. IT personnel will attempt to extinguish the fire with available extinguishers, only if safe to do so. IT will call the base fire department in the event of a fire that IT is unable to safely and immediately extinguish. The PS will ensure that the Navy is immediately notified of any fires.

12.6 Emergency Information

Prior to the start of the project, contact will be made with local authorities and emergency services to establish communication channel during an event of emergency and to familiarize the project personnel with the communication procedure and services. Pertinent emergency information will be included on the daily tailgate safety meeting forms.

Public Agencies

Fire	9-911
Ambulance	9-911
Police	9-911
Cal/OSHA	(510) 568-8602

Key Project and IT Personnel

Program Manager	Louis E. Stout (510) 372-9100
Program CIH	William Hetrick (510) 372-9100, pager (510) 988-5979
Senior Project Engineer/Manager	Richard Johns (510) 372-9100
Project Superintendent	Jamie Hargrave (510) 372-9100
Site Health and Safety Officer	Dan Brennen (510) 372-9100
Occupational Physician:	
Elayne Therieult, M.D. Environmental Medicine Resources, Inc. 4360 Chamblee Dunwoody Road Suite 202 Atlanta, GA 30341	(800) 229-3674
Medical Incident Reporting:	
Environmental Medicine Resources, Inc.	(800) 229-3674 FAX (404) 455-0814
Navy Contact	Wayne Coffer (510) 302-3354
Base Health and Safety Office	(510) 263-3395

Medical Care Facilities

Hospital Name:	Alameda Hospital
Hospital Address:	2070 Clinton Ave.
Hospital Telephone:	(510) 523-4357

Other Important Telephone Numbers

_____	_____
_____	_____
_____	_____

13.0 Summary and Checklist

This project will involve the construction of a Temporary Storage and Treatment Area, and will be performed in Level D personal protective equipment.

13.1 Summary

13.2 Checklist

- ☐ First aid kits (one per vehicle and facility)
- ☐ Fire extinguishers (one per vehicle and facility)
- ☐ Safety glasses or goggles, ANSI approved
- ☐ Hard hats, ANSI approved
- ☐ Ear plugs
- ☐ Work gloves
- ☐ Steel toed work boots, ANSI approved
- ☐ Duct tape
- ☐ Trash bags
- ☐ Portable toilet
- ☐ Drinking water and disposable cups
- ☐ Complete Health and Safety Plan
- ☐ All applicable MSDSs

TABLE 1

HAZARDOUS AND TOXIC MATERIALS

TABLE 1

HAZARDOUS AND TOXIC MATERIALS
TEMPORARY STORAGE AND TREATMENT AREA
NAS ALAMEDA, CALIFORNIA

CONTAMINANT (SYNONYM)	PHYSICAL DESCRIPTION	CHEMICAL & PHYSICAL PROPERTIES	INCOMPATIBILITIES	SOURCES & ANTICIPATED CONCENTRATION	TARGET ORGANS	SYMPTOMS OF EXPOSURE
Lead	Variable, depending on specific compound.	MW: Varies BP: Varies MP: Varies VP: Varies Sol: Varies FP: N/A LEL: N/A UEL: N/A IP: N/A	Strong oxidizers, hydrogen peroxide, active metals (sodium, potassium).	Contaminated soil <1000 ppm	Kidneys, blood, gastro-intestinal tract, CNS.	Pallor, blue gums, lethargy; colic, abdominal pain, constipation; anemia, weight loss.
PCBs	Oily liquid.	MW: 326 BP: 700°F MP: 50°F VP: 0.00006 mm Hg Sol: insol. FP: N/A LEL: N/A UEL: N/A IP: N/A	Strong oxidizers	Contaminated soil <50 ppm	Skin, eyes, liver	Irritation of skin, acne; liver damage, cancer

TABLE 1

HAZARDOUS AND TOXIC MATERIALS
TEMPORARY STORAGE AND TREATMENT AREA
NAS ALAMEDA, CALIFORNIA
(Continued)

MW: Molecular weight.
BP: Boiling point at 1 atmosphere pressure, in degrees Fahrenheit (°F).
MP: Melting point in °F.
VP: Vapor pressure at 1 atmosphere pressure and 68°F.
Sol: Solubility in water at 68°F, as percentage (%) by weight.
FP: Flash point, closed cup method, in °F.
LEL: Lower explosive limit in air, as % by volume.
UEL: Upper explosive limit in air, as % by volume.
IP: Ionization potential, in electron-volts (eV).
CNS: Central nervous system.
mm Hg: Millimeters of mercury.
eV: Electron volts.
°F: Degrees Fahrenheit.
%: Percent.
ppm: Parts per million.
mg/m3: Milligrams per cubic meter.
µ/l: Micrograms per liter.
>: Greater than.
<: Less than.
N/A: Not applicable.

TABLE 2

EXPOSURE GUIDELINES

TABLE 2

EXPOSURE GUIDELINES
TEMPORARY STORAGE AND TREATMENT AREA
NAS ALAMEDA, CALIFORNIA

CONTAMINANT (SYNONYMS)	OSHA PEL		ACGIH TLV		IDLH	WARNING PROPERTIES
	8-HR TWA	15-MIN STEL	8-HR TWA	15-MIN STEL		
Lead	0.05 mg/m^3	-	0.15 mg/m^3	-	N/A	Odor Thresh: N/A Eye Irr Lvl: Not established
PCBs	0.05 mg/m^3	-	0.5 mg/m^3	-	N/A	Odor Thresh: N/A Eye Irr Lvl: N/A

OF:	Olfactory fatigue occurs quickly after initial detection of odor.
OSHA:	Occupational Safety and Health Administration.
PEL:	Permissible Exposure Limit.
ACGIH:	American Conference of Government Industrial Hygienists.
TLV:	Threshold Limit Value.
TWA:	Time-weighted average.
STEL:	Short-term exposure limit.
Hr:	Hour.
Min:	Minute.
mg/m3:	Milligrams per cubic meter.
ppm:	Parts per million by volume.
Odor Thresh:	Odor threshold.
Eye Irr Lvl:	Eye irritant level.
< :	Less than.
>. :	Greater than.

TABLE 3

PPE SELECTION MATRIX

TABLE 3

PPE SELECTION MATRIX
TEMPORARY STORAGE AND TREATMENT AREA
NAS ALAMEDA, CALIFORNIA

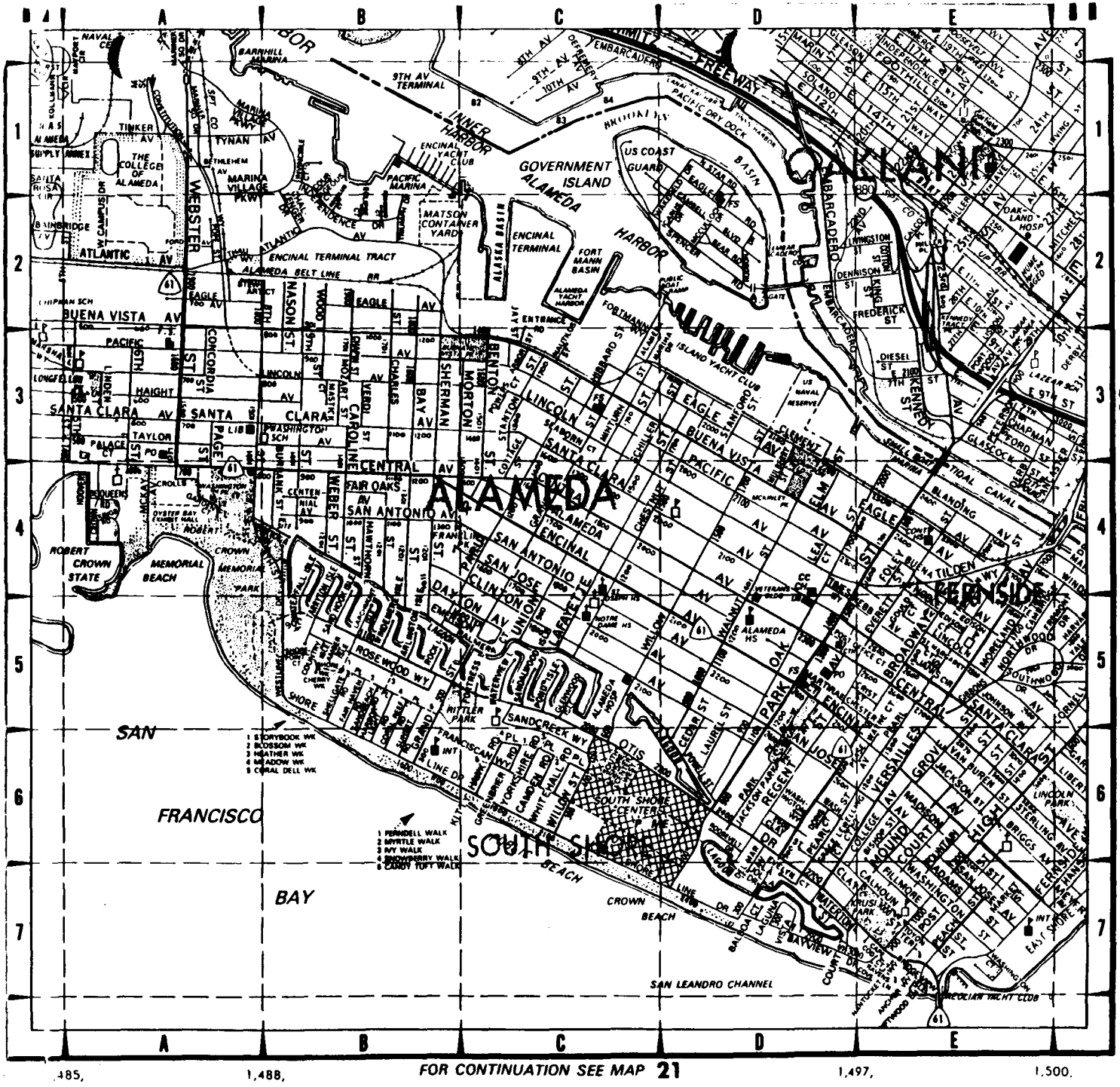
PPE LEVEL	CONDITIONS
Level D	All identified contaminant airborne concentrations below the PEL for that contaminant. • Oxygen concentration less than 25% and greater than 20%. • < 5 ppm VOC above background as determined by PID. • No significant splash or skin contact potential.
Level C	Any contaminant airborne concentration above the PEL but below 10 times the PEL for that contaminant. • Oxygen concentration less than 25% and greater than 20%. • < 50 ppm VOC above background as determined by PID. • All confined space entry with contaminant airborne concentrations below 2 times the PEL. • Low splash or skin contact potential. • Contact the Program CIH.
Level B	Contact the Program CIH.
Level A	Contact the Program CIH.
Stop Work	• Oxygen content more than 25% or less than 20% • 50 ppm VOC above background as determined by PID.

Level B protection must be approved by the Program CIH. Level A protection must be approved by the Program CIH, and the IT Corporate Director of Health and Safety.

PEL = permissible exposure limit.
VOC = volatile organic compounds.
PID = photoionization detector.
ppm = parts per million by volume.
% = percentage by volume.
< = less than.

APPENDIX A

SITE AND HOSPITAL LOCATION MAPS



DIRECTIONS

1. Turn Left onto Perimeter Rd. (From the site.)
2. Follow Perimeter Rd. to stop sign at Avenue A.
3. Turn Left on Avenue A.
4. At stop sign (Second St), turn Left.
5. Exit the NAS through the Main Gate, follow Main St. to Atlantic Avenue.
6. Turn Left on Atlantic Ave.
7. Turn Right on Webster St.
8. Turn Left on Central Ave.
9. Turn Right on Sherman St.
10. Turn Left on Clinton Ave.

ALAMEDA HOSPITAL
2070 Clinton Avenue
Alameda, California

(510) 523-4357

FIGURES
SITE SPECIFIC HEALTH AND SAFETY PLAN

TEMPORARY STORAGE AND TREATMENT AREA
WORK PLAN
REVISION 1

DATED 01 NOVEMBER 1995

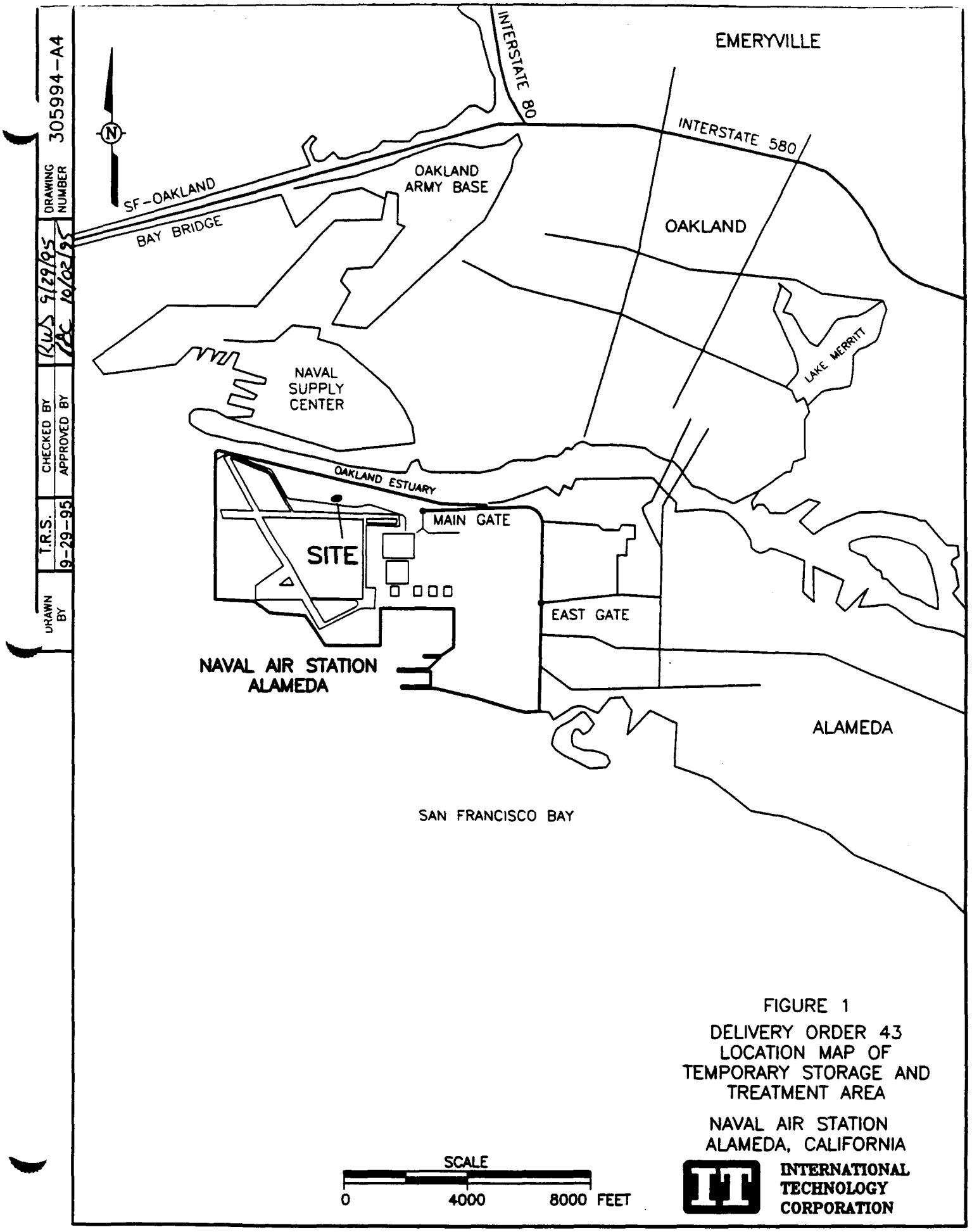


FIGURE 1

DELIVERY ORDER 43
LOCATION MAP OF
TEMPORARY STORAGE AND
TREATMENT AREA

NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

WD-LMS15(WD1)

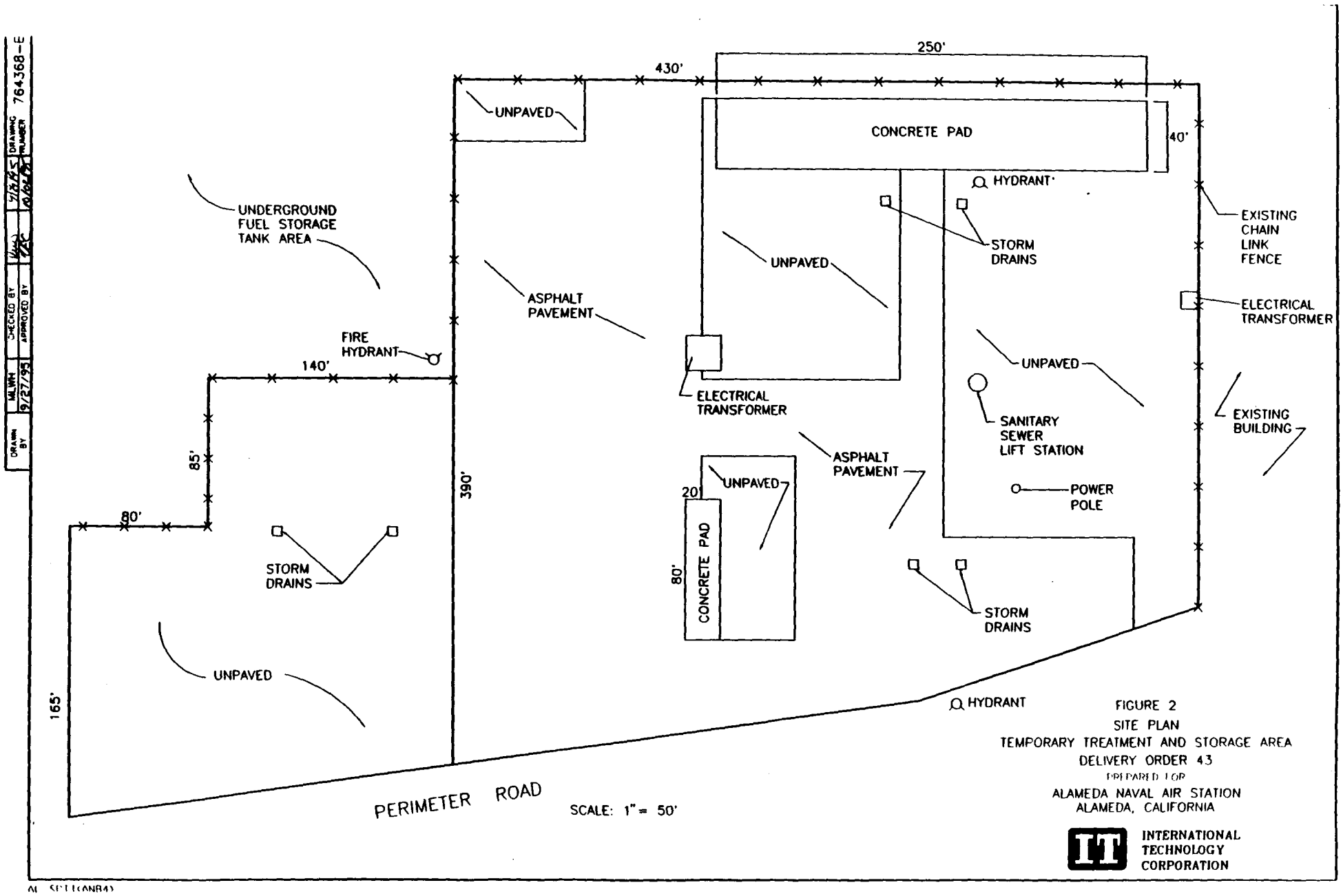


FIGURE 2
SITE PLAN
TEMPORARY TREATMENT AND STORAGE AREA
DELIVERY ORDER 43
PREPARED FOR
ALAMEDA NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

AL_SPT1(ANB43)

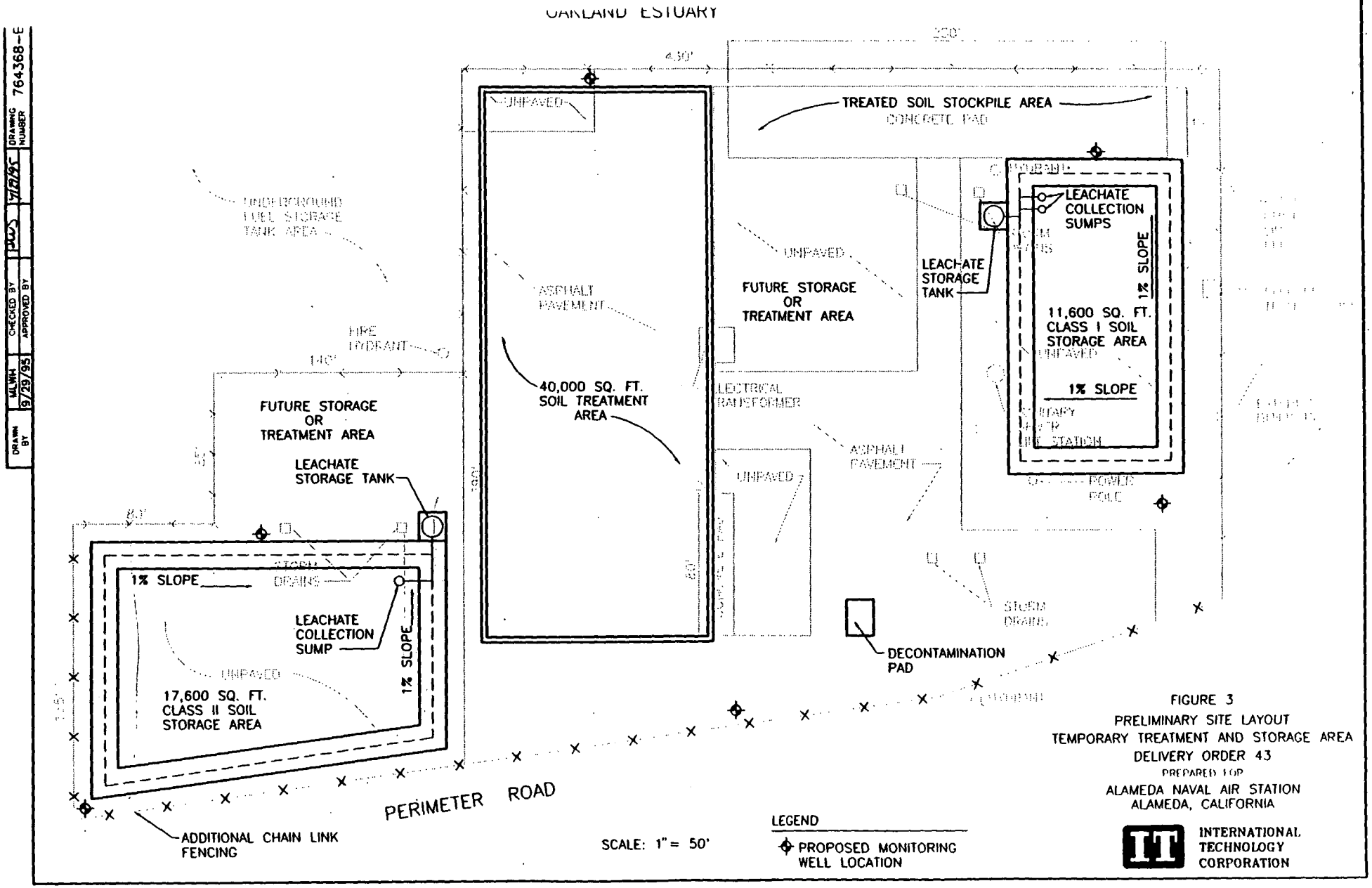


FIGURE 3
PRELIMINARY SITE LAYOUT
TEMPORARY TREATMENT AND STORAGE AREA
DELIVERY ORDER 43
PREPARED FOR
ALAMEDA NAVAL AIR STATION
ALAMEDA, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
MLWH 9/29/95			764368-E

AL-SPT13(AN84)

APPENDIX B

MATERIAL SAFETY DATA SHEETS

MATERIAL SAFETY DATA SHEET

Diablo Petroleum, Inc.
3930 Pacheco Blvd.
Martinez, CA 94553
228-2222

Emergency # - (415) 228-2222
Transport Emergency # -
CHEMTREC (800) 424-9300

DIESEL FUELS

********** PRODUCT IDENTIFICATION **********

SUPPLIERS: Diablo Petroleum, Inc.
CHEMICAL NAMES AND SYNONYMS:
Hydrocarbons and Additives
USE OR DESCRIPTION: Fuel Oil
Diesel Fuel

DOT HAZARDOUS MATERIALS PROPER SHIPPING NAME:
Fuel Oil, Diesel No. 1 and 2
DOT HAZARDOUS CLASSIFICATION: Combustible Liqui
UN/NA IDENTIFICATION # - NA 1993

********** TYPICAL CHEMICAL AND PHYSICAL PROPERTIES **********

APPEARANCE:
Clear to Dark Amber
ODOR: Hydrocarbon
RELATIVE DENSITY: 15/4C
0.82-0.87

VISCOSITY: At 100 F, SUS 31.0-40.0 At 40 C, CST 1.3-4.1
BOILING RANGE: No. 1 300-550F No. 2 350-700F
FLASH POINT: F (C) (ASTM D-93) No. 1:100(40) No. 2:125(52)

SOLUBILITY IN WATER: Negligible
VAPOR PRESSURE: MM HG 20C 1.0

********** INGREDIENTS **********

HAZARDOUS INGREDIENTS	WT PCT (APPROX)	EXPOSURE LIMIT (TWA): MG/M3	PPM
PETROLEUM DISTILLATES	100	575	100

NOTE: Exposure limits shown are for guidance only. Follow applicable regulations.

********** FIRE AND EXPLOSION HAZARD DATA **********

FLASH POINT: F(C) (ASTM D-93)
No. 1: 100(40) No. 2: 125 (52)
EXTINGUISHING MEDIA:
CO2, Foam, Dry Chemical or Water Fog
SPECIAL FIRE FIGHTING PROCEDURES:
Firefighters must use self-contained breathing apparatus
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Material is combustible.

FLAMMABLE LIMITS: LEL: NE UEL: NE

NFPA CODES:
Health 0
Flammability 2
Reactivity 0

********** HEALTH HAZARD SUMMARY **********

THRESHOLD LIMIT VALUE (IF ESTABLISHED): No TLV Established. DPI recommends a TWA exposure limit of 100 PPM.
EFFECTS OF OVEREXPOSURE: Slight Skin Irritation. Respiratory irritation, dizziness, nausea, loss of consciousness. This product may contain trace quantities of polycyclic aromatic hydrocarbons (PCAH). Under conditions of poor personal hygiene and prolonged, repeated contact, some PCAH have been suspected as a cause of skin cancer in humans.

********** EMERGENCY AND FIRST AID PROCEDURES **********

EYE CONTACT: Flush with Water
SKIN CONTACT: Wash contact areas with soap and water.
INHALATION: Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance and call a physician. If breathing has stopped, use mouth to mouth resuscitation.
INGESTION: Do not induce vomiting. Administer vegetable oil. Get medical assistance.
NOTE TO PHYSICIAN: (Material if aspirated into the lungs may cause chemical pneumonitis. Treat appropriately).

********** REACTIVITY DATA **********

STABILITY: Stable CONDITIONS TO AVOID: Heat, Sparks, Flame, and Build Up of Static Electricity.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong Oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide (CO) from incomplete combustion.
HAZARDOUS POLYMERIZATION: Will not occur. CONDITIONS TO AVOID: NA

********** SPILL OR LEAK PROCEDURES **********

ENVIRONMENTAL IMPACT:

Report spills as required to appropriate authorities. In case of accident or road spill notify CHEMTREC (800) 424-9300. U. S. Coast Guard regulations require immediate reporting of spills that could reach any waterway including intermittent dry creeks. Coast Guard Toll Free number (800) 424-8802.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED:

Absorb on fire retardant treated sawdust, diatomaceious earth, etc. Shovel up and dispose of at an appropriate waste disposal facility in accordance with current applicable laws and regulations, and product characteristics at time of disposal.

WASTE MANAGEMENT:

Dispose of waste by supervised incineration in compliance with applicable laws and regulations.

********** SPECIAL PROTECTION INFORMATION **********

EYE PROTECTION: No special equipment required.
SKIN PROTECTION: If prolonged or repeated skin contact is likely, oil impervious gloves should be worn.
GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.
RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.
VENTILATION: Ventilation desirable and equipment should be explosion proof, use in well ventilated area.
OTHER: NA

********** SPECIAL PRECAUTIONS **********

STORED MATERIAL MUST BE LABELED AS: Combustible.
STORAGE: Store in a cool area.

DIESEL FUELS

********** TOXICOLOGICAL DATA **********

ACUTE

ORAL TOXICITY: (Rats)
Slightly Toxic (estimated) -- Based on testing of similar products and/or the components.
DERMAL TOXICITY: (Rabbits)
Nontoxic (estimated) -- Based on testing of similar products and/or the components.
INHALATION TOXICITY: (Rats)
Slightly Toxic (estimated) -- Based on testing of similar products and/or the components.
EYE IRRITATION: (Rabbits)
Expected to be Non-Irritating -- Based on testing of similar products and/or the components.
SKIN IRRITATION: (Rabbits)
May cause slight irritation on prolonged or repeated contact.
--Based on testing of similar products and/or the components.

SUBACUTE AND MUTAGENICITY (Summary)

NO INFORMATION AVAILABLE

CHRONIC OR SPECIALIZED (Summary)

This product may contain trace quantities of polycyclic aromatic hydrocarbons, some of which have been shown to cause skin cancer in laboratory animals after prolonged, repeated skin contact.

OTHER DATA

NA

****

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures whould be provided to handlers and users.

CUSTOMER P.O. NO. 70806

'A' 3/03/86 MATERIAL SAFETY DATA SHEET PAGE 1

SECTION I - GENERAL INFORMATION

CATALOG NO 44804 (REORDER PRODUCT BY THIS NO.)
PRODUCT NAME KIT PCB-8-20 ISOOCTANE
DATA SHEET NO I44d140
AROCLOR 1254 (1NG/UL)
FORMULA C8H18 FORMULA WEIGHT 114
CAS 540-84-1 NRTECS SA3320000
SYNONYM ANALYTICAL STANDARD IN ISOOCTANE
MANUFACTURER SUPELCO INC. PHONE 814-359-3441
ADDRESS SUPELCO PARK, BELLEFONTE, PA 16823

SECTION II - HAZARDOUS INGREDIENTS OF MIXTURES

MATERIALS - PERCENTAGE - CAS #
(FORMULA) - TLV(UNITS)
LD50 VALUE - CONDITIONS

N/A

SECTION III - PHYSICAL DATA

BOILING POINT 99 C MM MELTING POINT -116 C
VAPOR PRESSURE 41 C SPECIFIC GRAVITY .690 C (WATER=1
VAPOR DENSITY 3.90 C (AIR=1) PERCENT VOLATILE BY VOLUME 100
WATER SOLUBILITY N/A EVAPORATION RATE >1 (ETHER=1)
APPEARANCE COLORLESS LIQUID

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT 10 F CLOSED CUP FLAMMABLE LIMITS LEL 1.1 UEL 6.

EXTINGUISHING MEDIA

CO2
FOAM
DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES

WEAR SELF CONTAINED BREATHING APPARATUS WHEN FIGHTING A CHEMICAL FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS

CAN REACT VIGOROUSLY WITH REDUCING MATERIALS.

SECTION V - HEALTH HAZARD DATA

LD50 N/A TLV N/A

EMERGENCY AND FIRST AID PROCEDURES
EYES
FLUSH EYES WITH WATER FOR 15 MINUTES.

FLUSH SKIN WITH LARGE VOLUMES OF WATER.

INHALATION
IMMEDIATELY MOVE TO FRESH AIR.

TALOG NO 44804 (REORDER PRODUCT BY THIS NO.)
ODUCT NAME KIT PCB-B-20 ISOOCTANE
DATA SHEET NO I448140
AROCLOR 1254 (1NG/UL)

SECTION V - HEALTH HAZARD DATA

* CONTINUED *
GIVE OXYGEN IF BREATHING IS LABORED
IF BREATHING STOPS, GIVE ARTIFICIAL RESPIRATION

INGESTION
NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON
NEVER TRY TO MAKE AN UNCONSCIOUS PERSON VOMIT
DO NOT INDUCE VOMITING.

FFECTS OF OVEREXPOSURE

N/A

SECTION VI - REACTIVITY DATA

STABILITY STABLE.

ONDITIONS TO AVOID

N/A

'N IPATIBILITY

REDUCING AGENTS

AZARDOUS DECOMPOSITION PRODUCTS

N/A

AZARDOUS POLYMERIZATION WILL NOT OCCUR.

ONDITIONS TO AVOID

N/A

SECTION VII - SPILL OR LEAK PROCEDURES

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

TAKE UP WITH ABSORBENT MATERIAL.
VENTILATE AREA.

TE DISPOSAL METHOD

COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL REGULATIONS

SUPELCO, INC. SUPELCO PARK BELLEFONTE, PA 16823-0048
TWX 510-670-3600

DATE 3/03/86 MATERIAL SAFETY DATA SHEET PAGE

CATALOG NO 44804 (REORDER PRODUCT BY THIS NO.)
PRODUCT NAME KIT PCB-8-20 ISOOCTANE
DATA SHEET NO I448140
AROCLOR 1254 (1NG/UL)
* CONTINUED *

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFIC TYPE)

WEAR FACE MASK WITH ORGANIC VAPOR CANISTER.

PROTECTIVE GLOVES

WEAR GLOVES.

EYE PROTECTION

WEAR PROTECTIVE GLASSES.

VENTILATION

USE ONLY IN WELL VENTILATED AREA.

SPECIAL

N/A

OTHER PROTECTIVE EQUIPMENT

N/A

SECTION IX - SPECIAL PRECAUTIONS

STORAGE AND HANDLING

STORE IN SEALED CONTAINER IN COOL, DRY LOCATION.
KEEP AWAY FROM HEAT.
STORE IN DRY, WELL VENTILATED AREA.
KEEP AWAY FROM IGNITION SOURCES.

OTHER PRECAUTIONS

AVOID EYE OR SKIN CONTACT.
AVOID BREATHING VAPORS.

A.. REVISED 11/21/85

STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES
DEPARTMENT OF INDUSTRIAL RELATIONS\CAL/OSHA

HESIS

2151 Berkeley Way
Berkeley, California 94704
Call Collect (415) 540-3014

MEDICAL GUIDELINES

HAZARD EVALUATION SYSTEM AND INFORMATION SERVICE

LEAD

SOURCES:

Occupational exposures to lead fume and dust are the most common sources of poisoning. Many workers are at risk, with major hazards found in smelting, battery manufacture and demolition work. Serious cases are relatively rare today due to better work practices and biologic monitoring.

Children age 1-5 are prone to pica, and ingestion of lead-based paint or plaster found in many older homes may result in poisoning. Other significant exposures have occurred in home owners stripping lead-based paint, in users of lead-glazed pottery and from ingestion of illicitly distilled liquor.

PHARMACOLOGY:

Lead is well absorbed by inhalation; about 10% of an ingested dose is absorbed by the GI tract; skin absorption is negligible except for organic (tetraethyl) lead. Once absorbed, it is initially found in all soft tissue, but eventually 90% of the body burden is bound to bone. In disease states that result in mobilization of calcium from bone (e.g., chronic infections, surgery etc.) lead is also released and has produced acute intoxication long after cessation of exposure. Since lead inhibits many enzyme systems, multiple organ systems are effected. Clinical effects, however, are most prominent in the nervous, hematopoietic, renal, gastrointestinal and reproductive systems. The majority of an absorbed dose is excreted through the kidney. Most poisonings occur as a result of repeated exposures over a period of weeks, months or even years.

CLINICAL PRESENTATION:

Early symptoms are non-specific and involve the nervous system (listlessness, fatigue, irritability, sleep disturbances, headache) and GI system (decreased appetite, nausea, abdominal pain, constipation). Anemia is generally associated with blood lead levels (BLL) above 80 mg%. It may be hypochromic, microcytic (acute, children) or normochromic, normocytic (chronic, adults). Basophilic

stippling is classically seen. Peripheral neuropathy (lead palsy), may occur after chronic exposure. and is characterized predominantly by extensor muscle weakness with minimal sensory loss. Severe abdominal pain ("lead colic") may occur and mimic an acute abdomen. Exposure to organic lead compounds produces a dramatic acute encephalopathy with delirium and hallucinations.

LABORATORY: The best single diagnostic test is the BLL. Although there is wide variation in individual susceptibility to lead intoxication, there are in general an increasing number and severity of symptoms with increasing BLL. Laboratory variability is great and only CDC certified labs should be used. In general, levels below 30 ugm/100 ml are considered "normal", although there is considerable geographic variation. Levels below 60 are usually asymptomatic, and levels above 100 are associated with severe effects and usually warrant hospitalization. Erthrocyte protoporphyrin levels (FEP, ZPP) indicate biologic effect on hematopoietic system; they rise with some lag compared to BLL but remain elevated longer.

TREATMENT: Based on severity of symptoms and BLL:

BLL	Symptoms	TREATMENT
30 - 50	Usually absent	Cessation of exposure
50 - 70	Mild	Cessation of exposure
70 - 100*	Moderate to severe	EDTA**
> 100	Usually severe	EDTA plus BAL x 5 days**

*If above 70 and asymptomatic, do EDTA mobilization test; if excretion greater than 1 mcg lead per mg EDTA, give full course chelation.

**Follow-up with oral penicillamine x 1-2 months for adults, 3-6 months for children. BLL should be less than 60 at end of treatment. (There may be transient "rebound" elevations of BLL after cessation of treatment.)

EDTA dose: 12 mg/kg q4h IM x 5 days. May give IV slow drip at concentration no greater than 0.5% (5 mg/ml) (do not give orally). Side effects: Reversible ATN, Zn and B_6 depletion .

BAL dose: 3-5 mg/kg q4h IM x 5 days. Side effects: hypertension, lacrimation, N & V, burning lips.

Penicillamine dose: 100 mg/kg/day (max. 1 gm) p.o. q4h on empty stomach. Side effects: loss of taste, nephrotic syndrome.

This information sheet was prepared by the HESIS medical staff. It is not a definitive summary, but rather a guideline for diagnosis and treatment of lead poisoning, one of the few industrial poisonings for which specific antidotal therapy is available. HESIS physicians are available for free consultation weekdays between 8:00 a.m. and 5:00 p.m. at (415) 540-3014.

APPENDIX C

JOBSITE POSTINGS AND PERMITS

STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION

CALIFORNIA RADIATION CONTROL REGULATIONS (17 CA CODE OF REGULATIONS SECTIONS 30250 ET SEQ.)

The California Radiation Control Regulation includes standards for protection against radiation hazards. The State Department of Health Services has primary responsibility for administering these standards which apply to both employers and employees. Enforcement is carried out by the Department of Health Services or its contractors, the Los Angeles County Health Department, the Orange County Health Department and the San Diego County Department of Environmental Health Services.

EMPLOYEES' RESPONSIBILITIES

You should know and understand those California Radiation protection standards and your employer's operating and emergency procedures which apply to your work. You should comply with their requirements for your own safety and the safety of others.

SCOPE OF THE STANDARDS

The Standards for Protection Against Radiation define:

1. Limits on exposure to radiation and radioactive materials in controlled and uncontrolled areas;
2. Actions to be taken after accidental exposure;
3. Working conditions requiring personnel monitoring, safety surveys and safety equipment;
4. Proper use of caution signs, labels and safety interlock devices;
5. Requirements for keeping worker exposure records and reporting of such exposures;
6. The requirement for specific operating and emergency procedures for radiation work; and
7. The rights of workers regarding safety inspections.

EMPLOYERS' RESPONSIBILITIES

Your employer is required to:

1. Comply with the requirements of the California Radiation Control Regulations, Departmental orders and license conditions;
2. Post or make available to you copies of the Radiation Control Regulations, any license issued thereunder and your operating and emergency procedures;
3. Post any notice of violation of radiologic working conditions; and
4. Provide you with information on your exposure to radiation.

REPORTS ON YOUR RADIATION EXPOSURE HISTORY

1. California Radiation Control Regulations require your employer to give you a written report if you receive an exposure greater than the limits set in the radiation safety standards. Basic limits for occupational radiation exposure can be found in Sections 30265 and 30266. These Sections specify limits on exposure to radiation and exposure to concentrations of radioactive material in air.
2. If the radiation protection standard, Section 30276-7, requires that your radiation exposure be monitored, your employer must, upon your request, (a) give you a written report of your exposures upon termination of your employment, and (b) advise you of your exposures annually.

INSPECTIONS

The Department or one of its contractors will inspect your workplace from time to time to ensure that health and safety requirements are being followed and that these requirements are effective in protecting you. Inspectors may confer privately with you at the time of inspection. At that time you may direct the inspector's attention to any condition you believe is or was a violation of the safety requirements.

In addition, if you believe at any time that any health and safety requirements are being violated, you or your workers' representative may request that an inspection be made by sending a complaint to the Department of Health Services or other official agency at the address listed below. Your complaint must describe the specific circumstances of the apparent violation and must be signed by you or your workers' representative. The Department is required to give your employer a copy of any such complaint. Names may be withheld at your request. You should understand, however, that the law protects you from being discharged or discriminated against in any way for filing a complaint or otherwise exercising your rights under the California Radiation Control Regulations.

FOR INFORMATION & ASSISTANCE CONTACT:

CALIFORNIA RADIATION CONTROL PROGRAM OFFICES

Address	Telephone (daytime)	Address	Telephone (daytime)
RADIOLOGIC HEALTH BRANCH **CALIFORNIA DEPARTMENT OF HEALTH SERVICES**		**LOCAL AGENCIES**	
714/744 P Street Sacramento, CA 95814	(916) 445-0831 FAX # (916) 324-3610	Los Angeles County Health Department Department of Health Services Radiation Management 2615 South Grand Ave., Rm. 608 Los Angeles, CA 90007	(213) 744-3244 FAX # (213) 748-8299
2151 Berkeley Way Berkeley, CA 94704	(510) 540-2014 FAX # (510) 540-2037		
1449 West Temple Street Los Angeles, CA 90026 P.O. Box 90327 Los Angeles, CA 90030	(213) 620-3426 FAX # (213) 620-2666	Health Care Agency Radiologic Health 2009 E. Edinger Avenue Santa Ana, CA 92705	(714) 667-3605 FAX # (714) 972-0749
		County of San Diego Environmental Health Services P.O. Box 85261 San Diego, CA 92138-5261	(619) 338-2085 FAX # (619) 338-2139

RADIATION EMERGENCY ASSISTANCE ONLY ~~(916) 891-7718~~ 1-800-852-7550 **ALL HOURS**

POSTING REQUIREMENTS

Copies of this notice must be posted in a sufficient number of places in every establishment where employees are employed in activities regulated by the Department of Health Services, to permit employees working in or frequenting any portion of a controlled area to observe a copy on the way to or from their place of employment.

CAUTI
RADIAT
INTERI
MAG-INGAT
RADYASYON
RADI
ATTENZIONE
RADIAZIONE
CAU
OPACHO
PAANALAR
SYM
VORSICHT
STRAHLUNGSGEFA

ESTADO DE CALIFORNIA
DEPARTAMENTO DE SALUD DE SERVICIOS

AVISO PARA EMPLEADOS

NORMAS PARA LA PROTECCIÓN CONTRA LA RADIACIÓN

REGLAMENTOS DE CALIFORNIA SOBRE EL CONTROL DE RADIACIÓN (17 CA CODE DE REGLAMENTOS SECTIONS 30260 ET SEQ.)

Los reglamentos de California sobre el control de radiación incluyen normas para la protección contra los peligros de la radiación. El Departamento de Salud de Servicios del estado tiene la responsabilidad primaria para administrar estas normas que aplican tanto a empleadores como a los empleados. La ejecución se lleva a cabo por el Departamento de Salud de Servicios o sus concesionarios, el Departamento de salud del Condado de Los Angeles, el Departamento de Salud del Condado de Orange y el Departamento de Servicios de Salud Environmental del Departamento del Condado de San Diego.

RESPONSABILIDADES DE LOS EMPLEADOS

Usted debe saber y comprender esas normas de California sobre la protección de radiación y los procedimientos de emergencia y funcionamientos de su empleador que aplican a su empleo. Usted debe complir con los requisitos para su seguridad y la seguridad de otros.

ALCANCE DE NORMAS

Las normas para la protección contra la radiación definan:

1. Límites sobre la exposición a la radiación y los elementos radioactivos en áreas controladas y no controladas;
2. Medios que deben tomar después de exponerse accidentalmente;
3. Condiciones de trabajo que requieren revisо de personal, estudios de seguridad y equipo de seguridad.
4. Uso apropiado de los rótulos de precaución y etiquetas y artefactos entrelazados de seguridad;
5. Requisitos para el mantenimiento de los antecedentes sobre la exposición del trabajador y avisar de estas exposiciones;
6. El requisito para los procedimientos de funcionamiento específico y de emergencia para el trabajo con la radiación; y
7. Los derechos de los trabajadores tocante a las inspecciones de seguridad.

RESPONSABILIDADES DE EMPLEADORES

Se requiere a su empleador que:

1. Cumpla con los requisitos de los reglamentos de California sobre el control de radiación, condiciones de órdenes y licencia del departamento;
2. Fije o haga disponible a Ud. copias de los reglamentos sobre el control de radiación, bajo cualquier licencia impartida y sus procedimientos de funcionamiento y emergencia;
3. Fije cualquier aviso de violación sobre condiciones de trabajo radiologico; y
4. Le proporcione con información de su exposición a la radiación.

REPORTES DE SU EXPOSICIÓN ANTECEDENTE A LA RADIACIÓN

1. Los reglamentos de California sobre el control de radiación requieren que su empleador le dé un reporte por escrito si Ud. recibe una exposición major que de los límites ya fijados en las normas de seguro sobre la radiación. Los límites básicos de exposición a la radiación ocupacional se pueden encontar en las secciones 30265 y 30266. Estas secciones especifican los límites sobre su exposición a la radiación y su exposición a concentraciones de elementos radioactivos en el aire.
2. Si la norma sobre la protección de radiación, sección 30276-7, requiere que su exposición a la radiación sea inspeccionada, y su empleador debe a su peticíon, (a) darle un reporte por escrito de las veses que se expuso cuando se termine su empleo, y (b) aconsejarle anualmente de las veses que se expuso.

INSPECCIONES

El departamento o uno de sus concesionarios inspeccionarán su lugar de trabajo de vez en cuando para asegurar que los requisitos de salud y seguridad sean observados y que estos requisitos sean efectivos en protejerle a Ud. Los inspectores pueden consultar en privado con Ud. al tiempo de la inspección. A ese tiempo Ud. puede dirigir la atención del inspector a cualquier condición que Ud. cree o creyó que fue una violación de los requisitos de seguridad.

Además, si Ud. cree que en algún tiempo cualesquier requisito de salud y seguridad son violados, Ud. o el representante de sus trabajadores pueden pedir que hagan una inspección, enviando su queja al Departamento de Salud de Servicios o otra agencia oficial a los domicilios en la lista de abajo. Su queja debe relatar las circunstancias específicas de la aparente violación y debe ser firmado y enviada por Ud. o un representante de sus trabajadores. Se require al departamento que dé una copia de su queja a su empleador. Pueden pedir que los nombres sean detenidos de la peticion. Usted debe comprender sin embargo que la ley le protaje de ser despedido o ser discriminado en cualquier manera por haber sentado una denuncia o de otro modo haber ejectado sus derechos bajo los reglamentos de California sobre el control de radiación.

¡CUIDADO!
RADIACION
RADIATION
注意
放射線
小心
輻射
ATTENTION

PARA INFORMACIÓN A AYUDA COMUNÍQUESE CON:

LAS OFICINAS DEL PROGRAMA DE CALIFORNIA SOBRE EL CONTROL DE RADIACIÓN

Dirección	Numero De Teléfono (durante el día)
SUCURSAL DE SALUD RADIOLOGICA	
CALIFORNIA DEPARTMENT OF HEALTH SERVICES	
714/744 P Street	(916) 445-0931
Sacramento, CA 95814	FAX # (916) 324-3610
2151 Berkeley Way	(510) 540-2014
Berkeley, CA 94704	FAX # (510) 540-2037
1449 West Temple Street	
Los Angeles, CA 90026	(213) 620-3428
P.O. Box 30327	FAX # (213) 620-2956
Los Angeles, CA 90030	

Dirección	Numero De Teléfono (durante el día)
AGENCIAS LOCALES	
Los Angeles County Health Department	
Department of Health Services	
Radiation Management	
2615 South Grand Ave., Rm. 608	(213) 744-3244
Los Angeles, CA 90007	FAX # (213) 748-8299
Health Care Agency	
Radiologic Health	
2009 E. Edinger Avenue	(714) 667-3605
Santa Ana, CA 92705	FAX # (714) 972-0749
County of San Diego	
Environmental Health Services	
P.O. Box 85261	(619) 338-2085
San Diego, CA 92138-5261	FAX # (619) 338-2139

AYUDA DE EMERGENCIA SOBRE RADIACIÓN ~~(916) 391-7716~~ 1-800-852-7550 **A TODAS HORAS**

REQUISITOS PARA FIJAR

Copies de este aviso deben ser fijadas en suficiente números de lugares en cada establecimiento donde los empleados se empleen en actividades reguladas por el Departamento de Salud de Servicios para permitir a los empleados que trabajan en o frequentan cualquier porción de una área controlada para observar una copia en camino a/o de sus lugares de empleo.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

No- 561924

13202

PERMIT

Permit Issued To
(Insert Employer's Name, Address and Telephone No.)

IT Corporation
336 W. Anaheim Street
Wilmington, CA 90744
(310) (800) 262-1900

No. _____

Date December 12, 1994

Region 3

District 5

Tel. (310) 516-3734

Type of Permit ANNUAL TRENCH/EXCAVATION PERMIT

Pursuant to Labor Code Sections 6500 and 6502, this Permit is issued to the above-named employer for the projects described below.

State Contractor's License Number			Permit Valid through	
137422			December 31, 1995	
Description of Project	Location Address	City and County	Anticipated Dates	
			Starting	Completion
Excavation/Trench	Various	Statewide	1/1/95	12/31/95
THIS PERMIT IS ISSUED SUBJECT TO THE CONDITION THAT THE WORK IS PERFORMED BY THE SAME EMPLOYER. THE APPROPRIATE DISTRICT OFFICE SHALL BE NOTIFIED IN WRITING OF LOCATION OF JOB SITE PRIOR TO COMMENCEMENT. THE IIP PROGRAM SUBMITTED FOR THIS PERMIT IS ACCEPTED BY DOSH FOR PERMIT PURPOSES ONLY. ALTHOUGH IT ADDRESSES THE PRIMARY POINTS REQUIRED? FAILURE TO IMPLEMENT IT OR ASSURE ITS EFFECTIVENESS? MAY RESULT IN A CITATION."				

This Permit is issued upon the following conditions:

1. That the work is performed by the same employer. If this is an annual permit the appropriate District Office shall be notified, in writing, of dates and location of job site prior to commencement.
2. That employer will comply with all occupational safety and health standards or orders applicable to the above projects, and any other lawful orders of the Division.
3. That if any unforeseen condition causes deviation from the plans or statements contained in the Permit Application Form the employer will notify the Division immediately.
4. Any variation from the specification and assertions of the Permit Application Form or violation of safety orders may be cause to revoke the permit.
5. This permit shall be posted at or near each place of employment as provided in 8 CAC 341.4.

B of A 2045/11-35/1210 1233

Received From	Received By	
J. Stapleton	J. Jones	
☐ Cash	Amount	Date
☒ Check	$100.00	12-13-94

Investigated by _____ Safety Engr. Date 12-13-94

Approved by _____ Dist. Manager Date 12-13-94

EMPLOYER ORIGINAL—GREEN DISTRICT COPY—PINK
ACCOUNTING COPY—CANARY REGION COPY—WHITE
S-680 (Rev. 2-81)

IT CORPORATION

EXCAVATION/TRENCH NOTIFICATION WORKSHEET

Project Number: _____ Project Name: _____

Customer's Name: _____

Specific Jobsite Location: _____

Nearest Major Cross Street: _____

City: _____ County: _____

Name of Project Manager: _____

Starting Date: _____ Estimated Completion Date: _____

High Voltage Lines in Proximity: NO: _____ YES: _____ How Near: _____

Depth Range (ft.): _____ (min) _____ (max) Width Range (ft.): _____ (min) _____ (max) Length (ft.): _____

Project Description: _____

_____

Anticipated Soil Condition: Hard Compact: _____ Unstable: _____ Running: _____

Ground Protection Method: Shoring: _____ Sloping: _____ Trench Shield: _____ Alternate: _____

ALL METHODS MUST MEET ACCEPTED ENGINEERING REQUIREMENTS. PLANS MUST BE KEPT ON SITE.

Describe Chemical Hazards in Work Area: _____

_____

Subcontractor's Name: _____

Equipment to be Used: _____

Design Engineer: _____ Project Supervisor: _____

Phone: ( ) _____

Health & Safety Use Only

IT Permit Number: _____ Date Issued: _____ Expires: _____

Issued By: _____

CAL/OSHA Notification: Date: _____ By: _____

District Office: _____ Contact: _____

ACTIVITY NOTIFICATION FORM FOR HOLDERS OF ANNUAL PERMITS

Scaffolding Falsework Trenches/Excavations

§ CCR 341. (f) requires holders of annual permits to provide notification to the DOSH office nearest the project prior to commencement of any work. This form in provided for you convenience to use for such notification.

This form may be faxed to the nearest DOSH office to comply with the above. Please do not mail duplicate notification to follow-up fax notification.

FAX DATA: Faxed to : _____ DOSH District Office on: _____
DOSH FAX NO.: _____ By: _____

Company Name: _____ Field Phone: _____
Annual Permit Number: _____ Office Phone: _____
Issuing Region: _____ Issuing District: _____
Specific Activity Location: _____ Number of Employees: _____
Nearest Major Cross Street: _____ Starting Date: _____
City: _____ Anticipated Completion Date: _____
County: _____ High Voltage Lines in Proximity? No ____ Yes ____

INSTRUCTIONS: The appropriate item(s) must be completed and signed by a person knowledgeable about the project for each activity covered by a permit. Please fill in or check off the blanks where appropriate.

Scaffolding: Height _____ Metal _____ Wood _____ Wood over 60 feet _____ Metal over 125 feet ____
Metal > 125 feet or Wood > 60 feet requires design by a California Registered Civil Engineer & plans at the site [See § CCR 1644(c)(7)]

Falsework/Vertical Shoring: Maximum Height _____ Maximum Span _____ Material _____
Description: _____

Trenches/Excavations: Depth Range (Min/Max)* _____ Width Range (Min/Max)* _____ Total Length _
Ground Protection Method: Shoring _____ Sloping _____ Trench Shield _____ Professional Engineer _____
Underground Services Alert (USA) Number _____(NORTH 1-800-642-2444/SOUTH 1-800-422-4133)
Soil Analysis to be done? Yes _____ No _____ If No, you must slope 1.5 to 1.
Competent Person: The holder of an Annual Permit who is notifying the District of the commencement of a Trench and/or Excavation project shall designate a competent person in accordance with the requirements of § CCR Section 1504, 1541, and 1541.1.

Description: _____

Ground protection methods for excavations deeper than 20 feet must be designed by a Registered Professional Engineer. See § CCR 1541.1, Appendix F.

I hereby certify that to the best of my knowledge, the above information and assertions are true and correct and that I/the applicant have knowledge of and will comply with the foregoing.

Signature: _____
Title: _____ Date: _____

APPENDIX D - DOSH DIRECTORY

DISTRICT	ADDRESS	TEL. NO.	FAX NO.
Anaheim	2100 E. Katella Ave., Suite 140, Anaheim 92806	(714)939-0145	(714)939-8518
Bakersfield	4800 Stockdale Hwy, Suite 212, Bakersfield 93309	(805)395-1718	(805)395-2841
Concord	1465 Enea Cir., Bldg E., Suite 900, Concord 94520	(510)676-5333	(510)676-0227
Covina	1123 So. Parkview, Suite 100, Covina 91724	(818)966-1166	(818)965-7041
Fresno	2550 Mariposa St., Rm. 4000, Fresno 93721	(209)445-5302	(209)445-5786
Los Angeles	3550 W. 6th St., Rm. 431, Los Angeles 90020	(213)736-3041	(213)736-4526
Oakland	7700 Edgewater Dr., Suite 125, Oakland 94621	(510)568-8602	(510)568-7092
Pico Rivera	9455 E. Slauson Ave., Pico Rivera 90660	(310)949-7827	(310)949-9880
Redding	381 Hemsted, Redding 96002	(916)224-4743	(916)224-4747
Sacramento	2424 Arden Way, Suite 165, Sacramento 95825	(916)263-2800	(916)263-2798
San Bernardino	242 E. Airport Dr., Suite 103, San Bernardino 92408	(909)383-4321	(909)383-6789
San Diego	7807 Convoy Ct., Suite 140, San Diego 92111	(619)637-5534	(619)279-4658
San Francisco	1390 Market St., Suite 718, San Francisco 94102	(415)557-1677	(415)
San jose	2010 No. First St., Suite 401, San Jose 95131	(408)452-7288	(408)452-7287
San Mateo	1900 So. Norfolk St., Suite 215, San Mateo 94403	(415)573-3812	(415)573-3817
Santa Rosa	1221 Farmers Lane, Suite 300, Santa Rosa 95405	(707)576-2388	(707)576-2598
Torrance/Long Beach/South Bay	680 Knox St., Suite 100, Torrance 90502	(310)516-3734	(310)516-4253
Van Nuys	6150 Van Nuys Blvd., Suite 405, Van Nuys 91401	(818)901-5403	(818)901-5578
Ventura	1655 Mesa Verde, Rm. 150, Ventura 93003	(805)654-4581	(805)654-4852

UNDERGROUND/OVERHEAD UTILITY CHECKLIST

Project Name/Number _____ ***Date*** _____

Location _____

This checklist must be completed for any intrusive subsurface work such as excavating or drilling. It records the fact that all underground and overhead structures and utilities in the work area are identified and located. The Project Manager must request utility markouts before the start of field operations to allow the client and utility companies time to complete them. If complete information is not available, a magnetometer survey must be performed to locate obstacles prior to excavating or drilling.

PROCEDURE

A diagram of the project area depicting the proposed location of excavation or drilling sites must be attached to this Health and Safety Plan. The diagram must clearly indicate the areas checked for underground structures/utilities and overhead power lines. This form and the diagram must be signed by the Project Manager, the IT Field Supervisor, and the client representative (if applicable).

CHECKLIST

TYPE OF STRUCTURE	PRESENT	NOT PRESENT	METHOD OF MARKOUT
Electric Power Line			
Natural Gas Line			
Telephone Line			
Water Line			
Product Line			
Steam Line			
Sewer Line			
Drain Line			
Underground Tank			
Overhead Power Line			
Overhead Product Line			
Septic Tank/Drain			

Client Representative _____ _____

(If applicable) ***(Signature)*** ***(Date)***

IT Project Manager _____ _____

(Signature) ***(Date)***

IT Field Supervisor _____ _____

(Signature) ***(Date)***

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

No- 561923

13202

PERMIT

Permit Issued To
(Insert Employer's Name, Address and Telephone No.)

IT Corporation
336 West Anaheim Street
Wilmington, CA 90744
(800) 262-1900

No. _____

Date December 13, 1994

Region 3

District 5

Tel. (310) 516-3734

Type of Permit ANNUAL SCAFFOLDING PERMIT

Pursuant to Labor Code Sections 6500 and 6502, this Permit is issued to the above-named employer for the projects described below.

State Contractor's License Number			Permit Valid through	
37422			December 31, 1995	
Description of Project	Location Address	City and County	Anticipated Dates	
			Starting	Completion
Scaffolding	Various	Statewide	1-1-95	12-31-95
THIS PERMIT IS ISSUED SUBJECT TO THE CONDITION THAT THE WORK IS PERFORMED BY THE SAME EMPLOYER. THE APPROPRIATE DISTRICT OFFICE SHALL BE NOTIFIED IN WRITING OF LOCATION OF JOB SITE PRIOR TO COMMENCEMENT. THE IIP PROGRAM SUBMITTED FOR THIS PERMIT IS ACCEPTED BY DOSH FOR PERMIT PURPOSES ONLY. ALTHOUGH IT ADDRSSES THE PRIMARY POINTS REQUIRED? FAILURE TO IMPLEMENT IT OR ASSURE ITS EFFECTIVENESS? MAY RESULT IN A CITATION."				

This Permit is issued upon the following conditions:

1. That the work is performed by the same employer. If this is an annual permit the appropriate District Office shall be notified, in writing, of dates and location of job site prior to commencement.
2. That employer will comply with all occupational safety and health standards or orders applicable to the above projects, and any other lawful orders of the Division.
3. That if any unforeseen condition causes deviation from the plans or statements contained in the Permit Application Form the employer will notify the Division immediately.
4. Any variation from the specification and assertions of the Permit Application Form or violation of safety orders may be cause to revoke the permit.
5. This permit shall be posted at or near each place of employment as provided in 8 CAC 341.4.

2046/11-35/1210 1233

Received From	Received By	
J. Stapleton	J. Jones	
☐ Cash / ☑ Check	Amount $100.00	Date 12-13-94

Investigated by _____ Safety Engr. Date 12-13-94

Approved by _____ Dist. Manager Date 12-13-94

EMPLOYER ORIGINAL—GREEN DISTRICT COPY—PINK
ACCOUNTING COPY—CANARY REGION COPY—WHITE
S-680 (Rev. 2-81)

STATE OF CALIFORNIA — Pete Wilson, Governor

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
Occupational Carcinogen Control Unit
455 Golden Gate Avenue, Room 5202
n Francisco, CA 94102

ADDRESS REPLY TO:
P.O. BOX 420603
San Francisco, CA 94142

October 28, 1994

IT CORPORATION
International Technology Corporation
2355 MAIN STREET, SUITE 100
IRVINE CA 92714

CONFIRMATION OF REGISTRATION

Your carcinogen 'Report of Use", or Cal/OSHA Form 183A, has been received and the cardinogen(s) checked has(have) been recorded with your assigned registration number and effective date below:

REGISTRATION NUMBER: 2077 **EFFECTIVE DATE: 9/23/77**

CODE	CARCINOGEN	SECTION	INDIVIDUAL
015	Asbestos	1529, 5208, 5208.1	September 23, 1977
002	4-aminodiphenyl	5209	November 6, 1985
003	Benzidine(and its salts)	5209	November 6, 1985
004	3,3-Dichlorobenzidine(and its salts)	5209	November 6, 1985
005	4-Dimethylaminoazobenzene	5209	November 6, 1985
006	alpha-Naphthylamine	5209	November 6, 1985
007	beta-Naphthylamine	5209	November 6, 1985
008	4-Nitrobiphenyl	5209	November 6, 1985
009	N-Nitrosodimethylamine	5209	November 6, 1985
010	beta-Propiolactone	5209	November 6, 1985
011	bis-Chloromethyl ether	5209	November 6, 1985
012	Methyl chloromethyl ether	5209	November 6, 1985
013	4,4'-Methylenebis(2-chloroaniline)MBOCA	5215	November 6, 1985
014	Ethyleneimine	5209	November 6, 1985
016	Vinyl Chloride	5210	November 6, 1985
018	1,2-Dibromo-3-chloropropane(DBCP)	5212	November 6, 1985
019	Acrylonitrile	5213	November 6, 1985

KEEP THIS DOCUMENT AS A RECORD OF YOUR REPORT. PLEASE ADVISE THIS OFFICE OF CHANGES TO YOUR REPORT OF USE WITHIN 15 CALENDAR DAYS PER THE CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS AS LISTED.

FOR FURTHER ASSISTANCE CALL: (415) 703-5301, OCCUPATIONAL CARCINOGEN CONTROL UNIT.

CC: **Frederick J. Miakar, CIH, Dir, H&S, Environ. Svcs Div, W**
Ltr dtd 10/18/94 updated registrations for 7 active locations; advised of locations no longer occupied by IT Corp. Your registration number 2077 will represent all locations as you list - with 2355 Main St as the mailing address and corporate hqtrs.

STATE OF CALIFORNIA — Pete Wilson, Governor

DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
Occupational Carcinogen Control Unit
455 Golden Gate Avenue, Room 5202
Francisco, CA 94102

ADDRESS REPLY TO:
P.O. BOX 420603
San Francisco, CA 94142

October 28, 1994

IT CORPORATION
International Technology Corporation, Regional Office
2355 MAIN STREET, SUITE 100
IRVINE CA 92714

CONFIRMATION OF REGISTRATION

Your carcinogen 'Report of Use", or Cal/OSHA Form 183A, has been received and the cardinogen(s) checked has(have) been recorded with your assigned registration number and effective date below:

REGISTRATION NUMBER: 2077 **EFFECTIVE DATE: 9/23/77**

CODE	CARCINOGEN	SECTION	INDIVIDUAL
020	Inorganic Arsenic	5214	November 6, 1985
021	Ethylene Dibromide(EDB)	5219	November 6, 1985
022	Ethylene Oxide(EtO)	5220	November 6, 1985
023	Formaldehyde	5217	October 18, 1994
024	Benzene	5218	August 30, 1991
025	Methylenedianiline(MDA)	1535, 5200	October 18, 1994
026	Cadmium	1532, 5207	October 18, 1994
001	2-acetylaminofluorene	5209	November 6, 1985

KEEP THIS DOCUMENT AS A RECORD OF YOUR REPORT. PLEASE ADVISE THIS OFFICE OF CHANGES TO YOUR REPORT OF USE WITHIN 15 CALENDAR DAYS PER THE CALIFORNIA CODE OF REGULATIONS, TITLE 8, SECTIONS AS LISTED.

FOR FURTHER ASSISTANCE CALL: (415) 703-5301, OCCUPATIONAL CARCINOGEN CONTROL UNIT.

CC: **Frederick J. Miakar, CIH, Dir, H&S, Environ. Svcs Div, W**
Ltr dtd 10/18/94 updated registrations for 7 active locations; advised of locations no longer occupied by IT Corp. Your registration number 2077 will represent all locations as you list - with 2355 Main St as the mailing address and corporate hqtrs.

INTERNATIONAL TECHNOLOGY CORPORATION

HOT WORK PERMIT

Operating Area _____ Good for this date only _____ 19____

Specific vessel or equipment _____

Work to be done _____

TESTS

STATE EXACT LOCATION OF TEST	TIME	PERCENT LOWER EXPLOSION LIMIT	PERCENT OXYGEN	OTHERS _____	OTHERS _____	INITIAL

CHECK LIST

	Initial: Yes	Initial: Does Not Apply
Operations/plant personnel have been informed of work to be performed.		
All tanks/lines/valves are disconnected, blinded, or locked out.		
Equipment and all attached piping has been cleaned and purged with: (check blank) Water_____ Steam_____ Inert gas_____ Air_____		
Electrical service has been locked out and tagged.		
All grounding/bonding wire in place.		
Surrounding equipment and operations are safe for hot work.		
No open vessels or lines within 35 feet of hot work area.		
No combustible items within 35 feet of hot work area or covered with wetted tarpaulins.		
Fire Watch has been provided by Contractor.		
No flammable gases greater than 10% LEL in hot work area.		
All requirements of ITCPRO 9531 for Confined Space Entry have been met and ITC Form 9531-1 has been completed and posted.		
If vessel contains leaded product, all requirements of ITCPRO 9531.3 have been met.		

PERSONNEL PROTECTIVE EQUIPMENT

EYES
- ☐ Chemical Goggles
- ☐ Face Shield
- ☐ Safety Glasses
- ☐ Welders Mask

BODY
- ☐ Environmental Suit: ☐ PVC ☐ Butyl
- ☐ Heavy Suit: ☐ PVC ☐ Neoprene
- ☐ Light PVC Suit
- ☐ Yellow Tyvek Suit
- ☐ White Tyvek Suit

EXTREMITIES
- ☐ Hard Hat
- ☐ Gloves
- ☐ Boots ☐ PVC ☐ Neoprene
- ☐ Hoods ☐ PVC ☐ Neoprene
- ☐ Foot Coverings, Disposable

RESPIRATORY
- ☐ Self-Contained Respirator
- ☐ Hose Line Respirator
- ☐ Hose Line W/Egress
- ☐ Cartridge Respirator

Cartridge Type _____
- ☐ Dust Respirator

EQUIPMENT REQUIRED
- ☐ Fire Extinguisher
- ☐ Fire Blanket
- ☐ Charged Water Hose
- ☐ Combustible Gas Indicator

Special Instructions: _____

Completed by: _____ _____ _____
Name Printed | Signature | Date

_____
Manager

ITC FORM 9571-1

195-1-2

ENTRY PERMIT
PERMIT-REQUIRED CONFINED SPACE (PRCS)

Division/Location _____ Job No. _____

Customer _____ Address _____

Location of Job _____ Identity of PRCS _____

Describe Hazards of PRCS (Chemical, Physical) _____

_____

Chemical Introduced Into Space _____

_____

Purpose This Permit Authorized _____

_____

CHECKLIST	*YES*	*DOES NOT APPLY*
All lines leading to and from confined space have been blinded or disconnected		
Electrical service disconnected or locked out		
All grounding and bonding cables in place		
All lighting, fittings, power equipment, and extension cords are explosion-proof		
Ground Fault Circuit Indicator (GFCI) checked and functioning		
All ignition sources have been isolated		
All respiratory equipment and alarms checked and functional		
All safety harnesses and life lines checked		
All required PPE checked and in use		
All entrants are confined space trained		
All entrants are trained in the use, care, and limitations of respirators and PPE		
Attendant trained in emergency procedures		
Attendant(s) trained in rescue procedures		
Outside rescue service will be used and they have been notified of this entry		
Appropriate rescue equipment available and checked		
Ventilation system in use and effective		
Entrant(s) can achieve a gas-tight seal with respirator		
Entrant(s) are not wearing contact lenses		
All tests have been completed and indicate that entrance requirements have been met		
Appropriate warning signs have been posted and unauthorized personnel have been excluded from the PRCS and area		

IF THE ANSWER TO ANY OF THE ABOVE QUESTIONS IS NO, ENTRY IS NOT PERMITTED.

PERSONAL PROTECTIVE EQUIPMENT
(Circle)

EYE/FACE
Chemical Goggles
Face Shield
Safety Glasses

EXTREMITIES
Hard Hat
Gloves (Material _____)
Hoods
Boots (Material _____)
Booties

BODY
Suit (Level____, Material_____)

RESPIRATORY
SCBA
Air Line
Egress System
Air Purifying (Cartridge_____)
Powered Air Purifying
(Cartridge _____)

OTHER
Hearing Protection
Harness & Lifeline
Chest or Parachute

RESCUE EQUIPMENT

Mechanical Extraction Device
First Aid Kit
SCBA
Other (Specify) _____
_____
_____

NON-IT RESCUE TEAM

Instructions to Summon Rescue
_____
_____
_____

COMMUNICATION

Lifeline "Tug" Signals (See HASP)

Air Powered Horn Signals (See HASP)

Other_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

OTHER PERMITS ISSUED FOR WORK IN PRCS: _____
_____

OTHER HAZARD CONTROL PROCEDURES OR INSTRUCTIONS: _____
_____
_____

TEST DATA
Oxygen, Flammability and Toxic Contaminant(s)

Time	*Percent Oxygen*	*Percent LEL*	*PEL*	*PEL*	*PEL*	*PEL*	*PEL*	*Initials*	*Comments*

AUTHORIZED ENTRANTS

AUTHORIZED ATTENDANTS

RESCUE PERSONNEL

Diagram the confined space, indicate location of manways and ventilators. Indicate location(s) where tests conducted.

) (- Manway

∞ - Ventilator

X - Test Location

ACCEPTABLE ENTRY CONDITIONS

1) Enry Permit Completely Filled Out
2) Oxygen between 20-23.5%
3) Combustible Gases Below 10% LEL
4) Permissible Levels of Toxic Gases (List)

5) Other _____

PRCS SAFE FOR ENTRY

DATE/TIME _____/____ NAME ENTRY SUPERVISOR _____ SIGNATURE _____

CURRENT ENTRY SUPERVISOR (IF DIFFERENT) _____

ENTRY PERMIT EXPIRES DATE/TIME _____/_____ (No longer than 1 shift)

ENTRY PERMIT CANCELLED

DATE/TIME _____/_____ SIGNATURE _____

REASON (✓) _____ Work Complete _____ Authorized Conditions not met _____ Incident

DESCRIBE PROBLEMS DURING ENTRY AND RESOLUTION

RECLASSIFICATION TO NON-PERMIT-REQUIRED CONFINED SPACE
Describe hazard removal methods, without use of ventilation. _____

TESTING VERIFICATION SHOWN AT TIME _____ ON TEST DATA CHART ABOVE.

DATE/TIME _____/_____ ENTRY SUPERVISOR SIGNATURE _____

REVIEWED BY _____ DATE _____

INTERNATIONAL TECHNOLOGY CORPORATION

SUPERVISOR'S EMPLOYEE INJURY REPORT

This is an official document to be initiated by the employee's supervisor. Please answer all questions completely. This report must be forwarded to the employee's Regional Health and Safety office within 24 hours of the injury.

Injured's Name _____ Sex____ S.S. No._____ Birthdate_____

Home Address _____ City_____ State_____ Zip_____ Phone_____

Job title _____ Employee's P.C._____ Hire date_____ Hourly wage_____

SUPERVISOR

Date of incident _____ Time_____ Time reported_____ To whom? _____

Client name_____ Client address _____ Time shift began_____

Exact location of incident _____ Did employee leave work? ☐ No ☐ Yes When_____

Has employee returned to work? ☐ No ☐ Yes When_____ Did employee miss a regularly scheduled shift? ☐ No ☐ Yes

Doctor/Hospital name _____ Address_____

Witness name(s) _____ Statements attached? ☐ No ☐ Yes

Nature of injury _____ Exact body part_____

Medical attention: ☐ None ☐ First aid on site ☐ Doctor's office ☐ Hospital ER ☐ Hospitalized

Job assignment at time of incident _____ Job:_____ Phase:_____ Task:_____ Subtask:_____

Describe incident _____

What unsafe physical condition or unsafe act caused the incident? _____

What corrective action has been taken to prevent recurrence? _____

Supervisor/Foreman _____ (Print) _____ Signature _____ Date

MANAGER

MANAGER

Comments on incident and corrective action_____

Manager's name _____ (Print) _____ Signature _____ Date

HEALTH AND SAFETY

HEALTH AND SAFETY

Concur with action taken? ☐ No ☐ Yes Remarks _____

OSHA Classification:

☐ Incident only ☐ First aid ☐ No lost workdays ☐ Lost workdays ☐ Restricted activity ☐ Fatality

Days away from work_____ Days restricted work_____ Total days charged _____

☐ State jurisdiction ☐ Federal L&H ☐ Date ER submitted_____ Which claims office _____

Coding: A. Injury type or illness_____ B. Injured body parts_____ C. Activity at time of accident_____ D. Injury cause code_____

E. Agent code_____ F. Safety rule violated code_____ G. Accident prevention code_____

Name _____ (Print) _____ Signature _____ Date

ITC FORM HSO20A (10/90)

White: Corporate Health and Safety Yellow: Regional Health and Safety Pink: Profit/Cost Center

IT CORPORATION WORKERS COMPENSATION ACCIDENT CODING

A. TYPE OF INJURY OR ILLNESS

10 Laceration
12 Puncture
14 Contusion
16 Abrasion
18 Crushing Injury
20 Foreign Body
22 Burn-Thermal
24 Burn-Chemical
26 Fracture
28 Amputation
30 Hernia/Inguinal
31 Hernia/Other
32 Strain
34 Sprain
36 Dislocation
38 Heat Exhaustion/Heat Stress
40 Drowning
42 Asphyxiation
44 Systemic Poisoning
46 Dermatitis
48 Inflammation/Irritation
49 Pneumoconiosis
50 Respiratory Condition Due to Toxic Agents
51 Radiation
52 Heart Disease
54 Liver Damage
56 Kidney Damage
58 Mental Stress/Psychiatric
60 Repeated Trauma
62 Hearing Loss
64 Cancer
66 Other Occupational Disease
68 Fatality
70 Infectious Respiratory Disease
72 Miscellaneous-Not Otherwise Coded
74 Not Work Related

B. INJURED BODY PARTS

10 Head
12 Face
14 Ear
16 Eye
17 Nose
18 Teeth/Mouth
20 Neck
22 Shoulder
24 Chest
26 Abdomen
28 Upper Arm
30 Elbow
32 Lower Arm
34 Wrist
36 Hand
38 Thumb
40 Fingers
42 Back/Spine
44 Hip/Pelvis
46 Thigh
48 Knee
50 Lower Leg
52 Ankle
54 Heel
56 Metatarsal
58 Toes
60 Lungs
62 Heart
64 Liver
66 Other Internal Organs
67 Psyche
68 Not Otherwise Coded

C. ACTIVITY AT TIME OF ACCIDENT

10 Driving
14 Operating Heavy Equipment
16 Hot Work
18 Hydroblasting
19 Washing
20 Cutting
22 Lifting Or Manual Carrying
24 Walking
26 Running
28 Jumping
30 Hammering
32 Sampling
34 Loading/Unloading Vacuum Trucks
36 Pulling Vacuum Hoses
38 Climbing
40 Shoveling
41 Sweeping
42 Pulling
44 Pushing
46 Opening Or Closing
48 Reaching Or Stretching
50 Standing, Observing Or Inspecting
52 Piling Or Stacking
54 Maintenance
56 Training
58 Chemical Packaging
60 Laboratory Analysis
62 Washing Glassware
64 Tank Cleaning
66 Asbestos Removal
68 Nuclear Decontamination
70 Drilling
72 Pond Maintenance
74 Using Hand Tools
76 Not Otherwise Classified

D. INJURY CAUSE CODE

STRUCK BY

01 Falling Object
02 Flying Object
03 Swinging Object
04 Tipping, Sliding Or Rolling Object
05 Motor Vehicle
06 Altercation
07 All Other Moving Objects

STRAIN OR OVEREXERTION

10 Lifting (Back)
11 Lifting (Other Than Back)
12 Pulling Or Pushing
13 Reaching, Twisting Or Over Extending
14 Cumulative Trauma

FALL FROM ELEVATION

20 Manway Opening
21 Ladder Or Scaffold
22 Machinery Or Stationary Equipment
23 Piled Materials
24 Stairs
25 Heavy Equipment
26 Vacuum Trucks
27 Other Trucks

FALL FROM SAME LEVEL

30 Slip
31 Trip

STRUCK AGAINST

40 Moving Object
41 Stationary Object
42 Sharp Object

CAUGHT IN, UNDER OR BETWEEN

50 Running Or Meshing Objects
51 Point Of Operation (Machinery Or Equipment)
52 Other Than Point Of Operation
53 Moving And Stationary Objects
54 Two Moving Objects

EXPOSURE TO

60 Cold
61 Heat
62 Electric Current
63 Chemicals
64 Radiation
65 Noise
66 Dust
68 Poison Oak/Ivy

MISCELLANEOUS

70 Inhalation
71 Ingestion
72 Absorption
73 Job Stress
74 Insect Or Animal Bites

E. AGENT CODE

10 Grading/Compacting Equipment
11 Excavating/Drilling Equipment
12 Crane
14 Vacuum Truck
16 End Dump Truck
18 Automobile
19 All Other Motor Vehicles
20 Hand Tools
22 Power Tools
24 Laboratory Glassware
26 Laboratory Equipment
28 Sampling Equipment
30 Hoses
32 Hydroblaster
34 High Pressure Washing
36 Hand Truck
38 Ladder
40 Scaffold
42 Stairs
44 Slippery Surface
45 Ice Or Snow
46 Uneven Surface
48 Hot Liquid/Gases
50 Toxic Material
52 Oxygen Deficient Atmosphere
54 Flammable Materials
56 Electric Current
58 Radiation
60 Door
62 Compressed Gas
64 Gas Cylinder
66 Respirator/Breathing Apparatus
68 Protective Clothing
70 Other Clothing/Jewelry
72 Mobile Treatment Equipment
73 Fixed Treatment Facility

F. SAFETY RULE VIOLATED CODE

01 IT Safety Rule
02 Client Safety Rule
03 Compressed Air
05 Wire Rope, Clips And Slings
06 Locking Out Equipment
07 Piling And Blocking Of Materials
08 High Voltage Rules
09 Eye And Face Protection
10 Portable Ladders
11 Underground Construction
12 Cold Weather Hazards
13 Loading/Unloading
14 Hand Tools
15 Cleaning And Repair To Tools
16 Protective Clothing And Apparel
17 Flammable And Combustible Liquids
18 Job Procedure
19 Portable Electrical Tools
21 Flammable Gases
22 Fall Protection
23 Grinding Wheel
24 Machine Guarding
25 Scaffolding
26 Handling Materials
27 Horse Play And Fighting
28 Housekeeping
29 Unauthorized Walkways
30 Welding Equipment
31 Machine Operations
32 Hand Tools
35 Crane Rules
37 Acids And Caustics
38 Tripping And Slipping Hazards
42 Respirator Protection
43 Hearing Protection
44 Confined Space
45 Late Report of Minor Accident
46 Temporary Cords And Lamps
47 Improper Operation Of Equipment
48 Hydroblast
50 Motor Vehicle
51 Driving Under the Influence (DUI)
52 Fork Lifts
54 Air Compressors And Receivers
60 No Safety Rule Violation
62 Did Not Review Job With Health and Safety

G. ACCIDENT PREVENTION CODE

02 Install Guards Or Safety Device
04 Install Warning System
06 Store Flammables And Combustibles In Approved Manner
08 Block Or Secure Material On Machinery Against Unexpected Movement
10 Additional Housekeeping Needed
12 Remove Protruding Objects
14 Maintain Necessary Clearance
16 Control Or Remove Atmospheric Conditions
18 Maintain Proper Piling of Storage
20 Install Additional Illumination
22 Personal Protective Equipment
24 Review Project with Health & Safety

INSTRUCTION/RE-INSTRUCTION ON:

50 Use Of Equipment
52 Proper Operation Or Working Speed
54 Use Of Warning Devices
56 Proper Use Of Safety Devices
58 Use Of Tools In Good Repair
60 Proper Lifting Practices
62 De-Energizing Equipment Before Adjusting Or Repairing
64 Stay Off Moving Equipment
66 Horse Play
68 Wearing Of Personal Protective Equipment
70 Proper Chemical Handling Procedure
72 Safety Work Rules
74 IT Training Class

MUST BE COMPLETED WITHIN 72 HOURS

ACCIDENT/INJURY INVESTIGATION

Date _____ Profit/Cost Center _____ Date of Accident/Injury _____
Employee Name _____
Supervisor Name _____
Job Number/Name _____ / _____
Location of Accident/Injury _____

- Accident/Injury Classification

Injury	Vehicle	DOT
☐ Near Miss	☐ Chargeable	☐ DOT Vehicle
☐ First Aid	☐ Non-Chargeable	☐ DOT Reportable
☐ OSHA Recordable	☐ Not at Fault	
☐ Lost Workday		General Liability ☐

- Description (Provide facts, describe how incident occurred, provide diagram (on back) or photos)

- Analysis 1 (What unsafe acts or conditions contributed to the incident?)

- Analysis 2 (What systematic or management deficiencies contributed to incident?)

- Corrective Action(s) (List corrective action items, responsible person, scheduled completion date)

- Witnesses (Attach statements or indicate why unavailable)

Investigated By _____ _____ _____
Print Name Signature Date

Manager _____ _____ _____
Print Name Signature Date

(Attach Additional pages if needed)
ITC Form HSO20E 8/13/03

ACCIDENT REVIEW BOARD REPORT

DATE: _____ LOCATION: _____

BOARD MEMBERS _____

_____

ACCIDENT DATE: _____ TYPE _____

INVESTIGATION COMPLETE? YES _____ NO _____

EMPLOYEE(S) _____ _____
PRINT NAME SIGNATURE

_____ _____
PRINT NAME SIGNATURE

SUPERVISOR(S) _____ _____
PRINT NAME SIGNATURE

CAUSE OF ACCIDENT _____

ACTION BY BOARD _____

ACCEPTED: ACCEPTED:

_____ _____
EMPLOYEE MANAGER

APPROVED REJECTED FOR:

_____ _____
(HS MANAGER) _____

APPROVED REJECTED FOR:

_____ _____
(REGIONAL GENERAL MANAGER) _____

APPROVED REJECTED FOR:

_____ _____
(DIVISION DIRECTOR)

INTERNATIONAL TECHNOLOGY CORPORATION

VEHICLE ACCIDENT REPORT

IT Vehicle

DRIVER _____ ACCIDENT DATE _____ DRIVERS LICENSE _____ STATE _____

ADDRESS _____

CITY _____ STATE _____ STATE _____ ZIP _____

WORK PHONE #( ) _____ SS# _____ PC# _____

VEHICLE # _____ YEAR _____ MAKE _____ MODEL _____ LICENSE PLATE # _____

STATE _____ VEHICLE OWNER: ☐ IT CORP. ☐ LEASED/RENTED ☐ PRIVATE VEHICLE

VEHICLE TYPE: ☐ COMMERCIAL MOTOR VEHICLE ☐ NON-COMMERCIAL

IF NOT OWNED: OWNER _____ PHONE ( ) _____

ADDRESS _____ STATE _____ ZIP _____

VEHICLE DAMAGE _____

OF VEHICLES TOWED FROM SCENE _____ NUMBER OF INJURIES _____ NUMBER OF FATALITIES _____

WERE HAZARDOUS MATERIALS RELEASED? ☐ YES ☐ NO IF YES, DESCRIBE MATERIALS _____

Other Vehicle(s)

Use separate sheet if more than one

DRIVER _____ DRIVERS LICENSE _____ STATE _____

ADDRESS _____

CITY _____ STATE _____ STATE _____ ZIP _____

PHONE #( ) _____ SS# _____

OWNERS NAME (CHECK IF SAME AS DRIVER ☐) _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

INSURANCE COMPANY _____ POLICY # _____

AGENT'S NAME _____ PHONE # ( ) _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

VEHICLE: YEAR _____ MAKE _____ MODEL _____ PLATE # _____ STATE _____

VEHICLE DAMAGE _____

PASSENGERS: ☐ YES (List on reverse) ☐ NO INJURIES: ☐ YES (List names & addresses on reverse) ☐ NO

Accident Description

DATE _____ TIME _____ A.M. or P.M.

LOCATION (CITY,STATE) _____

DESCRIPTION OF ACCIDENT _____

WITNESS _____ PHONE # ( ) _____

ADDRESS _____

POLICE OFFICER'S NAME _____ DEPARTMENT _____

EMPLOYEE _____ (PRINT) _____ (SIGNATURE) DATE _____

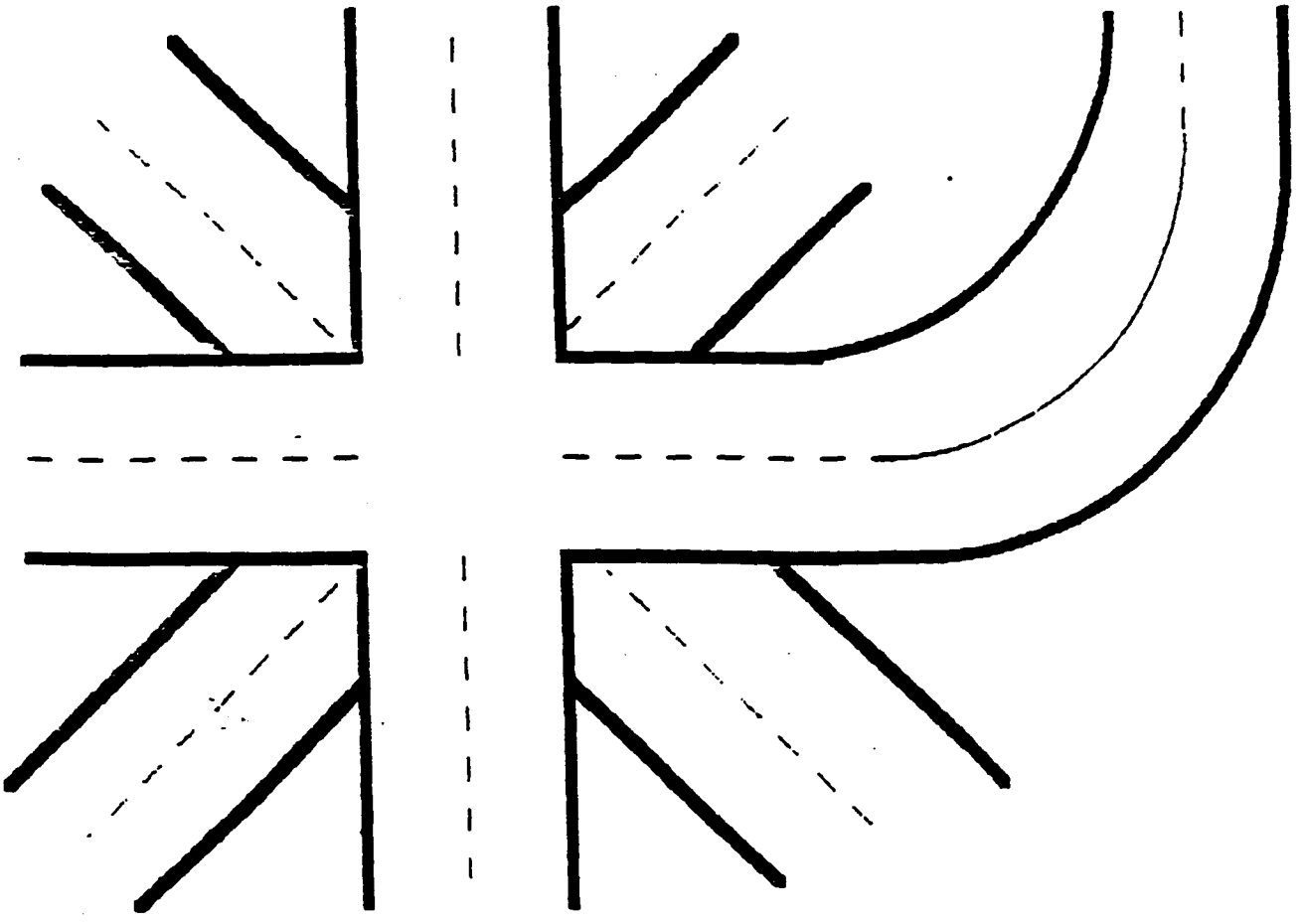
SUPERVISOR _____ (PRINT) _____ (SIGNATURE) DATE _____

PHONE OR FAX TO CORPORATE HEALTH & SAFETY AND JOHN McCARTHY WITHIN 24 HOURS, OR NOT LATER THAN NEXT BUSINESS DAY.

IT PHONE: (310) 378-8633 * IT FAX: (310) 791-2587**

HS0208/10-7-93

VEHICLE ACCIDENT REPORT
ACCIDENT DIAGRAM



INSTRUCTIONS

1. USE SECTION OF DIAGRAM WHICH MOST CLOSELY RESEMBLES ACCIDENT SETTING.
2. LABEL ALL STREETS. USE AN ARROW TO INDICATE NORTH. USE ARROWS TO INDICATE TRAFFIC FLOW. NOTE SPEED LIMIT.
3. INDICATE POSITION OF VEHICLES JUST PRIOR TO ACCIDENT AND INDICATE POINT OF COLLISION OR ACCIDENT.
4. INDICATE ANY OBSTACLES, OBSTRUCTIONS OR OTHER ITEMS WHICH MIGHT HAVE INFLUENCED ACCIDENT. FOR EXAMPLE INDICATE CONSTRUCTION, OBSTRUCTIONS TO VIEW, ICY OR WET PATCHES, ETC.

DATE:	SKETCH BY:
LOCATION:	

FOR ADMINISTRATION USE ONLY

Date Claim Submitted

Agent

IT CORPORATION

GENERAL LIABILITY, PROPERTY DAMAGE, AND LOSS REPORT

DIVISION/SUBSIDIARY _____ **DATE** / /

ADDRESS _____

HOW DID DAMAGE OR LOSS OCCUR: _____

DESCRIPTION OF DAMAGE OR LOSS: _____

IDENTIFICATION OF DAMAGED OR LOST PROPERTY: _____

LOCATION OF DAMAGED OR LOST PROPERTY (Before Loss): _____

DATE AND TIME OF DAMAGE OR LOSS: Date / / Time _____ AM PM

OWNER OF DAMAGED OR LOST PROPERTY:

Name _____ Phone No. _____

Address _____ City _____

Employer _____

INJURED PARTIES (Complete also a Supervisors Employee Injury Report if an IT Employee):

1. Name _____ Phone No. _____
   Address _____ City _____
   Employer's Name & Address _____
   Nature Of Injury _____
2. Name _____ Phone No. _____
   Address _____ City _____
   Employer's Name & Address _____
   Nature Of Injury _____

WITNESSES:

1. Name _____ Phone No. _____
   Address _____ City _____
   Employer's Name & Address _____
2. Name _____ Phone No. _____
   Address _____ City _____
   Employer's Name & Address _____

WERE PICTURES TAKEN ☐ YES ☐ NO

WERE POLICE NOTIFIED ☐ YES ☐ NO DEPT. _____

COMPLETED BY: _____ _____ Date / /
Name Printed Signature

Manager _____ Date / /
Signature

ITC FORM 9300.1-3 (May 1984) **USE BACK SIDE IF NECESSARY**

TAILGATE SAFETY MEETING

sion/Subsidiary _____ Facility _____

Date _____ Time _____ Job Number _____

Customer _____ Address: _____

Specific Location _____

Type of Work _____

Chemicals Used _____

SAFETY TOPICS PRESENTED

Protective Clothing/Equipment _____

Chemical Hazards _____

Physical Hazards _____

Emergency Procedures _____

ital / Clinic _____ Phone ( ) _____ Paramedic Phone ( ) _____

pital Address _____

Special Equipment _____

Other _____

ATTENDEES

NAME PRINTED	SIGNATURE

Meeting conducted by:

_____ _____

NAME PRINTED SIGNATURE

Supervisor _____ Manager _____

36-8-85

EMERGENCY

AMBULANCE _____

FIRE - RESCUE _____

HOSPITAL _____

PHYSICIAN _____

ALTERNATE _____

POLICE _____

CAL/OSHA _____

[POSTING IS REQUIRED BY TITLE 8 SECTION 1512(e)]

STATE OF CALIFORNIA
CAL OSHA
DEPARTMENT OF INDUSTRIAL RELATIONS

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH
P.O. Box 420603, San Francisco CA 94142-0603

S-50(
3/8(

...NOTICE MUST BE POSTED IN A CONSPICUOUS LOCATION
FREQUENTED BY EMPLOYEES

WORKERS' COMPENSATION NOTICE

INTERNATIONAL TECHNOLOGY CORPORATION
EMPLOYER:

Notice is hereby given that this employer is insured with
NATIONAL UNION FIRE INSURANCE COMPANY
(NAME OF INSURANCE COMPANY)

for Workers' Compensation, in compliance with the laws of the state of California.

Address of nearest claims office and telephone number CONSTITUTIONAL STATE SERVICE COMPANY
215 LENNON LANE / P.O. BOX 8112 / WALNUT CREEK, CA 94596 (510) 945-4299

Under the California Labor Code, in the event of injury, you have the right to request a change of treating physician if the original treating physician is selected initially by the employer. Thirty (30) days after reporting an injury you can be treated by a physician of your own choice. Upon selecting a physician thirty (30) days after reporting the injury, you should immediately notify your employer of the name and address of the physician selected.

If you wish direct initial medical treatment, other than appropriate emergency or first aid treatment, by your own designated physician in the event of injury, you must notify your employer of your choice in writing prior to injury.

If you are unable to return to work due to the injury, you have the right to receive temporary or permanent disability income and, if eligible, vocational rehabilitation services.

'ditional benefits are available if the injury results in death.

Report any work-related injury or illness to your supervisor or employer as soon as possible. Provide all necessary information regarding injury or illness.

For further information, please contact your supervisor or employer. You may also contact an Information and Assistance Officer at the Office of Benefit Assistance and Enforcement located at
CSSC / 215 LENNON LANE / P.O. BOX 8112 / WALNUT CREEK, CA (800) 832-7839

EMERGENCY TELEPHONE NUMBERS

Doctor DR. Elayne Theriault, EMR (Environmental Medicine Resources) 800) 229-3674

Hospital ( )

Ambulance ( )

Fire Department ( ) Police Department ( )

OFF-DUTY ACTIVITIES OF EMPLOYEE(S)

Your employer or its insurance company may not be responsible for compensation because of an injury due to the employee's v'''ntary participation in any off-duty recreational, social, or athletic activity that is not part of the employee's work-related
s.

ACCESS TO MEDICAL AND EXPOSURE RECORDS

BY CAL/OSHA REGULATION
- GENERAL INDUSTRY SAFETY ORDER 3204 -
YOU HAVE THE RIGHT TO SEE AND COPY:

- **Your medical records and records of exposure to toxic substances or harmful physical agents.**
- **Records of exposure to toxic substances or harmful physical agents of other employees with work conditions similar to yours.**
- **Material Safety Data Sheets or other information that exists for chemicals or substances used in the workplace, or to which employees may be exposed.**

THESE RECORDS ARE AVAILABLE AT: IT Corporation
(Location)
4585 Pacheco Blvd., Martinez, CA 94553

FROM: H&S Dept.
(Person Responsible)

A COPY OF GENERAL INDUSTRY SAFETY ORDER 3204 IS AVAILABLE FROM: (Same)

Posting the above information is required by GISO 3204. This posting may be done by use of this placard or any similar method the employer chooses.

CAL OSHA

December 1989
S-11

State of California
Department of Industrial Relations
Cal/OSHA Communications
P.O. Box 603
San Francisco, CA 94101

EMPLOYMENT STANDARDS ADMINISTRATION

Wage and Hour Division
Washington, D.C. 20210

NOTICE

EMPLOYEE POLYGRAPH PROTECTION ACT

The Employee Polygraph Protection Act prohibits most private employers from using lie detector tests either for pre-employment screening or during the course of employment.

PROHIBITIONS

Employers are generally prohibited from requiring or requesting any employee or job applicant to take a lie detector test, and from discharging, disciplining, or discriminating against an employee or prospective employee for refusing to take a test or for exercising other rights under the Act.

EXEMPTIONS*

Federal, State and local governments are not affected by the law. Also, the law does not apply to tests given by the Federal Government to certain private individuals engaged in national security-related activities.

The Act permits *polygraph* (a kind of lie detector) tests to be administered in the private sector, subject to restrictions, to certain prospective employees of security service firms (armored car, alarm, and guard), and of pharmaceutical manufacturers, distributors and dispensers.

The Act also permits polygraph testing, subject to restrictions, of certain employees of private firms who are reasonably suspected of involvement in a workplace incident (theft, embezzlement, etc.) that resulted in economic loss to the employer.

EXAMINEE RIGHTS

Where polygraph tests are permitted, they are subject to numerous strict standards concerning the conduct and length of the test. Examinees have a number of specific rights, including the right to a written notice before testing, the right to refuse or discontinue a test, and the right not to have test results disclosed to unauthorized persons.

ENFORCEMENT

The Secretary of Labor may bring court actions to restrain violations and assess civil penalties up to $10,000 against violators. Employees or job applicants may also bring their own court actions.

ADDITIONAL INFORMATION

Additional information may be obtained, and complaints of violations may be filed, at local offices of the Wage and Hour Division, which are listed in the telephone directory under U.S. Government, Department of Labor, Employment Standards Administration.

THE LAW REQUIRES EMPLOYERS TO DISPLAY THIS POSTER WHERE EMPLOYEES AND JOB APPLICANTS CAN READILY SEE IT.

**The law does not preempt any provision of any State or local law or any collective bargaining agreement which is more restrictive with respect to lie detector tests.*

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
Wage and Hour Division
Washington, D.C. 20210

* U.S. GPO: 1988 — 550-014

WH Publication 1462
September 1988

NOTICE TO ALL EMPLOYEES

Working on Federal or Federally Financed Construction Projects

MINIMUM WAGES

You must be paid not less than the wage rate in the schedule posted with this Notice for the kind of work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 8 a day or 40 a week—whichever is greater. There are some exceptions.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, contact the Contracting Officer listed below:

or you may contact the nearest office of the Wage and Hour Division, U.S. Department of Labor. The Wage and Hour Division has offices in several hundred communities throughout the country. They are listed in the U.S. Government section of most telephone directories under:
U.S. Department of Labor
Employment Standards Administration

WH Publication 1321
Revised November 1980

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division

Notice To Employees Working on Government Contracts

This establishment is performing Government contract work subject to the—

Service Contract Act
or
Public Contracts Act

During the period of performance on the contract the following requirements must be observed:

Minimum Wages

Your rate must be at least $3.35 an hour.

A higher rate may be required for *Service* contracts if a wage determination applies or if a predecessor contractor has paid a higher rate for your classification pursuant to a collective bargaining agreement. Such higher rates for *Service* contracts will be posted as an attachment to this Notice.

Fringe Benefits

Service contract wage determinations may require fringe benefit payments (or a cash equivalent). *Supply* contracts do not require fringe benefits.

Overtime Pay

You must be paid 1½ times your basic rate of pay for all hours worked over 40 in a week. There are some exceptions.

Safety and Health

The work must be performed under conditions that are sanitary, and not hazardous or dangerous to the employees' health and safety.

No person under 16 years of age may be employed on a *Supply* Contract.

Information

Further information on the wage provisions of the Service Contract Act or the Walsh-Healey Public Contracts Act may be obtained from the Wage and Hour Division. Information relating to the safety and health provisions may be obtained from the Occupational Safety and Health Administration. Offices are located in principal cities. Check your telephone directory under U.S. Government, Department of Labor, Wage and Hour Division or the Occupational Safety and Health Administration.

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division
Washington, D.C. 20210

WH Publication 1313 (Revised January 1996)

According to information submitted to this office, your firm has been awarded a contract which is subject to the Walsh-Healey Public Contracts Act or the Service Contract Act. The purpose of the discussion below is to advise contractors of the principal provisions of these acts.

Walsh-Healey Public Contracts Act

General Provisions—This act applies to contracts which exceed or may exceed $10,000 entered into by any agency or instrumentality of the United States for the manufacture or furnishing of materials, supplies, articles, or equipment. The act requires the contractor to be qualified as a manufacturer or regular dealer, establishes minimum wage, maximum hours, and safety and health standards for work on such contracts, and prohibits the employment on contract work of convict labor (unless certain conditions are met) and children under 16 years of age. The employment of homeworkers (except handicapped clients of bona fide sheltered workshops) on a covered contract is not permitted. The act also requires the keeping of certain records.

In addition to its coverage of prime contractors, the act under certain circumstances applies to secondary contractors performing work under contracts awarded by the Government prime contractor.

All provisions of the act except the safety and health requirements are administered by the Wage and Hour Division.

Minimum Wage—Covered employees must currently be paid not less than $3.35 an hour.

Overtime—Covered workers must be paid at least one and one-half times their basic rate of pay for all hours worked in excess of 40 a week. Overtime is due on the basis of the total hours spent in all work Government and non-Government, performed by the employee in any week in which covered work is performed.

Child Labor—Employers may protect themselves against unintentional child labor violations by obtaining certificates of age. State employment or age certificates are acceptable.

Safety and Health—No covered work may be performed in plants, factories, buildings, or surroundings or under work conditions that are unsanitary or hazardous or dangerous to the health and safety of the employees engaged in the performance of the contract. The safety and health provisions of the Walsh-Healey Public Contracts Act are administered by the Occupational Safety and Health Administration.

Posting—During the period that covered work is being performed on a contract subject to the act, the contractor must post copies of Notice to Employees Working on Government Contracts in a sufficient number of places to permit employees to observe a copy on the way to or from their place of employment.

Responsibility for Secondary Contractors—Prime contractors are liable for violations of the act committed by their covered secondary contractors.

Service Contract Act

General Provisions—The Service Contract Act applies to every contract entered into by the United States or the District of Columbia, the principal purpose of which is to furnish services in the United States through the use of service employees. Contractors and subcontractors performing on such Federal contracts must observe minimum wage and safety and health standards, and must maintain certain records, unless a specific exemption applies.

Wages and Fringe Benefits—Every service employee performing any of the Government contract work under a service contract in excess of $2,500 must be paid not less than the monetary wages, and must be furnished the fringe benefits, which the Secretary of Labor has determined to be prevailing in the locality for the classification in which the employee is working or the wage rates and fringe benefits (including any accrued or prospective wage rates and fringe benefits) contained in a predecessor contractor's collective bargaining agreement. The wage rates and fringe benefits required are usually specified in the contract. If no wage determination has been made applicable to the contract, employees performing work under the contract must be paid not less than the minimum wage provided in section 6(a)(1) of the Fair Labor Standards Act, currently $3.35 an hour.

All employees doing work necessary to the performance of the contract must also be paid not less than the minimum wage provided in section 6(a)(1) of the Fair Labor Standards Act.

Service contracts which do not exceed $2,500 are not subject to prevailing rate determinations or to the safety and health requirements of the act. However, the act does require that employees performing work on such contracts be paid not less than the above minimum wage rate provided by section 6(a)(1) of the Fair Labor Standards Act.

All provisions of the act except the safety and health requirements are administered by the Wage and Hour Division.

Overtime—Service contracts in excess of $2,500 which may require or involve the use of laborers or mechanics require the payment of overtime under the Contract Work Hours and Safety Standards Act at time and one-half the basic rate for all hours worked on the contract in excess of 40 a week.

Safety and Health—The act provides that no part of the services in contracts in excess of $2,500 may be performed in buildings or surroundings or under working conditions, provided by or under the control or supervision of the contractor or subcontractor, which are unsanitary or hazardous or dangerous to the health or safety of service employees engaged to furnish the services. The safety and health provisions of the Service Contract Act are administered by the Occupational Safety and Health Administration.

Notice to Employees—On the date a service employee commences work on a contract in excess of $2,500, the contractor (or subcontractor) must provide the employee with a notice of the compensation required by the act. The posting of the notice (including any applicable wage determination) contained on the reverse in a location where it may be seen by all employees performing on the contract will satisfy this requirement.

Notice in Subcontracts—The contractor is required to insert in all subcontracts the labor standards clauses specified by the regulations in 29 CFR 4 for Federal service contracts exceeding $2,500.

Other Obligations—*Observance of the labor standards of these acts does not relieve the employer of any obligation he may have under any other laws or agreements providing for higher labor standards.*

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division
Occupational Safety and Health Administration

***Additional Information**—Additional information and copies of the acts and applicable regulations and interpretations may be obtained from the nearest office of the Wage and Hour Division or the National Office in Washington, D.C. Information pertaining to safety and health standards may be obtained from the nearest office of the Occupational Safety and Health Administration or the National Office in Washington, D.C.*

IT CORPORATION

NOTICE

YOU HAVE THE RIGHT TO REVIEW:

- RECORDS OF WORKPLACE TESTS FOR TOXIC SUBSTANCES OR HARMFUL PHYSICAL AGENTS
- YOUR MEDICAL RECORDS
- MATERIAL SAFETY DATA SHEETS OR OTHER INFORMATION THAT EXISTS FOR CHEMICALS OR SUBSTANCES USED IN YOUR WORK
- OSHA HEALTH & SAFETY REGULATIONS

THIS INFORMATION IS AVAILABLE THROUGH YOUR REGIONAL HEALTH AND SAFETY OFFICE.

CONTACT Health & Safety Department
(510) 372-9100

ITC FORM 9420.1 (8/20/84)

We hereby pledge our full support to IT Corporation's Affirmative Action Program and policy of nondiscrimination and equal opportunity, in compliance with Executive Order 11246, as amended. IT Corporation will recruit, hire, train and promote persons in all job titles without regard to race, creed, color, religion, age, marital status, sexual orientation, disability or national origin, except where sex is a bona-fide occupational qualification. We will insure that hiring and promotion decisions are in accord with equal employment opportunity principles by imposing only requirements which are job-related and do not have an adverse impact, and that other employment decisions further the principle of equal employment opportunity. IT Corporation will insure that all personnel actions such as compensation, benefits, Company sponsored training, education, tuition assistance, transfer, demotion, termination, layoff, return from layoff, and social and recreation programs will be administered without regard to race, creed, color, religion, age, sex, marital status, sexual orientation, disability or national origin.

Equal opportunity can only be achieved through demonstrated leadership and aggressive implementation of a viable Affirmative Action Program. Our Affirmative Action Program sets forth specific affirmative action and equal employment opportunity responsibilities of managers, supervisors, and all employees. It is incumbent that employees not discriminate in any policy, practice or procedure on the basis of race, creed, color, religion, age, sex, marital status, sexual orientation, disability or national origin.

All employees are expected to make every reasonable effort to carry out their Affirmative Action Program responsibilities in spirit as well as in letter to assure that equal opportunity is available to all. We further expect all employees to demonstrate sensitivity to and respect for all other employees and to demonstrate commitment to the Company's equal employment opportunity and affirmative action objectives.

Murray H. Hutchison
Chairperson of the Board

E. Brian Smith
President

1/1/90

EEO-AAP

YOUR RIGHTS
UNDER THE
FAMILY AND MEDICAL LEAVE ACT OF 1993

FMLA requires covered employers to provide up to 12 weeks of unpaid, job-protected leave to "eligible" employees for certain family and medical reasons. Employees are eligible if they have worked for a covered employer for at least one year, and for 1,250 hours over the previous 12 months, and if there are at least 50 employees within 75 miles.

REASONS FOR TAKING LEAVE:

Unpaid leave must be granted for any of the following reasons:

- to care for the employee's child after birth, or placement for adoption or foster care;
- to care for the employee's spouse, son or daughter, or parent, who has a serious health condition; or
- for a serious health condition that makes the employee unable to perform the employee's job.

At the employee's or employer's option, certain kinds of paid leave may be substituted for unpaid leave.

ADVANCE NOTICE AND MEDICAL CERTIFICATION:

The employee may be required to provide advance leave notice and medical certification. Taking of leave may be denied if requirements are not met.

- The employee ordinarily must provide 30 days advance notice when the leave is "foreseeable."
- An employer may require medical certification to support a request for leave because of a serious health condition, and may require second or third opinions (at the employer's expense) and a fitness for duty report to return to work.

JOB BENEFITS AND PROTECTION:

- For the duration of FMLA leave, the employer must maintain the employee's health coverage under any "group health plan."
- Upon return from FMLA leave, most employees must be restored to their original or equivalent positions with equivalent pay, benefits, and other employment terms.
- The use of FMLA leave cannot result in the loss of any employment benefit that accrued prior to the start of an employee's leave.

UNLAWFUL ACTS BY EMPLOYERS:

FMLA makes it unlawful for any employer to:

- interfere with, restrain, or deny the exercise of any right provided under FMLA;
- discharge or discriminate against any person for opposing any practice made unlawful by FMLA or for involvement in any proceeding under or relating to FMLA.

ENFORCEMENT:

- The U.S. Department of Labor is authorized to investigate and resolve complaints of violations.
- An eligible employee may bring a civil action against an employer for violations.

FMLA does not affect any Federal or State law prohibiting discrimination, or supersede any State or local law or collective bargaining agreement which provides greater family or medical leave rights.

FOR ADDITIONAL INFORMATION:

Contact the nearest office of the Wage and Hour Division, listed in most telephone directories under U.S. Government, Department of Labor.

U.S. Department of Labor,
Employment Standards Administration
Wage and Hour Division,
Washington, D.C. 20210

EDD Serving the People of California

NOTICE TO EMPLOYEES

THIS EMPLOYER IS REGISTERED UNDER THE CALIFORNIA UNEMPLOYMENT INSURANCE CODE, AND IS REPORTING WAGE CREDITS THAT ARE BEING ACCUMULATED FOR YOU TO BE USED AS A BASIS FOR

UNEMPLOYMENT INSURANCE

(Paid for entirely by EMPLOYERS' taxes)

and

DISABILITY INSURANCE

(Paid for entirely by WAGE EARNERS' taxes)

- **WHEN YOU ARE UNEMPLOYED AND READY, WILLING AND ABLE TO WORK, YOU MAY BE ELIGIBLE TO RECEIVE UNEMPLOYMENT INSURANCE.**

  You must file a claim for Unemployment Insurance at the nearest Employment Development Department Office, and register for work.

- **IF YOU WORK LESS THAN YOUR NORMAL FULL-TIME HOURS, YOU MAY ALSO BE ELIGIBLE TO RECEIVE BENEFITS.**

  You must file a claim for Unemployment Insurance at the nearest Employment Development Department Office.

- **WHEN YOU ARE UNABLE TO WORK BECAUSE OF SICKNESS OR INJURY, YOU MAY BE ELIGIBLE TO RECEIVE DISABILITY INSURANCE BENEFITS.**

  1. **If this firm operates under an approved Voluntary Plan of Disability Insurance and you have chosen to be covered by it, claim forms should be obtained from your employer.**
  2. **For State Disability Insurance, claim forms may be obtained from your doctor, hospital, or any Employment Development Department Office. The "First Claim" must be mailed not later than the 41st day after the first day for which benefits are payable if you are to receive credit from the time you first became disabled. Earlier filing will speed your payment.**

- **GET FULL INFORMATION AT YOUR LOCAL EMPLOYMENT DEVELOPMENT DEPARTMENT OFFICE.**

CLAIMS SHOULD BE FILED PROMPTLY. YOU MAY LOSE BENEFITS TO WHICH YOU WOULD OTHERWISE BE ENTITLED IF YOU DELAY FILING OF YOUR CLAIM.

STATE OF CALIFORNIA
DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF LABOR STANDARDS ENFORCEMENT

PAY DAY NOTICE

(IT CORPORATION)

REGULAR PAY DAYS FOR EMPLOYEES OF International Technology (FIRM NAME)

Corporation SHALL BE AS FOLLOWS:

Salaried Employees	Bi-weekly
Hourly Employees	Weekly

THIS IS IN ACCORDANCE WITH SECTIONS 204. 204A. 204B. AND 205 OF THE CALIFORNIA LABOR CODE.

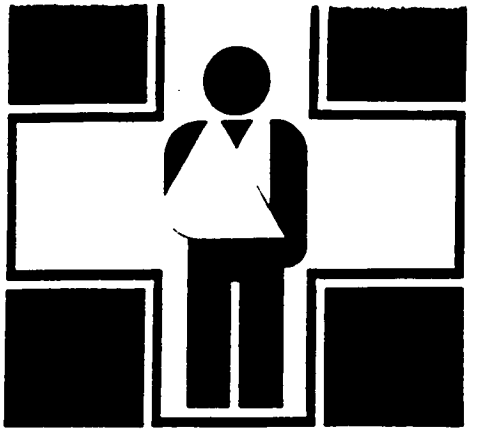
BY C. L. Perrignon

TITLE Human Resources

C.L.PERRIGNON
MANAGER, HUMAN RESOURCES

DLSE 8 (REV. 12-68)
◊ 08P

PLEASE POST



If A Work Injury Occurs...

...you're automatically protected by workers' compensation insurance. California law provides certain benefits to employees who are injured or become ill because of the job.

Workers' Compensation Benefits Include...

- **Medical Care.** All medical treatment required to cure the injury or illness—without deductible or dollar limit. You should never see a bill, since all costs are paid directly by your employer's insurance company.

  Your employer will arrange for medical care, usually by a specialist for the particular injury. If you want to change doctors, please ask your supervisor. (In addition, 30 days after reporting the injury you can be treated by a doctor of your choice. Or you can be treated by your own personal physician if you've notified your employer in writing *before* the injury. For further information, please contact your supervisor.)

- **Rehabilitation.** If the injury or illness prevents returning to your usual job, you may be eligible for vocational rehabilitation. If so, all costs are paid by your employer's insurance company.

- **Payment for Lost Wages.** Employees disabled by job injuries or illnesses receive tax-free income while unable to work. The payments are two-thirds of your average weekly pay, up to a maximum set by State law. (Payments are not made for the first three days, however, unless you're hospitalized or unable to work more than 21 days.)

  Additional payments also will be made after recovery if the injury or illness results in a permanent handicap. If the injury or illness results in death, benefits will be paid to surviving dependents.

In The Event Of A Work Injury...

1. Be sure first aid is given.
2. See that the injured employee is taken to a doctor or hospital, if necessary.
3. Report *every* injury IMMEDIATELY to your supervisor. Any delay in reporting an accident may delay workers' compensation benefits.
4. If you have any questions about workers' compensation, please see your supervisor.

Emergency Telephone Numbers

Doctor _____ Police _____

Hospital _____ Fire _____

Ambulance _____

Workers' Compensation Is Provided By

NATIONAL UNION FIRE INSURANCE COMPANY
OF PITTSBURGH, PENNSYLVANIA
3699 Wilshire Boulevard
Los Angeles, California 90010
(213) 480-3400

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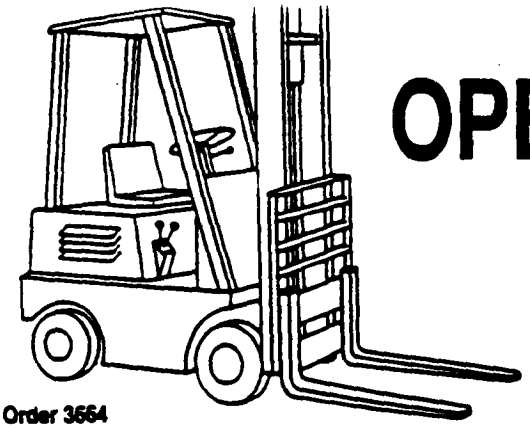


OPERATING RULES FC

Operating rules for industrial truc through Register 85, No. 18–5– Other rules may also apply. Parr trial trucks and industrial tow tr office of the Division of Occupati Cal/OSHA Communications. P.(

General Industry Safety Order 3664

Operating Rules

(a) Every employer using industrial trucks or industrial tow tractors, shall post and enforce a set of operating rules including the appropriate rules listed below:

(1) Only drivers authorized by the employer and trained in the safe operations of industrial trucks or industrial tow tractors shall be permitted to operate such vehicles. Methods shall be devised to train operators in safe operation of powered industrial trucks.

(2) Stunt driving and horseplay are prohibited.

(3) No riders shall be permitted on vehicles unless provided with adequate riding facilities.

(4) Employees shall not ride on the forks of lift trucks.

(5) Employees shall not place any part of their bodies outside the running lines of an industrial truck or between mast uprights or other parts of the truck where shear or crushing hazards exist.

(6) Employees shall not be allowed to stand, pass, or work under the elevated portion of any industrial truck, loaded or empty, unless it is effectively blocked to prevent it from falling.

(7) Drivers shall check the vehicle at least once per shift, and if it is found to be unsafe, the matter shall be reported immediately to a foreman or mechanic, and the vehicle shall not be put in service again until it has been made safe. Attention shall be given to the proper functioning of tires, horn, lights, battery, controller, brakes, steering mechanism, oling system, and the lift system of fork lifts (forks, chains, cable, and it switches).

(8) No truck shall be operated with a leak in the fuel system.

(9) Vehicles shall not exceed the authorized or safe speed, always maintaining a safe distance from other vehicles, keeping the truck under positive control at all times and all established traffic regulations shall be observed. For trucks traveling in the same direction, a safe distance may be considered to be approximately 3 truck lengths or preferably a time lapse—3 seconds—passing the same point.

(10) Trucks traveling in the same direction shall not be passed at intersections, blind spots, or dangerous locations.

(11) The driver shall slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.

(12) Operators shall look in the direction of travel and shall not move a vehicle until certain that all persons are in the clear.

(13) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object of such size that the person could be caught between the truck and object.

(14) Grades shall be ascended or descended slowly.

(A) When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade.

(B) On all grades the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.

(C) Motorized hand and hand/rider trucks shall be operated on all grades with the load-engaging means downgrade.

(15) The forks shall always be carried as low as possible, consistent with safe operations.

(16) When leaving a vehicle unattended, either:

(A) The power shall be shut off, brakes set, the mast brought to the vertical position, and forks left in the down position. When left on an ne, the wheels shall be blocked; or

(B) The power may remain on provided the brakes are set, the mast is brought to the vertical position, forks are left in the down position, and the wheels shall be blocked, front and rear.

Note: When the operator is over 25 feet (7.6 meters) from or out of sight of the industrial truck, the vehicle is "unattended."

(17) When the operator of an industrial truck is dismounted and within 25 feet (7.6 meters) of the truck which remains in the operator's view, the load engaging means shall be fully lowered, controls neutralized, and the brakes set to prevent movement.

(18) Vehicles shall not be run onto any elevator unless the driver is specifically authorized to do so. Before entering an elevator, the driver shall determine that the capacity of the elevator will not be exceeded. Once on an elevator, the power shall be shut off and the brakes set.

(19) Motorized hand trucks shall enter elevators or other confined areas with the load end forward.

(20) Vehicles shall not be operated on floors, sidewalk doors, or platforms that will not safely support the loaded vehicle.

(21) Prior to driving onto trucks, trailers and railroad cars, their flooring shall be checked for breaks and other structural weaknesses.

(22) Vehicles shall not be driven in and out of highway trucks and trailers at loading docks until such trucks or trailers are securely blocked or restrained and the brakes set.

(23) To prevent railroad cars from moving during loading or unloading operations, the car brakes shall be set, wheel chocks or other recognized positive stops used, and blue flags or lights displayed in accordance with applicable regulations promulgated by the Public Utilities Commission.

(24) The width of one tire on the powered industrial truck shall be the minimum distance maintained from the edge by the truck while it is on any elevated dock, platform, freight car or truck.

(25) Railroad tracks shall be crossed diagonally, wherever possible. Parking closer than 8-1/2 feet from the centerline of railroad tracks is prohibited.

(26) Trucks shall not be loaded in excess of their rated capacity.

(27) A loaded vehicle shall not be moved until the load is safe and secure.

(28) Extreme care shall be taken when tilting loads. Tilting forward with the load engaging means elevated shall be prohibited except when picking up a load. Elevated loads shall not be tilted forward except when the load is being deposited onto a storage rack or equivalent. When stacking or tiering, backward tilt shall be limited to that necessary to stabilize the load.

(29) The load engaging device shall be placed in such a manner that the load will be securely held or supported.

(30) Special precautions shall be taken in the securing and handling of loads by trucks equipped with attachments, and during the operation of these trucks after the loads have been removed.

(31) When powered industrial trucks are used to open and close doors, the following provisions shall be complied with:

(A) A device specifically designed for opening or closing doors shall be attached to the truck.

(B) The force applied by the device to the door shall be applied parallel to the direction of travel of the door.

(C) The entire door opening operation shall be in full view of the operator.

(D) The truck operator and other employees shall be clear of the area where the door might fall while being opened.

(32) If loads are lifted by two or more trucks working in unison, the total weight of the load shall not exceed the combined rated lifting capacity of all trucks involved.

General Industry Safety Order 3657

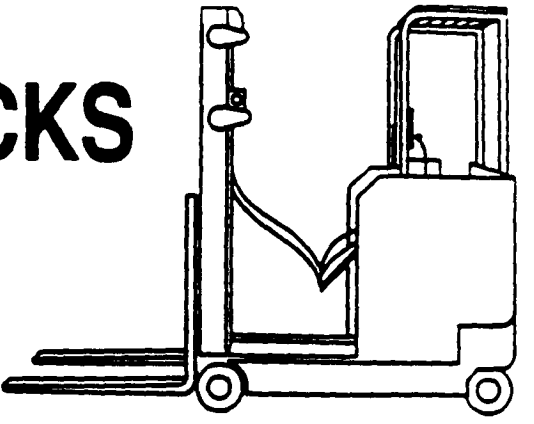
Elevating Employees With Lift Trucks

(a) When it is necessary to elevate employees using an industrial truck, the following shall be accomplished:

(1) The platform shall be of sufficient size, but not less than 24" x 24" (.61 meters x .61 meters) to accommodate the employee and the material being elevated.

R INDUSTRIAL TRUCKS

s contained on this poster are current 85. 'ornia Code of Regulations. hle taining rules covering industors are available from the nearest nal Safety and Health or by writing to Box 603, San Francisco, CA 94101.



(2) The platform shall be secured to the forks or mast to prevent tipping, slipping or falling.

(3) The platform shall meet the guardrail and toeboard requirements of Section 3210.

(4) The platform floor shall have no spaces or holes greater than one inch; and

(5) The platform floor shall have a slip resistant surface.

(b) Where a clearance restriction or the nature of the work prohibits the use of guardrails, a safety belt or harness with lanyard shall be used as described in Section 3656(e).

(c) Wherever the truck is operated under conditions which expose the operator to danger from falling objects, the truck shall be equipped with overhead protection.

(d) There shall be an operator in the control position on the truck while employees are on the elevated platform.

(e) Whenever a truck is equipped with vertical only, or vertical and horizontal controls elevatable with the lifting carriage or forks, means shall be provided whereby personnel on the platform can shut off the motive power of the truck.

(f) Means shall be provided to render inoperative all operating controls other than those on the elevatable platform when the controls on the elevatable platform have been selected for use. Only one location of controls shall be capable of being operated at one time.

(g) All bridge cranes or other moving or motorized equipment which could overrun or otherwise injure the elevated worker shall be shut d or locked out.

) Operating Rules Whenever Elevating Personnel. Before elevating personnel, employees shall be instructed to:

(1) Use a securely attached safety platform.

(2) Make sure the lifting mechanism is operating smoothly.

(3) Make sure that the mast is vertical. The mast shall not be tilted forward or rearward while persons are elevated.

(4) Place truck in neutral and set parking brake.

(5) Lift and lower smoothly and with caution.

(6) Watch for overhead obstructions.

(7) Keep hands and feet clear of controls other than those in use.

(8) Never travel with personnel on the work platform other than to make minor movements for final positioning of the platform.

General Industry Safety Order 3658

Operator Platforms

(a) Every end control, reach, narrow aisle and motorized hand/rider truck shall be equipped with an operator platform of sufficient size to contain the operator's feet within its periphery and strong enough to withstand a compression load equal to the weight of the loaded truck applied longitudinally against a flat vertical surface.

(b) When installed, operator enclosures shall not restrict movement to and from the operating position.

General Industry Safety Order 3659

Back Guards

(a) The side of the platform nearest the mast frame truss shall be guarded on every high-lift industrial truck where employees ride up or down. This guard shall consist of a substantial frame covered with 1/2 inch expanded metal, laminated safety glass, or equivalent providing effective guarding to a height of 7 feet.

If the type of load presents a hazard, high-lift industrial trucks sha quipped with a load backrest extension high enough to reach abov e center of the top row of the maximum height load handled or other positive means acceptable to the Division shall be used to prevent parts of the load falling onto the operator or into the operator's compartment. The openings shall not be greater than the smallest parcel carried.

General Industry Safety Order 3660

Rated Capacity

(a) The rated capacity of all industrial lift trucks and industrial tractors shall be displayed at all times on the vehicle in such a manner that it is readily visible to the operator.

(b) Industrial lift trucks and industrial tractors equipped with forks shall not be loaded beyond their designated capacity.

General Industry Safety Order 3661

Brakes and Warning Devices

(a) Every industrial truck and tractor shall be equipped with brakes or other effective devices adequate to bring the vehicle to a complete safe stop while fully loaded.

(b) Every industrial truck and tractor shall be equipped with a parking brake or other effective device to prevent the vehicle moving when unattended.

(c) Every industrial truck and industrial tow tractor, except those guided or controlled by a walking operator, shall be equipped with a warning horn, whistle, gong, or other device which can be heard clearly above the normal industrial noises in the places of employment.

General Industry Safety Order 3662

Internal Combustion Engines

Internal combustion engine-driven equipment shall be operated inside of buildings or enclosed structures, only when such operation does not result in harmful exposure to concentrations of dangerous gases or fumes. (See Section 5146.)

General Industry Safety Order 3663

Maintenance of Industrial Trucks

(a) Industrial truck repair operations involving open flames or which may produce sparks or other sources of ignition shall not be performed in Class I, II and III locations, unless and until tests show that atmospheric concentrations of flammable or combustible vapors do not exceed 20 percent L.E.L. of such flammable or combustible materials and until precautions are taken to maintain the atmosphere at or below 20 percent L.E.L. Such precautions could include, but not be limited to removal of flammable material, provision for adequate ventilation, etc.

(b) Water mufflers shall be filled daily or as frequently as is necessary to prevent depletion of the supply of water below 75 percent of the filled capacity. Vehicles with mufflers having screens or other parts that may become clogged shall not be operated while such screens or parts are clogged. Any vehicle that emits hazardous sparks or flames from the exhaust system shall immediately be removed from service, and not returned to service until the cause for the emission of such sparks and flames has been eliminated.

(c) Industrial trucks shall be kept in a clean condition free of debris, oil, and grease.

(d) Batteries on all powered trucks shall be disconnected during repairs to the primary electrical system unless power is necessary for testing and repair. On trucks equipped with systems capable of storing residual energy, that energy shall be safely discharged before work on the primary electrical system begins.

(e) Replacement parts for industrial trucks shall be equivalent in safety to the original parts.

(f) Those repairs to the fuel and ignition systems of industrial trucks which involve fire hazards shall be conducted only in locations designated as safe for such repairs.

AFFIRMATIVE ACTION PROGRAM
HANDICAPPED INDIVIDUALS AND
VETERANS OF THE VIETNAM ERA

IT Corporation complies with Section 503 of the Rehabilitation Act of 1973, which requires affirmative action to employ and advance in employment qualified handicapped individuals. IT Corporation also complies with Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, which requires affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam Era. If you have a handicap, or are disabled veteran covered by this Program, and would like to be considered under our Affirmative Action Program, please tell us. Submission of this information is voluntary and your refusal to provide it will not cause you to be subjected to discharge or other disciplinary treatment. Information obtained concerning your handicap or status as a disabled veteran will be kept confidential, except that: (i) supervisors and managers may be informed regarding necessary restrictions on your work or duties as a result of your handicap or disabled status, and regarding necessary accommodations; (ii) first aid personnel may be informed, when and to the extent appropriate, if your condition might require emergency treatment; and (iii) government officials investigating compliance with either of the above-mentioned Acts shall be informed. If you are a disabled veteran or are otherwise handicapped, we would like to include you under our Affirmative Action Program. It would assist us if you would tell us about (1) any special methods, skills and procedures which qualify you for positions which you might otherwise not be able to do because of your handicap or disability, and (2) any accommodations that we could make to enable you to perform any job properly and safely, including special equipment, changes in the physical layout of the job, elimination of certain duties relating to the job, or other accommodations. Any employee or applicant upon request may review our Affirmative Action Program during business hours in the Human Resources Department.

If you are a handicapped person, disabled veteran, or veteran of the Vietnam Era, you should know that, whether an employee or applicant for employment, you are protected from coercion, intimidation, interference, or discrimination for filing any complaint or assisting in any investigation under the Rehabilitation Act of 1973 or the Vietnam Era Veterans Readjustment and Assistance Act.

Human Resources Department
March 1993

NOTICE

ON THE JOB INJURIES

Report all injuries immediately to your foreman or supervisor.

Authorization for medical treatment must be obtained from your employer.

ORDER 4-89
Title 8, California
Code of Regulations
Section 11040
Replaces former Order 4-80;
Incorporates changes contained
in IWC Order MW-88
Effective July 1, 1989

Please Post With This Side Showing

OFFICIAL NOTICE

INDUSTRIAL WELFARE COMMISSION ORDER NO. 4-89, REGULATING

WAGES, HOURS, AND WORKING CONDITIONS IN PROFESSIONAL, TECHNICAL, CLERICAL, MECHANICAL, AND SIMILAR OCCUPATIONS

TAKE NOTICE: The Industrial Welfare Commission (IWC) of the State of California, having proceeded in accord with the authority vested in it by Labor Code Sections 1171 through 1204 and Article 14, Section 1 of the Constitution of the State of California, reviewed certain sections of Order 4-80 for the Professional, Technical, Clerical, Mechanical, and Similar Occupations for the purpose of amending Section 1, Applicability, and Section 3, Hours and Days of Work. The IWC held investigative hearings, called a wage board, held public hearings on proposed language to amend these sections, and considered all written materials and information submitted prior to adopting its amendments to Sections 1 and 3 of Order 4-80. In printing this order, the IWC incorporated the amendments made by IWC Order No. MW-88 to Section 4, Minimum Wages, and Section 10, Meals and Lodging.

This order also incorporates the nonsubstantive revisions previously made in accord with the statewide review mandated by Government Code Section 11349 and reflected in the provisions of Title 8 of the California Code of Regulations, Section 11040. Because of the amendments and changes to Order 4-80 described above and for purposes of clarity in this printing, the IWC renumbered Order 4-80 to Order 4-89.

1. APPLICABILITY OF ORDER

This Order shall apply to all persons employed in professional, technical, clerical, mechanical, and similar occupations whether paid on a time, piece rate, commission, or other basis, unless such occupation is performed in an industry covered by an industry order of this Commission, except that:

(A) Provisions of Sections 3 through 12 shall not apply to persons employed in administrative, executive, or professional capacities. No person shall be considered to be employed in an administrative, executive, or professional capacity unless one of the following conditions prevails:

(1) The employee is engaged in work which is primarily intellectual, managerial, or creative, and which requires exercise of discretion and independent judgment; and

(2) The employee customarily and regularly exercises discretion and independent judgment in performing duties of employment; and

(3) The employee is employed and paid salary for more than half time in one or more of the above-mentioned capacities; and

(4) The employee earns monthly salary equivalent to no less than two (2) times the minimum wage if employed full time.

(B) Provisions of Sections 3 through 12 shall not apply to persons employed in computer software occupations who are paid on an hourly basis and who meet all of the following criteria:

(1) The employee is employed and paid salary for more than half time in computer software occupations; and

(2) The employee's primary duties consist of one or more of the following:

(a) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;

(b) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

(c) The documentation, testing, creation or modification of computer programs related to the design of software or hardware for computer operating systems;

(d) A combination of the duties described in (a), (b), and (c) above, the performance of which requires the same level of skill.

(3) The employee earns monthly salary equivalent to no less than two (2) times the minimum wage if employed full time.

(C) Provisions of Sections 3 through 12 shall not apply to persons employed in the capacity of outside salesperson.

(D) Provisions of Sections 3 through 12 shall not apply to any individual participating in a motion picture production as an actor or actress, extra, stand-in, double, or photographic double, if the wages of such individual are in excess of two (2) times the minimum wage for each hour worked.

(E) Provisions of Sections 3 through 12 shall not apply to any individual participating in a motion picture production as a musician, if the wages of such individual are in excess of two (2) times the minimum wage for each hour worked.

(F) Provisions of Sections 3 through 12 shall not apply to any individual participating in a motion picture production as a performer outside the classifications listed in (D) and (E) above, if the wages of such individual are in excess of two (2) times the minimum wage for each hour worked.

(G) Provisions of Sections 3 through 12 shall not apply to any individual participating in a motion picture production as a makeup artist, hairstylist, wardrobe person, or animal trainer, if the wages of such individual are in excess of two (2) times the minimum wage for each hour worked.

(H) Provisions of Sections 3 through 12 shall not apply to any individual participating in a motion picture production as a production assistant, if the wages of such individual are in excess of two (2) times the minimum wage for each hour worked.

2. DEFINITIONS

(A) "Commission" means the Industrial Welfare Commission as established by the California Legislature.

(B) "Department" means the Department of Industrial Relations.

(C) "Division" means the Division of Labor Standards Enforcement.

(D) "Employ" means to engage, suffer, or permit to work.

(E) "Employee" means any person employed by an employer.

(F) "Employer" means any person as defined in Section 18 of the Labor Code, who directly or indirectly, or through an agent or any other person, employs or exercises control over the wages, hours, or working conditions of any person.

(G) "Hours worked" means the time during which an employee is subject to the control of an employer, and includes all the time the employee is suffered or permitted to work, whether or not required to do so.

(H) "Minor" means, for the purpose of this Order, any person under the age of eighteen (18) years.

(I) "Outside Salesperson" means any person, 18 years of age or over, who customarily and regularly works more than half the working time away from the employer's place of business selling tangible or intangible items or obtaining orders or contracts for products, services or use of facilities.

(K) "Primarily" as used in Section 1, Applicability, means more than one-half the employee's work time.

(L) "Split shift" means a work schedule which is interrupted by non-paid non-working periods established by the employer, other than bona fide rest or meal periods.

(M) "Teaching" means, for the purpose of Section 1 of this Order, the profession of teaching under a certificate from the Commission for Teacher Preparation and Licensing or teaching in an accredited college or university.

(N) "Wages" (See California Labor Code, Section 200)

(O) "Workday" means any consecutive 24 hours beginning at the same time each calendar day.

(P) "Workweek" means any seven (7) consecutive days, starting with the same calendar day each week. "Workweek" is a fixed and regularly recurring period of 168 hours, seven (7) consecutive 24 hour periods.

3. HOURS AND DAYS OF WORK

(A) The following overtime provisions are applicable to employees eighteen (18) years of age or over and to employees sixteen (16) or seventeen (17) years of age who are not required by law to attend school. Such employees shall not be employed more than eight (8) hours in any workday or more than forty (40) hours in any workweek unless the employee receives one and one-half (1 1/2) times such employee's regular rate of pay for all hours worked over forty (40) hours in the workweek. Such employee shall be compensated for overtime at not less than one and one-half (1 1/2) times the employee's regular rate of pay for all hours worked over eight (8) hours up to and including twelve (12) hours in any workday, and for the first eight (8) hours worked on the seventh (7th) consecutive day of work in a workweek. Such employee shall be compensated for overtime at not less than twice the employee's regular rate of pay for all hours worked in excess of twelve (12) hours in any workday and for all hours worked in excess of eight (8) hours on the seventh (7th) consecutive day of work in a workweek.

Alternate workweek schedules adopted pursuant to Labor Code Section 511 or 514 shall not result in employment of an employee for more than twelve (12) hours in any workday unless the employee receives two (2) times such employee's regular rate of pay for all hours worked in excess of twelve (12) hours in any workday.

The term "employee" for the purpose of this subsection may consist of an individual employee as long as the criteria for an identifiable work unit in this subsection are met.

(B) Provisions of subsections (A) and (B) above shall not apply to any employee whose earnings exceed one and one half (1 1/2) times the minimum wage if more than half (1/2) of that employee's compensation represents commissions.

(D) One and one-half (1 1/2) times a minor's regular rate of pay shall be paid for all work over forty (40) hours in any workweek except that minors sixteen (16) and seventeen (17) years old who are not required by law to attend school and may therefore be employed for the same hours as an adult are subject to subsection (A) or (B) above.

(VIOLATIONS OF CHILD LABOR LAWS are subject to civil penalties of from $100 to $5,000 as well as to criminal penalties provided herein. Refer to California Labor Code Sections 1285 to 1311 and 1390 to 1398 for additional restrictions on the employment of minors. Employers should ask school districts about required work permits.)

(E) An employee may be employed on seven (7) workdays in one workweek with no overtime pay required when the total hours of employment during such workweek do not exceed thirty (30) and the total hours of employment in any one workday thereof do not exceed six (6).

(F) If a meal period occurs on a shift beginning or ending at or between the hours of 10 p.m. and 6 a.m., facilities shall be available for securing hot food or drink or for heating food or drink, and a suitable shelter place shall be provided in which to consume such food or drink.

(G) Except as provided in subsections (D), (F), and (I), this section shall not apply to any employee covered by a collective bargaining agreement if said agreement provides premium wage rates for overtime work and a cash wage rate for such employee of not less than one dollar ($1.00) per hour more than the minimum wage.

(H) The provisions of this section are not applicable to employees whose hours of service are regulated by (1) the United States Department of Transportation Code of Federal Regulations, Title 49, Section 395.1 et seq., or (2) the California Public Utilities Commission, or (3) Title 13, California Code of Regulations, Section 1200 et seq., but shall apply to employees not regulated by the above.

and independent judgment, and for which the remuneration is not less than $1150.00 per month; or

(2) The employee is licensed or certified by the State of California and is engaged in the practice of one of the following recognized professions: law, medicine, dentistry, pharmacy, optometry, architecture, engineering, teaching, or accounting, or is engaged in an occupation commonly recognized as a learned or artistic profession; provided, however, that registered nurses shall not be considered to be exempt professional employees for the purposes of this subsection (2) of this order, unless they individually meet the administrative, executive, or professional criteria described in subsection (A) (1) above.

(B) The provisions of this Order shall not apply to employees directly employed by the State or any county, incorporated city or town or other municipal corporation, or to outside salespersons.

(C) Provisions of this Order shall not apply to any individual who is the parent, spouse, child, or legally adopted child of the employer.

2. DEFINITIONS

(A) "Commission" means the Industrial Welfare Commission of the State of California.

(B) "Division" means the Division of Labor Standards Enforcement of the State of California.

(C) "Professional, Technical, Clerical, Mechanical, and Similar Occupations" includes professional, semiprofessional, managerial, supervisorial, laboratory, research, technical, clerical, office work, and mechanical occupations. Said occupations shall include, but not be limited to the following: accountants; agents; appraisers; artists; attendants; audio-visual technicians; bookkeepers; bundlers; billposters; canvassers; carriers; cashiers; checkers; clerks; collectors; communications and sound technicians; compilers; copy holders; copy readers; copy writers; computer programmers and operators; demonstrators and display representatives; dispatchers; distributors; door-keepers; drafters; elevator operators; estimators; editors; graphic arts technicians; guards; guides; hosts; inspectors; installers; instructors; interviewers; investigators; librarians; laboratory workers; machine operators; mechanics; mailers; messengers; medical and dental technicians and technologists; models; nurses; packagers; photographers; porters and cleaners; process servers; printers; proof readers; salespersons and sales agents; secretaries; sign erectors; sign painters; social workers; solicitors; statisticians; stenographers; teachers; telephone, radio-telephone, telegraph and call-out operators; tellers; ticket agents; tracers; typists; vehicle operators; x-ray technicians; their assistants and other related occcupations listed as professional, semiprofessional, technicial, clerical, mechanical, and kindred occupations.

(D) "Emergency" means an unpredictable or unavoidable occurrence at unscheduled intervals requiring immediate action.

(E) "Employ" means to engage, suffer, or permit to work.

(F) "Employee" means any person employed by an employer.

(G) "Employer" means any person as defined in Section 18 of the Labor Code, who directly or indirectly, or through an agent or any other person, employs or exercises control over the wages, hours, or working conditions of any person.

(H) "Hours worked" means the time during which an employee is subject to the control of an employer, and includes all the time the employee receives one and one-half (1 1/2) times such employee's regular rate of pay for all hours worked over forty (40) hours in the workweek. Employment beyond eight (8) hours in any workday or more than six (6) days in any workweek is permissible provided the employee is compensated for such overtime at not less than:

(1) One and one-half (1 1/2) times the employee's regular rate of pay for all hours worked in excess of eight (8) hours up to and including twelve (12) hours in any workday, and for the first eight (8) hours worked on the seventh (7th) day of work; and

(2) Double the employee's regular rate of pay for all hours worked in excess of twelve (12) hours in any workday and for all hours worked in excess of eight (8) hours on the seventh (7th) day of work in any workweek.

(B) No employer shall be deemed to have violated the provisions of this Section 3, Hours and Days of Work, by instituting, pursuant to a written agreement voluntarily executed by the employer and by at least two-thirds (2/3) of the employees in the affected work unit following a secret ballot and before the performance of the work, a regularly scheduled week of work consisting of such hours and days as shall be agreed upon consistent with both of the following provisions: the premium wage rate provisions of one and one-half (1 1/2) times the employee's regular rate of pay shall apply to all hours worked in any workday in excess of the regularly scheduled hours established by the agreement for that workday up to twelve (12) hours a workday, or to all hours worked in excess of 40 hours per week; and the premium wage rate provisions of double the employee's regular rate of pay shall apply to all hours worked in excess of twelve (12) hours per day and to all hours worked in excess of eight (8) hours on those days worked beyond the regularly scheduled number of workdays in the written agreement.

(1) Prior to the secret ballot vote, any employer who proposes to institute an alternative schedule shall make a disclosure in writing to the affected employees, including the effects of the proposed schedule on the employees' wages, hours, and benefits. Such a disclosure shall include meetings duly noticed, for the specific purpose of discussing the effects of alternative scheduling. Failure to comply with this section shall make the election null and void.

(2) Any employer who institutes a regularly scheduled week of work pursuant to this subsection shall make a reasonable effort to find an alternative work assignment for any employee who participated in the vote which authorized the schedule and is unable or unwilling to work it. An employer shall not be required to offer an alternative work assignment to an employee if an alternative work assignment is not available or if the employee was hired after the adoption of the alternative schedule.

(3) After a lapse of twelve (12) months and upon petition of one-third (1/3) of the affected employees, a new vote by secret ballot shall be held and a two-thirds (2/3) vote of the affected employees will be required to reverse the agreement above. If such agreement is revoked the employer shall comply within 60 days. Upon a proper showing by the employer of undue hardship, the Division may grant an extension of time for compliance.

(4) For purposes of Section 3(B), affected employees may include all employees in a readily identifiable work unit, such as a division, a department, a job classification, a shift, a separate physical location, or a recognized subdivision of any such work unit. A work unit

ment of Transportation Code of Federal Regulations, Title 49, sections 395.1 to 395.13, Hours of Service of Drivers, or (2) Title 13 of the California Code of Regulations, Subchapter 6.5, section 1200 and following sections, regulating hours of drivers.

(I) No employee shall be terminated or otherwise disciplined for refusing to work more than 72 hours in any workweek, except in an emergency as defined in Section 2(D).

4. MINIMUM WAGES

(A) Every employer shall pay to each employee wages not less than four dollars and twenty-five cents ($4.25) per hour for all hours worked, effective July 1, 1988, except:

(1) LEARNERS. Employees 18 years of age or over, during their first one hundred and sixty (160) hours of employment in occupations in which they have no previous similar or related experience, may be paid not less than eighty-five percent (85%) of the minimum wage rounded to the nearest nickel.

(2) MINORS may be paid not less than eighty-five percent (85%) of the minimum wage rounded to the nearest nickel provided that the number of minors employed at said lesser rate shall not exceed twenty-five percent (25%) of the persons regularly employed in the establishment. An employer of less than ten (10) persons may employ three (3) minors at said lesser rate. The twenty-five percent (25%) limitation on the employment of minors shall not apply during school vacations.

NOTE: Under certain conditions, the full minimum wage may be required for minors. See Labor Code Section 1391.2 (b).

(B) Every employer shall pay to each employee, on the established payday for the period involved, not less than the applicable minimum wage for all hours worked in the payroll period, whether the remuneration is measured by time, piece, commission, or otherwise.

(C) When an employee works a split shift, one hour's pay at the minimum wage shall be paid in addition to the minimum wage for that workday, except when the employee resides at the place of employment.

(D) The provisions of this section shall not apply to apprentices regularly indentured under the State Division of Apprenticeship Standards.

5. REPORTING TIME PAY

(A) Each workday an employee is required to report for work and does report, but is not put to work or is furnished less than half said employee's usual or scheduled day's work, the employee shall be paid for half the usual or scheduled day's work, but in no event for less than two (2) hours nor more than four (4) hours, at the employee's regular rate of pay, which shall not be less than the minimum wage.

(B) If an employee is required to report for work a second time in any one workday and is furnished less than two hours of work on the second reporting, said employee shall be paid for two hours at the employee's regular rate of pay, which shall not be less than the minimum wage.

(C) The foregoing reporting time pay provisions are not applicable when:

(1) Operations cannot commence or continue due to threats to employees or property, or when recommended by civil authorities, or

(2) Public utilities fail to supply electricity, water, or gas, or there is a failure in the public utilities, or sewer system, or

(3) The interruption of work is caused by an Act of God or other

cause not within the employer's control.

(D) This section shall not apply to an employee on paid standby status who is called to perform assigned work at a time other than the employee's scheduled reporting time.

6. LICENSES FOR HANDICAPPED WORKERS

A license may be issued by the Division authorizing employment of a person whose earning capacity is impaired by physical disability or mental deficiency at less than the minimum wage. Such licenses shall be granted only upon joint application of employer and employee and employee's representative if any.

A special license may be issued to a nonprofit organization such as a sheltered workshop or rehabilitation facility fixing special minimum rates to enable the employment of such persons without requiring individual licenses of such employees.

All such licenses and special licenses shall be renewed on a yearly basis or more frequently at the discretion of the Division.

(See California Labor Code, Sections 1191 and 1191.5.)

7. RECORDS

(A) Every employer shall keep accurate information with respect to each employee including the following:

(1) Full name, home address, occupation and social security number.

(2) Birthdate, if under 18 years, and designation as a minor.

(3) Time records showing when the employee begins and ends each work period. Meal periods, split shift intervals and total daily hours worked shall also be recorded. Meal periods during which operations cease and authorized rest periods need not be recorded.

(4) Total wages paid each payroll period, including value of board, lodging, or other compensation actually furnished to the employee.

(5) Total hours worked in the payroll period and applicable rates of pay. This information shall be made readily available to the employee upon reasonable request.

(6) When a piece rate or incentive plan is in operation, piece rates or an explanation of the incentive plan formula shall be provided to employees. An accurate production record shall be maintained by the employer.

(B) Every employer shall semimonthly or at the time of each payment of wages furnish each employee, either as a detachable part of the check, draft, or voucher paying the employee's wages, or separately, an itemized statement in writing showing: (1) all deductions; (2) the inclusive dates of the period for which the employee is paid; (3) the name of the employee or the employee's social security number; and (4) the name of the employer, provided all deductions made on written orders of the employee may be aggregated and shown as one item.

(C) All required records shall be in the English language and in ink or other indelible form, properly dated, showing month, day and year, and shall be kept on file by the employer for at least three years at the place of employment or at a central location within the State of California. An employee's records shall be available for inspection by the employee upon reasonable request.

(D) Clocks shall be provided in all major work areas or within reasonable distance thereto insofar as practicable.

Room shared	$ 16.50 per week
Apartment— two-thirds (2/3) of the ordinary rental value, and in no event more than	$ 248.00 per month
Where a couple are both employed by the employer, two-thirds (2/3) of the ordinary rental value, and in no event more than	$ 355.00 per month
Meals:	
Breakfast	$ 1.50
Lunch	$ 2.10
Dinner	$ 2.80

(C) Meals evaluated as part of the minimum wage must be bona fide meals consistent with the employee's work shift. Deductions shall not be made for meals not received nor lodging not used.

(D) If, as a condition of employment, the employee must live at the place of employment or occupy quarters owned or under the control of the employer, then the employer may not charge rent in excess of the values listed herein.

11. MEAL PERIODS

(A) No employer shall employ any person for a work period of more than five (5) hours without a meal period of not less than thirty (30) minutes, except that when a work period of not more than six (6) hours will complete the day's work the meal period may be waived by mutual consent of employer and employee. Unless the employee is relieved of all duty during a thirty (30) minute meal period, the meal period shall be considered an "on duty" meal period and counted as time worked. An "on duty" meal period shall be permitted only when the nature of the work prevents an employee from being relieved of all duty and when by written agreement between the parties an on-the-job paid meal period is agreed to.

(B) In all places of employment where employees are required to eat on the premises, a suitable place for that purpose shall be designated.

12. REST PERIODS

Every employer shall authorize and permit all employees to take rest periods, which insofar as practicable shall be in the middle of each work period. The authorized rest period time shall be based on the total hours worked daily at the rate of ten (10) minutes net rest time per four (4) hours or major fraction thereof.

However, a rest period need not be authorized for employees whose total daily work time is less than three and one-half (3 1/2) hours. Authorized rest period time shall be counted as hours worked for which there shall be no deduction from wages.

13. CHANGE ROOMS AND RESTING FACILITIES

(A) Employers shall provide suitable lockers, closets, or equivalent for the safekeeping of employees' outer clothing during working hours, and when required, for their work clothing during nonworking hours. When the occupation requires a change of clothing, change rooms or equivalent space shall be provided in order that employees may change their clothing in reasonable privacy and comfort. These rooms or spaces may be adjacent to but shall be separate from toilet rooms and shall be kept clean.

NOTE: This section shall not apply to change rooms and storage facilities regulated by the Occupational Safety and Health Standards Board.

21. SEPARABILITY

If the application of any provision of this Order, or any section, subsection, subdivision, sentence, clause, phrase, word, or portion of this Order should be held invalid or unconstitutional or unauthorized or prohibited by statute, the remaining provisions thereof shall not be affected thereby, but shall continue to be given full force and effect as if the part so held invalid or unconstitutional had not been included herein.

22. POSTING OF ORDER

Every employer shall keep a copy of this Order posted in an area frequented by employees where it may be easily read during the work day. Where the location of work or other conditions make this impractical, every employer shall keep a copy of this Order and make it available to every employee upon request.

Order 4-89 becomes effective on July 1, 1989. The provisions of Order 4-80 remain in full force and effect until the date this order becomes effective. IWC Order MW-88 remains in full force and effect and its amendments to Order 4-80 will be incorporated in this Order 4-89 on July 1, 1989. The provisions of Order 4-80 which were not amended are carried forward as part of Order 4-89.

Dated: September 22, 1988, at San Francisco, California

INDUSTRIAL WELFARE COMMISSION
STATE OF CALIFORNIA

Lynnel Pollard, Chairperson
Muriel Morse — David Pedde
Michael Callahan — James Ruda

QUESTIONS ABOUT ENFORCEMENT of the Industrial Welfare Commission orders and reports of violations should be directed to the Division of Labor Standards Enforcement. Consult the white pages of your telephone directory under CALIFORNIA, State of, Industrial Relations for the address and telephone number of the office nearest you. The Division has offices in the following cities: Bakersfield, El Centro, Eureka, Fresno, Hollywood, Inglewood, Long Beach, Los Angeles, Marysville, Napa, Oakland, Pomona, Redding, Sacramento, Salinas, San Bernardino, San Diego, San Francisco, San Jose, San Mateo, San Rafael, Santa Ana, Santa Barbara, Santa Monica, Santa Rosa, Stockton, Van Nuys, Ventura, Watsonville

SUMMARIES IN OTHER LANGUAGES

The Department of Industrial Relations will make summaries of wage and hour requirements in this Order available in Spanish, Chinese and certain other languages when it is feasible to do so. Mail your request for such summaries to the Department at P.O. Box 603, San Francisco, CA 94101.

RESUMEN EN OTROS IDIOMAS

El Departamento de Relaciones Industriales confeccionará un resumen sobre los requisitos de salario y horario de esta Disposición en español, chino y algunos otros idiomas cuando sea posible hacerlo. Envíe por correo su pedido por dichos resúmenes al Departamento a: P.O. Box 603, San Francisco, CA 94101.

8. CASH SHORTAGE AND BREAKAGE

No employer shall make any deduction from the wage or require any reimbursement from an employee for any cash shortage, breakage, or loss of equipment, unless it can be shown that the shortage, breakage, or loss is caused by a dishonest or willful act, or by the gross negligence of the employee.

(The former second sentence which was part of this section, effective January 1, 1998, was removed, effective April 24, 1998, based on a judicial determination that it was inconsistent with California law and, therefore, invalid and unenforceable. *People v. Industrial Welfare Commission et al.*, Santa Cruz Superior Court No. 89071.)

9. UNIFORMS AND EQUIPMENT

(A) When uniforms are required by the employer to be worn by the employee as a condition of employment, such uniforms shall be provided and maintained by the employer. The term "uniform" includes wearing apparel and accessories of distinctive design or color.

NOTE: This section shall not apply to protective apparel regulated by the Occupational Safety and Health Standards Board.

(B) When tools or equipment are required by the employer or are necessary to the performance of a job, such tools and equipment shall be provided and maintained by the employer, except that an employee whose wages are at least two (2) times the minimum wage provided herein may be required to provide and maintain hand tools and equipment customarily required by the trade or craft. This subsection (B) shall not apply to apprentices regularly indentured under the State Division of Apprenticeship Standards.

NOTE: This section shall not apply to protective equipment and safety devices on tools regulated by the Occupational Safety and Health Standards Board.

(C) A reasonable deposit may be required as security for the return of the items furnished by the employer under provisions of subsections (A) and (B) of this section upon issuance of a receipt to the employee for such deposit. Such deposits shall be made pursuant to Section 400 and following of the Labor Code or an employer with the prior written authorization of the employee may deduct from the employee's last check the cost of an item furnished pursuant to (A) and (B) above in the event said item is not returned. No deduction shall be made at any time for normal wear and tear. All items furnished by the employer shall be returned by the employee upon completion of the job.

10. MEALS AND LODGING

(A) "Meal" means an adequate, well-balanced serving of a variety of wholesome, nutritious foods.

"Lodging" means living accommodations available to the employee for full-time occupancy which are adequate, decent, and sanitary according to usual and customary standards. Employees shall not be required to share a bed.

(B) Meals or lodging may not be credited against the minimum wage without a voluntary written agreement between the employer and the employee. When credit for meals or lodging is used to meet part of the employer's minimum wage obligation, the amounts so credited may not be more than the following:

	Effective July 1, 1998
Room occupied alone	$ 29.60 per week

(B) Suitable resting facilities shall be provided in an area separate from the toilet rooms and shall be available to employees during work hours.

14. SEATS

(A) All working employees shall be provided with suitable seats when the nature of the work reasonably permits the use of seats.

(B) When employees are not engaged in the active duties of their employment and the nature of the work requires standing, an adequate number of suitable seats shall be placed in reasonable proximity to the work area and employees shall be permitted to use such seats when it does not interfere with the performance of their duties.

15. TEMPERATURE

(A) The temperature maintained in each work area shall provide reasonable comfort consistent with industry-wide standards for the nature of the process and the work performed.

(B) If excessive heat or humidity is created by the work process, the employer shall take all feasible means to reduce such excessive heat or humidity to a degree providing reasonable comfort. Where the nature of the employment requires a temperature of less than 60° F., a heated room shall be provided to which employees may retire for warmth and such room shall be maintained at not less than 68°.

(C) A temperature of not less than 68° shall be maintained in the toilet rooms, resting rooms, and change rooms during hours of use.

(D) Federal and State energy guidelines shall prevail over any conflicting provision of this section.

16. ELEVATORS

Adequate elevators, escalator or similar service consistent with industry-wide standards for the nature of the process and the work performed shall be provided when employees are employed four floors or more above or below ground level.

17. EXEMPTIONS

If, in the opinion of the Division after due investigation, it is found that the enforcement of any provision contained in Section 7, Records; Section 11, Meal Periods; Section 12, Rest Periods; Section 13, Change Rooms and Resting Facilities; Section 14, Seats; Section 15, Temperature; or Section 16, Elevators, would not materially affect the welfare or comfort of employees and would work an undue hardship on the employer, exemption may be made at the discretion of the Division. Such exemptions shall be in writing to be effective and may be revoked after reasonable notice is given in writing. Application for exemption shall be made by the employer or by the employee and/or the employee's representative to the Division in writing. A copy of the application shall be posted at the place of employment at the time the application is filed with the Division.

18. FILING REPORTS (See California Labor Code, Section 1174(a))

19. INSPECTION (See California Labor Code, Section 1174)

20. PENALTIES (See California Labor Code, Section 1199)

EXCERPTS FROM THE LABOR CODE

Section 200. As used in this article: (a) "Wages" includes all amounts for labor performed by employees of every description, whether the amount is fixed or ascertained by the standard of time, task, piece, commission basis, or other method of calculation.

Section 201. If an employer discharges an employee, the wages earned and unpaid at the time of discharge are due and payable immediately.

Section 202. If an employee not having a written contract for a definite period quits his or her employment, his wages shall become due and payable not later than 72 hours thereafter, unless the employee has given 72 hours previous notice of his intention to quit, in which case the employee is entitled to his wages at the time of quitting.

Section 226. (a) Every employer shall semimonthly, or at the time of each payment of wages, furnish each of his or her employees either as a detachable part of the check, draft, or voucher paying the employee's wages, or separately when wages are paid by personal check or cash, an itemized statement in writing showing: (1) gross wages earned, (2) total hours worked by each employee whose compensation is based on an hourly wage (3) all deductions, provided, that all deductions made on written orders of the employee may be aggregated and shown as one item, (4) net wages earned, (5) the inclusive dates of the period for which the employee is paid, (6) the name of the employee and his or her social security number, and (7) the name and address of the legal entity which is the employer.

Section 1174. Every person employing labor in this state shall:

(a) Furnish to the commission, at its request, reports or information which the commission requires to carry out this chapter. Such reports and information shall be verified if required by the commission or any member thereof.

(b) Allow any member of the commission or the employees of the Division of Labor Standards Enforcement free access to the place of business or employment of such person to secure any information or make any investigation which they are authorized by this chapter to ascertain or make. The commission may inspect or make excerpts, relating to the employment of employees, from the books, reports, contracts, payrolls, documents, or papers of such person.

Section 1191. For any occupation in which a minimum wage has been established, the commission may issue to an employee who is mentally or physically handicapped, or both, a special license authorizing the employment of the licensee for a period not to exceed one year from date of issue, at a wage less than the legal minimum wage. The commission shall be a special minimum wage for the licensee. Such license may be renewed on a yearly basis.

Section 1191.5. Notwithstanding the provisions of Section 1191, the commission may issue a special license to a nonprofit organization such as a sheltered workshop or rehabilitation facility to permit the employment of employees who have been determined by the commission to meet the requirements in Section 1191 without requiring individual licenses of such employees. The commission shall be a special minimum wage for such employees. The special license for the nonprofit corporation shall be renewed on a yearly basis, or more frequently as determined by the commission.

Section 1199. Every employer or other person acting either individually or as an officer, agent, or employee of another person is guilty of a misdemeanor and is punishable by a fine of not less than one hundred dollars ($100) or by imprisonment for not less than thirty days, or by both, who does any of the following:

(a) Requires or causes any employee to work for longer hours than those fixed or under conditions of labor prohibited by an order of the commission.

(b) Pays or causes to be paid to any employee a wage less than the minimum fixed by an order of the commission.

(c) Violates or refuses or neglects to comply with any provision of this chapter or any order or ruling of the commission.

Section 1251.2. (a) Notwithstanding Sections 1248 and 1251, any minor under 18 years of age who has been graduated from a high school maintaining a four-year course above the eighth grade of the elementary schools, or who has had an equivalent amount of education as a graduate of such school or by private tutor, or who has been awarded a certificate of proficiency pursuant to Section 48412 of the Education Code, may be employed for the same hours as an adult may be employed in performing the same work. (b) Notwithstanding the provisions of the rules of the Industrial Welfare Commission, no employer shall pay any minor employee a rate of wage less than the rate paid to adult employees in the same establishment for the same quantity and quality of the same class of work; provided, however, that nothing herein shall prohibit a variation of rates of pay for such minors and adult employees engaged in the same classification of work based upon a differential in seniority, length of service, ability, skill, difference in the nature of duties performed, difference in quantity or occasional difference in the shift or time of day worked, hours of work, or other reasonable differentiations when consistent with good faith.

STATEMENT AS TO THE BASIS UPON WHICH INDUSTRIAL WELFARE COMMISSION ORDER NO. 4-89 REGULATING WAGES, HOURS, AND WORKING CONDITIONS IN PROFESSIONAL, TECHNICAL, CLERICAL, MECHANICAL, AND SIMILAR OCCUPATIONS IS PREDICATED

The Industrial Welfare Commission's (IWC) legal authority for promulgating and amending this order are set forth under the heading "Take Notice." The IWC offers the following statement as to the basis for the various sections of this order:

1. APPLICABILITY

This section provides, in part, that employees employed in executive and administrative capacities are exempt from Sections 3 through 12 of this order if they meet two tests: (1) duties appropriate to such capacity, and (2) a specified remuneration. These are appropriate and well-established criteria for determining whether a person designated as an executive or administrator should be protected by the minimum standards in the order, most significantly by the requirement for premium pay for overtime work. For this reason, when the IWC began its investigation of overtime issues, it included Section 1, Applicability, in that review.

The IWC rejected the California Hospital Association's (CHA) petition to amend all of the IWC Orders by adopting new standards that more closely resemble the federal rule for the executive and administrative exemption, including a standard for "primary" duties. The IWC reasserted its historical position that it preferred the term "primarily" to "primary" because the former afforded employees greater protections. Additionally, "primarily" was defined in a way to assist enforcement, and changing to the federal standard would create more problems for enforcement staff. The IWC also rejected CHA's request to adopt a "high salary proviso" which would exempt certain employees paid very high salaries regardless of duties or responsibilities. The salary levels suggested by CHA would automatically exempt from overtime certain employees, such as nurses, and the IWC wanted to continue protecting such employees unless duties or responsibilities clearly indicated that an exemption was in order.

While employer representatives on three wage boards were unsuccessful in their attempts to convince their colleagues to recommend adoption of language similar to that requested by CHA, the majority of one wage board recommended that the IWC adopt a proposal to increase the specified remuneration amount by the same percentage as any minimum wage increase. The IWC recognized that this recommendation was reasonable and proposed language which would apply to employees covered by all the orders under review, including this one. The IWC received testimony during the public hearing process which led it to conclude that the arithmetical relationship between the amount of minimum wage and the amount of the remuneration contained in Section 1, which existed upon the promulgation of the 1988 Orders, was proper and should be maintained. On September 28, 1988, the IWC adopted a proposal to increase the remuneration amount for persons employed in executive and administrative capacities to but was not limited to, a critical nursing shortage that placed more demands than ever on nurses, the IWC concluded that registered nurses still needed its protections and adopted language which clearly did not include nurses in a categorical professional exemption under subsection (2), but allowed nurses to be exempt as administrators, executives, or professionals if they individually met the criteria for an exemption under subsection (1).

This section of the statement as to the basis addresses those revisions or changes adopted on September 23, 1988. The statements as to the basis for the remaining parts of this section are contained in prior printings of this order. Those parts have not changed, and there is no need for an explanation because the IWC is continuing in effect regulations that have previously become a part of the standard working conditions for employees in the state. The IWC received no compelling evidence and concluded that there was no rationale to warrant making any other changes in this section.

2. DEFINITIONS

The wage board for this industry generally accepted definitions as they stood in the 1976 order. Several wage boards asked the IWC to insert the definition for "primarily". The IWC found that the substance of the definition proposed was in accord with the Division's established administrative policy that an employee who spends as much as half his or her work time performing the tasks of non-exempt employees is covered by this order.

The IWC received no compelling evidence, and concluded there was no rationale, to warrant making any other change in the provisions of this section, except in the list of occupations covered in subsection (C). This list was revised when the IWC delimited the scope of the occupations to be considered by the wage board to reflect technological changes since it was first compiled, and it was approved unanimously by the wage board.

Subsection (D), defining "emergency", was inserted because the word is used in a subsection (1) in the section on Hours and Days of Work. It is the same definition that has been used in IWC Order 15, and the IWC had no compelling evidence to justify changing it.

3. HOURS AND DAYS OF WORK

During the investigative phase of its overtime review, the IWC heard and read testimony which suggested that some employees and employers wanted the opportunity to implement work schedules which could be used as alternatives to the 8-hour day within a 40-hour week. This testimony indicated that the IWC regulations requiring premium pay after eight hours a day did not provide enough flexibility, and that the "four-ten" work schedule, permitted since 1976, while allowing some relief did not allow other desirable options such as longer but fewer workdays within workweeks. Additionally, the IWC received a petition from the California Newspaper Publishers Association requesting an orders 1-88, 4-89, 5-89, and 10-88, a representative from the California Labor Federation defended the 8-hour day as the "cornerstone of the embryonic labor movement" and noted that the 8-hour day had been a standard in California since 1868. Other representatives from organized labor testified that the proposal to allow 12-hour days was an attack on the welfare of employees and would subject them to pressure from their employers to work longer hours without overtime pay. Employee representatives argued that many employees are unable or unwilling to work 12-hour shifts, that 12-hour shifts decrease the quality of life, and that occurring child care for the time necessary to work a 12-hour shift would be difficult. Employer representatives and some employees, including those who worked 12-hour schedules already permitted under Order 5-89 for licensed hospitals, testified that they preferred shifts up to 12 hours without overtime. These persons stated that flexible scheduling improved morale, attracted and retained staff, increased communication and camaraderie among workers, and decreased commuting time. The same persons asserted that alternative work schedules offered employees a choice, and were completely voluntary. They added that from their own experience, 12-hour shifts posed few problems, and persons on a 12-hour schedule could provide child care within the family unit because each parent could stay home for longer blocks of time.

The IWC considered all of the information it received during the entire course of its overtime review and indicated that although it was not yet ready to embrace the straight 40-hour workweek contained in the Fair Labor Standards Act, it did recognize that societal changes demanded greater scheduling flexibility than currently permitted under the IWC orders so that employers and employees could work together for the benefit of both. The IWC acknowledged that the 8-hour day was no longer the only acceptable standard in California as shown by the acceptance of the "four-ten" workweek, the language recommended by the wage board for Order 1-88, the provision contained in Order 5 to allow persons working in licensed hospitals to work up to 12 hours a day at straight time pay, the "nine eighty" plan in place for Los Angeles city employees, and various other alternative workweeks available to employees in the public sector.

On September 23, 1988, the IWC concluded its overtime review, as it pertained to this section of the order, by adopting the language contained in its original proposal with minor modifications. The modified language contained built-in protections, including but not limited to a regularly scheduled week of work, a two-thirds vote by affected employees, a secret ballot election, a written disclosure requirement, and a reasonable accommodation clause to protect employees unwilling or unable to work alternative schedules. In an effort to promote clarity, consistency, continuity, and ease of enforcement, the IWC adopted the same language for Section 3 in three of the orders under review, including schedule. "A regularly scheduled week of work" should exist over a period of time, and the language permitting a new secret ballot vote to be held only after one year confirmed this. The IWC intended that alternative schedules could include different predetermined alternating schedules during designated periods, for example, peak periods of work due to seasonal or holiday schedules or regular alternating schedules, as long as these schedules were included as part of the original agreement executed by two-thirds of the employees in the affected work unit following a secret ballot and before the performance of work. Finally, the IWC stated it intended for alternative schedules to be defined in terms of a certain number of hours and days in a week of work, but persons on alternative schedules did not necessarily have to work on the same specific day during each week of work.

This section of the statement as to the basis addresses those revisions or changes adopted on September 23, 1988. The statements as to the basis for the remaining parts of this section are contained in prior printings of this order. Those parts have not changed, and there is no need for an explanation because the IWC is continuing in effect regulations that have previously become a part of the standard working conditions for employees in this state. The IWC received no compelling evidence and concluded that there was no rationale to warrant making any other changes in this section.

4. MINIMUM WAGES

The IWC examined the minimum wage in the context of a wage adequate to supply the necessary cost of proper living to, and maintain the health and welfare of, an employee in California, while considering the legislative intent expressed in the Cal State 1913, Ch. 1887, sec. 11, which provides: "It is the intent of the Legislature in enacting the act that the Industrial Welfare Commission interpret these provisions [amendments to the Labor Code, including but not limited to secs. 1173, 1178, and 1178.5] in a manner which does not cause undue hardship and loss of employment opportunities in any segment of industry in California."

During the early stages of its minimum wage review, the IWC studied historic, demographic, statistical, and economic data and testimony and reports presented prior to and in conjunction with four investigative hearings. Testimony and data from employee representatives, including the California Labor Federation, advocated that an increase was necessary to adjust for the decline in purchasing power since the last increase in 1981 and to adjust for overall increased inflation. These advocates stated that an increase in the minimum wage of over $5.00 per hour was needed to reflect increases in the Consumer Price Index, or increases in the average hourly manufacturing wage (a standard advocated by some economists) or to maintain the same relationship to the poverty level that the min-

factors which suggested that some increase in the minimum wage was certainly in order with the belief that too significant an increase could harm employees by contributing to a decrease in their employment opportunities. On September 11, 1987 the IWC proposed to increase the minimum wage to $4.00 per hour, an amount which falls well within the upper and lower limits of the range of suggested rates, as well as an amount considered reasonable, relative to all of the evidence before the IWC.

The IWC cited its authority to re-examine the minimum wage after enough time passed to measure the economic effects of any increase and then evaluate the need for any further change at that time.

The IWC held three public hearings on its minimum wage proposals. Advocates representing unions, neighborhood organizations, and other groups of mainly urban workers urged a "moral minimum wage" of at least $5.00 an hour. These groups also expressed concern for families of minimum wage earners and pointed out that $4.00 per hour, or $8000 per year was still below the poverty level for a family of three. Employers contended that the minimum wage was established to support an individual, not an entire household. The IWC also studied additional information which indicated that some econometric models may have overstated the negative effects attributed to an increase in the minimum wage and that previous projections of job losses resulting from an increase may have been too high. The IWC also received an analysis from the Industrial Areas Foundation Network of Southern California which showed that while some businesses opposed any increase in the minimum wage, others now supported a "substantial" increase.

The IWC reconsidered all of the information it received during the entire course of its minimum wage review. It re-evaluated the reasons for its original $4.00 proposal and concluded that those reasons were still valid, but decided that an increase to $4.25 per hour was warranted. The majority felt that while opposition now evidenced which suggested that an increase would not have as great an impact on unemployment as previously assumed by employers, and that some employers now supported an increase above $4.00 per hour in order to attract and retain staff, the IWC, mindful of the fact that, historically, it had always focused on a single individual, as opposed to a family unit, to determine the adequacy of the minimum wage, and concluded that the minimum wage is the wage necessary to support the cost of proper living for a single worker and is not intended to support a family, nor supplant public assistance programs. The IWC discounted arguments in favor of a "moral minimum wage" of over $5.00 per hour because they appeared to be based in part on a subjective philosophical standard and related in part upon certain cost indices and comparisons to public assistance programs. Additionally, the IWC [illegible]

$1100 per month, proportionate to the most recent increase in the minimum wage, as well as proportionate to other record increases made by the IWC with respect to the meals and lodging credits.

During its overtime investigation the IWC learned that the professional exemption, as distinct from the administrative or executive exemption contained in the IWC Orders, was too restrictive insofar as it did not recognize the societal and technological changes that have occurred and still occur in years to come. Emerging occupations, such as those in the fields of science and high technology, and other occupations requiring advanced knowledge, the exercise of discretion and independent judgment and/or invention, imagination or talent in a recognized field of artistic endeavor, while exempt under federal law, rarely, if ever, qualified for a professional exemption under the IWC Orders. Testimony indicated that this differentiation generated confusion and resulted in disadvantages both to employees and employers. The IWC also received information about enforcement problems due to the fact that there was very little flexibility to interpret and/or enforce individual professional exemptions based on actual duties and responsibilities. In response to these concerns, and based upon evidence received in the CNA petition, written materials, and oral and written public testimony, the IWC decided that the professional exemption relied too much on credentialism. Consequently, the IWC proposed language which would add persons engaged in an occupation commonly recognized as a "learned or artistic" profession to the licensed professions already listed in the order. This broad language would eliminate the need for the IWC to modify the list (as it did to add pharmacists in 1979) each time it wished to recognize a new group as professionals, because it would allow enforcement staff to consider individual situations and actual duties when applying the exemption. The language also would permit, but would not be limited to, use of the federal guidelines for purposes of interpretation.

With respect to an exception for nurses as professionals, the IWC received testimony from the California Association of Hospitals and Health Systems (formerly the California Hospital Association) and individual nurses who urged the IWC to recognize nurses as professionals because they are considered professionals under the FLSA and professional status is consistent with the true nature of nurses' duties and responsibilities. On the other hand, the California Nurses Association (CNA) strongly opposed any modification of the applicability section which would exempt nurses "as a class" of professionals or which would preclude nurses from an exemption based on the other factors in subsection (1). Instead, CNA argued, each professional exemption should be examined individually, and decisions regarding professional status for registered nurses should depend on actual duties and responsibilities. The IWC heard and read testimony which indicated that professional recognition and a professional exemption under the IWC Orders were not synonymous. CNA testified that as long as employers fail to provide registered nurses with the rights and privileges generally conferred on a professional, i.e., consistent exercise of discretion and independent judgment, control over one's practice, and full integration in the decision making process, professional recognition and a professional exemption will remain mutually exclusive. Based on the evidence presented which also included, caption from daily overtime up to 12 hours a workday within a 40-hour workweek. The North American Association of Inventory Services petitioned for an exemption for persons working less than 40 hours per payroll week, with overtime pay after 40 hours at either the state or federal premium rate, whichever is higher. The California Teamsters Public Affairs Council (Teamsters) submitted a petition requesting amendment of all the IWC Orders by providing certain additional protective conditions whenever an alternative workweek arrangement is allowed.

The wage board for Order 4-80 discussed amending Section 3 to delete the requirement that premium overtime compensation be paid for hours worked in excess of eight but less than 12 in any workday. A simple majority of the wage board suggested that the IWC modify the "four-ten" workweek to allow employees to work four 9-hour days and one 4-hour day a week as long as certain protections were provided. Since this recommendation was not supported by at least two-thirds of the members of the wage board, the IWC was not required under Labor Code Section 1182 to adopt it, and chose not to. The IWC noted, however, the wage board's discussions suggested that flexibility under protective conditions was desirable for persons covered by Order 4, and both employers and employees could benefit from alternative scheduling.

After considering all of the evidence and testimony received during its investigation, and after deliberating on the wage board report, the IWC concluded that employees should have more choices with respect to their hours and days of work and proposed an amendment to Section 3 which allowed employees the option of entering into a "regularly scheduled workweek consisting of such hours and days as shall be agreed upon" up to 12 hours a day within a 40-hour week. According to the provisions contained in the proposal, the employer and two-thirds of the employees in the affected work unit must voluntarily execute a written agreement before implementing the new schedule. The proposal provided premium pay for hours worked in excess of the regular schedule, or for all hours in excess of 12 per day or 40 per week. The proposal also included some of the protective conditions suggested in the Teamsters' petition, such as a secret ballot, as well as additional protections including a written disclosure by the employer of the effects of the proposed schedule on the employee's hours and pay, a reasonable accommodation clause, and a mechanism for reversing the agreement after one year. In addition the proposal listed some appropriate exemptions of work units, as well as provided for two consecutive days off within a workweek.

The IWC did not propose or adopt the language suggested in the Teamsters' petition which would require employers to file alternative work schedules with the Division of Labor Standards Enforcement. The IWC determined that the burden of a filing requirement would outweigh any significant benefit for employees, and create additional paperwork for employers as well as enforcement staff. The IWC also declined to propose or adopt the Teamsters' language which stipulated that alternative schedules be valid for no longer than three years. The IWC concluded that the reversal provision which permitted employees to petition for a new secret ballot vote after one year provided adequate protection for employees.

During the public comment period on the proposals to amend the overtime provisions contained in IWC Order 4, the IWC received the language which provided that weeks of work be "regularly scheduled." The IWC was not persuaded by testimony which suggested that employees' interests could best be met by allowing employees to work different hours every week within a 40-hour weekly limitation. The IWC agreed that if employees wanted to take advantage of an alternative schedule, they should have the built-in protection of limiting that schedule to a certain number of hours and number of days in a week. This would allow employees to plan for their transportation and child care needs, educational pursuits, family and recreation time, and other personal activities.

The IWC also retained the language requiring a "secret ballot" in order to assure freedom of choice for the employee. The IWC reasoned that only a secret ballot would remove the threat of employer coercion and/or retribution by allowing employees to anonymously vote on an alternative schedule without regard to the outcome of the vote or the time delay between the vote and the signing of the written agreement. Anonymity is particularly important to the employee during this period because it allows the employee the freedom to reflect on the effects of the alternative schedule without undue influence or pressure from the employer.

The IWC also retained the language which cited examples of a "readily identifiable work unit," including language which said a work unit may consist of an individual employee "as long as the criteria of an identifiable work unit in this subsection are met," because it recognized that one person could constitute a work unit and a single employee should have the option of working longer than eight hours a day without overtime pay. The IWC also retained the language which allowed reasonable accommodation for employees who were unwilling or unable to work the new schedule. The IWC concluded that employees should have a choice with regard to their hours of work, and that employers shall make a reasonable effort to find an alternative work assignment for persons who are unable or unwilling to work the new schedule.

The IWC made minor amendments to its original proposal, including changes in wording from "workweek" to "week of work" and "day" to "workday"; these changes insured clarity and were consistent with similar language contained in the IWC Orders. "Hours of pay" was changed to "wages, hours, and benefits" for purposes of clarity and consistency with language contained in the Labor Code.

The original language proposed by the IWC included provisions "for not less than two consecutive days off within a workweek." The IWC ultimately rejected this language because many employees would automatically receive two consecutive days off by virtue of working longer but fewer days within the 40 hour week of work. The IWC also recognized that some employees had personal obligations, such as educational pursuits, which may warrant schedules with specified non consecutive days off as opposed to two consecutive days off. Finally, based upon testimony heard at public hearings the IWC determined that this provision would inhibit and might prevent trading shifts, a frequent and desirable practice advocated by some employees.

Upon adopting its final language, the IWC made clear its intent: the IWC did not intend to invalidate any "four-ten" workweek agreements entered into prior to the effective date of the order, nor did the IWC intend for employees to vote frequently on a new alternative

hold his (or her) head considerably above the official poverty level." Advocates also pointed out that the Governor and the Legislature had recognized the inadequacy of the minimum wage by establishing $5.14 as the base hourly wage in the "GAIN" or "Workfare" program. The California Retailers Association and other employer groups opposed any minimum wage increase until such an increase occurred at the federal level. These groups testified to the adverse consequences of an increase, including but not limited to unemployment, disemployment and reduced hours of employment, and said that an increase would have a detrimental impact on employees, particularly youth and minorities, whom they identified as most vulnerable to these adverse effects. In addition, employers pointed out that jobs would be lost to California employers because employers would tend to establish new businesses or relocate present businesses in other states with more favorable minimum wage rates.

With respect to the Report of the 1987 Minimum Wage Board, the IWC noted that although the report contained no recommendation on a minimum wage adequate to supply the cost of proper living, it did include a motion that the minimum wage remain at $3.35 per hour until the federal minimum wage changed. Other motions made by members of the wage board were to increase the minimum wage to $4.50 or $5.50 per hour, tied to certain indices. The IWC decided not to tie the minimum wage to the Consumer Price Index, the California Necessities Index, the Employment Cost Index, or any other index, including the average hourly manufacturing wage, because of complex interacting economic forces such as inflation, deflation, recession, unemployment, and uncertain fiscal/monetary policies which affect these indices, and because of the imperfect relationship between such indices and the factors underlying the adequacy of the minimum wage. The IWC also decided that tying the minimum wage to "Mondo's Budget," a budget level recommended in 1981 for a self supporting woman, was no longer appropriate because such a budget could not meet the needs of every person within the standard and would not accurately reflect the current needs of working people, including men.

With respect to the $5.14 base hourly wage used in the GAIN program, the IWC concluded that $5.14 is not a wage but rather the figure used to calculate the number of hours of service owed to recipients on AFDC check and related to jobs requiring skilled training rather than entry level jobs requiring little or no skills such as minimum wage jobs.

The IWC also considered state and federal actions with respect to the minimum wage. It studied the "Senate Office Research Issue Brief" which explained the consequences of increasing California's minimum wage, and it made note of the fact that members of the Legislature voted to increase the minimum wage to $4.25 per hour. The IWC also considered legislation proposing a nationwide increase in the minimum wage to between $3.85 to $4.25 per hour. Finally, the IWC studied minimum wage rates in other states and noted that at the time of its deliberations only seven states had rates over $3.35 per hour, and the rates ranged from $3.37 to $4.65. Only two states, Connecticut, planned to exceed $4.00 per hour.

In considering all of the rates actually placed during its minimum wage review, rates ranging from $3.35 per hour to over $5.00 per hour, the IWC balanced these living in urban areas, for example, were subject to different cost of living than those residing in remote rural parts of the state. The IWC considered these and other factors, including the fact that the Legislature had independently proposed a minimum wage of $4.25. On December 18, 1987, the IWC concluded that a new minimum wage of $4.25 per hour was appropriate to maintain the health and welfare of a single individual and not cause undue hardship and loss of employment opportunities.

[On October 31, 1988, the California Supreme Court in *Kennedy v. Industrial Welfare Com.* (1988) 48 C.3d 1262 held that portion of the minimum wage order providing for an alternative minimum wage for tipped employees to be invalid. Therefore, all references to an alternative minimum wage for tipped employees have been deleted from IWC Order No. MW-88, including references contained in Sections 5 and 10 which referred to minimum wage for tipped employees set forth in other IWC orders. Additionally, all references to the IWC's considerations and adoption of an alternative minimum wage for tipped employees were deleted from the statement as to the basis.]

With respect to establishing alternative minimum wages for certain employees. After its initial meetings, the IWC found that the minimum wage may be inadequate to supply the proper cost of living paid under a wage board. The IWC agreed it would consider input from the public regarding the minimum wage board charge, and upon the suggestion of the California Hotel & Motel Association, decided that in addition to making a general recommendation on the adequacy of the minimum wage, that wage board should also consider an alternative minimum wage for full time students under 21. The California Hotel & Motel Association argued that by establishing this alternative the IWC would remove the economic disincentive that currently exists in the employment of students. The IWC requested the wage board to consider and make recommendations on whether or not full time students under the age of 21 should receive an alternative minimum wage.

The official report of the minimum wage board was received with respect to any recommendations on alternative minimum wage rates. With respect to an alternative wage for students, employee representatives argued that an alternative wage would reduce the adverse employment effects associated with a minimum wage that disproportionately impacts teenagers and young adults who are generally not self supporting. Employee representatives stated that the alternative would encourage the employment of minor workers and expand the job opportunities available to them.

On September 11, 1987, the IWC voted to adopt regular hearings a proposal establishing an alternative minimum wage rate for full time students under 21. Students throughout California presented testimony at alternative wage rate for full time students under 21. Many students testified that they were self supporting and a lower student wage rate would have an impact on the ability to go to school. Others stated that proposal was discriminatory, conflicted in part with Labor Code Section 1194 and would result in less jobs for adult and full time workers. After evaluating all of the written and oral testimony, including reports from staff and testimony from the Division of Labor Standards Enforcement, the

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language in the proposal was both unclear and probably inherently difficult to enforce, the IWC decided to withdraw its proposed alternative minimum wage for full-time students under 21.

[This section of the statement as to the basis addresses those revisions or changes adopted on December 10, 1997. The statements as to the basis for the remaining parts of this section are contained in prior printings of this order. These parts have not changed, and there is no need for an explanation because the IWC is continuing in effect regulations that have previously become a part of the standard working conditions for employees in this state.]

5. REPORTING TIME PAY

The requirement for reporting time pay historically has been included in the IWC's orders on the basis that it is necessary to employees' welfare that they be notified in advance when changes in their starting time must be made. It has deemed a maximum of four hours' pay adequate to encourage proper notice and scheduling.

The IWC received no compelling evidence, and concluded there was no rationale, to warrant making any change in the provisions of this section, which date back to 1942. Exceptions to the requirement date to 1974.

6. LICENSES FOR HANDICAPPED WORKERS

This section, long a part of the order, is intended to allow a lesser rate only for those so seriously incapacitated that they cannot approach normal productivity. It is a restatement of Labor Code Sections 1191 and 1191.5. The word "permit" was changed to "license" to conform more closely to the statute.

The IWC received no compelling evidence, and concluded there was no rationale, to warrant making any other change in the provisions of this section.

7. RECORDS

Employee welfare requires that data on wages and hours of work be furnished to employees, in order to assist in the resolution of disputes and in the employee's dealings with taxing agencies.

In response to employee demands for more information on checkstubs, the IWC concluded that it is not feasible at this time to require employers to provide such written information. It did find it appropriate and reasonable to require that employers keep information on applicable rates of pay and hours worked and make it available to the employee on reasonable request, as specified in (A) (3).

The IWC received no compelling evidence, and concluded there was no rationale, to warrant making any other change in the provisions of this section.

8. CASH SHORTAGE AND BREAKAGE

Some prohibition against deductions from pay for shortage or breakage has existed in IWC Orders since 1938. It is apparent that the employee's welfare financially would be involved and his or her employment possibly would be at stake if the employee could be charged for shortages without the protection of this section.

It is the IWC's intent that the employer can only deduct for cash shortages or breakages if they are caused by the dishonest or willful act or gross negligence of the employee. No compelling reason was demonstrated for changing the word "shown" to "proven" because the IWC intends that the burden of proof rests with the employer in all cases.

The IWC felt it was not necessary to refer to Labor Code Sections 400-410 and deleted that reference.

The IWC received no compelling evidence, and concluded there was no rationale, to warrant making any other change in the provisions of this section.

9. UNIFORMS AND EQUIPMENT

The IWC historically has required employers to pay for uniforms, tools and equipment as basically provided in the section, because such standard conditions of labor are necessary to the welfare of employees. There was no compelling evidence before the IWC to warrant a change in the basic provisions of Subsection (A), but clarification of the IWC's intent is appropriate here. The definition and enforcement policy to sufficiently flexible to allow the employer to specify basic wardrobe items which are usual and generally usable in the occupation, such as white shirts, dark pants and black shoes and belts, all of unspecified design, without requiring the employer to furnish such items. If a required black or white uniform or accessory does not meet the test of being generally usable in the occupation the employee may not be required to pay for it. The IWC also concluded that present provisions in the order adequately protect the employee against bearing the cost of maintenance.

The IWC did have evidence to justify amending (B) to allow employers to require regularly indentured apprentices to provide their own tools, such apprentices customarily have a career investment in their tools and usually are assured of an ultimate wage exceeding two times the minimum wage, and in addition their working conditions are monitored by the Division of Apprenticeship Standards.

Notes were inserted to clarify the boundaries of the respective jurisdictions of the IWC and the Occupational Safety and Health Standards Board in the course of consultation with the OSHA Standards Board.

In some cases, the procedures for establishing funds in which to hold deposits in accord with Labor Code Sections 400-410, as provided in this section, are too cumbersome to be practical and an alternative is needed. There was considerable sentiment in wage boards for deleting the provision for a deposit, which could be a substantial burden on a starting employee. The IWC found that employers were reasonable in their insistence that employees have an obligation to either return items belonging to the employer or pay for the cost of them. The IWC's intent is that only the actual cost of the item may be withheld from the final check, pending return of the item within a reasonable time after the employment terminates. The balance of the check must be paid promptly as required by the Labor Code.

The IWC received no compelling evidence, and concluded there was no rationale, to warrant making any other change in the provisions of this section.

10. MEALS AND LODGING

Historically, the IWC has limited the amount of credit for meals and lodging that could be used as an offset against the employer's minimum wage obligations. The IWC asked the 1997 Minimum Wage Board to make recommendations on this provision consistent with the health and welfare of employees. Although that board was unable to agree on any recommendation, it did discuss a motion calling for credit increases which would proportionately equal any increase in the minimum wage. Employer representatives argued that such "increases would potentially benefit employees by increasing the probability of being offered meals and lodging associated with a job" and pointed out that employees could "choose to reject such offers as part of their employment package." They also noted that "the meals and lodging received are substantially below fair market value." Employee representatives disputed whether "employees have the unrestricted option of a full minimum wage or a reduced wage with meals and/or lodging."

The IWC proposed that the level of the amounts credited for meals or lodging be proportionate with the proposed increase in the minimum wage, and although no one testified in support of this specific proposal, several persons indicated support of all the proposals. Others suggested, however, that an increase in the meals and lodging credits would merely offset any increase in the minimum wage. The IWC decided that the relationship between the minimum wage and meals and lodging credits which existed upon the promulgation of the 1988 orders was proper and concluded that the same relationship should be maintained. On December 10, 1997, the IWC adopted a proposal to increase the meals and lodging credits 20.9 percent, proportionate to the increase in the minimum wage.

[This section of the statement as to the basis addresses those revisions or changes adopted on December 10, 1997. The statements as to the basis for the remaining parts of this section are contained in prior printings of this order. These parts have not changed, and there is no need for an explanation because the IWC is continuing in effect regulations that have previously become a part of the standard working conditions for employees in this state.]

11. MEAL PERIODS

A "duty free" meal period is necessary for the welfare of employees. The section is sufficiently flexible to allow for situations where that is not possible.

The IWC received no compelling evidence and concluded that there was no rationale to warrant any change in this section, the basic provisions of which date back to 1932. It also noted that administrative exemptions are available if warranted under provisions of Section 17 of the order.

12. REST PERIODS

The IWC received no compelling evidence and concluded that there was no rationale to warrant any change in the section, the basic provisions of which date back to 1932. It also noted that administrative exemptions are available if warranted under provisions of Section 17 of the order.

With regard to substantial testimony from employees that their health and welfare was being adversely affected by continuous use of video display terminals the IWC does not have sufficient information at this time to warrant modifying the rest period requirement for such employees. It further notes that employees are performing (National Institute for Occupational Safety and Health) for action on the matter.

13. CHANGE ROOMS AND RESTING FACILITIES

The IWC's intent historically has been that employers take ordinary care to provide for the safekeeping of employees' outer clothing and street clothes. This does not always mean that lockable closets or lockers are required. It has sometimes meant, for example, the provision of coat racks open to the view of the employees, drawers or bins in some employee's custody, or supervised check rooms. Over the years the number of problems in this area has been minimal. (See also Labor Code Section 2000.)

The word "sanitary", previously used in connection with change rooms, was dropped to reinforce the IWC's intent that there be no overlap with the jurisdiction of the Occupational Safety and Health Standards Board.

The IWC inserted a note to clarify the boundaries of the respective jurisdictions of the IWC and the Occupational Safety and Health Standards Board in the course of consultation with the OSHA Standards Board.

No compelling evidence was received, and the IWC concluded there was no rationale, to warrant any other change in the provisions of this section.

14. SEATS

The basic requirement for seats has been in IWC orders since the earliest "Sanitary Regulations", and in 1913 the Legislature made a similar provision in statute. The IWC added the words "when it does not interfere with the performance of their duties" because of evidence that such clarification of the section was necessary.

The IWC received no compelling evidence and concluded that there was no rationale to warrant any other change in the section.

15. TEMPERATURE

In view of the promulgation of Federal and State energy guidelines the IWC has conformed its order to those guidelines.

The IWC received no compelling evidence and concluded there was no rationale to warrant any other change in the section, the basic provisions of which date back more than 30 years.

16. ELEVATORS

To require employees to walk large flights of stairs up and down each workday is detrimental to their comfort and welfare. This section is not intended to apply to the area of safety of elevators, which is regulated by the Occupational Safety and Health Standards Board.

The IWC received no compelling evidence and concluded there was no rationale to warrant making any change in the provisions of this section, which date back more than 30 years.

LIFTING

The former section regulating lifting was deleted pursuant to the State Occupational Safety and Health Standards Board assumption of exclusive jurisdiction in the area during joint consultations held by the two agencies pursuant to Section 1173 of the Labor Code.

17. EXEMPTIONS

Although the IWC has attempted to foresee as many circumstances as it could in allowing its employers or foreseen circumstances or occasionally justify exemptions after careful investigation and in the exercise of the best judgment of the Division.

The IWC received no compelling evidence and concluded there was no rationale to warrant making any change in this section, the basic provisions of which date back more than 30 years.

18. FILING REPORTS

The IWC does not regularly require employers to file reports but is authorized by statute to gather information to carry out the purposes of the order.

The IWC received no compelling evidence and concluded there was no rationale to warrant making any change in the provisions of this section.

19. INSPECTION

Labor Code Section 1174 charges the IWC with the "continuing duty ... to ascertain the wages paid to all employees in this state, and to ascertain the hours and conditions of labor in and employment in the various occupations, trades and industries." See item 19 makes it possible for the IWC to fulfill the duty and to carry out the purpose of the order.

The IWC received no compelling evidence and concluded there was no rationale to warrant making any change in the provisions of this section.

20. PENALTIES

The section refers on the face of the order to Labor Code Sections which specify penalties for violation.

The IWC received no compelling evidence, and concluded there was no rationale, to warrant making any change in the provisions of this section.

21. SEPARABILITY

This section is intended to preserve the enforceability of the orders in the face of any legal challenge.

The IWC received no compelling evidence and concluded there was no rationale to warrant making any change in the provisions of this section.

22. POSTING

The basic requirement for posting a copy of the order in the building in which employees are employed is stated in Labor Code Section 1198, and the IWC received no compelling evidence to warrant a change in the provisions of this section. Considerable concern was expressed at wage boards over the need for posting information about the basic standards contained in the order in the language understood by workers who do not speak English. The IWC has requested the Department of Industrial Relations to make such translations available. In the event it is unable to [illegible] and other languages [illegible] encouraging the orders.

Sections 1 and 2 of the Statement as to the basis were adopted on October 21, 1988. Sections 3 and 4 were adopted on January 22, 1988, and were effective December 16, 1988. The remaining sections of the Statement as to the basis were adopted [illegible] 1, 1989.

SAFETY AND HEALTH PROTECTION ON THE JOB

CAL/OSHA

State of California
Department of Industrial Relations

California law provides job safety and health protection for workers under the Cal/OSHA program. This poster explains the basic requirements and responsibilities for compliance with the state's job safety and health laws and regulations. The law requires that this poster be displayed. (Failure to do so could result in a penalty of up to $7,000.)

WHAT AN EMPLOYER MUST DO:

An employer must provide work and workplaces that are safe and healthful. In other words, as an employer, you must follow state laws governing job safety and health. Failure to do so can result in a threat to the life or health of workers, and subsequent regulatory penalties.

You must display this poster so everyone on the job can be aware of basic rights and responsibilities.

You must have a written and effective injury and illness prevention program for your employees to follow.

You must be aware of hazards your employees face on the job and have records showing that each employee has been trained in the hazards unique to each job assignment.

You must correct any hazardous condition that you know may result in serious injury to employees. Failure to do so could result in criminal charges, monetary penalties, and even imprisonment.

You must notify the nearest Cal/OSHA office of any serious injury or fatality occurring on the job. Be sure to do this immediately after calling for emergency help to assist the injured employee.

WHAT AN EMPLOYER MUST NEVER DO:

Never permit an employee to do work that violates Cal/OSHA law.

Never permit an employee to be exposed to harmful substances without providing adequate protection.

Never allow an untrained employee to perform hazardous work.

EMPLOYEES HAVE CERTAIN RIGHTS IN WORKPLACE SAFETY & HEALTH:

As an employee, you (or someone acting for you) have the right to file a confidential and request an inspection if you believe conditions there are unsafe or unhealthful. This is done by contacting the most current office of the Division of Occupational Safety and Health (see list of offices). Your name is not revealed by Cal/OSHA, unless you request otherwise.

You also have the right to bring unsafe or unhealthful conditions to the attention of the Cal/OSHA investigator making an inspection of your workplace. Likewise, Cal/OSHA will protect the names of employees who express or make complaints during an inspection or investigation.

Any employee has the right to refuse to perform work that would violate a Cal/OSHA or any occupational safety or health standard or order where such violation would create a real and apparent hazard to the employee or other employees.

You may not be fired or punished in any way for filing a complaint about unsafe or unhealthful working conditions, or using any other right given to you by Cal/OSHA law. If you feel that you have been fired or punished for exercising your rights, you may file a complaint about this type of discrimination by contacting the nearest office of the Department of Industrial Relations, Division of Labor Standards Enforcement (State Labor Commissioner) or the San Francisco office of the U.S. Department of Labor, Occupational Safety and Health Administration. (Employees of state or local government agencies may only file these complaints with the State Labor Commissioner.) Consult your local telephone directory for the office nearest you.

EMPLOYEES ALSO HAVE RESPONSIBILITIES:

To keep the workplace and your co-workers safe, you should tell your employer about any hazard that could result in an injury or illness to occur on the job.

While working, you must always obey state job safety and health laws.

SPECIAL RULES APPLY IN WORK AROUND HAZARDOUS SUBSTANCES:

Employers who use any substance listed as a hazardous substance in Section 339 of Title 8 of the California Code of Regulations, or subject to the Federal Hazard Communications Standard (29 CFR 1910.1200), must provide employees with information on the contents on Material Safety Data Sheets (MSDS), or equivalent information about the substance that trains employees to use the substance safely.

Employers must make available on a timely and reasonable basis a Material Safety Data Sheet on each hazardous substance on the workplace upon request of an employee, an employee authorized bargaining representative, or an employee's physician.

Employers have the right to see and copy their employees' medical and records of exposure to potentially toxic substances or harmful physical agents.

Employers must allow access by employees or their representatives to substantial records of employee exposures to potentially toxic substances or harmful physical agents, and notify employees of any exposures in excess/violation of levels established by the exposure limits allowed by Cal/OSHA standards.

Any employee has the right to observe monitoring or measuring of employee exposure to hazardous substances in accordance with Cal/OSHA regulations.

WHEN CAL/OSHA COMES TO THE WORKPLACE:

A trained Cal/OSHA safety engineer or industrial hygienist may periodically visit the workplace to make sure your company is staying job safety and health laws.

An inspection will also be conducted when a legitimate complaint is filed by an employee with the Division of Occupational Safety and Health.

Cal/OSHA also goes to the workplace to investigate a serious injury or fatality.

When an inspection begins, the Cal/OSHA investigator will show official identification from the Division of Occupational Safety and Health.

The employer, or someone the employer chooses, will be given an opportunity to accompany the investigator during the inspection. A representative of the employees will be given the same opportunity. Where there is no authorized employee representative, the investigator will talk to a reasonable number of employees about safety and health conditions at the workplace.

VIOLATIONS, CITATIONS & PENALTIES:

If the investigation shows that the employer has violated a safety and health standard or order, then the Division of Occupational Safety and Health issues a citation. Each citation contains a date by which the violation must be abated. A repeat, willful violation may mandatory penalty, may be issued in lieu of a citation for certain non-serious violations.

Citations carry penalties of up to $7,000 for each regulatory, general or serious violation. Additional penalties of up to $7,000 per day may be proposed for each failure to correct a violation by the abatement date shown on the citation. A penalty of not less than $5,000 nor more than $70,000 may be assessed on employer who willfully violates any occupational safety and health standard or order. The maximum civil penalty that can be assessed for each repeat violation is $70,000. A willful violation that causes death or permanent impairment of the body of any employee results, upon conviction, in a fine of not more than $70,000, or imprisonment of not more than six months, or both.

While governmental entities may be cited on the same basis as other employers, and abatement dates set, civil penalties will not be assessed.

The law provides that employers may appeal citations within 15 working days of receipt to the Occupational Safety and Health Appeals Board.

An employer who receives a citation, Order to Take Special Action, or Special Order must post a prominently at or near the place of the violation for three working days, or until the unsafe condition is corrected, whichever is longer, to warn employees of danger that may exist there. Any employee may contest the time allowed for correction of the violation to the Division of Occupational Safety and Health or the Occupational Safety and Health Appeals Board.

HELP IS AVAILABLE:

To learn more about job safety rules you may contact the Cal/OSHA Consultation Service for free information, required forms and publications. You can also contact a local district office of the Division of Occupational Safety and Health. If you prefer, you may retain a consultant (private consultant), or ask your workers' compensation insurance carrier for guidance in obtaining information.

OFFICES OF THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

HEADQUARTERS: 455 Golden Gate Ave.–Room 8362, San Francisco CA 94102 — Telephone (415) 703-4341

District & Field Offices

Anaheim	2100 East Katella Ave.–Room 140, 92806	(714) 939-0145
Bakersfield	4800 Stockdale Highway–Suite 212, 93309	(805) 395-2710
Chico	926 Rio Lindo–Suite A, 95926	(916) 895-4781
Concord	1485 Enea Center–Bldg. E Suite 200, 94520	(510) 576-6333
Covina	1123 South Peterson–Suite 100, 91724	(818) 966-1165
Eureka	619 Second St.–Room 102, 95501	(707) 445-6811
Fresno	2550 Mariposa St.–Room 4000, 93721	(209) 445-5302
Los Angeles	3550 West Sixth St.–Room 431, 90020	(213) 736-3041
Modesto	1358 Westover Ave.–Suite C-4, 95350	(209) 576-6350
Oakland	7700 Edgewater Dr.–Suite 135, 94621	(510) 568-6252
Palm Springs	9455 East Bluestem Ave., 92262	(619) 346-7357
Redding	381 Hemsted Dr., 96002	(916) 224-4743
Sacramento	2424 Arden Way–Suite 165, 95825	(916) 920-5123
Salinas	1194 Monroe St.–Suite 1, 93906	(408) 443-8560
San Bernardino	342 East Airport Dr.–Suite 103, 92408	(714) 383-4321
San Diego	7577 Convoy Court–Suite 140, 92111	(619) 237-7325
San Francisco	1288 Market St.–Suite 719, 94102	(415) 557-1677
San Jose	2010 North First St.–Suite 401, 95131	(408) 452-7388
San Mateo	1600 South Norfolk St.–Suite 215, 94403	(415) 573-3812
Santa Rosa	1221 Farmers Lane–Suite 302, 95405	(707) 576-2388
Torrance	680 Knox St.–Suite 100, 90502	(310) 516-3734
Ukiah	630 Kings Court–Suite B, 95482	(707) 463-4793
Van Nuys	6150 Van Nuys Blvd.–Suite 405, 91401	(818) 901-5403
Ventura	1855 Mesa Verde–Room 150, 93003	(805) 654-4581

Regional Offices

Anaheim	2100 East Katella Ave.–Room 125, 92806	(714) 939-0811
Los Angeles	3550 West Sixth St.–Suite 413, 90020	(213) 736-4911
Sacramento	2424 Arden Way–Suite 125, 95825	(916) 920-5127
San Francisco	1288 Market St.–Suite 822, 94102	(415) 557-0949

CAL/OSHA CONSULTATION SERVICE

Headquarters:
455 Golden Gate Ave.–Room 8348, San Francisco CA 94102 — (415) 703-4880

Area Offices:

Fresno	1681 North Gateway–Suite 102, 93727-1605	(209) 454-1295
Sacramento	2424 Arden Way–Suite 410, 95825	(916) 920-5131
San Diego	7577 Convoy Court–Suite 405, 92111	(619) 279-5771
San Mateo	3 Waters Park Dr.–Suite 220, 94403	(415) 573-5384
Santa Fe Springs	10320 Norwalk Park Dr.–Suite 201, 90670	(310) 944-9825

Employers of Cal/OSHA job safety and health standards are enforced by the Division of Occupational Safety and Health, under the California Department of Industrial Relations, which has primary responsibility for administering the Cal/OSHA program. Safety and health standards are promulgated by the Occupational Safety and Health Standards Board. Anyone desiring to request a variance, alleging discrimination by the Administration of the California Occupational Safety and Health Plan may do so by contacting the San Francisco Regional Office of the Occupational Safety and Health Administration (OSHA), U.S. Department of Labor (Tel: 415/744-6670). OSHA reviews the operation of state plans to ensure that employees' interests are upheld.

SEPTEMBER 1992

JOB SAFETY & HEALTH PROTECTION

The Occupational Safety and Health Act of 1970 provides job safety and health protection for workers by promoting safe and healthful working conditions throughout the Nation. Provisions of the Act include the following:

Employers

All employers must furnish to employees employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious harm to employees. Employers must comply with occupational safety and health standards issued under the Act.

Employees

Employees must comply with all occupational safety and health standards, rules, regulations and orders issued under the Act that apply to their own actions and conduct on the job.

The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor has the primary responsibility for administering the Act. OSHA issues occupational safety and health standards, and its Compliance Safety and Health Officers conduct jobsite inspections to help ensure compliance with the Act.

Inspection

The Act requires that a representative of the employer and a representative authorized by the employees be given an opportunity to accompany the OSHA inspector for the purpose of aiding the inspection.

Where there is no authorized employee representative, the OSHA Compliance Officer must consult with a reasonable number of employees concerning safety and health conditions in the workplace.

Complaint

Employees or their representatives have the right to file a complaint with the nearest OSHA office requesting an inspection if they believe unsafe or unhealthful conditions exist in their workplace. OSHA will withhold, on request, names of employees complaining.

The Act provides that employees may not be discharged or discriminated against in any way for filing safety and health complaints or for otherwise exercising their rights under the Act.

Employees who believe they have been discriminated against may file a complaint with their nearest OSHA office within 30 days of the alleged discriminatory action.

Citation

If upon inspection OSHA believes an employer has violated the Act, a citation alleging such violations will be issued to the employer. Each citation will specify a time period within which the alleged violation must be corrected.

The OSHA citation must be prominently displayed at or near the place of alleged violation for three days, or until it is corrected, whichever is later, to warn employees of dangers that may exist there.

Proposed Penalty

The Act provides for mandatory penalties against employers of up to $1,000 for each serious violation and for optional penalties of up to $1,000 for each nonserious violation. Penalties of up to $1,000 per day may be proposed for failure to correct violations within the proposed time period. Also, any employer who willfully or repeatedly violates the Act may be assessed penalties of up to $10,000 for each such violation.

There are also provisions for criminal penalties. Any willful violation resulting in death of an employee, upon conviction, is punishable by a fine of up to $250,000 (or $500,000 if the employer is a corporation), or by imprisonment for up to six months, or both. A second conviction of an employer doubles the possible term of imprisonment.

Voluntary Activity

While providing penalties for violations, the Act also encourages efforts by labor and management, before an OSHA inspection, to reduce workplace hazards voluntarily and to develop and improve safety and health programs in all workplaces and industries. OSHA's Voluntary Protection Programs recognize outstanding efforts of this nature.

OSHA has published Safety and Health Program Management Guidelines to assist employers in establishing or perfecting programs to prevent or control employee exposure to workplace hazards. There are many public and private organizations that can provide information and assistance in this effort, if requested. Also, your local OSHA office can provide considerable help and advice on solving safety and health problems or can refer you to other sources for help such as training.

Consultation

Free assistance in identifying and correcting hazards and in improving safety and health management is available to employers, without citation or penalty, through OSHA-supported programs in each State. These programs are usually administered by the State Labor or Health department or a State university.

Posting Instructions

Employers in States operating OSHA approved State Plans should obtain and post the State's equivalent poster.

Under provisions of Title 29, Code of Federal Regulations, Part 1903.2(a)(1) employers must post this notice (or facsimile) in a conspicuous place where notices to employees are customarily posted.

More Information

Additional information and copies of the Act, specific OSHA safety and health standards, and other applicable regulations may be obtained from your employer or from the nearest OSHA Regional Office in the following locations:

Atlanta	(404) 347-3573
Boston	(617) 565-7164
Chicago	(312) 353-2220
Dallas	(214) 767-4731
Denver	(303) 844-3061
Kansas	(816) 426-5861
New York	(212) 337-2325
Philadelphia	(215) 596-1201
San Francisco	(415) 995-5672
Seattle	(206) 442-5930

Elizabeth Dole

Elizabeth Dole, Secretary of Labor

Washington, D.C.
1988 (Revised)
OSHA 2203

U.S. Department of Labor

Occupational Safety and Health Administration

State of California

Department of Fair Employment and Housing

DISCRIMINATION IN EMPLOYMENT

Because of

- Race
- Color
- Ancestry
- Religious Creed
- National Origin
- Physical Handicap (Including AIDS)
- Medical Condition (Cancer)
- Sex
- Age
- Marital Status

IS PROHIBITED BY LAW

The California Fair Employment and Housing Act

(Part 2.8 (commencing with Section 12900) of Div. 3 of Title 2 of the Government Code)

- permits job applicants to file complaints with the Department of Fair Employment and Housing (DFEH) against an employer, employment agency, or labor union which fails to grant equal employment as required by law.
- requires employers not to discriminate against any job applicant or worker in hiring, promotions, assignments, or discharge. On-the-job segregation is also prohibited, and employers may file complaints against workers who refuse to cooperate in compliance.
- requires employers, employment agencies, and unions to preserve applications, personnel and employment referral records for a minimum of two years.
- requires employers to provide leaves of up to four months to employees disabled because of pregnancy, maternity, or childbirth.
- requires employment agencies to serve all applicants equally; to refuse discriminatory job orders; to refrain from prohibited pre-hiring inquiries or help-wanted advertising.
- requires unions not to discriminate in member admissions or dispatching to jobs.
- forbids any person to interfere with efforts to comply with the act. Authorizes the DFEH to work affirmatively with cooperating employers to review hiring and recruiting practices in order to expand equal opportunity.
- prohibits harassment of employees or applicants and requires employers to take all reasonable steps to prevent harassment.

REMEDIES TO INDIVIDUALS, OR PENALTIES FOR VIOLATION MAY INCLUDE: hiring, back pay, promotion, reinstatement, cease-and-desist order.

JOB APPLICANTS AND EMPLOYEES: If you believe you have experienced discrimination, DFEH will investigate without cost to you.

For information contact the nearest office of the Department of Fair Employment and Housing:

BAKERSFIELD
1001 Tower Way, #250
Bakersfield, CA 93309
(805) 395-2728

EL CENTRO AREA
(619) 353-3420
Write or Visit
San Diego District Office
110 West C Street, #1702
San Diego, CA 92101

FRESNO
1900 Mariposa Mall, #130
Fresno, CA 93721
(209) 445-5373

LOS ANGELES
322 West First Street, #2126
Los Angeles, CA 90012-3112
(213) 620-2610
TDD (213) 620-3109

OAKLAND
1330 Broadway, #1326
Oakland, CA 94612
(415) [illegible]-4095

SACRAMENTO
2000 "O" Street, #120
Sacramento, CA 95814
(916) 445-9918
TDD (916) 324-1478

SAN BERNARDINO
1845 S. Business Center Drive, Suite 127
San Bernardino, CA 92408
(714) 383-4711

SAN DIEGO
110 West C Street, #1702
San Diego, CA 92101
(619) 237-7405

SAN FRANCISCO
30 Van Ness Avenue, #3000
San Francisco, CA 94102
(415) 557-2005

SAN JOSE
111 N. Market Street, #810
San Jose, CA 95113
(408) 277-1264

SANTA ANA
28 Civic Center Plaza, #538
Santa Ana, CA 92701
(714) 558-4159

VENTURA
5720 Ralston Street, #302
Ventura, CA 93003
(805) 654-4513

This notice must be conspicuously posted in hiring offices, on employee bulletin boards, in employment agency waiting rooms, union halls, etc. For copies contact the nearest DFEH office.

FEH 162 (Rev. 10/90)

APPENDIX D

LEAD CONTROL PLAN

LEAD CONTROL PLAN
IT CORPORATION

Prepared By:

IT Corporation
4585 Pacheco Boulevard
Martinez, California 94553

September 1995
Revision 1

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List of Figures

List of Acronyms and Initials

µg/dL	Micrograms per deciliter
µg/L	Micrograms per liter
µg/m^3	Micrograms per cubic meter
ACGIH	American Conference of Governmental Industrial Hygienists
AIDS	Acquired Immune Deficiency Syndrome
Cal-EPA	California Environmental Protection Agency
Cal-OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CGI	Combustible Gas Indicator
CHP	Chemical Hygiene Plan
CHRIS	Chemical Hazard Response Information System
CIH	Certified Industrial Hygienist
CRZ	Contamination Reduction Zone
Decon	Decontamination Area
DHS	California Department of Health Services
DTSC	Department of Toxic Substances Control
EMR	Environmental Medical Resources, Inc.
EZ	Exclusion Zone
FA/CPR	First-Aid/Cardiopulmonary Resuscitation
FID	Flame Ionization Detector
FMA	Fire Marshals Association
H_2S	Hydrogen Sulfide
HS	Health and Safety
IDLH	Immediately Dangerous to Life and Health
IH	Industrial Hygiene
IT	IT Corporation
LELLCP	Lead Control Plan
LEL	Lower Explosive Limit
MSR	Medical Summary Report
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per liter
mg/m^3	Milligrams per cubic meter
mL	Milliliters
mm	Millimeters
MSDS	Material Safety Data Sheet
NIOSH	National Institute of Occupational Safety and Health
OSHA	Occupational Safety and Health Administration

List of Acronyms and Initials (Continued)

PAPR	Powered Air Purifying Respirators
Pb	Lead
PEG	Permissible Exposure Guideline
PEL	Permissible Exposure Limit
PID	Photoionization Detector
PM	Project Manager
PPE	Personal Protective Equipment
Pro-Clo	Protective Clothing
SCBA	Self-Contained Breathing Apparatus
SIIR	Supervisor Incident Investigation Report
SM	Site Manager
SPM	Senior Project Manager
SSHO	Site Safety and Health Officer
SSHP	Site Safety & Health Plan
TEL	Tetraethyl Lead
™	Trademark
TML	Tetramethyl Lead
TSM	Tailgate Safety Meeting
USEPA	U.S. Environmental Protection Agency
VOCs	Volatile Organic Compounds
ZPP	Zinc Protoporphyrin

Lead Control Plan Acknowledgment

I have had this Lead Control Plan reviewed with me. I understand and agree to abide by the provisions as detailed in this LCP.

Printed Name	Company	Signature	Date

Disclaimer

This Lead Control Plan (LCP) is for use by IT personnel, subcontractors, and visitors who will be working in connection with this project. The LCP was developed to be used in conjunction with the site specific Safety and Health Plan along with IT's corporate Health and Safety Policies and Procedures. The recommendations and guidance provided herein are based on generally and currently accepted industrial hygiene principles and safety practices. All such advice and instruction is intended to reflect the present level of health and safety and industrial hygiene efforts consistent with prevailing professional standards. This representation is in lieu of all warranties either expressed or implied, and no responsibility is assumed for the misapplication of any materials, advice, or instruction provided hereunder.

Any reference contained herein to products and manufacturers is intended only for the purpose of illustration and is not meant to be and should not be construed as an endorsement of IT Corporation.

1.0 Introduction

1.1 Objective

The objective of this Lead Control Plan (LCP) is to, in conjunction with the SSHP, assure that safe working conditions exist during certain lead related activities. The safety procedures and organization outlined have been established based on preliminary analysis of potential lead hazards associated with this project. Personnel protection measures have been selected in response to these potential hazards. The LCP describes the requirements and procedures to be used while performing specific activities and includes:

- Responsibilities of persons on site
- Training Program
- Medical Surveillance Program
- Hazard Analysis/Assessment
- Hazard Control Measures
- Personnel Protection Program
- Decontamination Procedures
- Industrial Hygiene Monitoring Program

The LCP will, in conjunction with the SSHP, provide all the necessary procedures and guidelines to ensure that the work is done safely as well as comply with the occupational safety and health standards for lead in 29 CFR 1926.62.

This LCP covers the work activities associated with the investigation, testing, removal or encapsulation of materials containing or believed to contain organic and/or inorganic lead ("lead") which have the potential to expose personnel to inorganic and/or organic lead at or above the action level of 0.030 milligrams per cubic meter of air (mg/m^3) or elevate an individual's blood lead level above 30 micrograms per deciliter of blood ($\mu g/dL$). Areas where lead containing materials are known to be present could be: drilling in areas known or believed to contain lead, sampling activities which list lead as an analyte, engineering activities involving lead containing materials, construction activities involving lead containing materials, and any other activity which involves or may involve contact with material known to contain lead, for example lead based painted material and areas.

The lead containing materials/waste of concern are those materials/waste which might, during the activities listed, come into contact with the employee through inhalation, absorption or ingestion at levels which could impact the employee's health and safety.

All on-site personnel, contractors, and visitors are subject to this LCP during project operations. As changes in work area conditions are identified, the LCP will be amended appropriately. Any changes must be made in writing, approved by the CIH and included in the SSHP as an amendment. Some changes which do not require prior approval by the SHM are outlined in the SHSP.

The scope of this LCP (although consistent with) is more stringent than that detailed in 29 CFR 1926.62 in that it covers occupational exposures to inorganic and a class of organic lead compounds called lead soaps. Other compounds such as tetraethyl lead and tetramethyl lead are excluded. Additionally, implementation of this LCP is required when the exposure action level (0.030 mg/m^3) is (or may be) reached **or** employee blood lead levels exceed 30 $\mu g/dL$. The regulatory limit for airborne concentration of inorganic/organic lead is 0.05 mg/m^3 and the acceptable concentration of lead in blood is 40 $\mu g/dL$ or less. However, it is recommended in 1926.62 that blood lead levels do not exceed 30 $\mu g/dL$ in those workers (both male and female) who intend to have children to minimize adverse reproductive health effects to the parents and developing fetus.

1.2 References

This LCP, when accompanied by the Project SSHP, complies with applicable Federal Occupational Safety and Health Administration (OSHA) and California Department of Industrial Relations, Division of Occupational Safety and Health (Cal-OSHA), United States Environmental Protection Agency (USEPA), and California EPA (Cal-EPA, Department of Toxic Substances Control) regulations. This LCP follows the guidelines established in the following documents:

Standard Operating Safety Guides (USEPA July 1986);

Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (National Institute for Occupational Safety and Health [NIOSH] 86-116);

Title 29 of the Code of Federal Regulations, Part 1926 (29 CFR 1926) (OSHA Occupational Safety and Health Standards - Construction Industry); and

Title 8 of the California Code of Regulations, Chapter 30, Subchapter 7, (commencing with Section 3200) (Cal-OSHA General Industry Safety Orders); Emergency Regulations, Title 17, CCR, Division 1, Chapter 8 Accreditation of Training Providers and Interim Certification of Individuals Engaged in Lead-Related Construction Work.

The contents of this LCP, when accompanied by the Project SSHP, are consistent with, or supplement, all of the appropriate IT corporate Health and Safety Policies and Procedures. These policies and their implementation are central to IT's Accident Prevention Program. Driving this program is the IT Procedure HS019: Injury and Illness Prevention Program.

2.0 Assignment of Responsibilities

All persons on site are responsible for continuous adherence to safety and health procedures during the performance of any work. In no case may work be performed in a manner which conflicts with the intent of, or the inherent safety precautions expressed in, this Lead Control Plan (LCP). After due warning, persons who violate any procedure may be dismissed from the site, terminated, or have their contract revoked. Blatant disregard or repeated infractions of safety and health policies are grounds for immediate dismissal or removal from the site. Safety and health responsibilities for those responsible or governed by this LCP are detailed in the following sections.

All IT and contractor personnel governed by this LCP are required to participate in a review of and acknowledge their understanding of this LCP and the appropriate SSHP.

Persons on site are required to immediately report any of the following to their Supervisor and/or the Site Superintendent/Project Manager:

- Accidents and injuries, no matter how minor;
- Unexpected or uncontrolled release of chemical substances;
- Any signs or symptoms of chemical or physical trauma;
- Any unsafe or malfunctioning equipment; and
- Any changes to site conditions or working procedures which may affect the safety and health of project personnel.

2.1 Project Manager

The Project Manager is responsible for all site/project activities and will be accountable for implementation of the LCP. The Project Manager will provide the CIH with the company name and representatives of those contractors being considered for hire, as well as those hired, to allow preliminary information to be collected in a timely manner.

2.2 Program Certified Industrial Hygienist

The Program Certified Industrial Hygienist (CIH) is responsible for development and coordination of this LCP and all addenda. The CIH will approve changes and update the LCP as warranted by altered work area conditions and shall have the only authorization to effect such changes.

2.3 Site Manager

For each project activity, the Site Project Manager (SM) will be responsible for ensuring that site work is conducted in compliance with this LCP.

2.4 Site Safety and Health Officer

The SSHO will report to the CIH on matters related to the responsibilities below. The responsibilities of the SSHO are:

- Perform air monitoring;
- Maintain Safety and Health log book of field lead activities performed;
- Assist the SM in implementation LCP

2.5 Site Personnel

All on site personnel covered by this LCP must meet the applicable Training and Medical Surveillance requirements of 29 CFR 1926.62

3.0 Training Program

3.1 General Requirements

All applicable training requirements identified in the SSHP will be met. In addition, requirements established in 29 CFR 1926.62, and Title 17, CCR, Division 1, Chapter 8, as outlined below, will be met.

Subcontractors performing activities covered by this LCP must provide verification of all required training before work may begin.

3.2 Lead Training Requirements

A pre-project meeting will be held prior to work beginning in any area covered by this LCP. Those required to attend include: Project Management and work crew (including subcontractor employees) and project SSHO. Should additional persons be identified or reassignments made, those persons joining the project after the initial pre-project briefing will participate in a similar meeting before beginning activities covered by this LCP. At a minimum, persons covered by this LCP shall receive the required training specific to this LCP annually.

The pre-project meeting will review, at a minimum, the following:

- The contents of this LCP and the SSHP;
- The contents of 29 CFR 1926.62 and its appendices;
- The specific nature of the operations which could result in exposure to lead above the action level (i.e., project work plan);
- Hazards associated with exposure to lead;
- Methods of controlling exposure to lead: including work area controls, personal protective equipment, decontamination and hygiene procedures, and safe work practices;
- Purpose and description of the LCP Medical Surveillance Program, medical removal protection program and medical treatment available as described in 29 CFR 1926.62;

- Purpose and description of the LCP industrial hygiene monitoring program; and
- Employee's rights as described in 29 CFR 1910.1200, 29 CFR 1910.20 and 29 CFR 1926.59.

Employee's engaged in lead abatement activities must also complete all formal training per the requirements of Emergency Regulations, Title 17, CCR, Division 1, Chapter 8, Accreditation of Training Providers and Interim Certification of Individuals Engaged in Lead-Related Construction Work. These formal training requirements can be satisfied by taking one or more of the following applicable courses;

- Lead-related Construction Inspection and Assessment Course (40 hours)
- Lead-related Construction Supervision and Project Monitoring Course (40 hours)
- Lead-related Construction Project Design Course 56 hours)
- Lead-related Construction Work Course (32 hours)

3.3 Recordkeeping

Documentation of all training conducted in compliance with this LCP will be kept in a central file IT's project management office and in the SSHO's site office. Visual access to these records will be made available upon request. Copies of an employee's training record will be authorized by the CIH upon receipt of a written request by the employee or employee's designated representative. Subcontractor's training certification and records will be maintained by the SSHO for the duration of the project at the project site office.

4.0 Medical Surveillance Program

4.1 General Program

The applicable medical examinations identified in the SSHP will be provided to all project personnel covered by this LCP. Contractors must provide documentation to the SSHO that these exams have been successfully completed by all crew members assigned to work areas governed by this LCP before work may begin.

4.2 Lead Program

A LCP Medical Surveillance Program shall be established for persons potentially occupationally exposed to lead during work activities according to the following guidelines:

Biological Monitoring

- Persons supporting work activities identified as having lead exposure potential;
- Persons identified by the CIH to be in a "lead sensitive" job category;
- Persons occupationally exposed any day at or above the action level for lead (0.030 mg/m^3);

Lead Specific Medical Exam

- Persons supporting work activities identified in this LCP as having a lead exposure potential (Section 4.7);
- Persons identified to be in a "lead sensitive" job category (Section 4.7);
- Persons occupationally exposed at or above the action level for lead (0.030 mg/m^3) for more than 30 days in any consecutive 12 month period;
- Persons for whom biological monitoring has indicated lead or zinc protoporphyrin levels beyond established acceptable levels (> 30 $\mu g/dL$);
- Persons showing signs or symptoms associated with lead intoxication;
- Persons in work areas covered by this LCP, requesting medical advice concerning the effects of current or past lead exposures;
- Persons in work areas covered by this LCP, with a confirmed pregnancy; and

- Persons in work areas covered by this LCP demonstrating difficulty breathing during use of respiratory protective equipment.

This LCP Medical Surveillance Program shall be provided to employees by IT. Where this LCP Medical Surveillance Program and the Medical Program required by 29 CFR 1926.62 are duplicated, efforts shall be made to utilize available medical information. Where the programs differ, the most conservative program requirements, in terms of the patient, shall be met. A list of current program participants will be maintained by the CIH.

Subcontractors must provide documentation that their employees participate in a Medical Surveillance Program for Lead which meets or exceeds the IT Program described in this LCP.

4.2.1 Lead Program Exam Content

Biological Monitoring

The biological monitoring aspect of the LCP Medical Surveillance Program will consist of blood sampling and analysis for lead and zinc protoporphyrin (ZPP) levels.

Lead Specific Medical Exam

The Lead Specific Medical Exam aspect of the LCP Medical Surveillance Program will be managed by EMR and is consistent with applicable regulations. At a minimum, the exam contains the following:

- A detailed work history and a medical history, with particular attention to past lead exposure (occupational and non-occupational), personal habits (smoking, hygiene, etc) and past gastrointestinal, hematologic, renal, cardiovascular, reproductive and neurological concerns;

- A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems;

- Blood pressure measurement;

- Blood sample and analysis to determine:
  - Blood lead levels;
  - Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;

- Zinc protoporphyrin;
- Blood urea nitrogen; and
- Serum creatinine;

- A routine urinalysis with microscopic examination;

- Any laboratory or other test relevant to lead exposure which the examining physician deems necessary by sound medical practice; and

- A pregnancy test, if appropriate.

The following information will be provided to the examining physician by the CIH:

- A copy of 29 CFR 1926.62;

- A description of the person's anticipated or actual job duties as they relate to the potential/real exposure;

- Anticipated and/or actual exposure levels to lead and any other toxic substances (as appropriate);

- A description of personal protective equipment to be used and/or used; and

- Occupation history, if available.

4.2.2 Lead Program Exam Frequency

The biological monitoring will be performed every 2 months for the first 6 months, and every 6 months thereafter, while the activity which required the monitoring is being performed. Should the activity requiring the monitoring not last over a two month period, an initial exam and an exam at the end of the activity will be conducted for those who do not perform lead abatement activities on a regular basis.

The Lead Specific Medical Exam shall be performed at least annually for those employees having the potential to be exposed or who had exposure. The exam will also be made available as medically appropriate to persons who have either been removed from exposure to lead due to a risk of sustaining material impairment to health, or otherwise been limited pursuant to a final medical determination.

4.2.3 Exit Exam

If an IT or subcontractor employee covered by this LCP transfers to a non-lead area, terminates, or completes the contracted project within six months of the due date of the physical , an exit exam will be given in accordance with IT Procedures HS100 and this LCP. It is the responsibility of the PM and/or the employee's immediate supervisor to notify the CIH within a reasonable time period (one week) prior to transfer, termination, or completion of contracted work to allow for the necessary arrangements. Employees refusing an exit exam will be sent a certified letter stating the exam is available at time of end of service to the project.

4.3 Medical Consultant Responsibilities

EMR is the contracted medical support services for all IT job sites. EMR's responsibilities will include:

- Develop the Lead Specific Medical Exam protocol;
- Notify CIH of annual examinations as they come due;
- Provide IT with a written medical opinion for each examination;
- Notify the IT Director of Safety and health of questionable, as well as unacceptable, exam results, including medical restrictions;
- Respond to questions concerning medical results and related issues;
- Monitor contracted clinics to ensure accuracy and reliability of medical services performed; and
- Communicate with IT's consulting physician and/or the participating patient's selected physician providing the second medical opinion as appropriate.

4.4 Notification of Results

IT will obtain a written medical opinion from EMR, in the form of a Medical Summary Report (MSR) which contains the following information:

- The physician's opinion as to whether the employee has any detected medical condition which would place the employee at increased risk of material impairment of the employee's health from exposure to lead;

- Any recommended special protective measures to be provided to the employee, or limitations to be placed upon the employee's exposure to lead;

- Any recommended limitation upon the employee's use of respirators, including determination of whether the employee can wear a powered air purifying respirator (PAPR) if a physician determines that the employee cannot wear a negative pressure respirator; and

- The results of the blood lead and other biological exam determinations.

The CIH will communicate medical results and any restrictions/recommendations through the EMR Medical Summary Report per HS100. As stated in IT Procedure HS105 every effort shall be made to utilize employees with physical activity restrictions as a result of work place injuries or illnesses without violating restriction provisions. It is the SSHO/SM responsibility to monitor employees with medical restrictions for compliance with each restriction. The CIH or SSHO shall schedule necessary appointments for reevaluation as appropriate.

It is the responsibility of the Contractor to communicate, in writing, all medical findings, determinations, and opinions relating to an employee's potential or real exposure to the CIH in a timely manner so that any necessary arrangements to mitigate the exposure, establish an air monitoring program and observe work restrictions established by the physician can be made.

4.5 Interpretation of Results

4.5.1 Multiple Physician Review

Because IT has selected the physician to conduct the examinations for the LCP, persons participating in the program may designate a second physician:

- To review any findings, determinations or recommendations of the initial physician; and

- To conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate the review.

The participant has a right to this second physician review after each occasion that the IT selected physician conducts a medical examination or consultation related to this LCP. This second opinion will be provided at no cost to the participant. The participant will be provided a written reminder of this right at the time the appointment is kept. However, the participant must do the following within 15 days after the receipt of the IT selected physician's written opinion in order to qualify for the second opinion:

- Inform the CIH, in writing, that they intend to seek a second medical opinion; and
- Initiate steps to make an appointment with the physician of their choice.

4.5.2 Medical Removal

Any employee with an elevated blood lead (at or above 30 μg/dL) will be removed from any potential or real exposure to lead and additional medical evaluations performed. Any employee whose medical evaluation results in a medical finding, determination, or opinion that the employee has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead shall be temporarily removed from any potential or real exposure to lead. Persons with elevated blood lead levels will not be required to enter the exclusion zones.

IT will provide an IT Associate up to 18 months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this LCP. This means that, as long as the job the employee was removed from continues, the employee shall retain the total normal earnings, seniority and other employment rights and benefits of an IT Associate. This includes the employee's right to their former job status as though the employee had not been medically removed or otherwise medically limited.

4.5.3 Medical Restrictions

Where a medical determination results in any recommended special protective measures for the employee, or limitations on the employee's exposure to lead, IT shall implement and act consistent with the recommendation.

The employee's supervisor, as well as appropriate members of project management will be informed of any medical restrictions so that compliance with those restrictions may be assured.

4.5.4 Return to Former Job Status

The employee who has been medically removed from activities which may expose him to lead may be returned to former job status when:

- Two consecutive blood sampling events indicate that the employee's blood lead level is at or below 30 μg/dL; and
- A subsequent medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of material impairment to health from exposure to lead.

Any limitations placed on an employee or any special protective measures provided will be removed upon receipt of a medical determination result which indicates that those limitations or measures are no longer needed. The employee must provide appropriate documentation of medical clearance to the CIH and SSHO and cannot return to work activities covered by this LCP until a Return to Work Authorization has been completed by the IT physician. A copy of the authorization form is in IT procedures.

4.6 Recordkeeping

Medical records will be maintained in accordance with IT Procedures HS102 and 104.

4.7 Qualifying Activities and Job Titles

4.7.1 Activities

Activities which are covered by this LCP and qualify for participation in the LCP Medical Surveillance Program include:

- Hazardous waste operations in the LCP Work Areas;
- Handling of materials from the LCP Work Areas;
- Drilling in areas known or believed to contain inorganic and/or organic lead;
- Engineering activities involving lead containing materials/waste;
- Construction activities involving lead containing materials/waste;

- Sampling activities which list lead or lead compounds as a constituent; and
- Other activities which involve the potential contact with lead containing materials/waste.

4.7.2 Job Titles/Groups

The following job titles/groups are covered by this LCP and qualify for participation in the LCP Medical Surveillance Program.

- Project management personnel
- Persons permanently assigned to the project
- Persons assigned to work involving activities covered by this LCP

5.0 Lead Exposure Assessment

5.1 Scope of Work

The appropriate SSHP governing the field activities supported by this LCP describes the hazards (without regard to potential lead exposure) and necessary controls associated with performing those activities. This section is intended to supplement that SSHP with detailed information regarding the potential safety and health risks associated with inorganic and/or organic lead (lead soaps) containing materials/wastes.

This potential for exposure to lead would occur during activities within the areas identified to contain lead and involves contact with that material. Due to the complexity and constant change of work areas, supervisors must inspect the work area frequently during each day of field operation to identify hazards which might harm personnel or the environment. The PM, SM, SSHO, and subcontractor supervisors must be aware of these changing conditions and discuss them with the CIH so that amendments to the LCP and appropriate SSHP may be developed as appropriate.

The following sections describe the safety and health risks associated with specific activities based on the risk of exposure to lead and/or lead containing compounds. Other safety and health risks associated with these activities have been addressed in the SSHP.

5.2 Lead Exposure Assessment

5.2.1 Exposure Potential

Selected work activities will, as previously described in SSHP, require contact with sludge, soil, dust, and groundwater that may be contaminated with lead or lead containing materials in addition to the wide variety of other organic solvents, inorganic gases, and metal compounds within the soil. The anticipated primary means of potential exposure will be skin contact with contaminated materials. Exposure due to inhalation of these contaminants may also occur if workers do not follow this LCP. Exposure assessment to chemicals other than lead or lead compounds can be found in the SSHP.

5.2.2 Chemical, Health Risk and Protection Information

Chemical Identification:

- Chemical formula for Lead is Pb;
- Appearance of Pb: heavy, soft gray ductile solid;
- Current OSHA PEL for lead is 0.05 mg/m^3, for TEL is 0.05 mg/m^3; and
- The action level for inorganic lead in air is 0.030 mg/m^3.

Pure lead is a metal at room temperature and pressure and is a basic chemical element. It can combine with other substances to form other lead compounds, such as Tetraethyl Lead (TEL) or tetramethyl lead (TML).

Health Risk Information

Lead is very toxic to the body, especially the nervous system. Health effects from lead exposure include nervousness, sleep disturbances, learning disabilities, and behavior abnormalities. Research indicates that adverse health effects from exposure to lead can occur at levels lower than previously recognized. Any exposure has the potential to cause harm. Lead is especially toxic to children because their nervous system is more vulnerable.

Routes of Exposure

When lead is absorbed into the body at certain doses it can be toxic. The object of the OSHA lead standard is to prevent absorption of harmful quantities of lead. The standard is intended to protect not only from the immediate toxic effects of lead, but also from the serious toxic effects that may not become apparent until years of exposure have passed.

All forms of lead can be absorbed into the body by inhalation (breathing) and ingestion (eating). Inorganic lead is not absorbed through the skin such as TEL which is readily absorbed through the skin. When lead is scattered in the air as a dust, fume, or mist, it can be inhaled and absorbed through the lungs and upper respiratory tract. Inhalation of airborne lead is generally the most important source of occupational lead absorption. Lead can affect the body if it is inhaled, comes in contact with the eyes or skin, or is swallowed. It may readily enter the body through the skin. Lead is also absorbed through the digestive

system if swallowed. If you handle food, cigarettes, chewing tobacco, or make-up with hands contaminated with lead, it will contribute to an exposure through ingestion.

A significant portion of the lead that is inhaled or ingested can get into the blood stream. Once in the blood stream, lead is circulated throughout the body and stored in various organs and body tissues. Some of this lead is quickly filtered and excreted, but some remains in the blood and other tissues. As exposure to lead continues, the amount stored in the body will increase if the body is absorbing more lead than excreting. Even though there is no awareness of immediate symptoms of disease, the lead stored in the body tissue can be slowly causing irreversible damage.

Short-Term (Acute) Overexposure

Lead is a potent, systemic poison that serves no known useful function once absorbed by your body. Taken in large enough doses, lead can kill you in a matter of days. A condition affecting the brain called acute encephalopathy may arise which develops quickly to seizures, coma and death from cardio-respiratory arrest. Short term occupational exposures of this magnitude are highly unusual, but not impossible. Similar forms of encephalopathy may arise from extended chronic exposure to lower doses of lead. There is no sharp dividing line between rapidly developing acute effects of lead and chronic effects which take longer to acquire.

Long-Term (Chronic) Overexposure

Chronic overexposure to lead may result in severe damage to your blood-forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in the mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle and joint pain or soreness, fine tremors, numbness, dizziness, hyperactivity and colic. In lead colic there may be severe abdominal pain. Damage to the central nervous system in general and the brain (encephalopathy) in particular is one of the most severe forms of lead poisoning. This damage may lead to a paralysis often observed as a characteristic "wrist drop" or "foot drop" and may progress to coma and death.

The absorption by humans of a sufficient quantity of tetraethyl lead either briefly at a high rate or for prolonged periods at a lower rate may cause intoxication. The onset of

symptoms may be delayed for up to eight days after termination of exposure. The milder toxic effects are difficulty in sleeping, tiredness, wild dreams, anxiety, trembling, spasms, slow heart beat, low body temperature, paleness, nausea and loss of appetite. More severe intoxication causes episodes of disorientation, hallucinations, grimacing, and intense activity which requires that the person be restrained. These episodes may convert into manic or violent convulsive seizures which may end in unconsciousness or death. Organic lead may cause irritation of the eyes.

Chronic overexposure to lead also results in kidney damage with few, if any, symptoms appearing until permanent damage has occurred.

Chronic overexposure to lead impairs the reproductive systems of both men and women. Overexposure to lead may result in decreased sex drive, impotence and sterility in men. Lead can alter the structure of sperm cells raising the risk of birth defects. Lead exposure may result in decreased fertility and abnormal menstrual cycles in women. Lead is also toxic to the developing fetus and can result in birth defects, mental retardation and behavioral disorders.

Personnel shall inform their supervisor and SSHO of any non-visual effects of toxic exposure such as:

- Headache, dizziness, blurred vision, insomnia, numbness;
- Nausea, cramps, muscle or joint pain;
- Metallic taste, loss of appetite; and
- Irritation of the eyes, skin or respiratory tract.

Health Protection

The measurement of the body's blood lead level is the most useful indicator of the amount of lead being absorbed by an individual. The best way to prevent all forms of lead-related impairments and diseases - both short and long term - is to maintain the blood lead level below 30 µg/dl. The provisions of the OSHA lead standard and IT's LCP are designed with this end in mind. Medical surveillance, respiratory protection guidelines, work practices, and hygiene standards are all part of the design to control exposure to lead to a

safe level. IT has the prime responsibility to provide a healthy work place, but all employees have a responsibility to follow safety and health procedures and practices.

5.3.3 Other Hazards

Other hazards (chemical and physical) are addressed in the SSHP. These documents must be reviewed prior to work beginning.

6.0 Hazard Control Program and Treatment Methods

6.1 Hazardous Chemical Exposure

PPE will be utilized to minimize worker exposure to lead or lead containing compounds when engineering or administrative controls are not feasible. Engineering controls may include ventilation, equipment such as working upwind, dust control, vapor suppression techniques. Engineering controls are the preferred methods for hazard control. Administrative controls include reducing the duration of a single worker's exposure by increasing the number of operators and rotating them. Rotation is not recommended. PPE includes such items as chemical resistant coveralls, respiratory and hearing protection, monitoring equipment and safety gear.

Selection of appropriate PPE will be made by the SSHO and will be based on knowledge of the chemical and physical state of the lead compounds, concentration in air/materials potentially contacted, duration of exposure, nature of the activities to be conducted in the work area, potential safety hazards, additional potential chemical hazards, and the construction and material of the PPE being considered. The CIH will have final authority on PPE selection and makes initial decisions on PPE selection.

6.2 Hygiene Practices

In addition to the decontamination procedures detailed in the SHSP, the following hygiene and housekeeping practices will be followed:

- Clean change areas shall be maintained in the Support Zone;
- Shower facilities shall be maintained and available at all times during field work covered by the LCP;
- An adequate supply of cleansing agents and towels shall be maintained;
- All reusable clothing materials shall be laundered on site;
- A Decontamination Station will be available in the CRZ for all projects covered by this LCP;
- Project personnel will wash their hands, forearm, face and neck before eating, drinking, smoking or applying cosmetics;

- No used protective clothing or equipment is permitted inside the support zone clean areas without being properly decontaminated;
- Work clothes for use during project activities shall be provided by Project Management;
- Project personnel shall shower at the end of the shift before leaving the site as determined by the SSHO or CIH;
- An adequate supply of potable water shall be provided at the work site. Only bottled water shall be utilized for drinking and cooking purposes;
- Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from the container;
- Containers used to distribute drinking water shall be clearly marked and not used for any other purpose; and
- Single service cups (to be used only once) will be supplied. A sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

6.3 Dust Suppression

IT will utilize best available technology during project activities to control dust emission levels. The purpose of this is to reduce the potential spread of contaminated materials due to material disturbance and air movement.

7.0 Work Area Control

7.1 General

The Hazard Control Program for the project is detailed in the SSHP. The Project-Specific SSHP will detail the control program, based on all site hazards, including those related to lead exposure. This LCP details the control program required for work areas where lead exposure is expected or anticipated.

The work areas covered by this Lead Control Plan will be delineated into exclusion zones. These zones are defined and described in the SHSP. The SSHO shall record in the Field Activity Daily Log all persons entering a work area supported by this LCP. The Entry Log shall be maintained at each work area. At the end of each shift, the Entry Logs will be turned into the Site Administrative Assistant for filing.

7.2 Work Zones

Prior to work beginning, the SS/PM will classify the work area into three zones: (1) Exclusion Zone, (2) Contamination Reduction Zone, and (3) Support (Clean) Zone. The purpose of this classification is to reduce the accidental spread of hazardous substances between contaminated and clean areas. The establishment of work zones will help ensure that; personnel are properly protected against potential hazards present, work activities and contamination are confined to appropriate areas, and personnel can be located and evacuated in an emergency. All EZs will be identified by some physical means (such as barrier tape) and labelled with the following warning sign:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

Only IT personnel, contractors and authorized visitors who have completed the 40-hour Hazardous Waste Operations training course (or equivalent) and meet the additional requirements of the Exclusion Zone (e.g., Lead Safety Training) will be allowed within the area.

7.3 Personnel Protection Program

7.3.1 Acceptable Contaminant Concentrations

- Current OSHA PEL for lead is 0.05 mg/m^3, for TEL is 0.05 mg/m^3; and
- The action level for inorganic and organic lead compounds is 0.030 mg/m^3

7.3.2 Personal Protective Equipment PPE

Personal protective equipment (PPE) will be assigned according to project tasks and work areas. The SSHP contains the PPE requirements for this project.

The CIH has the only authority to downgrade PPE levels. This type of change will be based on a minimum of two consecutive sets of integrated monitoring data (no less than one and no more than three work days apart), or real-time monitoring which indicate that airborne contaminant concentrations are below current action levels recommended/required by appropriate agencies.

7.3.2.1 Levels of Protection

Project-specific personnel protective equipment requirements are given in the SSHP.

7.3.2.2 PPE Selection Criteria

PPE selection criteria will be used in the selection of project specific PPE, and in the upgrade or downgrade of PPE levels. Downgrading of the PPE levels will not be made without the approval of the CIH.

7.4 Respiratory Protection Program

The Respiratory Protection Program detailed in the SSHP shall be followed. The following additions are required for work covered by this LCP.

- Air-purifying respirators will be cleaned with mild soap and warm water daily by the wearer. The respirator will be air-dried before being reassembled and stored in a sealable container in the Support Zone. Employees responsible for such activity will be given adequate training annually by the SSHO;

- Respirators will not be placed in unprotected areas of potential contamination when not in use;

- Qualified project personnel will have an assigned air purifying respirator when use is required;

- A pair of Self-Contained Breathing Apparatus (SCBA) units will be located in a area designated by the SSHO;

- Qualified personnel will have been fit tested and certified in the use of air purifying respirators within the past six months in accordance with 29 CFR 1926.62. Fit test and respirator qualification cards or certifications must be available prior to commencing work covered by this LCP;

- Within the past year, project personnel assigned to use respiratory protection must have been medically certified as being capable of wearing a respirator. Documentation of the medical certification must be available to the SSHO prior to commencement of site work;

- Project personnel scheduled to wear a respirator will be clean shaven. Mustaches and side burns are permitted, but they must not interfere with the face-to-face piece seal of the respirator;

- Respirators will be inspected and a positive and negative pressure test performed prior to each use by the user;

- After each use, the respirator will be wiped with a disinfectant cleansing wipe. The respirator will also be thoroughly cleaned at the end of the work shift. The respirator will be stored in a clean sealable plastic bag; and

- SCBAs will be red-tagged after each use to prevent reuse prior to inspection and recharging.

7.5 Decontamination Program

The decontamination program has been designed to eliminate the spread of hazardous material contamination beyond the CRZ and to reduce that contamination to a minimum outside the Exclusion Zone. By following decontamination procedures and reducing the spread of contamination, the risk of exposure to contaminants while removing protective clothing is also reduced and good personal hygiene practices are enhanced.

The procedures listed in the SSHP for personnel decontamination will be implemented based on the required level of protection. Procedures for equipment decontamination are

also outlined. Modification to these procedures or the program must be approved, in writing, by the CIH and communicated to all project personnel prior to implementation.

8.0 Industrial Hygiene Monitoring Program

The CIH shall be responsible for determining method, type, and extent of industrial hygiene (IH) monitoring to be conducted prior to initiating project activities. The monitoring program detailed in the SSHP shall be followed. In addition, the following LCP Air Monitoring Program shall be implemented.

8.1 IH Monitoring Schedule

The CIH will determine the type and extent of exposure monitoring to be conducted based on the following conditions. The SSHO compiles data for the CIH to review as needed.

8.1.1 New Project/Phase

Monitoring will be conducted at the beginning of each project to: (1) evaluate effectiveness of protective equipment assigned, (2) assess current hazard potentials, and (3) evaluate operation exposures. For projects covered by this LCP, this will include, as a minimum, integrated sampling for inorganic lead and real-time monitoring for total dust levels.

8.1.2 Safety and Health Assessment

Monitoring will be repeated, as appropriate, to provide the CIH adequate information to make accurate assessments concerning the safety and health of persons on site. For projects covered by this LCP, this will include, as a minimum, integrated sampling for inorganic lead and real-time monitoring for total dust levels.

8.1.3 Condition Change

Monitoring will be conducted at any time project conditions change which may affect the exposure of persons in a work area. A change in condition may include, but is not limited to:

- Weather changes;
- Worker complaints/concerns; or
- Variation in work plan/procedures.

Monitoring to be conducted will be determined by the CIH and based on the type of condition and the level of change. Real time dust monitoring results which exceed the

action levels established in the SSHP will automatically trigger the initiation of integrated air sampling.

9.0 Lead Control Plan Amendments

All changes to this LCP must be made in writing. The CIH must approve, by signature, any changes (excluding those exempted below) prior to implementation. Upon submittal and approval, changes will be communicated to all site personnel and contractors before actual field implementation. All changes will be classified as one of the following categories and filed accordingly:

- General Work Practices;
- Work Areas;
- Medical Surveillance Program;
- Personal Protective Equipment;
- Work Area Control Zones; and
- Decontamination Procedures

Those changes which do not require prior approval from the CIH to be implemented by the SSHO include:

- PPE level upgrade; and
- Changes in decontamination procedures during an emergency or injury related incident.
- Changes required by state, local, and federal law which require immediate action

These changes shall be documented by the SSHO.

FIGURES

FIGURE 1
EMPLOYEE NOTIFICATION OF RIGHT TO A SECOND MEDICAL OPINION

IT Corporation, in accordance with the Occupational Health and Safety Administration's Lead Standard for the Construction Industry: Title 29 of the Code of Federal Regulations, Part 1926, Section 62 (29 CFR 1926.62), hereby notifies _____ of your right to a second medical opinion. This medical opinion may be sought to; further evaluate and/or interpret any findings, determinations or recommendations of the initial physician, and/or conduct such examinations, consultations, and laboratory tests as the second physician deems necessary to facilitate that review. This second medical opinion may be sought regarding any potential or actual occupational exposure to lead during the course of business with IT Corporation.

Notification Made By:

_____ _____

Name/Title Date

I, _____, acknowledge that I have received notification from IT Corporation of my right to seek a second medical opinion, as provided me by law through the OSHA 29 CFR 1926.62.

I also acknowledge that I must inform IT Corporation of my intent to seek a medical opinion and initiate the steps to do so by scheduling an appointment with the physician of my choice. I understand that I must take this action within fifteen (15) days after receipt of this notification, or receipt of the initial physician's written opinion, whichever is later.

- ☐ I wish to decline a second medical opinion.
- ☐ I have scheduled an appointment for a second medical opinion for _____

  (date)
- ☐ I will notify you of my decision regarding a second medical opinion within 15 working days of the date of this notification.

_____ _____

Signature of Employee Date

APPENDIX E

ACTIVITY HAZARD ANALYSIS

ACTIVITY HAZARD ANALYSIS
SITE PREPARATION

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Placement/unloading of construction materials	Noise	Noise levels above 85 dBA mandates hearing protection.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!
	Fire	Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Strains and sprains	Use proper lifting techniques, lifts greater than 60 lbs. require assistance or mechanical equipment. Size up the lift. Recommend wearing a back support if possible.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		All lockout-tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting off or on any equipment while it is in motion is prohibited.

Activity	Potential Hazards	Recommended Controls
Placement/unloading of construction materials	Heavy equipment operations	Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
		All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		Bulldozer and scraper blades, end-loader buckets, and similar equipment will be either fully lowered or blocked when being repaired or when not in use.
	Ropes, slings, chains and hooks	The use of ropes, slings and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.
		The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.
		Hooks, shackles, rings, pad eyes and other fittings that show excessive wear or that have been bent, twisted or otherwise damaged shall be removed from service.
		Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during it use to insure that it is safe. Defective rigging equipment shall be removed from service.

Activity	Potential Hazards	Recommended Controls
Placement/unloading of construction materials	Ropes, slings, chains and hooks	Rigging equipment, when not in use, shall be removed from the immediate work area and properly stored so as not to present a hazard.
		Taglines shall be used to control the loads being handled by hoisting equipment.
	Hoisting equipment	All hoisting equipment shall be capable of passing a performance (operating) test prior to being placed into service.
Placement of building materials	Hoisting equipment	At no time shall the hoisting equipment be loaded in excess of the manufacturers rating.
		While hoisting equipment is in operation, the operator shall not perform any other work and he/she shall not leave his/her position at the controls until the load has been safely landed or returned to the ground.
		A standard signal system shall be used on all hoisting equipment.
Support Area Construction	Knife cuts	Cutting strokes will always be away from the body.
		Leather gloves will be worn when cutting.
		Place knife in sheath on holder when not in use.
		Unused knives will never be left with cutting edges exposed.
		Never use a knife that is defective or has a broken blade or handle.
		Never use a knife as a prybar or screwdriver.
		Don't use a dull blade; replace or have sharpened prior to use.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Stay alert at all times!
	Flying debris	Wear safety glasses at all times.
	Fire	A dry chemical fire extinguisher with a minimum UL rating of 5 A:B:C will be readily available.

Activity	Potential Hazards	Recommended Controls
Support Area Construction	Fire	No smoking or open flames within 50 ft. of the work area. (Work area will be posted)
		Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
		All hoses, couplings, fixtures, etc. shall be properly bonded and grounded.
		IT Corporation's HS314 "Hot Work in Hazardous Locations" Policy and Procedure shall be adhered to at all times.
	Fueling	Only UL/FM approved safety cans shall be used to store fuel.
		Do not refuel equipment while it is operating.
		Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Faulty or damaged equipment	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
	Electrical hand tools/electrocution	Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout-tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Ground fault circuit interrupters inspect extension cords, hand tool inspection, lockout-tagout procedure.
	Contact with glues, solvents, etc.	Be familiar with the materials you are working with (MSDSs)
	Noise	If noise levels exceed 85 dBA wear hearing protection.

Activity	Potential Hazards	Recommended Controls
Support Area Construction	Heavy lifting	Safe lifting procedures. Loads over 60 lbs require assistance or mechanical lifting device.
	Slip, trip and fall hazards	Good housekeeping
	Confined spaces	Follow policy and procedures for confined spaces.
	Excavation and trenching	Follow policy and procedures for safe trench excavation.
	Hot work	Hot work permits.
	Scaffolding	IT Policy and Procedure HS308 "Scaffolding" will be adhered to at all times.
		Scaffolds and their components will be capable of supporting without failure at least 4 times the maximum anticipated load.
		Scaffolds will be plumb and level.
		Scaffolds will bear on base plates upon sills of other adequate foundation.
		Working levels of work platforms will be fully planked or decked.
		All planking of platforms will be either overlapped a minimum of 12 inches or secured from movement.
		Scaffold planks will extend over their end supports not less than 6 inches nor more than 18 inches.
		Planking on scaffolds will extend from the toeboard to not more than 14 inches from the face of the structure unless standard guardrails are installed or personal fall protection systems are used.
		Planking will be supported or braced to prevent excessive spring or deflection; secured and supported to prevent loosening, tipping, or displacement.
		Work platforms will be securely fastened to the scaffold.
		An access ladder or equivalent safe access will be provided.
		Climbing of braces is prohibited.

Activity	Potential Hazards	Recommended Controls
Support Area Construction	Scaffolding	When the scaffold height exceeds 4 times the minimum scaffold base dimension (including the width added by outriggers) the scaffold will be secured to the structure.
		Sections of metal scaffold will be securely connected and all braces will be securely fastened.
		Scaffolds will be properly braced by cross, horizontal, or diagonal braces or a combination of these braces, so that vertical members are securely together laterally and the cross braces will be of such a length so that they will automatically square and align vertical members so that the erected scaffold is always plumb, square, and rigid.
		Frames will be placed one on top of the other with coupling or stacking pins to provide vertical alignment of the legs.
		If uplift may occur, panels will be locked together vertically by pins or equivalent means.
Welding and Cutting	U.V. light and fire	Utilize appropriate eye protection. Provide fire watch. Obtain hot work permit. Torches must have anti-flashback device.
	Pressurized cylinders	Properly store and secure compressed gas cylinders.
Handling sharp objects	Cuts	Wear appropriate hand protection.
Grinding/sawing	Flying particles	Proper eye protection.
Working on elevated heights	Falls	Lanyards, lifelines, and ladder/scaffolding safety.
	Falling objects	Overhead protection hardhats.
Material storage	Flammable and combustible liquids	Store in NO SMOKING AREA and 50 ft. from combustible construction materials.
		Fire extinguisher readily available.
		Properly grounded and bonded.
	Round stock	Secure from rolling, work from the top of the stack.
	Slip, trip and fall hazards	Good housekeeping

Activity	Potential Hazards	Recommended Controls
Material Storage	Sprains and strains	Safe lifting procedures
	Pinch points/cuts	Adequate hand protection and observation of contact points.
	Hazard communication	Proper labeling/MSDSs.
Application of sealants	Pinch points	Beware of contact points.
		Keep hands, fingers, and feet clear of moving parts.
		Stay alert at all times!
	Cut hazards	Wear adequate hand protection.
	Noise	Noise levels above 85 dBA mandate hearing protection.
	Heavy lifting	Any lifting over 60 lbs. requires assistance or the use of a mechanical lifting device.
	Moving equipment	Signal person will assist in positioning equipment.
		Signal person will wear a reflective vest for high visibility.
	Contact with sealants	Personnel will wear adequate protective clothing and equipment to protect themselves against contact with sealant.
		MSDS's of all sealant materials will be obtained and reviewed with applicable personnel.
Material Hauling	Dump truck operations	Dump truck bodies shall be fully lowered or blocked when maintenance is being performed or when not in use.
		Dump trucks will have back-up alarms.
		A signal person will be used when the point of operation is not in full view of the vehicle, machine or equipment operator; vehicles are backed more than 100 ft; terrain is hazardous; or 2 or more vehicles are backing in the same area.
		Dump trucks will not be loaded in a manner that obscures the operator's view ahead or to either side or that interferes with the safe operation of the vehicle.

Activity	Potential Hazards	Recommended Controls
Material Hauling	Dump truck operations	The load on every truck will be distributed, checked, tied down, or secured.
		Loads will be covered when there is a hazard of flying/falling dirt, rock, debris, or material.
		All dump trucks will be equipped with a holding device to prevent accidental lowering of the body.
		All hoist levers will be secured to prevent accidental starting or tripping of the mechanism.
		Trip handles for tailgates will be arranged to keep the operator in the clear.
Falling trees	Dropping trees onto personnel	Only qualified personnel will drop trees.
		The work area shall be cleared to permit safe working conditions and an escape route planned before any cutting is started.
		Just before the tree or limb is ready to fall an audible warning shall be given to those in the area. All personnel in the vicinity shall be safely out of range.
		Employees shall work from the uphil side whenever possible.
		Prior to falling operations, the surrounding area, the shape of the tree, the lean of the tree, wind force anddirection, and the location of other employees will be reviewed.
	Chainsaw operations	The chainsaw will not be fueled while running, when not, or near open flame. The saw will not be started within 10 ft. of a fuel container.
		The operator will hold the saw with both hands during all cutting operations.
		Operators must wear eye, ear, hand, foot and leg protection.
		The chainsaw must never be used to cut above the operator's shoulder height.

Activity	Potential Hazards	Recommended Controls
Falling trees	Chainsaw operations	The idle speed will be adjusted so that the chain does not move when the engine is idle.
		The operator will shut off the saw when carrying it over slippery surfaces, through heavy brush, and when adjacent to personnel.
		All chainsaws on-site shall have an automatic cnain brake or kick back device.
Clearing brush and debris	Slip, trip and fall hazards	Individuals must survey the terrain and look before stepping.
	Sharp objects	Individuals must be alert to sharp objects that may be lying under brush. Metal inserts may be used inside boots to make them puncture resistant.
	Poisonous plants, snakes and insects (poison oak prevalent)	Individuals must be aware of the potential for these hazards to be present. Precautionary measures to be taken will be addressed in daily tailgate safety meetings.
	Use of machetes.	Keep other personnel clear of swing area. Us extreme caution when using.
	Heavy lifting.	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechcanical equipment; size up the lift. Recommend wearing a back support if possible.
	Pinch points	Keep hands, fingers and feet clear of moving/suspended materials and equipment.
	Falling objects	Hardhat, stay alert and clear of materials suspended overhead; steel-toed boots.
	Flying debris, dirt, dust, etc.	Safety glasses/eye wash.
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
• Heavy equipment • Liner material • Fencing • PPE • Dump trucks • Hand tools	• Pre-postmaintenance • Visual prior to use	• Tailgate Safety Meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan • UXO Training

ACTIVITY HAZARD ANALYSIS
LINER INSTALLATION

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Principal Steps	Potential Hazards	Recommended Controls
Placement/Unloading Liner Materials	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the load. Recommend wearing a back support if possible.
	Noise	Hearing protection is mandatory above 85 dBA.
	Falling objects	Hardhat, stay alert and clear of materials suspended overhead, steel-toed boots.
	Flying debris, dirt, dust etc.	Safety glasses/eye wash. Wear eye protection.
	Pinch points	Keep hands and feet clear of moving/suspended materials and equipment.
		Stay alert at all times!
		Beware of contact points.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		All lockout-tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting off or on any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.

Principal Steps	Potential Hazards	Recommended Controls
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
		All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		Bulldozer and scraper blades, end-loader buckets, and similar equipment will be either fully lowered or blocked when being repaired or when not in use.
	Ropes, slings, chains and hooks	The use of ropes, slings and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.
		The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.
		Hooks, shackles, rings, pad eyes and other fittings that show excessive wear or that have been bent, twisted or otherwise damaged shall be removed from service.
		Rigging equipment, when not in use, shall be removed from the immediate work area and properly stored so as not to present a hazard.
		Taglines shall be used to control the loads being handled by hoisting equipment.
	Faulty or damaged equipment	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
	Knife cuts	Cutting strokes will always be away from the body.

Principal Steps	Potential Hazards	Recommended Controls
	Knife cuts	Leather gloves will be worn when cutting.
		Place knife in sheath on holder when not in use.
		Unused knives will never be left with cutting edges exposed.
		Never use a knife that is defective or has a broken blade or handle.
		Never use a knife as a prybar or screwdriver.
		Don't use a dull blade; replace or have sharpened prior to use.
Liner Installation		
	High winds	Keep liner low ;to the ground during deployment.
	Welding	
	Electrical hand tools/ electrocution	Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout-tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Ground fault circuit interrupters inspect extension cords, hand tool inspection, lockout-tagout procedure.
	Contact with bonding materials	Be familiar with the materials you are work with (MSDSs).
		Wear appropriate hand protection
	Hot work	Refer to HS Policy HS314
	Rolling Stock	Keep rolls of liner secured and braced to prevent roll away.

ACTIVITY HAZARD ANALYSIS
REMOVAL OF LIQUIDS/SEDIMENTS

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Placement/unloading of materials	Noise	Noise levels above 85 dBA mandates hearing protection.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!
	Strains and sprains	Use proper lifting techniques, lifts greater than 60 lbs. require assistance or mechanical equipment. Size up the lift. Recommend wearing a back support if possible.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		All lockout-tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting off or on any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.

Activity	Potential Hazards	Recommended Controls
Placement/unloading of materials	Heavy equipment operations	All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		Bulldozer and scraper blades, end-loader buckets, and similar equipment will be either fully lowered or blocked when being repaired or when not in use.
	Ropes, slings, chains and hooks	The use of ropes, slings and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.
		The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.
		Hooks, shackles, rings, pad eyes and other fittings that show excessive wear or that have been bent, twisted or otherwise damaged shall be removed from service.
		Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during it use to insure that it is safe. Defective rigging equipment shall be removed from service.
		Rigging equipment, when not in use, shall be removed from the immediate work area and properly stored so as not to present a hazard.
		Taglines shall be used to control the loads being handled by hoisting equipment.
		All hoisting equipment shall be capable of passing a performance (operating) test prior to being placed into service.
	Hoisting equipment	At no time shall the hoisting equipment be loaded in excess of the manufacturers rating.
		While hoisting equipment is in operation, the operator shall not perform any other work and he/she shall not leave his/her position at the controls until the load has been safely landed or returned to the ground.

Activity	Potential Hazards	Recommended Controls
Placement/unloading of materials	Hoisting equipment	A standard signal system shall be used on all hoisting equipment.
Removal of Liquids/Sediments	Fire	A dry chemical fire extinguisher with a minimum UL rating of 5 A:B:C will be readily available.
		No smoking or open flames within 50 ft. of the work area. (Work area will be posted)
		Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
		All hoses, couplings, fixtures, etc. shall be properly bonded and grounded.
		IT Corporation's HS314 "Hot Work in Hazardous Locations" Policy and Procedure shall be adhered to at all times.
	Fueling	Only UL/FM approved safety cans shall be used to store fuel.
		Do not refuel equipment while it is operating.
		Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Faulty or damaged equipment	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
	Fall hazard	No employee will be exposed to a fall of over 6 feet without being adequately protected. See section ▒▒ of SHSP.
	Contact with blood borne pathogens	Adhere to HS512 "Handling of blood or other potentially infectious material"
	Contact with potentially contaminated materials	Real-time air monitoring will take place. Proper personal protective clothing and equipment will be utilized.
		Good housekeeping will be stressed to safe guard against cross contamination of surrounding areas and eliminate safety hazards.

Activity	Potential Hazards	Recommended Controls
Removal of Liquids/Sediments	Contact with potentially contaminated materials	All site personnel will practice good personal hygiene.
		They work area will be demarcated. All unnecessary personnel will be kept out of the work area and in an upwind location.
		Refer to Section ▒ of SHSP for chemical hazard discussion.
Pumping Liquids	Faulty Equipment	Equipment will be inspected prior to being placed into service and at the beginning of each shift.
	Pressurized systems	All discharge hoses and connections shall be routinely inspected.
	Noise	A dry chemical fire extinguisher with a minimum UL rating of 5:A:B:C will be readily available.
	Refueling	Proper bonding and grounding. Only UL/FM approved safety cans will be used.
Confined Spaces	Various	Adhere to HS300 "Confined Spaces."
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
Pumps Piping Hand Tools Vacuum Truck	• Pre-post maintenance • Visual prior to use	• Tailgate safety meeting • Site-specific orientation • Hazardous waste operations • Hazard communication

ACTIVITY HAZARD ANALYSIS
GROUNDWATER MONITORING

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Staging Equipment	Contact with moving equipment/vehicles	Work area will be barricaded/demarcated.
		Equipment will be laid out in an area free of traffic flow.
	Hazard communication	Label all containers as to contents and dispose of properly.
	Noise	Sound levels above 85 dBA mandates hearing protection.
Measuring water levels	Bees, spiders and snakes	Inspect work areas carefully and avoid placing hands and feet into concealed areas.
	Cross-contamination and contact with potentially contaminated materials	Sampling technicians will wear proper protective clothing and equipment to safeguard against potential contamination.
		Only essential personnel will be in the work area.
		Initial real-time air monitoring will take place before and during activities.
		All personnel will follow good hygiene practices.
		All liquids and materials used for decontamination will be contained and disposed of in accordance with federal, state, and local regulations.
	Hazard communication	Label all containers as to contents.
	Sprains/strains	Use the proper tool for the job being performed.
		Get assistance if needed.
	Slip, trip and fall hazards	Determine best access route before transporting equipment.
		Good housekeeping, keep work area picked up and clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
		Look before you step, insure safe and secure footing.

Activity	Potential Hazards	Recommended Controls
Measuring water levels	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up lift. Recommend wearing a back support if possible.
	Falling objects	Hard hat, stay alert and clear of materials suspended overhead, steel-toed boots.
	Flying debris, dirt, dust, etc.	Use safety glasses/goggles. Ensure that eye wash is in good working order.
	Pinch points	Keep hands, fingers, and feet clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!
	Bees, spiders and snakes	Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Fire	Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Strains and sprains	Avoid twisting/turning while pulling on tools, materials, etc.
	Spills/residual materials	Absorbent material and containers will be kept available where leaks or spills may occur.
	Lighting	Adequate lighting will be provided to ensure a safe working environment.
	Unattended worker	"Buddy system" visual contact will be maintained between technicians during fence installation.
	Slip, trip and fall hazards	Avoid walking on wet surfaces.
	Splash hazards	Splash shield will be used by employees engaged in this task.

Equipment to be Used	Inspection Requirements	Training Requirements
Water level measurer	• Pre-post maintenance • Visual prior to use	• Tailgate safety meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan (if applicable)

ACTIVITY HAZARD ANALYSIS
CONDUIT/PIPING INSTALLATION

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Staging equipment	Slip, trip and fall hazards	Determine best access route before transporting equipment.
		Good housekeeping, keep work area picked up and clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
		Look before you step, insure safe and secure footing.
	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the lift. Recommend wearing a back support if possible.
	Falling objects	Stay alert and clear of materials suspended overhead. Use steel-toed boots and hard hat.
	Flying debris, dirt, dust etc.	Use safety glasses/goggles. Ensure that eye wash is in good working order.
	Pinch points	Keep hands, fingers, and feet clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!
	Bees, spiders and snakes	Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Cut hazards	Wear adequate hand protection. Use care when handling material.
	Fire	Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Fire/chemical exposure	All solvents will be transported in UL/FM approved containers and sources of ignition will be prohibited.
		Initial real time air monitoring will take place.
	Contact with moving equipment/vehicles	Work area will be barricaded/demarcated.

Activity	Potential Hazards	Recommended Controls
Staging Equipment	Contact with moving equipment/vehicles	Equipment will be laid out in an area free of traffic flow.
	Hazard communication	Label all containers as to contents and dispose of properly.
		Obtain Material Safety Data Sheets for solvents, etc. that are being used.
	Noise	Sound levels above 85 dBA mandates hearing protection.
Installation of piping and conduit	Working at elevated heights/falls	Ladders will be secured by top, bottom, and intermediate fastenings as required.
		Personnel working at heights of 6 feet or more must be secured with fall protection (safety belt/lanyard).
	Electrical shock	All electrical circuits will be deenergized and locked out.
	Bees, spiders and snakes	Inspect work areas carefully and avoid placing hands and feet into concealed areas.
	Contact with potentially contaminated materials	Installers will wear proper protective clothing and equipment to safeguard against potential contamination.
		Only essential personnel will be in the work area.
		Initial real-time air monitoring will take place before and during installation activities.
		All personnel will follow good hygiene practices.
		Proper decontamination procedures will be followed.
		All liquids and materials used for decontamination will be contained and disposed of in accordance with Federal, State and Local regulations.
	Cut hazards	Use care when handling glassware.
		Wear adequate hand protection.
	Hazard communication	Label all containers as to contents.

Activity	Potential Hazards	Recommended Controls
Installation of piping and conduit	Strains/sprains	Use the proper tool for the job being performed.
		Get assistance if needed.
		Avoid twisting/turning while pulling on tools, grates, pipe wrenches, etc.
	Spills/residual materials	Absorbent material and containers will be kept available where leaks or spills may occur.
	Lighting	Adequate lighting will be provided to insure a safe working environment in the trench.
	Unattended worker	"Buddy System" - visual contact will be maintained with the personnel inside trench.
	Confined space	IT Policy and Procedure HS300 - "Confined Spaces, Industrial" will be adhered to at all times.
	Open trenches	IT Policy and Procedure HS307 - "Excavation and Trenching" will be adhered to at all times.
Moving materials	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the lift. Recommend wearing a back support if possible.
	Pinch points	Keep hands, fingers, and feet clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!

Equipment to be Used	Inspection Requirements	Training Requirements
• Piping • Plumbing Tools • PPE	• Pre-postmaintenance • Visual prior to use	• Tailgate safety meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan (if applicable) • Excavation safety (if applicable)

ACTIVITY HAZARD ANALYSIS
DRUM HANDLING

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Staging equipment	Contact with moving equipment/vehicles	Area around drums will be barricaded/demarcated.
		Equipment will be laid out in an area free of traffic flow.
	Cut hazards	Use care when handling any glassware.
		Wear adequate hand protection
Collect samples	Chemical contamination	Drum sampling will be performed in Level B PPE.
	Hazard communication	Label all containers as to contents.
	Cuts	Use care when handling glassware.
		Wear adequate hand protection.
Drum opening	Fire/Explosion	All equipment and tools will be of the type to prevent sources of ignition.
		Only essential personnel will be in drum opening area.
		Suspect drums will be opened using a beryllium or bronze spike.
		Bungs will be opened slowly without excessive pressure.
		Fire extinguishers will be available to control small fires.
		Only intrinsically safe equipment will be used to transfer contents of suspect drums.
		Real time monitoring will take place before and during drum opening/handling.
Drum handling	Spills	Absorbent and overpack drums will be kept available where leaks, spills, or ruptures may occur.
	Contact with potentially contaminated materials	Drum handling will be performed in Level B PPE.

Activity	Potential Hazards	Recommended Controls
Drum handling	Sprain/strains	Use caution when removing drum lids.
		Use the proper tool for the task being performed.
		Get assistance if required.
		Avoid twisting/turning while pulling on tools or drums.
	Heavy lifting	Lift with your legs, not your back.
		Lifts greater than 60 lbs. require assistance or mechanical equipment; size up the lift. Recommend wearing a back support if possible.
	Pinch points	Keep feet and hands clear of moving materials and equipment.
		Beware of contact points.
		Stay alert at all times.
	Cut hazards	Wear adequate hand protection
Drum transfer	Noise	Noise levels above 85 dBA mandates hearing protection.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting on or off any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.

Activity	Potential Hazards	Recommended Controls
Drum transfer	Heavy equipment operations	All machinery or equipment will be shutdown and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		All self-propelled construction equipment shall be equipped with a back-up alarm.
	Fire	Equipment will be equipped with at least one dry chemical fire extinguisher having a minimum UL rating of 5 B:C.
	Truck and Equipment Traffic	Site personnel will wear orange safety vests to identify themselves to traffic.
		Load out area will be properly demarcated.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip, and fall hazards. Look where you step, ensure safe footing when climbing on/off equipment etc.
Drum storage	Incompatible drums	Segregate drums so that no incompatibles are stored next to each other.
Drum transfer	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points. Stay alert at all times!
	Sprain/strains	Use proper lifting techniques. Lifts greater than 60 lbs require assistance or mechanical equipment. Size-up the lift. Recommend wearing a back support if possible. When pulling on materials, pull in a straight line. Do not twist and pull simultaneously.
	Ropes, slings, chains, and hooks	The use of ropes, slings, and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.
		The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.

Activity	Potential Hazards	Recommended Controls
Drum transfer	Ropes, slings, chains and hooks	Hooks, shackles, rings, pad eyes, and other fittings that show excessive wear or that have been bent, twisted, or otherwise damaged shall be removed from service.
		Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to insure that it is safe. Defective rigging equipment shall be removed from service.
		Rigging equipment, when not is use, shall be removed from the immediate work area and properly stored so as not to present a hazard.
		Taglines shall be used to control the loads being handled by hoisting equipment.
	Hoisting Equipment	All hoisting equipment shall be capable of passing a performance (operating) test prior to being placed into service.
		At no time shall the hoisting equipment be loaded in excess of the manufacturers rating except during performance tests.
	Hoisting Equipment	While hoisting equipment is in operation, the operator shall not perform any other work and he/she shall not leave his/her position at the controls until the load has been safely landed or returned to the ground.
		A standard signal system shall be used on all hoisting equipment.
	Bees, spiders, and snakes	Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Cut hazards	Wear adequate hand protection.
	Falling objects	Hardhat, stay alert and clear of materials suspended overhead, steel-toed boots
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
Drum Dolly/Grappler PPE Hoisting Equipment	• Pre-post maintenance • Visual prior to use	• Tailgate safety meeting • Site specific orientation • Hazardous waste operations • Hazard communication

ACTIVITY HAZARD ANALYSIS
TRENCHING

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Principal Steps	Potential Hazards	Recommended Controls
Excavate trench	Underground utilities	All underground utilities will be located prior to excavating.
	Open trenches	IT Policy and Procedure HS307- "Excavation and Trenching" will be adhered to at all times.
	Contact with potentially contaminated materials	Real time air monitoring will take place. If necessary proper personal protective clothing and equipment will be utilized.
	Noise	Noise levels above 85 dBA mandates hearing protection.
	Equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in a safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventative maintenance procedures recommended by the manufacturer shall be followed.
		A lockout-tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only be designated personnel.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.

Principal Steps	Potential Hazards	Recommended Controls
Excavate trench	Equipment operations	All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
	Fire	A dry chemical fire extinguisher will be readily available.
	Pinch points	Keep hands, fingers, and feet clear of moving parts.
	Heavy lifting	Any lifting over 60 lbs. requires assistance or the use of a mechanical lifting device.
	Slip, trip, fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip, and fall hazards. Look where you step, ensure safe footing.
	Cut hazards	Wear adequate hand protection.
	Traffic	Work area will be barricaded off.
		Personnel will wear reflective vests for high visibility.
	Hazard communication	Obtain MSDs for materials used on site. Label all containers as to contents.
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
Heavy Equipment Shoring Devices	• Pre-post maintenance • Visual prior to use	• Tailgate safety meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan (if applicable) • Excavation safety

ACTIVITY HAZARD ANALYSIS
EXCAVATION OF CONTAMINATED MATERIALS

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Excavation	Underground utilities	All underground utilities will be located prior to excavating.
	Open excavations	IT Policy and Procedure HS307 - "Excavation and Trenching" will be adhered to at all times.
	Confined spaces	IT Policy and Procedure HS 300 - "Confined Spaces" will be adhered to at all times.
	Noise	Noise levels above 85 dBA mandates hearing protection.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting off or on any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
	Contact with overhead power lines	See distances

Activity	Potential Hazards	Recommended Controls
Excavation	Heavy equipment operations	Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
		All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		Bulldozer and scraper blades, end-loader buckets, and similar equipment will be either fully lowered or blocked when being repaired or when not in use.
		All self-propelled construction equipment shall be equipped with a back-up alarm.
	Fire	Each bulldozer, backhoe, or other similar equipment will be equipped with at least one dry chemical fire extinguisher having a minimum UL rating of 5 A:B:C.
	Contact with potentially contaminated materials	Real-time air monitoring will take place. Proper personal protective clothing and equipment will be utilized.
		Good housekeeping will be stressed to safe guard against cross contamination of surrounding areas and eliminate safety hazards.
		All site personnel will practice good personal hygiene.
		The work area will be demarcated. All unnecessary personnel will be kept out of the work area and in an upwind location.
		Refer to SHSP for chemical hazard discussion.
	Noise	Noise levels above 85 dBA mandates hearing protection.

Activity	Potential Hazards	Recommended Controls
Excavation	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!
	Strains and sprains	Use proper lifting techniques, lifts greater than 60 lbs. requires assistance or mechanical equipment; size up the lift. Recommend wearing a back support if possible.
Material hauling	Dump truck operations	Dump truck bodies shall be fully lowered or blocked when maintenance is being performed or when not in use.
		Dump trucks will have back-up alarms.
		A signal person will be used when the point of operation is not in full view of the vehicle, machine or equipment operator; vehicles are backed more than 100 ft; terrain is hazardous; or 2 or more vehicles are backing in the same area.
		Dump trucks will not be loaded in a manner that obscures the operator's view ahead or to either side or that interferes with the safe operation of the vehicle.
		The load on every truck will be distributed, checked, tied down, or secured.
		Loads will be covered when there is a hazard of flying/falling dirt, rock, debris, or material.
		All dump trucks will be equipped with a holding device to prevent accidental lowering of the body.
		All hoist levers will be secured to prevent accidental starting or tripping of the mechanism.

Activity	Potential Hazards	Recommended Controls
Material hauling	Dump truck operations	Trip handles for tailgates will be arranged to keep the operator in the clear.
Equipment to be Used	Inspection Requirements	Training Requirements
• Hand tools • PPE • Heavy equipment • Dump trucks	• Pre-postmaintenance • Visual prior to use	• Tailgate Safety Meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan • UXO Training

Activity Hazard Analysis
Groundwater Well Drilling and Installation

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Drill rig inspection	Faulty or damaged equipment being utilized to perform work	All machinery or mechanized equipment will be inspected by a competent mechanic and be certified to be in safe operating condition.
		Equipment will be inspected before being put to use and at the beginning of each shift.
		Faulty/unsafe equipment will be tagged and if possible locked out.
		Earth drilling equipment will be equipped with two easily-accessible emergency shutdown devices, one for the operator and one for the helper.
Drill rig staging	Uneven terrain, poor ground support, inadequate clearances, contact with utilities	Earth drilling equipment will not be transported with the mast up. The exceptions are: movement over level,, smooth terrain; the path of travel has been inspected for stability and the absence of holes, other ground hazards, and electrical hazards; and the travel distance is limited to short, safe distances. The equipment operator will ascertain proper clearance prior to moving equipment. Clearance will be monitored by a spotter or by the use of an electrical proximity warning device.
		Machinery and mechanized equipment will be operated only by designated personnel.
		Above and below ground utilities will be located prior to staging equipment.
		Whenever the equipment is parked, the parking brake will be set. Equipment parked on inclines will have the wheels chocked.
		Inspect brakes and tire pressure on drill rig.
	Overhead power lines	See distances
	General	IT H&S Procedure HS316 will be adhered to.
Drill rig operation	Inexperienced operator	Machinery and mechanized equipment will be operated only by designated personnel.

Activity	Potential Hazards	Recommended Controls
Drill rig operation	Inexperienced operator	The operator will verbally alert employees and visually ensure employees are clear from dangerous parts of equipment prior to starting or engaging equipment.
	Falling objects	Hard hats, remove unsecured tools and materials before raising or lowering the derrick.
		Stay alert and clear of materials suspended overhead.
	Pinch points.	Keep feet and hands clear of moving/suspended materials and equipment.
		Inspect for all pinch points
		Stay alert at all times!!!
	Jacks/outriggers	Outriggers will be extended per the manufacturer's specifications.
		Ensure proper footing and cribbing.
	Hoists	Hoists will be used only for their designed intent and will not be loaded beyond their rated capacity. Steps will be taken to prevent two-blocking of hoists.
		The equipment manufacturer's procedures will be followed if rope becomes caught in, or objects pulled into, a cathead.
		Drill rods will be neither run nor rotated through rod slipping devices. No more than one foot of drill rod column will be hoisted above the top of the drill mast. Drill rod tool joints will not be made up, tightened, or loosened while the rod column is supported by a rod slipping device.
	Whip lines & cables	Stand clear when under tension
	Fire	Keep areas adjacent to derricks reasonably free from accumulation of oil, fuel, or other materials (good housekeeping).
		Have fire extinguishers inspected and readily available.
		Real time air monitoring will take place for LEL/0^2.

Activity	Potential Hazards	Recommended Controls
Drill rig operation	Noise	Hearing protection is mandatory above 85 dbA.
	Contact with rotating or reciprocating machine parts	Machine guards, use long-handled shovels to remove auger cuttings.
		Safe lockout procedures for maintenance work.
	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs require assistance or mechanical equipment size-up the lift. Recommend wearing a back support if possible.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and clean as feasible. Continually inspect the work area for slip, trip and fall hazards. Assure no holes in walkways exist that are greater than 12" x 12".
	Contact with potentially contaminated materials	Real time air monitoring will take place. If necessary, proper personal protective clothing and equipment will be utilized. Modified "D" will be the lowest level of protection due to the high potential for skin contact.
	Auger binding or breaking	Auger guides will be used on hard services.
	Contact with potentially contaminated materials	Utilize appropriate PPE
	Special conditions	Climbing booms, or any hazardous operations out of the normal use of drill will not be conducted without approval of SSHO.
	Contact with utility lines (gas, electric, etc.) and buried drums, etc.	Use magnetometer or other metal detector devices to check for buried drums, cylinders, USTs, etc.
	Buried ordnances, chemical warheads, etc.	Use ordnance detector with experienced personnel and/or remote control drill rig.
	Inclement weather, lightning	Weather conditions will be monitored. Operations will cease during electrical storms or when electrical storms are imminent.

Activity	**Potential Hazards**	**Recommended Controls**
Drill rig operation	Fall hazards	Use safety full-body harness, shock absorbing lanyard with double locking hooks, and lifeline when working above 6 feet.
		Open bore holes will be capped and flagged. Open excavations will be barricaded.
	Welding	Do not watch arc or it's reflection.
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
• Hand tools • PPE • Heavy equipment • Drill rig • Service truck	• Pre-postmaintenance • Visual prior to use	• Tailgate Safety Meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan • UXO Training

ACTIVITY HAZARD ANALYSIS
SOIL/DEBRIS SEPARATION

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Job setup for soil/debris separation	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the lift. Recommend wearing a back support if possible.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
	Cut hazards	Wear adequate hand protection.
	Lighting	Adequate lighting will be provided to ensure a safe working environment.
	Strains/sprains	When pulling or lifting, do not turn or twist your back.
		Use the proper tool for the task being performed.
	Contact with potentially contaminated materials	Appropriate PPE will be required.
		Keep airborne particulates to a minimum.
		Practice good housekeeping, avoid spreading potentially contaminated materials.
	Fueling	Only UL/FM approved safety cans shall be used to store fuel.
		Do not refuel equipment while it is operating.
		Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
Vibrative screen operations	Noise	Use hearing protection and monitor noise level.
	Unqualified operators	Machinery and mechanized equipment shall be operated only by designated personnel.
	Out of control equipment	Machinery or equipment requiring an operator shall not be permitted to run unattended.

Activity	Potential Hazards	Recommended Controls
Vibrative Screen Operations	Out of control equipment	Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment
		Stay alert at all times!
	Falling objects	Hard hats, remove unsecured tools and materials before operating equipment.
		Stay alert and clear of materials suspended overhead.
	Flying debris	Splash shield will be used.
	Contract with potentially contaminated materials	Appropriate PPE will be required.
Vibrative screen maintenance	Exposure to moving parts or from accidental start-up	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting on or off any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
	Exposure to moving parts or from accidental startup	Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.

Activity	Potential Hazards	Recommended Controls
Vibrative screen maintenance	Exposure to moving parts or from accidental startup	All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip, and fall hazards. Look where you step, ensure safe footing when climbing on/off equipment, etc.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points. Stay alert at all times!
	Strains/sprains	Use proper lifting techniques. Lifts greater than 60 lbs require assistance or mechanical equipment. Size-up the lift. Recommend wearing a back support if possible. When pulling on materials, pull in a straight line. Do not twist and pull simultaneously.
		The use of ropes, slings, and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.
		The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.
		Hooks, shackles, rings, pad eyes, and other fittings that show excessive wear or that have been bent, twisted, or otherwise damaged shall be removed from service.
	Ropes, slings, chains, and hooks	Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective rigging equipment shall be removed from service.

Activity	Potential Hazards	Recommended Controls
Pressure washing equipment	High pressures	IT Policy and Procedure HS303 "Hydroblasting" shall be adhered to at all times.
Pressure washing equipment	Unqualified operators	Machinery and mechanized equipment shall be operated only by designated personnel.
	Out of control equipment	Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
	Noise	Sound levels above 85 dBA mandates hearing protection.
	Activation during repairs	All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Stay alert at all times!
	Falling objects	Hard hats, remove unsecured tools and materials before operating equipment.
		Stay alert and clear of materials suspended overhead.
	Flying debris	Splash shield will be used.
	Contact with potentially contaminated materials	Appropriate PPE will be required.
	Hot work (hot water/steam cleaning)	IT Policy and Procedure HS314 "Hot Work in Hazardous Locations" will be adhered to at all times during any operations involving hot work.
Stage-setup equipment for pumping liquids	Pinch points	Keep hands, fingers, and feet clear of moving parts.
	Heavy lifting	Any lifting over 60 lbs requires assistance or the use of a mechanical lifting device.
	Moving equipment	Signal person will assist in positioning equipment.

Activity	Potential Hazards	Recommended Controls
Stage-setup equipment for pumping liquids	Contact with potentially contaminated materials	Real time air monitoring will take place. Appropriate PPE protection will be required.
Pumping liquids	Faulty equipment	Equipment will be inspected prior to being placed into service and at the beginning of each shift.
	Pressurized systems	All discharge hoses and connections shall be routinely inspected.
	Noise	Sound levels above 85 dBA mandates hearing protection.
	Fire	A dry chemical fire extinguisher with a minimum UL rating of 5 A:B:C will be readily available.
	Refueling	Proper bonding and grounding. Only UL/FM approved safety cans will be used.
Loadout of equipment	Noise	Noise levels above 85 dBA mandates hearing protection.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting on or off any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.

Activity	Potential Hazards	Recommended Controls
Loadout of equipment	Heavy equipment operations	Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
		All machinery or equipment will be shutdown and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		All self-propelled construction equipment shall be equipped with a back-up alarm.
	Fire	Each bulldozer, backhoe, or other similar equipment will be equipped with at least one dry chemical fire extinguisher having a minimum UL rating of 5 A:B:C.
	Truck and Equipment Traffic	Site personnel will wear orange safety vests to identify themselves to traffic.
		Load out area will be properly demarcated.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip, and fall hazards. Look where you step, ensure safe footing when climbing on/off equipment etc.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points. Stay alert at all times!
	Strains/sprains	Use proper lifting techniques. Lifts greater than 60 lbs require assistance or mechanical equipment. Size-up the lift. Recommend wearing a back support if possible. When pulling on materials, pull in a straight line. Do not twist and pull simultaneously.
	Ropes, slings, chains, and hooks	The use of ropes, slings, and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.

Activity	Potential Hazards	Recommended Controls
Loadout of equipment	Ropes, slings, chains, and hooks	The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.
		Hooks, shackles, rings, pad eyes, and other fittings that show excessive wear or that have been bent, twisted, or otherwise damaged shall be removed from service.
		Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to insure that it is safe. Defective rigging equipment shall be removed from service.
		Rigging equipment, when not is use, shall be removed from the immediate work area and properly stored so as not to present a hazard.
		Taglines shall be used to control the loads being handled by hoisting equipment.
	Hoisting Equipment	All hoisting equipment shall be capable of passing a performance (operating) test prior to being placed into service.
		At no time shall the hoisting equipment be loaded in excess of the manufacturers rating except during performance tests.
		While hoisting equipment is in operation, the operator shall not perform any other work and he/she shall not leave his/her position at the controls until the load has been safely landed or returned to the ground.
		A standard signal system shall be used on all hoisting equipment.
	Heat	Be aware of warning signs of these conditions
	Bees, spiders, and snakes	Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Cut hazards	Wear adequate hand protection.
	Falling objects	Hard hat, stay alert and clear of materials suspended overhead, steel-toed boots.

Equipment to be Used	Inspection Requirements	Training Requirements
• Hand tools • PPE • Heavy equipment • Soil separator	• Pre-postmaintenance • Visual prior to use	• Tailgate Safety Meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan • UXO Training

ACTIVITY HAZARD ANALYSIS
DECONTAMINATION OF PROCESS EQUIPMENT AND SCRAP

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Principal Steps	Potential Hazards	Recommended Controls
Job setup for decontamination of equipment and scrap	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the lift. Recommend wearing a back support if possible.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
	Cut hazards	Wear adequate hand protection.
	Lighting	Adequate lighting will be provided to ensure a safe working environment.
	Strains/sprains	When pulling or lifting, do not turn or twist your back.
		Use the proper tool for the task being performed.
	Contact with potentially contaminated materials	Appropriate PPE will be required.
		Real time air monitoring will take place during decontamination activities.
		Keep airborne particulates to a minimum.
		Practice good housekeeping, avoid spreading potentially contaminated materials.
	Fueling	Only UL/FM approved safety cans shall be used to store fuel.
		Do not refuel equipment while it is operating.
		Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.

Principal Steps	Potential Hazards	Recommended Controls
Job setup for decontamination of equipment and scrap	Faulty or damaged equipment	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
Pressure washing	High pressures	IT Policy and Procedure HS303 "Hydroblasting" shall be adhered to at all times.
	Unqualified operators	Machinery and mechanized equipment shall be operated only by designated personnel.
	Out of control equipment	Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
	Noise	Sound levels above 85 dBA mandates hearing protection.
	Activation during repairs	All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Stay alert at all times!
Pressure washing	Falling objects	Hardhats, remove unsecured tools and materials before operating equipment.
		Stay alert and clear of materials suspended overhead.

Principal Steps	Potential Hazards	Recommended Controls
Pressure washing	Flying debris	Splash shield will be used.
	Contact with potentially contaminated materials	Appropriate PPE will be required.
	Hot work (hot water/steam cleaning)	IT Policy and Procedure HS314 "Hot Work in Hazardous Locations" will be adhered to at all times during any operations involving hot work.
Stage-setup equipment for pumping liquids	Pinch points	Keep hands, fingers, and feet clear of moving parts.
	Heavy lifting	Any lifting over 60 lbs requires assistance or the use of a mechanical lifting device.
	Moving equipment	Signal person will assist in positioning equipment.
	Contact with potentially contaminated materials	Real time air monitoring will take place.
Pumping liquids	Faulty equipment	Equipment will be inspected prior to being placed into service and at the beginning of each shift.
	Pressurized systems	All discharge hoses and connections shall be routinely inspected.
	Noise	Sound levels above 85 dBA mandates hearing protection.
	Fire	A dry chemical fire extinguisher with a minimum UL rating of 5 B:C will be readily available.
	Refueling	Proper bonding and grounding. Only UL/FM approved safety cans will be used.
Loadout of scrap	Noise	Noise levels above 85 dBA mandates hearing protection.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.

Principal Steps	Potential Hazards	Recommended Controls
Loadout of scrap	Heavy equipment operations	Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting on or off any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
		All machinery or equipment will be shutdown and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		All self-propelled construction equipment shall be equipped with a back-up alarm.
	Fire	Each bulldozer, backhoe, or other similar equipment will be equipped with at least one dry chemical fire extinguisher having a minimum UL rating of 5 B:C.
	Truck and Equipment Traffic	Site personnel will wear orange safety vests to identify themselves to traffic.
		Load out area will be properly demarcated.

Principal Steps	Potential Hazards	Recommended Controls
Loadout of scrap	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip, and fall hazards. Look where you step, ensure safe footing when climbing on/off equipment etc.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points. Stay alert at all times!
	Strains/sprains	Use proper lifting techniques. Lifts greater than 60 lbs require assistance or mechanical equipment. Size-up the lift. Recommend wearing a back support if possible. When pulling on materials, pull in a straight line. Do not twist and pull simultaneously.
	Ropes, slings, chains, and hooks	The use of ropes, slings, and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.
		The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.
	Ropes, slings, chains, and hooks	Hooks, shackles, rings, pad eyes, and other fittings that show excessive wear or that have been bent, twisted, or otherwise damaged shall be removed from service.
		Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to insure that it is safe. Defective rigging equipment shall be removed from service.

Principal Steps	Potential Hazards	Recommended Controls
Loadout of scrap	Ropes, slings, chains, and hooks	Rigging equipment, when not is use, shall be removed from the immediate work area and properly stored so as not to present a hazard.
		Taglines shall be used to control the loads being handled by hoisting equipment.
	Hoisting Equipment	All hoisting equipment shall be capable of passing a performance (operating) test prior to being placed into service.
		At no time shall the hoisting equipment be loaded in excess of the manufacturers rating except during performance tests.
		While hoisting equipment is in operation, the operator shall not perform any other work and he/she shall not leave his/her position at the controls until the load has been safely landed or returned to the ground.
		A standard signal system shall be used on all hoisting equipment.
	Heat stress/Cold stress	Recognize warning signs
	Bees, spiders, and snakes	Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Cut hazards	Wear adequate hand protection.
	Falling objects	Hardhat, stay alert and clear of materials suspended overhead, steel-toed boots.
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
Power Washer PPE Rigging Equipment	• Pre-post maintenance • Visual prior to use	• Tailgate safety meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan (if applicable)

ACTIVITY HAZARD ANALYSIS
BACKFILLING AND SITE RESTORATION

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Backfilling and site restoration	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
	Areas on or adjacent to contaminated material	Implement appropriate level of protection.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting off or on any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
		All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.

Activity	Potential Hazards	Recommended Controls
Backfilling and site restoration	Areas on or adjacent to contaminated material	Bulldozer and scraper blades, end-loader buckets, and similar equipment will be either fully lowered or blocked when being repaired or when not in use.
		All self-propelled construction equipment shall be equipped with a back-up alarm.
	Overhead power lines	See distances
	Fire	Each bulldozer, backhoe, or other similar equipment will be equipped with at least one dry chemical fire extinguisher having a minimum UL rating of 5 A:B:C.
	Open excavations	IT Policy and Procedure HS307 "Excavation and Trenching" will be adhered to at all times.
		Excavations will be backfilled as soon as possible.
	Dump truck operations	Dump truck bodies shall be fully lowered or blocked when maintenance is being performed or when not in use.
		Dump trucks will have back-up alarms.
		A signal person will be used when the point of operation is not in full view of the vehicle, machine or equipment operator; vehicles are backed more than 100 ft; terrain is hazardous; or 2 or more vehicles are backing in the same area.
		Dump trucks will not be loaded in a manner that obscures the operator's view ahead or to either side or that interferes with the safe operation of the vehicle.
		The load on every truck will be distributed, checked, tied down, or secured.
		Loads will be covered when there is a hazard of flying/falling dirt, rock, debris, or material.

Activity	Potential Hazards	Recommended Controls
Backfilling and site restoration	Dump truck operations	All dump trucks will be equipped with a holding device to prevent accidental lowering of the body.
		All hoist levers will be secured to prevent accidental starting or tripping of the mechanism.
		Trip handles for tailgates will be arranged to keep the operator in the clear.
	Contact with moving equipment	Ground personnel shall wear reflective vests.
	Noise	Noise levels above 85 dBA mandates the use of hearing protection.
Backfill with existing clear materials or borrow material	Confined space hazards and trenching	Excavation and trenching will comply with 29 CFR 1926, USACE (Subpart P and Section 06.I and 25A)
Final grading	Contaminated borrow material	Check historical and analytical data on borrow material
	Noise hazards	Administer hearing protection
	Heavy equipment, travel	Use qualified operators
	Mechanical moving parts, pinch, paint, etc.	Have all grounding in place
		Use lockout/tagout for maintenance
		Assure all emergency stop switches are working
Equipment to be Used	**Inspection Requirements**	**Training Requirements**
• Hand tools • PPE • Heavy equipment	• Pre-postmaintenance • Visual prior to use	• Tailgate Safety Meeting • Site specific orientation • Hazardous waste operations • Hazard communication

ACTIVITY HAZARD ANALYSIS
EQUIPMENT DECONTAMINATION

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Job setup for decontamination of equipment	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the lift. Recommend wearing a back support if possible.
	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
	Cut hazards	Wear adequate hand protection.
	Lighting	Adequate lighting will be provided to ensure a safe working environment.
	Strains/sprains	When pulling or lifting, do not turn or twist your back.
		Use the proper tool for the task being performed.
	Contact with potentially contaminated materials	Appropriate PPE protection will be required.
		Real time air monitoring will take place during decontamination activities.
		Keep airborne particulates to a minimum.
		Practice good housekeeping, avoid spreading potentially contaminated materials.
	Fueling	Only UL/FM approved safety cans shall be used to store fuel.
		Do not refuel equipment while it is operating.
		Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.

Activity	Potential Hazards	Recommended Controls
Job setup for decontamination of equipment	Faulty or damaged equipment	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.
		Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
Pressure washing equipment	High pressures	IT Policy and Procedure HS303 "Hydroblasting" shall be adhered to at all times.
	Unqualified operators	Machinery and mechanized equipment shall be operated only by designated personnel.
	Out of control equipment	Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
	Noise	Sound levels above 85 dBA mandates hearing protection.
	Activation during repairs	All machinery or equipment will be shut down and positive means taken to prevent its operation while repairs or manual lubrications are being done.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Stay alert at all times!
	Falling objects	Hardhats, remove unsecured tools and materials before operating equipment.

Activity	Potential Hazards	Recommended Controls
Pressure washing equipment	Falling objects	Stay alert and clear of materials suspended overhead.
	Flying debris	Splash shield will be used.
	Contact with potentially contaminated materials	Appropriate PPE will be required.
	Hot work (hot water/steam cleaning)	IT Policy and Procedure HS314 "Hot Work in Hazardous Locations" will be adhered to at all times during any operations involving hot work.
Stage-setup equipment for pumping liquids	Pinch points	Keep hands, fingers, and feet clear of moving parts.
	Heavy lifting	Any lifting over 60 lbs requires assistance or the use of a mechanical lifting device.
	Moving equipment	Signal person will assist in positioning equipment.
	Contact with potentially contaminated materials	Real time air monitoring will take place. Appropriate PPE protection will be required.
Pumping liquids	Faulty equipment	Equipment will be inspected prior to being placed into service and at the beginning of each shift.
	Pressurized systems	All discharge hoses and connections shall be routinely inspected.
	Noise	Sound levels above 85 dBA mandates hearing protection.
	Fire	A dry chemical fire extinguisher with a minimum UL rating of 5 A:B:C will be readily available.
	Refueling	Proper bonding and grounding. Only UL/FM approved safety cans will be used.
Loadout of equipment	Noise	Noise levels above 85 dBA mandates hearing protection.
	Heavy equipment operations	Before any machinery or mechanized equipment is placed into service, it shall be inspected and tested by a competent mechanic and certified to be in safe operating condition.

Activity	Potential Hazards	Recommended Controls
Loadout of equipment	Heavy equipment operations	Equipment shall be inspected before being placed into service and at the beginning of each shift.
		Preventive maintenance procedures recommended by the manufacturer shall be followed.
		A lockout - tagout procedure shall be used for equipment found to be faulty or undergoing maintenance.
		Machinery and mechanized equipment shall be operated only by designated personnel.
		Getting on or off any equipment while it is in motion is prohibited.
		Machinery or equipment requiring an operator shall not be permitted to run unattended.
		Machinery or equipment will not be operated in a manner that will endanger persons or property nor will the safe operating speeds or loads be exceeded.
		All machinery or equipment will be shutdown and positive means taken to prevent its operation while repairs or manual lubrications are being done.
		All repairs on machinery or equipment will be made at a location which provides protection from traffic for repair persons.
		All self-propelled construction equipment shall be equipped with a back-up alarm.
	Fire	Each bulldozer, backhoe, or other similar equipment will be equipped with at least one dry chemical fire extinguisher having a minimum UL rating of 5 A:B:C.
Loadout of equipment	Truck and Equipment Traffic	Site personnel will wear orange safety vests to identify themselves to traffic.
		Load out area will be properly demarcated.

Activity	Potential Hazards	Recommended Controls
Loadout of equipment	Slip, trip and fall hazards	Good housekeeping, keep work area picked up and as clean as feasible. Continually inspect the work area for slip, trip, and fall hazards. Look where you step, ensure safe footing when climbing on/off equipment etc.
	Pinch points	Keep feet and hands clear of moving/suspended materials and equipment.
		Beware of contact points. Stay alert at all times!
	Strains/sprains	Use proper lifting techniques. Lifts greater than 60 lbs require assistance or mechanical equipment. Size-up the lift. Recommend wearing a back support if possible. When pulling on materials, pull in a straight line. Do not twist and pull simultaneously.
	Ropes, slings, chains, and hooks	The use of ropes, slings, and chains shall be in accordance with the safe recommendations of their manufacturer.
		Rigging equipment shall not be loaded in excess of its recommended safe working load.
		The use of open hooks is prohibited in rigging to lift any load where there is danger of relieving the tension on the hook due to the load or hook catching or fouling.
		Hooks, shackles, rings, pad eyes, and other fittings that show excessive wear or that have been bent, twisted, or otherwise damaged shall be removed from service.
		Rigging equipment for material handling shall be inspected prior to use on each shift and as necessary during its use to insure that it is safe. Defective rigging equipment shall be removed from service.

Activity	Potential Hazards	Recommended Controls
Loadout of equipment	Ropes, slings, chains and hooks	Rigging equipment, when not is use, shall be removed from the immediate work area and properly stored so as not to present a hazard.
		Taglines shall be used to control the loads being handled by hoisting equipment.
	Hoisting Equipment	All hoisting equipment shall be capable of passing a performance (operating) test prior to being placed into service.
		At no time shall the hoisting equipment be loaded in excess of the manufacturers rating except during performance tests.
		While hoisting equipment is in operation, the operator shall not perform any other work and he/she shall not leave his/her position at the controls until the load has been safely landed or returned to the ground.
		A standard signal system shall be used on all hoisting equipment.
	Heat	Be aware of warning signs of these conditions
	Bees, spiders, and snakes	Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Cut hazards	Wear adequate hand protection.
	Falling objects	Hardhat, stay alert and clear of materials suspended overhead, steel-toed boots.
Equipment to be Used	Inspection Requirements	Training Requirements
• Hand tools • PPE • Heavy equipment • Pressure Washer	• Pre-postmaintenance • Visual prior to use	• Tailgate Safety Meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan

ACTIVITY HAZARD ANALYSIS
SOIL/WATER SAMPLING

ANALYZED BY/DATE_____ REVIEWED BY/DATE_____

Activity	Potential Hazards	Recommended Controls
Staging equipment	Slip, trip and fall hazards	Determine best access route before transporting equipment.
		Good housekeeping, keep work area picked up and clean as feasible. Continually inspect the work area for slip, trip and fall hazards.
		Look before you step, insure safe and secure footing.
	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the lift. Recommend wearing a back support if possible.
	Falling objects	Stay alert and clear of materials suspended overhead. Use steel-toed boots and hard hat.
	Flying debris, dirt, dust etc.	Use safety glasses/goggles. Ensure that eye wash is in good working order.
	Pinch points	Keep hands, fingers, and feet clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!
	Bees, spiders and snakes	Inspect work area carefully and avoid placing hands and feet into concealed areas.
	Cut hazards	Wear adequate hand protection. Use care when handling glassware.
	Fire	Fire extinguishers shall be suitably placed, distinctly marked, readily accessible, and maintained in a fully charged and operable condition.
	Fire/chemical exposure	All solvents will be transported in UL/FM approved containers and sources of ignition will be prohibited.
		Initial real time air monitoring will take place.

Activity	Potential Hazards	Recommended Controls
Staging Equipment	Contact with moving equipment/vehicles	Work area will be barricaded/demarcated.
	Work in excavations	IT Policy and Procedure HS 307 - "Excavation and Trenching" will be adhered to at all times.
	Contact with moving equipment/vehicles	Equipment will be laid out in an area free of traffic flow.
	Hazard communication	Label all containers as to contents and dispose of properly.
		Obtain Material Safety Data Sheets for solvents, etc. that are being used.
	Noise	Sound levels above 85 dBA mandates hearing protection.
Sample Collection	Working at elevated heights/falls	Ladders will be secured by top, bottom, and intermediate fastenings as required.
		Personnel working at heights of 6 feet or more must be secured with fall protection (safety belt/lanyard).
	Electrical shock	All electrical circuits will be deenergized and locked out.
	Bees, spiders and snakes	Inspect work areas carefully and avoid placing hands and feet into concealed areas.
	Cross-contamination and contact with potentially contaminated materials	Sampling technicians will wear proper protective clothing and equipment to safeguard against potential contamination.
		Only essential personnel will be in the work area.
		Initial real-time air monitoring will take place before and during sampling activities.
		All personnel will follow good hygiene practices.
		Proper decontamination procedures will be followed.
		All liquids and materials used for decontamination will be contained and disposed of in accordance with Federal, State and Local regulations.
	Cut hazards	Use care when handling glassware.
		Wear adequate hand protection.

Activity	Potential Hazards	Recommended Controls
Sample Collection	Hazard communication	Label all containers as to contents.
	Strains/sprains	Use the proper tool for the job being performed.
		Get assistance if needed.
		Avoid twisting/turning while pulling on tools, grates, manway covers, etc.
	Spills/residual materials	Absorbent material and containers will be kept available where leaks or spills may occur.
	Lighting	Adequate lighting will be provided to insure a safe working environment.
	Unattended worker	"Buddy System" - visual contact will be maintained with the sampling technician during sampling activities.
	Confined spaces	IT Policy and Procedure HS300 - "Confined Spaces" will be adhered to at all times.
	Contact with potentially contaminated materials	Real-time air monitoring will take place. Appropriate PPE will be utilized.
		Good housekeeping will be stressed to safeguard against cross contamination of nearby areas and eliminate safety hazards.
		All site personnel will practice good personal hygiene by utilizing the decon facility on site.
		The work area will be demarcated. All unnecessary personnel will be kept out of the work area and in an upwind location.
		IT Policy and Procedure HS601 - "Respiratory Protective Devices" will be adhered to at all times.
		Maintain MSDS's for any preservatives such as HCl acid. Follow protection procedures.
Equipment decontamination	Chemical exposure	Maintain MSDS's for all chemicals such as methanol or hexane and follow protection procedures.
On-site sample analysis	Various	On-site laboratory will develop and adhere to a site specific chemical hygiene plan (CHP). the CHP will be submitted to the SHM for review and acceptance.

Activity	Potential Hazards	Recommended Controls
Moving and shipping collected samples	Heavy lifting	Use proper lifting techniques. Lifts greater than 60 lbs. require assistance or mechanical equipment; size-up the lift. Recommend wearing a back support if possible.
	Pinch points	Keep hands, fingers, and feet clear of moving/suspended materials and equipment.
		Beware of contact points.
		Stay alert at all times!
	Cut hazards	Wear adequate hand protection. Use care when handling glassware.
	Hazard communication	Label all containers as to contents and associated hazards.
	Training	See section 9.0 of SHSP
Equipment to be Used	Inspection Requirements	Training Requirements
• Hand tools • PPE • Sampling equipment	• Pre-postmaintenance • Visual prior to use	• Tailgate Safety Meeting • Site specific orientation • Hazardous waste operations • Hazard communication • Lead Control Plan (if applicable)

APPENDIX F

SITE SAFETY AND HEALTH PLAN ADDENDA

Proposition 65 Warning and Notification

As required under the Safe Drinking Water and Toxic Enforcement Act of 1986 (also known as Proposition 65), on February 27, 1987, the Governor published a listing of those chemicals determined by the State of California to cause cancer, birth defects, or other reproductive harm. Proposition 65 requires that businesses that handle any of the listed chemicals notify people in the affected area of that fact. IT Corporation handles some of the listed chemicals at the NAS Alameda TSTA Project in Alameda California.

The chemicals present on site that have been determined to cause cancer include:

- PCBs

The following contaminants on site have been determined by the State to cause reproductive harm:

- Lead