CLOSURE PLAN FOR UNDERGROUND STORAGE TANKS AT CAMP PARKS

REVISION A

Prepared by: Augustin Rodriguez
SSPORTS Environmental Detachment
Vallejo, CA 94592-0135

October 2, 1998

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CLOSURE PLAN

CAMP PARKS

UNDERGROUND STORAGE TANKS

Augustin Rodriguez, Project Engineer
SSPORTS Environmental Detachment — 10/24/97 Date

Reviewed and Approved by:

Russ Finlinson, UST Project Manager
SSPORTS Environmental Detachment — 10/24/97 Date

Gary VanderMolen, Health & Safety Project Engineer
SSPORTS Environmental Detachment — 10-24-97 Date

John Bouldt, Health and Safety Office
SSPORTS Environmental Detachment — 1/22/98 Date

or

N/A
Greg Rodgers, Health & Safety Office
SSPORTS Environmental Detachment — Date

Vic George, Deputy Director
SSPORTS Environmental Detachment — 2/27/98 Date

R. K. Pieper, Director
SSPORTS Environmental Detachment — 2/26/98 Date

WORK PLAN
UNDERGROUND TANK REMOVAL
CAMP PARKS

List of Revisions

Revision	Description	Approval	Date
A	Added instructions to remove a gasoline tank. Updated the Health and Safety Plan to the latest requirements, with special emphasis on excavation/utility safety		10/29/98 10/29/98 11/2/98

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1.0 INTRODUCTION

1.1 CONTENTS & PURPOSE

This Underground Storage Tank (UST) Closure Plan Revision A contains the necessary Work Plan and Health and Safety Plan required by regulations for removal of one Underground Storage Tank by **SSPORTSENVDET.**

The purpose of this tank closure project is to safely and permanently remove one UST at three sites on Camp Parks and to examine and remediate, as feasible, any contamination and properly backfill the excavations.

1.2 TANK SITES

The following is a listing of the tank sites covered under this closure plan.

1. SITE 1100 RESIDENTIAL HOME (COMPLETED)
2. SITE CONCRETE SLAB (COMPLETED)
3. SITE 334 GASOLINE TANK

This plan includes all environmental health and safety requirements.

1.3 ASSIGNMENT

Camp Parks tasked **SSPORTS** Environmental Detachment to implement the removal of one tank listed above at Camp Parks. See Appendix B for maps.

1.4 SCOPE OF WORK

Underground Storage Tank and associated piping will be emptied, removed, or capped by **SSPORTSENVDET** personnel who have had the training and experience required by Federal, State and local regulations.

All work operations shall meet the safety and health requirements of OPNAVINST 5100.23D and 29CFR 1926. Safety requirements of the handling of all hazardous waste shall be accomplished as indicated in the Health and Safety Plan, Appendix A.

1.5 RESPONSIBILITIES

SSPORTSENVDET:

(1) Bob Turpin (phone 562-3498) responsible for taking samples, preserving, packing and sending samples to a State of California certified laboratory for analysis.

(2) G. Rodgers/J Bouldt (phone 562-3245/562-3200) responsible for providing the Occupational Safety and Health program to ensure workers' safety, confined space rescue, spill containment and clean up.

(3) Augie Rodriguez (phone 562-3244) is the UST Program Engineer with overall responsibility for coordinating with regulatory agencies for this project.

(4) Gary VanderMolen (phone 562-1966) is the Project Engineer with overall responsibility for the technical administration of the Health and Safety Plan.

(5) Chuck Watson (phone 562-3211) is the UST Project Engineer responsible for the Summary Removal Report.

(6) Russ Finlinson (phone 562-1965) is the UST Project Manager.

(7) Jim Porter (phone 562-3337) has overall responsibility for planning, coordinating, directing and controlling industrial work at the site. Responsibilities include establishing and maintaining the Field Log Book.

(8) The Parks Reserve Forces Training Area (PRFTA) Fire Department has overall responsibility for coordinating fire emergencies.

2.0 SITE INFORMATION

2.1 SITE DESCRIPTION

Camp Parks is located within the PRFTA complex. The UST to be removed is located on Camp Parks. A Camp Parks UST general site location map is located on Fig. B-1 in Appendix B.

2.2.1 B334 SITE

One(1) abandoned gasoline tank is located at this site. It is assumed that this tank was used to store gasoline for automoviles, the tank size is not known.

3.0 WORK PLAN

Note: All work required in this section and sampling shall be performed by **SSPORTSENVDET OPS** personnel unless otherwise indicated.

3.1 ADVANCE PLANNING

3.1.1 WORK FORMS & RECORDS

The Safety Meeting Sign-off Sheet is required by Section D of Appendix A. A copy is provided in Attachment HS-2.

The Confined Space Entry Permit is required by Section L.2 of Appendix A. A copy is provided in Attachment HS-4.

The Utilities Site Safety Form is required by Section L.7 of Appendix A. A copy is provided in Attachment HS-5.

The Site Log Book (also known as the Field Log Book) is required by Section 4.3.1. A reproducible copy of the Site Log Sheet is provided in Appendix D.

A Chain of Custody Record is required to be filled out with each sample sent to our contract laboratory, Calscience Environmental Laboratories, Inc. A reproducible copy of the form is provided in Appendix D.

A Hazardous Waste label is required on each container of hazardous waste. A copy of what a filled out label should look like is provided in Appendix D. The **SSPORTS** UST Removal Team will assign each container a control number, fill out the Hazardous Waste label, and attach it to the container.

A Hazardous Waste Containment Pile and Hazardous Waste Container Weekly Inspection Form is provided in Appendix D. Inspections are to be accomplished weekly by the site supervisor.

3.1.2 TOOLS, EQUIPMENT & SUPPLIES

Procure and stage tools and equipment necessary to do soil/water/spoils sampling, UST excavation, removal and site restoration. The UST removal will require enough equipment to support up to 4 soil and/or water samples.

3.1.3 PERSONNEL TRAINING AND MEDICAL CERTIFICATION

Ensure that all personnel are appropriately trained, as required by Sections K and L of Appendix A. The assigned supervisor will ensure all assigned personnel are medically qualified to work with any suspected hazardous waste.

3.1.4 DOCUMENTATION

Forward copies of all documents pertinent to this UST closure plan to the UST Project Manager **(SSPORTSENVDET)** for inclusion in the Removal Summary Report.

3.2 SITE PREPARATION

3.2.1 INSTALL FENCE AND SITE CONTROL

Install a six-foot-high portable chain link fence with "**NO SMOKING**" placards around the UST excavation. Establish an area for staged material and excavated soils if there is insufficient room inside the fence. See Appendix B for recommended site control/layout sketch. The fence will serve as a safety barricade and exclusion boundary. Ignition sources shall be prohibited in the exclusion zone. When hot work is necessary, see Appendix A, section L.4 for appropriate instructions. All stormwater catch basins and sanitary sewerage system manholes shall be secured to prevent any runoff from entering the respective systems. Herculite, sealant and/or berms may be used.

3.2.2 NOTIFICATION

Notify the following organizations as required to schedule and coordinate their participation and involvement in the UST removal.

ORGANIZATION NAME	PHONE NO.
Sample Team	707-562-3495
Occupational Safety and Health Office	707-562-3245/3200
Environmental Compliance Office	707-562-3253
Operations	707-562-3478
Camp Parks Point of Contact	925-803-5638
UST Project Manager	707-562-1965

3.2.3 LOG BOOK

Establish the Field Log Book and begin recording daily entries. See paragraph 4.3.1 for detailed requirements. Reproducible pages are located in Appendix D.

3.2.4 SAFETY MEETING

Conduct a "kick-off" safety meeting before each excavation begins and hold subsequent safety meetings on a daily basis. HASP acceptance form (Attachment HS-2.) must be completed by the Project Supervisor and each person performing the work.

3.3 GASOLINE TANK REMOVAL

The following are general guidelines for the gasoline gallon tank removal.

3.3.1 DRAIN PIPING

Backdrain inlet and outlet piping into the tank. Care must be exercised to prevent spilling contents to the soil.

3.3.2 LIQUID REMOVAL

Pump out contaminated water from the tank into on-site transfer container as determined by the **SSPORTSENVDET** UST Removal Team.

Backdrain inlet and outlet piping into the tank. Care must be exercised to prevent spilling contents to the soil.

Place any removed piping or pumping components on plastic sheeting for further inspection and handle as contaminated waste.

3.3.3 TANK PREPARATION

Remove the fill pipe, drop tube, gauge pipe, vapor recovery truck connection, submersible pumps and other tank fixtures using non-sparking tools. Cap or remove all non-product lines except the vent line, which shall remain connected until the tank is purged or inerted. Any piping abandoned under permanent structures must be cleaned, inerted and capped or plugged. Temporarily plug all other tank openings so that all vapors will exit through the vent line when vapor-freeing the tank. Inspect the piping for any holes, stains, odors or other physical evidence of leakage. Document any adverse conditions of the piping or tank by photographs and sketches as applicable.

3.3.4 REMOVE OVERBURDEN

CAUTION: prior to any excavation, notify USA dig at 1-800-227-2600 at least 72 hrs in advance to ensure that all utilities are marked. Request a "Field Meeting" to ensure that the site is properly marked, all utilities identified and Form HS-5 is completed. Approach utilities by power equipment, then use hand tools to expose them. Pre-position stanchions, barrier tape and required

placards to mark/barricade all open excavations. See Subpart L.8 of Appendix A "Trench/Excavation Safety" for additional safety constraints on this job.

Any buried utility lines (identified by USA) adjacent to the tank, and in the way of excavation for tank removal must be removed. Excavate around the tank down to existing utility lines on all sides of the tank. As utilities are uncovered, check them off on Attachment HS-5 of Appendix A.

When underground utilities are exposed, notify the appropriate personnel to secure, remove and cap all utility lines that must be removed to accommodate the tank removal.

Remove overburden down to the tank top. Place soil in a containers or containment piles if immediate removal from the site is not possible.

Treat the soil and tank components removed from the excavation site as contaminated waste until certified laboratory testing results can confirm their level and type of contamination (see Section 3.4). Segregate, store, and label in accordance with the **SSPORTSENVDET** Hazardous Material Plan Guidelines using the label example in Appendix D.

During the soil excavation work, separate the excavated materials into two categories; "possibly contaminated" and "possibly uncontaminated", as detailed in paragraph 4.1.1.2. (Field Screening), in order to reduce treatment and disposal costs. Place these excavated soils in separate containment piles or covered metal containers. Line the container with 6 mil plastic sheeting.

3.3.6 INERTING

Add a minimum of 1.5 pounds dry ice per 100 gallons of tank capacity to inert the tank. As the dry ice vaporizes, flammable vapors will flow out of the tank and may surround the area. The vent from the tank during purging shall discharge a minimum of 12 feet above grade and 3 feet above any adjacent structures. Ensure that all of the dry ice has vaporized before continuing the removal of the tank.

The method provided will temporarily inert the tank atmosphere. The tank may continue to be a source of flammable vapors after purging. Caution must always be

exercised when handling or working around tanks that have stored flammable or combustible liquids. Before working in the area of a tank, a combustible gas indicator (CGI) shall be used to assess vapor concentrations in the tank and work area.

3.3.7 TESTING (NPS ACTION)

The inspector shall be present for gas free tank testing prior to tank removal and prior to tank loading for transportation off-site. The tank vapor space and excavation area shall be regularly tested for flammable or combustible vapor concentrations until the tank is removed from the excavation and the site. Test with a combustible gas indicator which has been properly calibrated in accordance with the manufacturer's instructions.

The tank vapor space is to be tested by placing the (CGI) probe into the fill opening with the drop tube removed. Readings shall be taken at the bottom, middle and upper portions of the tank, and the reading shall be cleared after each reading. If the fill tube is not removable, then readings shall be taken through another opening. The readings must be 10% or less of the lower flammable limit and less than 5% oxygen before the tank is safe for removal. Approval from the inspector shall be obtained prior to tank removal.

3.3.8 REMOVAL

After the tank is inerted and before it is removed from the excavation, remove the vent line and plug or cap all of the accessible holes. One plug must have a minimum of a 1/8 inch vent hole to prevent the tank from being subjected to excessive internal pressure.

Disconnect the tank hold down straps if present. Remove the tank from the excavation and place it on a level surface using wooden chock blocks to prevent the tank from rolling.

All ballast slabs and holding straps will be removed from the excavation as part of the tank removal. If the ballast slab is below the groundwater level, removal may not be required. The inspector will make the final determination for slab removal.

3.3.9 INSPECT AND LOAD TANK

Once the tank is at ground level, inspect, document and photograph the tank for structural failure, stains, corrosion and any other indications of a containment failure. Use screwed (boiler) plugs to plug any corrosion leak holes. The Health Department Hazardous Material Specialist will spray paint the permit number on the side of the tank.

Load the tank on an approved hazardous waste hauler. The tank must be positioned on the truck so that the plug having the 1/8 inch vent hole is located at the uppermost portion of the tank.

3.3.10 TAKE SOIL SAMPLES

All soil/water samples will be conducted under the guidance of the Inspector and in accordance with the requirements of Section 4 of this work plan.

3.3.11 SECURE SITE UNTIL SAMPLE RESULTS HAVE BEEN OBTAINED

Secure site IAW Health and Safety Plan Section D requirements and Detail Location Map (see Appendix B). Maintain locked 6-foot metal fencing, around excavation and spoils. Provide berm around excavation to prevent intrusion of rainwater runoff. Berm may be constructed using clean fill materials with plastic sheeting.

3.4 HAZARDOUS WASTE MANAGEMENT

3.4.1 HAZARDOUS WASTE CONTAINMENT

Soil, concrete and tank components removed from UST excavations will be treated as contaminated waste until laboratory testing results confirm their level and type of contamination.

Although materials confirmed to be hazardous will normally be scheduled for immediate removal from the UST site for appropriate disposal/remediation, the actual removal may take several weeks.

The requirements for on-site management of hazardous waste found under Hazmat Manual 4410.2, which regulates the accumulation of hazardous wastes, are to be strictly observed during all UST closure operations. This regulation specifies that generators of hazardous waste are responsible for compliance with the following:

Containers used to hold hazardous waste shall be closed. Ensure the container is in good condition and not leaking waste to surrounding areas. If containment piles are used, the area shall be bermed and lined with a double layer of 6 mil plastic and completely covered. Inspections shall be conducted weekly and after storms by the on-site supervisor to verify that: (1) no leaks exist in the container or containment system; (2) any installed berms are in good shape; (3) the containment pile is properly covered with plastic; and (4) the installed fencing around the area is in place with "**NO SMOKING**" placards. Make a date/time entry in the Site Log Sheet recording the inspection and any results or corrective action required or taken.

- Containers used for the storage of liquid hazardous wastes shall be inspected weekly by the on-site supervisor to ensure container integrity. Any leaking containers shall immediately have the contents transferred to another container and be repaired or scrapped as necessary.
- All hazardous waste containers shall be labeled in accordance with Hazmat Manual 4110.2. The labeling (see Appendix D for label example) shall state:
    - the accumulation start date; i.e., the date the 90-day storage limit began;
    - the words **"HAZARDOUS WASTE";**
    - the composition and physical state of the waste;
    - warning words indicating the hazardous properties of the waste (e.g. toxic, ignitable, reactive, corrosive);
    - the name and address of the generating facility.
- All wastes stored in containments must be *like* wastes, (i.e. earth with earth, concrete with concrete, etc.).

- The designated holding area shall have staged within its boundaries a portable fire extinguisher, flat-blade shovel, and broom. Access to a telephone for the purpose of emergency response team notification is also required.
- For security purpose, at the start of waste accumulation the on-site supervisor shall post the holding area with signs visible from 25 feet, carrying the legend **"DANGER, HAZARDOUS WASTE AREA -- UNAUTHORIZED PERSONNEL KEEP OUT."**

In the event of a hazardous waste spill, stop the spill, warn others and isolate the area. If **SSPORTS** personnel are unable to control the spill contact the fire department. Rescue any individuals when possible, without risking your safety. Clear the area to a safe distance from the spill.

3.4.2 WASTE DISPOSITION (CAMP PARKS ACTION)

After the soil, tank and pipe materials and removed groundwater have been analyzed and classified, their disposal will be individually evaluated and determined.

Excavated soil may be used as fill material for the site from which it was excavated if approved by the **SSPORTS** Project Manager. Soil determined to be Hazardous Waste will be manifested by the Camp Parks authorized personnel and be shipped to a permitted Treatment, Storage and Disposal Facility.

3.5 SITE RESTORATION

3.5.1 OBTAIN RESTORATION GO-AHEAD

1. Backfilling of the tank excavation will not be undertaken until approved by the UST Project Manager. Soil and water samples must have been taken from the excavation and analyzed prior to any backfilling.

2. The preferred makeup backfill material is sand, gravel or pea gravel, procured from reputable local sources.

3. Any excavation material from the tank site or other native material from Camp Parks must be analyzed and approved by the Project Manager before it can be used as backfill.

4. Once the tank is removed, assure that the excavated pit will be properly secured in accordance with section 3.3.11. Any stockpiles of dirt shall also be covered with Visquine™ or similar durable plastic material.

3.5.2 FILL AND COMPACT TO UTILITIES LEVEL.

3.5.2.1 FILL

Fill with clean fill up to 4½ feet of the finish surface level or to a level necessary to support reinstallation of removed utilities. The excavation may have to be pumped to keep it dry enough to allow workers inside the excavation during utility restoration.

The fill and consolidation may occur in stages with various utility restoration occurring at different depths in the tank pit.

3.5.3 REINSTALL AND TEST UTILITY LINES

Active utilities removed or damaged by the UST removal work shall be repaired and retested prior to their reactivation at the discretion of the responsible person.

3.5.4 FILL AND COMPACT SUBSURFACE

Fill the upper 4½ feet of the tank pit with clean fill in six to twelve inch lifts, compacted to a minimum of 95% of the optimum density specified in ASTM-D-1556.

Use clean soil from the tank pit, if approval is obtained from the UST Project Manager.

Use clean soil Class 2 aggregate, sand, or pea gravel procured from a local reputable source for all make up fill material.

3.5.5 SURFACE RESTORATION

The surface shall be restored to the original condition or to match the surrounding surface as appropriate. Use paragraph 3.5.5.1 or 3.5.5.2, as required, for asphalt or concrete surface restoration.

3.5.5.1 ASPHALT

Pave the final four inches with asphalt. This procedure can be modified, if required, to match the existing site subgrade and paving.

3.5.5.2 CONCRETE

Concrete, if used, shall have a 3,000 psi strength with a maximum aggregate size of one inch, a slump of not more than three inches. Consolidate the concrete using concrete vibrators and finish the surface to grade. Provide contraction joints at intervals not to exceed five feet. Provide expansion joints at intervals of not less than 30 feet nor more than 50 feet. This procedure can be modified, if required, in the detail site specifications to match the existing site subgrade, paving, curbing, sidewalks, etc.

3.5.5.3 LANDSCAPE AREAS

Backfill using only clean fill materials and compact to 90 percent density to within about 12 inches of grade. Top with clean soil similar to the surrounding topsoil and re-seed as necessary to be compatible with the surrounding vegetation.

4.0 QUALITY ASSURANCE

4.1 SAMPLING AND ANALYSIS PLAN

The objective of the soil and groundwater sampling is to determine whether the UST is a source of soil and groundwater contamination. Further investigations will remain ongoing at the UST site, if deemed necessary, after completion of the UST removal. The following sections present the rationale, sample types, and sample locations for UST contents, soil, and groundwater sampling.

The sampling and analysis activities associated with removing USTs involves soil and groundwater sampling from the UST excavations. Soil samples will be taken from the native soil / backfill interface beneath the UST and from the ends of the soil excavation. Sample results will be used to determine if releases from the UST have contaminated the soil adjacent to the UST. If groundwater is encountered in the

excavation pit, it will be sampled to determine whether contaminant releases have impacted the groundwater adjacent to the UST.

4.1.1 SOIL AND GROUNDWATER SAMPLING

Soil and, if appropriate, groundwater samples will be taken. When water is not present in the excavation, take soil samples from the native soil just below the interface of the backfill and the native soil. When water is present in the excavation, collect soil samples at the high water stain along the sidewalls. Take water samples when groundwater is present in the excavation. The following sections provide methods for soil and groundwater sampling from UST excavations.

4.1.1.1 SOIL SAMPLES

Collect soil samples as soon as possible after reaching the required depths for samples. Collect samples as directed by the Project Manager. As a minimum, two soil samples must be taken in the location specified by the Project Manager.

4.1.1.2 FIELD SCREENING

The purpose of field screening is to sort the excavated soil into two categories: "possibly contaminated" and "possibly uncontaminated."

After removal of the UST and backfill materials, perform field screening to determine if soil hydrocarbon contamination exists as a result of UST leakage. Field screening includes: visual observation of soil discoloration, oily sheen on groundwater; the presence of odor in the breathing zone, and the use of portable air monitoring instruments, such as Photoionnization Detector (PID), or Flame Ionization Detector (FID). Base field screening of soil contamination on field screening methods only, not on laboratory analysis of soil samples. Note all observations in the project log book.

An example of portable field instrument screening would be the use of the Photoionization Detector (PID). The PID will show a reading when it is used around any volatile (VOC) or semi-volatile organic compound (SVOC) including the tank and

adjacent equipment. Find the soil background level around the tank installation, then place the soil in a clean plastic bag (12" zip lock) providing enough air space to insert the probe without contacting the soil. Allow a few minutes for vapors to accumulate. Use the PID as a screening device to find whether excavated soil exceeds the background level. If the soil exceeds the background level then it is contaminated and shall be deposited in the "possibly contaminated" pile.

4.1.1.3 EXCAVATI0N BOTTOM SOIL SAMPLES

Collect soil samples, the Project Manager will indicate the exact location from which samples are to be taken.

Obtain soil samples from the backhoe bucket when it is brought to the surface. Personnel must not enter the pit for samples unless OSHA requirements for excavation safety have been met, as stated in Appendix A section L.8.

Approximately three inches shall be rapidly scraped away from the surface of this soil, then a clean brass tube (at least three inches long) shall be driven into the soil with a suitable instrument. The ends of the brass tube shall be covered with aluminum foil, and then a plastic end caps and finally wrapped with suitable tape.

To obtain the most accurate samples, take care to minimize the amount of soil disturbance during sampling, thus avoiding loss of volatile constituents. Store all soil samples in a cooler with crushed ice or dry ice or store at less than 4°C (39° F) and transport to a laboratory within two working days.

4.1.1.4 STOCKPILED SOIL SAMPLING

Collect and analyze one composite soil sample for every 30 cubic yards of excavated soil from the pit. Each composite sample will consist of four separate soil samples taken from different locations. Take samples from a depth of at least 3 inches below the surface of the pile.

4.1.1.5 ACCUMULATED CONTAMINATED LIQUID SAMPLING

Accumulated liquid from all phases of the tank removal will be collected in transfer containers and sampled prior to disposal. Use a liquid sample bomb to collect one sample from the transfer container. Use a rope to lower the sample bomb into the transfer container. Lower the sample bomb slowly to the level to be sampled, then trigger the sample bomb, allowing fluid to slowly fill it. Remove the sample bomb slowly from the transfer container and transfer the liquid sample to an appropriate container. **Submerge and remove the bomb slowly to minimize agitation.** If the depth of the liquid in the container is enough to have allowed stratification to occur, then sample the container liquid from the top, middle and bottom of the container liquid level to ensure a representative sample collection for analysis. Only one sample from the container will be analyzed.

4.1.2 GROUNDWATER SAMPLING

Take one groundwater sample from within the excavation pit if the groundwater level is higher than the bottom of the excavation. To collect a water sample from a UST excavation pit, remove groundwater by either pumping into a transfer container or have a pump or vacuum truck remove the water from the UST excavation prior to collecting the groundwater sample. If any free product is found floating in the excavation, notify the Project Manager immediately (see Section L.3 of Appendix A). Store, analyze and dispose of the pumped water in accordance with section 3.4. When a sufficient amount of water has recharged into the excavation, collect a groundwater sample. Lower the liquid sample bomb slowly to the level to be sampled, then trigger the sample bomb, allowing fluid to slowly fill it. Slowly remove the sample bomb from the transfer container and transfer the liquid sample to an appropriate container. **Submerge and remove the bomb slowly to minimize agitation.**

4.1.2.1 SOURCE CONTROL

The objective of source control is to remove a continuing source of contamination of soils and groundwater. Contaminated soil and free product must be removed from the excavation pit to provide effective source control . **Do not pump groundwater from the excavation pit as a means of source control.**

If soil contamination is observed, contact the UST Project Manager. The Project Manager shall determine and authorize the extent of source control to be utilized. Enlarge the pit configuration as appropriate. Use visual observation of contamination to determine the extent of excavation. Halt the excavation if any of the following conditions are encountered:

- The excavation produces a structural risk to adjacent buildings or other significant structures.
- Soil staining indicates that the contamination may be from a different source and not from the UST. This determination may be made on evidence such as location and color of soil staining within the excavation and soil sample analysis with increasing excavation.
- Groundwater is encountered.

Continue excavation if it appears to be successfully remediating contaminated soil at the UST site (i.e., UST associated contamination is decreasing with increased excavation). However, excavate no more than approximately seven feet of soil around the UST, and five feet of soil from underneath the UST. Collect confirmation samples from the excavation sidewalls and/or bottom.

4.1.2.2 SOURCE CONTROL SOIL SAMPLES

Continue source control excavation after collection of the first two soil samples if contamination is observed. After removal of the contaminated soil, collect samples from the excavation sidewalls and/or bottom. Collect these samples based on suspected worst-case locations.

If the samples continue to indicate hazardous constituents beyond regulatory action levels, a site investigation will be required to determine the extent of contamination. Interim site restoration measures will be provided by the UST Project Manager.

4.1.3 SUMMARY OF CHEMICAL ANALYSIS

The chemical analyses to be performed on soil, groundwater, and UST contents samples are summarized in the table which follows. This table is extracted from "Table #2" of the Tri-Regional Board Staff recommendations of 10 August 1990.

CONSTITUENT	SOIL ANALYSIS	WATER ANALYSIS
TPH G	GCFID Method (5030) or TPH and BTX&E by 8260 CRYOGENIC FOCUSING TOTAL LEAD AA	GCFID Method (5030) or TPH and BTX&E by 8260 CRYOGENIC FOCUSING TOATAL LEAD AA
BTX&E AND CL HC	Method 8020 or 8240	Method 602 or 624

4.2 SAMPLE HANDLING, SHIPMENT AND CHAIN-OF-CUSTODY

This section describes sample handling procedures, including sample identification and documentation, sample containerization, sample shipment, and Chain-of-Custody.

4.2.1 SAMPLE IDENTIFICATION

Give each sample a unique identification (ID) number to provide a means of tracking the sample from collection through analysis. The ID number indicates: (1) the general sample location (UST excavation number), (2) sample matrix, (3) sample depth for soil samples or water table depth for groundwater samples, (4) the specific sampling location (sample location within an excavation) and (5) the sample number. Enter the

ID number on sample labels, Chain-of-Custody Record forms, field log book, Chain-of-Custody forms, and other records documenting the sampling activities.

4.2.2 SAMPLE LABELS

Affix a sample label (see Appendix D-2) to each sample container as samples are obtained and containerized. The label must indicate Camp Parks, sample number, the name of the sampler, the time and date of sample collection, any preservatives used, and field observations. The label must be type-written or computer printer generated for clarity. Once the label is completed, place clear plastic tape over the label to protect it from damage.

4.2.3 SAMPLE DOCUMENTATION

Use Chain-of-Custody Record forms (see Appendix D-1) to document the sample collection process and other pertinent information regarding sample location, sampling times, and conditions. Complete the Chain-of-Custody Record form as samples are obtained. The Chain-of-Custody Record form has spaces to write down the site, sample ID number, date and time of sample collection, the name of the sampler, and comments, such as weather conditions, problems containerizing sample, and field equipment readings.

4.2.4 SAMPLE CONTAINERIZATION

This section describes the sample containerization procedures. Procedures involved with the activities are discussed below.

4.2.4.1 CONTAINERS

All samples will be containerized in accordance with SW846, US EPA Test Methods for Evaluating Solid Waste, and packaged for delivery to the analytical laboratory to maintain sample integrity and chain-of-custody. Filled sample containers shall have an approved security seal in place to prevent sample contamination or tampering.

Package the UST contents and groundwater samples in appropriate containers. UST contents and groundwater samples being analyzed for TPH extractables will completely fill each container. Fill water sample containers being analyzed by Method 624 for BTEX until a meniscus forms at the top. Check the container for air bubbles, and remove any bubbles present by agitating the container to bring them to the top and add additional liquid. Tightly seal the cap, complete with Teflon™ inner lining, onto the container. Affix a sample label to the container, and use clear tape to cover the label.

4.2.4.2 PRESERVATION

Preserve all samples in accordance with SW846, US EPA Test Method for Solid Waste, and record the preservative and volume used in the field logbook. Add the required volume of preservative to the sample container prior to shipment to the site. Mark the sample labels with preservative and volume used. Package samples, place on crushed ice or dry ice or store at less than 4° C.

4.2.5 SAMPLE SHIPMENT AND CHAIN-OF-CUSTODY

Within two working days, ship all samples to the laboratory from the site in sealed sample storage coolers. Begin the chain-of-custody procedures at the time of sample collection by placing the packaged and labeled samples into the cooler, and covering them with bagged ice or dry ice or storing them at less than 4° C. At the end of the day complete all sample documentation and Chain-of-Custody forms. Seal all required documentation in a Ziplock™ bag and tape to the inside lid of the cooler. Seal coolers with tamper-proof custody seals that will warn against tampering.

Adhere to the following procedures when completing the Chain-of-Custody form:

Project Name — Enter the project name.

Project No. — Enter the complete project number.

Samplers — Enter the signature and print the names of people who participated in collecting the sample and whom to contact if questions arise during sample log-in.

Sample No. Enter ID number.

Date and Time Enter the date and time of sample collection.

Sample Location Enter UST number.

Parameters Check the parameters to be analyzed for each sample listed. Identify analysis method if not indicated on the form.

No. of Containers Enter the total number of sample containers for a given location. *(in Remarks block)*

Remarks Enter any remarks related to sample identification, chain-of-custody, or field observations.

When all line items are completed or when the samples are picked up, the custodian signs and dates the form, lists the time, and confirms the completeness of all descriptive information contained on the form. Each individual who subsequently assumes responsibility for the sample signs the Chain-of-Custody form and indicates the reason for assuming custody. The field chain-of-custody terminates when the laboratory receives the samples. The field sample custodian retains a copy of the Chain-of-Custody form for project files. The Chain-Of-Custody form is located in Appendix D of this work document.

4.3 DATA REPORTING

Data reporting requirements are divided into field data requirements and laboratory data requirements. Field data requirements include documentation of field activities and measurements and Chain-of-Custody Record forms, and data transfer to the UST removal report.

Laboratory data reports include internal QC checks, analytical data results, system audits, and corrective actions but are not addressed within this Quality Assurance section, which is limited to tank removal sampling.

4.3.1 FIELD DATA REPORTING

Maintain field documentation in the following types of documents: field logbooks, sample tags, Chain-of-Custody forms, Chain-of-Custody Record forms for recording sampling activities, and field equipment calibration and maintenance data. A description of these activities is given in the applicable Sections. Use the following general guidelines for maintaining field documentation:

FIELD LOG BOOK

- Complete documentation in permanent ink.
- Ensure all entries are legible.
- Correct errors by crossing out with a single line, dating, and initialing.
- Do not destroy any serialized documents, but maintain on-site and reference in the field logbook
- Do not remove any page from the logbook , all pages shall be clearly numbered.

Use three ring binders as logbooks with **sequentially numbered pages** for the maintenance of field records. On the front cover of the logbook list the Project Name, Project Number and Project Manager. At a minimum, record the following information in the field logbook:

- Name and affiliation of all "non SSPORTS" personnel or visitors on-site
- Any adverse weather conditions
- Log and summary of daily activities and significant events
- Notes of conversations with coordinating officials
- ID number of instruments used
- Results of calibrations and field measurements.
- Documentation of sampling activities

- Decontamination procedures
- Reference to other field logbooks or forms that contain specific information
- Discussion of problems encountered and their resolution
- Discussions of deviations from the SAP, Work Plan, or other governing documents

4.4 CALIBRATION PROCEDURES AND FREQUENCY

Calibration procedures and frequency tables are listed in Attachment HS-6 to the Health and Safety Plan.

HEALTH AND SAFETY PLAN
UNDERGROUND STORAGE TANK
REMOVAL / CLOSURE
CAMP PARKS

REVISION A

Prepared by: Gary VanderMolen
SSPORTS Environmental Detachment
Vallejo, California 94592-0135

October 30, 1998

SITE-SPECIFIC HEALTH & SAFETY PLAN
CAMP PARKS UST REMOVAL / CLOSURE

TABLE OF CONTENTS

REFERENCES

1. OPNAVINST 5100.23D, Navy Occupational Safety and Health Program Manual
2. 29 CFR 1910.146, Permit Required Confined Spaces
3. NAVSEA Technical Manual S6470-AA-SAF-010, Gas Free Engineering Program
4. ASTM Standard E1575-93, Standard Practice for Pressure Water Cleaning and Cutting
5. NEHC-TM92-6, Prevention and Treatment of Heat and Cold Stress Injuries
6. 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response
7. 29 CFR 1926.1101, Asbestos in the Construction Industry
8. NAVSHIPYDMAREINST 5100.36, Occupational Safety and Health Workplace Manual
9. 29 CFR 1910, General Industry Standards
10. 29 CFR 1926, Construction Standards
11. EM 385-1-1 (3 Sept 1996), US Army Corps of Engineers, Safety and Health Requirements Manual

LIST OF ATTACHMENTS

A. PURPOSE

The purpose of this project is to safely excavate, and remove, the underground storage tanks (UST) located at Camp Parks.

B. SITE DESCRIPTION

Description: Three sites are involved: The first site (at building 1100) has a 300 gallon tank that was used to store heating oil for a residence. The second site has a buried 55 gallon drum that contains arsenic contaminated water. The third site has an abandoned gasoline tank, size unknown.

Existing hazards: Arsenic; residual heating oil; residual gasoline with possible lead contents; confined space, potential asbestos pipe lagging.

Surrounding population: Camp Parks PRFTA employees.

General topography: Generally level, asphalt paved ground or sod. Depth to groundwater is unknown.

Climate: Typical summer day is sunny and warm. Typical winter day is partly cloudy with occasional rain. Typical wind conditions are: westerly at 15 mph.

Location and area affected: The USTs are located on the grounds of Camp Parks which is a Parks Reserve Forces Training Area (PRFTA) in Dublin, California. Site location maps are included in Appendix B of the Work Plan.

C. KEY PERSONNEL AND RESPONSIBILITIES

UST Project Manager: Russ Finlinson (phone 707-562-1965) has overall responsibility for the administration of the SSPORTS UST removal program.

UST Project Engineer: Augie Rodriguez (phone 707-562-3244) is responsible for coordinating with regulatory agencies regarding this project, and for the technical aspects of the Work Plan.

Health & Safety Engineer: Gary VanderMolen (phone 707-562-1966) is responsible for the development and maintenance of the site-specific Health and Safety plan for this project.

Office of Safety, Health & Environmental (OSHE): Greg Rodgers (phone 707-562-3245) and John Bouldt (707-562-3200) serve as the OSHE representatives, and are responsible for the SSPORTS occupational health and safety program.

On-Site H&S Coordinator: Jim Porter (in his absence, James Cook) (phone 707-480-7949) is responsible for the implementation and enforcement of the Health and Safety plan for this project.

Site Supervisor & Security Coordinator: Jim Porter (phone 707-480-7949) is responsible for directing and controlling industrial work for this project.

Emergency Coordinator: The SSPORTS site supervisor shall have primary responsibility for coordinating fire emergencies, confined space & trench rescue, and hazardous spill management. If the event is beyond SSPORTS capabilities, the PRFTA Fire Department (phone 911) shall be called to assist.

D. ON-SITE CONTROLS

This Health and Safety Plan applies to all workers and visitors who require access to the work site. Changes to the H&S Plan must be in writing, and will require written approval of the Health and Safety Specialist, prior to implementation. A copy of this H&S Plan and all standard operating procedures (SOP) referenced herein must be kept on the site. All personnel working the site must be familiar with this H&S Plan and the referenced SOP, and shall sign the Health & Safety Meeting Sign-off Sheet, see Attachment HS-2-2.

The On-site Health & Safety Coordinator (OHSC) shall be responsible for ensuring that all personnel entering an active work area comply with the Health & Safety Plan, medical and training requirements for the site, and have the required level of Personal Protective Equipment (PPE). Only authorized personnel will be allowed in active work areas. Daily site safety meetings will be held each morning before work begins, and workers shall discuss the health and safety topics listed on the Safety Meeting Sign-off Sheet (Attachment HS-2-1). The Site Foreman shall maintain a Site Log for the purpose of recording events.

A fenced-off area shall be established to manage access control and security. Access gates shall be securely locked at the conclusion of work each day. The safe perimeter boundary is designated as the outer fence line. No unauthorized access is permitted within the boundary. The Exclusion Zone is defined as the area to be excavated. The decontamination station (if required), command station and staging areas shall not be downwind from the exclusion zone. Detail site location plans are included in Appendix B of the Work Plan.

E. HAZARD EVALUATION

CHEMICAL HAZARDS:

Refer to Attachment HS-7, Hazard Analysis Table - Chemical Hazards

PHYSICAL HAZARDS:

Refer to Attachment HS-7, Hazard Analysis Table - Physical Hazards

BIOLOGICAL HAZARDS: None

RADIOLOGICAL HAZARDS: None

F. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

Based on the evaluation of potential hazards for the site, the following levels of personal protection have been designated for applicable work areas or tasks.

Location	Job Function	Level of Protection
Exclusion/Decon Zones	Arsenic Drum removal	Level C
Exclusion/Decon Zones	Heating Oil Tank removal	standard work uniform
Support Zone	All	standard work uniform

Level C equipment may include, but is not committed or limited to, the following as appropriate:

1. Full-face or half-mask, air-purifying, canister equipped respirators. (NIOSH- or MSHA-approved) or power air purifying respirators with HEPA filter.
2. Hooded chemical-resistant clothing (overalls; two-piece chemical - splash suit; disposable chemical-resistant overalls).
3. Coveralls.
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots, outer, chemical-resistant steel toe and shank.
7. Boot-covers, outer, chemical-resistant (disposable).
8. Hard hat.
9. Ear plugs or ear muffs.
10. Face shield/safety glasses.

If there are unanticipated changes in site conditions or adverse results from air monitoring, the H&S Coordinator may upgrade the PPE and the decontamination requirements, if appropriate.

In addition to personal protective clothing and equipment, field personnel having duties in or near the exclusion zone must have ready access to the following:

- An eyewash kit (must provide 15 minutes of flushing)

- At least 3 gallons of potable water in a container to permit decontamination in the event of accidental skin or eye contact with chemicals

- Field instrumentation as applicable for potential hazards, including oxygen level, combustible gas, hydrogen sulfide, and carbon monoxide.

G. SITE WORK PARTY

It is anticipated that the size and makeup of the site work party will vary greatly during different phases of the project. The Site Foreman shall ensure that each worker records his name and job function in the daily Site Log.

H. COMMUNICATIONS PROCEDURES

Internal and external communications are to be in effect whenever a site entry is to be made. Internal communications requires that the field team members be able to communicate with each other at all times. Methods of communication may be via radio, verbal, hand signals, or other viable means. The method of choice must be understood by all members and tested to determine its effectiveness.

An external communications system is required to call for off-site emergency assistance and to handle administrative tasks. Alternatives which meet the requirements are a telephone, cellular telephone or radio communications system. Every team member must be aware of the location of the nearest external communications system and be competent in its use.

Other communications systems which may be appropriate for special circumstances include, but are not limited to, sirens, horns, whistles and flags. All team members must be briefed on the purpose of each.

Communications systems for this site are:

(Blanks to be completed on-site by On-Site Foreman or On-Site H&S Coordinator)

EXTERNAL: Cellular Phone INTERNAL: Verbally & Hand Signals
Air Horn

Applicable telephone numbers or radio channels are:

EXTERNAL: 707-480-7949 (Jim Porter)
INTERNAL: N/A
Other signals: Air Horn

The following standard hand signals shall be used in case of radio/telephone failure:

Hand gripping throat	Out of air or can't breathe
Grip partner's wrist or hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK, understand, am all right
Thumbs down	No, negative

I. ROUTINE EXITING DECONTAMINATION PROCEDURES

After inspection of the work site by the Health and Safety Specialist, a determination shall be made as to the necessity for decontamination. If required, personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated, and the standard level (A, B, C, D, other) of decontamination protocol shall be used at the following Decon station:

(1) Level C

Decontamination at Level C

The following decontamination stations are recommended for Level C decontamination. Stations should be set up in the following order in the decontamination area if level C decontamination is required.

a) Segregated equipment drop for hand tools and monitoring equipment. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners.

Equipment:
- various size containers
- plastic liners
- plastic drop cloths

b) Boot cover, outer glove and coverall wash and rinse. Scrub outer boot covers and gloves with decontamination solution or detergent water. Rinse off decontamination solution using copious amounts of water. Repeat as many times as necessary.

Equipment:
- containers (20 to 30 gallons)
- decontamination solution or detergent water
- high-pressure spray unit
- containers (30 to 80 gallons)
- water
- 5 to 8 long-handle, soft-bristle scrub brushes

c) Removal station for boot covers and outer gloves. Remove tape around boots and gloves and deposit in container with a plastic liner. Remove

PHYSICAL HAZARDS:

Refer to Attachment HS-7, Hazard Analysis Table - Physical Hazards

BIOLOGICAL HAZARDS: None

RADIOLOGICAL HAZARDS: None

F. PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

Based on the evaluation of potential hazards for the site, the following levels of personal protection have been designated for applicable work areas or tasks.

Location	Job Function	Level of Protection
Exclusion/Decon Zones	Arsenic Drum removal	Level C
Exclusion/Decon Zones	Heating Oil Tank removal	standard work uniform
Support Zone	All	standard work uniform

Level C equipment may include, but is not committed or limited to, the following as appropriate:

1. Full-face or half-mask, air-purifying, canister equipped respirators. (NIOSH- or MSHA-approved) or power air purifying respirators with HEPA filter.
2. Hooded chemical-resistant clothing (overalls; two-piece chemical - splash suit; disposable chemical-resistant overalls).
3. Coveralls.
4. Gloves, outer, chemical-resistant.
5. Gloves, inner, chemical-resistant.
6. Boots, outer, chemical-resistant steel toe and shank.
7. Boot-covers, outer, chemical-resistant (disposable).
8. Hard hat.
9. Ear plugs or ear muffs.
10. Face shield/safety glasses.

If there are unanticipated changes in site conditions or adverse results from air monitoring, the H&S Coordinator may upgrade the PPE and the decontamination requirements, if appropriate.

In addition to personal protective clothing and equipment, field personnel having duties in or near the exclusion zone must have ready access to the following:

- An eyewash kit (must provide 15 minutes of flushing)

- At least 3 gallons of potable water in a container to permit decontamination in the event of accidental skin or eye contact with chemicals

- Field instrumentation as applicable for potential hazards, including oxygen level, combustible gas, hydrogen sulfide, and carbon monoxide.

G. SITE WORK PARTY

It is anticipated that the size and makeup of the site work party will vary greatly during different phases of the project. The Site Foreman shall ensure that each worker records his name and job function in the daily Site Log.

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The following decontamination stations are recommended for Level C decontamination. Stations should be set up in the following order in the decontamination area if level C decontamination is required.

a) Segregated equipment drop for hand tools and monitoring equipment. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners.

Equipment:
- various size containers
- plastic liners
- plastic drop cloths

b) Boot cover, outer glove and coverall wash and rinse. Scrub outer boot covers and gloves with decontamination solution or detergent water. Rinse off decontamination solution using copious amounts of water. Repeat as many times as necessary.

Equipment:
- containers (20 to 30 gallons)
- decontamination solution or detergent water
- high-pressure spray unit
- containers (30 to 80 gallons)
- water
- 5 to 8 long-handle, soft-bristle scrub brushes

c) Removal station for boot covers and outer gloves. Remove tape around boots and gloves and deposit in container with a plastic liner. Remove

PHYSICAL HAZARDS:

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BIOLOGICAL HAZARDS: None

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Equipment:
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Other signals: Air Horn

The following standard hand signals shall be used in case of radio/telephone failure:

Hand gripping throat ----------	Out of air or can't breathe
Grip partner's wrist or hands around waist----------	Leave area immediately
Hands on top of head ----------	Need assistance
Thumbs up ----------	OK, understand, am all right
Thumbs down ----------	No, negative

I. ROUTINE EXITING DECONTAMINATION PROCEDURES

After inspection of the work site by the Health and Safety Specialist, a determination shall be made as to the necessity for decontamination. If required, personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated, and the standard level (A, B, C, D, other) of decontamination protocol shall be used at the following Decon station:

(1) Level C

Decontamination at Level C

The following decontamination stations are recommended for Level C decontamination. Stations should be set up in the following order in the decontamination area if level C decontamination is required.

a) Segregated equipment drop for hand tools and monitoring equipment. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners.

Equipment:
- various size containers
- plastic liners
- plastic drop cloths

b) Boot cover, outer glove and coverall wash and rinse. Scrub outer boot covers and gloves with decontamination solution or detergent water. Rinse off decontamination solution using copious amounts of water. Repeat as many times as necessary.

Equipment:
- containers (20 to 30 gallons)
- decontamination solution or detergent water
- high-pressure spray unit
- containers (30 to 80 gallons)
- water
- 5 to 8 long-handle, soft-bristle scrub brushes

c) Removal station for boot covers and outer gloves. Remove tape around boots and gloves and deposit in container with a plastic liner. Remove

boot covers and outer gloves and deposit in container with a plastic liner.

Equipment: containers (20 to 50 gallons)
plastic liners
bench or stool

d) Respirator or cartridge change station. If worker leaves the hot zone to change respirator or cartridge, this is the last step in the decontamination procedure. Worker's cartridge is exchanged, new outer gloves and boot covers donned, and joints taped. Worker returns to duty.

Equipment: cartridge (or respirator)
tape
boot covers
gloves

e) Removal station for coveralls. Remove disposable coveralls with the assistance of a helper. Deposit suit in container with plastic liner.

Equipment: containers (30 to 50 gallons)
bench or stool
plastic liner

f) Inner glove wash and rinse. Wash inner gloves with decontamination solution or detergent water that will not harm skin. Repeat as many times as necessary. Rinse inner gloves with water. Repeat as many times as necessary.

Equipment: decontamination solution or detergent water
basin or bucket
water
small table

g) Removal station for respirators. Remove the air purifying respirator while avoiding touching face with gloves. Deposit respirator in container with plastic liner.

Equipment: containers (30 to 50 gallons)
plastic liners

h) Removal station for inner gloves. Remove inner gloves and deposit in container with plastic liner.

Equipment: containers (20 to 30 gallons)
plastic liners

I) Hand and face wash and rinse. Wash hands and face.

Equipment: water

l) Hand and face wash and rinse. Wash hands and face.

Equipment:
water
soap
tables
wash basins or buckets

All disposable items will be double-bagged into plastic bags and drummed. The items will be tested for possible residual contamination and will be properly disposed of based on analytical results. All decontamination liquids shall be placed in 55 gallon drums, sampled, and disposed of at an appropriate facility.

J. EMERGENCY RESPONSE

Emergency and general safety equipment shall be available at the site and shall be properly inspected and maintained. Qualified Fire Department EMTs are available for emergency response actions in 4 to 5 minutes. The following safety equipment shall be staged in a location familiar to all personnel:

- Supply of clean water
- Fire extinguisher (rated 20BC minimum)
- Portable eyewash unit (rated 15 minutes minimum)
- Air horn
- First Aid kit with CPR mouthpiece

(Blanks to be completed on-site by Site Foreman or On-Site H&S Coordinator)

Emergency equipment is available on-site at the following locations:
(include size or quantity, as appropriate)

Emergency eyewash _____
Emergency shower _____
Fire extinguisher _____
Air horn _____
First Aid kit with CPR mouthpiece _____

Local ambulance service is available via PRFTA Fire Dept. at telephone number 911. Response time to the site is 5 to 10 minutes.

Seriously injured personnel will be evacuated to the nearest Emergency Room located at Valley Care Medical Center The telephone number to this facility is 510-847-3000. See Attachment HS-9 for a hospital route map.

EMERGENCY TELEPHONE NUMBERS

Facility	From a base telephone	From a cellular telephone
Fire	911	911
Police	911	911
Ambulance	911	911

** Note: "911" calls from a cellular phone are routed through the CHP dispatch center, which will take additional time (10-15 minutes).*

EMERGENCY PROCEDURES (may be modified as required for incident)

The following standard emergency procedures shall be used by on-site personnel. The On-site Health and Safety Coordinator shall be notified of any on-site emergencies and shall be responsible for ensuring that appropriate procedures are followed.

Personnel Injury in the Exclusion Zone: Upon notification of an injury within the Exclusion Zone, the designated emergency signal two long air horn blasts shall be broadcast and all site personnel inside the zone shall assemble at the decontamination line. If required, the rescue team will enter the Exclusion Zone and remove the injured person to the hotline. The On-site Health and Safety Coordinator or Project Team Leader shall ensure the injured person is decontaminated to the extent possible prior to removal to the Support Zone. The Fire Department EMT shall initiate the necessary first aid, and notify the designated medical facility of the nature of the accident and the condition of the injured person. If the severity of the injury is such that decontamination is not completed, the ambulance carrier and hospital shall be briefed as to the type and degree of possible contamination by the On-Site Health and Safety Coordinator. No party shall reenter the Exclusion Zone until a determination of cause of the injury or symptoms is determined.

Personnel injury in the Support Zone: Upon notification of an injury in the Support Zone, The Project Team Leader and the H&S Coordinator will assess the nature of the injury. If the cause of the injury or loss of the injured person does not effect the performance of site personnel in their tasks, operations may continue while the Fire Department EMT initiates appropriate first aid and necessary follow-up as mentioned above. If the injury or loss of the injured person will increase the risk to others, the designated emergency signal two long air horn blasts shall be broadcast and all site personnel shall assemble at the decontamination line for further instruction. Activities inside the Exclusion Zone shall cease until the additional hazards can be removed or minimized.

Fire/Explosion: Upon notification of a fire or explosion at the site, the designated emergency signal two long air horn blasts shall be broadcast and all site personnel shall assemble at the decontamination line. The fire department shall be notified and all personnel will be directed to a safe area of the site by the Project Team Leader.

Personal Protection Equipment Failure: If any site worker experiences a failure or displacement of PPE which affects the level of protection required for the task which is being performed, that person and his/her partner shall put the work in a safe condition, (if it is possible to do so without adverse effect on health and safety), and immediately proceed to the decontamination area. Reentry shall not be permitted until the appropriate level of protection is reestablished.

Other Equipment Failures: Any other equipment failures will be addressed by the project team leader and Site Health & Safety Coordinator to determine the effects on continuing operations on site. If the failure is determined to have adverse effects on the safety of personnel on site or completion of the Work Plan tasks, all personnel shall leave the Exclusion Zone until the problem is remedied or appropriate actions to circumvent the problem have been implemented.

The following emergency escape routes are designated for use when egress from the Exclusion Zone cannot occur through the decontamination line and exiting the area is necessary due to an emergency: To be discussed at the daily safety meeting ('tail-gate' meeting).

In all situations of on-site emergency resulting in the evacuation of personnel from the Exclusion Zone, personnel shall not reenter the area until:

1) The condition or conditions resulting in the emergency have been cleared.
2) Hazards have been reassessed.
3) Site Safety Plan has been reviewed.
4) Site personnel have been briefed on any changes to the Site Safety Plan.

ACCIDENT/INCIDENT REPORTING

Whenever an employee, subcontractor, or member of the public is injured at the work site, the Safety Officer, in coordination with the Project Manager, must prepare a written accident/incident report in accordance with 29 CFR 1904.8 and NAVFACINST 5100.11. In addition, an incident report shall be prepared for "near misses" and minor injuries not requiring medical evaluation. The purposes of the accident/incident report are to document fully what happened and to assess the accident/incident for "lessons learned." NAVFAC report form CSIR-1 shall be used for documentation of an accident or incident. A copy of the report shall be forwarded within 24 hours to EFA West Code 09K via the cognizant Remediation Project Manager (RPM). The accident/incident report must be prepared in addition to any reports required by OSHA or Worker's Compensation Insurance claims offices. While much of the information requested is the same, the accident/incident report will provide a much more detailed account of the conditions at the time of the accident/incident and the actions taken at the time of discovery. The OSH Specialist and the Project Manager shall review these reports and may institute corrective or preventive actions to reduce the likelihood of future occurrences. These actions may include making changes in procedures or equipment, retraining personnel, or communicating cautionary warnings to personnel.

K. TRAINING REQUIREMENTS

General site workers engaged in hazardous substance removal or other activities which expose, or potentially expose, workers to hazardous materials and health hazards shall receive, as a minimum, Hazard Communication (HAZCOM) training, and First Aid/CPR training. Additionally, workers and supervisors shall receive HAZWOPER training as required by reference 6.

Training for specific hazards is covered in the next section. This includes training for: Confined Space Entry, Competent Person, Hydroblaster Operator, and Heavy Equipment Operator.

L. SITE-SPECIFIC SAFETY PROCEDURES

1. ASBESTOS

Whenever insulation materials are found, such as tank liners, pipe lagging, or valve gaskets, contact the Health and Safety Specialist, Greg Rodgers at 707-562-3245. Sampling for asbestos shall be done only by asbestos-qualified building inspectors. Only qualified asbestos workers shall remove asbestos, in accordance with procedures approved by the Health and Safety Specialist, and meeting the requirements of reference 7.

2. CONFINED SPACE ENTRY

Confined space precautions will be necessary if it is decided to use personnel entry into a tank, or into trenches that are deeper than four feet. Entry into a confined space or area having possible oxygen deficient, flammable or toxic atmosphere must meet the requirements of OPNAVINST 5100.23D (reference 1), Chapter 27, and 29 CFR 1910.146 (reference 2). The SSPORTS Confined Space Program Manager (CSPM) or his assistant (ACSPM) shall test the confined space. A Confined Space Entry Permit, see Attachment HS-4, must be completed and posted at the site before entry into the confined space can begin. The Entry Permit must be kept on-site until work is complete. Entry permits shall expire at the end of the normal work shift.

3. FREE PRODUCT

'Free product' refers to a petroleum product which is found floating in an excavation. If found, stop work and notify the Project Manager. The product shall be sampled and then removed as soon as practical using a non-spark-producing pump (e.g. pneumatic double-diaphragm type) or vacuum truck. Extreme care must be taken during free product removal to prevent fire or explosion.

4. HOT WORK

Demolition of tanks and cutting of pipes should be done with non-spark-producing tools, whenever possible. If the use of spark-producing tools or any work generating temperatures ≥ 400°F is required, see NAVSEA S6470-AA-SAF-010 (reference 3), Chapter 5. Notify the on-base Fire Department before any hot work is started.

5. NOISE HAZARDS

All heavy equipment operators shall wear single or double hearing protection (plugs and/or muffs) whenever the equipment is posted with noise hazard notices. When noise levels exceed 84 dbA (or when voices must be raised to be heard at arm's length), additional hearing conservation measures shall be employed as described in OPNAVINST 5100.23D (reference 1), Chapter 18.

6. TANK OR PIPE CLEANING

It is not anticipated that tank cleaning will be done. If a hydroblaster or similar high pressure water device is used for cleaning, see reference 4 for safety requirements. Specialized, documented training is required for hydroblaster operators.

7. UTILITIES

Prior to any excavation work, all underground utilities in the vicinity shall be surveyed and marked conspicuously by Underground Service Alert (USA). The site supervisor (or his designee) shall complete the Utilities Site Safety Form check-off list and the Underground Utilities Location Sketch (see Attachment HS-5) to document utilities uncovered at the site. Extreme care must be taken when working near underground utilities since the exact location is often unknown. Use only hand tools when uncovering utilities.

8. TRENCH/EXCAVATION SAFETY

Whenever excavation work is to be performed on shift, the Supervisor shall conduct an excavation briefing ensuring that the following is completed daily with the work crew on site.

a. All USA markings are clearly visible and have been sighted by the supervisor and crew personnel.
b. Based on the USA markings, all initial work within two (2) feet of the marked utility will be hand dug until the utility location is positively identified.
c. Ensure the WP/TWD inspection form and utility location sketches (Attachment HS-5) have been completed and are available to the crew workers.
d. Ensure communications are available on site at all times.
e. Ensure that a spotter is available and utilized during any intrusive backhoe operations, exclusively for the purpose of monitoring digging safety.

Note: If the hand dig area is too hard, discuss methods such as wetting the soil to accomplish the digging without power equipment. Note that using a pick also has a good chance of puncturing a pipe.

Trenching and excavation work shall comply with OSHA requirements detailed in 29 CFR 1926 Subpart P, and EM 385-1-1 (reference 11). As a minimum, the following safety requirements shall be strictly observed:

Trenching and excavation work shall comply with OSHA requirements detailed in 29 CFR 1926 Subpart P, and EM 385-1-1 (reference 11). As a minimum, the following safety requirements shall be strictly observed:

- Appropriate perimeter barriers shall be used around all open pits and excavations (see Section 25B of reference 11).

- Excavations shall be inspected daily by a Competent Person before workers enter them, and as needed throughout the shift, and be noted in the daily site log.

- Trenches deeper than five feet shall be securely shored prior to any personnel entry. No worker shall descend above his waist level into an unshored trench, unless directed by a supervisor who is a Competent Person.

- A trench deeper than four feet is considered to be a confined space, therefore the section on Confined Space Entry applies.

- Whenever possible, workers will not enter trenches or excavations. When workers are in the excavation, other personnel in the immediate area shall be available to respond in the event of an emergency.

- Appropriate access methods, such as ladders or ramps accessible within 25 feet, shall be used to enter an excavation which is four feet or more in depth. Do not ride in backhoe buckets, etc.

- The level of protection for entry personnel will be based on evaluation by the on-site Health and Safety Coordinator and the results of air monitoring. The minimum acceptable protection level will be Level D.

- Stop logs or other heavy barriers shall be used to prevent vehicles from rolling into the excavation.

- Sources of vibration and heavy objects or equipment shall not be situated on the edge of a trench unless steps are taken to ensure the stability of the trench wall by a competent person.
- As much as possible, do not allow water to accumulate in trenches or excavations. Surface runoff water shall be prevented from entering the excavation.

- Excavated materials (spoils) shall not be stored closer than two feet from the edge of the trench.

- Excavation shall be halted if one of the following conditions exists:

  (1) Structural risk to adjacent buildings or other significa nt structures.
  (2) Soil staining indicates that contamination may be from the UST.

9. USE OF HEAVY EQUIPMENT

The following heavy equipment may be used at the site:

- Front loader

- Backhoe

These types of equipment can present a substantial hazard to worker safety. General requirements for motor vehicles and material handling equipment are provided in the OSHA Construction Industry Standards, 29 CFR 1926, Subpart O.

The following precautions will be followed whenever heavy equipment is used:

- Heavy equipment will be inspected by the operator before each work shift. The OHSC will ensure compliance with this precaution.
- Equipment operators will be instructed to report any abnormalities, such as equipment failure, oozing liquids, and unusual odors, to their supervisor or the OHSC.
- Only qualified and licensed personnel will operate heavy equipment.
- Ignition keys shall remain inserted at all times during working hours.
- Hard hats, steel-toed boots, and safety glasses or goggles will be worn at all times around heavy equipment in addition to any other PPE specified by this HASP.
- Workers will not assume that the equipment operator is aware of their exact location. Workers will never walk directly behind or to the side of heavy equipment without the operator's knowledge and will maintain visual contact with equipment operators at all times.
- When an operator must maneuver equipment in tight quarters, the presence of a second person will be required to ensure adequate clearance. When a large amount of close maneuvering is required, two ground guides will be used: one in the direction the equipment is moving, and the other in the operator's normal field of vision to relay signals.
- All heavy equipment will remain in the exclusion zone until the work has been completed. The equipment will then be decontaminated within the designated decontamination area.
- Hand-signal communications will be established when verbal communication is difficult. One person per work team will be designated to give hand signals to equipment operators.
- Equipment with an obstructed rear view must have an audible alarm that sounds when the equipment is moving in reverse (unless a spotter guides the operator).
- Parking brakes will be kept engaged when equipment is not in use.
- Blades, buckets, dump bodies, and other hydraulically operated components will be kept fully lowered when equipment is not in use.
- Equipment cabs will be kept free of all nonessential items.
- Seat belts must be present in all vehicles having rollover protective structures (ROPS).
- With specific exceptions, all material-handling equipment will be provided with ROPS. Material-handling equipment lacking a ROPS will not be operated on a grade unless the grade can safely accommodate the equipment involved.
- All precautions will be taken before moving heavy equipment. Appropriate equipment will be used to transport heavy equipment.
- An ongoing maintenance program for all tools and equipment will be implemented. All tools and moving equipment will be inspected regularly to ensure that parts are secured, are intact, and have no cracks or areas of weakness. The equipment must operate according to manufacturer specifications. Defective items will be promptly repaired or replaced. Maintenance and repair logs will be kept.
- Tools will be stored in clean, secure areas to prevent damage, loss, or theft.
- Workers will not use equipment which they are not familiar with. This precaution applies to heavy as well as light equipment.

- Loose-fitting clothing and loose, long hair will be prohibited around moving machinery.
- Workers will make sure that no underground or overhead power lines, sewer lines, gas lines, or telephone lines present a hazard in the work area.
- All personnel who are not essential to work activities will be kept out of the work area.
- Workers will be aware of their footing at all times.
- Workers will remain alert at all times.
- All machinery used for intrusive excavations will be equipped with fragmentation shielding.
- All self-propelled construction and industrial equipment, whether moving alone or in combination shall be equipped with a reverse signal alarm. Reverse signal alarms shall be audible and sufficiently distinct to be heard under prevailing conditions.
- Each bulldozer, scraper, dragline, crane, motor grader, front-end loader, mechanical shovel, backhoe, and other similar equipment shall be equipped with at least one dry chemical or carbon-dioxide fire extinguisher with a minimum rating of 5-B:C.

M. MONITORING

1. AIR MONITORING

The need for air monitoring of the work area will be determined by the on-site Health and Safety Coordinator or his representative before beginning any work task. This monitoring will be performed using currently accepted industrial hygiene practices.

Continuous and/or periodic air monitoring as determined by the on-site Health and Safety Coordinator is required:

- When the possibility of an IDLH condition or flammable atmosphere is present
- There is an indication that exposures may have risen over PELs, or published exposure levels
- When contaminants other than those previously identified are handled
- When a new operation is initiated
- When employees are handling leaking containers or working in areas with obvious liquid contamination
- When entry into confined spaces is required
- When asbestos abatement or removal is performed

For work requiring entry into the exclusion area, air monitoring will be performed periodically if required by the Health and Safety Coordinator, using currently accepted hygiene practices, while personnel are inside the Exclusion Area. Should samples indicate limitations for hazard are exceeded, team members shall immediately proceed to the decontamination line. Teams shall not reenter the Exclusion Zone for continuation of work tasks until the Site Foreman and the On-site Health and Safety Coordinator determine how the hazardous condition is to be mitigated.

2. GUIDELINES FOR ATMOSPHERIC HAZARDS

a. **Organic Vapors**

The following instruments may be used to monitor for organic vapors during site activities.

- Instrument: Photoionization Detector (PID), or Flame Ionization Detector (FID)
- Activity: Initial site survey, subsequent periodic monitoring
- Monitoring Frequency: As determined by the on-site Health and Safety Coordinator

Initial PID readings shall be recorded in the field logbook. If continued monitoring does not indicate the presence of volatile organic compounds (VOC), readings shall be recorded *once* per shift. It is anticipated that VOCs will not be present for this project.

b. **Explosive Atmospheres**

When a flammable compound reaches a certain concentration in air, it becomes explosive when exposed to an ignition source. The lowest concentration able to support combustion is known as the Lower Explosive Limit (LEL). Each flammable compound has its own LEL. Monitoring indicates how close the airborne concentration of a flammable compound is to this limit.

Site activities shall not be conducted when airborne concentrations of any flammable compound reaches 10 percent of its LEL. The following instrument, monitoring frequency, and general action levels may be used to monitor for explosive atmospheres during site activities.

- Instrument: Combustible gas and oxygen indicator (calibrated for specific instrument calibration gas)
- Activity: Trench or vault entry, digging, drilling, pipe cutting
- Monitoring Frequency: As determined by the Health and Safety Specialist
- Action Levels: 10% of LEL

c. **Oxygen Percentage**

Oxygen percentage monitoring shall be conducted to verify that an adequate oxygen level is present for site activities. Hazardous conditions exist whenever the oxygen level is too high or too low. An oxygen-enriched atmosphere is hazardous because it causes an increased risk of fire. Oxygen deficiency is a respiratory hazard.

The following instrument, monitoring frequency, and general action levels can be used to monitor for oxygen-abundant and oxygen-deficient atmospheres during site activities.

- Instrument: Combustible gas and oxygen indicator
- Activity: Initial site survey, subsequent periodic monitoring
- Monitoring Frequency: As determined by the Health and Safety Coordinator
- Action Levels: Greater than 22% or less than 19.5%

3. USE AND MAINTENANCE OF MONITORING EQUIPMENT

See Attachment HS-6 for use and maintenance of monitoring equipment. Specific monitoring equipment used for this site includes:

(Blanks to be completed on-site by the Site Foreman or H&S Coordinator)

	Equipment Description / Ser #	Calibration Due Date
(1)		
(2)		
(3)		
(4)		

4. MEDICAL MONITORING

If it is determined by the Project Team Leader and the Site Health & Safety Coordinator that heat or cold stress or temperature monitoring is required (mandatory if ambient temperature exceeds 70° F and personnel are garbed in impermeable protective clothing), see reference 5 for procedures.

5. SANITATION

Potable water, drinking cups, toilet facilities and washing facilities shall be provided in compliance with OSHA 29 CFR 1926.51.

N. MEDICAL SURVEILLANCE REQUIREMENTS

All personnel performing work at the site shall be enrolled in, as a minimum, a medical surveillance program designed for the HAZWOPER Hazardous Waste Worker. Other programs for specific hazards of this site are listed below:

- Forklift and heavy equipment medical programs for those operating heavy equipment.

- Respirator (Health) surveillance.
- Asbestos worker surveillance *

*(required only if Action Level is exceeded for 30 or more days per year or 10 days per quarter)

O. GENERAL SAFETY RULES

The following safety guidelines are instrumental in maintaining a proper and safe work environment for all personnel. Employees assigned to work on this project shall familiarize themselves with these instructions.

- Refrain from any horseplay, scuffling, and other acts which tend to endanger the safety or well-being of your fellow employees.
- Do not eat, drink, smoke or apply cosmetics while inside the site.
- Walk, do not run. Concentrate on what you are doing at all times.
- Promptly report unsafe conditions and practices to your supervisor if available, or to any supervisor.
- Consider the safety of your fellow employees; warn or advise them of dangerous situations in the work area; do not assume that unsafe conditions are obvious to them.
- Be alert for moving vehicles or cranes when walking around the site. Stand clear of any suspended load.
- Do not remove safety/warning devices or tags.
- Pick up debris. Practice good housekeeping habits to prevent trip and fall hazards.
- Do not enter compartments, tanks, voids or trenches until they have been tested and approved for entrance by the Confined Space Program Manager or his designated representative.
- Keep off all equipment and material handling vehicles unless authorized.
- For your own protection, don't use any tool or equipment which you have not been authorized or properly trained to operate.
- Size up loads prior to attempting to lift them. Always use the muscles in the legs to lift objects and not the weaker muscles of the back.
- Do not enter a restricted area without the required PPE, including as a minimum, a hard hat, safety shoes, eye protection, and hearing protection (if appropriate).
- Be aware of protruding edges, such as nails or sharp metal that could puncture protective clothing.
- Be aware of slippery or uneven surfaces that could cause falls, slips, and trips.

- All equipment must maintain at least a 10' clearance from overhead power lines. Avoid standing in water when operating electrical equipment.
- Use the Buddy System. Do not work alone.
- Do not do close-up sniff testing of soil, piping, or tank components, as they are potentially hazardous.

SITE-SPECIFIC H&S PLAN SUMMARY

(Blanks to be completed on-site by On-Site Foreman or On-Site H&S Coordinator)

SITE HAZARDS

	(Hazard Class)		(Hazard Class)
_____	C B P R O	_____	C B P R O
_____	C B P R O	_____	C B P R O
_____	C B P R O	_____	C B P R O
_____	C B P R O	_____	C B P R O
_____	C B P R O	_____	C B P R O

C-Chemical; B-Biological; P-Physical; R-Radiological; O-Other

PPE REQUIREMENTS

Location	Job Function	Level of Protection
Exclusion Zone	_____	A B C D other
	_____	A B C D other
	_____	A B C D other
	_____	A B C D other
	_____	A B C D other
Contamination Reduction Zone	_____	A B C D other
	_____	A B C D other
	_____	A B C D other

Additional Requirements: _____

_____

_____

COMMUNICATIONS

Internal: Hand signal / Air Horn

Specific Instruction: _____

External: Cellular Phone

Specific Instruction: _____

SUPPORT EQUIPMENT

Safety equipment: _____

Monitoring eqpt: _____

Other support eqpt: _____

Phone Numbers

Ambulance: 911
Fire: 911
Police: 911

Spill Team: 707-480-9488
Project Manager: 707-562-1965
Project Engineer: 707-562-3244

ADDITIONAL INFORMATION: _____

_____

_____

_____

ATTACHMENT HS-1

[Not Used]

ATTACHMENT HS-2

SAFETY MEETING SIGN-OFF SHEET

SSPORTS ENVIRONMENTAL DETACHMENT VALLEJO

SAFETY MEETING SIGN-OFF SHEET

Site: _____ Sheet No.___ of ____

Meeting held by: _____ Date: _____

ITEMS DISCUSSED

Hazard Evaluation:

Toxic Vapors	Yes _____	No _____
Explosivity	Yes _____	No _____
Radioactivity	Yes _____	No _____
O_2 Depletion	Yes _____	No _____
Physical Hazards	Yes _____	No _____
Noise	Yes _____	No _____
Other (list):_____	Yes _____	No _____
_____	Yes _____	No _____
_____	Yes _____	No _____

Personal protection to be worn and equipment to be used

Yes _____ No _____

Decontamination Procedures: Yes _____ No _____

EMERGENCY INFORMATION

First aid	Yes _____	No _____
Hospital route	Yes _____	No _____
Poison Control Cntr.	Yes _____	No _____
Eye rinse/shower locations	Yes _____	No _____
Water faucet locations	Yes _____	No _____
Fire extinguisher locations	Yes _____	No _____
Fire hydrant locations	Yes _____	No _____

SSPORTS ENVIRONMENTAL DETACHMENT VALLEJO

SAFETY MEETING SIGN-OFF SHEET

Sheet No._____ of_____

INSTRUCTIONS: This form is to be completed by each person prior to beginning work at the site. THE COMPLETED FORM IS TO BE RETURNED TO THE ON-SITE HEALTH AND SAFETY FILES.

Project: _____

By my signature below, I acknowledge that I have read and understand the contents of the Health and Safety Plan for this project. I agree to perform my work in accordance with the Health and Safety Plan.

Team Member or Visitor Signature, Affiliation	Signature	Date

ATTACHMENT HS-3

[Not Used]

ATTACHMENT HS-4

CONFINED SPACE ENTRY PERMIT

SAMPLE ONLY. OBTAIN ORIGINALS FROM OSHE OFFICE.

CONFINED SPACE ENTRY PERMIT

CLASS I, II, III, IV

EXPIRATION: (TIME/DATE)

NAME OF ACTIVITY & LOCATION.

TYPE OF OPERATION TO BE PERFORMED:

NAME OF ATTENDANT:

TESTED BY: (GFE/T) (TIME/DATE)

TIME IN: TIME OUT.

(NOTIFY ~~UTILITY CONTROLLER~~ DISPATCH)

NAMES OF ENTRANTS

DETECTION INSTRUMENT(S): CALIBRATION DATE

TYPE: _____ SERIAL # _____

TYPE: _____ SERIAL # _____

READINGS

ATMOSPHERIC TESTS	INITIAL TESTS	ADJACENT SPACE TESTS	RE-TEST / TIME	POST VENTILATION				P. E. L
				15 MIN	30 MIN	45 MIN	OTHERS	
% OXYGEN								20% TO 22%
FLAM / COMB (% LEL)								ANY % OVER 10
TOXICITY								CO ~~50~~ ppm 25 H2S ~~10~~ ppm
RS								NH4 25 ppm SO2 5 ppm

THIS CERTIFICATE INDICATES THE CONDITIONS THAT EXIST AT THE TIME TESTS WERE CONDUCTED

____ NOT Safe for Personnel - NOT Safe for Hot Work

____ SAFE for Personnel - NOT SAFE for Hot Work

____ NOT Safe for Personnel without Protection NOT Safe for Hot Work

____ SAFE for Personnel SAFE for Hot Work

____ INERTED - NOT SAFE for personnel INSIDE - SAFE for Personnel and Hot Work OUTSIDE _____

____ PRESSED UP with ( ) NOT SAFE for Personnel INSIDE SAFE for Hot Work OUTSIDE

COMMENTS.

SPECIAL REQUIREMENTS

YES	NO	
___	___	INSTURMENT CALIBRATION & BATTERY CHECK
___	___	FORCED EXHAUST VENTILATION REQUIRED
___	___	LOCK OUT - TAG OUT - DE-ENERGIZE
___	___	FIRE EXTINGUISHER
___	___	RESPIRATORY PROTECTION
___	___	PRE-ENTRY WORK CREW SAFETY BRIEFING

YES	NO	
___	___	PPE: CLOTHING / HAND / HEAD / FOOT
___	___	LIFELINES / HARNESS / HOIST / RETRIEVAL LINE
___	___	INTRINSICALLY SAFE POWER TOOLS & LIGHTING
___	___	STANDBY PERSON / BUDDY SYSTEM / FIRE WATCH
___	___	AUDIO / VISUAL / RADIO COMMUNICATION
___	___	RESCUE PROCEDURES REVIEWED

(GFE/T)

WORK CREW REP.

DEPARTMENT

NSCO (510) 302-3333
NASA (510) 263-3333
TI (415) 395-6911
DOD/MF (415) 892-4562
NRMC (510) 839-2333
HPT (415) 822-6779

UTILITY CONTROL (510) 302-6171
SAFETY/PWC GFE. (510) 302 5697/5690

MANDATORY: RADIO REQUIRED ON SITE. COMMUNICATIONS CHECK WITH DISPATCH COMPLETED: _____

DISTRIBUTION: WHITE (JOB SITE)
BLUE (SHOP/UNIT)

DATE:

HS-4-1

ATTACHMENT HS-5

UTILITIES SITE SAFETY FORM

SSPORTS ENVIRONMENTAL DETACHMENT VALLEJO

UTILITIES SITE SAFETY FORM

Site _____

UTILITY	HAZARD TO WORK	VULNERABLE TO DAMAGE	POLLUTION HAZARD	SIZE/DESCRIPTION	DATE	SIGNATURE
Fiber Optic Local Area Network (LAN) Conduit	No	Yes	No			
Fire Fighting High Pressure Mains	Yes	Yes	No			
Fresh Water Piping	Yes	Yes	No			
Fuel Oil Distribution Piping	Yes	Yes	Yes			
Compressed Air Piping	Yes	Yes	No			
High Voltage Above Ground Electric Power	Yes	Yes	No			
High Voltage Underground Electric Power	Yes	Yes	No			
Natural Gas Piping	Yes	Yes	No			
Sanitary Sewer Piping	Yes	Yes	Yes			
Steam Condensate Piping	Yes	Yes	Yes			
Steam (hot) Piping	Yes	Yes	Yes			
Stormwater Sewer Piping	No	Yes	No			
Telephone Lines	No	Yes	No			
Other:						

The Site Foreman or his designee shall complete this form for each utility identified by USA as present on the site. Include a hand-drawn sketch using the attached sheet.

Date_____

Company:_____Point of Contact:_____Phone:_____

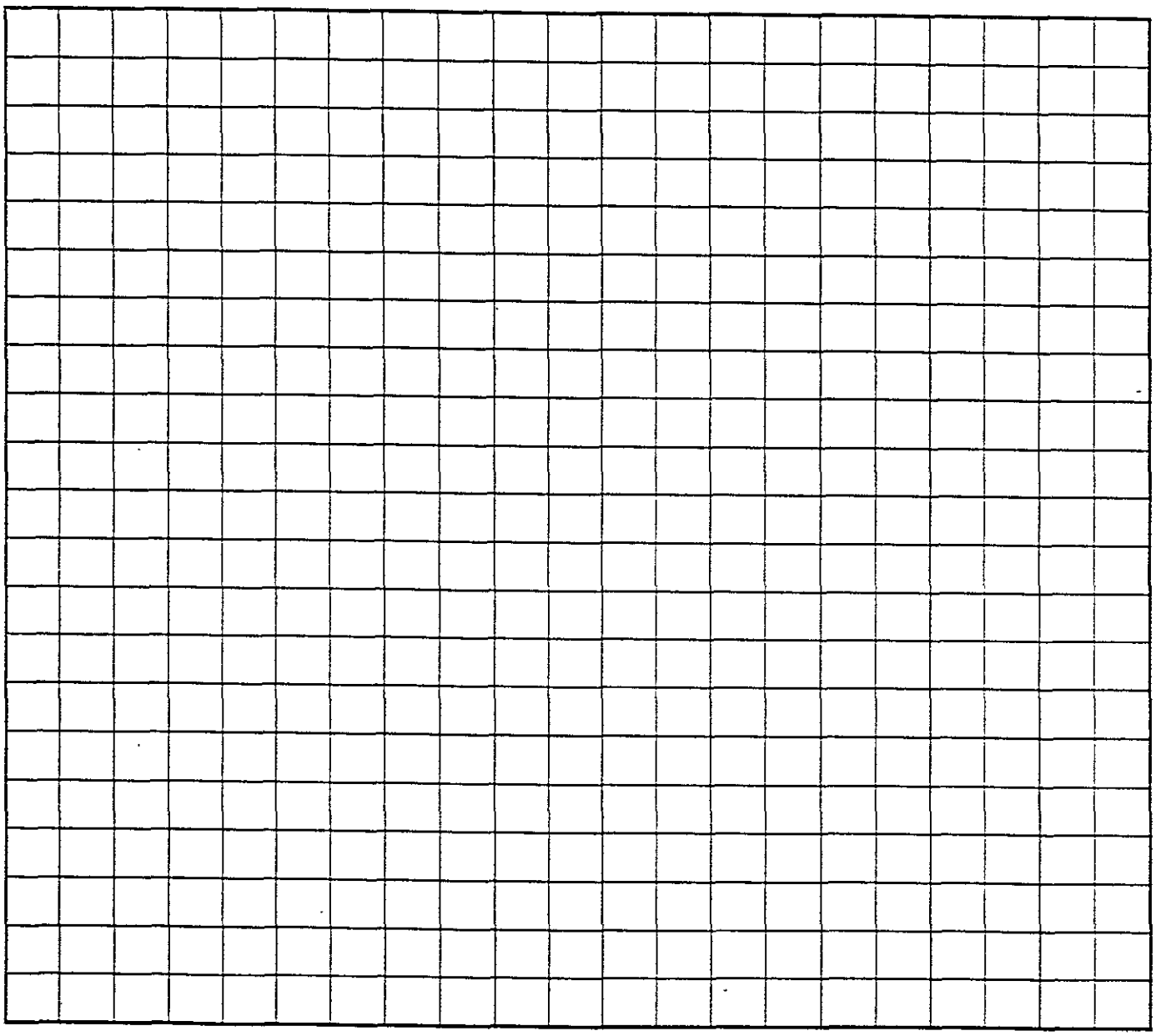
Location:_____Fax:_____

Description:_____

_____

_____

_____



Underground Utilities Location Sketch

ATTACHMENT HS-6

CALIBRATION PROCEDURES AND FREQUENCY

Operators shall ensure that all field measuring and testing equipment is identified and calibrated in accordance with either EPA guidance or manufacturer's recommendation when EPA guidance is not available. Calibrate measuring equipment, test equipment, and reference standards at prescribed intervals or daily before use. Record all calibration activities in an equipment logbook for each piece of equipment used. As discussed below, a summary of typical field equipment calibration requirements and frequency of procedures is provided in the following table.

In some cases, particularly for field equipment, scheduled periodic calibration will not be performed because the equipment is not continuously in use. Calibrate such equipment on an "as needed" basis prior to use and then at the required frequencies for as long as its use continues.

FIELD EQUIPMENT CALIBRATION SCHEDULE

Instrument To Be Calibrated	Standard Reference	Acceptance Specifications	Calibration Schedule
Conductivity meter	Buffer solution of known conductivity	Standard solution value	Daily, prior to use
pH/temperature meter	Two buffer solution pH-4, pH-7, or pH-10.0	Buffer solution values	Daily, prior to use
Combustible gas indicator (CGI)	Refer to manufacturer's daily calibration requirements	Refer to the manufacturer's daily calibration requirements	Daily, prior to use, and after use
Photo Ionization detector (PID)	Refer to manufacturer's daily calibration requirements	Refer to the manufacturer's daily calibration requirements	Daily, prior to use, and after use
Interface probe	Battery check	Audio check	Daily, prior to use

ATTACHMENT IIS-6: CALIBRATION PROCEDURES AND FREQUENCY

1-9-SH

ATTACHMENT HS-7

HAZARD ANALYSIS TABLE

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Heating Oil Tank removal	**Heating/Fuel Oil:** (Minor amounts of fuel oil may remain in the piping and in the surrounding soil.) Entry Route: (1) Dermal (skin) contact (2) Inhalation (of mist or dust) Concentration: Unknown. Exposure Limits: PEL/TLV/TWA: 5 mg/m³; STEL: 10 mg/m³ Target Organs: Respiratory system. Symptoms: Skin contact: moderate skin irritant, may lead to dermatitis and defatting after prolonged exposure. Inhalation: headache, dizziness, respiratory irritation.	Wear oil-resistant gloves while handling oil contaminated objects. Remain upwind during venting procedures. During operations where dust is generated, the soil shall be kept moist with a spray mist of water. When indicated by Air Monitoring (see Section M) use respirator with organic vapor cartridges. First Aid: see MSDS
Heating Oil Piping removal	**Asbestos:** (Pipes may be lagged with asbestos insulation; piping joints may have asbestos gaskets.) Entry Route: (1) Inhalation (of fibers/dust) (2) Dermal (skin) or eye contact Concentration: Unknown. Exposure Limits: OSHA: 0.1 fiber per cc Target Organs: Respiratory system; eyes. Symptoms: No short-term symptoms; see MSDS for long-term symptoms. *** KNOWN HUMAN CARCINOGEN ***	Pipes and lagging to be removed intact. Do not damage any lagging. If it is necessary to disturb the lagging, refer to Section L.1. Piping gaskets will be assumed to contain asbestos. Handle in accordance with Section L.1. First Aid: see MSDS
Arsenic Drum removal	**Arsenic:** (Drum contents is arsenic contaminated water) Entry Route: Inhalation/ingestion Concentration: 79 PPM Exposure Limits: OSHA PEL: 0.5 mg/m³ Exposure Limits: ACGIH TLV: 0.2 mg/m³ Target Organs: heart, digestive tract, kidney, liver. Symptoms: vomiting, diarrhea, nausea, irritation, metallic taste, bloody nose *** KNOWN HUMAN CARCINOGEN ***	Use Level 'C' PPE, see Section F. Establish Air Monitoring as indicated in Section M. First Aid: See MSDS

PRINCIPAL STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
Tank removal	**GASOLINE** (Tank may contain some residual gasoline.) Entry Route: Inhalation. Concentration: Unknown. Exposure Limits: ACGIH TLV: 300 ppm OSHA PEL: 300 ppm Target Organs: Respiratory system. Symptoms: irritation of eyes, skin, nose.	Avoid heat, sparks and other ignition sources, and vapor concentrations. Establish Air Monitoring as indicated in Section M. Avoid skin contact. Wear gloves and appropriate respiratory equipment as directed by the Health and Safety Specialist. First Aid: see MSDS
	BENZENE (Primary constituent of gasoline.) Entry Route: Inhalation. Concentration: Unknown. Exposure Limits: ACGIH TLV: 10 ppm OSHA PEL: 1 ppm Target Organs: Respiratory system. Symptoms: irritation of eyes, skin, nose. *** KNOWN CARCINOGEN ***	Establish Air Monitoring as indicated in Section M. Avoid skin contact. Wear gloves and appropriate respiratory equipment as directed by the Health and Safety Specialist. Avoid skin contact with any tank residue. Wear gloves. First Aid: see MSDS for gasoline.
	LEAD (Gasoline may contain lead additives.) Entry Route: primarily by skin contact or ingestion. Concentration: unknown. Exposure Limits: OSHA PEL: 0.05 milligrams/m^3 ACGIH TLV: 0.05 milligrams/m^3 Target Organs: Kidneys Symptoms: Inhalation: irritated eyes. Ingestion: weakness, stupor, headache.	Avoid skin contact with any tank residue. Wear gloves. First Aid: Eye/skin: Irrigate immediately. Ingestion: Induce vomiting.

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
1. Mobilization of equipment and supplies	Slip/Trip/Falls	• Work areas and means of access shall be maintained safe and orderly. • Even terrain shall be used as loading/unloading areas. • Tripping and poor footing hazards will be repaired as they are discovered or clearly Identified
	Vehicular Traffic	• Spotters will be used when backing up trucks and moving equipment. • Traffic vests will be worn when working near roadways. • Traffic barricades will be installed or traffic director personnel will be used.
	Back Injuries	• Site personnel will be instructed on proper lifting techniques. • Mechanical devices will be used to reduce manual handling of materials. • Team lifting will be used when mechanical devices are not appropriate.
	Dropped Objects	• Steel toe boots will be worn.
	Overhead Hazards	• Personnel will be required to wear hard hats when overhead hazards are present.
	Eye Injury	• ANSI approved safety glasses will be worn when appropriate.
2. Excavation	Equipment Rollover (also see Section L.9)	• Equipment shall have rollover protective structures and seat belts. • Operators shall wear seat belts when operating equipment. • Equipment will not be operated on grades which exceed manufacturer's recommendations. • Ensure equipment has secure footing (maintain safe distance from excavation pit).
	Struck by (also see Section L.9)	• Eye contact with operators shall be made before approaching equipment. • Equipment will not be approached on blind sides. • Personnel will avoid equipment swing area. • Personnel will understand and review hand signals. • All machines will be equipped with backup alarms.
	Noise (also see Section L.5)	• Noise monitoring will be conducted. Hearing protection (ear muffs or plugs) will be provided with a noise reduction rating capable of maintaining personnel exposures below 84 dbA.
3. Tank lift	Rollover/Fall	• Use only qualified riggers to secure the lift slings and set the chocks. Do not set tank down on unstable soil. Ensure crane has sufficient rated lift capacity.

PRINCIPLE STEPS	POTENTIAL HAZARDS	RECOMMENDED CONTROLS
4. Power saw and angle grinder operations	Contact	• Saws will be equipped with guards and other safety devices as installed by the manufacturer. • Power saws shall not be left running while unattended.
	Noise	• Noise monitoring will be conducted. Hearing protection (ear muffs or plugs) will be provided with a noise reduction rating capable of maintaining personnel exposures below 84 dbA.
	Slip/Trip/Fall	• Personnel will clear walkways as much as possible. • Remaining obstructions shall be identified, marked or barricaded.
	Sharp edges	• Cut-resistant work gloves will be worn. • All hand and power tools will be maintained in safe condition, and guards will be kept in place. • A First-Aid kit shall be readily available.
	Dropped objects	• Steel toe boots will be worn.
	Flying objects and debris	• ANSI approved safety glasses will be worn. • Saw operator to wear goggles or full face shield.
	Dust from asphalt and concrete cutting	• When cutting use water spray as required to prevent dust particles from becoming airborne. • In addition, Air Monitoring may be required: see Section M.
5. Removal of debris	Splinters and sharp edges	• Work gloves (i.e. leather gloves) shall be worn. • A First Aid kit shall be readily available.
6. Backfill: unloading of dump trucks	Struck by (also see Section L.9)	• Eye contact with operators shall be made before approaching equipment. • Equipment will not be approached on blind sides. • Personnel will avoid equipment swing area. • Personnel will understand and review hand signals. • All machines will be equipped with backup alarms.
	Equipment rollover (also see Section L.9)	• Equipment shall have rollover protective structures and seat belts. • Operators shall wear seat belts when operating equipment. • Equipment will not be operated on grades which exceed manufacturer's recommendations.

ATTACHMENT HS-8

MATERIAL SAFETY DATA SHEETS (MSDS)

MSDS for the following chemicals are attached:

Arsenic
Asbestos
Heating Oil
Leaded Gasoline

JOHNSON MATTHEY CATALOG -- 13044 ARSENIC LUMP
MATERIAL SAFETY DATA SHEET
NSN: 685000F034390
Manufacturer's CAGE: 0JVJ1
Part No. Indicator: A
Part Number/Trade Name: 13044 ARSENIC LUMP

General Information

Company's Name: JOHNSON MATTHEY CATALOG CO
Company's Street: 30 BOND ST
Company's City: WARD HILL
Company's State: MA
Company's Country: US
Company's Zip Code: 01835-0747
Company's Emerg Ph #: 508-777-1970/508-521-6300
Company's Info Ph #: 508-777-1970/508-521-6300
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SE
Date MSDS Prepared: 11MAY94
Safety Data Review Date: 23JUN94
Preparer's Company: JOHNSON MATTHEY CATALOG CO
Preparer's St Or P. O. Box: 30 BOND ST
Preparer's City: WARD HILL
Preparer's State: MA
Preparer's Zip Code: 01835-0747
MSDS Serial Number: BTNMG

Ingredients/Identity Information

Proprietary: NO
Ingredient: ARSENIC, ARSENICALS (CONFIRMED HUMAN CARCINOGEN BY OSHA, NTP, IARC - GROUP 1) *94-2*
Ingredient Sequence Number: 01
Percent: 100
NIOSH (RTECS) Number: CG0525000
CAS Number: 7440-38-2
OSHA PEL: 0.5 MG/CUM
ACGIH TLV: 0.2 MG/CUM

Physical/Chemical Characteristics

Appearance And Odor: STEEL-GRAY BRITTLE SOLID/NO ODOR
Boiling Point: 1135.4F
Melting Point: 1502.6F
Vapor Pressure (MM Hg/70 F): 1
Specific Gravity: 5.72
Evaporation Rate And Ref: (BU AC = 1): 0
Solubility In Water: INSOLUBLE
Percent Volatiles By Volume: 0

Fire and Explosion Hazard Data

Extinguishing Media: CO2, DRY CHEMICAL EXTINGUISHING AGENTS, DRY SAND/DRY GROUND DOLOMITE.
Special Fire Fighting Proc: WEAR NIOSH/MSHA APPROVED SCBA, FLAME & CHEMICAL RESISTANT PROTECTIVE CLOTHING. IF W/O RISK, REMOVE MATERIAL FROM FIRE AREA.
Unusual Fire And Expl Hazrds: SLIGHT EXPLOSION HAZARD IN THE FORM OF DUST WHEN EXPOSED TO FLAME. MODERATE FIRE HAZARD IN THE FORM OF DUST WHEN EXPOSED TO HEAT/FLAME/BY CHEMICAL REACTION.

ARSENIC 1 of 2

http://haz1.siri.org/msds/h/q282/q287.html

Reactivity Data

Stability: YES
Cond To Avoid (Stability): HEAT, FLAME, EXPOSURE TO AIR
Materials To Avoid: ACIDS, ACID FUMES, OXIDIZING AGENTS, HALOGENS, PALLADIUM, ZINC, PLATINUM, NITROGEN TRICHLORIDE, SILVER NITRATE (SUPP)
Hazardous Decomp Products: ARSENIC OXIDES
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): EXPOSURE TO AIR

Health Hazard Data

Route Of Entry - Inhalation: YES
Route Of Entry - Skin: NO
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: SKIN: MODERATE IRRITATION/SENSITIZATION. EYES: MODERATE IRRITATION. INHALATION: IRRITATION OF MUCOUS MEMBRANES/ RESPIRATORY TRACT/PHARYNGITIS. ARSENIC IS A NEUROTOXIN. POISONING MAY EFFECT THE HEART/GI SYSTEM/KIDNEYS & LIVER. CHRONIC-SKIN: ECZEMATOUS DERMATITIS/PIGMENTATION/HYPERKERATOSIS.
Carcinogenicity - NTP: YES
Carcinogenicity - IARC: YES
Carcinogenicity - OSHA: YES
Explanation Carcinogenicity: SEE INGREDIENTS.
Signs/Symptoms Of Overexp: VOMITING, DIARRHEA, NAUSEA, IRRITATION, METALLIC TASTE, BLOODY NOSE, PERFORATION OF NASAL SEPTUM.
Emergency/First Aid Proc: SKIN: FLUSH W/PLENTY OF WATER. EYE: FLUSH W/ PLENTY OF WATER FOR 15 MINS. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: WEAR FULL PROTECTIVE EQUIPMENT, COVER W/DRY SAND/VERMICULITE. MIX WELL & CAREFULLY TRANSFER TO A CONTAINER.
Waste Disposal Method: DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS.
UN1558
Precautions-Handling/Storing: KEEP CONTAINER TIGHTLY CLOSED. STORE IN COOL, DRY, WELL-VENTILATED AREA.
THIS PRODUCT CONTAINS A CHEMICAL KNOWN & CAUSE CANCER.

Control Measures

Respiratory Protection: REQUIRED
Ventilation: GLOVE BAG/BOX PREFERRED
Protective Gloves: RUBBER
Eye Protection: SAFETY GOGGLES W/FULL FACE SHIELD.
Other Protective Equipment: LAB COAT/APRON/FLAME & CHEMICAL RESISTANT COVERALLS/EYEWASH/SAFETY SHOWER.
Work Hygienic Practices: WASH THOROUGHLY AFTER USE. REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.
Suppl. Safety & Health Data: MAT TO AVOID CONT'D: ACETYLENES, CHLOROSYLAMINE, CHROMIUM VI OXIDE, SOLDIUM PEROXIDE, DIRUBIDIUM ACETYLIDE.

Transportation Data

Disposal Data

Label Data

Label Required: NO
Technical Review Date: 24JUN94
Label Date: 24JUN94

Label Status: N
Special Hazard Precautions: POSSIBLE LUNG IRRITAITON FROM SILICA. LONG QUARTZ.
Label Name: JOHNSON MATTHEY CATALOG CO
Label Street: 30 BOND ST
Label City: WARD HILL
Label State: MA
Label Zip Code: 01835-0747
Label Country: US
Label Emergency Number: 508-777-1970/508-521-6300

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DOD Hazardous Materials Information System
DoD 6050.5-LR
AS OF January 1996
Proprietary Version - For U.S. Government Use Only

FSC: 6810
NIIN: 00F008292
Manufacturer's CAGE: 4F473
Part No. Indicator: A
Part Number/Trade Name: ASBESTOS FIBER (CHRYSOTILE)

==========

General Information

==========

Item Name:
Company's Name: JOHNS-MANVILLE CORPORATION
Company's Street: N/K
Company's P. O. Box: 5108
Company's City: DENVER
Company's State: CO
Company's Country:
Company's Zip Code: 80217
Company's Emerg Ph #: (303) 978-3120
Company's Info Ph #: (303) 978-3120
Distributor/Vendor # 1:
Distributor/Vendor # 1 Cage:
Distributor/Vendor # 2:
Distributor/Vendor # 2 Cage:
Distributor/Vendor # 3:
Distributor/Vendor # 3 Cage:
Distributor/Vendor # 4:
Distributor/Vendor # 4 Cage:
Safety Data Action Code:
Safety Focal Point: F
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status:
Date MSDS Prepared: 20APR83
Safety Data Review Date: 07JUN89
Supply Item Manager:
MSDS Preparer's Name: KENNETH A. ROBERTS
Preparer's Company: JOHNS-MANVILLE CORPORATION
Preparer's St Or P. O. Box: N/K
Preparer's City: DENVER
Preparer's State: CO
Preparer's Zip Code: 80217
Other MSDS Number:
MSDS Serial Number: BGVBD
Specification Number:
Spec Type, Grade, Class:
Hazard Characteristic Code:
Unit Of Issue:
Unit Of Issue Container Qty:
Type Of Container:
Net Unit Weight:

Report for NIIN: 00F008292

NRC/State License Number:
Net Explosive Weight:
Net Propellant Weight-Ammo:
Coast Guard Ammunition Code:

Ingredients/Identity Information

Proprietary: NO
Ingredient: ASBESTOS (AMIANTHUS, OBSOLETE AMOSITE), (FOR OSHA PEL, SEE 29CFR 1910.1101)
Ingredient Sequence Number: 01
Percent: 100%
Ingredient Action Code:
Ingredient Focal Point: F
NIOSH (RTECS) Number: CI6475000
CAS Number: 1332-21-4
OSHA PEL: 0.2 FIBERS/CC
ACGIH TLV: 0.5 FIBERS/CC; A1;89
Other Recommended Limit: A1 HUMAN CARCINOGEN

Physical/Chemical Characteristics

Appearance And Odor: WHITE TO GRAY FIBROUS MATERIAL - DON'T TEST FOR ODOR.
Boiling Point: N/R
Melting Point: N/R
Vapor Pressure (MM Hg/70 F): N/R
Vapor Density (Air=1): N/R
Specific Gravity: 2.4-2.6
Decomposition Temperature: N/R
Evaporation Rate And Ref: N/R
Solubility In Water: NIL
Percent Volatiles By Volume: N/R
Viscosity:
pH: N/R
Radioactivity:
Form (Radioactive Matl):
Magnetism (Milligauss):
Corrosion Rate (IPY): N/R
Autoignition Temperature:

Fire and Explosion Hazard Data

Flash Point: NONFLAMMABLE
Flash Point Method: N/P
Lower Explosive Limit: N/R
Upper Explosive Limit: N/R
Extinguishing Media: N/R
Special Fire Fighting Proc: N/R
Unusual Fire And Expl Hazrds: N/R

Report for NIIN: 00F008292

Reactivity Data

Stability: YES
Cond To Avoid (Stability): N/R
Materials To Avoid: N/R
Hazardous Decomp Products: NONE
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): N/R

Health Hazard Data

LD50-LC50 Mixture: N/K
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: INHALATION: CAUSE CHRONIC PULMONARY DISEASE & CANCER. EYES: AS WITH ANY DUST, EXCESSIVE EXPOSURES CAN CAUSE TRANSIENT IRRITATION. SKIN: FIBERS CAN BECOME IMBEDDED & SOME RESULT IN ASBESTOS "CORNS".
Carcinogenicity - NTP: N/P
Carcinogenicity - IARC: N/P
Carcinogenicity - OSHA: YES
Explanation Carcinogenicity: KNOWN HUMAN CARCINOGEN
Signs/Symptoms Of Overexp: THERE ARE NO ACUTE SIGN OR SYMPTOMS ASSOCIATED WITH ASBESTOS. THE DISEASE ASSOCIATE WITH OVER EXPOSURE ARE CHRONIC GENERALLY TAKING FROM 10 TO 40 YEARS TO BECOME APPARENT.
Med Cond Aggravated By Exp: PULMONARY DISEASE
Emergency/First Aid Proc: INHALATION: REMOVE TO FRESH AIR. AVOID INHALATION OF TABACCO SMOKE. SKIN: WASH OR SHOWER THOROUGHLY USING SOAP & WARM WATER. EYES: FLUSH W/WATER.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: VACUUM CLEAN SPILLAGE. REPAIR BROKEN BAGS. IF SWEEPING IS NECESSARY, WET DOWN SPILLAGE. USE APPROVED RESPIRATORY EQUIPMENT WHEN REQUIRED.
Neutralizing Agent: N/R
Waste Disposal Method: PUT CAUTION LABEL ON BAG.
Precautions-Handling/Storing: REPAIR ALL BROKEN BAGS IMMEDIATELY.
Other Precautions: SMOKING GREATLY INCREASES THE CHANCE FOR ASBESTOS RELATED LUNG DISEASE. IF YOU WORK WITH ASBESTOS, DON'T SMOKE.

Control Measures

Respiratory Protection: USE RESPIRATORS APPROVED FOR PROTECTION AGAINST PNEUMOCONIOSIS-PRODUCING DUSTS.
Ventilation: CONTROL WITH MECHANICAL DUST COLLECTION EQUIPMENT TO WITHIN TLV.
Protective Gloves: NOT NORMALLY REQUIRED
Eye Protection: NOT NORMALLY REQUIRED
Other Protective Equipment: USE SPECIAL CLOTHING AS REQUIRED
Work Hygienic Practices: N/R

STANDARD OIL OF OHIO -- #2 HEATING OIL,UNBRANDED - FUEL OIL,BURNER
MATERIAL SAFETY DATA SHEET
NSN: 9140002474365
Manufacturer's CAGE: 82250
Part No. Indicator: A
Part Number/Trade Name: #2 HEATING OIL,UNBRANDED

General Information

Item Name: FUEL OIL,BURNER
Company's Name: STANDARD OIL CO OF OHIO
Company's Street: 200 PUBLIC SQ
Company's City: CLEVELAND
Company's State: OH
Company's Country: US
Company's Zip Code: 44114
Company's Emerg Ph #: 800-362-8059/800-424-9300(CHEMTREC)
Company's Info Ph #: 800-362-8059 216-586-6499
Record No. For Safety Entry: 075
Tot Safety Entries This Stk#: 082
Status: SE
Date MSDS Prepared: 05AUG88
Safety Data Review Date: 05MAR96
Supply Item Manager: KY
MSDS Preparer's Name: RIGNEY/R W MAST
MSDS Serial Number: BGWDY
Specification Number: VV-F-815
Spec Type, Grade, Class: 2 GRADE
Hazard Characteristic Code: F4
Unit Of Issue: GL
Unit Of Issue Container Qty: BULK
Type Of Container: BULK
Net Unit Weight: UNKNOWN

Ingredients/Identity Information

Proprietary: NO
Ingredient: NO. 2 FUEL OIL
Ingredient Sequence Number: 01
Percent: 99-100
NIOSH (RTECS) Number: LS8930000
CAS Number: 68476-30-2
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Other Recommended Limit: NONE RECOMMENDED

Physical/Chemical Characteristics

Appearance And Odor: LIQUID;STRAW COLORED;HYDROCARBON ODOR.
Boiling Point: 320F,160C
Melting Point: -15F,-26C
Vapor Pressure (MM Hg/70 F): 0.4
Vapor Density (Air=1): 4.7
Specific Gravity: 0.84-0.89
Decomposition Temperature: UNKNOWN
Evaporation Rate And Ref: <1 WATER=1
Solubility In Water: NEGLIGIBLE
Percent Volatiles By Volume: NEG
Viscosity: 2-3.6CST@100F
pH: 7
Corrosion Rate (IPY): UNKNOWN

Fire and Explosion Hazard Data

Flash Point: 129F,54C
Lower Explosive Limit: 0.7
Upper Explosive Limit: 5.0NOWN
Extinguishing Media: USE WATER FOG, CARBON DIOXIDE, FOAM, OR DRY CHEMICAL.
Special Fire Fighting Proc: USE A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT.COOL FIRE EXPOSED CONTAINERS WITH WATER FOG.
Unusual Fire And Expl Hazrds: CONTAINERS MAY BURST AT ELEVATED TEMPERATURES.RUNOFF TO SEWERS MAY CREAT AN EXPLOSION HAZARD.FIRE CONDITIONS MAY EVOLVE TOXIC FUMES.

Reactivity Data

Stability: YES
Cond To Avoid (Stability): HIGH HEAT, OPEN FLAMES AND OTHER SOURCES OF IGNITION
Materials To Avoid: STRONG OXIDIZING AGENTS
Hazardous Decomp Products: CARBON DIOXIDE,CARBON MONOXIDE. AND REACTIVE HYDROCARBONS.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT APPLICABLE

Health Hazard Data

LD50-LC50 Mixture: TLV FOR OIL MIST IS 5MG/M3
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: EYES:SLIGHT IRRITATION.SKIN:MODERATE IRRITATION,POSSIBLY ALLERGIC REACTION.HIGH PRESSURE INJECTIONS ARE A MEDICAL EMERGENCY.INGEST:GI TRACT IRRITATION AND CNS EFFECTS.MAY CAUSE LUNG DAMAGE IF VOMITED AFTER INGESTING.INHAL:MAY CAUSE RESPIRATORY IRRITATION AND CNS EFFECTS.CHRONIC:DEGENERATIVE CHANGE IN KIDNEYS AND LIVER.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: SIMILAR PRODUCTS HAVE PRODUCED SKIN CANCER IN LABORATORY ANIMALS.
EXCITATION,EUPHORIA,HEADACHE,DIZZINESS,DROWSINESS,BLURRED VISION,FATIGUE, TREMORS,RESPIRATORY ARREST.
Med Cond Aggravated By Exp: BECAUSE OF ITS DEFATTING PROPERTIES, PROLONGED AND REPEATED SKIN CONTACT MAY AGGRAVATE AN EXISTING DERMATITIS.
Emergency/First Aid Proc: SKIN:REMOVE CONTAMINATED CLOTHING;WASH WITH SOAP AND WATER.EYES:FLUSH WITH WATER FOR 15 MINUTES.INHAL:REMOVE TO FRESH AIR.GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED.INGEST:DO NOT INDUCE VOMITING.GET PROMPT QUALIFIED MEDICAL ATTENTION.IF SPONTANEOUS VOMITING OCCURS,MONITOR FOR BREATHING DIFFICULTY.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: REMOVE PERSONNEL. ELIMINATE IGNITION SOURCES. VENTILATE AREA. WEAR PROTECTIVE CLOTHING AND EQUIPMENT. DIKE AND CONTAIN. ABSORB IN INERT MATERIAL AND PLACE IN APPROPIATE DISPOSAL CONTAINER AND COVER. WASH AREA WITH SOAP AND WATER.800-424-9300-CHEMTREC
Neutralizing Agent: NOT APPLICABLE
Waste Disposal Method: CONTACT YOUR LOCAL ENVIRONMENTAL OFFICER. DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
Precautions-Handling/Storing: STORE IN A COOL,DRY,WELL-VENTILATED PLACE. KEEP CONTAINER CLOSED WHEN NOT IN USE.KEEP AWAY FROM HEAT,SPARKS,FLAMES AND INCOMPATIBLE MATERIALS.
Other Precautions: GROUND CONTAINERS WHEN TRANSFERRING LIQUID;FLOWING HYDROCARBONS CAN BECOME ELECTROSTATICALLY CHARGED.EMPTY CONTAINERS MUST BE DISPOSED OF PROPERLY.

Control Measures

Control Measures

Respiratory Protection: NONE NORMALLY REQUIRED. NIOSH/MSHA-APPROVED RESPIRATOR OR SCBA AS APPROPIATE FOR EXPOSURE OF CONCERN.
Ventilation: MECHANICAL (GENERAL) VENTILATION.
Protective Gloves: IMPERVIOUS GLOVES.
Eye Protection: SPLASH GOGGLES IF MISTING.
Other Protective Equipment: PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE EXPOSURE FROM PROLONGED OR REPEATED CONTACT. EYE BATH AND SAFETY SHOWER.
Work Hygienic Practices: WASH THOROUGHLY AFTER HANDLING AND BEFORE EATING. LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. DISCARD CONTAMINATED SHOES
Suppl. Safety & Health Data: NONE

Transportation Data

Trans Data Review Date: 96065
DOT PSN Code: GOD
DOT Symbol: D
DOT Proper Shipping Name: FUEL OIL
DOT Class: 3
DOT ID Number: NA1993
DOT Pack Group: III
DOT Label: FLAMMABLE LIQUID
IMO PSN Code: HIA
IMO Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. o *
IMO Regulations Page Number: 3345
IMO UN Number: 1993
IMO UN Class: 3.3
IMO Subsidiary Risk Label: - *
IATA PSN Code: MCA
IATA UN ID Number: 1993
IATA Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. *
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
AFI PSN Code: MMK
AFI Symbols: D
AFI Prop. Shipping Name: FUEL OIL (NO. 1, 2, 4, 5, OR 6);
AFI Class: 3
AFI ID Number: NA1993
AFI Pack Group: III
AFI Label: FLAMMABLE LIQUID
AFI Basic Pac Ref: A7.3
MMAC Code: NR
N.O.S. Shipping Name: NO. 2 HEATING OIL.
Additional Trans Data: NONE

Disposal Data

Disposal Data Review Date: 90144
Rec # For This Disp Entry: 09
Tot Disp Entries Per NSN: 010
Landfill Ban Item: YES
Disposal Supplemental Data: 4 IN CASE OF ACCIDENTAL EXPOSURE OR DISCHARGE, CONSULT HEALTH AND SAFETY FILE FOR PRECAUTIONS.
1st EPA Haz Wst Code New: D001
1st EPA Haz Wst Name New: IGNITIBLE
1st EPA Haz Wst Char New: IGNITABILITY
1st EPA Acute Hazard New: NO

Label Data

Label Required: YES
Technical Review Date: 05MAR96
Label Date: UNDATED

MFR Label Number: UNKNOWN
Label Status: D
Common Name: #2 HEATING OIL,UNBRANDED
Signal Word: CAUTION!
Acute Health Hazard-Slight: X
Contact Hazard-Slight: X
Fire Hazard-Moderate: X
Reactivity Hazard-None: X
Special Hazard Precautions: EYES:SLIGHT IRRITATION.SKIN:MODERATE IRRITATION,POSSIBLY ALLERGIC REACTION.HIGH PRESSURE INJECTIONS ARE A MEDICAL EMERGENCY.INGEST:GI TRACT IRRITATION AND CNS EFFECTS.MAY CAUSE LUNG DAMAGE IF VOMITED AFTER INGESTING.INHAL:MAY CAUSE RESPIRATORY IRRITATION AND CNS EFFECTS.CHRONIC:DEGENERATIVE CHANGE IN KIDNEYS AND LIVER. FIRST AID: SKIN:REMOVE CONTAMINATED CLOTHING;WASH WITH SOAP AND WATER.EYES:FLUSH WITH WATER FOR 15 MINUTES.INHAL:REMOVE TO FRESH AIR.GIVE OXYGEN OR ARTIFICIAL RESPIRATION IF NEEDED.INGEST:DO NOT INDUCE VOMITING.GET PROMPT QUALIFIED MEDICAL ATTENTION.IF SPONTANEOUS VOMITING OCCURS,MONITOR FOR BREATHING DIFFICULTY.
Protect Eye: X
Protect Skin: X
Label Name: STANDARD OIL CO OF OHIO
Label Street: 200 PUBLIC SQ
Label City: CLEVELAND
Label State: OH
Label Zip Code: 44114
Label Country: US
Label Emergency Number: 800-362-8059/800-424-9300(CHEMTREC)

==========

AMOCO OIL -- AMOCO REGULAR LEADED GASOLINE - GASOLINE,AUTOMOTIVE, REFEREE
MATERIAL SAFETY DATA SHEET
NSN: 9130001429457
Manufacturer's CAGE: 15958
Part No. Indicator: A
Part Number/Trade Name: AMOCO REGULAR LEADED GASOLINE

General Information

Item Name: GASOLINE,AUTOMOTIVE, REFEREE
Company's Name: AMOCO OIL CO.
Company's Street: 200 EAST RANDOLPH DR.
Company's City: CHICAGO
Company's State: IL
Company's Zip Code: 60601
Company's Emerg Ph #: 800-447-8735 MED. 800-424-9300
Company's Info Ph #: 312-856-3907
Record No. For Safety Entry: 002
Tot Safety Entries This Stk#: 009
Status: SE
Date MSDS Prepared: 21MAR88
Safety Data Review Date: 21JUN89
Supply Item Manager: KY
MSDS Preparer's Name: STEPEN A. ELBERT
MSDS Serial Number: BGXFY
Specification Number: MIL-G-46015
Spec Type, Grade, Class: GR I, COLOR RED
Hazard Characteristic Code: F2
Unit Of Issue: GL
Type Of Container: BULK

Ingredients/Identity Information

Proprietary: NO
Ingredient: GASOLINE
Ingredient Sequence Number: 01
Percent: 100
NIOSH (RTECS) Number: LX3300000
CAS Number: 8006-61-9
OSHA PEL: 300 PPM/500 STEL
ACGIH TLV: 300 PPM/500STEL;9192

Proprietary: NO
Ingredient: BENZENE (SARA III)
Ingredient Sequence Number: 02
NIOSH (RTECS) Number: CY1400000
CAS Number: 71-43-2
OSHA PEL: 1PPM/5STEL;1910.1028
ACGIH TLV: 10 PPM; A2; 9192

Physical/Chemical Characteristics

Appearance And Odor: CLEAR RED LIQUID;GASOLINE ODOR.
Boiling Point: 80-430F
Specific Gravity: 0.72 - 0.76
Solubility In Water: NEGLIGIBLE
Percent Volatiles By Volume: 100
Autoignition Temperature: 495

Fire and Explosion Hazard Data

Flash Point: -45F
Lower Explosive Limit: 1.3

Upper Explosive Limit: 7.6
Extinguishing Media: DRY CHEMICAL,CARBON DIOXIDE,FOAM,WATER FOG. WATER MAY BE INEFFECTIVE,AS PRODUCT WILL FLOAT AND MAY SPREAD FIRE.
Special Fire Fighting Proc: WEAR SELF CONTAINED BREATHING APPARATUS IN ENCLOSED AREAS. WATER SPRAY MAY BE USED TO COOL FIRE EXPOSED CONTAINERS.
Unusual Fire And Expl Hazrds: VAPORS HEAVIER THAN AIR,ACCUMULATING IN LOW AREAS,TRAVELING ALONG GROUND AND MAY FLASH BACK FROM DISTANT IGNITION SOURCE.

Reactivity Data

Stability: YES
Cond To Avoid (Stability): HEAT,SPARKS AND OTHER IGNITION SOURCES,VAPOR ACCUMULATIONS.
Materials To Avoid: STRONG OXIDIZERS
Hazardous Decomp Products: CARBON DIOXIDE,CARBON MONOXIDE
Hazardous Poly Occur: NO

Health Hazard Data

LD50-LC50 Mixture: ORAL RAT LD50 18,800 MG/KG
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: NO
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: PRODUCT IS IRRITATING TO EYES,SKIN, RESPRIATORY TRACT AND DEPRESSES THE CENTRAL NERVOUS SYSTEM. CHRONIC OVER EXPOSURE MAY CAUSE LIVER,KIDNEY, OR CENTRAL NERVOUS SYSTEM DAMAGE.
Carcinogenicity - NTP: YES
Carcinogenicity - IARC: YES
Carcinogenicity - OSHA: YES
Explanation Carcinogenicity: CONTAINS BENZENE;LISTED BY ALL THREE ALSO,AN API SYUDY FOUND LIVER CANCER IN MICE EXPOSED TO GASOLINE VAPORS.
Signs/Symptoms Of Overexp: EYE/SKIN CONTACT:TRANSITORY IRRITATION. INHALED:RESPIRATORY IRRITATION,CENTRAL NERVOUS SYSTEM DEPRESSION INCLUDING, EUPHORIA,HEADACHE,DIZZINESS,DROWINESS,FATIGUE,TREMOUR,CONVULSIONS,NAUSEA, VOMITING,DIARRHEA,LOSS OF CONSCIOUSNESS.AND FINALLY DEATH. INGESTED:G/I IRRITATION,PLUS SYMPTOMS SIMILAR TO THOSE UNDER "INHALED" .
Med Cond Aggravated By Exp: PRE-EXISTING EYE,SKIN CONDITIONS OR IMPAIRED LIVER,KIDNEY FUNCTION MAY BE AGGRAVATED BY THIS PRODUCT.
Emergency/First Aid Proc: EYE:FLUSH WITH WATER 15 MIN. SKIN:WASH WITH SOAP & WATER. REMOVE CONTAMINATED CLOTHING;LAUNDER BEFORE FEUSE. INHALED: REMOVE TO FRESH AIR.RESUSCITATE OR GIVE OXYGEN AS NEEDED. GET MEDICAL CARE. INGESTED:GET IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING. IF VOMITING OCCURS, MINIMIZE ASPIRATION. HAZARD.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: ELIMINATE IGNITION SOURCES. ISOLATE AREA. USE PROTECTIVE EQUIPMENT AS NECESSARY. STOP LEAK AND CONTAIN SPILL. DIKE AS NEEDED TO KEEP SPILL FROM DRAINS,WATER WAYS ETC. WATER FOG MAY BE USED TO REDUCE VAPORS & PERSONAL HAZARD. REPORT SPILL PER LAW.
Neutralizing Agent: NONE
Waste Disposal Method: DISPOSE I/A/W FEDERAL,STATE,LOCAL REGULATIONS. PRODUCT QUALIFS AS IGNITABLE WASTE AND CANNOT BE LANDFILLED. IF RECOVERY OR RECYCYLE ARE UNACCEPTABLE, INCINERATION MAY BE ACCEPTABLE DISPOSAL METHOD.
Precautions-Handling/Storing: STORE IN A COOL,DRY,ISOLATED,WELL VENTILATED AREA. KEEP IGNITION SOURCES AWAY. GROUND CONTAINERS TO PREVENT STATIC DISCHARGE DURING TRANSFERS.
Other Precautions: FIRE AND EXPLOSION ARE THE ACUTE HAZARDS OF THIS PRODUCT. TAKE EXTRAORDINARY STEPS TO PREVENT THEM.

Control Measures

Respiratory Protection: IF NEEDED,USE NIOSH/MSHA RESPIRATOR WITH ORGANIC

VAPOR CARTRIDGE OR PREFERRABLY, A POSITIVE PRESSURE AIR SUPPLIED RESPIRATOR OR SELF CONTAINED BREATHING APPARATUS.
Ventilation: USE EXPLOSION PROOF VENTILATION EQUIPMENT TO MAINTAIN EXPOSURE BELOW PEL/TLV.
Protective Gloves: IMPERVIOUS RUBBER OR POLYMER.
Eye Protection: SAFETY GLASSES,OR SPLASH GOGGLES.
Other Protective Equipment: SAFETY SHOWER/EYE WASH. WORK CLOTHING AS NEEDED TO PROTECT FROM PROLONGED/REPEATED CONTACT.
Work Hygienic Practices: USE GOOD CHEMICAL HYGIENE PRACTICE. AVOID UNNECESSARY CONTACT. MINIMIZE ALL CONTACT.

Transportation Data

Trans Data Review Date: 89172
DOT PSN Code: GTN
DOT Proper Shipping Name: GASOLINE
DOT Class: 3
DOT ID Number: UN1203
DOT Pack Group: II
DOT Label: FLAMMABLE LIQUID
IMO PSN Code: HRV
IMO Proper Shipping Name: GASOLINE
IMO Regulations Page Number: 3141
IMO UN Number: 1203
IMO UN Class: 3.1
IMO Subsidiary Risk Label: -
IATA PSN Code: RMF
IATA UN ID Number: 1203
IATA Proper Shipping Name: MOTOR SPIRIT
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
AFI PSN Code: MUC
AFI Prop. Shipping Name: GASOLINE
AFI Class: 3
AFI ID Number: UN1203
AFI Pack Group: II
AFI Basic Pac Ref: 7-7

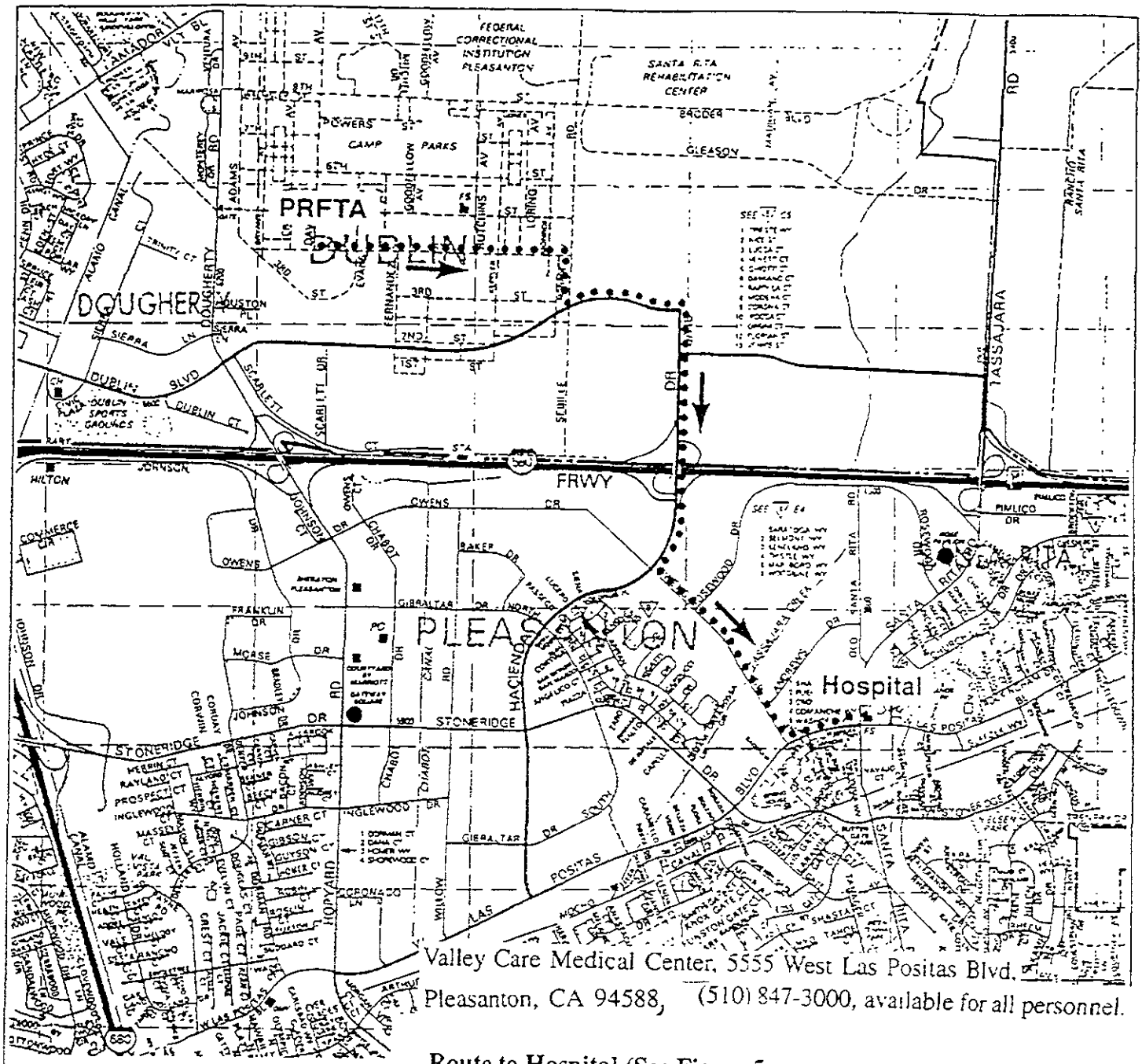
Disposal Data

Label Data

Label Required: YES
Label Status: F
Special Hazard Precautions: MAY BE POISONOUS IF INHALED OR ABSORBED THROUGH SKIN. VAPORS MAY CAUSE DIZZINESS OR SUFFOCATION. CONTACT MAY IRRITATE OR BURN SKIN AND EYES. FIRE MAY PRODUCE IRRITATING OR POISONOUS GASES. RUNOFF FROM FIRE CONTROL OR DILUTION WATER MAY CAUSE POLLUTION.
Label Name: AMOCO OIL CO
Label Street: 200 E RANDOLPH DR MC 1408
Label City: CHICAGO
Label State: IL
Label Zip Code: 60601-6401
Label Country: US

ATTACHMENT HS-9

HOSPITAL ROUTE MAP



Valley Care Medical Center, 5555 West Las Positas Blvd, Pleasanton, CA 94588, (510) 847-3000, available for all personnel.

Route to Hospital (See Figure 5)

Go West on 5th Street to PRFTA main entrance on Dougherty Road

Make left on Dougherty Road

Take 580 East

Take Santa Rita Road Exit

Make right at first light which is Santa Rita

Make a right on Los Positas and into emergency room driveway

Source: Thomas Guide, Alameda County, 1995

Project No. 7133	Parks Reserve Forces Training Area	ROUTE TO HOSPITAL	HS-9-1
Woodward-Clyde Consultants			

APPENDIX B

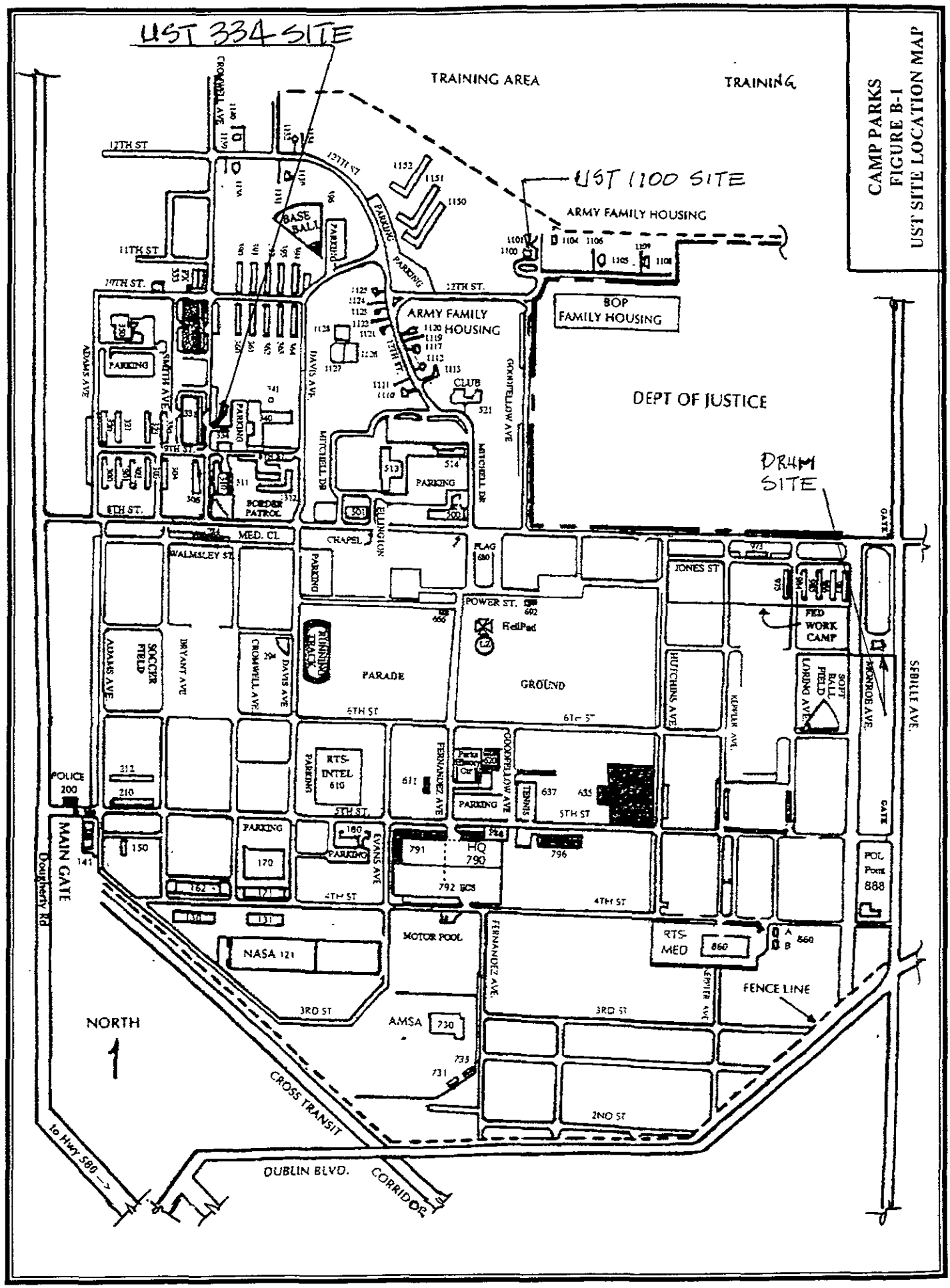
SITE LOCATION SKETCHES

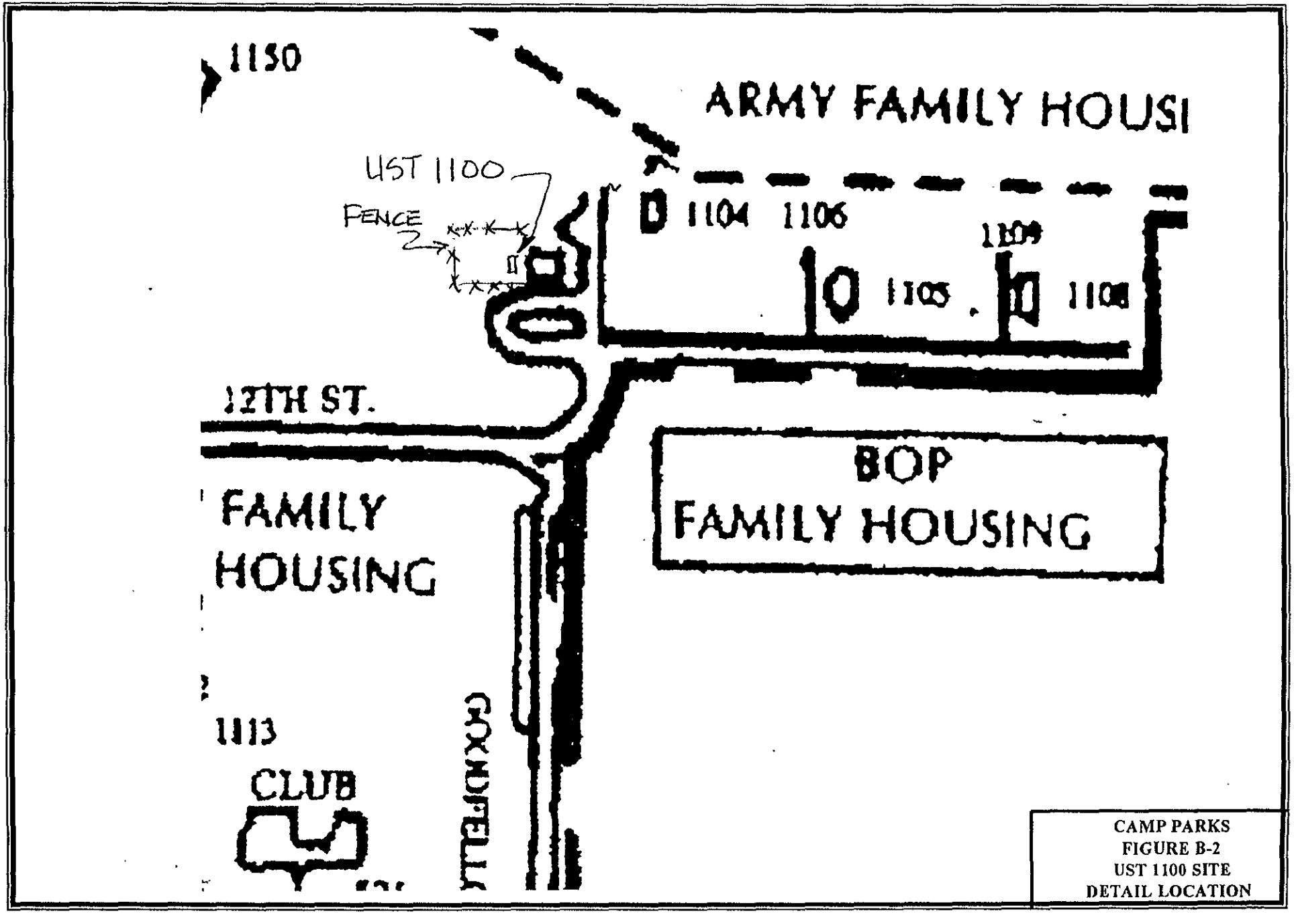
B-1: UST SITE LOCATION MAP

B-2: UST 1100 SITE LOCATION MAP

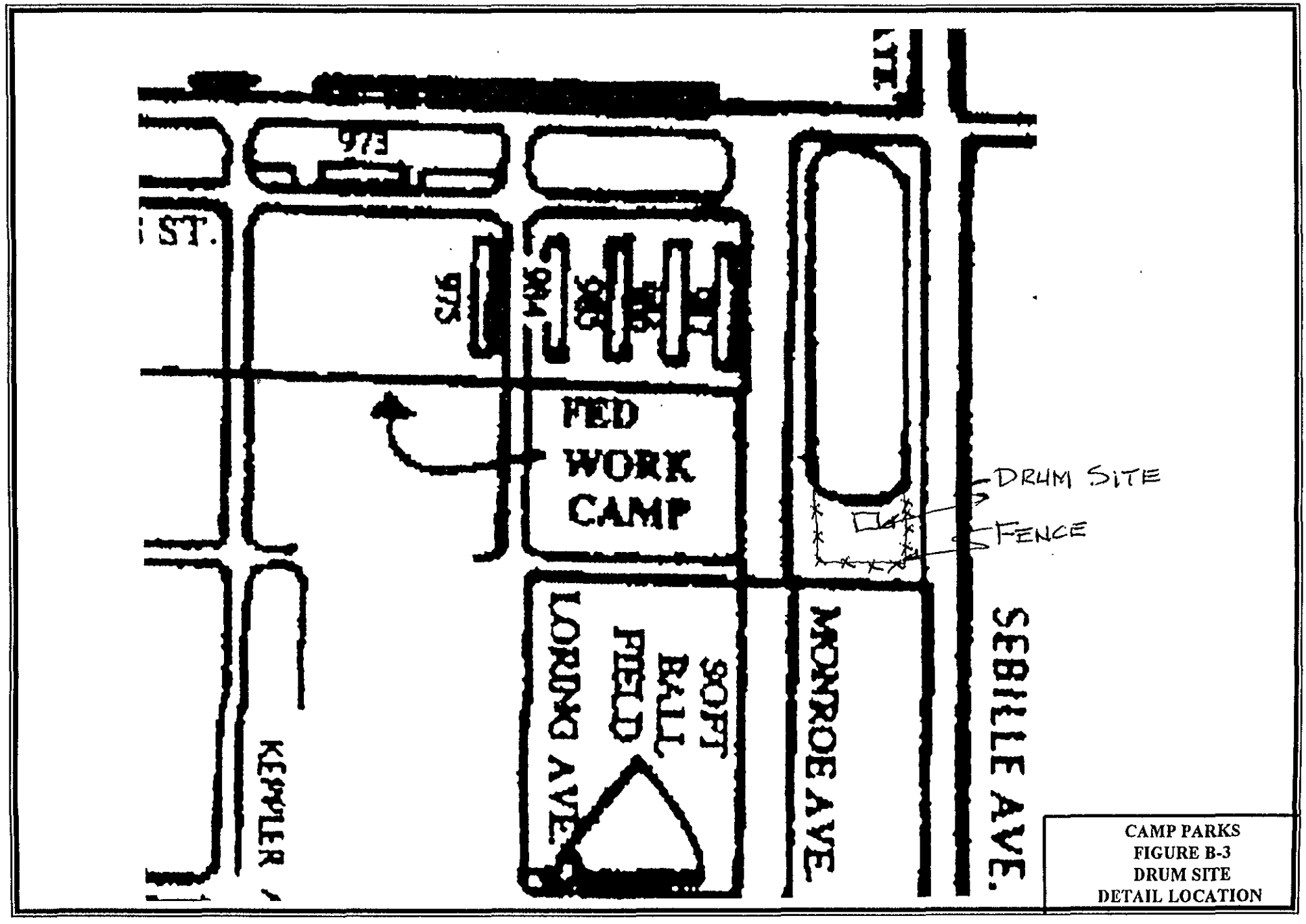
B-3: DRUM SITE LOCATION MAP

B-4: UST 334 SITE LOCATION MAP

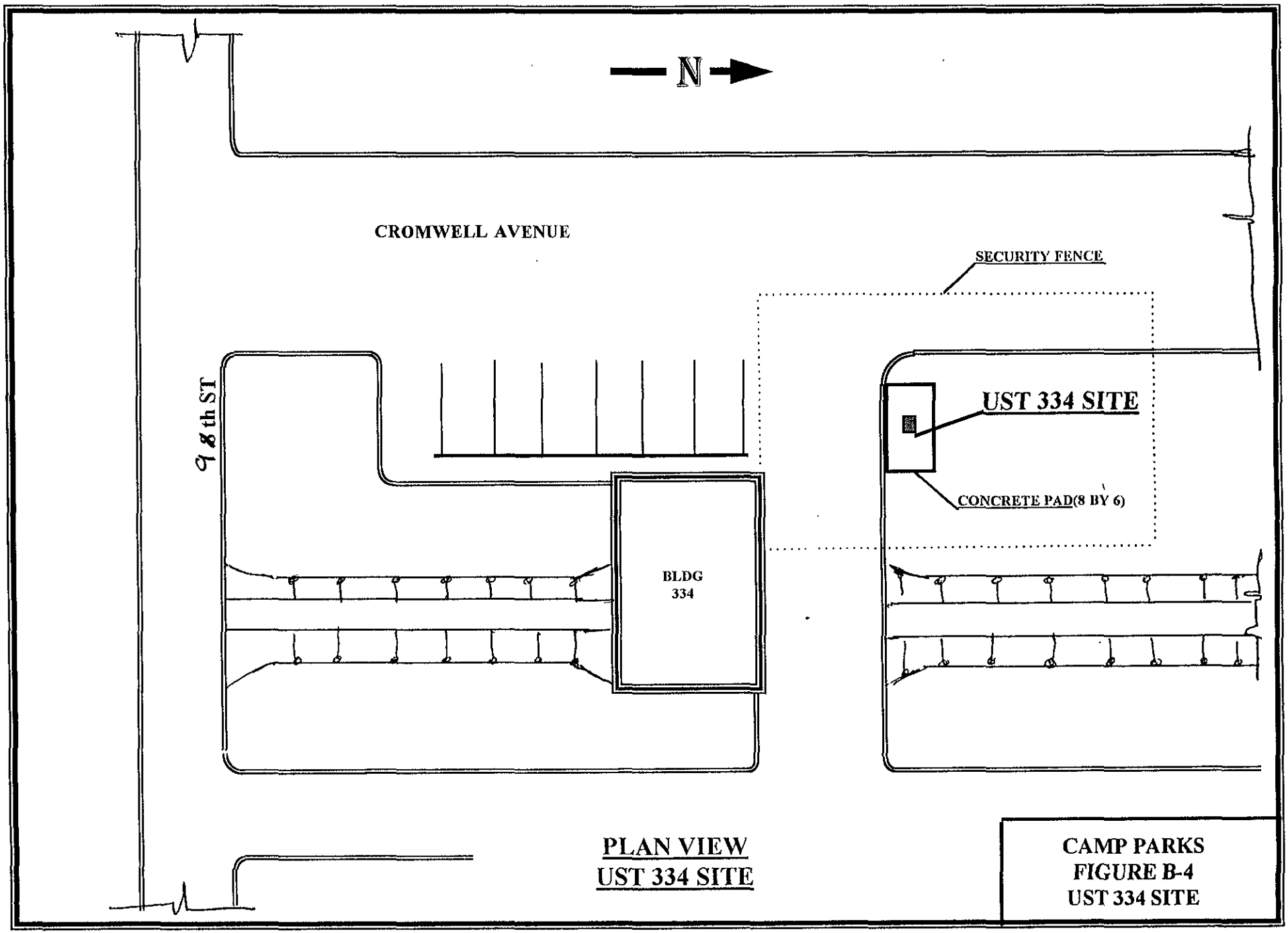

CAMP PARKS
FIGURE B-1
UST SITE LOCATION MAP
UST 334 SITE
UST 1100 SITE
DRUM SITE
TRAINING AREA
TRAINING
ARMY FAMILY HOUSING
BOP FAMILY HOUSING
DEPT OF JUSTICE
ARMY FAMILY HOUSING
CLUB
BASE BALL
PARKING
12TH ST
11TH ST
10TH ST.
9TH ST.
8TH ST.
ADAMS AVE
SMITH AVE
DAVIS AVE
MITCHELL DR
GOODRELLOW AVE
BORDER PATROL
MED. CL
CHAPEL
WALMSLEY ST.
ELLINGTON
FLAG
POWER ST.
HELIPAD
JONES ST
FED WORK CAMP
SOFT BALL FIELD
LOADING AVE
MONROE AVE
SCHULTZ AVE
GATE
SOCCER FIELD
BRYANT AVE
CROMWELL AVE
DAVIS AVE
PARADE
GROUND
6TH ST
HUTCHINS AVE
KEPNER AVE
RTS-INTEL 610
FERNANDEZ AVE
PARKING
5TH ST
TENNIS
637
635
POLICE 200
MAIN GATE
Dougherty Rd
PARKING
EVANS AVE
791
HQ 790
792 BCS
796
4TH ST
POL Point 888
NASA 121
MOTOR POOL
RTS-MED 860
FERNANDEZ AVE
KEPNER AVE
FENCE LINE
3RD ST
AMSA 730
731
733
NORTH
CROSS TRANSIT
2ND ST
to HWY 580 →
DUBLIN BLVD. CORRIDOR



CAMP PARKS
FIGURE B-2
UST 1100 SITE
DETAIL LOCATION



CAMP PARKS
FIGURE B-3
DRUM SITE
DETAIL LOCATION



PLAN VIEW
UST 334 SITE

CAMP PARKS
FIGURE B-4
UST 334 SITE

APPENDIX C

NOTICES AND APPLICATIONS

C-1: UNIFORM HAZARDOUS WASTE MANIFEST

C-2: UST UNAUTHORIZED RELEASE (LEAK)/CONTAMINATION SITE REPORT

State of California—Environmental Protection Agency
Form Approved OMB No 2050-0039 (Expires 9-30-94)
Please print or type Form designed for use on elite (12 pitch) typewriter

See Instructions on back of page 6.

Department of Toxic Substances Co
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1 Generator's US EPA ID No	Manifest Document No	2 Page 1 of	Information in the shaded areas is not required by Federal law

3 Generator's Name and Mailing Address	A. State Manifest Document Number: 92501534
4 Generator's Phone ( )	B. State Generator's ID
5 Transporter 1 Company Name / 6 US EPA ID Number	C. State Transporter's ID
	D. Transporter's Phone
7 Transporter 2 Company Name / 8 US EPA ID Number	E. State Transporter's ID
	F. Transporter's Phone
9. Designated Facility Name and Site Address / 10 US EPA ID Number	G. State Facility's ID
	H. Facility's Phone

11 US DOT Description (including Proper Shipping Name Hazard Class and ID Number)	12 Containers No	12 Containers Type	13 Total Quantity	14 Unit Wt/Vol	I. Waste Number
a					State / EPA/Other
b					State / EPA/Other
c					State / EPA/Other
d					State / EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. b. c. d.

15 Special Handling Instructions and Additional Information

16 GENERATOR'S CERTIFICATION: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable federal state and international laws

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment OR if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford

Printed/Typed Name	Signature	Month	Day	Year

17 Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18 Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19 Discrepancy Indication Space

Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19

Printed/Typed Name	Signature	Month	Day	Year

DO NOT WRITE BELOW THIS LINE.

C-1

DTSC 8022A / 92)
EPA 8700-2

GENERATOR

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPO

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☐ NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? ☐ YES ☐ NO

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I HAVE DISTRIBUTED THIS INFORMATION ACCORDING TO THE DISTRIBUTION SHOWN ON THE INSTRUCTION SHEET ON THE BACK PAGE OF THIS FORM.
SIGNED _____ DATE _____

REPORT DATE M M D D Y Y | CASE #

REPORTED BY
NAME OF INDIVIDUAL FILING REPORT | PHONE ( ) | SIGNATURE
REPRESENTING ☐ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER _____ | COMPANY OR AGENCY NAME
ADDRESS
STREET | CITY | STATE | ZIP

RESPONSIBLE PARTY
NAME ☐ UNKNOWN | CONTACT PERSON | PHONE ( )
ADDRESS
STREET | CITY | STATE | ZIP

SITE LOCATION
FACILITY NAME (IF APPLICABLE) | OPERATOR | PHONE ( )
ADDRESS
STREET | CITY | COUNTY | ZIP
CROSS STREET

IMPLEMENTING AGENCIES
LOCAL AGENCY AGENCY NAME | CONTACT PERSON | PHONE ( )
REGIONAL BOARD | | PHONE ( )

SUBS. INVOLVED
(1) NAME | QUANTITY LOST (GALLONS) _____ ☐ UNKNOWN
(2) _____ ☐ UNKNOWN

DISCOVERY/ABATEMENT
DATE DISCOVERED M M D D Y Y | HOW DISCOVERED ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☐ TANK REMOVAL ☐ OTHER _____
DATE DISCHARGE BEGAN M M D D Y Y ☐ UNKNOWN
HAS DISCHARGE BEEN STOPPED? ☐ YES ☐ NO IF YES, DATE M M D D Y Y
METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY)
☐ REMOVE CONTENTS ☐ CLOSE TANK & REMOVE ☐ REPAIR PIPING
☐ REPAIR TANK ☐ CLOSE TANK & FILL IN PLACE ☐ CHANGE PROCEDURE
☐ REPLACE TANK ☐ OTHER _____

SOURCE/CAUSE
SOURCE OF DISCHARGE
☐ TANK LEAK ☐ UNKNOWN
☐ PIPING LEAK ☐ OTHER
CAUSE(S)
☐ OVERFILL ☐ RUPTURE/FAILURE ☐ SPILL
☐ CORROSION ☐ UNKNOWN ☐ OTHER _____

CASE TYPE
CHECK ONE ONLY
☐ UNDETERMINED ☐ SOIL ONLY ☐ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS
CHECK ONE ONLY
☐ NO ACTION TAKEN ☐ PRELIMINARY SITE ASSESSMENT WORKPLAN SUBMITTED ☐ POLLUTION CHARACTERIZATION
☐ LEAK BEING CONFIRMED ☐ PRELIMINARY SITE ASSESSMENT UNDERWAY ☐ POST CLEANUP MONITORING IN PROGRESS
☐ REMEDIATION PLAN ☐ CASE CLOSED (CLEANUP COMPLETED OR UNNECESSARY) ☐ CLEANUP UNDERWAY

REMEDIAL ACTION
CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ CAP SITE (CD) ☐ EXCAVATE & DISPOSE (ED) ☐ REMOVE FREE PRODUCT (FP) ☐ ENHANCED BIO DEGRADATION (IT)
☐ CONTAINMENT BARRIER (CB) ☐ EXCAVATE & TREAT (ET) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ REPLACE SUPPLY (RS)
☐ VACUUM EXTRACT (VE) ☐ NO ACTION REQUIRED (NA) ☐ TREATMENT AT HOOKUP (HU) ☐ VENT SOIL (VS)
☐ OTHER (OT) _____

COMMENTS

HSC 05 (8/90)

C 2

APPENDIX D

WORK FORMS

D-1: CHAIN-OF-CUSTODY RECORD

D-2: BLANK EXAMPLES OF SAMPLE LABELS

D-3: HAZARDOUS WASTE LABEL

D-4: REQUEST FOR DISPOSAL OF HAZARDOUS WASTE (RFD) FORM

D-5: HAZARDOUS WASTE CONTAINMENT PILE WEEKLY INSPECTION FORM

D-6: HAZARDOUS WASTE CONTAINER WEEKLY INSPECTION FORM

D-7: SITE LOG SHEET

CALSCIENCE ENVIRONM LABORATORIES, INC.
7440 LINC WAY
GARDEN GROVE, CA 92641-1432
TEL: (714) 895-5494 FAX: (714) 894-7501

CHAIN OF CUSTODY

DATE:_____ Page : _____

LABORATORY CLIENT: **MINSY**	CLIENT PROJECT NAME/NUMBER:
ADDRESS: **SSPORTS ENVIRONMENTAL DETACHMENT**	PROJECT CONTACT: **ROBERT TURPIN (707) 562-3495**
CITY: **VALLEJO** STATE: **CA** ZIP: **94592-0135**	SAMPLER(S): (SIGNATURE)
TEL: **(707) 562 - 3495** FAX: **(707) 562 - 3497**	

TURN AROUND TIME:

☐ SAME DAY (<6 HRS) 100% ☐ 24 HOURS, 50% ☐ 48 HOURS, 25% ☐ 5 DAYS ☐ 10 DAYS ☐ RUSH WRITTEN REPORT, 10%

1. All turnaround times are based on working hours of 8 a.m., M-F. 2. Prior confirmation is strongly recommended. 3. 3 days for Tedlar bag samples.

SPECIAL INSTRUCTIONS/REQUIREMENTS:

WRITTEN QC REPORT REQUIRED?
☐ ROUTINE QC ☐ RWQCB QC

SAMPLE ID	LOCATION/DESCRIPTION	SAMPLING		WATER		PRESV		Solid/	No. of	ANALYSES REQUIRED
		DATE	TIME	Comp	Grab	HNO3	Other	Soil/Filter	Containrs	

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Unless otherwise requested, all samples will be disposed of 30 days after reciept.

BLANK

EAGLE PICHER

ENVIRONMENTAL SCIENCE
& TECHNOLOGY DEPT.
200 B.J. TUNNELL BLVD., MIAMI, OK 74354
1-800-331-7425

Specially Cleaned
Sample Container

Lot #:

DATE:	TIME:	COLLECTED BY:

SAMPLING SITE:

SAMPLE TYPE:
☐ Grab ☐ Composite ☐ Other

TESTS REQUIRED:	PRESERVATIVE

♻

ENVIRONMENTAL SAMPLING SUPPLY

LOT #
SAMPLE ID

SAMPLED BY	DATE
	TIME
LOCATION	PRESERVATIVE
ANALYSIS	CLIENT

9601 San Leandro Street, Oakland, California 94603
(510) 562-4988 (800) 233-8425

D-2

HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

GENERATOR INFORMATION: CONTROL NUMBER _____

NAME CAMP PARKS

ADDRESS PARKS BLDG 790 PHONE 510-803-5638

CITY DUBLIN STATE CA ZIP 94568

EPA ID NO. / MANIFEST DOCUMENT NO. CAL000121364 / _____

EPA WASTE NO. D004 CA WASTE NO. D004 ACCUMULATION START DATE _____

CONTENTS COMPOSITION ARSENIC SOLUTION

PHYSICAL STATE ☒ SOLID ☐ LIQUID

HAZARDOUS PROPERTIES ☐ FLAMMABLE ☒ TOXIC ☐ CORROSIVE ☐ REACTIVITY ☐ OTHER _____

TO BE FILLED BY TRANSPORTER

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

HCL® HCL LABELS, INC. (800) 421-6710

HZW-2

D-3-1

HAZARDOUS WASTE

STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY OR THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES

GENERATOR INFORMATION: CONTROL NUMBER —

NAME CAMP PARKS

ADDRESS PARKS BLDG 790 PHONE 510-803-5638

CITY DUBLIN STATE CA ZIP 94568

EPA ID NO. / MANIFEST DOCUMENT NO. CAL000121364 /

EPA WASTE NO. — CA WASTE NO. 611 ACCUMULATION START DATE

CONTENTS COMPOSITION SOIL CONTAMINATED WITH PETROLEUM HYDROCARBONS

PHYSICAL STATE ☒ SOLID ☐ LIQUID

HAZARDOUS PROPERTIES ☐ FLAMMABLE ☒ TOXIC ☐ CORROSIVE ☐ REACTIVITY ☐ OTHER

TO BE FILLED BY TRANSPORTER

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

HCL® HCL LABELS, INC. (800) 421-6710

HZW-2

REQUEST FOR DISPOSITION OF HAZARDOUS MATERIAL (RFD)

MATERIAL DESCRIPTION (write in the noun name, and attach a copy of the label, MSDS or profile. For unknown material provide the color, texture, appearance, and concentration.)	Container location HWAA/ GAP	Site (Alameda, Hamilton, M.L, etc.)	Container Gross Weight (lb.)	Container Type (1A1, etc.)	Container Size (gal)	Accumulation Start Date	Control Number

PHYSICAL CHARACTERISTIC: ☐ SOLID ☐ LIQUID ☐ GAS

PROFILE/MSDS #/WP/TWD

SOURCE OF MATERIAL (Bldg./Floor/Area/IR/ etc.)

NAME & PHONE # OF GENERATOR OF MATERIAL

PACKER/HANDLER NAME	DATE RECEIVED	PHONE NO	JOB ORDER NUMBER

WAP	SAMPLE
NO. _____	NO. _____
Date _____	Date _____
	Sampled By: _____

* For items in Table I, 22 CCR 66261.24: If Totals Results ≥ 20 x RL (solids) ≥ RL (liquids) ⇒Do TCLP

* For items in Table II or III, 22 CCR 66261.24: If Totals Results ≥ 10 x STLC (solids) ≥ STLC (liquids) ⇒ Do WET

SAMPLE ANALYSIS (Line out the analysis that is not required)	
Total Digestion:	0019AA, 0020AC (water), 0020AD (solids)
Mercury:	0019AG (aqueous), 0019AH (non-aqueous)
* TCLP:	0019AB, 0021AA
* WET:	0019AB, 0020AA
Volatiles:	0021AF, 0021AE
Semivolatiles:	0021AA, 0021AC
PCB:	0031AA (oil), 0031AB (aqueous), 0031AC (non-aqueous)
pH:	0022AJ (solid), 0022AK (liquid)
Ignitability:	0022AB
TPH:	0018AR
Other:	

Hazard Codes: ☐ Ignitable Waste (I) ☐ Corrosive Waste (C) ☐ Reactive Waste (R) ☐ Acute Hazardous Waste (H) ☐ Toxic Waste (T)

PROPER DOT SHIPPING NAME

Hazard Class	UN/NA no.	Packing Group	Label
EPA Waste No.		Cal. Waste Category No.	
Emerg. Response Guidebook Guide no. RSPA P 5800.7 1996 Edition		Reportable Quantity (RQ) pounds	

CONSTITUENTS (TOTALING 100%)	(%)	CONSTITUENTS	(%)

SPECIAL INSTRUCTIONS (If the material is corrosive is it an {☐ Acid, ☐ Base, ☐ Other})

GENERATOR CERTIFICATION. BASIS FOR INFORMATION:

☐CHEMICAL ANALYSIS (ATTACH TEST RESULTS)

☐USER KNOWLEDGE (ATTACH SUPPORTING DOCUMENTS - Explain how and why these documents comply with RCRA requirements) _____

I, _____ (Print or Type Name) HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS TO THE BEST OF MY KNOWLEDGE AN ACCURATE REPRESENTATION OF THE WASTE TURNED IN TO DRMO. ALL KNOWN OR SUSPECTED HAZARDOUS WASTES HAVE BEEN DISCLOSED.

(TECHNICAL CODE I20 EVALUATOR SIGNATURE) _____ DATE _____ PHONE NO. _____

DTID NO. (1348)	1348 Completed By	Del. Order No.	Manifest No.	Shipped Out
	SIGNATURE DATE			DATE

Hazardous Waste Containment Pile Weekly Inspection Form

Pile Location (Include ID for Pile)	Contents	Berm Stable Yes	Berm Stable No	Covered/Secured Yes	Covered/Secured No	Evidence of Leaks Yes	Evidence of Leaks No
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐

Note: If any containment pile is found with a condition that requires a "No" response, the condition shall be corrected immediately and all details concerning the condition and the steps taken as corrective action shall be itemized below. The SSPORTS Project Manager shall be notified immediately of the condition found. This inspection sheet shall be attached to the Site Field Log of the same date.

_____

_____

_____

_____

_____

_____

_____

_____
Name (print)

_____
Name (print)

_____
Date

Hazardous Waste Container Weekly Inspection Form

Container Description (Include ID for Rolloff Bins)	Contents	Stable Level Yes	Stable Level No	Closed/Secure Yes	Closed/Secure No	Evidence of Spill/Leaks Yes	Evidence of Spill/Leaks No
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐

Note: If any container is found with a condition that requires a "No" response, the condition shall be corrected immediately and all details concerning the condition and the steps taken as corrective action shall be itemized below. The SSPORTS Project Manager shall be notified immediately of the condition found. This inspection sheet shall be attached to the Site Field Log of the same date.

_____

_____

_____

_____

_____

_____

_____

_____
Name (print)

_____
Name (print)

_____
Date

SITE LOG SHEET

Site/Facility: UST-334

Log Sheet Recorder _____

Date Weekday Time Activity Comments

Enter all information specified including a brief account of the days activities, problems encountered, and list the names of all site workers, supervisors, and all site visitors. Include the name, agency or company affiliation, and if known, the purpose of the visit. All site log sheets shall be **numbered consecutively** and placed in the site field log. Additional copies may be made as required.

[ ]

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APPENDIX E

TRAINING AND MEDICAL QUALIFICATIONS CERTIFICATES

(Training records to be included for all personnel working on this site)

APPENDIX F

MANIFESTS