

DEMOLITION WORK PLAN

Former Navy Jet Fuel Storage Site
3300 Panorama Drive
Morro Bay, California

SUBMITTED TO:

City of Morro Bay
Community Development Department
955 Shasta Ave.
Morro Bay, CA 93442
ATTN: Whitney McIlvaine, Contract Planner

and

County of San Luis Obispo
Environmental Health Services
2191 Johnson Avenue
San Luis Obispo, California 93401
ATTN: Ms. Patricia Atkins, REHS

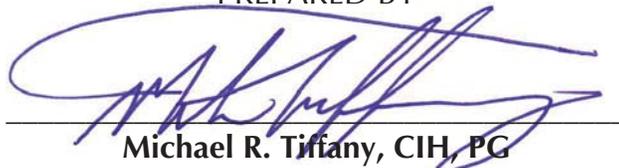
FOR:

Rhine LP & Morro 94
2304 W. Shaw Ave, Suite 102
Fresno, CA 93711
ATTN: Mr. Chris Mathys

ACG JOB NO. 11612-1202

December 29, 2017

PREPARED BY



Michael R. Tiffany, CIH, PG
Certified Industrial Hygienist No. 5056
Calif. Professional Geologist No. 6750

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Figure 1: Demolition Plan

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Pre-Demolition Tank and Piping Certification Plan
Soil Management and Sampling Plan
Contingency Plan for Hazardous Waste
Lead Compliance Plan
Health and Safety Plan



1.0 PROJECT DESCRIPTION

Rhine LP and Morro 94 (Owners) propose to remove two aboveground JP-5 jet fuel storage tanks (131,600 barrels, approximately 5,527,000 gallons each), an aboveground 100,000-gallon fire-water tank, and associated pumps and piping from the decommissioned fuel storage site formally known as the Defense Fuel Support Point (DFSP) at Estero Bay, 3300 Panorama Drive, Morro Bay CA. The facilities were no longer needed by the Department of Defense and were decommissioned in 1996. Per the attached closure report “all tanks and pipelines have been drained, cleaned and made inert where appropriate. The sources of potential future releases from the facility have been eliminated.” (Section 9 General Conclusions, page 23)

o require some level of disturbance over approximately 8 acres of the 10.6-acre site.

The sequence of work, briefly, will be as follows. Some tasks will occur concurrently or overlap. A detailed project schedule is attached.

1. Notification of site neighbors and other stakeholders.
2. Site preparation. Remove fencing, install temporary fencing. Install stormwater protection, install track-out system. Deliver equipment. Cut opening in center berm for access to north tank containment.
3. Inspect and test tanks and pipelines for gas, vapor, and residual fluids. Clean, rinse, and ventilate as needed. Certify tanks and pipelines clean and gas-free.
4. Remove Lemoore pipeline beyond ESHA limits. Abandon pipeline section adjacent to ESHA by filling with slurry.
5. Remove aboveground pipelines.
6. Demolish and remove water tank, south fuel tank, and north fuel tank.
7. Trench and remove underground pipelines.
8. Remove pump oils if needed. Remove pumping equipment.
9. Haul away prepared steel scrap. Haul away concrete and shotcrete. Haul away trash and debris.
10. Clean up site. Remove equipment. Remove track-out system. Re-install fencing.
11. Conduct post-demolition environmental site assessment.

The pipelines and tanks will be certified clean and gas-free by a Certified Industrial Hygienist. The Certified Industrial Hygienist will also oversee management of asbestos-containing materials, lead-based paint, hazardous materials, contaminated soil, and general site safety continuously throughout the project. The Certified Industrial Hygienist will conduct air monitoring and noise monitoring on site and at the site perimeter.

The pipeline adjacent to the ESHA will be abandoned in place by filling with slurry under approval by SLO County Environmental Health Services. Minor impacts to ESHA may occur as a result of soil sampling prior to slurry activities. Soil sampling equipment consisting of a pickup truck or ATV mounted drill will enter the ESHA along the pipeline



but will remain above the top of bank. Equipment used for accessing and slurring the pipeline will not enter the ESHA.

In addition, direct and indirect impacts may occur to ESHA as a result of tree trimming and/or removal of dead and dying trees located at top of bank and removal of debris from the drainage feature. Up to 7 dead and/or dying Monterey Cypress (*Hesperocyparis macrocarpa*) trees located at top of bank were identified by Chris Stier (Greenvale Tree Company) in an *Arborist Report* dated August 14, 2017. Equipment used for tree removal will be staged at top of bank. At no time shall equipment enter the drainage feature below top of bank. Similarly, no equipment will be utilized to remove debris from the channel. All debris removal will be completed manually with the use of hand tools (e.g., loppers and rope).

The tanks will be demolished by cutting them into sections using hydraulic excavators with shear and grapple attachments. Spotters will monitor the demolition for safety. Once the tanks are safely lowered, the excavators will continue to reduce the metal into transportable sizes using shears. Once reduced, the material will be loaded into large end-dump trucks and/or roll-off containers until the site is cleared of metal and debris.

Shotcrete on the berms will be removed using an excavator with bucket. Concrete slabs and foundations will be broken up using a hydraulic ram and removed by excavator.

The demolition process will require the use of the following equipment: two to three 32- to 40-ton tracked hydraulic excavators; one small loader (Bobcat or similar); a water truck for dust and fire suppression (in addition to compliance with City Fire Department requirements); semi-trucks with high-side end-dump trailers (maximum 40 tons loaded weight); roll-off trucks (maximum 40 tons loaded weight); and man-lifts. Ground disturbance would include removal of 12 yards of fill material between the two Navy tanks, and approximately 20 cubic yards of soil would be spread on either side of the existing berm, north to south, to reduce the existing slope for safe vehicle and equipment mobility. An additional approximately 12 yards of soil would be removed to expose underground pipe to be removed the pump house and the tanks, and then used to backfill the resulting trench. No soil will be imported to or exported from the project site.

Erosion control measures include the use of wattles and sand bags. Following demolition of the tanks, structures, and piping, the wattles will remain in place as needed, and disturbed areas will be grass seeded. At the point of entry, all traffic will enter the site on pavement and will cross a rumble plate. Straw wattles will be installed on the downslope side of the entrance, and sand bags will be placed on the downslope side of the entrance along Panorama Drive to catch any potential soil runoff. The contractor will monitor the site daily for excess dirt or mud, and implement any required remediation to avoid sediment runoff into the creek.

The project is expected to require 1.5 to 2 months to complete. Over this time, a total of approximately 130 round-trip truck loads would be required, and construction traffic would vary from 0 to 6 trucks per day. For the majority of the project, the contractor, crew, and equipment will enter the site from Highway 1 onto Yerba Buena Street to Main Street, and then left onto Sicily Street to the site. If trucks are unable to make the hard right turn from Highway 1/Yerba Buena Street/Main Street, they may need to enter Main Street further south (San Jacinto), turn right on Sicily Street, then proceed to the project



site. There will be 2-3 trucks entering the project site along Yerba Buena Street to Panorama Drive. A rumble plate is proposed at access points onsite to shake soil off the tires of trucks leaving the site.

No vehicle traffic will occur in the creek area, identified as Environmentally Sensitive Habitat (ESH) in the City's Local Coastal Plan. Temporary construction fencing and signage will be installed to keep equipment and traffic out of the ESHA and away from mature trees and root zones. Trees and shrubs near the tanks and in the containment area may be affected by the project.

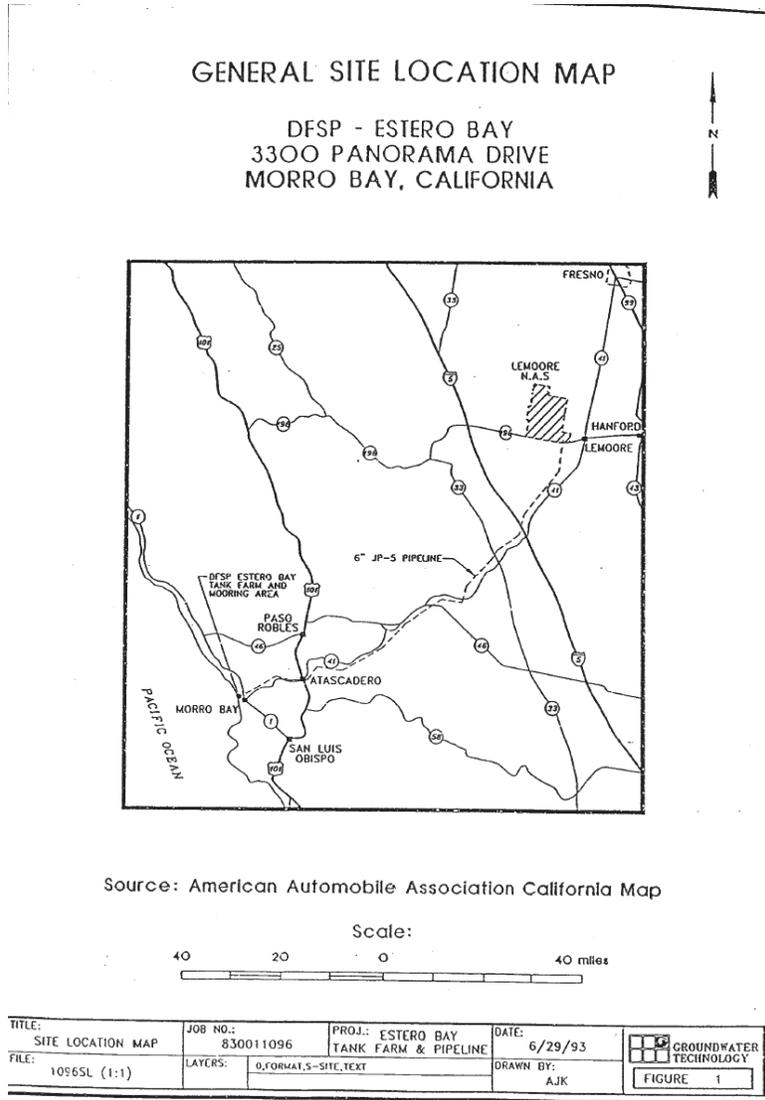
1.1 SITE BACKGROUND

DFSP Estero Bay California was formally a US-Government owned, contractor-operated facility used for delivery of JP-5 fuel from a Pacific coast terminal to the Lemoore Naval Air Station. During its years of operation, the facility included the following: (1) an offshore tanker mooring point in Estero Bay, (2) a 0.5 mile length of submerged pipeline, (3) a 0.35 mile length of the buried pipeline through the City of Morro Bay, (4) a 10 – acre tank farm at the northeastern end of Morro Bay and (5) a 98-mile pipeline from Morro Bay to the Lemoore NAS.

The tank farm and pipelines were closed in 1991. The offshore mooring buoys, chains, anchors and undersea pipeline (from the mooring point to the surf zone) were removed in 1992. The Morro Bay to Lemoore pipeline was cleared of remaining JP-5 and inerted in March of 1992, per California Fire Marshall requirements. DFSP was sold by the US-Government and subsequently purchased by Rhine LP and Morro 94 the current owners.

Figure 1-1. DFSP Vicinity Map





Dominant structures and features on site include: two 131,000 barrel (bbl) fuel storage tanks, one 100,000-gallon firewater tank, electrical control building and a pump pad, an office building, and a shop/garage building. This Demolition Plan does not include removing any of the three buildings or asphalt or concrete pavement. Grading will be limited to cutting through the central berm to provide access to the northern tank containment and trenching to remove pipelines. No soil will be removed from the site.

Figure 1-2. DFSP Site Location and Structures





1.2 SITE GEOLOGY AND HYDROGEOLOGY

The DFSP Estero Bay tank farm is located in the Southern part of the Coast Ranges geographic province of California.

Please refer to the Risk Based Closure Report (GT 1996c, referenced below), Section 4, 5 and 6, pages 6-12 for site-specific hydrogeologic information.

1.3 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

A report titled “*Environmental Evaluation for Defense Fuel Supply Point – Estero Bay, Morro Bay, California, 1991*”, dated September 23, 2016 by ECC was reviewed for information regarding site history and current conditions. The report summarizes the following reports and correspondence for the site:

California Department of Toxic Substances Control Board, 1996. *Approval to Risk-Based Closure Report, Dense Fuel Supply Point – Estero Bay Facility, Morro Bay, California*. December 1996.

California Regional Water Control Board, 1996. *Closure Report Acceptance Memorandum*, From Roger Briggs, Executive Officer to Jose Salcedo, Department of Toxic Substances Control, Region 1, Sacramento, CA. October 1996.

Environmental Chemical Corporation (ECC), 1991. *Environmental Quality Survey: Final Report, for Defense Fuel Supply Point- Estero Bay*. July 1991.

Groundwater Technology Government Services, Inc. (GTI), 1994. *Site Assessment Groundwater Monitoring Report, DFSP Estero Bay Tank Area*. May 1994.

GTI, 1995. *Site Assessment/Groundwater Sampling Report*. March 1995.

GTI, 1996a. *Site Assessment, Well Installation and Limited Feasibility Report, DFSP Estero Bay Operations Building Area*. January 1996.

GTI, 1996b. *Surface Soil and Selected Groundwater Sampling Results, DFSP Estero Bay*. May 1996.



GTI, 1996c. *Risk-Based Closure Report, DFSP Estero Bay*, September 1996.

GTI, 1996d. *Limited Site Assessment and Well Installation Report, DFSP Estero Bay Tank Farm Pump Pad and Oil/Water Separator Areas*. October 1996.

HMS, Inc., 2016. *Inspection of Storage Tanks and Pump Station for Demolition, 3300 Panorama Drive, Morro Bay CA*. May 13, 2016.

Based on the findings of the Risk Based Closure Report (GTI, 1996c), Section 7.7, the report made the following conclusions. “Because the exposure through a groundwater route was eliminated based on the review of the site hydrogeological setting, it is proposed that the DFSP Estero Bay facility be closed without any further action.” (Section 7.7, page 20). The report based their recommendations on the findings that suggested the worst case possibility of long-term exposure by potential future residents on the location for residential uses. (Section 7.0, paragraph 1, pages 12 & 13; Section 7.3, paragraph 1, page 15.)



Section 2

2.0 PRE-DEMOLITION ACTIVITIES

Procedures for the removal and recycling of aboveground structures (e.g., tanks, pipes, valves, buildings, supports) and the capping of underground pipes that will be abandoned in place follow. The plan is to recycle/reuse as much material as possible (goal is ≥ 95 percent), including tanks, piping, pumping equipment, poles, and wiring, and to provide disposition of equipment, materials, structures, and non-hazardous waste, and debris. This plan presents the procedure, order, and scale of on-site activities to:

- Identify locations of tanks, structures and piping to be removed
- Identify hazardous materials including asbestos, lead-based paint, petroleum hydrocarbons, and other chemicals
- Identify underground pipes and structures
- Define and identify piping to be abandoned in place
- Identify structures that will not be removed or demolished
- Estimate the anticipated number of site workers
- Estimate equipment and materials utilized during demolition
- Maximize recycling and reuse of waste products, and
- Describe transportation methods and total number of on-/off-site trips

Additionally, operational restraints that may be necessary for safety, to minimize environmental impacts are discussed. Best Management Practices (BMPs) for erosion control will be considered in all plans and on-site activities. BMPs may include temporary berms and sedimentation traps, including silt fencing, straw bales, wattles, and sand bags that may be installed prior to structure removal or ground disturbance. The BMPs include maintenance and inspection of the berms and, if necessary, sedimentation traps during rainy and dry periods, as well as specific protection methods to reduce impact on sensitive vegetation identified during initial site surveys. Best Available Control Measures will also be implemented to mitigate air emissions.

2.1 DEMOLITION PREPARATION

A Project Manager (PM) and/or Site-Safety Officer (SSO) will be on the property at all times during demolition activities to ensure the Demolition Plan procedures, safety practices, and necessary mitigation measures are followed. Cal/OSHA requirements for worker protection will be adhered to during all dismantling and handlings activities and will be outlined in the task-specific Job Safety Analysis (JSA). The PM will track and report daily progress, planned activities, and plan modifications.

The Project Manager is a Certified Industrial Hygienist, California Professional Geologist, California Certified Asbestos Consultant, and California Certified Lead in Construction Inspector-Assessor with experience in all phases of tank abandonment and hazardous waste remediation.



Site neighbors and other stakeholders will be notified in accordance with a plan approved by the City of Morro Bay. Permits will be obtained as necessary from San Luis Obispo County Environmental Health Services and the City of Morro Bay.

The following structures, equipment, and materials will be removed:

- Fuel storage tanks: two 131,6000-bbl each
- Fire water tank: one 100,000-gal
- Pumps and associated piping
- Aboveground & below ground 12-inch loading lines
- Aboveground & below 6-inch water lines from the water tank to the pressure pump
- Approximately 6 power poles, with pole-mounted transformers and wiring
- Aboveground & below ground 6 inch Lemoore supply line, capped at the property line and at driveways
- Aboveground pipelines

The following structures and site improvements will remain in place:

- All 3 building structures will remain on site
- Driveways, steps, walkways, asphalt and concrete will remain intact
- Water supply and storm drain lines

The portion of the 6-inch Lemoore pipeline adjacent to the ESHA will be abandoned in place.

2.2 PRE-DEMOLITION GEOPHYSICAL SURVEY & NOTIFICATION

A geophysical inspection will be completed to identify and locate subsurface pipe and structures at the DFSP site. The survey will use magnetometer and ground penetrating radar to locate the position and depth (to approximately 5 feet bgs) of buried items that could impede site characterization sampling and demolition. Underground facilities will be marked using flags, stakes, or paint.

Notification will be made to Underground Service Alert at least 2 working days before any excavation. USA markings will be maintained throughout the project. Notification will be renewed every 14 days.

2.3 HAZARDOUS MATERIAL REMOVAL

Material and/or soil found to contain hazardous substances will be removed and disposed of at a permitted off-site facility. Should identified areas interfere with demolition activities, the materials will be removed and stored on site and disposed of as part of the remedial action plan. Should site logistics prevent removal prior to demolition, the affected areas will be cordoned off to avoid surface traffic.

Waste Petroleum Liquids: Tank and Piping Contents and Rinseate. Unless field observations or instrument readings indicate otherwise, tank or piping contents and



rinseate will be characterized as oily water based on generator knowledge. Petroleum liquids will be removed by vacuum truck, placarded appropriately (22 CCR § 66262.33), and transported under UHWM manifest to a licensed TSDF recycling or disposal facility.

Transporter:

Pacific Petroleum California, Inc.
1615 E. Betteravia Road
Santa Maria, CA 93454
Ph: (805) 925-1947

Disposal Facility:

Clean Harbors
Buttonwillow Landfill Facility
2500 West Lokern Road
Buttonwillow, CA 93206

If waste petroleum liquids need to be stored on site pending removal, they will be placed in DOT-approved drums (22 CCR § 66262.30), labeled in accordance with 22 CCR § 66262.31 and 22 CCR § 66262.32, and stored in the pumping equipment secondary containment area. The contents of the drums will be characterized and transported to the disposal facility prior to the 90-day accumulation time limit (22 CCR § 66262.34).

Lead-Based Paint (LBP). An x-ray fluorescence (XRF) survey conducted by Hazard Management Services, Inc. on April 19, 2016 (Attachment 1) identified lead-based paint and lead-containing paint on tanks, piping, and other painted equipment. Construction work which disturbs paint with any detectable concentration of lead is regulated by Cal/OSHA. Paint, debris, soil, or other waste material containing more than 1,000 ppm total lead or 5 mg/L soluble lead (by TCLP and/or California WET method) is considered hazardous waste.

All demolition work involving painted tanks, piping, or structures will be conducted in accordance with the site-specific **Lead Compliance Plan (LCP)**. In general, LBP will be removed prior to any hot work, including torch-cutting, arc-gouging, or abrasive-saw cutting. Mechanical demolition using low-speed reciprocating saws and hydraulic shears will be used wherever feasible to minimize release of lead dust and debris and resultant exposure to workers and the environment. Lead-containing paint chips, debris, and dust will be contained and cleaned up in accordance with the Lead Compliance Plan.

Mercury. Manometers, wet-gas meters, and similar devices were not observed or found where the demolition will take place. The buildings on the site are not included in this demolition plan.

Asbestos. A pre-demolition asbestos survey has been conducted by HMS, Inc. (*Inspection of Storage Tanks and Pump Station for Demolition, 3300 Panorama Drive, Morro Bay CA, dated May 13, 2016*). The asbestos survey report is attached. Confirmed asbestos-containing materials (ACM) were not discovered in the tanks, piping, or pumping systems to be demolished. Gaskets in the piping and pumping system that were not accessible for sampling are considered to be suspect ACM and will be treated as ACM unless they are tested and shown to be non-ACM. If gaskets are to be disturbed during demolition, the suspect material will be sampled by a California Asbestos Consultant and removed by a licensed asbestos abatement contractor if it contains asbestos. If non-friable



suspect ACM (flange gaskets) are left intact and undisturbed between the flanges this material can be removed with the piping and disposed of without testing. In general, pipe flanges with suspect ACM gaskets will be removed without disturbing the gasket by cutting the pipe on either side of the flange.

A Certified Asbestos Consultant (CAC) or a Certified Site Surveillance Technician under supervision of a CAC will be on site during demolition. Inspection, sampling, analysis, removal, and disposal of ACM during demolition will be in accordance with the USEPA NESHAPS asbestos regulation (40CFR 61 Subpart M) and SLOAPCD Rule 701.

Polychlorinated Biphenyls (PCBs). Based on preliminary physical inspections, transformers and/or compressors were flushed of possible PCB-containing oils and left evacuated. The interior of any drained transformers will be wipe tested for PCBs before removal. If any oils are discovered, work will immediately cease and the oils will be tested for PCB's. If PCB's are present, the area will be cordoned off and oils will be evacuated by a State Certified contractor.

Petroleum-contaminated Soil (PCS). Soil contaminated with JP-5 jet fuel is known to be present in various locations. As-built plans show that the tanks are underlain by a 6-inch layer of oiled sand. There will be minimal disturbance of PCS except for removal of the oil sand and tank foundations and excavation of trenches for underground pipe removal.

Soil excavated during trenching and foundation removal will be field-screened, sampled, handled, and disposed of in accordance with the **Contaminated Materials Management Plan**. Soil will be screened for petroleum contamination during excavation using visual observation and a photoionization detector (PID). PCS will be segregated and stockpiled separately from clean soil.

2.4 TANK AND PIPING CLEANING, INERTING, AND CERTIFICATION

The tanks and pipelines were previously cleaned per the Closure Report (GTI, 1996c) and recent site inspections. Additional cleaning of the ASTs is not anticipated to be required. The current condition of the piping is not known, although they were reportedly cleaned prior to abandonment. The tanks are documented to have contained JP-5 jet fuel, a middle distillate fuel with a very low vapor pressure (0.1 p.s.i.a. @ 130° F).

Prior to any demolition work, the tanks and pipes will be inspected, cleaned, ventilated, inerted if necessary, tested, and certified in accordance with **22 CCR 67383.3, API Standard 2015** and the site-specific **Pre-Demolition Tank and Piping Certification Plan**. These procedures will be supervised, and the certificate issued by, Michael R. Tiffany, Certified Industrial Hygienist No. 5056.

Tanks. All tanks will be treated as permit-required confined spaces until they are reclassified by the Certified Industrial Hygienist.

All tanks will be disconnected and/or blinded and locked-out from all piping (product, vapor, vent, return, gauging, etc.) and power sources prior to inspection. The fuel tanks are currently disconnected or blinded from all pipelines. The tanks, piping, and pumping system will be physically disconnected from electrical power by removing the wires from the main supply connection.



*The atmosphere in the tanks and piping will be monitored continuously during tank entry and cleaning in accordance with **API Standard 2015** until the tank or pipe is certified clean and gas-free by the Certified Industrial Hygienist. Once the tank or pipe is certified in accordance with **22 CCR 67383.3(f)**, monitoring is not required.*

The atmosphere in the tanks will be tested by the CIH using direct-reading instruments capable of detecting combustible gas, oxygen, carbon dioxide, hydrogen sulfide, and volatile organic compounds (VOCs). The instrument(s) will be calibrated prior to use. Instruments include RKI Eagle, RAE Systems MultiRAE Plus, and MultiRAE MiniRAE 3000.

Acceptable limits for certifying tanks and piping as gas-free are:

Combustible gas	< 1% LEL
Oxygen	$19.5\% \leq O_2 \leq 23.5\%$
Carbon Monoxide	≤ 25 ppm
Hydrogen Sulfide	≤ 10 ppm
Volatile Organic Compounds	≤ 100 ppm (as isobutylene)

If the atmosphere in the tank is found to be below the acceptable limits for air contaminants, the tank will be visually inspected for fluids. Containment measures will be implemented to capture any residual fluids that may be present in tanks. Collected fluids will be removed by vacuum truck or by pumping into DOT-approved drums and disposed through a designated and permitted disposal/recycling facility. If petroleum, petroleum-contaminated water, or other hazardous material is present in a tank, the tank will be rinsed with a pressure washer and ventilated prior to atmospheric testing. Rinsing of large tanks may require a permit-required confined-space entry. Rinsate will be removed by vacuum truck or pumped into drums.

Tanks will also be inspected for pipe connections not visible from outside the tank. To the extent feasible, the visual inspections will be carried out prior to entering the tank.

Once the atmosphere has been tested and the tank has been visually inspected, the CIH will issue a certification that the tank is gas-free and non-hazardous. This certification also re-classifies the tank as a non-permit-required confined space. The certified tank will be painted with the certificate number.

Tanks will be isolated, emptied, cleaned, rinsed, and ventilated to remove all liquid and airborne contaminants prior to starting demolition. Tanks will not be inerted. Once the tanks are certified by the CIH, further monitoring is not required.

In order to certify the tanks for hot work on the tank bottom, the atmosphere under the tank must also be tested. Normally this is performed by hot-tapping holes in the tank bottom with a water-cooled drill. If combustible gas is detected at any point under the tank, the cavity under the tank must be inerted before any hot work can be performed on the bottom or the lower 6 inches of the tank sides. It is expected that the tank bottom can be demolished without hot work.

Piping. All piping will be disconnected and/or blinded and locked-out from all piping and power sources prior to inspection. The atmosphere in the pipes will be tested by flushing the pipe with compressed air and testing the air exiting the pipe. If the interior of a pipe



cannot be accessed by opening a valve or breaking a connection, the pipe will be hot-tapped using a water-cooled drill or tapping tool.

Containment measures will be implemented to capture any residual fluids that may be present in pipes. Collected fluids will be removed by vacuum truck or by pumping into DOT-approved drums and disposed through a designated and permitted disposal/recycling facility. If fluids are discovered in a pipe, the pipe will be flushed with water until the water is visually clean, ventilated with compressed air, and re-tested.

Pipes will be isolated, emptied, cleaned, rinsed, and ventilated to remove all liquid and airborne contaminants prior to starting demolition. The CIH will issue a certification that the pipe is gas-free and non-hazardous in accordance with 22 CCR 67383.3(f). Pipes will not be inerted. Once the pipes are certified by the CIH, further monitoring is not required. Certified pipes will be marked with paint.

2.5 GROUNDING

Tanks or pipes will be grounded prior to any of the following activities: confined-space entry, removal of liquids, washing or rinsing, or ventilating. Any equipment being used in the process (vacuum trucks, pumps, blowers, etc.) will be grounded and bonded to the tank or pipe. Grounding will be performed by a competent person in accordance with 8CCR §6775. Bonding and grounding cables and clamps shall be inspected prior to the start of work and periodically during the work.

Grounding and bonding is not required after tanks and pipes have been certified clean and gas-free. Cathodic protection requirements do not apply, as the facility is being demolished.

2.6 HEALTH AND SAFETY

All required precautions will be taken to ensure that safe working conditions are provided during all phases of the demolition. Staff and contractors entering the DFSP site facility will attend Bedford's safety orientation conducted on site. All workers will check in each working morning prior to commencing site work. Tailgate safety meetings will be completed each day prior to commencing operations to review the specific JSA and confirm health and safety concerns for that day's activities. Signed copies of the safety management documentation will be maintained by the PM or SSO.

The following are safety requirements specific to DFSP operations. A Site Specific Health and Safety Plan will be generated prior to commencing demolition activities. Basic health and safety provisions are as follows:

- AT a minimum, PPE will be worn while on site, including steel-toed safety boots/shoes, safety glasses and hardhats. Additional PPE, safety vests, and gloves may be required for certain activities.
- Flame resistant clothing (FRC) coveralls will be worn when performing hot work.
- Landline phone service does not exist at the site; contractors will provide a working mobile phone for emergency purposes.
- Smoking is not allowed at DFSP.



- At the end of the workday, workers will sign out with a designated Bedford representative. Temporary sanitary facilities, adequate to support site workers, including a wash sink, will be provided on site. These facilities will be maintained on a schedule to mitigate health and nuisance issues.

2.7 ARCHAEOLOGY AND CULTURAL AWARENESS

Areas with identified cultural resources will be avoided to the extent possible during demolition. Site workers will be given cultural resources and habitat awareness training by qualified scientists prior to commencing site operations. A qualified archeologist will observe the work as required by permit conditions. If found, artifacts will be documented, flagged, and left undisturbed.

2.8 BIOLOGICAL RESOURCES

Biological resources within the project area, including the limits of Environmentally Sensitive Habitat Areas (ESHA), were documented by Terra Verde Environmental Consulting, LLC (Terra Verde) in February and May 2016 and summarized in a *Biological Assessment Letter Report for the Fuel Tank Demolition Project* (Terra Verde, 2016). Specifically, the northern boundary of the site, which includes the drainage feature and associated vegetation, is designated as an Environmentally Sensitive Habitat Area (ESHA).

Work to be performed in or adjacent to the ESHA in connection with the demolition project will include soil sampling using an ATV-mounted or pickup truck-mounted hydraulic-push drill rig to support pipeline abandonment. Following soil sampling, the pipeline adjacent to the ESHA will be filled with cement slurry and abandoned in place. No equipment will be operated in or adjacent to the ESHA during slurring and abandonment in place. Due to the limited use of equipment and activities adjacent to ESHA, pipeline abandonment activities are not expected to cause significant disturbance to ESHA.

Work to be performed within ESHA will include the trimming and/or removal of up to seven dead and/or dying Monterey cypress trees and removal of woody debris within the drainage feature. According to the recommendations in the *Arborist Report* (Greenvale Tree Company, 2017), the seven subject trees were observed to be in poor health or dead. Certified arborist Chris Stier recommended that the trees be trimmed or removed. The trees are located at top of bank of the subject drainage feature. Due to their association with the drainage feature, these trees are considered to be within the ESHA. As such, direct and indirect impacts to ESHA may occur as a result of tree trimming and/or removal. Similarly, woody debris removal from the channel and behind the storm grate will require work within ESHA. All woody debris removal will be completed manually with the use of hand tools. Impacts to ESHA as a result of woody debris removal are considered minor.

To reduce potential impacts to ESHA, tree removal will be conducted by a certified arborist. At no time will equipment enter below top of bank of the drainage feature during tree removal activities. In addition, all applicable regulatory agency permits (e.g., Lake or Streambed Alteration Agreement from the California Department of Fish Wildlife) will be obtained prior to work within the drainage feature. Further, biological monitoring will



be conducted in accordance with *Biological Monitoring Plan 3300 Panorama Drive Fuel Tank Demolition Project, City of Morro Bay, San Luis Obispo County, California* prepared by Terra Verde Environmental Consulting, LLC (Terra Verde, 2016).

2.9 HOT WORK PROCEDURES

Hot work is not planned during this project. In unusual circumstances, demolition may require the use of oxy-acetylene torches to cut piping, equipment, and tank wall plates. Other hot work methods including arc-gouging, welding, or abrasive cutting may also be used as needed. Hot work will be kept to the minimum necessary. Alternative non-hot-work methods including hydraulic shears, rivet buster, and low-speed sawing will be used to the extent feasible and are expected to be adequate to complete the demolition.

Based on an XRF survey of facility components, all painted surfaces are assumed to contain lead (Pb). No hot work will be performed on painted surfaces. Paint will be removed for a distance of 12 inches on each side of hot work locations in accordance with the Lead Compliance Plan. The completion of lead paint removal will be confirmed by the Certified Industrial Hygienist prior to starting any hot work on painted surfaces.

All tanks and pipes will be certified safe for hot work prior to performing any hot work on the site, in accordance with Section 2.1.3 above.

A JSA will be completed and followed for specific operations. Prior to any cutting or hot work, a site “Hot-Work Permit” will be secured from the City of Morro Bay Fire Department. A fire watch will be required for all hot work activities.

2.10 DUST CONTROL

Dust generation is not anticipated to be a major problem at this facility due to the nature of the work. However, due to the site’s proximity to the community, dust generation will be minimized by the following procedures:

- Utilizing water trucks or water on site with hoses as needed for dust suppression
- Limiting vehicular traffic to established roads
- Limiting vehicle speeds to under 15 mph
- Limiting earth-moving activities during extreme wind periods
- Covering of soil piles if standing for prolonged periods of time
- Keeping soil moist before and after grubbing and clearing
- Soil binder may be used if necessary to stabilize bare soil areas.

Contaminated soil stockpiles, if needed, will be kept securely covered at all times except when adding to or loading from the piles.

2.11 PERSONNEL AND LOGISTICS

Demolition activities will require 2 to 10 on-site personnel including the PM/SSO. The demolition contractor, Bedford Demolition and Contracting, will employ the workers anticipated to be residents of Santa Barbara and San Luis Obispo Counties. Workers will



travel to the site on US 101 and Highway 1 exit on Yerba Street, right onto Main Street, left onto Sicily Street and proceed to the site.

The DFSP facility is not manned; therefore, access must be coordinated. There will be two coded security gates, and locked gates, to gain access to the site.

2.12 HAZWOPER TRAINED PERSONNEL

Personnel involved in cleaning tanks and pipelines or handling hazardous waste will have received 40-hour Hazardous Waste Operations (HAZWOPER) training in accordance with 8 CCR 5192 and annual 8-hour refresher training. The following personnel have been HAZWOPER trained:

NAME	INITIAL 40-HR DATE	REFRESHER DATE
Christian Allen	9/27/12	5/19/16*
Robert Claborn	7/27/06	5/19/16*
Encarnacion Gomez	9/27/12	11/13/15*
Hector Gomez	9/27/12	11/18/15*
William Sarten	9/27/12	5/19/16*

* Refresher training will take place prior to project.

2.13 SITE CONTROLS

Site access will be restricted during all work periods to protect human health and safety. The existing perimeter fence, with locked gates, should keep pedestrian and vehicle traffic away from site operations. On-site controls will include fencing (interior to the perimeter fence), construction fencing, cones, barricades, barrier tape, and other precautions to keep non-involved workers and equipment from open excavations and active work areas. Any open excavations will be backfilled or fenced off before work is concluded. Equipment will remain on site overnight within the secured interior fenced area.

Excavated areas will be backfilled before work is concluded each day if outside of the perimeter fence. Soil will be stockpiled within the containment berm during excavation. Soil will be placed on impermeable barriers (polyethylene sheeting), kept moist, and covered to protect from the weather and animals.

Electrical power lines will be de-energized to all site facilities that will be demolished. This will be completed by the demolition contractor and verified by PM/SSO. De-energized lines will be disconnected and locked out from the equipment they powered and from their source. De-energized lines that are not removed will be tagged with yellow flags or tape.

Electrical power lines that will not be removed will be identified by the PM/SSO prior to any large equipment being used on the site. Energized lines will be marked distinctively with red flags or tape. Lockout-tagout procedures, as defined in the corresponding JSA, will be followed where temporary de-energizing is required.



2.14 EQUIPMENT REQUIREMENTS

The equipment utilized for this project will be task specific and dependent upon the methods selected by the demolition contractor. The following is a tentative list of equipment that is anticipated to be used during the demolition project.

- Excavators, track mounted, 10K#, 64k# and 80K# - hydraulic cutting shears will be installed and utilized, as required
- Up to three tractor-trailer trucks
- One water truck, 2,000 gal capacity
- 1 Skidsteer loader
- 1 Reach lift
- Waste hauling trucks
- Welding/cutting tools/intrinsically safe cutting tools (reciprocating saws) for tank access
- Welding/cutting utility trucks
- Fueling/service truck, as needed
- Dump trucks, as needed
- Hand tools

2.15 HAZARDOUS MATERIALS STORAGE

Fuel, lubricants, and other materials used to service equipment will be stored on the mobile service truck. No fuel or other hazardous materials will be stored on site.

Compressed gases for welding will be properly secured on the welding truck, on a cylinder cart, or in a lift basket at all times.



3.0 STRUCTURE AND MATERIAL REMOVAL

The tanks and pipelines were previously cleaned per site inspections and the Closure Report (GTI, 1996c). Tanks and pipes will be certified clean and gas-free by the Certified Industrial Hygienist in accordance with Section 2.1.3 prior to demolition. Tanks and pipes that have been certified will be marked accordingly.

Demolition of tanks and pipes will be performed in accordance with the site-specific Lead Compliance Plan, which provides for controls to reduce disturbance of paint during demolition and procedures to contain and cleanup any LBP debris generating during the project. Hot work is not expected to be necessary. In the event that hot work on steel structures is unavoidable, lead-based paint (LBP) will be removed from surfaces within 12 inches of any hot work, including torch-cutting, arc-gouging, welding, or abrasive cutting.

3.1 STRUCTURE REMOVAL

The tanks, pumps and pipelines will be dismantled and demolished. Metal components and concrete will be stockpiled, loaded and taken off site for recycling. Non-recyclable non-hazardous waste materials (i.e. wood, plastic) will be transported to a Class II or Class III landfill as appropriate.

3.2 PIPING REMOVAL

Bedford plans to remove surface and underground piping in the containment area prior to storage tank demolition. Pipelines to be removed are shown on the **Demolition Plan**. The majority of the on-site piping is above ground. Pipelines have been evacuated and some are already disconnected from their respective tanks and have been laid on the ground.

If the surface piping extends underground and exits within 30 feet of that point, the piping may be cut at the exit point and pulled for removal, as practical. Otherwise, underground piping will be removed by excavating a trench alongside the pipe using a mini-excavator, cutting the pipe into sections with a band saw or hydraulic shears, and transporting the pipe sections to the loading stockpile or bin.

Pipelines will be inspected, cleaned if necessary, ventilated, and tested in accordance with Section 2.1.3 prior to demolition. Caution will be exercised, and containment measures employed, to capture fluids remaining in the lines. Connections, manifolds, and valves will be removed to expose the lines to the atmosphere. Pipelines, saddles, cribbing, vent pipes, and related appurtenances will be removed in manageable sections. Cutting will be completed with hydraulic shears or low-speed saws. The materials removed will be stored on site in a designated area or sorted in bins based on material types, as required by the recycling/disposal facilities.

3.3 LOADING LINE REMOVAL (LEMOORE PIPELINE)

The Morro Bay to Lemoore pipeline was cleared of remaining JP-5 and inerted in March of 1992, per California Fire Marshall requirements. The owners plan to remove the onsite portions of the loading line, except where the pipe runs adjacent to the ESHA. The buried segments exit to the west and east of the property, along the north side of the berm and the pump pad. The loading line (Lemoore pipeline) is constructed of a 6-inch diameter



onshore pipeline that extends approximately 500 feet from the pump house along the north side of the containment berm then exits the property. To the west the pipeline extends from the pump house approximately 120 feet to the west and exits the property. Pipelines will be inspected, cleaned if necessary, ventilated, and tested in accordance with Section 2.1.3 prior to removal. Caution will be exercised, and containment measures employed, to capture fluids remaining in the lines. At the property lines the 6-inch line will be capped with a welded plate or blind flange.

The procedure for pipeline abandonment-in-place adjacent to the ESHA will include the following steps:

1. Sample soil every 50 feet along pipeline using hydraulic-push drill rig as required by SLO County Environmental Health. Collect samples at 2, 5, and 10 feet below grade surface (bgs) (pipe invert is estimated at 2-4 bgs). The hydraulic-push drill rig is a lightweight vehicle (ATV) that will not cause significant disturbance to trees or roots.
2. Submit soil samples to accredited laboratory for analysis of petroleum hydrocarbons and volatile organic compounds in accordance with County requirements and reported to County. If contamination is encountered in soil samples, removal of pipe via trenching may be required.
3. Pothole to expose pipe at northeast end of ESHA and at pump station southwest of ESHA. Break pipe flange joint, or hot-tap pipe if necessary.
4. Rinse pipe with water, capturing rinsate with vacuum truck at pump station end, transport and dispose of rinsate as non-hazardous oily water.
5. Ventilate pipe. Test effluent air until combustible gas level is <1% of LEL as hexane and organic vapor is <100 ppm as isobutylene.
6. Supervision and monitoring of operations and testing and certification of pipe by Certified Industrial Hygienist.
7. After rinsing and certifying pipe as above, pump cement slurry into pipe.
8. Weld steel caps on pipe ends and backfill potholes.
9. Closure report for SLO County Environmental Health will include surveyed location of pipe and sample locations.

Sample boring dimensions are 2 inches in diameter and up to 10 feet deep. Up to 12 borings will be sampled along the 570 linear feet of pipeline. The hydraulic push drilling method does not produce cuttings. The borings will be backfilled with granular bentonite. The pipeline access potholes will be approximately 4 feet wide, 8 feet long, and 4 feet deep. The volume of soil excavated will be approximately 10 cubic yards. All excavated soil will be temporarily stockpiled adjacent to open potholes and immediately backfilled following slurry activities. Approximately 2.5 cubic yards of cement slurry will be pumped into pipe from the northeast end. Equipment utilized may include a hydraulic-push drill rig mounted on a small ATV, vacuum truck, grout mixer, grout pump, and contractor pickup trucks. All equipment access to the northeast end of the pipe will be through the tank containment area via the roadway over the northwest berm. Access to the southwest end of the pipe will be from the pump station. No equipment other than the



ATV-mounted drill rig for soil sampling will enter the ESHA. Equipment access and staging will be the same as the pipe trenching option. Pipe abandonment activities will take approximately 2 weeks.

3.4 TANK REMOVAL

An access way will be cut into the earthen berm between the tanks for equipment access. The tanks have previously been emptied and cleaned, and vents at the top of the tanks were left open. The tanks will be inspected, cleaned if necessary, ventilated, and tested in accordance with Section 2.1.3 prior to demolition. Caution will be exercised, and containment measures employed to capture fluids.

The tanks will be cut into pieces of manageable size utilizing hydraulic shears mounted on an excavator, working from top to bottom. No hot work is anticipated. The tanks will be collapsed inward within the existing footprint to minimize impact to the surrounding area. Excavators will remove and place the scrap into dump or end-dump trucks for transport to Bedford Enterprises scrap yard facility. Excavator and truck movement will be minimized to limit impact within and outside of the berms.

Lead-containing paint debris will be contained and cleaned up in accordance with the Lead Compliance Plan. Lead-containing paint will be removed from the exterior and interior surfaces in accordance with the Lead Compliance Plan in the event that hot work is unavoidable.

3.5 PUMP AND EQUIPMENT REMOVAL

Pumps, control equipment, and other equipment and appurtenances will be separated from pipelines by cutting the pipes or unbolting the flanges, detached or cut from their mountings, and loaded into bins for transport to the recycler. The Certified Industrial Hygienist or Associate Industrial Hygienist will observe demolition of pumps and equipment to identify any unanticipated hazardous materials. If hazardous or unidentified materials are encountered, work will be stopped until the materials are characterized and properly disposed of under the supervision of the Industrial Hygienist.

3.6 MISCELLANEOUS MATERIAL REMOVAL

Concrete foundations and support pads will be broken into manageable size pieces using a backhoe-mounted hydraulic ram and stockpiled on site for transport and disposal. Remaining debris will be collected and sorted into corresponding stockpiles and disposed of at local recycling facilities or landfills.



3.7 TRANSPORTATION

Truckloads for metal recycling are estimated based on a maximum trailer size of 8 feet wide by 40 feet long by 8 feet high and a net load of 20 tons. Concrete will be hauled in low-side end dump trailers with a load capacity of approximately 22 net tons. A contingency is added to the number of truck trips to allow for unanticipated load variations. For the DFSP demolition, the following truck round trips are estimated:

- Metals – 50 loads
- Concrete – 75 loads
- Debris – 4 loads
- Domestic trash and miscellaneous debris – 2 loads

All truck traffic will exit the DFSP facility and proceed directly onto Sicily Street and then right on Main Street and enter Hwy 1 at Yebara. Trucks will not be staged on residential streets. Trucks will not be allowed to idle on site. Loads will be covered prior to exiting the site.

3.8 WASTE DISPOSITION

General waste from the facility demolition will be managed in accordance with applicable regulations. Wherever practical and allowable, waste materials will be recycled or reused. The demolition contractor is an established recycler. Metal, concrete, and other demolition materials will be recycled through a locally licensed facility. All materials that cannot be recycled or reused will be properly disposed at licensed facilities.

Prior to final disposition, wastes will be characterized based upon the generator's knowledge (or laboratory analyses, if necessary) to evaluate hazardous characteristics in accordance with applicable regulations. Materials determined to be hazardous will be managed in accordance with California and Federal hazardous waste regulations and disposed of at a licensed facility. The only hazardous wastes anticipated to be generated during demolition are non-friable asbestos, lead paint removal waste, and lead paint debris.

Domestic trash generated as a result of the decommissioning activities will be collected in a waste bin for landfill disposal.

3.9 DUST CONTROL PLAN

Dust control measures will include close monitoring of the site and site conditions. The purpose of the dust control plan is to identify the steps that will be taken to reduce particulate emission during the work activities. Best management practices (BMP's) will be implemented throughout the project. BMP's will include wetting active areas, minimizing or ceasing activity during periods of high wind (greater than 25 mph), sweeping or wetting paved areas, wetting unpaved areas, application of dust suppressant materials if necessary, and covering stockpiles. The onsite project manager is responsible for ensuring that Dust Control measures are followed.



The primary source for wetting will be an onsite water truck. The truck will have a spray bar and spray hoses. Working areas will be monitored and wetting will be applied as a suppression system.

Potential dust control activities may include:

- General Dust Suppression – All activities: Use of wet suppression during operation hours for all material handling activities and otherwise as needed. Water spray/mist to wet work areas prior to beginning work and as needed as work progresses. Adjust the excavation rate, if any. Suspend work under high wind conditions until sustained wind speed is below 25 MPH for at least 15 consecutive minutes.
- Truck Traffic: Wetting unpaved and paved drives prior to the start of activities each morning and during working hours.
- Visible dust: If visible dust is present in the active work zone, increased wetting of the area using water trucks will be implemented. Also, adjustment of the rate/speed of the equipment working.

4.0 SITE RESTORATION PLAN

Upon completion of demolition activities the disturbed areas will be restored to existing grades, i.e. rough grade, as needed. The disturbed areas will be hydroseeded for erosion control and restoration. The mixture will be DOT specified mixes.

