



28 September 2017

Edwin Reyes, Administrator
Guam Coastal Management Program
Bureau of Statistics and Plans
P.O. Box 2950
Hagåtña, Guam 96932

**Subject: Coastal Zone Management Act (CZMA) Consistency Determination for Task Order (TO) 0035 Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam
Contract No. N62583-09-D-130, Task Order 0035**

Mr. Reyes:

This letter is to inform you of the transmittal of the completed Guam Coastal Management Program Assessment Format Form and the CZMA Consistency Determination for TO 0035 Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam. This project is funded by the Naval Facilities Engineering Command (NAVFAC) and Expeditionary Warfare Center and is being implemented by APTIM Guam.

The proposed action includes the following.

- Performing repairs and maintenance on eleven (11) valve pits in Lower Sasa Valley, Delta Causeway, Delta Pier and Echo Pier.
- Installation of new valves, piping, vents and drains at the eleven (11) locations.

In 2014, a total of 93 valves were purchased under Task Order (TO) 0035. The 11 valve pits contained in the current scope of work will require 23 of the 93 valves to be installed. APTIM will be responsible for installing all 23 valves. The remaining valves will be returned for future installations in the remaining 47 valve pit locations.

Maintenance will include structural, electrical and mechanical repairs at each site. Aging metal and concrete structures at the valve pit locations will be demolished and rebuilt. Pipeline components will be maintained with sandblasting, priming and coating repairs. All safety structures (railings and ladders) will be renovated and painted safety yellow. Renovations of aging facilities will increase worker safety at each site. The specifications of all repair and maintenance work can be found in the Work Plan attached.



The project purpose is to improve valve pit operations. The installations of new valves and valve components coupled with the structural, mechanical and electrical repairs and renovations (new catwalks, platforms, concrete structures, etc.) will increase the efficiency, longevity and safety of the specific valve pits as well as the overall efficiency of military fuel consumption and transfer.

The Guam Coastal Management Program Assessment Format Form and the CZMA Consistency Determination are being provided to assist in the review for consistency of the proposed project with Guam's Coastal Management Program.

We appreciate your support in working with APTIM on behalf of the NAVFAC to obtain the approved Coastal Zone Act Consistency Determination. If you have any questions or comments regarding the completed Guam Coastal Management Program Assessment Format Form or the CZMA Consistency Determination for the proposed project, please do not hesitate to contact Mr. Christopher Arnsfield by phone at 671.478.0516 or by email at christopher.arnsfield@aptim.com.

Sincerely,

A handwritten signature in black ink that reads 'Chris Arnsfield'.

Christopher Arnsfield
Senior Project Manager
APTIM Guam
176 Chorito Blvd; Suite 201
Asan, Guam, 96910-1600
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Phone: 671-478-0516

Attachments:

- Guam Coastal Management Program Assessment Format Form for Task Order (TO) 0035 Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam
- CZMA Consistency Determination Outline for Task Order (TO) 0035 Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam
- Work Plan for Task Order (TO) 0035 Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam
- Environmental Protection Plan (EPP), Environmental Management Plan (EMP) and Dirt and Dust Control Plan



- Storm Water Pollution Prevention Plan (SWPPP)
- Solid Waste Management Plan (SWMP)

Coastal Zone Management Act (CZMA) Consistency Determination

This document provides the Guam Coastal Management Program with the APTIM Consistency Determination under CZMA § 307(c) (1) and 15 CFR part 930, subpart C, for the Task Order (TO) 0035 Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam. The information in this Consistency Determination is provided pursuant to 15 CFR § 930.39. This activity includes:

- performing repairs and maintenance on eleven (11) existing valve pits in Lower Sasa Valley, Delta Causeway and Delta and Echo Pier; and,
- installation of new valves, piping, vents and drains to increase efficiency and longevity of the valve pits.

APTIM will install 23 valves in the 11 valve pits, performing operation and pressure tests prior to installation.

All work, maintenance and installation, will be performed in the valve pits which are accessible via paved roads. All work sites have been previously disturbed (e.g., original excavation, construction and grading). Ground disturbance is anticipated under the proposed action but will be limited to areas with existing pipeline components and utility corridors. The appropriate excavation permits, including underground utility clearances through DZSP21, will be obtained for each valve pit where excavation will be performed.

The proposed action will be completed with *no discharge* to the environment. Silt fences will be temporarily erected around the perimeter of excavation and any stockpiled materials to prevent releases into the environment. Catch basins will be utilized to intercept all fuel leaks and ensure fuel does not reach adjacent soil or water. At two locations extending over Apra Harbor, Delta and Echo wharfs, an overwater pipeline containment enclosure will be erected to prevent any releases of dirt, dust or debris of any kind into the adjacent waters.

The Guam Coastal Management Program contains the following applicable enforceable policies:

- Guam Environmental Protection Agency (GEPA) Section 401 Water Quality Certification [401(b)- discharge to or withdrawal from inland surface waters and 401(c) discharge of dredged material or fill in wetlands and other inland surface waters.
- Wetlands Permit - Chapters 61 & 62 of the Government Code of Guam and Executive Order No. 91-27
- Pollution Discharge Permit - “Water Pollution Control Act,” Title 10, Chapter 47, Guam Code Annotated; and 22 GAR Chapter 10

- Erosion Control Permit - “Water Pollution Control Act,” Title 10, Chapter 47, Guam Code Annotated; and “Soil Erosion and Sedimentation Control” Regulations, 1985. 22 GAR Chapter 10
- Section 106 - National Historic Preservation Act, “Historical Objects and Sites,” Title 21, Chapter 76, Guam Code Annotated, PL 12-126
- Floodplain Management Ordinance – Government of Guam, Department of Public Works, Subsection (a), Subsection 66116, Article 1, Chapter 66, Building Law, 21 Guam Code Annotated

Based upon the following information, data and analysis APTIM finds that TO 0035 Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam is consistent to the maximum extent practicable with the enforceable policies of the Guam Coastal Management Program. This project will not adversely affect the ability:

- to determine the extent to which Guam’s natural resources limit urban and rural development;
- to plan for the preservation of the natural charm and character of Guam within the framework of a growing population and modern technology;
- to plan for a high quality environment essentially free from pollution with adequate well-kept open space throughout Guam’s varying activity centers; and,
- to recommend creative legislation regulating the use of land for protection of future generations.

Pursuant to 15 CFR § 930.41, the Guam Coastal Management Program has 90 days from the receipt of this letter in which to concur with or object to this Consistency Determination, or to request an extension under 15 CFR §930.41(b). The Territory’s concurrence will be presumed if the Territory’s response is not received by APTIM on behalf of Naval Facilities Engineering Command (NAVFAC) and Expeditionary Warfare Center on the 91st day from receipt of this determination.

The Guam Coastal Management Program response should be sent to:

Christopher Arnsfield
 Senior Project Manager
 APTIM Guam
 176 Chorito Blvd; Suite 201
 Asan, Guam, 96910-1600
 Email: christopher.arnsfield@aptim.com
 Phone: 671-478-0516

**GUAM COASTAL MANAGEMENT PROGRAM
ASSESSMENT FORMAT**

DATE OF APPLICATION: September 28, 2017

NAME OF APPLICANT: APTIM Guam

ADDRESS: 176 Chorito Blvd, Suite 201, Asan, Guam

TELEPHONE NO. 671-478-0516 FAX NO. _____ E-MAIL ADDRESS: christopher.arnsfield@aptim.com

TITLE OF PROPOSED PROJECT: Maintain, Repair Pipelines for Defense Fuel Supply Point (DFSP) Guam

COMPLETE FOLLOWING PAGES

FOR BUREAU OF STATISTICS AND PLANS ONLY:

DATE APPLICATION RECEIVED: _____

OCRM NOTIFIED: _____ LC. AGENCY NOTIFIED: _____

APPLICANT NOTIFIED: _____ PUBLIC NOTICE GIVEN: _____

OTHER AGENCY REVIEW REQUESTED: _____

**DETERMINATION: () CONSISTENT () NON-CONSISTENT () FURTHER INFORMATION
REQUESTED**

OCRM NOTIFIED: _____ LIC. AGENCY NOTIFIED: _____

APPLICANT NOTIFIED: _____

ACTION LOG: 1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

DATE REVIEW COMPLETED: _____

GUAM COASTAL MANAGEMENT PROGRAM ASSESSMENT FORMAT

DEVELOPMENT POLICIES (DP):

DP1. Shore Area Development

Intent: To ensure environmental and aesthetic compatibility of shore area land uses.

Policy: Only those uses shall be located within the Seashore Reserve which:

- enhance, are compatible with or do not generally detract from the surrounding coastal area's aesthetic and environmental quality and beach accessibility; or
- can demonstrate dependence on such a location and the lack of feasible alternative sites.

Discussion: *The land uses within all the project sites would not change under the proposed action. Eight of the 11 project sites are not located within or in proximity to shore areas. For these sites, DP1 does not apply.*

For 3 project sites, located in the Delta Wharf and Echo Wharf project areas, the pipeline components are found on piers extending over Apra Harbor. The proposed action will not detract from the surrounding coastal area's aesthetic, environmental quality and beach accessibility. All work will be contained on the fuel piers, no work will be done in the water and an overwater pipeline containment enclosure will be installed to ensure no dust or debris enters the surrounding waters as a result of work activities.

This project is consistent with the intent of DP1.

DP2. Urban Development

Intent: To cluster high impact uses such that coherent community design, function, infrastructure support and environmental compatibility are assured.

Policy: Commercial, multi-family, industrial and resort-hotel zone uses and uses requiring high levels of support facilities shall be concentrated within appropriate zone as outlined on the Guam Zoning Code.

Discussion: *This project is not located near urban development areas and urban development areas will not be affected by the project. Policy DP 2 does not apply to this project.*

DP3. Rural Development

Intent: To provide a development pattern compatible with environmental and infrastructure support suitability and which can permit traditional lifestyle patterns to continue to the extent practicable.

Policy: Rural districts shall be designated in which only low density residential and agricultural uses will be acceptable. Minimum lot size for these uses should be one-half acre until adequate infrastructure including functional sewerage is provided.

Discussion: *Work will be limited to Defense Fuel Supply Point (DFSP) Guam property that is currently being operated for industrial use. The sites do not include rural district designations. Policy DP3 does not apply to this project.*

DP4. Major Facility Siting

- Intent: To include the national interest in analyzing the siting proposals for major utilities, fuel and transport facilities.
- Policy: In evaluating the consistency of proposed major facilities with the goals, policies, and standards of the Comprehensive Development and Coastal Management Plans, Guam shall recognize the national interest in the siting of such facilities, including those associated with electric power production and transmission, petroleum refining and transmission, port and air installations, solid waste disposal, sewage treatment, and major reservoir sites.

Discussion: *The proposed action includes the replacement, maintenance and renovation of aging fuel facilities to increase the efficiency of valve pit and wharf operations. Well-maintained fuel pipelines and valves will serve the national interest, increasing the efficiency of military fuel consumption and transfer.*

This project is consistent with DP4.

DP 5. Hazardous Areas

- Intent: Development in hazardous areas will be governed by the degree of hazard and the land use regulations.
- Policy: Identified hazardous lands, including flood plains, erosion-prone areas, air installations' crash and sound zones and major fault lines shall be developed only to the extent that such development does not pose unreasonable risks to the health, safety or welfare of the people of Guam, and complies with the land use regulations.

Discussion: *The project work sites are found in nonhazardous land areas. The work sites are not within an erosion-prone area, along a major fault line, or air installations' crash and sound zone. Ground disturbance will be limited to areas with existing pipeline components and utility corridors. All heavy equipment and vehicle operations will be limited to designated roadways and maintained mowed grass areas.*

Implementation of appropriate abatement, demolition and cleanup actions during repair and maintenance work will be conducted as part of the redevelopment of the sites in order to address potential environmental health and hazardous materials issues. These activities are proposed to be performed in compliance with applicable Federal and Guam regulations and existing agreements.

This project is consistent with DP5.

DP 6. Housing

- Intent: To promote efficient community design placed where the resources can support it.
- Policy: The government shall encourage efficient design of residential areas, restrict such development in areas highly susceptible to natural and manmade hazards, and recognize the limitations of the island's resources to support historical patterns of residential development.

Discussion: *This project does not include development of residential areas or structures and residential areas will not be affected by the project. Policy DP 6 does not apply to this project.*

DP 7. Transportation

Intent: To provide transportation systems while protecting potentially impacted resources.

Policy: Guam shall develop an efficient and safe transportation system, while limiting adverse environmental impacts on primary aquifers, beaches, estuaries, coral reefs and other coastal resources.

Discussion: *This project does not involve the development of transportation systems and will not result in the creation of vehicle traffic at the sites. This project is consistent with the intent of Policy DP7.*

DP 8. Erosion and Siltation

Intent: To control development where erosion and siltation damage is likely to occur.

Policy: Development shall be limited in areas of 15% or greater slope by requiring strict compliance with erosion, sedimentation, and land use regulations, as well as other related land use guidelines for such areas.

Discussion: *All sites have been previously disturbed by past excavation and grading. The proposed action will require excavation at 8 of the 11 proposed valve pit sites. Excavation permits, including underground utility clearances through DZSP21, will be obtained for each excavation site. The excavated areas and pits will be dewatered as necessary to keep the excavation dry in conformance with approved permits.*

Erosion control measures will consist of Best Management Practices (BMPs) to install a silt fence around the perimeter of excavation activity and any stockpiled materials, in conformance with approved environmental plans and permits, throughout the period the excavation is open. Erosion control inspection and maintenance will be conducted once every 7 calendar days and within 24 hours of a storm event that produces 0.5 inches of rain or more.

This project is consistent with the intent of Policy DP8.

RESOURCES POLICIES (RP):

RP1. Air Quality

Intent: To control activities to insure good air quality.

Policy: All activities and uses shall comply with all local air pollution regulations and all appropriate Federal air quality standards in order to ensure the maintenance of Guam's relatively high air quality.

Discussion: *At the valve pit job sites, a light water spray may be used to control dust when necessary. All vehicles and equipment will remain on paved roads and maintained mowed grass areas to access the valve pit locations. APTIM will clean up any dirt and debris that builds up on the road pavement from equipment and vehicles leaving the sites. This may include manual shoveling and water spray. If winds interfere with material capture during sandblasting activities, work will be immediately suspended.*

The proposed action represents a modernization of existing valves, valve pits and wharfs. These improvements are intended (in part) to improve on inefficient pipeline equipment. The proposed maintenance and repair of DFSP pipelines would not cause or exacerbate an exceedance of National Ambient Air Quality Standards (NAAQS). Therefore, project-generated emissions would be less than the General Conformity significance thresholds. As such, the proposed action would comply with the U.S Environmental Protection Agency (USEPA) General Conformity Rule.

The project is consistent with the intent of Policy RP1.

RP2. Water Quality

Intent: To control activities that may degrade Guam's drinking, recreational, and ecologically sensitive waters.

Policy: Safe drinking water shall be assured and aquatic recreation sites shall be protected through the regulation of uses and discharges that pose a pollution threat to Guam's waters, particularly in estuaries, reef and aquifer areas.

Discussion: *Work will be contained within the valve pit work sites. Erosion and siltation will be contained using BSPs (mentioned in DP8) to prevent/stop sedimentation into surrounding water bodies. Two proposed work sites, Delta Wharf and Echo Wharf, extend directly over Apra Harbor. For these sites, an overwater pipeline fully containment enclosure will be erected around all pipe sections to trap all dust, dirt, cleaning debris and paint drips generated by sandblasting and other work activities. Below the pipelines, a suspended platform of wood planking will cover 10 mil plastic sheeting. The entire containment will be covered by shrink wrap. Full specifications and diagrams of the overwater pipeline containment can be found in the Environmental Protection Plan (EPP) and Dirt and Dust Control Plan as an attachment. The containment enclosure will follow the work progress along the pipelines. If winds interfere with material capture, work will be immediately suspended. The tarp will be cleaned of debris daily. The proposed action will have no effect on the water quality on Guam.*

The proposed actions at all sites will not produce a discharge and are consistent with the intent of Policy RP2.

RP3. Fragile Areas

Intent: To protect significant cultural areas, and natural marine and terrestrial wildlife and plant habitats.

Policy: Development in the following types of fragile areas including Guam's Marine Protected Areas (MPA) shall be regulated to protect their unique character.

- historical and archeological sites
- wildlife habitats
- pristine marine and terrestrial communities
- limestone forests
- ravine forests
- mangrove stands and other wetlands
- coral reefs

Discussion: *Implementation of the project would not be expected to result in direct or indirect impacts to terrestrial resources (vegetation communities or wildlife) or benthic and marine resources, including sensitive species occurring on or near the site.*

One site of the proposed action, the Navy/Tri-Star Tie-In Valve Pit work site, is adjacent to a wetland area. There will be no effect on the wetland from this project.

An archaeological survey was conducted in July 2015 in accordance with the National Historic Preservation Act (NHPA) Section 106 Evaluation. The Naval Facilities Engineering Command (NAVFAC), along with the Guam Department of Parks and Recreation, determined a finding of "No Adverse Effect" for the proposed maintenance and

repair of the DFSP pipelines. Ground disturbance will be limited to areas with existing pipeline components and utility corridors and all project areas have been previously disturbed (original excavation, construction, grading). No further archaeological monitoring will be required as per the findings of the Section 106 Review and corresponding State Historic Preservation Officer (SHPO) letter.

The project would not be expected to result in impacts on cultural or historic resources on and near the sites during or as a result of project implementation. If an inadvertent discovery of a cultural resource occurs during implementation activities, the work where the discovery is made will immediately cease, and the Guam Historic Preservation Officer Point of Contact (POC) will be immediately notified. An archaeologist (or designee) and/or the Guam Historic Preservation Officer POC may stop work to allow investigators to inspect the area and to protect the artifacts. The perimeter of the find, as determined by archaeologists, will be delineated and access to the area will be restricted. No intrusive work will proceed without consultation with the archaeologist (or designee).

This project is consistent with the intent of Policy RP3.

RP4. Living Marine Resources

Intent: To protect marine resources in Guam's waters.

Policy: All living resources within the waters of Guam, particularly fish, shall be protected from over harvesting and, in the case of corals, sea turtles and marine mammals, from any taking whatsoever.

Discussion: No impacts to the marine resources and mangrove habitat would result from implementation of the proposed project.

The project does not involve any harvesting of marine resources or activities within the waters that could otherwise adversely impact marine resources. There are no threatened or endangered species in the immediate vicinity of the project sites. The proposed action will not require an essential fish habitat or threatened and Endangered Species Act consultation as per the Request for Information No. 013 dated 08/30/2017.

The work practices do not cast significant shadowing over the water and the tools utilized to remove rust and paint will not create significant noise for long periods of time. No work will be performed in the water and the repair work will not produce a discharge. There will be no impact to the aquatic environment.

This project is consistent with the intent of Policy RP4.

RP5. Visual Quality

Intent: To protect the quality of Guam's natural scenic beauty

Policy: Preservation and enhancement of, and respect for the island's scenic resources shall be encouraged through increased enforcement of and compliance with sign, litter, zoning, subdivision, building and related land-use laws. Visually objectionable uses shall be located to the maximum extent practicable so as not to degrade significant views from scenic overlooks, highways and trails.

Discussion: This project involves the repair and maintenance of existing valve pits. All project areas have been previously disturbed (original excavation, grading, etc.). Disturbances from the proposed project will be limited to areas of existing pipeline components and utility corridors. The new and refurbished structures will have similar profiles to what currently exists at the sites. Implementing the project will have no effect on the visual quality or natural scenic beauty of the sites.

This project is consistent with the intent of Policy RP5.

RP6. Recreation Areas

Intent: To encourage environmentally compatible recreational development.

Policy: The Government of Guam shall encourage development of varied types of recreational facilities located and maintained so as to be compatible with the surrounding environment and land uses, adequately serve community centers and urban areas and protect beaches and such passive recreational areas as wildlife, marine conservation and marine protected areas, scenic overlooks, parks, and historical sites. Developments, activities and uses shall comply with the Guam Recreational Water Use Management Plan (RWUMP).

Discussion: *The project site is not located on or near any recreational areas and will not have any effects on recreational areas. Policy RP 6 does not apply to the Proposed Action.*

RP7. Public Access

Intent: To ensure the right of public access.

Policy: The public's right of unrestricted access shall be ensured to all non-federally owned beach areas and all Guam recreation areas, parks, scenic overlooks, designated conservation areas and their public lands. Agreements shall be encouraged with the owners of private and federal property for the provision of releasable access to and use of resources of public nature located on such land.

Discussion: *This project is not located on or near public access areas and it will not affect access to public areas. All project work will be contained to the DFSP 11 valve pit locations and Delta Wharf and Echo Wharf locations. Policy RP 7 does not apply to the Proposed Action.*

RP8. Agricultural Lands

Intent: To stop urban types of development on agricultural land.

Policy: Critical agricultural land shall be preserved and maintained for agricultural use.

Discussion: *The project does not involve urban development on agricultural land and will not preclude surrounding properties from being used for agricultural purposes in the future. Policy RP 8 does not apply to the Proposed Action.*

WORK PLAN

Maintain and Repair Pipelines, Defense Fuel Support Point Guam

NAVFAC EXWC POL MAC Contract No. N62583-09-D-0130

Task Order 0035 - Modification 05

APTIM Project No. 147500

29 SEP 2017

Revision 1

REFERENCE:

Work Plan Aviation Fuel Distribution (Non-Hydrant) Section 33 52 43, paragraph 1.4.2;

Describe, in detail, the means of:

a. Coordinating work with Government and third parties.

APTIM will coordinate with DFSP Guam to determine which lines can be taken out of service at any given time, and the scheduled outage durations. Any deviations from the SOW may result in an RFI to be submitted to the Government. APTIM will coordinate the work tasks of subcontractors conforming to the baseline schedule. The Government will be responsible to notify APTIM of work by other prime contractors that may affect this project.

b. Phasing and work sequence.

The Government will confirm which valve pits and line(s) are available to be removed from service. The Construction Phase will include the repair of 11 valve pits which will be executed in 3 Groups/Phases as noted below in Section 2, Schedule.

c. Preparing for safe piping repair work.

- Asbestos-containing material (ACM) pipes from the valve pit will be removed, packaged and disposed of at a permitted landfill. Estimated ACM pipes from four locations (Tasks 2.2.4, 2.2.8, 2.2.10, and 2.2.11) are as follows:
 - 130 feet of 12-inch pipeline approximately 6,435 pounds
 - 5 feet of 14-inch pipeline approximately 293 pounds
- The existing metal structures to be demolished (canopy, handrails, gratings, and ladders) and existing piping may be coated with lead-based paint (LBP). All necessary precautions for the safety of personnel and the proper disposal methods for demolished material will be implemented. A Lead Assessment and Lead Abatement Plan will be prepared by a CIH, who will require employees to be trained in lead as well as respiratory protection in the event that work may expose them to lead.

- Excavation at three valve pits (2.2.10, 2.2.11 & 2.2.18) are in areas of moderate probability of munitions and explosives of concern (MEC) and requires MEC clearance. The MEC Plan will conform with the current Joint Region Marianas Explosives Safety Submittal (ESS) Amendment 5 rules and Chief of Naval Operations Explosive Safety Exemption (Waiver). The MEC clearance will be performed as stated in the approved plan. The major tasks consist of preparing an ESS for review, approving and submitting an excavation permit application, performing fieldwork/MEC clearance, and mobilizing/demobilizing.

d. Pressure testing new piping sections.

- Prior to installation, APTIM will perform a hydrostatic pressure test on valves that were previously procured (Oct. 2014) and stored in containers at DFSP Guam under this task order. The pressure test will follow the valve manufacturer's recommendations and the testing procedure will be provided by the Designer of Record (DOR).
- A pneumatic pressure-test will be performed on all five underground low-point drains (LPDs) before repairs between Tasks 2.2.3 (Delta Electric), 2.2.5 (Delta Manual), and 2.2.6 (Bldg. 1716) valve pits. The lines will be pressure tested using nitrogen to ensure the integrity of the underground piping.
- New pipe spools will undergo a hydrostatic pressure test to 225 psi for 1 hour prior to installation.

e. Interrupting or isolating an existing fuel service or system.

The Government will drain fuel from the pipeline segments to the extent that its pumps allow, and will then turn over the pipeline to APTIM. APTIM will take full responsibility for isolating and gas-freeing each pipeline segment prior to performing any media blasting, repair, or other hot work.

All blinds will be American Society of Mechanical Engineers 16.5/16.47 to match the flange class and diameter. The blind will be installed with a single gasket and a tag attached that meets the requirements of CMS-710-02-PR-01500, "Control of Hazardous Energy."

f. Purging piping.

A Certified Industrial Hygienist (CIH) or Marine Chemist will issue a gas-free certificate for all hot work including demolition and installation at each valve pit. After the lines are drained, the piping will be purged with an inert gas. An inert backing gas will be used, as required by the weld procedures, for all tie-in welds.

g. Vapor monitoring.

The valve pits are considered confined spaces. The Site Manager/SSHO will perform atmospheric testing and monitoring in the work areas to measure the concentrations of oxygen (O₂), flammable/combustible vapors relative to the LEL, hydrogen sulfide (H₂S), carbon monoxide (CO), and meteorological conditions.

h. Preparations for containing and disposing of residual fuel.

For all work at pits in the piers (Delta and Echo) and causeway pits, APTIM is responsible for the drain down as the operator/facility has no resources to haul away fuel product. The operator/facility can still provide support to operate valves and pumps. APTIM will drain down at Delta and Echo fuel piers (Tasks 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.6, 2.2.8, and 2.2.9) and at the Pier Causeway tie-in pits (Tasks 2.2.10 and 2.2.11) because of lack of pumps.

i. Cutting, sealing, and welding into existing piping systems.

A Hot Work Permit will be obtained from the Naval Base Fire Department prior to any hot work to be performed at all valve pits. The existing piping outside the headwalls will be cut and removed, and new pipe sections (flanges and appurtenances as required) will be welded in their place. Safe for Work forms will be completed (similar to a gas-free certificate or hot work form) daily and copies provided to DFSP Guam.

j. Welding tie-ins in place.

The existing piping outside the headwalls will be cut and removed, and new pipe sections (flanges and appurtenances as required) will be welded in their place. Tie-in welds will not be pressure tested. Per ASME B31.3, 344.7, these welds will require in-process examination. 100% phased array ultrasonic testing (PAUT) will be performed on all underground piping and 20% PAUT will be performed on the aboveground piping. Small bore socket welds will require 100% MT or PT.

k. Examining repair section tie-in welds.

Weld testing will be done by non-destructive examination (NDE) performed by a third party-certified weld inspector. The typical NDEs that may be performed on this work consist of: visual inspection, liquid (dye) penetrant testing (PT), magnetic particle testing (MT), PAUT.

l. Collecting, storing and disposing of waste fuel generated during work.

APTIM will assume residual fuel will be present in the pipelines and will drain (or suction) this remaining residual fuel into vacuum trucks and transport it to product tanks or the DFSP Guam skim pit. The estimated volume of fuel to be removed from each line is as follows:

- 24-inch intermediate fuel oil (IFO)-180—211,944 gallons
- 14-inch marine diesel fuel (F-76)—96,704 gallons
- 14-inch jet propellant grade 5 (JP-5)—74,246 gallons
- 14-inch jet propellant grade 8 (JP-8)—72,132 gallons
- 12-inch ballast—62,093 gallons

1. Technical Approach

The 11 locations with scope sequence, details, and exclusions are detailed below and summarized in Table 1, “Activities per Location (in Sequence of Performance).”

1.1. Task 2.2.2 - Delta Flange Pit

- Demolish the existing canopy structure (assume size is 16 feet, 10 inches in length by 9 feet in width) and safety railing.
- Excavate and demolish existing concrete flange pit side walls (four walls) and floor slab. The existing pit size is approximately 15 feet, 10 inches in length by 5 feet, 4 inches in width by 5 feet in depth. The pit will not be replaced, and the site will be backfilled and restored at the completion of the mechanical pipeline work.
- Remove the following existing pipes, flanges, and blinds: 20-inch IFO-180, 16 inch recovered fuel oil (RFO), 12-inch F-76, 12-inch JP-5, 12-inch JP-8. Replace with new pipes only. Remove the 4-inch and 6-inch lube oil piping, grout each side shut, and weld steel plates on ends. Remove the mechanical joint from the 6-inch water line and replace with welded pipe.
- Assume the tie-in locations to be within 60 inches outside of the pit wall in a staggered layout.
- Provide pipeline markers and cathodic protection test stations.
- Sandblast and coat six large diameter pipelines: one 6-inch pipe diameter (ø), three 12 inch ø, one 16-inch ø, and one 20-inch ø.
- Exclusion: The 14-inch ø ballast line (transite pipe) will not be coated. The 6-inch ø water line will not be coated.
- There are no valves associated with this pit.
- Backfill, compact, and restore.
- The asphalt pavement adjacent to the pit will be removed and replaced if necessary to provide adequate space within the excavation for pipe welding. Assume 300 square feet of asphalt pavement needs to be replaced as specified by the Government in the RFP. If additional asphalt is required, this will be subject to a contract modification or a future project.

1.2. Task 2.2.3 - Delta Electrical Valve Pit

- Remove the existing canopy structure (assume size is 18 feet, 6 inches in length by 18 feet in width), safety railing, and entry ladder. This existing canopy structure will be re-installed after completion of work. New safety railing and ladder will be installed.
- Excavate and demolish the existing concrete electrical valve pit side walls (four walls) and floor slab. Existing pit size is approximately 17 feet, 5 inches in length by 15 feet in width by 5 feet, 8 inches in depth. This valve pit will be completely rebuilt to match the existing footprint.
- Construct a new concrete floor slab.

- Remove the following existing pipes, flanges, and blinds: 20-inch and 24-inch IFO 180, 16-inch RFO, 12-inch and 14-inch F-76, 12-inch and 14-inch JP-5, 12-inch and 14-inch JP-8.
- Remove the 4-inch and 6-inch lube oil piping, grout each side shut, and weld steel plates on ends.
- Replace with new pipes, flanges, reducers, and blinds.
- Install five new double-block-and-bleed (DBB) motor-operated valves (MOVs) for the following: 16-inch IFO, 14-inch RFO, 12-inch F-76, 12-inch JP-5, and 12-inch JP-8.
- Fabricate and install five stainless steel thermal/pressure relief loops with check valves. The IFO line is 1½ inches, and the other four lines are 1-inch. Loops will have two flanged check valves installed horizontally. All other components will be socket welded.
- Remove and replace all of the 4-inch drain piping connected from the IFO-180, RFO, F-76, JP-5, and JP-8 lines. Demolish the drain piping within the pit to a minimum distance of 6 inches outside the pit walls. Replace with new pipes only, and a flanged connection installed inside the pit. Install five 4-inch DBB valves on the new drain lines.
- Pressure-test all five underground low-point drains (LPDs) before repairs between Tasks 2.2.3, 2.2.5, and 2.2.6 valve pits. If the pressure test fails, then repairs will be subject to a contract modification or a future project.
- Remove six existing pipe supports and replace with new pipe supports.
- Install new gaskets, bolting hardware, flange hardware, grease-filled bolt protectors and flange protectors, and grounding jumper cabling (perform continuity testing).
- Assume the tie-in locations for the main piping to be within 60 inches outside of the pit wall in a staggered layout.
- Construct a replacement concrete valve pit to dimensions that will be confirmed by the final design.
- Sandblast and coat six large diameter pipelines (one 6-inch ø, three 12-inch ø, one 16 inch ø, and one 20-inch ø) and five 4-inch ø drain lines.
- Exclusion: The 14-inch ø ballast line (transite pipe) will not be coated. The 6-inch ø water line will not be coated.
- Valves: There are 10 new valves to be coated: one 16-inch, one 14-inch, three 12-inch, and five 4-inch. Four valves to remain in-place will be coated: one 12 -inch valve and three 6-inch valves.
- Assume the total pipe length to be top coated is approximately 90 linear feet.
- Install stainless steel sleeves, link seal and water-excluding, fuel-resistant expanding sealant on each pipe penetration where new walls are being constructed.
- Backfill, compact, and restore.
- The asphalt pavement adjacent to the pit will be removed and replaced if necessary to provide adequate space within the excavation for pipe welding. Assume 250 square feet of asphalt pavement needs to be replaced as specified by the Government in the RFP. If

additional asphalt is required, this will be subject to a contract modification or a future project.

- Re-install the existing canopy. Fabricate and install new metal canopy, safety railing, and entry ladder.
- Remove and replace the main electrical panel, and replace the entire electrical system within the valve pit. Provide all materials and labor to remove and replace the entire electrical system within the valve pit to provide electrical power to five new MOVs. Remove the main electrical panel and replace with all new components and mounting hardware/bracket. This includes the control panel, circuit breakers, push buttons, external lights, switches, power and control wiring, cable, conduit, and flex conduit from the new control panel to each new MOV. Assume electrical circuit back to the power source is in acceptable condition and will be tested and reused.

1.3. Task 2.2.4 – Wharf-Front Risers 1 & 2 (Delta Pier)

- Remove, package, and dispose of ACM piping and approximately 100 feet (SOW dimension) of 12-inch $\varnothing$ overwater pipeline. Field measured 25 feet, 3 inches from shoreline bulkhead to second flange.
- Install new bolts, nuts, washers, gaskets, flange protectors, nut caps, and grease on all flanges.
- Remove and replace thirteen 8-inch DBB valves, nine will be refurbished and four are new valves.
- Gov't RFP - XM1. Refurbish or supply new 8" DBB. (Refurbish 9 existing DBBs; supply 2 new DBBs)
- Verified Field Condition:
 - There are thirteen (13) risers.
 - Nine (9) risers have DBB Valves
 - Four (4) risers are blinded
- Facility Requirements:
 - All risers should have valves installed
- All wharf risers will be replaced from their connection point to the main pipeline, including all associated small bore piping, connections, and flanges. All small bore piping connections will be directly welded or flanged (i.e., no threaded connections will be allowed).
- Replace the 12-inch ballast water line from the shore to the second flange on the pier (assume 100 linear feet). Over-the-water work will require an environmental permit from the USACE.
- Remove the 6-inch and 4-inch lube lines, cap, and plug at the shoreline.
- Replace two 4-foot sections of pipe on the 12-inch JP-8 line over the water section to remove the existing repair sleeves.

- Replace 4 feet of piping on the 12-inch F-76 line on the pier side as it passes beneath the structure.
- Replace 8 feet of piping on the over-the-water section of the 16-inch RFO line containing a repair sleeve. Field measured 2 feet.
- Sandblast and coat six large diameter pipelines; three 12-inch ø, one 14-inch ø, one 16-inch ø, and one 20-inch ø.
- Exclusion: The 14-inch ø ballast line (transite pipe) will not be coated. The 6-inch ø water line will not be coated.
- Valves: There are four new DBB valves to be coated, and nine existing valves to be removed, refurbished, coated, and reinstalled. All valves are 8 inches.
- Assume the total overwater pipe length to be blasted and 3-part coated is approximately 550 linear feet.

1.4. Task 2.2.5 – Delta Manual Valve Pit

- Remove the existing canopy structure (assume size is 18 feet 6 inches in length by 18 feet 6 inches in width), safety railing, and entry ladder. This existing canopy structure will be re-installed after completion of work. New safety railing and ladder will be installed.
- Excavate and demolish the existing concrete manual valve pit side walls (four walls) and floor slab. Existing pit size is approximately 17 feet, 5 inches in length by 14 feet, 10 inches in width by 6 feet in depth.
- Construct a new concrete floor slab.
- Remove the following existing pipes, flanges, and blinds: 24-inch IFO-180, 16-inch RFO, 14-inch F-76, 14-inch JP-5, and 14-inch JP-8. Remove the 4-inch and 6-inch lube oil piping, grout each side shut, and weld steel plates on ends. Replace with new pipes, flanges, reducers, and blinds.
- Install six refurbished DBB valves: 16-inch IFO, 14-inch RFO, 12-inch F-76, 12 inch JP-5, 12-inch JP-8, and 12-inch ballast.
- Fabricate and install five stainless steel thermal/pressure relief loops with check valves. The IFO line is 1½ inch, and the other four lines are 1-inch. Loops will have two flanged check valves installed horizontally. All other components will be socket welded.
- Pressure-test all five underground LPDs before repairs between Tasks 2.2.3, 2.2.5, and 2.2.6 valve pits. If the pressure test fails, then repairs will be subject to a contract modification or a future project.
- Remove and replace all of the 4-inch drain piping connected from the IFO-180, RFO, F-76, JP-5, and JP-8 lines. Demolish the drain piping within the pit to a minimum distance of 6 inches outside the pit walls. Replace with new pipes only, and a flanged connection installed inside the pit. Install five 4-inch DBB valves on the new drain lines.
- Install new gaskets, bolting hardware, flange hardware, grease filled bolt protectors and flange protectors, and grounding jumper cabling (perform continuity testing). Assume the

tie-in locations for the main piping to be within 60 inches outside of the pit wall in a staggered layout.

- Construct a replacement concrete valve pit to dimensions that will be confirmed by final design.
- Sandblast and coat six large diameter pipelines: (four 14-inch ø, one 16-inch ø, and one 24-inch ø), and five 4-inch ø drain lines.
- Exclusion: The 14-inch ø ballast line (transite pipe) will not be coated.
- Valves: There are six refurbished valves to be coated: one 16-inch, one 14-inch, and four 12-inch. New valves to be coated consist of five 4-inch Double Block and Bleed.
- Assume the total pipe length to be top coated is approximately 90 linear feet.
- Install stainless steel sleeves, link seal and water-excluding, fuel-resistant expanding sealant on each pipe penetration where new walls are being constructed.
- Backfill, compact, and restore.
- The asphalt pavement adjacent to the pit will be removed and replaced if necessary to provide adequate space within the excavation for pipe welding. Assume 75 square feet of asphalt pavement needs to be replaced, as specified by the Government in the RFP. If additional asphalt is required, this will be subject to a contract modification or a future project.
- Re-install the existing canopy. Fabricate and install new metal canopy, safety railing, and entry ladder.

1.5. Task 2.2.6 - Manifold Pit at Drainage Pump House 1716

- Remove the existing canopy roof structure (assume size is 32 feet 10 inches in length by 21 feet 5 inches in width). This existing canopy structure will be re-installed after completion of work. New safety railing and ladder will be installed.
- Excavate and demolish the existing concrete valve pit side walls as required. Existing pit size is approximately 30 feet in length by 21 feet, 5 inches in width by 6 feet in depth. The extent of the wall removal and replacement will be determined in the final design.
- Remove and replace with new pipes, fittings, flanges, reducers, blinds, and valves for the 24-inch IFO-180, 16-inch RFO, 14-inch F-76, 14-inch JP-5, and 14-inch JP-8. Assume the tie-in locations to be within 60 inches outside of the pit wall in a staggered layout.
- Pressure-test all five underground LPDs before repairs between Tasks 2.2.3, 2.2.5, and 2.2.6 valve pits. If the pressure test fails, then repairs will be subject to a contract modification or a future project.
- Install additional pipe supports per final design.
- Remove the 4-inch and 6-inch lube oil piping, demolish the piping within the pit to a minimum distance of 6 inches outside the pit walls, grout each side shut, and weld steel plates on ends.
- Remove portions of the existing 4-inch drain lines and valves (inside Building 1716).
- The Building 1716 wall penetrations where pipes are removed will be sealed.

- Install five MOV DBB valves for the one 16-inch IFO, one 14-inch RFO, one 12-inch F-76, one- 12-inch JP-5, and one 12-inch JP-8.
- Fabricate and install five stainless steel thermal/pressure relief loops with check valves. The IFO line is 1½ inches, and the other four lines are 1-inch. Loops will have two flanged check valves installed horizontally. All other components will be socket- welded.
- Install twenty 4-inch manual valves (14 gate valves and 6 DBB valves).
- Install new gaskets, bolting hardware, flange hardware, grease filled bolt protectors and flange protectors, and grounding jumper cabling (perform continuity testing).
- Sandblast and coat six large diameter pipelines (one 6-inch ø, three 14-inch ø, one 16 inch ø, and one 24-inch ø), and five 4-inch ø drain lines.
- Exclusion: The 14-inch ø ballast line (transite pipe) will not be coated. The 4-inch drain-line sections connecting to Building 1716 will be removed and not replaced.
- Valves: There are five new MOVs to be coated: one 16-inch, one 14-inch, and three 12-inch; New valves consist of twenty 4 inch and two 8-inch to be coated.
- Assume the total pipe length to be top coated is approximately 180 linear feet.
- Seal pipe penetrations through the wall of Building 1716 Drain Pump House. Assume seven 4-inch pipe penetrations.
- Install stainless steel sleeves, link seals and water-excluding, fuel-resistant expanding sealant on each pipe penetration where new walls are being constructed.
- Backfill, compact, and restore.
- The asphalt pavement adjacent to the pit will be removed and replaced if necessary to provide adequate space within the excavation for pipe welding. Assume 60 square feet of asphalt pavement needs to be replaced as specified by the Government in the RFP. If additional asphalt is required, this will be subject to a contract modification or a future project.
- Re-install the existing safety railing, and provide a new entry ladder, stair and the catwalk system based on final design.
- Remove main electrical panel and five junction boxes, and replace with all new components and mounting hardware/bracket. This includes the control panel, junction boxes, circuit breakers, push buttons, external lights, switches, power and control wiring, cable, conduit, and flex conduit from the control panel to each new junction box and MOV. Assume the electrical circuit back to the power source is in acceptable condition and will be tested and reused.

1.6. Task 2.2.7 – JP-5 Filter/Separator Bldg. 1717 (Echo Pier)

- Install three new 1-inch thermal relief systems.
- Sandblast and coat three new 1-inch ø thermal relief systems. Fifteen threaded connections will be replaced by 1-inch socolets that will be coated along with repair to any damage on the existing pipes.

1.7. Task 2.2.8 – Echo Lube Oil Valve Pit at Bldg. 1720

- Demolish the existing canopy structure (assume size is 17 feet 5 inches in length by 12 feet 3 inches in width) and safety railing.
- Excavate and demolish the existing concrete lube oil valve pit side walls (four walls) and floor slab. Existing pit size is approximately 5 feet in length by 17 feet, 2 inches in width by 5 feet in depth. This pit will not be replaced, and the site will be backfilled and restored at the completion of the mechanical pipeline work.
- Remove the following existing pipes, flanges, and blinds: 24-inch IFO-180, 16-inch RFO, 14-inch F-76, 14-inch JP-5, and 14-inch JP-8. Replace with new pipes only.
- On the 14-inch ballast line (transite/cast iron), remove all components that can be buried and replace with components that can be buried. Accomplish this by tying-in new welded carbon steel piping with FBE coating with couplers meant to be buried. Remove, package, and dispose of ACM piping, which is approximately 5 feet of 14 inch ø pipeline.
- Tie new carbon steel underground pipe into the existing cathodic protection system by attaching to IFO piping with jumper cable and exothermic welds. Install cathodic protection test stations for six pipes: 24-inch IFO-180, 16-inch RFO, 14-inch F 76, 14-inch JP-5, 14-inch JP-8, and 4-inch lube oil. Thrust blocks may be installed based on the final design.
- Remove 2-inch drain valve V7, replace with pipe pup, and install replacement valve inside Building 1720.
- Remove all waterline components that cannot be buried and replace with components that can be buried. Accomplish this by replacing all piping as shown in the drawing with welded carbon steel piping and FBE coating. Remove the 1½ inch water valve V6, replace with pipe pup, and install replacement valve inside Building 1720.
- The relocation of valves to Building 1720 may be revised in the final design.
- Remove all the 4-inch lube oil piping that cannot be buried and replace with components that can be buried. Accomplish this by replacing all piping shown in the drawing with welded carbon steel piping with FBE coating.
- Remove the 4-inch lube oil valve V1, replace with pipe pup, and install replacement valve in Building 1720.
- Remove portions of the 4-inch and 6-inch lube oil lines, and replace connections to the active 4-inch lube oil line as necessary for burial. Grout-cut lines and weld steel plates on cut ends before burial.
- Assume the tie-in locations to be within 60 inches outside of the pit wall in a staggered layout. Provide pipeline markers and cathodic protection test stations.
- Sandblast and coat three 14-inch ø, one 16-inch ø, and one 24-inch pipelines.
- Exclusion: The 14-inch ø ballast line (transite pipe) will not be coated. The 6-inch ø water line will not be coated.
- Three new valves will be installed in Building 1720.

- The pipes will be buried and do not require topcoat. Repair coating at 2 welds per pipe on six pipes.
- Backfill, compact, and restore.
- Install an 8-inch thick concrete slab over all pipe tops that are less than 3 feet from the surface within the existing valve pit perimeter (exact dimensions to be field determined if required).

1.8. Task 2.2.9 – Wharf-Front Risers 3 & 4 (Echo Pier)

- Install new bolts, nuts, washers, gaskets, flange protectors, nut caps, and grease on all flanges.
- Remove and replace fourteen 8-inch DBB valves; nine will be refurbished, and five are new valves.
- Gov't RFP - XM1. Refurbish or supply new 8" DBBs (refurbish 10 existing DBBs; supply 3 new DBBs)
- Verified Field Condition:
 - There are fourteen (14) risers
 - Nine (9) risers have DBB Valves
 - Five (5) risers are blinded
- Facility Requirements:
 - All risers should have valves installed
- All wharf risers will be replaced from their connection point to the main pipeline, including all associated small bore piping, connections, and flanges. All small bore piping connections will be directly welded or flanged (i.e., no threaded connections will be allowed).
- Remove and replace pipe supports for all piping under grating. Assume 10 support systems to be replaced in-kind.
- Sandblast and coat six large diameter pipelines to remain in this pit: three 14-inch ø, one 6-inch ø, one 16-inch ø, and one 24-inch ø.
- Exclusion: The 12-inch ø ballast line (transite pipe) will not be coated.
- There are 5 new DBB valves to be installed, and 9 existing valves to be removed, refurbished, and reinstalled.
- Assume the total overwater pipe length to be 3-part coated is approximately 180 linear feet, including a portion over the water. Over-the-water work will require an environmental permit from USACE.

1.9. Task 2.2.10 – Navy/Tri-Star Tie-In Valve Pit

- Work will require penetrating into the Tri-Star valve pit. Maintain the Tri-Star chain-link security fence during construction, and restore any damaged fencing to its preconstruction condition.
- Install a permanent security fence around the entire pit during construction.

- Conduct MEC clearance and excavation of the soil around the valve pit side walls (three walls) and below the floor depth. The existing pit size is approximately 16 feet in length by 15 feet in width by 7 feet in depth. Perform MEC clearance and excavation around the perimeter of the existing pit, for demolition of the pit walls and slab, and for the construction of a relocated valve pit. The final depth will be excavated after the floor slab is demolished.
- Excavate and demolish the existing concrete valve pit side walls (three walls), floor slab, and aboveground concrete masonry wall surrounding the pit (three sides). The existing pit size is approximately 16 feet in length by 15 feet in width by 7 feet in depth.
- Construct a new concrete floor slab.
- Remove, package, and dispose of ACM piping, which is approximately 16 feet of 12 inch $\varnothing$ pipeline.
- Remove the existing and replace with new pipes, flanges, blinds, pipe supports, and pressure/thermal relief systems for the 24-inch IFO-180, 16-inch RFO, 14-inch JP-5, 14-inch JP-8, 14-inch F-76, and 12-inch ballast.
- Replace the 12-inch gate valve on the ballast line. Replace the mid-stream sample port and pressure gauge on the JP-8 line.
- Install three refurbished DBB valves for the following: 20-inch IFO, 14-inch RFO, and 14-inch F-76.
- Install pipe support on the 24-inch IFO line to allow replacement of corroded piping in the valve pit.
- Remove and replace the dead-leg of the F-76 line with a blind flange.
- On the JP-8 Navy line connection to the jet propulsion-aviation commercial line, remove the existing and install a refurbished 14-inch DBB, and install two new 12 inch DBB valves including new relief systems.
- Install new bolts, nuts, washers, gaskets, grounding jumper cabling (perform continuity testing), flange protectors, nut caps, and grease on all flanges.
- Assume the tie-in locations to be within 60 inches outside of the pit wall in a staggered layout.
- Construct a replacement concrete valve pit to dimensions that will be confirmed by final design. No replacement masonry wall is necessary.
- Sandblast and coat one 12-inch $\varnothing$, three 14-inch $\varnothing$, one 16-inch $\varnothing$ and one 24-inch $\varnothing$ pipeline.
- Four refurbished and three new valves will be installed.
- Assume the total pipe length to be top coated is approximately 90 linear feet.
- Install stainless steel sleeves, link seals and water-excluding, fuel-resistant expanding sealant on each pipe penetration where new walls are being constructed.
- Backfill, compact, and restore.

- Fabricate and install a new safety railing and entry ladder. The approximate size of the new valve pit is 15 feet by 16 feet, but this measurement will be confirmed by final design.
- Move the cathodic protection rectifier. The existing pit size is approximately 16 feet in length by 15 feet in width by 7 feet in depth, and the replacement concrete valve pit will be determined by the final design. Move the existing cathodic protection rectifier to the new location as set in the field.

1.10. Task 2.2.11 – Navy/GPA Tie-In Valve Pit (this valve pit will not be replaced)

- Install a temporary security fence around the entire pit during construction.
- Conduct MEC clearance and excavation of the soil around the valve pit side walls (four walls) and below the floor depth. The existing pit size is approximately 13 feet in length by 12 feet in width by 6 feet in depth. Perform MEC clearance and excavation around the perimeter of the existing pit, for demolition of the pit walls and slab, and for the construction of a relocated valve pit. The final depth will be excavated after the floor slab is demolished.
- Demolish the existing concrete valve pit side walls (four walls), floor slab, and aboveground concrete masonry wall surrounding the pit (four sides). The existing pit size is approximately 13 feet, 4 inches in length by 12 feet, 4 inches in width by 6 feet, 3 inches in depth.
- Remove, package, and dispose of ACM piping, which is approximately 14 feet of 12 inch $\varnothing$ pipeline.
- Remove all existing piping, valves, fittings, blinds, and flanges on the 16-inch RFO/F-76 pipelines and the 12-inch branch line tie-in to the GPA commercial pipeline.
- The tie-in to the 20-inch GPA line will be removed.
- Remove the existing and replace with new pipes: 24-inch IFO-180, 14-inch JP-5, 14-inch JP-8, 14-inch F-76, and 12-inch ballast.
- Assume the tie-in locations to be within 60 inches outside of the pit wall in a staggered layout.
- Backfill, compact, and restore.

1.11. Task 2.2.18 – Master Valve Pit 2

- Remove and reuse the existing canopy columns, and replace the roof frame and roof sheets (assume size is 14 feet, 7 inches in length by 12 feet, 11 inches in width). Remove the safety railing and entry ladder. The existing railing will be reused as much as possible.
- Conduct MEC clearance and excavation of the soil around the valve pit side walls with pipe penetrations (two walls) and below the floor depth. Assume the pit size is 13 feet in length by 12 feet in width by 6 feet in depth. Perform MEC clearance and excavation as may be required based on the final design.

- MEC clearance and excavation will also be required for connection of an electrical underground conduit, which is approximately 75 feet to substation Building 5956.
- Demolish the existing concrete master valve pit side walls with pipe penetrations (two walls). Assume the pit size is 13 feet in length by 12 feet in width by 6 feet in depth.
- Remove the following existing valves, pipes, flanges, blinds and pipe supports: 24 inch IFO-180, 16-inch F-76, 14-inch JP-5, 14-inch JP-8, and 14-inch slop.
- Replace with new valves (MOV), pipes, flanges, blinds, and pipe supports only. Install new 1-inch (three each) and 1½-inch (two each) pressure/thermal relief systems.
- Install new bolts, nuts, washers, gaskets, grounding jumper cabling (perform continuity testing), flange protectors, nut caps, and grease on all flanges.
- Assume the tie-in locations to be within 60 inches outside of the pit wall in a staggered layout.
- Construct two replacement concrete valve pit end walls to the approximate size of 17 feet in length by 16 feet in width by 8 feet in depth, but dimensions will be confirmed by final design.
- Sandblast and coat five large diameter pipelines: three 14-inch ø, one 16-inch ø, and one 24-inch ø.
- Five MOVs will be removed and replaced with new MOVs.
- Assume the total pipe length to be top coated is approximately 65 linear feet.
- Install stainless steel sleeves, link seals and water-excluding, fuel-resistant expanding sealant on each pipe penetration where new walls are being constructed.
- Backfill, compact, and restore.
- The existing railing will be reused as much as possible.
- The asphalt pavement adjacent to the pit will be removed and replaced if necessary to provide adequate space within the excavation for pipe welding. Assume 100 square feet of asphalt pavement needs to be replaced as specified by the Government in the RFP. If additional asphalt is required, this will be subject to a contract modification or a future project.
- Replace the entire electrical system within the valve pit, including all electrical components, lights, switches, conduit, and cabling, with the following exceptions:
 - The main electrical panel shall be removed and replaced.
 - Replace all five downstream junction boxes. Replace all internal components.
 - The electrical system between substation Building 5956, the main electrical panel and the downstream junction boxes will be replaced.

2. Schedule

The Construction Phase will include the repair of 11 valve pits which will be executed in 3 Groups/Phases. One crew will complete the Demo, Excavation, and Concrete Flooring for each valve pit. Group 1 and Group 3 valve pits will be worked concurrently with 2 crews for Group 1

and 1 crew for Group 3. Once Group 1 work is complete, those 2 crews will move to the Group 2 valve pits. Within each Group, the same fuel line in each valve pit will be worked concurrently and put back in service before working on the next fuel line in order to minimize downtime for any given type of fuel line. See the table below for a summary of the groups/phases and crews for the JP8, JP5, F76, RFO, and IFO 180 lines.

Valve Pit		Location	Group/Phase
2.2.2	Delta Flange Pit	Delta Pier	1a
2.2.3	Dela Electrical Valve Pit	Delta Pier	1a
2.2.4	Wharf-Front Risers 1 & 2	Delta Pier	1a
2.2.5	Manual Valve Pit	Delta Pier	1b
2.2.10	Navy / Tri-Star Tie-In Valve Pit	Pier Causeway	1b
2.2.11	Navy / GPA Tie-in Valve Pit	Pier Causeway	1b
2.2.6	Manifold Pit at Drainage Pump House 1716	Echo Pier	2a
2.2.8	Lube Oil Valve Pit	Echo Pier	2a
2.2.7	JP-5 Filter/Separator Building 1717	Echo Pier	2a
2.2.9	Wharf-Front Risers 3 & 4	Echo Pier	2a
2.2.18	Master Valve Pit 2	Lower Sasa Valley	3

3. Quality Control

A separate Construction Quality Control Plan will be submitted with the following DFOWs:

1. MEC and Anomaly Avoidance
2. Structural Repairs
3. Civil Work and Demolition
4. Mechanical Repair
5. Coating Work
6. Electrical Repair

Transmittal/Review/Approval			FILE NAME		DATE	
CONTRACT NO			TITLE Fill in Project Title/Location Here			
FROM (CONTRACTOR)			TO		SUBMITTAL NO.	FOR SPEC. SECTION
					Add	Del
ENCL. NO.	NO. OF COPIES	DESCRIPTION	SPEC. SEC.PARA./DWG.NO.		SCHEDULE ACTIVITY NO.	CQC CODE
DATE NEEDED BY:						
TRANSMITTED FOR: ☐ APPROVAL ☐ CLARIFICATION ☐ SELECTION ☐ RECORD ☐ VARIANCE						
It is hereby certified that the material submitted herein conforms to contract requirements and can be installed in the allocated spaces.			CONTRACTOR'S REPRESENTATIVE NAME/TITLE		SIGNATURE:	
Received By (Print Name & Sign) /Date/Time:						
FROM:			SIGNATURE:		DATE:	
TO:			For review/comment () copies of enclosures forwarded. RETURN WITHIN () WORKING DAYS, unless submittal is for record/info purposes only and there are no adverse comments.			
Received By (Print Name & Sign) /Date/Time:						
FROM:			TO:		DATE:	
RECOMMEND:						
☐ APPROVAL/ACCEPTANCE, subject to contract requirements			☐ DISAPPROVAL			
☐ APPROVAL/ACCEPTANCE, as noted, subject to contract requirements			☐ REVIEWED AND PROCEED			
☐ RETURN for correction and resubmission			☐ _____			
REMARKS:						
			SIGNATURE: _____			
☐ copies of encls retained						
Received By (Print Name & Sign) /Date/Time:						
FROM:			TO (CONTRACTOR) / ATTENTION:		DATE:	
Enclosure(s) is (are):						
☐ APPROVED/ACCEPTED, subject to contract requirements			☐ DISAPPROVED			
☐ APPROVED/ACCEPTED, as noted, subject to contract requirements			☐ NOT REVIEWED			
☐ RETURNED for correction and resubmission			☐ RECEIVED FOR RECORD			
REMARKS:						
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☐ copies of encls returned			BY DIRECTION OF THE CONTRACTING OFFICER			
Copy to: Contract File (w/encls) ConRep/ET (w/encls) CME (w/encls)			Received By (Print Name & Sign) /Date/Time:			

SOLID WASTE MANAGEMENT PLAN and WASTE MANAGEMENT PLAN

Maintain, Repair Pipelines

Defense Fuel Support Point Guam

NAVFAC EXWC Contract No. N62583-09-D-130, Task Order 0035

APTIM Project No. 147500; 15 September 2017

REFERENCE:

Solid Waste Management Plan (TEMPORARY ENVIRONMENTAL CONTROLS Section 01 57 19.00 20, paragraph 3.3) and,

Waste Management Plan (CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT Section 01 74 19, paragraph 1.6)

1. Responsible Personnel

The APTIM Environmental Manager will be the Quality Control (QC) Manager or the QC Alternate. They shall be responsible for instructing workers and overseeing and documenting results of the Solid Waste Management Plan for the project. APTIM employees and subcontractor staff will be informed of waste management during daily tailgate briefings and at corrective action briefs if needed.

2. Waste Generation

The majority of waste that is expected to be generated during this project consists of non-hazardous solid debris such as general construction debris, used personal protective equipment (PPE), daily trash, limited packaging materials for construction products, etc. Hazardous waste is expected to be encountered as well, in the form of lead-based paint (LBP) and asbestos-containing material (ACM).

Existing metal structures to be demolished at the valve pits (canopy, handrails, gratings, ladders) and existing piping may be coated with LBP. A Lead Assessment and Lead Abatement Plan will be prepared by a Certified Industrial Hygienist (CIH), who will require employees be trained in lead as well as respiratory protection in the event that work may expose them to lead. For all waste generated from abrasive blasting and metal demolition, lead-abatement measures will be performed for in accordance with UFGS 02 83 13.00 20, "Lead in Construction" and UFGS 02 82 33.13 20, "Removal/Control and Disposal of Paint Lead" before removal of any debris from the site.

Asbestos-containing material (ACM) pipes from the valve pit will be removed, packaged and disposed of at a permitted landfill. APTIM estimates the quantity of ACM pipes as follows: 130 feet of 12-inch pipeline (approximately 6435 pounds) and 5 feet of 14-inch pipeline

(approximately 293 pounds).

Before any metal components are primed and re-coated, they will be media-blasted down to bare metal and washed with potable water to remove any residual chlorides. All resulting waste from this activity, including wash water, will be removed and properly disposed.

The used construction materials have no practical use or economic benefit and shall not be source separated, but collected in a covered combined waste bin at the construction site and disposed of at an approved landfill. Daily housekeeping will assure that trash and debris are contained and disposed of properly.

Only non-hazardous blast grit and other coating debris such as non-hazardous empty paint cans will be collected separately for off-base, municipal solid waste landfill disposal. A private waste hauling company will be responsible for proper disposal.

No, chemical wastes, rubber products, solvents, adhesives, aerosols and similar products are expected. A Waste Determination form (provided by the government at the pre-construction conference) will be completed.

3. Reuse and Recycling

Due to the type of work required by this project the application of material reuse, recycling, salvage, composting and other LEED waste diversion/reduction requirements are not practical.

4. Permits

Solid waste transport and disposal permits and/or licenses will be the responsibility of the private waste haulers. Copies will be provided in the final solid waste report.

5. Reports

APTIM will prepare a final solid waste report for each valve pit due to the short term of construction activity. This report will include waste-haulers' receipts or other available documentation, and a statement indicating the disposal location for the solid waste.

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It is hereby certified that the material submitted herein conforms to contract requirements and can be installed in the allocated spaces.			CONTRACTOR'S REPRESENTATIVE NAME/TITLE		SIGNATURE:	
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Storm Water Pollution Prevention Plan

Maintain, Repair Pipelines

Defense Fuel Support Point Guam

NAVFAC EXWC Contract No. N62583-09-D-130, Task Order 0035

APTIM Project No. 147500; 15 September 2017

REFERENCE:

Storm Water Pollution Prevention Plan (Temporary Environmental Controls 01 57 19.00 20, paragraph 3.1.2.1)

Storm Water Notice of Intent (for NPDES coverage under the general permit for construction activities) (Temporary Environmental Controls 01 57 19.00 20, paragraph 3.1.2.1)

1. Erosion-Control Measures

Erosion-control measures will consist of Best Management Practices (BMPs) to install a silt fence around the perimeter of the excavation and any stockpiled materials, in conformance with approved environmental permits, throughout the period the excavation is open. The excavation areas and pits will be dewatered as necessary to keep the excavation dry in conformance with approved permits. This will control sediment transport from water runoff at the work site. Erosion control inspection and maintenance will be once every 7 calendar days and within 24 hours of a storm event that produces 0.5 inch or more of rain. Inspection results will be included in the Quality Control Daily Report (QC DR).

2. Protection of Water Resources

Construction activities will be conducted in such a manner as to prevent fuels, oils, grease, and any other contaminated material from entering nearby surface water and to minimize infiltration of contaminants into groundwater. Spill containment measures include the use of catch basins and fuel absorbent material. Catch basins will be utilized to intercept all fuel leaks and ensure fuel does not reach adjacent water bodies. At some sites, including Echo and Delta wharfs which extend out over Apra Harbor, the valve pits are enclosed in the catch basins. Absorbent material will be available for quick response to any release of fluids other than clean water. APTIM will take full responsibility for isolating and gas-freeing each pipeline segment prior to performing any media blasting, repair or other hot work.

Secondary containment will be placed around the valve pits as needed. At Echo and Delta wharfs, a full containment enclosure will be temporarily installed to trap all dust, cleaning debris and paint drips generated from sandblasting and other work activities. This tarp will be positioned below the pipes and will follow the work progress along the pipes.

If contaminated soil is detected based on visual or olfactory observations, APTIM will immediately notify the Point of Contact from Navy. The contaminated soil will be placed in a temporary storage area (TSA) that is constructed by placing two layers of 10-mil polyethylene sheeting on the ground, placing a 1-foot earthen berm around the TSA, covering the contaminated soil with one layer of 10-mil polyethylene sheeting, and finally, securing the sheeting with sandbags.

In the event a leak occurs in these areas, absorbents will be used to prevent runoff into the surrounding area and the Base Environmental Division will be notified. Ensuring that all waste is stored, handled, and transported on and off-site properly will protect water resources.

A supply of spill absorbents will be readily available nearby for response to any release into or from the containment area. Potentially contaminated liquid wastes include wastewater from rinsing the metal components of the valve pits after media-blasting to remove residual chlorides. Protection of water resources will also include the appropriate containment and disposal of liquid originating from the construction activities.

Excavation will occur at 8 of the 11 sites and excavation permits, including underground utility clearances through DZSP21, will be obtained for each excavation site. The excavated areas and pits will be dewatered as necessary to keep the excavation dry in conformance with approved permits.

A Section 401 Water Quality Certification application will not be submitted because this work will not produce a discharge or fill and will not impact the waters of the United States. No element of the work touches the water, no scaffolding or floating vessels will be used and the work practices do not cast significant shadow over the water.

Additional details are included in the Environmental Protection Plan prepared separately.

3. Storm Water Notice of Intent (NOI)

The USEPA National Pollutant Discharge Elimination System (NPDES) storm water program requires permits for discharges from construction activities that disturb one or more acres and discharges from smaller sites that are part of a larger common plan of development or sale. The NOI criteria do not apply for this project. Although work will occur at multiple valve pit locations simultaneously, the total project area worked on at one time will never exceed one acre. At all the proposed sites, there will be no discharge directly produced from the work activities. Therefore, the NPDES Storm Water NOI will not be required for this project.

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ENVIRONMENTAL PROTECTION PLAN, ENVIRONMENTAL MANAGEMENT PLAN and DIRT AND DUST CONTROL PLAN

Maintain, Repair Pipelines

Defense Fuel Support Point Guam

NAVFAC EXWC Contract No. N62583-09-D-130, Task Order 0035

APTIM Project No. 147500; 20 September 2017

REFERENCE:

Environmental Protection Plan (Temporary Environmental Controls 01 57 19.00 20, paragraph 1.6)

Environmental Management Plan (Temporary Environmental Controls 01 57 19.00 20, paragraph 1.5.3)

Dirt and Dust Control Plan (Temporary Environmental Controls 01 57 19.00 20, paragraph 3.13.1)

1. General Overview and Purpose

The Environmental Protection Plan (EPP) is prepared for the installation, repair and maintenance of valves, pipelines at 11 valve pits across Guam. This EPP will conform to the Naval Base Guam (NBG) Environmental Management System (EMS) construction related objectives and targets.

- a. Specific plans required by the contract and prepared separately consist of the following:
 - i. Storm Water Pollution Prevention Plan; Section 01 57 19.00 20, para. 3.1.2.1
 - ii. Solid Waste Management Plan; Section 01 57 19.00 20, para. 1.3 and 3.3
 - iii. Waste Management Plan; Section 01 74 19, para. 1.4 and 1.6 (combined with Solid Waste Management Plan)
- b. Environmental Compliance. The Environmental Managers for this project will be the QC Manager and QC Alternate. They will have the authority to implement applicable environmental regulations and be responsible to document environmental procedures as required by the contract.
- c. Operating Procedures. The APTIM Management System (AMS) consists of documents including those related to Health, Safety and the Environment (HSE). These documents include forms, guidelines, checklists, policy, and procedures. Specific AMS documents applicable for this EPP are;
 - i. AMS-710-04-PR-00110 Identification and Assessment of Environmental Aspects

- ii. AMS-710-04-PR-00400 Site Environmental Management Plan
- iii. AMS-710-04-FM-00112 Environmental Aspects Register (Site)
- iv. AMS-710-04-FM-00401 Site Environmental Management Plan
- d. Communication and Training. The QC Manager and QC Alternate will complete the on-line Environmental Compliance Assessment Training and Tracking System (ECATTS) training prior to construction. The NBG EMS training will be documented for APTIM and subcontractor personnel. In-house training will be conducted to familiarize employees of the requirements following AMS procedures and contract.

e. Emergency Contacts.

Position	Name	Office Phone	Cell Phone	email
Project Manager	Christopher Arnsfield	478-0516	777-5737	christopher.arnsfield@aptim.com
Site Manager	Robert Hendrix	478-0500	777-6085	robert.hendrix@aptim.com
QC Manager	Andrew Smith	478-0519	898-7793	Andrew.smith@aptim.com
QC Alternate	Joonu Thomas	478-0500		joonu.thomas@aptim.com
SSHO	Johnny Cruz	478-0510	747-4619	johnny.cruz@aptim.com

2. General Site Information

The valve pits and pipelines are at 11 locations through Guam at Delta Wharf, Echo Wharf, Wharf Causeway and Lower Sasa Valley. The work sites are the valve pits which are accessible via paved roads. All sites have been previously disturbed (eg. original excavation, construction, and grading). Excavation will be required for the scoped work at eight valve pits. Excavation will be performed around the exterior of the valve pits to a dimension approximately 4 feet beyond the existing walls and approximately 3 feet beneath the pipes. An excavation permit, including underground utility clearances through DZSP21, will be obtained for each valve pit where excavation will be performed.

Work at Echo and Delta Wharves located in the Echo Wharf and Delta Wharf project areas extends directly over Apra Harbor. Special precautions (i.e., temporary work platform, installation of containment tarp) will be undertaken to provide specialized environmental protection and resource management for these sites. The work will not affect the course, capacity, or condition of navigable waters of the U.S. The locations of Delta and Echo Wharves are found in Figure 1. Navy Base Guam (NBG) security and site

access is required at Delta and Echo Wharves.

A Preconstruction Survey of the project sites (11 valve pits locations) with the Contracting Officer's Representative will document with photographs showing existing environmental conditions at and adjacent to the sites. A report detailing the survey will be submitted for the record.

3. Management of Natural Resources

- a. Land resources. There are no other land uses within the valve pits and Wharves property. All heavy equipment and vehicle operations will be limited to designated roadways. Ground disturbance will be limited to areas with existing pipeline components and utility corridors. *The work will not produce a discharge.*
- b. Tree protection. Existing trees will not be affected by project activity.
- c. Replacement of damaged landscape features. The valve pits and Wharves will be the project staging areas and will be impacted by vehicles and equipment. The grassed area will be restored as part of demobilization. Clean excavated soil may be reused as common backfill if suitable and supported by a geotechnical report. The services of a geotechnical firm will be used to perform soil investigation and prepare required reports. Alternatively, imported fill materials may be used as a backfill when approved. Surplus excavated material will be removed from the site and relocated on based to a location specified by DFSP Guam. Screened, manufactured sand will be used as bedding and backfill around all pipes. Backfill and sand bedding will be placed in 6-inch lifts for approximately 2 feet around each pipe. Turf will be provided to match the existing grades.
- d. Temporary construction. Silt fences will be temporarily erected to prevent releases into the environment. At Delta and Echo Wharves, a temporary platform will provide the worker's access to clean the pipes and place the coating material. The platform consists of scaffold grade wood planks that are stable and can be shifted to follow the work progress. The platform will be suspended and not touch the surrounding water.
- e. Stream crossings. The nearby streams will not be impacted by project activity.
- f. Fish and wildlife resources. There are no threatened or endangered species in the immediate vicinity of the project sites. No work will be performed in the water and as such will not have an effect on the benthic habitat and will not require an essential fish habitat or threatened and endangered species consultation. The work practices do not cast significant shadowing over the water, no element of the work touches the water and the hand tools utilized to remove rust and paint do not create significant noise. U.S. Fish and Wildlife Service (USFWS) Section 7 Endangered Species Act (ESA) is not required for this Task Order noted in Request for Information (RFI) #013 dated 08/30/2017.
- g. Wetland areas. One valve location (Navy/Tri-Star Tie-In Valve Pit) is adjacent to a wetland. The scope of work will have no effect on the adjacent wetland from this project. The project will avoid directly impacting the wetland.

4. Protection of Historical and Archaeological Resources.

There are no known historical or archaeological resources at the project sites. A NHPA Project Evaluation was conducted in July 2015 and a finding of “No Adverse Effect” was determined by both Navy Facilities Engineering Command (NAVFAC) and the Department of Parks and Recreation of the Government of Guam.

5. Storm Water Management and Control

- a. Ground cover. The existing ground cover at the valve pit sites is either mowed grass areas or paved areas.
- b. Erodible soils. The general soil classification for the Lower Sasa Valley area is Pulantat clay, shallow, well-drained soil is on dissected plateaus and hills, with a slight to moderate erosion hazard. The general soil classification at the Delta Wharf, Echo Wharf, and Wharf Causeway is Urban land-Ustorthents complex; nearly level; on coastal fill in and around Agana and Apra Harbor; most areas are covered by roads, buildings, and parking lots.
 - i. Temporary measures. Existing drainage patterns will not be altered by this project. The adjacent areas have vegetation and will not be disturbed.
 - ii. Vegetation at the valve pits will be restored during demobilization. A combination of turf, sand, imported soil, and clean, excavated soil will be used to backfill and restore the existing grades.
- c. Effective selection, implementation and maintenance of Best Management Practices (BMPs). Control of runoff will be accomplished by constructing silt fences around the valve pits prior to mobilization. The silt fences will be inspected and maintained during the project. The excavated areas and pits will be dewatered as necessary to keep the excavation dry in conformance with approved permits.

6. Protection of the Environment from Waste Derived from Contractor Operations

- a. Control and disposal of solid and sanitary waste. Solid waste generation is minimal with covered containers used for collection of daily trash and other debris. The blast grit used to prepare surfaces for valve and pipeline coating will be bagged and disposed of in 10 cubic yards bin (non-hazardous waste) to be hauled off-site by a licensed disposal company. Before waste derived from abrasive blasting/demolition is bagged and hauled off site, lead-abatement measures will be performed in accordance with UFGS 02 83 13.00 20, “Lead in Construction,” and UFGS 02 82 33.13 20, “Removal/Control and Disposal of Paint with Lead”. After media-blasting, potable water will be utilized to remove residual chlorides before priming and re-coating. All resulting waste, including the wash water, will be removed and properly disposed of. Sanitary waste is controlled by using a portable toilet with twice weekly service by the sanitation company.

- b. Control and disposal of hazardous waste. Anticipated hazardous waste generated by this project is, fuel, water, solids mixture, lead based paint and asbestos containing material. Pipelines will be completely drained (or suctioned) into vacuum trucks and transported to product tanks or the DFSP Guam skim pit. A Lead Assessment and Lead Abatement Plan will be prepared by a CIH, who will require employees to be trained in lead as well as respiratory protection. All waste derived from abrasive blasting will be screened utilizing the proper lead-abatement measures. Asbestos-containing material (ACM) pipes from valve pits will be removed, packaged and disposed of at a permitted landfill. Estimated ACM pipes are as follows: 130 feet of 12-inch pipeline (approximately 6435 pounds) and 5 feet of 14-inch pipeline (approximately 293 pounds).

7. Prevention of Releases to the Environment

The Government will drain fuel from the pipeline segments to the extent that its pumps allow, and will then turn over the pipeline to APTIM. APTIM will assume residual fuel will be present in the pipelines and will drain (or suction) this remaining residual fuel into vacuum trucks and transport it to product tanks or the DFSP Guam skim pit. Absorbent material will be available for quick response to any release of materials other than clean water. Catch basins will be utilized to intercept all fuel leaks and ensure fuel does not reach adjacent soil or water. At some sites, including Echo and Delta Wharves, the valve pits are enclosed in the catch basin, as seen in Figure 2. APTIM will take full responsibility for isolating and gas-freeing each pipeline segment prior to performing any media blasting, repair or hot work. Silt fences will also be erected and maintained around the perimeter of excavation and any stockpiled materials to prevent releases to the environment. Excavated areas will be dewatered as necessary to keep excavation dry in conformance with approved permits. For sites that extend over Apra Harbor, APTIM's pipe coating subcontractor will be responsible for erecting a full containment enclosure around all pipe sections to prevent releases of dust, dirt, cleaning debris and paint drips generated by sandblasting and other work activities into the adjacent water body.

8. Regulatory Notification and Permits

The total project area of 1650 square feet (sqft) does not exceed the 1 acre threshold for the USEPA NPDES construction activity Notice of Intent. Other local permits from the Guam EPA are not anticipated for this project's scope of work.

9. Clean Air Act Compliance

This is not expected to apply for the size of equipment on the job.

10. Corrective Action

The job site will be monitored daily for compliance with the requirements of this EPP and

the base EMS. Daily job site tailgate meeting will include environmental protection and controls. As situations require remediation then appropriate responses will be implemented.

In the event of any releases of oil and hazardous substances, chemicals, or gases; APTIM will immediately (within 15 minutes) notify the Base or Activity Fire Department, the activity's Command Duty Officer, and the Contracting Officer.

If the presence of contaminated soil is detected based on visual or olfactory observations, APTIM will immediately notify the Government. The contaminated soil will be placed in a temporary storage area (TSA) that is constructed by placing two layers of 10-mil polyethylene sheeting on the ground, placing 1-foot earthen berm around the TSA, covering the contaminated soil with one layer of 10-mil polyethylene sheeting, and finally, securing the polyethylene sheeting with sandbags.

DIRT AND DUST CONTROL PLAN:

REFERENCE:

Dirt and Dust Control Plan (Temporary Environmental Controls 01 57 19.00 20, paragraph 3.13.1; and, Temporary Construction Facilities and Controls for Design-Build, Section 01 50 00.05 20 paragraph 3.3.4);

At the valve pit job sites, a light water spray may be used to control dust when necessary. All vehicles and equipment will remain on paved roads and/or mowed grassed areas to access the valve pit locations. APTIM will clean up any dirt and debris build up on the road pavements from equipment and vehicles leaving the site. This may include manual shoveling and water spray. Silt fences will be erected and maintained around the perimeter of excavation and any stockpiled materials.

For sites with pipelines extending over water bodies (Delta Wharf and Echo Wharf), APTIM's pipe coating subcontractor will be responsible for temporarily erecting a full containment enclosure around all pipe sections to trap all dust, dirt, cleaning debris and paint drips generated by sandblasting and other work activities.

The overwater pipeline containment will require a bolted frame made of angle iron 2-1/2" x 2-1/2" x 1/4". The top and bottom of the frame may have nylon turnbuckles to prevent torque. Below the pipelines a suspended platform of wood planking will cover 10 mil plastic sheeting. The entire containment will be covered by shrink wrap. Access to the containment will be with a ladder from the Wharf causeway. The ends of the containment will be secured around the pipeline penetrations. The containment is designed to cover two bays between pipeline support girders.

The containment enclosure will follow the work progress along the pipes. If winds interfere with material capture, or if the containment is breeched work will be immediately suspended.

A section of the pipeline containment can be found in Figure 3. A plan view of the containment enclosure can be found in Figure 4. The enclosure will be cleaned of debris daily. All debris will be subject to lead-abatement measures mentioned in Section 6.a above before being removed from the site.

FIGURES:



Figure 1. Delta and Echo Wharf location map



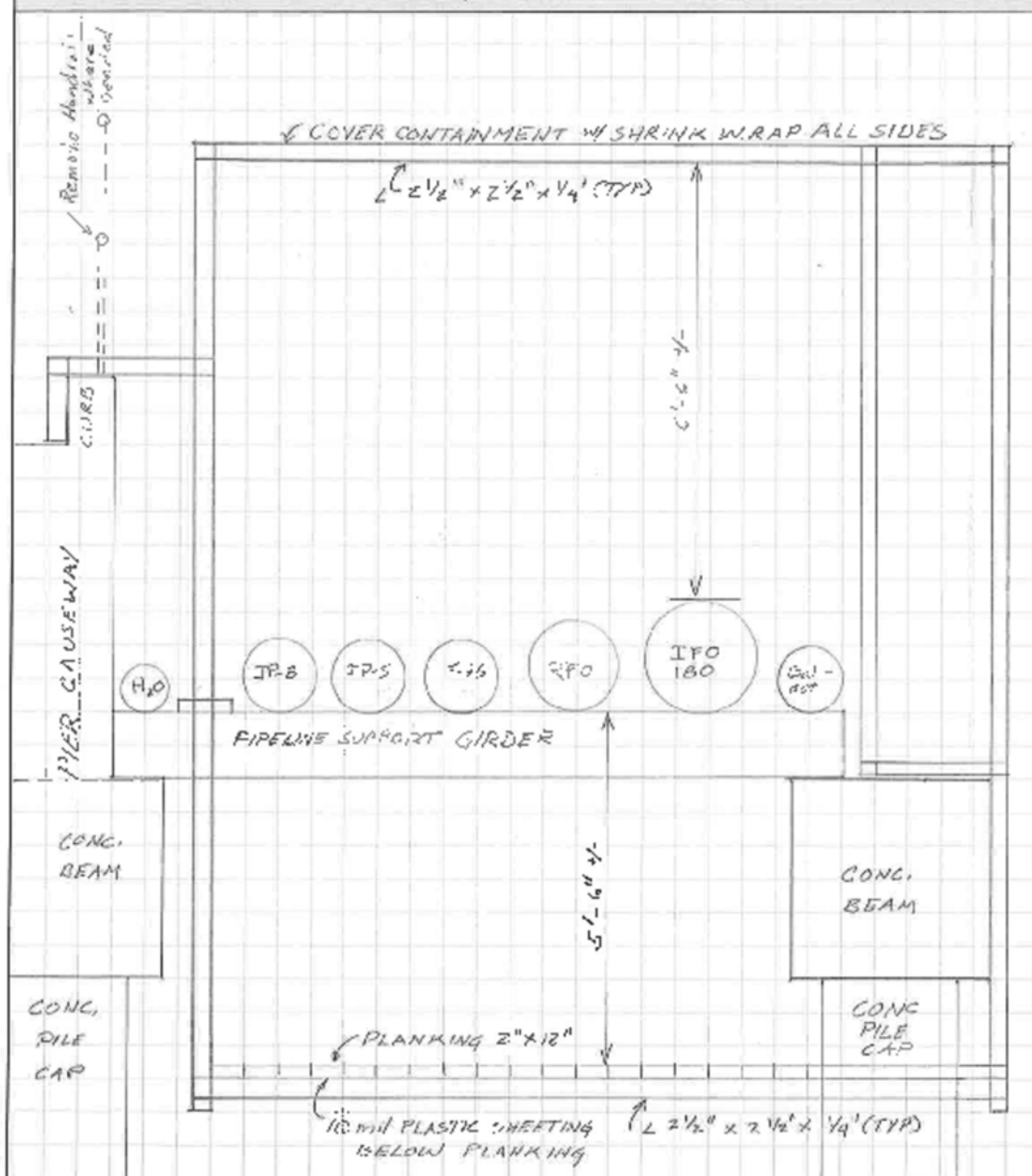
Figure 2. Example of a valve pit enclosed by a catch basin



Field Activity Daily Log Continuation Sheet

DATE	9	17	17
NO.			
SHEET	1	OF	2

Project Name: *146252.3-09-0-0130-0035* Project No. *147500* *TD-035*
Field Activity Subject: *Delta/Echo Wharf*
Description of Daily Activities and Events: *Overwater Pipeline Containment - SECTION* *NTS*



0.25 in x 0.25 in

Form Number: *40_3*
PA 011212

Figure 3. Containment Section to be utilized at Delta and Echo Wharves



Field Activity Daily Log Continuation Sheet

DATE	5/19/11
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SHEET	2 OF 2

Project Name: *162583-09-D-0130-0035* Project No: *147500* *70-035*
Field Activity Subject: *Delta/Echo Wharves*
Description of Daily Activities and Events: *Overwater Pipeline Containment - PI. AN* *NES*

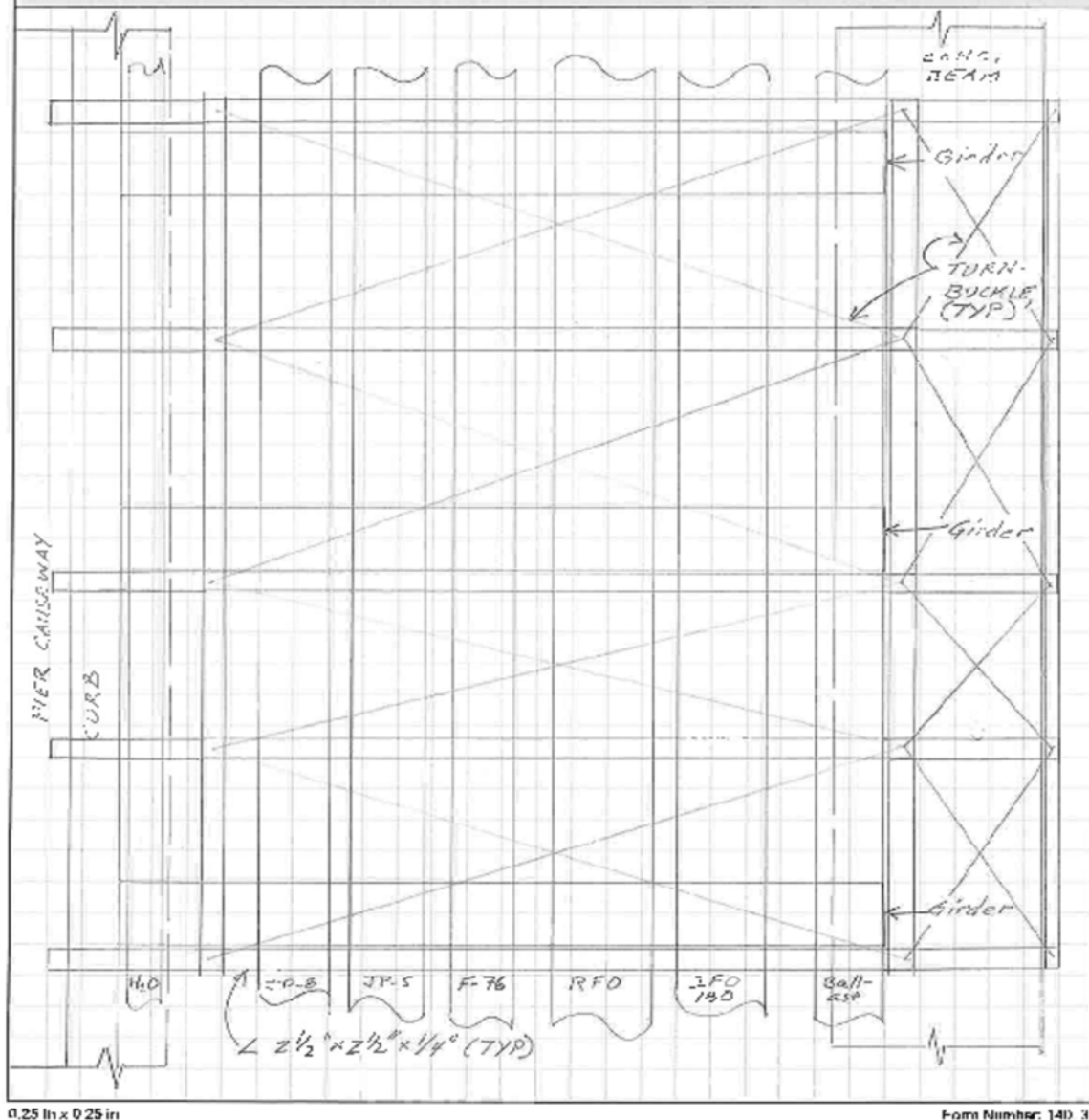


Figure 4. Containment Plan to be utilized at Delta and Echo Wharves