HAZARDOUS MATERIALS MANAGEMENT AND CONTINGENCY PLAN

CALIFORNIA RESOURCES CORPORATION (CRC) DECOMMISSIONING OF THE GRUBB LEASE (PRC 3913.1) INTAKE/OUTFALL STRUCTURE VENTURA COUNTY, CALIFORNIA

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ATTACHMENTS

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1.0 INTRODUCTION

This Hazardous Materials Management and Contingency Plan (HMMCP) has been prepared for the proposed California Resources Corporation (CRC) Grubb Lease (PRC 3913.1) Intake/Outfall Structures Decommissioning Project in Ventura County, California (Project). The purpose of this HMMCP is to present an overview of the procedures and protocols that will be utilized during the Project to safely and appropriately recover, handle, characterize, store, transport and dispose of any contaminated materials identified during Project decommissioning activities.

1.1 PROJECT LOCATION AND OVERVIEW

The Project includes decommissioning of the Grubb Lease Outfall/Intake facilities located alongside Pacific Coast Highway approximately 792 feet northwest of Solimar Beach at the foot of the "A" Lease Canyon Road underpass (Figure 1-1 – Project Facilities Map). Project activities will occur within three primary areas as follows:

Table 1-1. Project Work Segments Summary

Segment	Description
Offshore Intake and Outfall Pipelines	The Offshore Intake and Outfall Pipelines Segment consists of three 12-inch-diameter steel submarine pipelines with two intake pipelines and one outfall pipeline. The two intake pipelines measure 680 and 630 feet in length. The outfall pipeline measures 500 feet in length. Each of the two intake pipelines has an approximately 6-foot by 6-foot by 1-foot reinforced concrete lattice box structure at the offshore end.
Shoreline Vault	The Shoreline Vault Segment consists of a shoreline vault that is a reinforced concrete and steel sheet pile structure set in the armor rock seawall between the Pacific Coast Highway (PCH) and the intertidal zone. The vault measures approximately 20 feet wide by 14 feet long and 27 feet deep. The entire 20-foot by 42-foot vault enclosure is surrounded by a chain link fence. The two intake pipelines and one outfall pipeline were originally connected to the seaward side of the vault. A 36-inch-diameter pipeline casing consisting of three pipelines exits the vault on the landward side of the vault. The vault contains water pumps, piping, two levels of grating, and other ancillary equipment.
Onshore Pipelines	The Onshore Pipelines Segment consists of a 36-inch-diameter steel casing containing one 14-inch-diameter steel pipeline, one 12-inch-diameter steel pipeline and one 8-inch-diameter polyvinyl chloride (PVC) pipe liner inside of a second 12-inch-diameter steel pipeline.

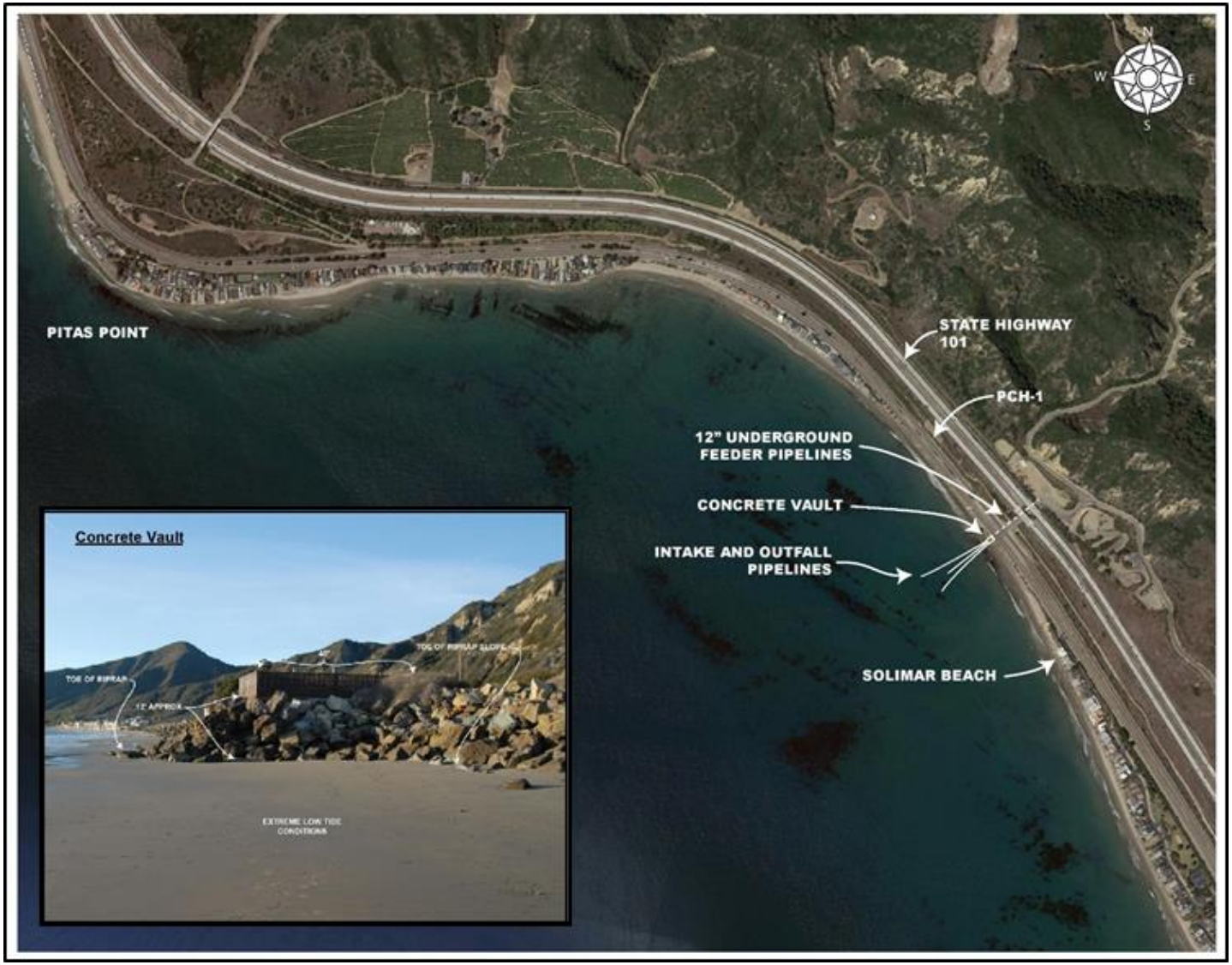

Figure 1-1. Project Facilities Map

The Project will require the following primary components:

- Pre-Project Preparation Activities and Surveys
    - Construction of a temporary equipment access ramp
- Removal of the Intake/Outfall facilities within PRC 3913.1 including:
    - Recovery of the 6-foot by 6-foot by 1-foot concrete lattice box structures at the offshore end of each of the intake pipelines
    - Recover of the two, 12-inch-diameter steel intake pipelines
    - Recovery of the12-inch-diameter steel outfall pipeline
- Demolition and removal of existing concrete vault including:
    - Removal of outer sheet piles
    - Removal of all internal water pumps, piping, two levels of grating, and other ancillary equipment
- Abandon-in-place the 36-inch casing (and internal pipelines) on the onshore side of the beach vault, including:
    - Removal or grouting of internal pipeline segments
    - Fill the casing between the onshore side of the beach vault and valve box on CRC's lower Grubb lease property with slurry
- Ramp demolition and reconstruction of the armor rock seawall at the gap created by removal of the concrete vault
- Demobilization of equipment and disposal/recycling of recovered pipelines and appurtenant facility components (fencing, foundation piling, concrete)
- Post-Project survey to confirm removal of pipelines and any associated seafloor anomalies, as compared to the Pre-Project survey

1.2 PROJECT BACKGROUND

The Project facilities were originally constructed by Continental Oil in 1967. Occidental Petroleum (Oxy) acquired the Grubb lease in 2005 from Vintage Petroleum. On November 30, 2014, Oxy restructured its California operations, including the Grubb lease, into California Resources Corporation (CRC), an independent, publicly traded company.

The Grubb Lease intake/discharge facility was used to bring in seawater for oil-field related water flood operations and on occasion for discharge of the inlet seawater filter backwash to the ocean. According to operational records, the western (up coast pipeline) was the last of the three pipelines to be in use and was used as a seawater intake suction pipeline until Project facilities were idled in 2003 or 2005.

1.2.1 Offshore Intake and Outfall Pipelines

The offshore portion of the facility consists of three 12-inch-diameter steel submarine pipelines with two intake pipelines and one outfall pipeline. The Grubb lease intake/discharge facility was used to bring in seawater for oil-field related water flood operations and on occasion for discharge of the inlet seawater filter backwash to the ocean. Hydrocarbons were not present

in the backwash sent through the outfall. The two intake pipelines measure approximately 680 and 630 feet in length, and the outfall pipeline measures approximately 500 feet in length. All lengths are measured from the seaward side of the concrete vault to the offshore terminations of each pipeline, which are located in water depths ranging from 12 to 14 feet of water. The original materials specification and wall thickness of these pipelines are unknown. The pipelines appear to be coated with an external anti-corrosive coating or weight coating of unknown composition, but most likely a mastic filler/sealer. The external coatings would be sampled prior to removal and tested for the presence of any hazardous materials.

The shoreline consists of a narrow sand beach that is exposed during low tide events and inundated at high tide events. The beach is bordered on the northeast side by a steep armor rock covered slope. All three pipelines run southwest, spaced at approximately ten-degree increments from the vault structure on the beach. There are two reinforced concrete lattice box structures located on the seafloor at the offshore ends of the intake pipelines each measuring approximately 6 square feet and 1 foot in height. Both the pipelines and lattice box structures are gravity based and no anchoring system has been used to secure them to the seafloor.

All three pipelines are fully severed, as a result of corrosion, just south of the seaward side of the vault in the surf zone area. At the severance points all three pipelines appear to be double walled within an inner and outer wall of steel or plastic pipe and mastic filler between the walls. The seaward pipeline sections cross the shoreline just below the beach sand line and the remaining stubs north of the severance points enter the reinforced concrete vault above the sand line but below the high tide.

Offshore, the pipelines appear to be intact and buried through the surf zone. The length and depth of cover appears to vary with the season and associated annual sand migration. This approximately 200-foot long surf zone segment has not been surveyed due to the difficulties of working in the surf zone. Further offshore, the remaining 300 to 500 feet of pipe are exposed and laying on a bedrock and sand seafloor. The exposure of the pipelines was identified in a 2012 and 2019 geophysical survey and confirmed visually in a 2018 biological survey by divers (Fugro 2012, eTrac 2019, Padre 2018).

1.2.2 Shoreline Vault

The shoreline vault is a reinforced concrete and steel sheet pile structure set in the armor rock seawall between Pacific Coast Highway and the intertidal zone. The vault's seaward side is inaccessible during periods of high tide. The vault measures approximately 20 feet wide by 14 feet long and 27 feet deep. The two intake pipelines and one outfall pipeline were originally connected to the seaward side of this vault, and there are pipeline remnants within the armor rock seawall.

A 36-inch-diameter pipeline steel casing with three pipelines exits the vault on the north side (landward side). The vault interior is partially filled with water, at a depth of approximately 16 feet, and still contains water pumps, piping, two levels of grating, and other ancillary equipment, much of it submerged. The interior water level does not change with the tides and so appears to be isolated from the ocean. Due to the flooded condition, the vault interior has only been partially surveyed.

The vault is approximately 27 feet deep and terminates approximately 12 feet below the surrounding sand beach level. Large pumps and equipment appear to be fastened to the floor of the vault and the floor is assumed to be concrete. The interior vault walls and ceiling are concrete, and the exterior walls are sheathed with steel sheet pile. The northern wall of the vault is separated from Pacific Coast Highway by a 28-foot-wide section of compacted soil covered with asphalt layer and then a thin layer of dirt. Armor rock surrounds the vault on the other three sides.

The top of the extended vault area is approximately 20 feet wide by 42 feet long and includes three approximately three-foot by three-foot pump caisson openings on the southern end and an access hatch with ladder on the southwest side. The entire 20-foot by 42-foot vault enclosure is surrounded by chain link fencing with access through a locked gate on the north side.

1.2.3 Onshore Pipelines

The onshore facilities consist of a 36-inch-diameter steel casing that at least partially spans between the northern side of the vault (landward) and the valve pit located in the CRC onshore facilities north of the Ventura Freeway – U.S. Highway 101 (U.S. 101). Exiting the interior wall on the north side of the vault is a 36-inch-diameter steel casing containing one 14-inch-diameter steel pipeline, one 12-inch-diameter steel pipeline and one eight-inch-diameter polyvinyl chloride pipe (PVC pipe) liner inside of a second 12-inch-diameter steel pipeline. The annulus between the pipelines within the 36-inch steel casing are filled with a grout material where the pipelines enter the side of the vault. The extent of this grout fill is unknown and will have to be field verified during decommissioning.

Based on pipeline tracking data, the 36-inch-diameter steel casing appears to run underground approximately 220 feet to the northeast and terminate approximately 80 feet north of the Union Pacific Railroad (UPRR) easement. Pipe tracking data suggests that at least one pipeline exits the 36-inch-diameter casing and extends underground via the “A” Lease Canyon Road, underneath the U.S. 101 overpass for approximately 310 feet and terminates in a valve box on CRC onshore property. Depth of burial to the top of the 36-inch-diameter casing varies from approximately nine feet at the southern side of Pacific Coast Highway to over 11 feet while running under the UPRR easement and U.S 101 dirt frontage road.

2.0 PRE-PROJECT SITE INVESTIGATIONS

2.1 VAULT STANDING WATER

As previously indicated, Project facilities are only known to have been utilized in support of water intake/outfall. The facility was never used to handle, store, or discharge contaminated water, hydrocarbons, or hazardous materials.

Initial sampling of the standing water inside the shoreline vault was conducted in April 2019 (OEC, Attachment A). Representative grab samples were taken and tested in accordance with EPA Methods 8081A for the presence of pesticides, EPA Method 8082 for the presence of Polychlorinated biphenyls (PCBs), EPA Methods 8015M and 1664, for the presence of total petroleum hydrocarbons (TPH) and gasoline fuel components, EPA 8260 for Volatile Organic Compounds (VOCs). The sample was also tested for the presence of CAM 17 heavy metals and other parameters including pH, flashpoint, and reactives; as well as conducting a 96-hour bioassay to determine toxicity.

Lab results from samples indicate that a passing result was obtained from the 96-hour bioassay. Metals were not detected with exception of a low-level concentration of barium (0.19 mg/L or ppm) and zinc (0.70 mg/L or ppm) which were greater than the established reporting levels (RL) of 0.10 mg/L for barium and 0.050 mg/L for zinc, respectively, but well below Total Threshold Limit Concentration (TTLC) limits for Barium of 10,000 mg/kg and zinc of 5,000 mg/kg. TPH in the form of gasoline, diesel, or motor oil as well as VOCs, PCBs, or organochlorine pesticides were not detected (ND) in the grab samples. The pH level at 25°C was 7.48.

Prior to demolition, the water within the shoreline vault will be re-sampled, pumped out, and shipped offsite for appropriate disposal. Based on past use of the facility and the initial sampling results, no significant concentrations of contaminated materials are anticipated.

2.2 LEAD AND ASBESTOS

A mastic filler is present within the walls of the intake/outfall pipelines. Additionally, the vault still contains water pumps, piping, two levels of grating and other ancillary equipment. This material will be surveyed for the presence of asbestos containing materials (ACM) or lead based paint (LBP) just prior to the planned demolition activities. Once the vault has been dewatered, a visual inspection of these components will be conducted. Based on this inspection, representative bulk sample materials of the pipeline and any suspect components within the vault will be taken and sampled for the presence of ACMs or LBP (if painted surfaces are present). Samples will be sent to a State of California certified laboratory to be analyzed in accordance with US EPA standards.

3.0 PROJECT-RELATED WASTES/HAZARDOUS MATERIALS

The following list identifies potential Project-related wastes and/or hazardous materials to be addressed during Project activities as well as contingencies to be implemented during decommissioning activities to manage each waste stream.

- Onshore Vault Demolition: Potential for LBP or ACM
- Pipeline Removal: Potential for ACM in pipe wrap coating
- Construction Equipment and Refueling: Onshore – primary removal methodology and/or offshore – alternative removal methodology. Potential for petroleum hydrocarbons as fuels and/or lubricants in construction equipment utilized onsite.

3.1 ONSHORE VAULT DEMOLITION

The proposed final disposition of the shoreline vault is to remove all equipment and appurtenances from inside the vault, remove the entire vault structure down to 5 feet below the existing beach contours, and then abandon the remaining 7 feet in place. Prior to this activity, the standing water within the vault will be re-sampled, pumped out, and recycled in CRC's production facilities. The reinforced concrete vault ceiling will be saw cut and removed and all equipment, appurtenances and debris inside the vault will be removed and disposed or recycled at approved facilities. Once the water, equipment, appurtenances and debris have been removed from the interior of the vault, the vault walls will be cut into removable sections.

An inspection for ACM or LBPs will be conducted prior to demolition. If ACM or LBPs are present within the vault materials, a Licensed/Certified LBP Contractor certified by the California Department of Public Health will be contracted to accomplish LBP abatement prior to the commencement of vault demolition. If ACM is found in any vault contents or materials, a Certified Asbestos Abatement Contractor will aid in vault removal and disposal activities. Vault removal activities will be conducted in accordance with all applicable regulations pertaining to asbestos.

3.2 PIPELINE REMOVAL

The proposed primary submarine pipeline removal methodology consists of mounting a winch on top of the existing reinforced concrete vault and pulling the submarine pipeline segments to shore along their existing alignments. The onshore ends of each pipeline will be exposed by an excavator operating on the beach. Materials testing will be performed once the pipelines are uncovered to determine the presence of any hazardous materials.

The pipelines will be pulled along their existing alignments up onto the beach where they will be cut into sections, removed from the beach and trucked to an approved offsite recycler or disposal facility. Alternatively, should the onshore pipe recovery operation be unable to recover all of the submarine pipeline segments to shore, the anchored offshore marine work spread consisting of a dive support vessel and divers will be used to recover the remaining submarine pipeline segments. All remaining sections of pipeline will be recovered to the marine work spread for transport to the dock and recycling or disposal.

In ACM is found in the pipe mastic material, a Certified Asbestos Abatement Contractor will aid in pipeline removal and disposal activities. Pipeline removal activities will be conducted in accordance with all applicable regulations pertaining to asbestos.

3.3 CONSTRUCTION EQUIPMENT AND REFUELING

Decommissioning activities will require the use of a limited amount of equipment that utilizes petroleum hydrocarbons as fuels and/or lubricants; onshore using the primary removal methodology using excavators and a winch and/or offshore using the alternative removal methodology via vessel. This equipment presents the potential for spills or petroleum hydrocarbon releases to the ambient environment. Although a release is not expected due to the limited volume of petroleum hydrocarbons that will be present onsite and the short-term duration of work activities, the following best management practices (BMPs) will be implemented throughout decommissioning activities to further reduce the potential for a release:

- All petroleum hydrocarbons will be stored in double containment,
- All fuels and lubricants will be properly labeled,
- All petroleum hydrocarbons will be stored a safe distance away from potential ignition sources,
- Fueling shall be conducted in a manner best suitable to avoid a release,
- No vessel to vessel fuel transfers will be permitted,
- When feasible, equipment should be equipped with drip pans,
- All equipment will be inspected for leaks on a daily basis,
- If any equipment is observed to be leaking, the equipment will be shut off and the leak stopped, or the equipment replaced, and
- The oil spill response equipment identified in the Project's Oil Spill Response and Contingency Plan (provided as an appendix of the Contractor's Project Work and Safety Plan) will be maintained onsite throughout decommissioning activities.

4.0 WASTE MANAGEMENT

CRC proposes to handle wastes generated during the decommissioning activities in the following manner:

4.1 VAULT PURGE - WATER/EQUIPMENT

The standing water within the vault will be re-sampled and pumped out using a vacuum truck prior to demolition activities. As previously discussed within Section 2.1, the standing water was previously sampled and not found to contain any hazardous materials. Therefore, the vault water is anticipated to be pumped out and transported from the Project site for re-use in CRC's production facilities, or disposal as a non-hazardous material.

Equipment located within the vault includes water pumps, piping, two levels of grating and other ancillary equipment. If determined to be free of ACM, all equipment, appurtenances and debris inside the vault will be removed and recycled or disposed of at Ventura Regional Sanitation District Sanitary Landfill at Toland Road in Santa Paula.

If it is determined that any equipment contained within the onshore vault contains ACM, any asbestos debris generated during demolition activities will be placed in a lined 40-yard bin, labeled and lockable with asbestos signage to warn of the hazard, and disposed according to federal and state regulations. Materials would likely be taken to the Clean Harbors Hazardous Waste Facility in Buttonwillow, California.

4.2 PIPELINES

If it is determined that the pipeline coating material contains ACM, any asbestos debris generated during removal activities will be placed in a lined 40-yard bin, labeled and lockable with asbestos signage to warn of the hazard, and disposed according to federal and state regulations. The location for disposal of pipe with mastic coating would be the Clean Harbors Hazardous Waste Facility in Buttonwillow, California.

4.3 LEAD-BASED PAINT (LBP) MATERIALS (IF FOUND)

If LBP materials are detected within the vault during pre-construction inspections; LBP debris generated during demolition activities will be placed in a lined and labeled 55-gallon drum(s) and disposed according to federal and state regulations. The location for disposal of materials including LBP would be the Clean Harbors Hazardous Waste Facility in Buttonwillow, California.

5.0 REPORTING

In consultation with the applicable regulatory agencies, the procedures presented in this HMMCP will be implemented. CRC will notify the following agencies if unanticipated hazardous materials are encountered during decommissioning activities:

- California State Lands Commission
- Ventura County Environmental Health Division
- Regional Water Quality Control Board, Los Angeles District

6.0 REFERENCES

Longitude 123, Inc. 2019. Project Execution Plan – Grubb Lease Intake and Outfall Decommissioning Project, Revision 6 October 2019.

Oilfield Environmental & Compliance, Inc. 2019. Grubb Lease Analytical Report (Work Order 1901882)

Attachment 1 –

Project Execution Plan (Longitude 123, October 2019)

PROJECT EXECUTION PLAN

GRUBB LEASE
INTAKE AND OUTFALL
DECOMMISSIONING PROJECT

REVISION 6 - OCTOBER 2019

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SECTION 1 – PROJECT OVERVIEW

1.1 INTRODUCTION

California Resources Corporation (CRC) intends to decommission the previously retired Vintage Petroleum Grubb Lease Water Treatment Plant Intake and Outfall Facility. The Grubb Lease Intake and Outfall Facility is located approximately 4.4 miles northwest of Ventura, California on the shoreline of the Pacific Ocean approximately 1.3 miles east southeast of Pitas Point (see Figure 1). The marine portions of the facilities are located within the California State Lands Commission (CSLC) Lease PRC 3913.1.

This "waterflood" support seawater intake and discharge facility was constructed in 1967/68. The date of the retirement of this facility is unknown. Some of the component details of this intake and discharge facility are known while others are currently inaccessible.

The facility was never used to handle, store or discharge contaminated water or hydrocarbons and the standing water inside the vault structure on the shoreline was tested in early 2019 and found to be contaminate free.

Generally, this retired waterflood support facility is comprised of three nominal 12-inch diameter steel pipe submarine pipelines (two seawater intake pipelines and one discharge pipeline) that extend from the seaward side of a reinforced concrete and steel sheet pile vault structure on the shoreline and terminate on the rocky seafloor approximately 500 to 700 feet offshore. Reinforced concrete intake structures rest on the seafloor at the offshore ends of the two intake pipelines. Onshore, a nominal 36-inch diameter steel pipe casing extends underground from the landward side of the vault, underneath Pacific Coast Highway and the adjoining Union Pacific Railroad (UPRR) line where it appears to terminate 80 feet north of the UPRR line approximately 10 feet underground. This 36-inch casing contains three pipelines at the vault end and one or more of these underground pipelines appear to extend underneath the Ventura Freeway "A" Lease Canyon Road overpass and may terminate in a valve box located inside CRC facilities on the north side of Ventura Freeway.

The decommissioning is scheduled to begin in late fall 2019 and to be completed in early 2020.

The intake structures at the offshore ends of the two intake pipelines will be recovered. All three submarine pipelines will be pulled ashore and cut into sections for transport to approved offsite disposal or recycling facilities. Alternatively, if the pipelines, or portions of the pipelines, cannot be pulled ashore, a dive support vessel and divers will be used to pull the pipelines segments offshore, cut and recover them, and then ship them to offsite disposal or recycling facilities.

After recovery of all three submarine pipelines, the vault on the beach will be demolished to a depth at least five feet below existing beach contours and the vault materials transported for offsite disposal or recycling.

All pipelines found inside the 36-inch casing will be removed from the casing, as feasible, and the 36-inch casing will be filled with cement slurry and abandoned in place. Alternatively, if the annulus between the pipelines and interior of the 36-inch casing is found to be already filled with cement, the pipelines inside the 36-inch casing will be filled with cement slurry and the 36-inch casing and pipelines will be abandoned in place.

Any pipelines between the landward termination of the 36-inch the casing and the valve box within the CRC facility will also be filled with cement slurry and abandoned in place.

Once all construction is complete, the existing rip rap rock that surrounded the vault on the beach will be used to create an armored rock shoreline matching the adjacent rip rap contours, and the surrounding areas returned to pre-construction contours and conditions. A post-construction bathymetric survey will confirm that all project-related debris has been removed from the offshore work area.

CALIFORNIA RESOURCES CORPORATION

GRUBB LEASE OUTFALL DECOMMISSIONING

FIGURE 1
GEOGRAPHIC SITE LOCATION

1.2 FACILITY HISTORY

Constructed in 1967, the purpose of this facility was to supply seawater to the onshore oil processing facility in support of groundwater flooding and to discharge treated clean water back into the ocean. None of the pipelines were ever used for the transmission of water with hydrocarbon content and the two submarine pipelines and outfall pipeline have been open to the ocean since their construction. These facilities are located alongside Pacific Coast Highway approximately 792 feet northwest of Solimar Beach at the foot of the "A" Lease Canyon Road underpass, underneath the Ventura Freeway (see Figure 2 and Figure 3).

1.3 FACILITY DESCRIPTION

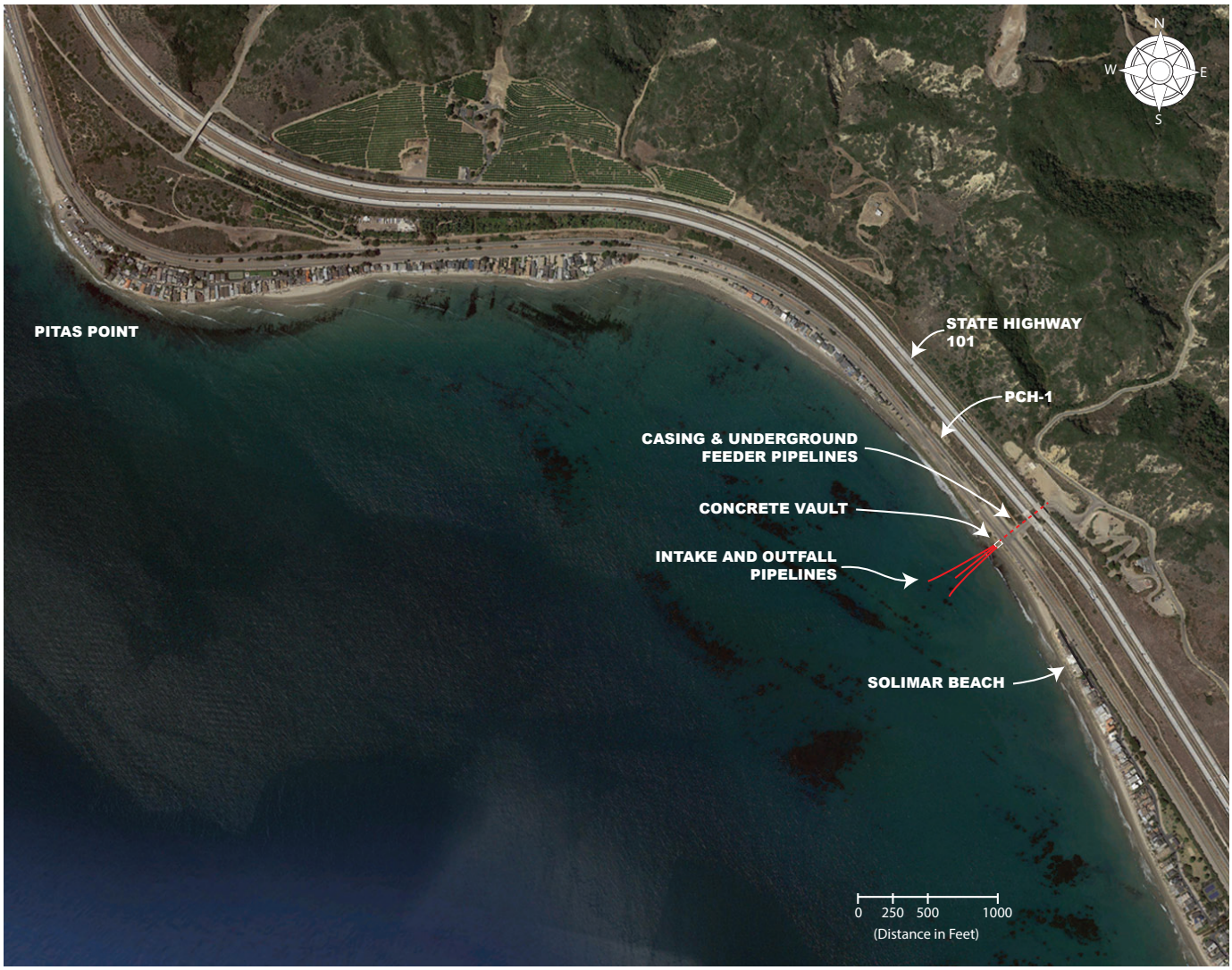
1.3.1 Offshore Intake and Outfall Pipelines

The offshore portion of the facility consists of three 12-inch steel submarine pipelines consisting of two intake pipelines and one outfall pipeline (see Appendix A). This segment is below the Mean High Water Mark (MHWM). The Grubb lease intake/discharge facility was used to bring in seawater for oil-field related water flood operations and on occasion for discharge of the inlet seawater filter backwash to the ocean. Hydrocarbons were not present in the backwash sent through the outfall. The two intake pipelines measure approximately 680 feet in length and 630 feet in length and the outfall pipeline measures approximately 500 feet in length. All lengths are measured from the seaward side of the concrete vault to the offshore terminations of each pipeline, which are located in water depths ranging from 12 to 14 feet of water. The original materials specification and wall thickness of these pipelines are unknown. The pipelines appear to be coated with an anti-corrosive coating or weight coating of unknown composition, but most likely a mastic filler/sealer. The external coatings will be sampled prior to disposal and tested for the presence of any hazardous materials.

The shoreline consists of a narrow sand beach that is exposed during low tide events and inundated at high tide events. The beach is bordered on the northeast side by a steep armor rock covered slope. All three pipelines run southwest, spaced at approximately ten-degree increments from the vault structure on the beach. There are two reinforced concrete lattice box structures located on the seafloor at the offshore ends of the intake pipelines each measuring approximately 6 square feet and 6 feet in height. Both the pipelines and lattice box structures are gravity based and no anchoring system has been used to secure them to the seafloor.

All three pipelines are fully severed, as a result of corrosion, just south of the seaward side of the vault in the surf zone area (see Figure 5). At the severance points all three pipelines appear to be double walled with an inner and outer wall of steel or plastic pipe and a mastic filler between the walls. The seaward pipeline sections cross the shoreline just below the beach sand line and the remaining stubs north of the severance points enter the reinforced concrete vault above the sand line but below the high tide line.

Offshore, the pipelines appear to be intact and buried through the surf zone. The length and depth of cover appears to vary with the season and associated annual sand migration. This approximately 200-foot long surf zone segment has not been surveyed due to the difficulties of working in the surf zone. Further offshore, the remaining 300 to 500 feet of pipe are exposed and laying on a bedrock and sand seafloor. The exposure of the pipelines was identified in 2012 and 2019 geophysical subsea surveys and confirmed visually in a 2018 biological survey by divers.



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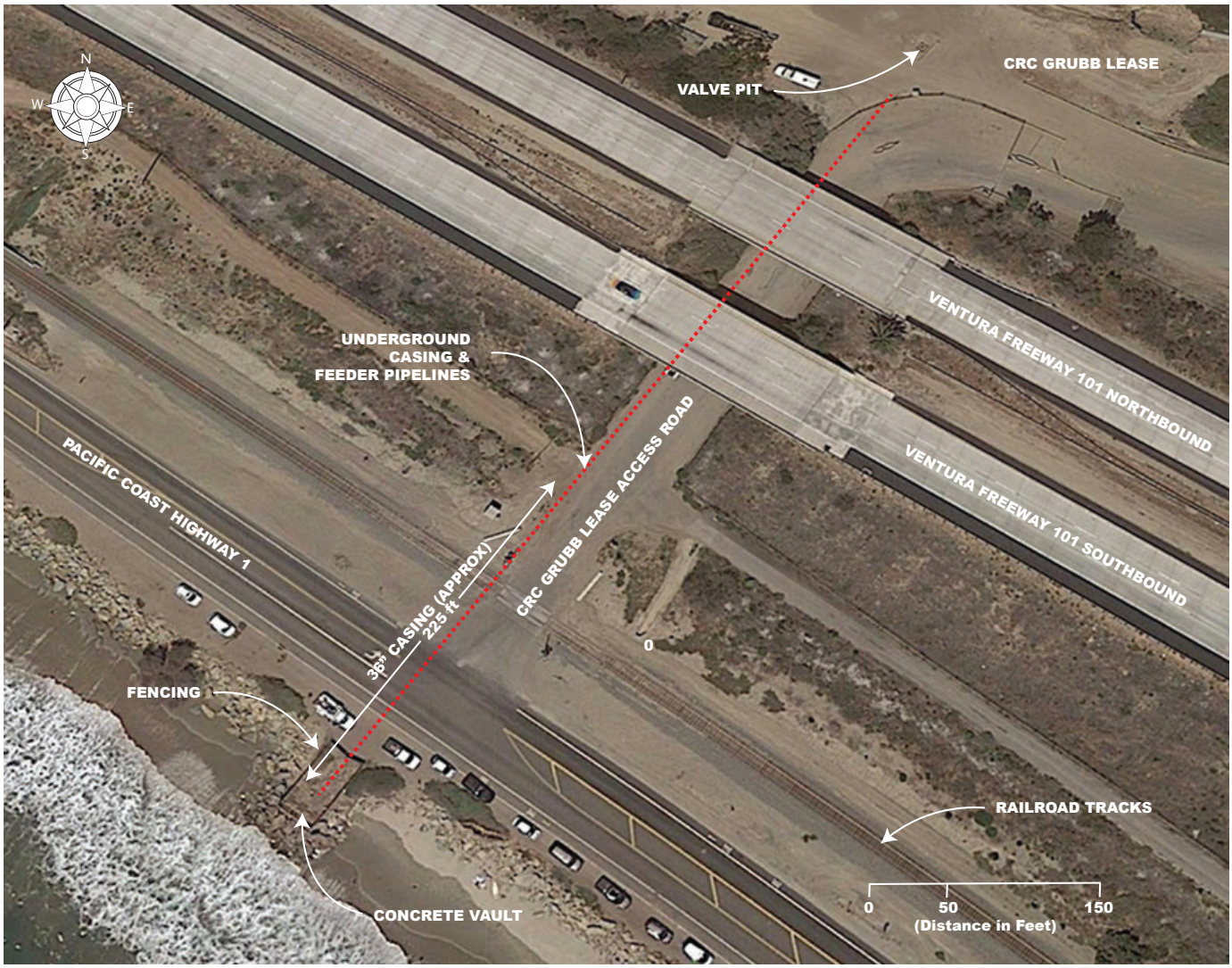
GRUBB LEASE OUTFALL
DECOMMISSIONING

FIGURE 2
SITE MAP



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GRUBB LEASE OUTFALL
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FIGURE 3
ONSHORE SITE MAP

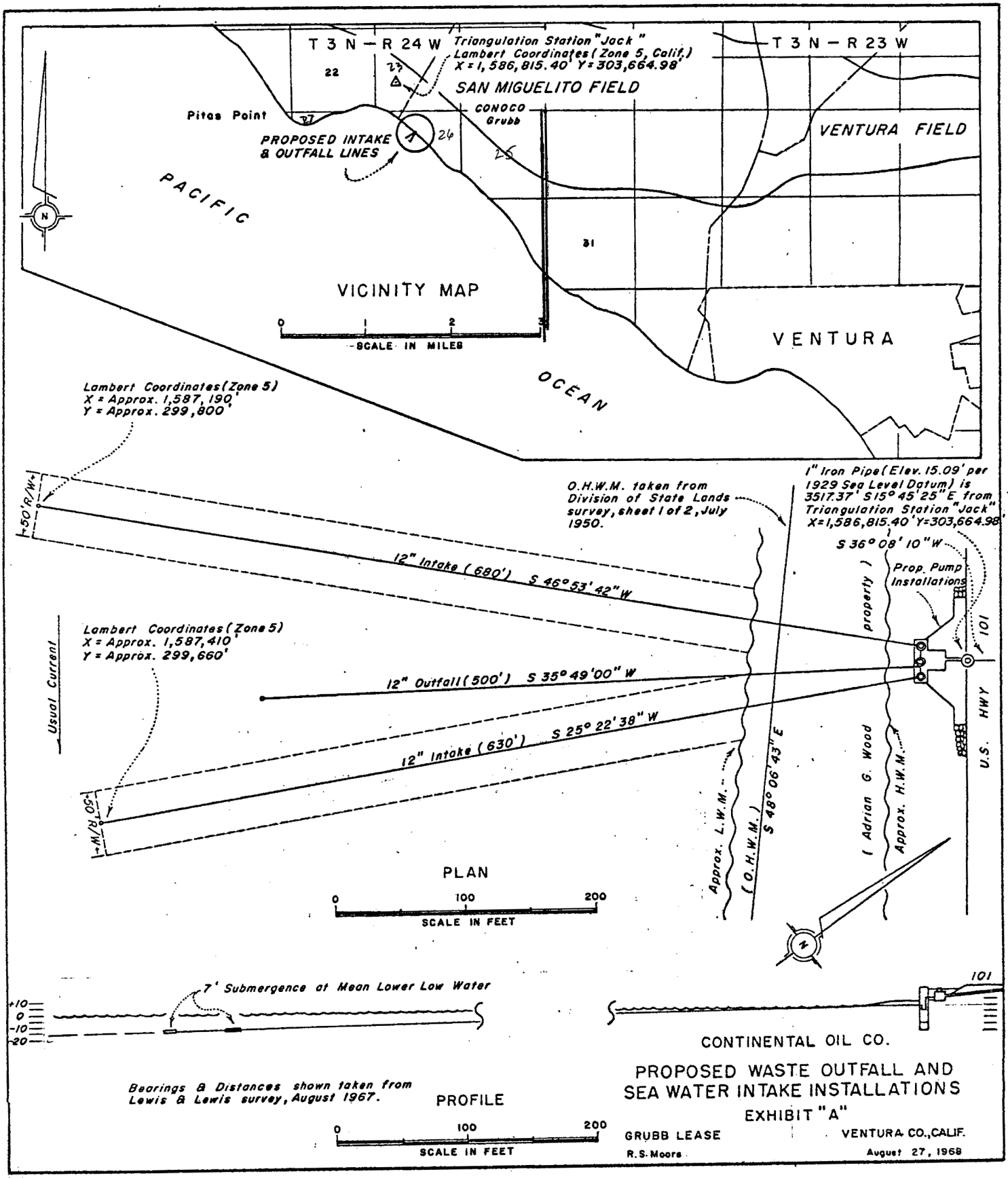

FIGURE 4 - CONTINENTAL OIL COMPANY PROPOSED WASTE OUTFALL AND SEA WATER INTAKE INSTALLATOINS - EXHIBIT "A"

FIGURE 5
SEVERED PIPELINES

1.3.2 Shoreline Vault

The shoreline vault is a reinforced concrete and steel sheet pile structure set in the armor rock seawall between Pacific Coast Highway and the intertidal zone. This segment is above the MHWM. The vault's seaward side is inaccessible during periods of high tide. The vault measures approximately 20 feet wide by 14 feet long and 27 feet deep. The two intake pipelines and one outfall pipeline were originally connected to the seaward side of this vault.

Three pipelines within a 36-inch casing exit the vault on the north side (landward side). The vault interior is partially filled with water to a depth of approximately 16 feet and still contains water pumps, piping, two levels of grating and other ancillary equipment, much of it submerged. The interior water level does not change with the tides and so appears to be isolated from the ocean. Due to the flooded condition, the vault interior has only been partially surveyed.

The vault is approximately 27 feet deep and terminates approximately 12 feet below the surrounding sand beach level. Large pumps and equipment appear to be fastened to the floor of the vault and the floor is assumed to be concrete. The interior vault walls and ceiling are concrete, and the exterior walls are sheathed with steel sheet pile.

The northern wall of the vault is separated from Pacific Coast Highway by a 28-foot wide section of compacted soil covered with an asphalt layer and then a thin layer of dirt. Armor rock surrounds the vault on the other three sides.

The top of the extended vault area is approximately 20 feet wide by 42 feet long and includes three approximately 3-foot by 3-foot pump caisson openings on the southern end and an access hatch with ladder on the southwest side. The entire 20-foot by 42-foot vault top is surrounded by chain link fencing with access through a locked gate on the north side.

1.3.3 Onshore Facilities

The onshore facilities consist of underground pipelines and support structure that span between the northern side of the vault (landward) and the valve pit located in the CRC facilities north of the Ventura Freeway. This segment is above the MHWM. Exiting the interior wall on the north side of the vault is a 36-inch diameter steel casing containing one 14-inch diameter steel pipeline, one 12-inch diameter steel pipeline and one 8-inch diameter PVC pipe liner inside of a second 12-inch diameter steel pipeline. The annulus between the pipelines within the 36-inch steel casing is filled with a grout material where the pipelines enter the side of the vault. The extent of this grout fill is unknown and will have to be field verified during decommissioning.

Based on pipeline tracking data, the 36-inch casing appears to run underground approximately 220 feet to the northeast and terminates approximately 80 feet north of the UPRR easement. Pipe tracking data suggests that at least one pipeline exits the 36-inch casing and extends underground via the "A" Lease Canyon Road and underneath the Ventura Freeway overpass a distance of approximately 310 feet and terminates in a valve box on CRC property. Depth of burial to the top of the 36-inch casing varies from approximately 9 feet at the southern side of Pacific Coast Highway to over 11 feet while running under the UPRR easement and Ventura Freeway dirt frontage road.

1.4 DECOMMISSIONING PROJECT TEAM

The decommissioning team consists of the following members:

1.4.1 Decommissioning Manager – Longitude 123, Inc.

Longitude 123, Inc. (L123) will serve as the project's decommissioning manager and is responsible for the preparation of all technical documents, plans, specifications and for performance of the decommissioning work. L123 is located in Oak View, California. Contact information for L123 is as follows:

Longitude 123, Inc.
2100 Valley Meadow Drive
Oak View, CA. 93022

Attention: Scot Anderson
Decommissioning Manager
Tel: 805.796.1235
Fax: 805.649.9864
Cell: 805.796.1235
Email: sanderson@longitude123.net

1.4.2 Engineering Consultant – YCE Incorporated

YCE Incorporated (YCE) will serve as the project's engineering consultant and is responsible for engineering analysis, calculations, and production of the project's plans and specifications.

YCE Incorporated
1587 Morse Avenue, Suite A
Ventura, CA. 93003

Attention: Marta Alvares, P.E., P.L.S.
President
Tel: (805) 650.6995
Fax: (805) 677.4721
Email: yce-mya@pacbell.net

SECTION 2 – PROJECT DESCRIPTION

2.1 OVERVIEW

The proposed facility final dispositions and project methodologies are provided in the following sections.

2.2 PRE-PROJECT PLANS AND SURVEYS

Once all regulatory permits are received, but prior to the start of site work, the following technical plans and surveys will be completed:

a. Produce a Project Work and Safety Plan (PSWP) that provides the following:
   - Project-specific Emergency Action Plans
   - Project Contacts
   - Final Scope of Work and final dispositions
   - Updated Project Schedule
   - Step-by-step Procedures with supporting engineering calcs
   - Quality Management Plan
   - Project Management and Communications Plan
   - Site Safety Plan
   - Diving Safety Plan
   - Critical Operations and Curtailments Plan
   - Survey Plan (onshore and offshore)
   - Confined Space Entry Plan
   - Oil Spill Contingency Plan
   - Marine Safety and Anchoring Plan with anchoring pre-plot
   - Excavation Plan
   - Certified Traffic Management Plan
   - Hazardous Materials Management Plan (if hazardous materials are found)

Other plans and information required to perform the work safely and in compliance with all regulatory permits and permissions, Cal OSHA safety regulations, U.S. Coast Guard safety regulations, and owner's safety requirements will also be developed as applicable. This PWSP will be submitted to all pertinent agencies for review and approval prior to the start of site work.

b. Produce a pre-project multi-beam seafloor survey, with 400% coverage, of the offshore area around the pipelines, including the proposed anchor spreads. This will serve as the baseline seafloor debris survey that will be compared against a post-decommissioning seafloor debris survey of the same area to ensure that no project-related debris has been left underwater on the seafloor.

c. Conduct a pre-project topographic survey of the armor rock sea wall on each side of the vault to determine the pre-construction contours and conditions of the sea wall. This will serve as the baseline for reconstructing the seawall after removal of the vault and the construction access ramp and restoration of the site to existing contours.

d. Conduct an 811 utility location survey (DigAlert) from the northern wall of the vault to the valve pit on the CRC property to ensure that all utilities are identified and located on the survey maps.

Prior to the start of offshore and onshore decommissioning activities, the work area will be staged in accordance with the pre-approved Traffic Plan. This will include setting up equipment and materials staging areas along the southern shoulder of Pacific Coast Highway; the closure of the eastbound bicycle and vehicle lane of Pacific Coast Highway; and the temporary rerouting of both eastbound and westbound traffic into the existing center divider and westbound lanes of Pacific Coast Highway. This traffic diversion will be maintained throughout the project to ensure there are public safety margins for equipment moving on and off the beach each day, loading pipe sections into trucks, excavating the vault, etc. While occasional traffic stops on Pacific Coast Highway may be needed during equipment ingress and egress, no long-term full closure of Pacific Coast Highway is anticipated. A preliminary work area and traffic impact layout is provided in Figure 6. Note that this plan is subject to change upon completion of the Traffic Plan.

A temporary equipment access ramp will be constructed across the existing armor rock seawall approximately 50 feet south of the concrete vault to provide equipment access to the project site. An excavator will remove and relocate the existing armor rock as needed to create the foundation for the equipment access ramp. All rock removed will be stored for replacement upon completion of construction activities. An excavator and loader will place smaller rock and cobble on top of the existing armor rock seawall to create a ramp of sufficient density and strength to allow tracked construction equipment to travel across it to the beach. The equipment access ramp will be approximately 30 feet wide and 60 feet long.

2.3 OFFSHORE FACILITIES DECOMMISSIONING

The proposed final disposition of the offshore facilities is to remove the two reinforced concrete lattice intake structures and all three 12-inch submarine pipelines in their entirety.

Offshore work will be initiated by anchoring the dive support vessel over the terminus of the intake structures (as detailed in the Anchoring Plan). Divers will be deployed to cut and remove the intake structures from each intake pipeline. A guillotine saw with a hydraulic power pack will be used to make the cut. Once cut the intake structures will be winched vertically to the surface and recovered onboard the vessel.

The proposed primary submarine pipeline removal methodology consists of mounting a winch on top of the existing reinforced concrete shoreline vault and pulling the submarine pipeline segments to shore along their existing alignments. Recovery operations have been scheduled when beach and surf zone sand cover is the lowest due to winter and early spring storm conditions. If the onshore ends of each pipeline are not already exposed, they will be exposed by an excavator operating on the beach. The ends of each pipeline will be cut and prepared for rigging of a pull wire or bridle. Tension will be slowly increased on the pipeline pulling wire allowing the pipelines to be pulled both vertically and horizontally until the pipeline is completely free of the surf zone sand cover. The pipelines will then be pulled along their existing alignments up onto the beach where they will be cut into lengths capable for trucking offsite (Figure 7). Once cut, the segments will be lifted from the beach, placed on a flatbed truck and trucked to an approved offsite recycler or disposal facility. This use of the vault and associated recovery of the offshore pipelines to shore will be performed prior to decommissioning the shoreline vault and armor rock.

Although engineering calculations have determined that pulling forces needed to free the pipeline segments from the surf zone do not exceed the tensile strength of the pipeline, there is a possibility a portion of pipelines cannot be recovered from shore. Should the onshore pipe recovery operation be unable to recover all of the offshore pipeline segments to shore, the existing anchored offshore dive support vessel and divers will be used to recover the remaining offshore pipeline segments. Work will be limited to the existing pipeline corridor and pipeline segments and will be cut into manageable segments and lifted vertically to the surface for recovery on the

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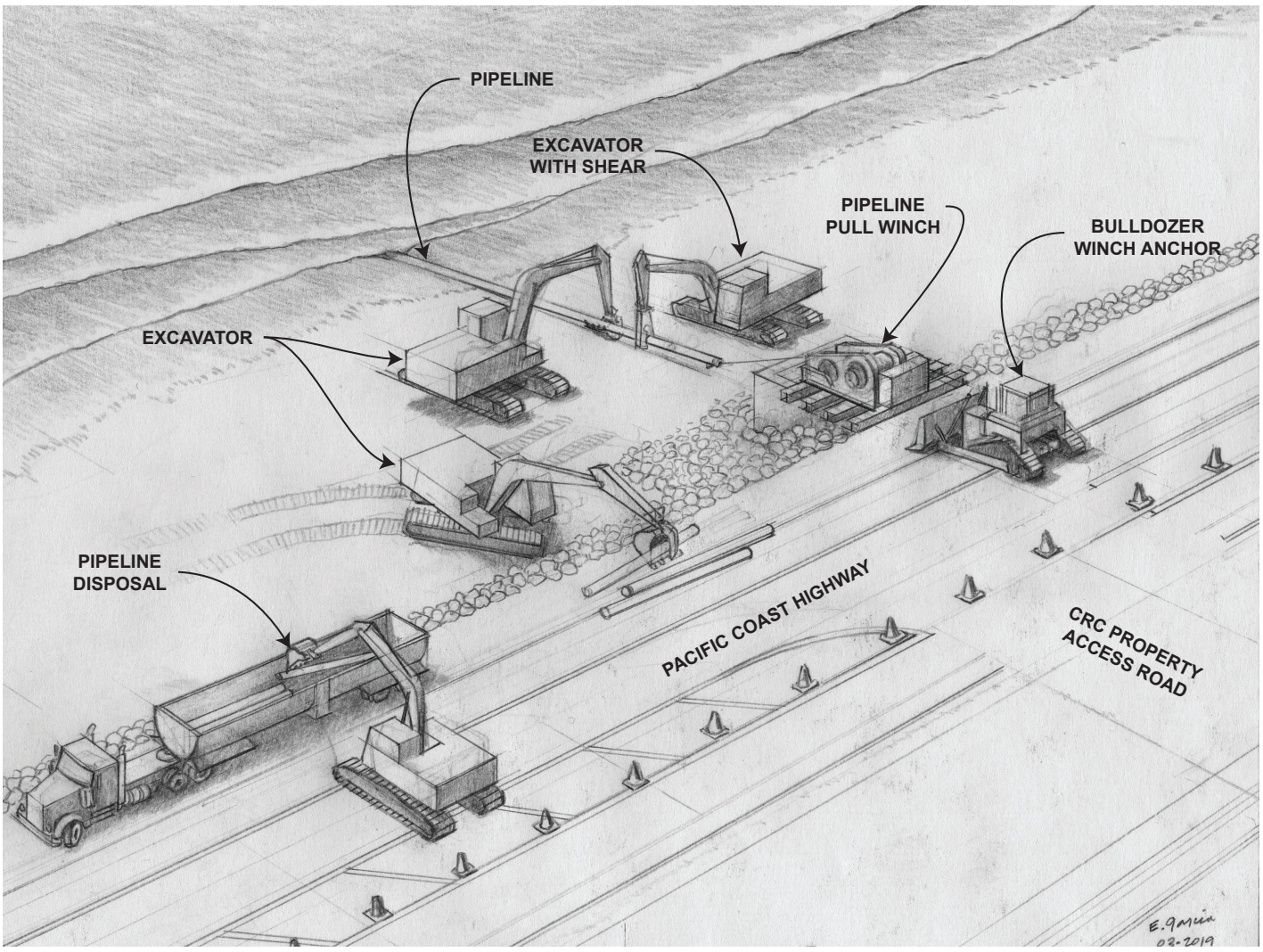
GRUBB LEASE OUTFALL DECOMMISSIONING

FIGURE 6
SITE WORK AREA PLAN



CALIFORNIA RESOURCES CORPORATION GRUBB LEASE OUTFALL DECOMMISSIONING

FIGURE 7
OFFSHORE PIPELINE PULL TO SHORE AND REMOVAL

dive support vessel using an onboard winch or crane. The dive vessel will be positioned over the cut point using the existing three-point anchoring spread.

In the event the unrecovered pipeline is located within the surf zone, recovery efforts will have to be limited to periods of low wave action and/or extreme low tides. These recovery efforts will also be timed during the winter and early spring beach profile conditions when the least amount of sand will be over the pipelines. If the remaining section is on the ocean side of the surf zone, divers will be deployed from the dive support vessel to expose the pipeline using a jet pump and then rig the exposed section for pulling to the vessel Alternatively, if the remaining section is on the landward side of the surf zone, an excavator will be used during a period of extreme low tide to expose the remaining segment and rig the section for recovery to the beach using the vault mounted winch.

2.4 SHORELINE VAULT DECOMMISSIONING

The proposed final disposition of the shoreline vault is to remove all equipment and appurtenances from inside the vault and then remove the entire vault structure down to 5 feet below the existing beach contours and abandon the remaining 7 feet in place.

The decommissioning of the vault will begin once the submarine pipelines have been removed. The reinforced concrete vault ceiling will be saw cut and removed to allow access to the interior of the vault. The water in the vault, which was sampled in early 2019 and found to be contaminate free, will be re-sampled, pumped out, and shipped offsite for appropriate disposal. Once the water has been removed the internal water pumps, piping, two levels of grating, and other ancillary equipment will be removed and trucked offsite for recycling or disposal.

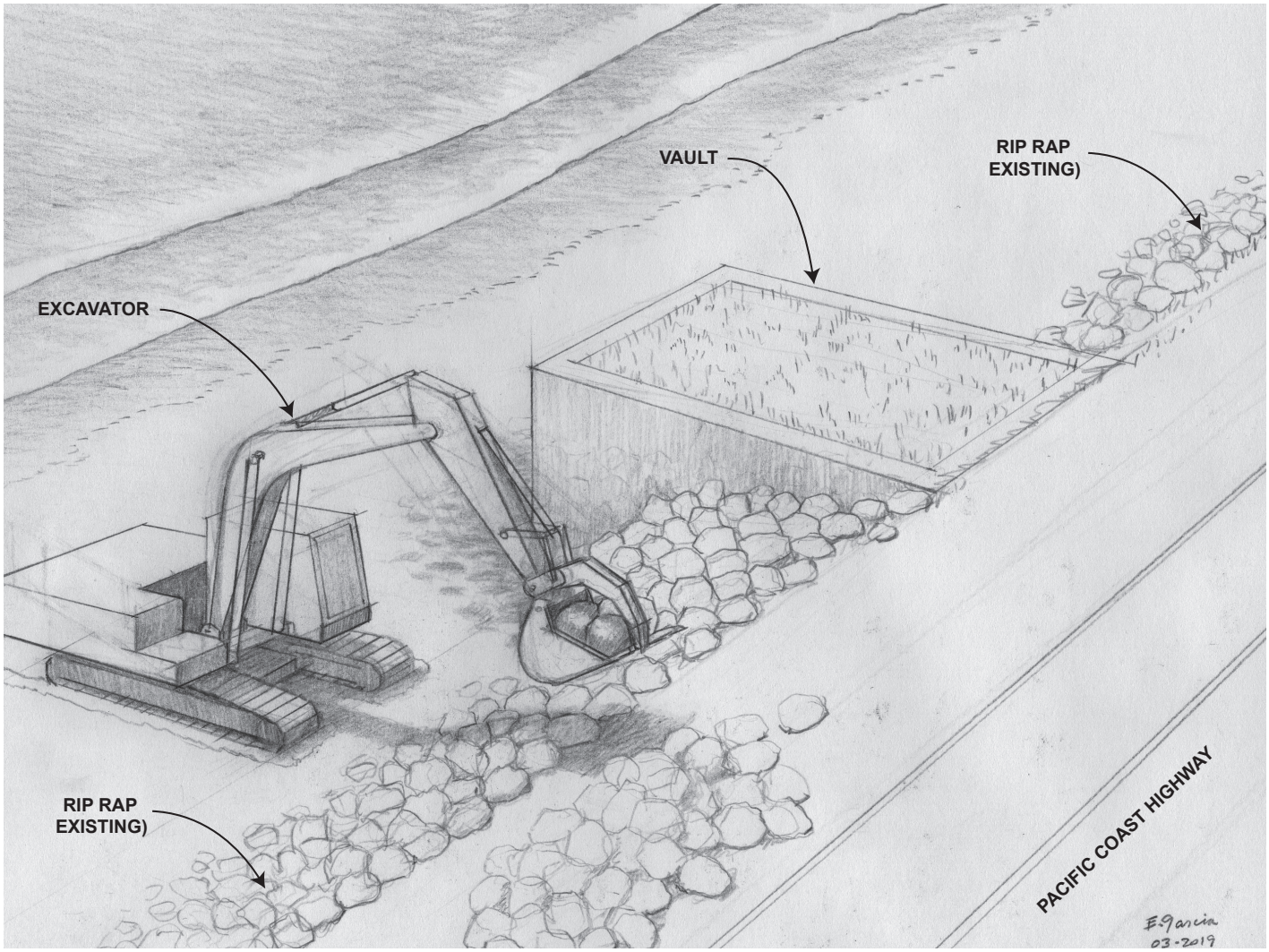
To facilitate removal of the vault, all armor rock currently surrounding the vault will be removed to expose the vault walls down to the beach elevation (Figure 8). Sand may also be excavated from the vault exterior in order to facilitate vault removal. The perimeter around the open excavation will be fenced off. Lower portions of the existing riprap around the perimeter of the vault will be left in place to inhibit backfill from surrounding sand during high tide periods.

Once the armor rock has been relocated from the interior of the vault, the four vault walls will be cut into removable sections with the use of a hydraulically powered rotary demolition saw (cuts both concrete and steel) attached to an excavator boom (Figure 9). In use, the excavator will reach inside the interior and make a horizontal cut around the base of the walls at an elevation at least 5 feet below the existing sand grade or at a lower elevation if conditions permit. Horizontal cuts may also be made from the exterior as well. After the base cut has been completed, the saw will be used to cut the walls into vertical sections for removal. An excavator will be used to grasp the cut wall pieces and place them in trucks for offsite disposal or recycling at approved facilities.

The vault removal process will likely result in several days during which the vault will fill with water at high tide periods. During low tide work periods, the water will be pumped back out and sand that has migrated back into the vault will be removed, as needed.

The 36-inch diameter steel casing that connects into the shoreward side of the vault, and pipes contained in that casing, will be excavated and cut back approximately even with the existing earth slope of the armor rock seawalls that exist on either side of the vault. The casing and pipes contained in the casing will have been decommissioned in accordance with the description in Section 2.5 – Onshore Pipeline Decommissioning below.

Once all walls are cut at least 5 feet below the local sand level, the area will be backfilled. Depending on the amount of natural sand movement, it is estimated that approximately 75 cubic yards of sand will be used to fill voids within the seawall. The site will then be recontoured and the armor rock repositioned over the project site to match pre-decommissioning contours.



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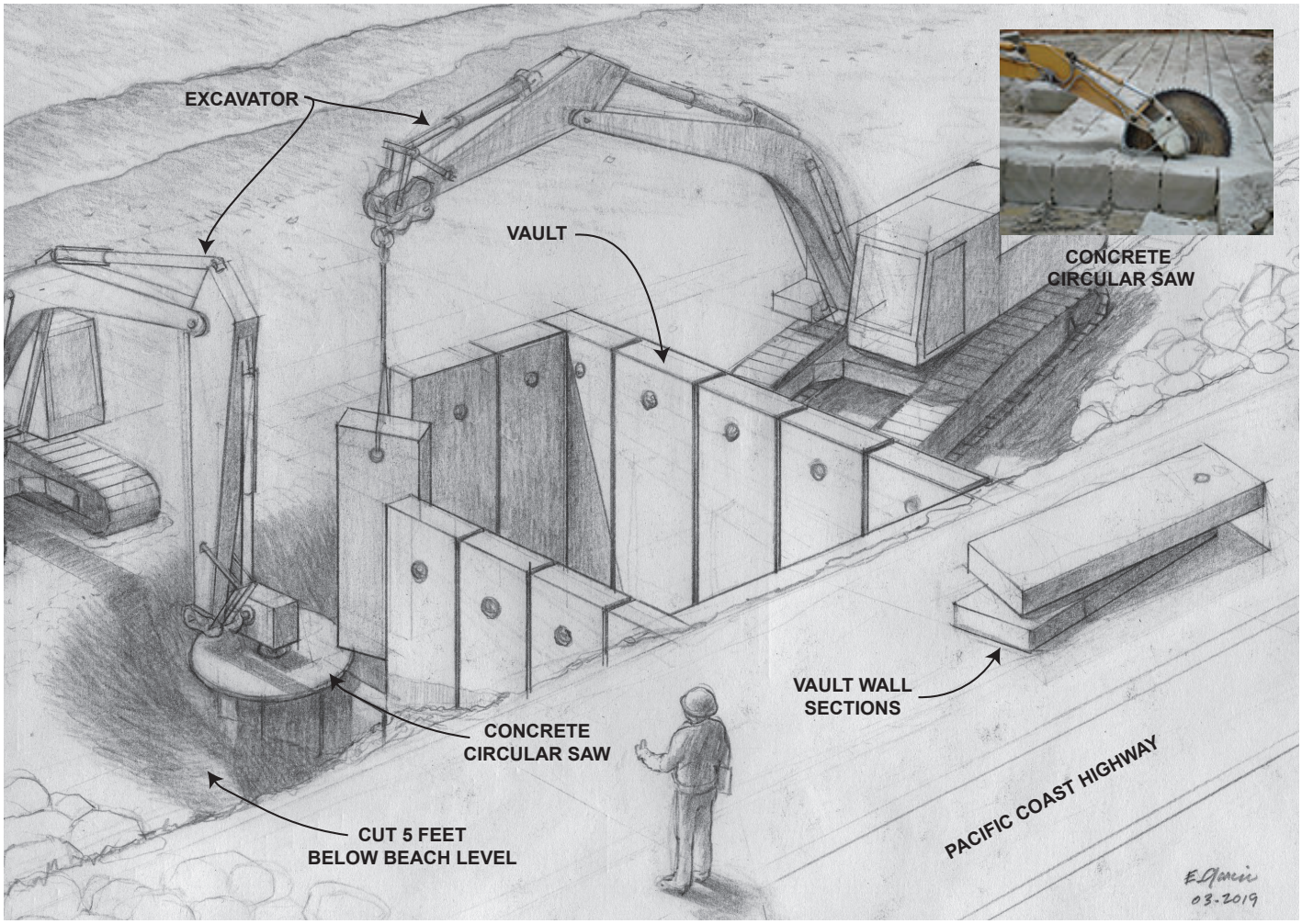
GRUBB LEASE OUTFALL
DECOMMISSIONING

FIGURE 8
RIP RAP REMOVAL FROM AROUND VAULT



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DECOMMISSIONING

FIGURE 9
VAULT REMOVAL

2.5 ONSHORE FACILITIES DECOMMISSIONING

The final disposition of the onshore facilities is to fill the 36-inch casing and associated internal pipelines with cement slurry and abandon it in place, except as detailed below. This work will be performed prior to the Shoreline Vault Decommissioning detailed in section 2.4.

In order to access the casing, two potholes will be excavated along the casing and/or pipeline route between the vault and the CRC facilities. These pothole locations are shown on Sheet 4 in Appendix A. The first pothole will be just north of the UPRR right-of-way, where based on the results of the pipeline tracking the casing appears to terminate. This will provide visual and quantifiable evidence on the casing, pipelines and level of cementing in the casing annulus between the southern end of the casing in the vault and the northern end of the casing at the pothole. The second pothole will be at the valve pit inside the CRC facilities on the north side of the Ventura Freeway. This will provide visual and quantifiable evidence on the pipelines between the two potholes. The excavations will use trench boxes to limit cut volumes and the disturbed areas surrounding the potholes. No traffic impacts to Pacific Coast Highway, the 101 Freeway or the access road to the CRC facilities are anticipated.

If the pipelines inside the casing between the vault and the first pothole are not cemented in place and can be removed, they will either be pulled to the vault structure or to the pothole where they can be saw cut into sections and recovered. The casing will then be filled with cement slurry and abandoned in place. If the pipelines carried inside the 36-inch casing are found to be already cemented into the 36-inch casing, the pipelines will be filled with cement slurry and abandoned in place inside the 36-inch casing between the vault and the first pothole. A cement pumping unit will be used to pump slurry from the pothole downslope to the vault.

If the internal pipelines inside the casing continue to extend between the northern end of the 36-inch casing (the first pothole) and their termination in the valve box located inside CRC facilities (the second pothole) they will be filled with cement slurry and abandoned in place. As before the cement slurry will be pumped from the upper pothole downslope to the first pothole location

Upon completion of the removal of the pipelines between the vault and the first pothole and the pumping of the slurry into the casing and/or pipelines between the vault and the second pothole, the trench boxes will be removed, and the potholes backfilled and compacted. The surrounding areas will be contoured to pre-construction conditions.

Upon completion of pipeline and vault removal activities, terrestrial construction equipment working from the shoulder of the road will deconstruct the equipment access ramp and construct the armor rock seawall at the removed vault location using original armor rock from the vault perimeter. The reconstructed armor rock seawall will match pre-decommissioning contours.

Upon completion of the offshore decommissioning work, a second offshore geophysical debris survey will be performed, and the results compared to the initial baseline seafloor debris survey. Any anomalous seafloor objects located in the survey will be positively identified by divers and any remaining objects related to the decommissioning will be removed. A Project close-out report with drawings and coordinates of all facilities abandoned in place will be submitted to the Commission within approximately 60 days of the completion of the work.

2.6 ESTIMATED AREAS AND VOLUMES

The estimated disturbed areas and volumes of project materials are provided in the following table.

Table 1. Estimated Areas and Volumes of Project Materials

Project Component/Description	Material	Length (ft)	Area of Disturbance (sq ft)	Volume (Excavation)	
				(cu ft)	(cu yd)
Below Mean High Water Mark					
Offshore Intake and Outfall Pipelines Segment					
Intake Pipeline (North)	Sand/Rock	680	680	400	15 [1]
Intake Pipeline (South)	Sand/Rock	630	630	400	15 [1]
Outfall Pipeline	Sand/Rock	500	500	400	15 [1]
Moorings (5 @ 50 ft diameter)	Beach Sand	--	9,813	--	--
Concrete Lattice Box Structures (2 @ 6 ft x 6 ft)	Concrete	--	36	--	--
Beach Sand Around Vault Exterior	Beach Sand	--	600	3,600	133 [2]
Temporary Equipment Access Ramp	Armor Rock/ Rock and Cobble	42	675	5,062	188
Shoreline Vault Segment					
Vault Rip Rap Moved	Armor Rock	100	2,000	24,000	889
Above Mean High Water Mark					
Seawall Construction in Place of Vault	Armor Rock	60	900	13,500	500
Temporary Rip Rap Storage	Armor Rock	--	1,325	--	--
Onshore Pipelines Segment					
Pothole Excavation (under road)	Topsoil	--	800	10,000	370
Pothole Excavation (CRC valve pit)	Topsoil	--	800	400	15[3]
Concrete Slurry (casing)	Concrete	227	--	1,600	59
Concrete Slurry (pipelines)	Concrete	534	--	1,269	47
Staging/Access Areas [8,295 sq ft total minus temporary equipment access ramp (798 sq ft)]	N/A	--	7,497	--	--
Totals:					
Total (above MHWM)	--	**821**	**11,322**	**26,769**	**991**
Total (below MHWM)	--	**1,952**	**14,934**	**33,862**	**1,255**
Total – All Project Segments	--	**2,773**	**26,256**	**60,631**	**2,246**
Notes:					

Table 1. Estimated Areas and Volumes of Project Materials

Project Component/Description	Material	Length (ft)	Area of Disturbance (sq ft)	Volume (Excavation)	
				(cu ft)	(cu yd)
1 Volume for the offshore pipeline reflects a 1 ft cover from the distance of each pipeline from the surf zone (approximately 5 ft offshore contour) to the shoreline vault. Pipelines are exposed on the seafloor offshore of the surf zone.					
2 Beach sand around vault exterior was calculated based on a liner distance of 100 feet of vault wall on the three beach sides to a dept of 6 feet below local sand level, which will be at its lowest annual point during the winter work period when the sand cover migrates offshore.					
3 Pole excavation (CRC valve pit) was calculated based on a 12 feet by 24 feet excavation for the trench box to a depth of about 10 feet to provide full access around the pipeline.					

2.7 PROPOSED MANPOWER AND EQUIPMENT

The proposed manpower and equipment for the offshore and onshore portions of the project are provided in the following tables. These Manpower and Equipment tables are provided to assist with air quality calculations, if necessary.

Table 2. Project Equipment List

Equipment Type	Quantity	Horsepower	Hours/Day	# of Days
Onshore				
Onshore Casing and Pipeline Decommissioning				
Excavator	1	310	10	10
Crane	1	220	10	10
4x4 Truck	1	325	10	10
Cement Truck	5	300	10	1
Cement Pump	1	85	10	1
Onshore Pipeline Recovery and Removal				
Excavator	3	310	10	9
Winch	1	150	10	9
Bulldozer	1	435	2	9
4x4 Truck	1	325	5	9
Onshore Vault Removal and Armor Rock Reconstruction				
Excavator	3	310	10	10
Crane	1	220	10	10
4x4 Truck	1	325	5	10
Vacuum Truck	5	225	10	1
Offshore				
Offshore Intake Structure Removal				
Dive Support Vessel	1	1,000	24	4

Equipment Type	Quantity	Horsepower	Hours/Day	# of Days
Shallow Air Dive System	1	50	12	4
Offshore Pipeline Removal Option – Pull Offshore (Alternative)[1]				
Dive Support Vessel	1	1,000	12	4
Shallow Air Dive System	1	50	12	4
Notes: 1 The alternative scenario would not require additional construction days or equipment.				

Table 3. Personnel Requirements

Labor	Quantity	Hours/Day	# of Days
Traffic Control			
Flagman	6	10	73[1]
Onshore			
Onshore Casing and Pipeline Decommissioning			
Project Manager	1	10	10
Site Supervisor	1	10	10
Heavy Equipment Operator	3	10	10
Rigger	2	10	10
Onshore Pipeline Recovery and Removal			
Project Manager	1	10	9
Site Supervisor	1	10	9
Heavy Equipment Operator	3	10	9
Rigger	2	10	9
Onshore Vault Removal and Armor Rock Reconstruction			
Project Manager	1	10	10
Site Supervisor	1	10	10
Heavy Equipment Operator	3	10	10
Rigger	2	10	10
Offshore			
Offshore Intake Structure Removal			
Project Manager	1	12	4
Dive Supervisor	1	12	4
Diver	3	12	4
Tender	1	12	4
Surveyor	1	12	4
Marine Wildlife Monitor	1	12	4
Offshore Pipeline Removal Option – Pull Offshore (Alternative)[2]			
Project Manager	1	12	4
Dive Supervisor	1	12	4

Labor	Quantity	Hours/Day	# of Days
Traffic Control			
Flagman	6	10	73[1]
Diver	3	12	4
Tender	2	12	4
Surveyor	1	12	4
Marine Wildlife Monitor	1	12	4

Notes:
1 Flagman (6) will be used throughout Project activities.
2 The alternative scenario would not require additional construction days.

SECTION 3 – PRELIMINARY SCHEDULE SUMMARY

The preliminary schedule for the decommissioning and removal of the offshore and onshore facilities associated with this retired seawater intake and outfall installation is provided in the following table. Additional details are provided in Appendix B – Preliminary Schedule.

3.1 SCHEDULE ASSUMPTIONS AND CONDITIONS

This Preliminary Schedule incorporates the following conditions and assumptions:

- Assumes a winter work window in 2020 to take advantage of sand migration off of the pipelines in the surf zone.
- Assumes there are no restrictions on work windows for both offshore and onshore work.
- Assumes a 12-hour per day, 7-day per week schedule (daylight) for offshore operations.
- Assumes a 10-hour per day, 6-day per week schedule (daylight) for onshore operations. However, some night operations may be required to take advantage of low tide periods during pipeline recovery and removal.

3.2 CONSTRUCTION SCHEDULE SUMMARY

The following is a summary of the construction timing by task:

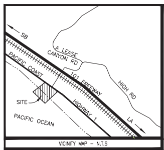
Table 4. Project Construction Duration

Project Activity	Estimated Duration (days)
Mobilization	
Perform Seafloor Debris Survey	2
Onshore Work	
Mobilization	15
Strip Concrete Vault – Piping/Fencing/Electric	1
Casing and Pipeline Decommissioning	15
Offshore Pipeline Recovery and Removal	15
Vault Removal and Seawall Construction	15
Demobilization	2
Offshore Work	
Mobilization	1
Recover Intake Structures	4
Demobilization	1
Final Surveys	
Perform Seafloor Debris Survey	2
Total Duration	**73**

APPENDIX A – PLANS AND SPECIFICATIONS

This appendix contains the 60% project plans and specifications consisting of the following drawings:

Sheet C1.0 – Cover
Sheet C1.1 – Plan and Profile – Existing Offshore
Sheet C1.2 – Plan and Profile – Existing Offshore
Sheet C1.3 – Right of Way
Sheet C2.1 – Construction Offshore
Sheet C2.2 – Construction Offshore



BENCHMARK DATA:

5.05 MILES NORTHWEST ALONG THE SOUTHERN PACIFIC RAILROAD FROM THE STATION AT VENTURA, 0.15 MILE SOUTHEAST OF MILE POLE 393, IN THE TOP AND 1.0 FOOT SOUTHEAST OF THE NORTHWEST END OF THE NORTHEAST CONCRETE HEAD WALL OF CONCRETE BOX CULVERT 393.12, 5.5 FEET NORTHEAST OF THE NORTHEAST RAIL, 0.8 FOOT SOUTHWEST OF THE SOUTHWEST FACE OF A CONCRETE RETAINING WALL WHICH PROJECTS ABOUT 4 1/2 FEET ABOVE THE GROUND, AND ABOUT 1 FOOT HIGHER THAN THE TRACK

DESIGNATION: W1216 ELEV.=24.05'

MEAN LOW LOWER WATER (MLLW)

MEAN LOW LOWER WATER (MLLW) WAS CALCULATED BY INTERPOLATING BETWEEN SANTA BARBARA AND SANTA MONICA TIDE STATIONS.

MLLW ELEVATION = -0.1 FT.

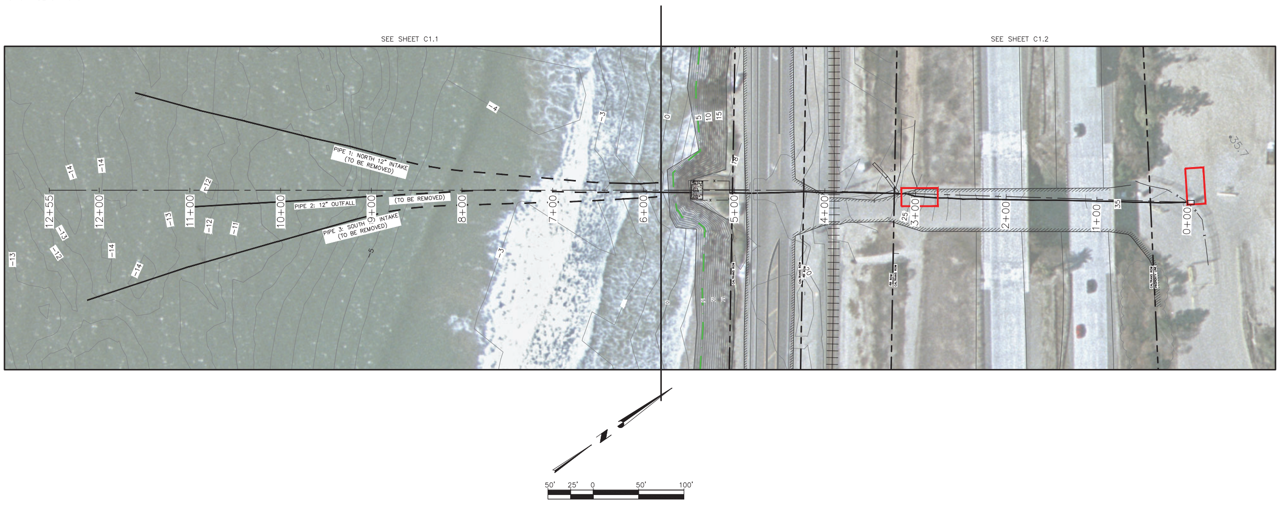
MEAN LOW LOWER WATER (MHW)

MEAN HIGH WATER (MHW) WAS CALCULATED BY INTERPOLATING BETWEEN SANTA BARBARA AND SANTA MONICA TIDE STATIONS.

MHW ELEVATION = 4.6 FT.

SEE SHEET C1.1

SEE SHEET C1.2



LEGEND:

CONCRETE	
CHAIN LINK FENCE	— X —
PIPE – ABOVE SEAFLOOR	
PIPE – BELOW SEAFLOOR	
CALTRANS RIGHT OF WAY	
RAILROAD RIGHT OF WAY	
CSLC/ MHW	

DIGALERT
DIAL 811
AT LEAST TWO DAYS BEFORE YOU DIG

1118-01B L123 Grubbs Lease Right Of Way Exhibit – 20190930 CMF

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REGISTERED PROFESSIONAL ENGINEER
MARTA Y. ALVAREZ
NO. 41700
CIVIL
STATE OF CALIFORNIA

DECOMMISSIONING PLAN
GRUBB LEASE VENTURA INTAKE/OUTFALL FACILITY DECOMMISSIONING PROJECT

REVISIONS:

No.	DATE:	DESCRIPTION	DRAWN:	CHECKED:	APPROVED:
1	9/30/2019	ADDING TEMPORARY ACCESS RAMP AND PROTECTION	CMF	JOE	

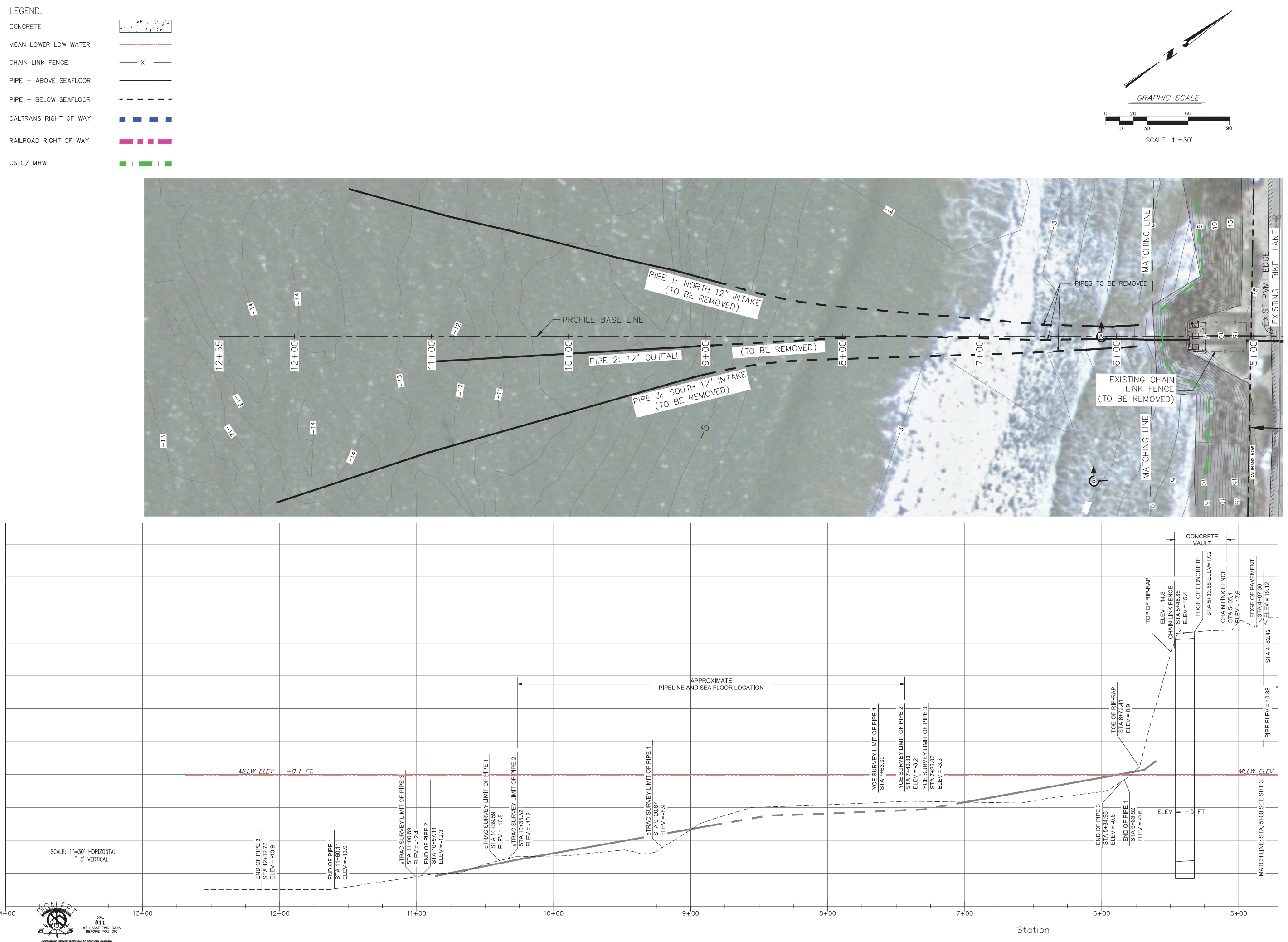
DRAWING NO.

SHEET NAME: COVER

Sheet NO. C1.0

LEGEND:

CONCRETE	
MEAN LOWER LOW WATER	
CHAIN LINK FENCE	—— X ——
PIPE – ABOVE SEAFLOOR	
PIPE – BELOW SEAFLOOR	
CALTRANS RIGHT OF WAY	
RAILROAD RIGHT OF WAY	
CSLC/ MHW	



GRAPHIC SCALE
0 10 20 30 60 90
SCALE: 1"=30'
PIPE 1: NORTH 12" INTAKE (TO BE REMOVED)
PIPE 2: 12" OUTFALL
(TO BE REMOVED)
PIPE 3: SOUTH 12" INTAKE (TO BE REMOVED)
PROFILE BASE LINE
PIPES TO BE REMOVED
EXISTING CHAIN LINK FENCE (TO BE REMOVED)
MATCHING LINE
EXIST PVMT EDGE
EXISTING BIKE LANE
12+55
12+00
11+00
10+00
9+00
8+00
7+00
6+00
5+00
CONCRETE VAULT
TOP OF RIP-RAP ELEV = 14.8
CHAIN LINK FENCE STA 5+46.65 ELEV = 15.4
EDGE OF CONCRETE STA 5+33.56 ELEV=17.2
CHAIN LINK FENCE STA 5+05.1
EDGE OF PAVEMENT STA 4+87.30 ELEV = 19.12
STA 4+82.42
PIPE ELEV = 10.88
MATCH LINE: STA. 5+00 SEE SHT 3
APPROXIMATE PIPELINE AND SEA FLOOR LOCATION
TOE OF RIP-RAP STA 5+72.41 ELEV = 0.9
YCE SURVEY LIMIT OF PIPE 1
YCE SURVEY LIMIT OF PIPE 2 ELEV = -3.2
YCE SURVEY LIMIT OF PIPE 3 ELEV = -3.3
eTRAC SURVEY LIMIT OF PIPE 1 STA 9+20.87 ELEV = -6.9
eTRAC SURVEY LIMIT OF PIPE 1 STA 10+39.59 ELEV = -10.5
eTRAC SURVEY LIMIT OF PIPE 2 STA 10+33.32 ELEV = -10.2
eTRAC SURVEY LIMIT OF PIPE 3 STA 11+00.89 ELEV = -12.4
END OF PIPE 2 STA 10+97.11 ELEV = -12.3
END OF PIPE 1 STA 11+60.11 ELEV = -13.9
END OF PIPE 3 STA 12+12.77 ELEV = -13.9
END OF PIPE 3 ELEV = -0.8
END OF PIPE 1 STA 5+83.52 ELEV = -0.6
ELEV = -5 FT
MLLW ELEV = -0.1 FT.
MLLW ELEV
SCALE: 1"=30' HORIZONTAL 1"=5' VERTICAL
28
24
20
16
12
8
4
0
-4
-8
-12
-16
14+00
13+00
12+00
11+00
10+00
9+00
8+00
7+00
6+00
5+00
Station
DIG ALERT
DIAL 811 AT LEAST TWO DAYS BEFORE YOU DIG

1118-01B L123 Grubbs Lease Right Of Way Exhibit – 20190930 CMF

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2100 VALLEY MEADOW DRIVE
OAK VIEW, CA 93022
TEL: 805.649.9364
EMAIL: MSTEFFY@LONGITUDE123.NET

REGISTERED PROFESSIONAL ENGINEER
MARIA Y. ALVAREZ
NO. 41700
CIVIL
STATE OF CALIFORNIA

DECOMMISSIONING PLAN
GRUBB LEASE VENTURA
INTAKE/OUTFALL FACILITY
DECOMMISSIONING PROJECT

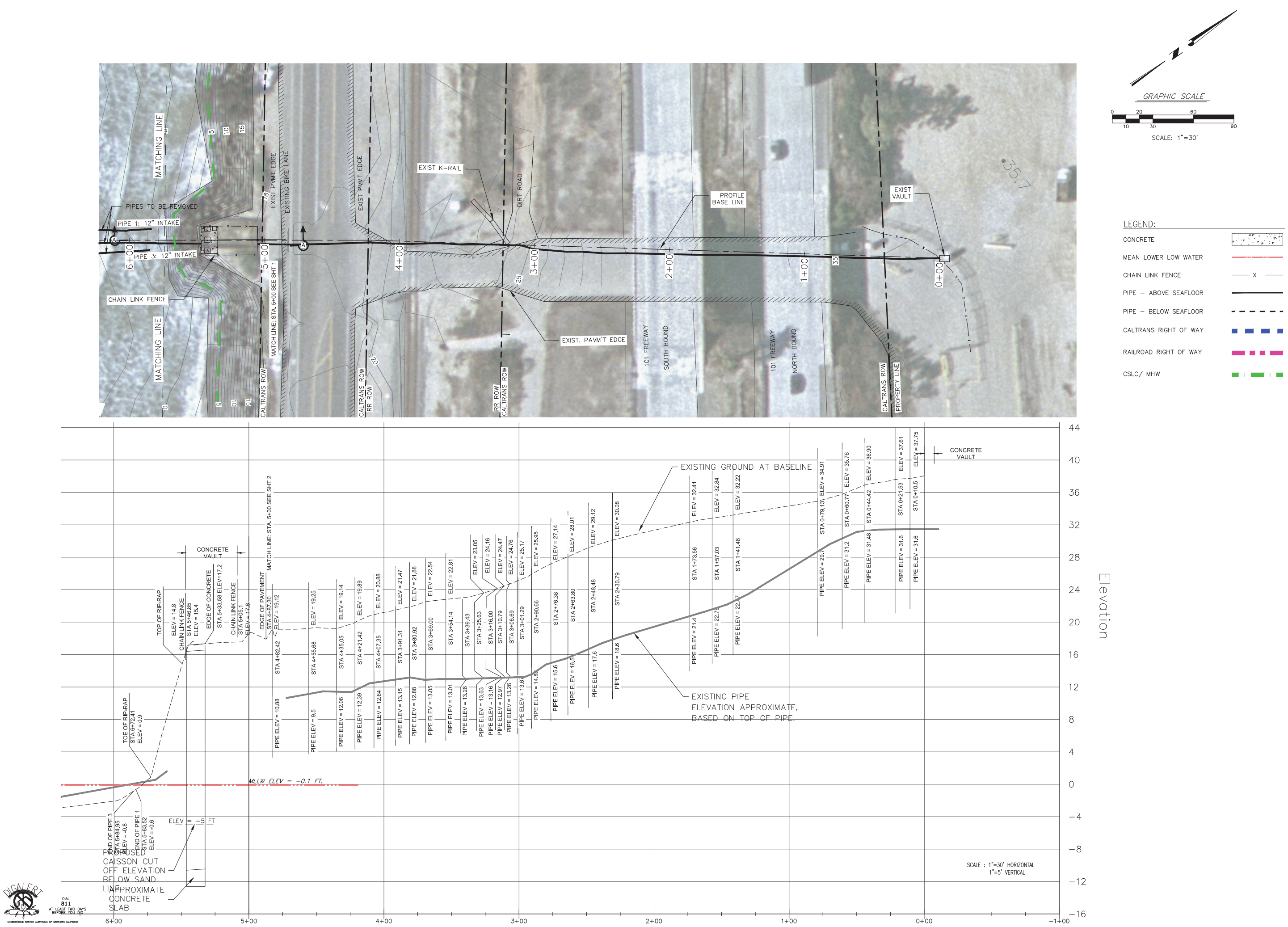
REVISIONS:

No.	DATE:	DESCRIPTION	DRAWN:	CHECKED:	APPROVED:
1	9/30/2019	ADDING TEMPORARY ACCESS RAMP AND PROTECTION	CMF	JOE	

DRAWING NO.

SHEET NAME:
PLAN AND PROFILE
EXISTING
OFFSHORE

Sheet NO.
C1.1


MATCHING LINE
PIPES TO BE REMOVED
PIPE 1: 12" INTAKE
PIPE 3: 12" INTAKE
CHAIN LINK FENCE
EXIST. PVMT EDGE
EXISTING BIKE LANE
MATCH LINE: STA. 5+00 SEE SHT 1
CALTRANS ROW
EXIST. PVMT EDGE
RR ROW
EXIST K-RAIL
DIRT ROAD
EXIST. PAVM'T EDGE
PROFILE BASE LINE
101 FREEWAY SOUTH BOUND
101 FREEWAY NORTH BOUND
CALTRANS ROW
PROPERTY LINE
EXIST VAULT
GRAPHIC SCALE
SCALE: 1"=30'
LEGEND:
CONCRETE
MEAN LOWER LOW WATER
CHAIN LINK FENCE
PIPE - ABOVE SEAFLOOR
PIPE - BELOW SEAFLOOR
CALTRANS RIGHT OF WAY
RAILROAD RIGHT OF WAY
CSLC/ MHW
CONCRETE VAULT
EXISTING GROUND AT BASELINE
EXISTING PIPE ELEVATION APPROXIMATE, BASED ON TOP OF PIPE.
MLLW ELEV = -0.1 FT.
ELEV = -5 FT
PROPOSED CAISSON CUT OFF ELEVATION BELOW SAND LINE
APPROXIMATE CONCRETE SLAB
TOP OF RIP-RAP
TOE OF RIP-RAP
SCALE : 1"=30' HORIZONTAL 1"=5' VERTICAL
Elevation
6+00
5+00
4+00
3+00
2+00
1+00
0+00
-1+00

1118-01B L123 Grubbs Lease Right Of Way Exhibit – 20190930 CMF

YCE INCORPORATED
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SHEET NAME:
PLAN AND PROFILE
EXISTING ONSHORE

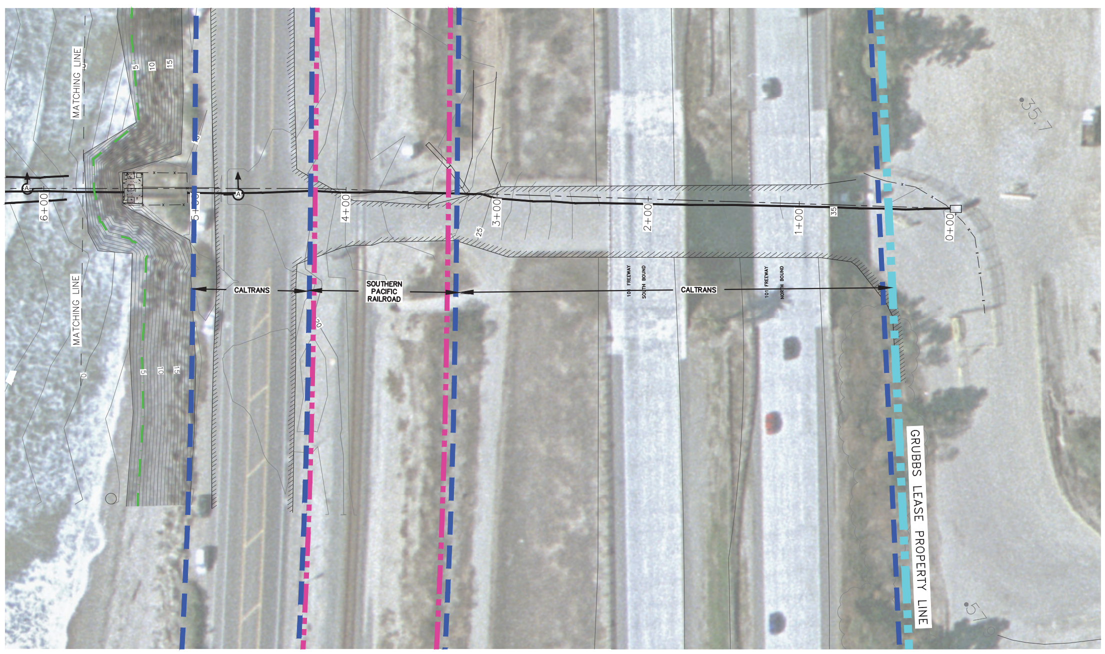
Sheet NO.
C1.2

PROPERTY LINE/ RIGHT OF WAY NOTE

THE PROPERTY LINE AND/OR RIGHT OF WAY DATA SHOWN ARE BASED ON RECORD DATA. NO FIELD SURVEY WAS CONDUCTED.

GRAPHIC SCALE

SCALE: 1"=30'



LEGEND:

- CONCRETE
- MEAN LOWER LOW WATER
- CHAIN LINK FENCE
- PIPE – ABOVE SEAFLOOR
- PIPE – BELOW SEAFLOOR
- CALTRANS RIGHT OF WAY
- RAILROAD RIGHT OF WAY
- CSLC/ MHW

DIGALERT DIAL 811 AT LEAST TWO DAYS BEFORE YOU DIG

1118-01B L123 Grubbs Lease Right Of Way Exhibit – 20190930 CMF

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REGISTERED PROFESSIONAL ENGINEER MARTA Y. ALVAREZ NO. 41700 CIVIL STATE OF CALIFORNIA

DECOMMISSIONING PLAN

GRUBB LEASE VENTURA
INTAKE/OUTFALL FACILITY
DECOMMISSIONING PROJECT

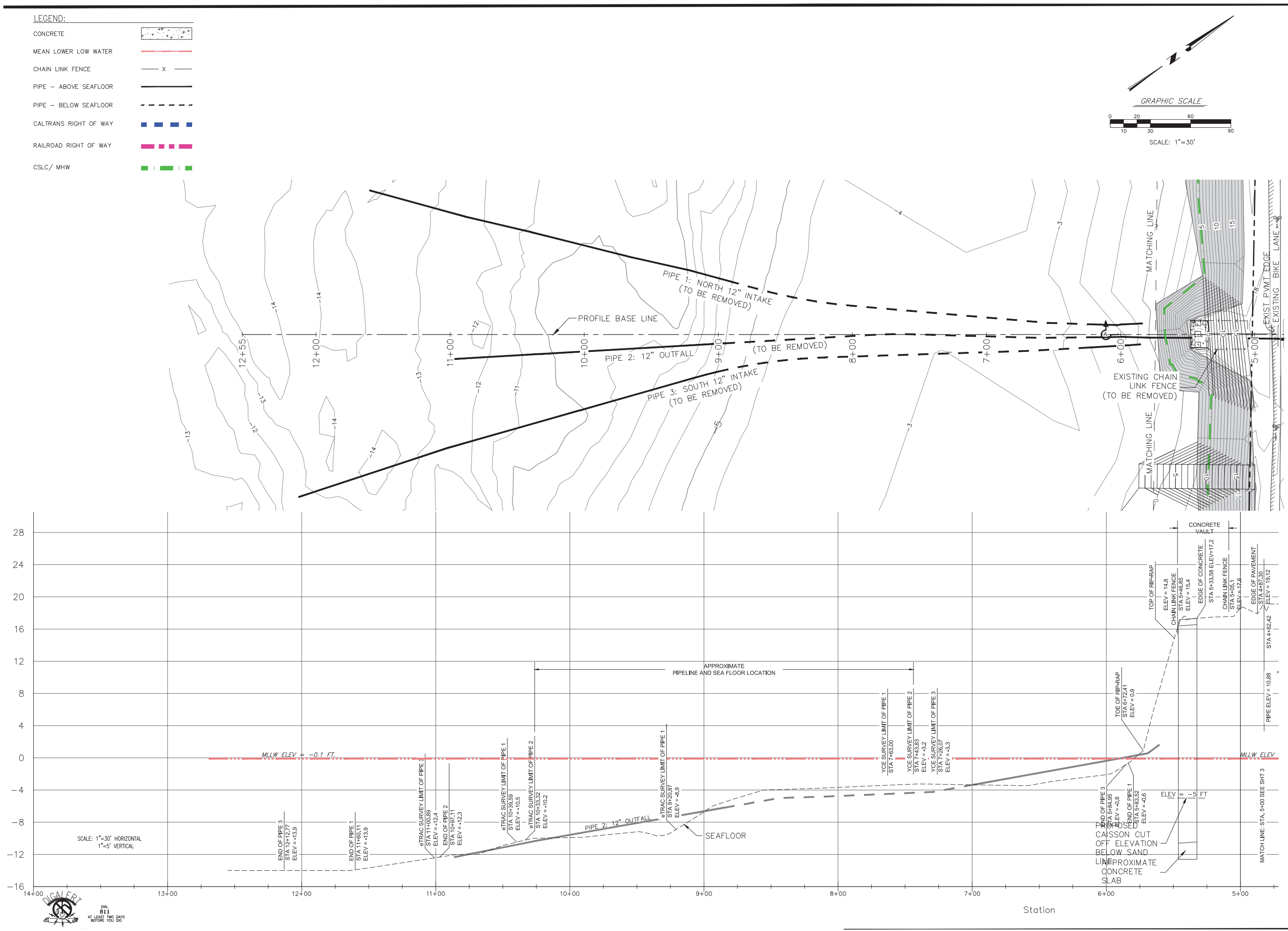
REVISIONS:

No.	DATE:	DESCRIPTION	DRAWN:	CHECKED:	APPROVED:
1	9/30/2019	ADDING TEMPORARY ACCESS RAMP AND PROTECTION	CMF	JOE	

DRAWING NO.

SHEET NAME: RIGHT OF WAY

Sheet NO. C1.3


LEGEND:
CONCRETE
MEAN LOWER LOW WATER
CHAIN LINK FENCE
PIPE – ABOVE SEAFLOOR
PIPE – BELOW SEAFLOOR
CALTRANS RIGHT OF WAY
RAILROAD RIGHT OF WAY
CSLC/ MHW
GRAPHIC SCALE
SCALE: 1"=30'
PIPE 1: NORTH 12" INTAKE (TO BE REMOVED)
PROFILE BASE LINE
PIPE 2: 12" OUTFALL (TO BE REMOVED)
PIPE 3: SOUTH 12" INTAKE (TO BE REMOVED)
EXISTING CHAIN LINK FENCE (TO BE REMOVED)
MATCHING LINE
EXIST PVMT EDGE
EXISTING BIKE LANE
12+55
12+00
11+00
10+00
9+00
8+00
7+00
6+00
5+00
CONCRETE VAULT
APPROXIMATE PIPELINE AND SEA FLOOR LOCATION
MLLW ELEV = -0.1 FT.
SEAFLOOR
PIPE 2: 12" OUTFALL
SCALE: 1"=30' HORIZONTAL 1"=5' VERTICAL
END OF PIPE 3 STA 12+12.77 ELEV = -13.9
END OF PIPE 1 STA 11+60.11 ELEV = -13.9
eTRAC SURVEY LIMIT OF PIPE 3 STA 11+00.89 ELEV = -12.4
END OF PIPE 2 STA 10+97.11 ELEV = -12.3
eTRAC SURVEY LIMIT OF PIPE 1 STA 10+39.59 ELEV = -10.5
eTRAC SURVEY LIMIT OF PIPE 2 STA 10+33.32 ELEV = -10.2
eTRAC SURVEY LIMIT OF PIPE 1 STA 9+20.87 ELEV = -8.9
YCE SURVEY LIMIT OF PIPE 1
YCE SURVEY LIMIT OF PIPE 2 STA 7+43.53 ELEV = -3.2
YCE SURVEY LIMIT OF PIPE 3 ELEV = -3.3
TOE OF RIP-RAP STA 6+72.41 ELEV = 0.9
END OF PIPE 3
END OF PIPE 1 STA 5+83.52 ELEV = -6.6
TOP OF CAISSON CUT OFF ELEVATION BELOW SAND LINE
APPROXIMATE CONCRETE SLAB
ELEV = -5 FT
TOP OF RIP-RAP ELEV = 14.8
CHAIN LINK FENCE STA 5+46.65 ELEV = 15.4
EDGE OF CONCRETE STA 5+33.58 ELEV=17.2
CHAIN LINK FENCE STA 5+05.1 ELEV = 17.6
EDGE OF PAVEMENT STA 4+87.30 ELEV = 19.12
STA 4+82.42
PIPE ELEV = 10.88
MATCH LINE: STA. 5+00 SEE SHT 3
MLLW ELEV
Station
DIGALERT DIAL 811 AT LEAST TWO DAYS BEFORE YOU DIG

1118-01B L123 Grubbs Lease Right Of Way Exhibit – 20190930 CMF

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REGISTERED PROFESSIONAL ENGINEER
MARTA Y. ALVAREZ
NO. 41700
CIVIL
STATE OF CALIFORNIA

DECOMMISSIONING PLAN

GRUBB LEASE VENTURA
INTAKE/OUTFALL FACILITY
DECOMMISSIONING PROJECT

DRAWN: CMF
CHECKED: JOE
APPROVED:

REVISIONS:

No.	DATE:	DESCRIPTION:
1	9/30/2019	ADDING TEMPORARY ACCESS RAMP AND PROTECTION

DRAWING NO.

SHEET NAME:
CONSTRUCTION OFFSHORE

Sheet NO.
C2.1

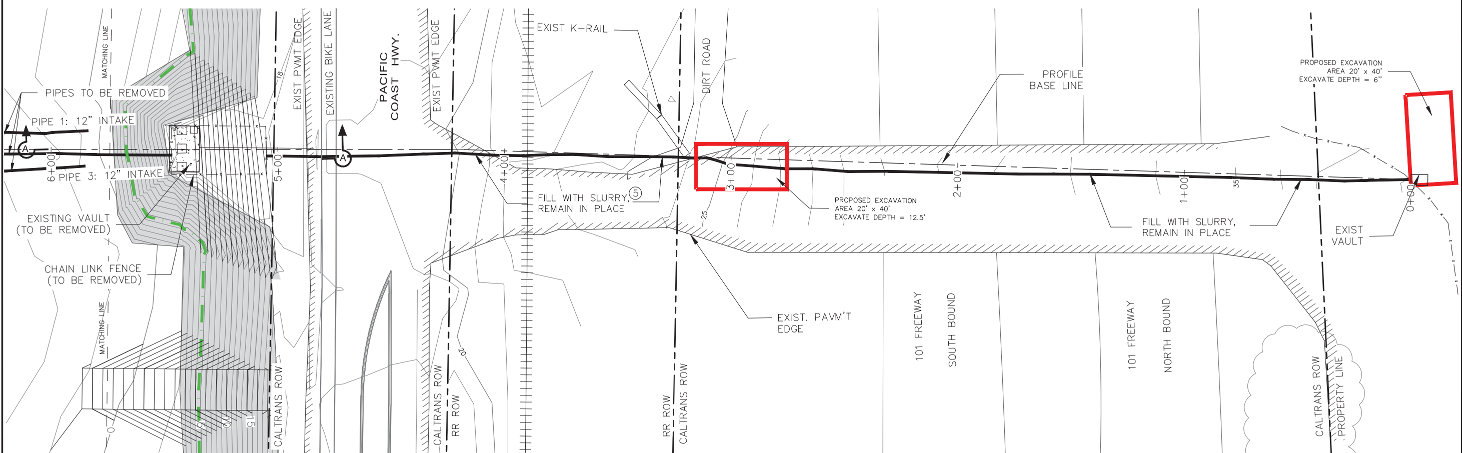
BENCHMARK DATA: W1216

5.05 MILES NORTHWEST ALONG THE SOUTHERN PACIFIC RAILROAD FROM THE STATION AT VENTURA, 0.15 MILE SOUTHEAST OF MILE POLE 393, IN THE TOP AND 1.0 FOOT SOUTHEAST OF THE NORTHWEST END OF THE NORTHEAST CONCRETE HEAD WALL OF CONCRETE BOX CULVERT 393.12, 5.5 FEET NORTHEAST OF THE NORTHEAST RAIL, 0.8 FOOT SOUTHWEST OF THE SOUTHWEST FACE OF A CONCRETE RETAINING WALL WHICH PROJECTS ABOUT 4 1/2 FEET ABOVE THE GROUND, AND ABOUT 1 FOOT HIGHER THAN THE TRACK

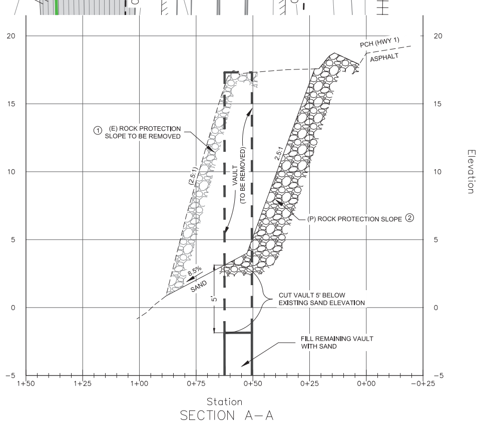
DESIGNATION: W1216 ELEV.=24.05'

CONSTRUCTION NOTES

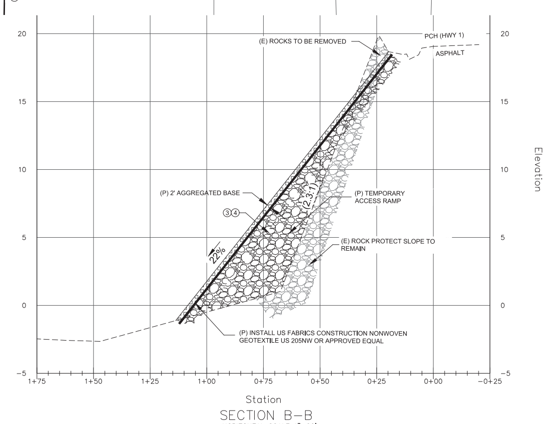
1. CONSTRUCT ROCK PROTECTION SLOPE USING ONSITE ROCKS OR APPROVED EQUAL
2. PROTECT AND STORE EXISTING ROCKS
3. CONSTRUCT TEMPORARY ACCESS RAMP USING ONSITE ROCKS.
4. AFTER DECOMMISSIONING, REMOVE ACCESS RAMP AND RESTORE ROCK PROTECT SLOPE TO ORIGINAL CONDITIONS.
5. THE CLSM MATERIAL SHALL HAVE AN UNCONFINED COMPRESSIVE STRENGTH 300PSI. THIS PROVIDES STRENGTH WHILE ALLOWING FUTURE REMOVAL IF NECESSARY. THE MIXTURE SHALL CONSIST OF WATER, PORTLAND CEMENT, FLY ASH, AND SOUND FINE OR COARSE AGGREGATE OR BOTH.
   THE MIX DESIGN SHALL ALLOW ADEQUATE FLOWABILITY WITHOUT SEGREGATION OF AGGREGATES. HARDENING TIME IS OF PRIME IMPORTANCE AND CLSM SHOULD DEVELOP 50PSI IN ABOUT ONE HOUR.



PIPES TO BE REMOVED
PIPE 1: 12" INTAKE
PIPE 3: 12" INTAKE
EXISTING VAULT (TO BE REMOVED)
CHAIN LINK FENCE (TO BE REMOVED)
MATCHING LINE
CALTRANS ROW
EXIST PVMT EDGE
EXISTING BIKE LANE
PACIFIC COAST HWY.
RR ROW
EXIST K-RAIL
FILL WITH SLURRY, REMAIN IN PLACE 5
DIRT ROAD
PROPOSED EXCAVATION AREA 20' x 40' EXCAVATE DEPTH = 12.5'
EXIST. PAVM'T EDGE
PROFILE BASE LINE
101 FREEWAY SOUTH BOUND
101 FREEWAY NORTH BOUND
FILL WITH SLURRY, REMAIN IN PLACE
EXIST VAULT
PROPOSED EXCAVATION AREA 20' x 40' EXCAVATE DEPTH = 6"
PROPERTY LINE
6+00
5+00
4+00
3+00
2+00
1+00
0+00



SECTION A–A
HORIZONTAL SCALE 1"=20'
VERTICAL SCALE 1"=5'



SECTION B–B
HORIZONTAL SCALE 1"=20'
VERTICAL SCALE 1"=5'

GRAPHIC SCALE
SCALE: 1"=20'

LEGEND:

- CHAIN LINK FENCE
- PIPE #2 – 12" OUTFALL
- EXISTING RAILROAD TRACKS
- EDGE OF PAVEMENT
- STATE LINE/ MHW
- EXISTING (E)
- PROPOSED (P)

DIG ALERT — DIAL 811 AT LEAST TWO DAYS BEFORE YOU DIG

1118-018 L123 Grubbs Lease Right Of Way Exhibit – 20190930 CMF

REVISIONS:

No.	DATE:	DESCRIPTION	DRAWN:	CHECKED:	APPROVED:
1	9/30/2019	ADDING TEMPORARY ACCESS RAMP AND PROTECTION	CMF	JOE	

DECOMMISSIONING PLAN

GRUBB LEASE VENTURA INTAKE/OUTFALL FACILITY DECOMMISSIONING PROJECT

DRAWING NO.

SHEET NAME: CONSTRUCTION ONSHORE

Sheet NO. C2.2

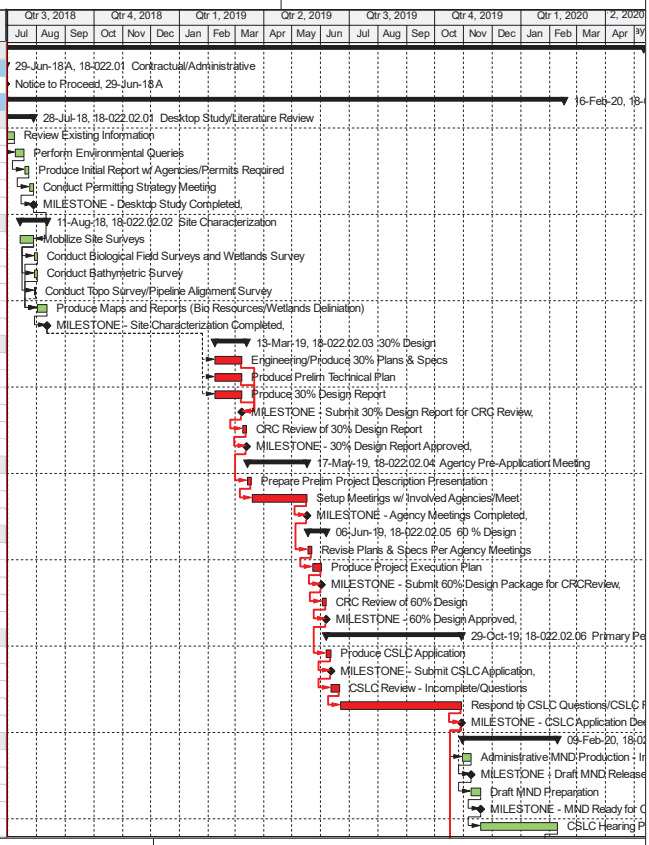
YCE INCORPORATED
Civil Engineering & Land Surveying
1587 Morse Avenue, Suite A – Ventura, CA 93003
LONGITUDE 123, INC.
2100 VALLEY MEADOW DRIVE
OAK VIEW, CA 93022

APPENDIX B – PRELIMINARY SCHEDULE

GRUBB LEASE OCEAN OUTFALL
FINAL DECOMMISSIONING

L123 Project: 18-022
Data Date: 29-Jun-18

#	Activity ID	Activity Name	Calendar	Original Duration	Start	Finish
1	**18-022**	**CRC Grubbs Lease Ocean Outfall Decommissioning**	7-Day Workweek	683	29-Jun-18 A	11-May-20
2	**18-022.01**	**Contractual/Administrative**	7-Day Workweek	0	29-Jun-18 A	29-Jun-18 A
3	01.010	Notice to Proceed	7-Day Workweek	0	29-Jun-18 A	
4	**18-022.02**	**Planning/Permitting**	7-Day Workweek	598	29-Jun-18	16-Feb-20
5	**18-022.02.01**	**Desktop Study/Literature Review**	7-Day Workweek	30	29-Jun-18	28-Jul-18
6	02.01.010	Review Existing Information	7-Day Workweek	10	29-Jun-18	08-Jul-18
7	02.01.020	Perform Environmental Queries	7-Day Workweek	10	09-Jul-18	18-Jul-18
8	02.01.030	Produce Initial Report w/ Agencies/Permits Required	7-Day Workweek	5	19-Jul-18	23-Jul-18
9	02.01.040	Conduct Permitting Strategy Meeting	7-Day Workweek	5	24-Jul-18	28-Jul-18
10	02.01.050	MILESTONE - Desktop Study Completed	7-Day Workweek	0		28-Jul-18
11	**18-022.02.02**	**Site Characterization**	7-Day Workweek	29	14-Jul-18	11-Aug-18
12	02.02.010	Mobilize Site Surveys	7-Day Workweek	15	14-Jul-18	28-Jul-18
13	02.02.020	Conduct Biological Field Surveys and Wetlands Surve	7-Day Workweek	4	29-Jul-18	01-Aug-18
14	02.02.030	Conduct Bathymetric Survey	7-Day Workweek	4	29-Jul-18	01-Aug-18
15	02.02.040	Conduct Topo Survey/Pipeline Alignment Survey	7-Day Workweek	2	29-Jul-18	30-Jul-18
16	02.02.050	Produce Maps and Reports (Bio Resources/Wetlands	7-Day Workweek	10	02-Aug-18	11-Aug-18
17	02.02.060	MILESTONE - Site Characterization Completed	7-Day Workweek	0		11-Aug-18
18	**18-022.02.03**	**30% Design**	7-Day Workweek	35	07-Feb-19	13-Mar-19
19	02.03.010	Engineering/Produce 30% Plans & Specs	7-Day Workweek	30	07-Feb-19*	08-Mar-19
20	02.03.020	Produce Prelim Technical Plan	7-Day Workweek	30	07-Feb-19*	08-Mar-19
21	02.03.030	Produce 30% Design Report	7-Day Workweek	30	07-Feb-19*	08-Mar-19
22	02.03.040	MILESTONE - Submit 30% Design Report for CRC F	7-Day Workweek	0		08-Mar-19
23	02.03.050	CRC Review of 30% Design Report	7-Day Workweek	5	09-Mar-19	13-Mar-19
24	02.03.060	MILESTONE - 30% Design Report Approved	7-Day Workweek	0		13-Mar-19
25	**18-022.02.04**	**Agency Pre-Application Meeting**	7-Day Workweek	65	14-Mar-19	17-May-19
26	02.04.010	Prepare Prelim Project Description Presentation	7-Day Workweek	5	14-Mar-19	18-Mar-19
27	02.04.020	Setup Meetings w/ Involved Agencies/Meet	7-Day Workweek	60	19-Mar-19	17-May-19
28	02.04.030	MILESTONE - Agency Meetings Completed	7-Day Workweek	0		17-May-19
29	**18-022.02.05**	**60 % Design**	7-Day Workweek	20	18-May-19	06-Jun-19
30	02.05.010	Revise Plans & Specs Per Agency Meetings	7-Day Workweek	5	18-May-19	22-May-19
31	02.05.020	Produce Project Execution Plan	7-Day Workweek	10	23-May-19	01-Jun-19
32	02.05.030	MILESTONE - Submit 60% Design Package for CRC	7-Day Workweek	0		01-Jun-19
33	02.05.040	CRC Review of 60% Design	7-Day Workweek	5	02-Jun-19	06-Jun-19
34	02.05.050	MILESTONE - 60% Design Approved	7-Day Workweek	0		06-Jun-19
35	**18-022.02.06**	**Primary Permit Application**	7-Day Workweek	145	07-Jun-19	29-Oct-19
36	02.06.010	Produce CSLC Application	7-Day Workweek	5	07-Jun-19	11-Jun-19
37	02.06.020	MILESTONE - Submit CSLC Application	7-Day Workweek	0		11-Jun-19
38	02.06.030	CSLC Review - Incomplete/Questions	7-Day Workweek	10	12-Jun-19	21-Jun-19
39	02.06.040	Respond to CSLC Questions/CSLC Review	7-Day Workweek	130	22-Jun-19	29-Oct-19
40	02.06.050	MILESTONE - CSLC Application Deemed Complete	7-Day Workweek	0		29-Oct-19
41	**18-022.02.07**	**Produce/Certify MND**	7-Day Workweek	103	30-Oct-19	09-Feb-20
42	02.07.010	Administrative MND Production - In-House	7-Day Workweek	10	30-Oct-19	08-Nov-19
43	02.07.020	MILESTONE - Draft MND Released	7-Day Workweek	0		08-Nov-19
44	02.07.030	Draft MND Preparation	7-Day Workweek	10	09-Nov-19	18-Nov-19
45	02.07.040	MILESTONE - MND Ready for Certification	7-Day Workweek	0		18-Nov-19
46	02.07.050	CSLC Hearing Process	7-Day Workweek	83	19-Nov-19	09-Feb-20



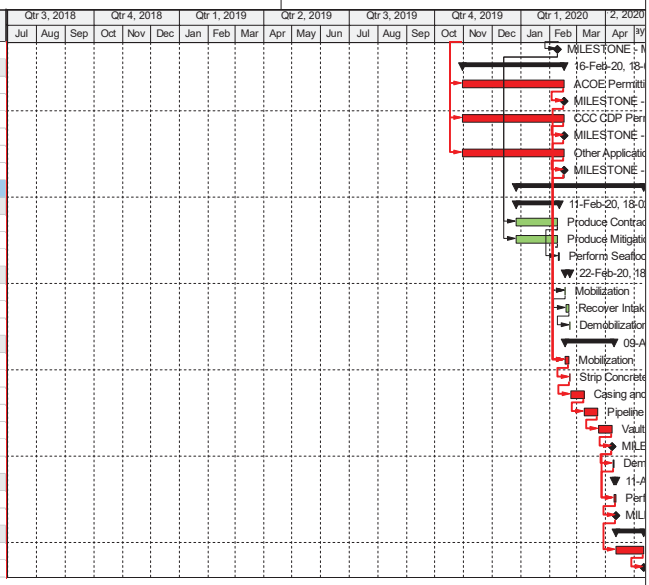
Actual Level of Effort
Actual Work
Remaining Work
Critical Remaining Work
Milestone
summary

PRELIMINARY SCHEDULE
REV 5 - 23-Oct-19

GRUBB LEASE OCEAN OUTFALL
FINAL DECOMMISSIONING

L123 Project: 18-022
Data Date: 29-Jun-18

#	Activity ID	Activity Name	Calendar	Original Duration	Start	Finish
47	02.07.060	MILESTONE - MND Certified	7-Day Workweek	0		09-Feb-20
48	**18-022.02.08**	**Other Agency Applications**	7-Day Workweek	110	30-Oct-19	16-Feb-20
49	02.08.010	ACOE Permitting Process	7-Day Workweek	110	30-Oct-19	16-Feb-20
50	02.08.020	MILESTONE - ACOE 404 Permit Issued	7-Day Workweek	0		16-Feb-20
51	02.08.030	CCC CDP Permitting Process	7-Day Workweek	110	30-Oct-19	16-Feb-20
52	02.08.040	MILESTONE - CCC CDP Certification	7-Day Workweek	0		16-Feb-20
53	02.08.050	Other Applications	7-Day Workweek	110	30-Oct-19	16-Feb-20
54	02.08.060	MILESTONE - Other Permits Issued	7-Day Workweek	0		16-Feb-20
55	**18-022.03**	**Decommissioning/Construction**	7-Day Workweek	137	27-Dec-19	11-May-20
56	**18-022.03.01**	**Mobilization**	7-Day Workweek	47	27-Dec-19	11-Feb-20
57	03.01.020	Produce Contractor Work Plan	7-Day Workweek	45	27-Dec-19	09-Feb-20
58	03.01.030	Produce Mitigation Monitoring Plan	7-Day Workweek	45	27-Dec-19	09-Feb-20
59	03.01.040	Perform Seafloor Debris Survey	7-Day Workweek	2	10-Feb-20	11-Feb-20
60	**18-022.03.02**	**Offshore Work**	7-Day Workweek	6	17-Feb-20	22-Feb-20
61	03.02.010	Mobilization	7-Day Workweek	1	17-Feb-20	17-Feb-20
62	03.02.020	Recover Intake Structures	7-Day Workweek	4	18-Feb-20	21-Feb-20
63	03.02.030	Demobilization	7-Day Workweek	1	22-Feb-20	22-Feb-20
64	**18-022.03.03**	**Onshore Work**	7-Day Workweek	53	17-Feb-20	09-Apr-20
65	03.03.010	Mobilization	7-Day Workweek	5	17-Feb-20	21-Feb-20
66	03.03.020	Strip Concrete Vault - Piping/Fencing/Electric	7-Day Workweek	1	22-Feb-20	22-Feb-20
67	03.03.030	Casing and Pipeline Decommissioning	7-Day Workweek	15	23-Feb-20	08-Mar-20
68	03.03.040	Pipeline Recovery and Removal	7-Day Workweek	15	09-Mar-20	23-Mar-20
69	03.03.050	Vault Removal and Seawall Construction	7-Day Workweek	15	24-Mar-20	07-Apr-20
70	03.03.060	MILESTONE - Onshore Work Completed	7-Day Workweek	0		07-Apr-20
71	03.03.070	Demobilization	7-Day Workweek	2	08-Apr-20	09-Apr-20
72	**18-022.03.04**	**Final Surveys**	7-Day Workweek	2	10-Apr-20	11-Apr-20
73	03.04.040	Perform Seafloor Debris Survey	7-Day Workweek	2	10-Apr-20	11-Apr-20
74	03.04.050	MILESTONE - Offshore Work Completed	7-Day Workweek	0		11-Apr-20
75	**18-022.03.05**	**Final Report / As-Builts**	7-Day Workweek	30	12-Apr-20	11-May-20
76	03.04.010	Develop Final Report / As-Builts	7-Day Workweek	30	12-Apr-20	11-May-20
77	03.04.020	Deliver Final Report / As-Builts	7-Day Workweek	0		11-May-20



Actual Level of Effort | Remaining Work | Milestone
Actual Work | Critical Remaining Work | summary

PRELIMINARY SCHEDULE
REV 5 - 23-Oct-19

Attachment 2 –

Oilfield Environmental & Compliance, Inc. Analytical Results (April 2019)

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

SAMPLE SUMMARY

Sample ID	Laboratory ID	Client Matrix	Lab Matrix	Date Sampled	Date Received
GRUBB-SEA-041019	1901882-01	Water	Water	04/10/19 08:50	04/10/19 16:55

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

SAMPLE SUMMARY

Sample ID	Laboratory ID	Client Matrix	Lab Matrix	Date Sampled	Date Received
GRUBB-SEA-041019	1901882-01	Water	Water	04/10/19 08:50	04/10/19 16:55

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

ANALYTICAL REPORT FOR SAMPLES
1901882-01 (Water)
GRUBB-SEA-041019

Analyte	Result	RL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Microbiological Parameters by CA Dept. of Fish and Game									
Bioassay 96 Hour Screen	Pass			1	B9D0381	04/12/19	04/12/19	Polisini & Miller (CDFG 1988)	LC50
Total Metals by CVAA									
Mercury	ND	0.00020	mg/L	1	B9D0398	04/15/19	04/15/19	EPA 7470A	
Total Metals by ICP									
Antimony	ND	0.050	mg/L	1	B9D0340	04/11/19	04/12/19	EPA 6010B	
Arsenic	ND	0.040	"	"	"	"	"	"	
Barium	**0.19**	0.010	"	"	"	"	"	"	
Beryllium	ND	0.010	"	"	"	"	"	"	
Cadmium	ND	0.0050	"	"	"	"	"	"	
Chromium	ND	0.010	"	"	"	"	"	"	
Cobalt	ND	0.010	"	"	"	"	"	"	
Copper	ND	0.010	"	"	"	"	"	"	
Lead	ND	0.010	"	"	"	"	"	"	
Molybdenum	ND	0.010	"	"	"	"	"	"	
Nickel	ND	0.010	"	"	"	"	"	"	
Selenium	ND	0.050	"	"	"	"	"	"	
Silver	ND	0.010	"	"	"	"	"	"	
Thallium	ND	0.020	"	"	"	"	"	"	
Vanadium	ND	0.050	"	"	"	"	"	"	
Zinc	**0.70**	0.050	"	"	"	"	"	"	
General Chemistry Parameters by EPA or APHA Standard Methods									
pH @ 25 C	**7.48**	0.10	pH Units	1	B9D0403	04/15/19	04/15/19	EPA 9040B/SM4500 H- B	HT-pH
pH Sample Temperature During Analysis	**23**	1.0	°C	"	"	"	"	EPA 170.1/SM 2550B	
Cyanide, reactive	ND	0.100	mg/L	"	B9D0328	04/11/19	04/11/19	SW846, 7.3	
Sulfide, reactive	ND	20.0	"	"	B9D0326	"	"	SW 846 7.3	
Flashpoint	>212	72	°F	"	B9D0482	04/17/19	04/17/19	EPA 1010	
Total Oil & Grease	ND	5.0	mg/L	"	B9D0442	04/16/19	04/16/19	EPA 1664	

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Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

1901882-01 (Water)
GRUBB-SEA-041019

Analyte	Result	RL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic TPH by GC/FID									
TPH Gasoline (C4-C12)	ND	50	ug/L	1	B9D0374	04/12/19	04/13/19	EPA 8015M	
Surrogate: 4-Bromofluorobenzene		*82.1 %*	*(47 - 155)*		"	"	"	"	
Semi-Volatile Organic TPH by GC/FID									
TPH Diesel (C13-C22)	ND	0.052	mg/L	1	B9D0339	04/11/19	04/12/19	EPA 8015M	
TPH Motor Oil (C23-C40)	ND	0.10	"	"	"	"	"	"	
Surrogate: o-Terphenyl		*93.3 %*	*(42 - 153)*		"	"	"	"	
Volatile Organic Compounds by GC/MS									R-07
Benzene	ND	200	ug/L	400	B9D0445	04/16/19	04/16/19	EPA 8260B	
Bromobenzene	ND	200	"	"	"	"	"	"	
Bromochloromethane	ND	200	"	"	"	"	"	"	
Bromodichloromethane	ND	200	"	"	"	"	"	"	
Bromoform	ND	200	"	"	"	"	"	"	
Bromomethane	ND	200	"	"	"	"	"	"	
n-Butylbenzene	ND	200	"	"	"	"	"	"	
sec-Butylbenzene	ND	200	"	"	"	"	"	"	
tert-Butylbenzene	ND	200	"	"	"	"	"	"	
Carbon tetrachloride	ND	200	"	"	"	"	"	"	
Chlorobenzene	ND	200	"	"	"	"	"	"	
Chloroethane	ND	200	"	"	"	"	"	"	
Chloroform	ND	200	"	"	"	"	"	"	
Chloromethane	ND	200	"	"	"	"	"	"	
2-Chlorotoluene	ND	200	"	"	"	"	"	"	
4-Chlorotoluene	ND	200	"	"	"	"	"	"	
Dibromochloromethane	ND	200	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	400	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	200	"	"	"	"	"	"	
Dibromomethane	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	200	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	200	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	200	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	200	"	"	"	"	"	"	
1,1-Dichloroethane	ND	200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	200	"	"	"	"	"	"	
1,1-Dichloroethene	ND	200	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	200	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	200	"	"	"	"	"	"	

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Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

1901882-01 (Water)
GRUBB-SEA-041019

Analyte	Result	RL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by GC/MS (Continued)									R-07
1,2-Dichloropropane	ND	200	ug/L	400	B9D0445	04/16/19	04/16/19	EPA 8260B	
1,3-Dichloropropane	ND	200	"	"	"	"	"	"	
2,2-Dichloropropane	ND	200	"	"	"	"	"	"	
1,1-Dichloropropene	ND	200	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	200	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	200	"	"	"	"	"	"	
Ethylbenzene	ND	200	"	"	"	"	"	"	
Hexachlorobutadiene	ND	200	"	"	"	"	"	"	
4-Isopropyl Toluene	ND	200	"	"	"	"	"	"	
Isopropylbenzene	ND	200	"	"	"	"	"	"	
Methylene chloride	ND	200	"	"	"	"	"	"	
Naphthalene	ND	200	"	"	"	"	"	"	
n-Propylbenzene	ND	200	"	"	"	"	"	"	
Styrene	ND	200	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	200	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	200	"	"	"	"	"	"	
Tetrachloroethene (PCE)	ND	200	"	"	"	"	"	"	
Toluene	ND	200	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	200	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	200	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	200	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	200	"	"	"	"	"	"	
Trichloroethene (TCE)	ND	200	"	"	"	"	"	"	
Trichlorofluoromethane	ND	200	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	200	"	"	"	"	"	"	
Vinyl chloride	ND	200	"	"	"	"	"	"	
Xylenes (total)	ND	200	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*(83 - 119)*		"	"	"	"	
Surrogate: Toluene-d8		*99.0 %*	*(69 - 120)*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*(79 - 125)*		"	"	"	"	

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1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

1901882-01 (Water)
GRUBB-SEA-041019

Analyte	Result	RL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Organochlorine Pesticides by GC/ECD/ECD									
alpha-BHC	ND	0.11	ug/L	1	B9D0441	04/16/19	04/16/19	EPA 8081A	
alpha-Chlordane	ND	0.11	"	"	"	"	"	"	
Aldrin	ND	0.11	"	"	"	"	"	"	
beta-BHC	ND	0.11	"	"	"	"	"	"	
delta-BHC	ND	0.11	"	"	"	"	"	"	
4,4´-DDD	ND	0.11	"	"	"	"	"	"	
4,4´-DDE	ND	0.11	"	"	"	"	"	"	
4,4´-DDT	ND	0.11	"	"	"	"	"	"	
Dieldrin	ND	0.11	"	"	"	"	"	"	
Endosulfan I	ND	0.11	"	"	"	"	"	"	
Endosulfan II	ND	0.11	"	"	"	"	"	"	
Endosulfan sulfate	ND	0.11	"	"	"	"	"	"	
Endrin	ND	0.11	"	"	"	"	"	"	
Endrin aldehyde	ND	0.11	"	"	"	"	"	"	
Endrin ketone	ND	0.11	"	"	"	"	"	"	
gamma-BHC	ND	0.11	"	"	"	"	"	"	
gamma-Chlordane	ND	0.11	"	"	"	"	"	"	
Heptachlor	ND	0.11	"	"	"	"	"	"	
Heptachlor epoxide	ND	0.11	"	"	"	"	"	"	
Methoxychlor	ND	0.11	"	"	"	"	"	"	
Chlordane (tech)	ND	0.57	"	"	"	"	"	"	
Toxaphene	ND	0.57	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*104 %*	*(10 - 202)*		"	"	"	"	
Surrogate: 2,4,5,6 Tetrachloro-m-xylene		*102 %*	*(10 - 145)*		"	"	"	"	

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1901882-01 (Water)
GRUBB-SEA-041019

Analyte	Result	RL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Polychlorinated Biphenyls by GC/ECD									
PCB-1016	ND	0.57	ug/L	1	B9D0441	04/16/19	04/16/19	EPA 8082	
PCB-1221	ND	0.57	"	"	"	"	"	"	
PCB-1232	ND	0.57	"	"	"	"	"	"	
PCB-1242	ND	0.57	"	"	"	"	"	"	
PCB-1248	ND	0.57	"	"	"	"	"	"	
PCB-1254	ND	0.57	"	"	"	"	"	"	
PCB-1260	ND	0.57	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*91.3 %*	*(10 - 202)*		"	"	"	"	
Surrogate: 2,4,5,6 Tetrachloro-m-xylene		*74.0 %*	*(10 - 145)*		"	"	"	"	

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1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
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Microbiological Parameters by CA Dept. of Fish and Game - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0381 - Polisini & Miller (CDFG 1988)	Preparation: Bio/Micro Prep 04/12/19 11:03									
Blank (B9D0381-BLK1)			Analyzed: 04/12/19 11:03							
Bioassay 96 Hour Screen	Pass									LC50
Blank (B9D0381-BLK2)			Analyzed: 04/12/19 11:03							
Bioassay 96 Hour Screen	Pass									LC50

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Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Total Metals by CVAA - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0398 - EPA 7470A Preparation: EPA 7470A Prep 04/15/19 08:11										
Blank (B9D0398-BLK1)				Analyzed: 04/15/19 15:01						
Mercury	ND	0.00020	mg/L							
LCS (B9D0398-BS1)				Analyzed: 04/15/19 14:57						
Mercury	0.00950	0.00020	mg/L	0.0100		95.0	85-115			
LCS Dup (B9D0398-BSD1)				Analyzed: 04/15/19 14:59						
Mercury	0.00963	0.00020	mg/L	0.0100		96.3	85-115	1.32	20	
Duplicate (B9D0398-DUP1)	**Source: 1901882-01**			Analyzed: 04/15/19 15:10						
Mercury	ND	0.00020	mg/L		ND				20	
Matrix Spike (B9D0398-MS1)	**Source: 1901890-03**			Analyzed: 04/15/19 15:12						
Mercury	0.00795	0.00020	mg/L	0.0100	0.000208	77.4	75-125			
Matrix Spike Dup (B9D0398-MSD1)	**Source: 1901890-03**			Analyzed: 04/15/19 15:14						
Mercury	0.00904	0.00020	mg/L	0.0100	0.000208	88.4	75-125	12.9	20	
Post Spike (B9D0398-PS1)	**Source: 1901914-01**			Analyzed: 04/15/19 15:16						
Mercury	5.05		ug/L	5.00	0.0149	101	85-115			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
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Total Metals by ICP - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0340 - EPA 6010B Preparation: EPA 3010A 04/11/19 10:08										
Blank (B9D0340-BLK1)			Analyzed: 04/12/19 17:37							
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.040	"							
Barium	ND	0.010	"							
Beryllium	ND	0.010	"							
Cadmium	ND	0.0050	"							
Chromium	ND	0.010	"							
Cobalt	ND	0.010	"							
Copper	ND	0.010	"							
Lead	ND	0.010	"							
Molybdenum	ND	0.010	"							
Nickel	ND	0.010	"							
Selenium	ND	0.050	"							
Silver	ND	0.010	"							
Thallium	ND	0.020	"							
Vanadium	ND	0.050	"							
Zinc	ND	0.050	"							
LCS (B9D0340-BS1)			Analyzed: 04/12/19 17:39							
Antimony	1.98	0.050	mg/L	2.00		99.0	80-120			
Arsenic	1.95	0.040	"	2.00		97.5	80-120			
Barium	1.95	0.010	"	2.00		97.4	80-120			
Beryllium	1.97	0.010	"	2.00		98.3	80-120			
Cadmium	2.00	0.0050	"	2.00		100	80-120			
Chromium	1.94	0.010	"	2.00		97.1	80-120			
Cobalt	2.01	0.010	"	2.00		100	80-120			
Copper	1.96	0.010	"	2.00		98.2	80-120			
Lead	2.02	0.010	"	2.00		101	80-120			
Molybdenum	1.98	0.010	"	2.00		98.8	80-120			
Nickel	2.03	0.010	"	2.00		101	80-120			
Selenium	1.92	0.050	"	2.00		96.2	80-120			
Silver	0.0975	0.010	"	0.100		97.5	80-120			
Thallium	1.95	0.020	"	2.00		97.4	80-120			
Vanadium	1.88	0.050	"	2.00		94.0	80-120			
Zinc	1.98	0.050	"	2.00		99.0	80-120			

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Total Metals by ICP - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0340 - EPA 6010B Preparation: EPA 3010A 04/11/19 10:08										
LCS Dup (B9D0340-BSD1)			Analyzed: 04/12/19 17:42							
Antimony	1.99	0.050	mg/L	2.00		99.4	80-120	0.302	20	
Arsenic	1.95	0.040	"	2.00		97.4	80-120	0.0513	20	
Barium	1.95	0.010	"	2.00		97.6	80-120	0.205	20	
Beryllium	1.96	0.010	"	2.00		98.2	80-120	0.102	20	
Cadmium	1.99	0.0050	"	2.00		99.7	80-120	0.300	20	
Chromium	1.96	0.010	"	2.00		98.2	80-120	1.08	20	
Cobalt	2.00	0.010	"	2.00		100	80-120	0.299	20	
Copper	1.99	0.010	"	2.00		99.4	80-120	1.16	20	
Lead	2.01	0.010	"	2.00		101	80-120	0.248	20	
Molybdenum	1.99	0.010	"	2.00		99.3	80-120	0.505	20	
Nickel	2.02	0.010	"	2.00		101	80-120	0.445	20	
Selenium	1.94	0.050	"	2.00		96.8	80-120	0.674	20	
Silver	0.0988	0.010	"	0.100		98.8	80-120	1.32	20	
Thallium	1.92	0.020	"	2.00		96.2	80-120	1.24	20	
Vanadium	1.91	0.050	"	2.00		95.6	80-120	1.74	20	
Zinc	1.97	0.050	"	2.00		98.7	80-120	0.253	20	
Duplicate (B9D0340-DUP1)	**Source: 1901859-01**		Analyzed: 04/12/19 17:57							
Antimony	ND	0.050	mg/L		ND				20	
Arsenic	ND	0.040	"		ND				20	
Barium	0.0244	0.010	"		0.0255			4.41	20	
Beryllium	ND	0.010	"		ND				20	
Cadmium	ND	0.0050	"		ND				20	
Chromium	ND	0.010	"		ND				20	
Cobalt	ND	0.010	"		ND				20	
Copper	ND	0.010	"		ND				20	
Lead	0.00950	0.010	"		0.00710			28.9	20	QR-04
Molybdenum	ND	0.010	"		ND				20	
Nickel	0.00590	0.010	"		0.00570			3.45	20	
Selenium	ND	0.050	"		ND				20	
Silver	ND	0.010	"		ND				20	
Thallium	ND	0.020	"		ND				20	
Vanadium	ND	0.050	"		ND				20	
Zinc	0.0520	0.050	"		0.0491			5.74	20	

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
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Total Metals by ICP - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0340 - EPA 6010B Preparation: EPA 3010A 04/11/19 10:08										
Matrix Spike (B9D0340-MS1)	**Source: 1901859-01**		Analyzed: 04/12/19 17:44							
Antimony	2.05	0.050	mg/L	2.00	ND	102	67-135			
Arsenic	2.05	0.040	"	2.00	ND	103	76-137			
Barium	1.99	0.010	"	2.00	0.0255	98.2	70-132			
Beryllium	2.01	0.010	"	2.00	ND	100	85-121			
Cadmium	1.98	0.0050	"	2.00	ND	99.0	84-121			
Chromium	1.96	0.010	"	2.00	ND	98.2	82-123			
Cobalt	1.98	0.010	"	2.00	ND	98.8	83-121			
Copper	2.02	0.010	"	2.00	ND	101	77-128			
Lead	1.96	0.010	"	2.00	0.00710	97.7	79-121			
Molybdenum	2.02	0.010	"	2.00	ND	101	59-142			
Nickel	1.99	0.010	"	2.00	0.00570	99.2	82-121			
Selenium	2.02	0.050	"	2.00	ND	101	51-154			
Silver	0.100	0.010	"	0.100	ND	100	78-132			
Thallium	1.85	0.020	"	2.00	ND	92.6	67-129			
Vanadium	1.96	0.050	"	2.00	ND	98.0	84-122			
Zinc	2.02	0.050	"	2.00	0.0491	98.7	72-140			
Matrix Spike Dup (B9D0340-MSD1)	**Source: 1901859-01**		Analyzed: 04/12/19 17:47							
Antimony	2.05	0.050	mg/L	2.00	ND	103	67-135	0.293	20	
Arsenic	2.05	0.040	"	2.00	ND	103	76-137	0.0975	20	
Barium	2.00	0.010	"	2.00	0.0255	99.0	70-132	0.751	20	
Beryllium	2.02	0.010	"	2.00	ND	101	85-121	0.447	20	
Cadmium	1.99	0.0050	"	2.00	ND	99.3	84-121	0.252	20	
Chromium	1.96	0.010	"	2.00	ND	98.2	82-123	0.102	20	
Cobalt	1.98	0.010	"	2.00	ND	99.0	83-121	0.152	20	
Copper	2.01	0.010	"	2.00	ND	101	77-128	0.199	20	
Lead	1.97	0.010	"	2.00	0.00710	98.2	79-121	0.559	20	
Molybdenum	2.03	0.010	"	2.00	ND	101	59-142	0.346	20	
Nickel	1.99	0.010	"	2.00	0.00570	99.3	82-121	0.151	20	
Selenium	2.02	0.050	"	2.00	ND	101	51-154	0.0496	20	
Silver	0.100	0.010	"	0.100	ND	100	78-132	0.00	20	
Thallium	1.92	0.020	"	2.00	ND	96.1	67-129	3.76	20	
Vanadium	1.97	0.050	"	2.00	ND	98.5	84-122	0.509	20	
Zinc	2.03	0.050	"	2.00	0.0491	98.8	72-140	0.148	20	

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Total Metals by ICP - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0340 - EPA 6010B Preparation: EPA 3010A 04/11/19 10:08										
Post Spike (B9D0340-PS1)	**Source: 1901859-01**		Analyzed: 04/12/19 17:49							
Antimony	2.08		mg/L	2.00	-0.00235	104	75-125			
Arsenic	2.08		"	2.00	0.00254	104	75-125			
Barium	2.04		"	2.00	0.0249	101	75-125			
Beryllium	2.05		"	2.00	-0.0000978	103	75-125			
Cadmium	2.02		"	2.00	-0.000196	101	75-125			
Chromium	2.01		"	2.00	0.00313	100	75-125			
Cobalt	2.01		"	2.00	0.000196	101	75-125			
Copper	2.06		"	2.00	0.00225	103	75-125			
Lead	2.01		"	2.00	0.00694	100	75-125			
Molybdenum	2.04		"	2.00	0.00450	102	75-125			
Nickel	2.02		"	2.00	0.00557	101	75-125			
Selenium	2.05		"	2.00	0.0107	102	75-125			
Silver	0.103		"	0.100	-0.000587	103	75-125			
Thallium	1.87		"	2.00	0.000489	93.4	75-125			
Vanadium	2.01		"	2.00	0.00196	100	75-125			
Zinc	2.06		"	2.00	0.0480	101	75-125			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

General Chemistry Parameters by EPA or APHA Standard Methods - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0326 - SW 846 7.3 Preparation: EPA 9030 04/11/19 08:26										
Blank (B9D0326-BLK1)			Analyzed: 04/11/19 08:26							
Sulfide, reactive	ND	20.0	mg/L							
LCS (B9D0326-BS1)			Analyzed: 04/11/19 08:26							
Sulfide, reactive	20.5	20.0	mg/L	32.0		64.1	32-103			
Duplicate (B9D0326-DUP1) **Source: 1901882-01**			Analyzed: 04/11/19 08:26							
Sulfide, reactive	ND	20.0	mg/L		ND				20	
Batch B9D0328 - SW846. 7.3 Preparation: EPA 9030 04/11/19 08:26										
Blank (B9D0328-BLK1)			Analyzed: 04/11/19 08:26							
Cyanide, reactive	ND	0.100	mg/L							
LCS (B9D0328-BS1)			Analyzed: 04/11/19 08:26							
Cyanide, reactive	0.242	0.100	mg/L	1.60		15.1	5-42			
Duplicate (B9D0328-DUP1) **Source: 1901882-01**			Analyzed: 04/11/19 08:26							
Cyanide, reactive	ND	0.100	mg/L		ND				20	
Batch B9D0403 - EPA 9040B/SM4500H+ B Preparation: EPA 9040B pH Prep 04/15/19 08:47										
LCS (B9D0403-BS1)			Analyzed: 04/15/19 08:47							
pH @ 25 C	3.96	0.10	pH Units	4.00		99.0	90-110			
LCS (B9D0403-BS2)			Analyzed: 04/15/19 08:47							
pH @ 25 C	7.00	0.10	pH Units	7.00		100	90-110			
LCS (B9D0403-BS3)			Analyzed: 04/15/19 08:47							
pH @ 25 C	10.02	0.10	pH Units	10.0		100	90-110			
LCS (B9D0403-BS4)			Analyzed: 04/15/19 08:47							
pH @ 25 C	12.00	0.10	pH Units	12.0		100	90-110			
Duplicate (B9D0403-DUP1) **Source: 1901838-02**			Analyzed: 04/15/19 08:47							
pH @ 25 C	7.70	0.10	pH Units		7.73			0.389	10	
pH Sample Temperature During Analysis	23.5	1.0	°C		23.9			1.69	10	

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

General Chemistry Parameters by EPA or APHA Standard Methods - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0403 - EPA 9040B/SM4500H+ B Preparation: EPA 9040B pH Prep 04/15/19 08:47										
Duplicate (B9D0403-DUP2)	**Source: 1901862-01**		Analyzed: 04/15/19 08:47							
pH @ 25 C	7.63	0.10	pH Units		7.70			0.913	10	
pH Sample Temperature During Analysis	23.4	1.0	°C		23.4			0.00	10	
Batch B9D0442 - EPA 1664 Preparation: EPA 1664 Oil and Grease Prep 04/16/19 09:30										
Blank (B9D0442-BLK1)			Analyzed: 04/16/19 09:30							
Total Oil & Grease	ND	5.0	mg/L							
LCS (B9D0442-BS1)			Analyzed: 04/16/19 09:30							
Total Oil & Grease	38.8	5.0	mg/L	40.0		97.0	78-114			
LCS Dup (B9D0442-BSD1)			Analyzed: 04/16/19 09:30							
Total Oil & Grease	33.2	5.0	mg/L	40.0		83.0	78-114	15.6	18	
Batch B9D0482 - EPA 1010 Preparation: EPA 1010 Prep 04/17/19 08:55										
Blank (B9D0482-BLK1)			Analyzed: 04/17/19 08:55							
Flashpoint	>212	72	°F							
LCS (B9D0482-BS1)			Analyzed: 04/17/19 08:55							
Flashpoint	83	72	°F	81.0		103	95-105			
Duplicate (B9D0482-DUP1)	**Source: 1901882-01**		Analyzed: 04/17/19 08:55							
Flashpoint	>212	72	°F		>212				10	

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Volatile Organic TPH by GC/FID - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0374 - EPA 8015M Preparation: EPA 5030B VOCGC 04/12/19 10:34										
Blank (B9D0374-BLK1)				Analyzed: 04/13/19 02:34						
TPH Gasoline (C4-C12)	ND	50	ug/L							
Surrogate: 4-Bromofluorobenzene	*102*		"	*125*		*81.8*	*47-155*			
LCS (B9D0374-BS1)				Analyzed: 04/13/19 01:36						
TPH Gasoline (C4-C12)	368	50	ug/L	500		73.5	67-151			
Surrogate: 4-Bromofluorobenzene	*110*		"	*125*		*87.6*	*47-155*			
LCS Dup (B9D0374-BSD1)				Analyzed: 04/13/19 02:05						
TPH Gasoline (C4-C12)	424	50	ug/L	500		84.7	67-151	14.2	20	
Surrogate: 4-Bromofluorobenzene	*114*		"	*125*		*91.1*	*47-155*			
Duplicate (B9D0374-DUP1)	**Source: 1901881-01RE1**			Analyzed: 04/13/19 04:58						
TPH Gasoline (C4-C12)	ND	50	ug/L		ND				20	
Surrogate: 4-Bromofluorobenzene	*100*		"	*125*		*80.2*	*47-155*			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Semi-Volatile Organic TPH by GC/FID - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0339 - EPA 8015M Preparation: EPA 3510C 04/11/19 10:07										
Blank (B9D0339-BLK1)			Analyzed: 04/11/19 17:26							
TPH Diesel (C13-C22)	ND	0.050	mg/L							
TPH Motor Oil (C23-C40)	ND	0.10	"							
Surrogate: o-Terphenyl	*0.0828*		"	*0.100*		*82.8*	*42-153*			
LCS (B9D0339-BS1)			Analyzed: 04/11/19 16:58							
TPH Diesel (C13-C22)	0.776	0.050	mg/L	1.00		77.6	24-105			
TPH Motor Oil (C23-C40)	1.04	0.10	"	1.00		104	70-130			
Surrogate: o-Terphenyl	*0.102*		"	*0.100*		*102*	*42-153*			
LCS Dup (B9D0339-BSD1)			Analyzed: 04/11/19 17:12							
TPH Diesel (C13-C22)	0.622	0.050	mg/L	1.00		62.2	24-105	22.0	20	QR-02
TPH Motor Oil (C23-C40)	1.08	0.10	"	1.00		108	70-130	3.95	20	
Surrogate: o-Terphenyl	*0.0874*		"	*0.100*		*87.4*	*42-153*			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0445 - EPA 8260B Preparation: EPA 5030B VOCGCMS 04/16/19 09:25										
Blank (B9D0445-BLK1)			Analyzed: 04/16/19 12:28							
Benzene	ND	0.50	ug/l.							
Bromobenzene	ND	0.50	"							
Bromochloromethane	ND	0.50	"							
Bromodichloromethane	ND	0.50	"							
Bromoform	ND	0.50	"							
Bromomethane	ND	0.50	"							
n-Butylbenzene	ND	0.50	"							
sec-Butylbenzene	ND	0.50	"							
tert-Butylbenzene	ND	0.50	"							
Carbon tetrachloride	ND	0.50	"							
Chlorobenzene	ND	0.50	"							
Chloroethane	ND	0.50	"							
Chloroform	ND	0.50	"							
Chloromethane	ND	0.50	"							
2-Chlorotoluene	ND	0.50	"							
4-Chlorotoluene	ND	0.50	"							
Dibromochloromethane	ND	0.50	"							
1,2-Dibromo-3-chloropropane	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
Dibromomethane	ND	0.50	"							
1,2-Dichlorobenzene	ND	0.50	"							
1,3-Dichlorobenzene	ND	0.50	"							
1,4-Dichlorobenzene	ND	0.50	"							
Dichlorodifluoromethane	ND	0.50	"							
1,1-Dichloroethane	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	0.50	"							
cis-1,2-Dichloroethene	ND	0.50	"							
trans-1,2-Dichloroethene	ND	0.50	"							
1,2-Dichloropropane	ND	0.50	"							
1,3-Dichloropropane	ND	0.50	"							
2,2-Dichloropropane	ND	0.50	"							
1,1-Dichloropropene	ND	0.50	"							
cis-1,3-Dichloropropene	ND	0.50	"							
trans-1,3-Dichloropropene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Hexachlorobutadiene	ND	0.50	"							
4-Isopropyl Toluene	ND	0.50	"							
Isopropylbenzene	ND	0.50	"							
Methylene chloride	ND	0.50	"							
Naphthalene	ND	0.50	"							
n-Propylbenzene	ND	0.50	"							
Styrene	ND	0.50	"							

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0445 - EPA 8260B Preparation: EPA 5030B VOCGCMS 04/16/19 09:25										
Blank (B9D0445-BLK1)			Analyzed: 04/16/19 12:28							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L							
1,1,2,2-Tetrachloroethane	ND	0.50	"							
Tetrachloroethene (PCE)	ND	0.50	"							
Toluene	ND	0.50	"							
1,2,3-Trichlorobenzene	ND	0.50	"							
1,2,4-Trichlorobenzene	ND	0.50	"							
1,1,1-Trichloroethane	ND	0.50	"							
1,1,2-Trichloroethane	ND	0.50	"							
Trichloroethene (TCE)	ND	0.50	"							
Trichlorofluoromethane	ND	0.50	"							
1,2,3-Trichloropropane	ND	0.50	"							
1,2,4-Trimethylbenzene	ND	0.50	"							
1,3,5-Trimethylbenzene	ND	0.50	"							
Vinyl chloride	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: Dibromofluoromethane	*12.6*		"	*12.5*		*101*	*83-119*			
Surrogate: Toluene-d8	*12.3*		"	*12.5*		*98.5*	*69-120*			
Surrogate: 4-Bromofluorobenzene	*13.5*		"	*12.5*		*108*	*79-125*			
LCS (B9D0445-BS1)			Analyzed: 04/16/19 09:57							
Benzene	8.74	0.50	ug/L	10.0		87.4	79-132			
Chlorobenzene	8.69	0.50	"	10.0		86.9	83-130			
1,1-Dichloroethene	9.03	0.50	"	10.0		90.3	62-147			
Toluene	8.69	0.50	"	10.0		86.9	71-133			
Trichloroethene (TCE)	9.24	0.50	"	10.0		92.4	79-140			
Surrogate: Dibromofluoromethane	*12.9*		"	*12.5*		*103*	*83-119*			
Surrogate: Toluene-d8	*12.9*		"	*12.5*		*103*	*69-120*			
Surrogate: 4-Bromofluorobenzene	*13.9*		"	*12.5*		*111*	*79-125*			
LCS Dup (B9D0445-BSD1)			Analyzed: 04/16/19 10:30							
Benzene	9.41	0.50	ug/L	10.0		94.1	79-132	7.38	20	
Chlorobenzene	9.34	0.50	"	10.0		93.4	83-130	7.21	20	
1,1-Dichloroethene	9.99	0.50	"	10.0		99.9	62-147	10.1	20	
Toluene	8.77	0.50	"	10.0		87.7	71-133	0.916	20	
Trichloroethene (TCE)	9.94	0.50	"	10.0		99.4	79-140	7.30	20	
Surrogate: Dibromofluoromethane	*12.9*		"	*12.5*		*103*	*83-119*			
Surrogate: Toluene-d8	*11.7*		"	*12.5*		*93.4*	*69-120*			
Surrogate: 4-Bromofluorobenzene	*13.5*		"	*12.5*		*108*	*79-125*			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0445 - EPA 8260B Preparation: EPA 5030B VOCGCMS 04/16/19 09:25										
Duplicate (B9D0445-DUP1)	**Source: 1901881-01**		Analyzed: 04/16/19 15:10							
Benzene	ND	0.50	ug/l.		ND				20	
Bromobenzene	ND	0.50	"		ND				20	
Bromochloromethane	ND	0.50	"		ND				20	
Bromodichloromethane	ND	0.50	"		ND				20	
Bromoform	ND	0.50	"		ND				20	
Bromomethane	ND	0.50	"		ND				20	
n-Butylbenzene	ND	0.50	"		ND				20	
sec-Butylbenzene	ND	0.50	"		ND				20	
tert-Butylbenzene	ND	0.50	"		ND				20	
Carbon tetrachloride	ND	0.50	"		ND				20	
Chlorobenzene	ND	0.50	"		ND				20	
Chloroethane	ND	0.50	"		ND				20	
Chloroform	ND	0.50	"		ND				20	
Chloromethane	ND	0.50	"		ND				20	
2-Chlorotoluene	ND	0.50	"		ND				20	
4-Chlorotoluene	ND	0.50	"		ND				20	
Dibromochloromethane	ND	0.50	"		ND				20	
1,2-Dibromo-3-chloropropane	ND	1.0	"		ND				20	
1,2-Dibromoethane (EDB)	ND	0.50	"		ND				20	
Dibromomethane	ND	0.50	"		ND				20	
1,2-Dichlorobenzene	ND	0.50	"		ND				20	
1,3-Dichlorobenzene	ND	0.50	"		ND				20	
1,4-Dichlorobenzene	ND	0.50	"		ND				20	
Dichlorodifluoromethane	ND	0.50	"		ND				20	
1,1-Dichloroethane	ND	0.50	"		ND				20	
1,2-Dichloroethane	ND	0.50	"		ND				20	
1,1-Dichloroethene	ND	0.50	"		ND				20	
cis-1,2-Dichloroethene	ND	0.50	"		ND				20	
trans-1,2-Dichloroethene	ND	0.50	"		ND				20	
1,2-Dichloropropane	ND	0.50	"		ND				20	
1,3-Dichloropropane	ND	0.50	"		ND				20	
2,2-Dichloropropane	ND	0.50	"		ND				20	
1,1-Dichloropropene	ND	0.50	"		ND				20	
cis-1,3-Dichloropropene	ND	0.50	"		ND				20	
trans-1,3-Dichloropropene	ND	0.50	"		ND				20	
Ethylbenzene	ND	0.50	"		ND				20	
Hexachlorobutadiene	ND	0.50	"		ND				20	
4-Isopropyl Toluene	ND	0.50	"		ND				20	
Isopropylbenzene	ND	0.50	"		ND				20	
Methylene chloride	ND	0.50	"		ND				20	
Naphthalene	ND	0.50	"		ND				20	
n-Propylbenzene	ND	0.50	"		ND				20	
Styrene	ND	0.50	"		ND				20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0445 - EPA 8260B Preparation: EPA 5030B VOCGCMS 04/16/19 09:25										
Duplicate (B9D0445-DUP1)	**Source: 1901881-01**		Analyzed: 04/16/19 15:10							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L		ND				20	
1,1,2,2-Tetrachloroethane	ND	0.50	"		ND				20	
Tetrachloroethene (PCE)	ND	0.50	"		ND				20	
Toluene	ND	0.50	"		ND				20	
1,2,3-Trichlorobenzene	ND	0.50	"		ND				20	
1,2,4-Trichlorobenzene	ND	0.50	"		ND				20	
1,1,1-Trichloroethane	ND	0.50	"		ND				20	
1,1,2-Trichloroethane	ND	0.50	"		ND				20	
Trichloroethene (TCE)	ND	0.50	"		ND				20	
Trichlorofluoromethane	ND	0.50	"		ND				20	
1,2,3-Trichloropropane	ND	0.50	"		ND				20	
1,2,4-Trimethylbenzene	ND	0.50	"		ND				20	
1,3,5-Trimethylbenzene	ND	0.50	"		ND				20	
Vinyl chloride	ND	0.50	"		ND				20	
Xylenes (total)	ND	0.50	"		ND				20	
Surrogate: Dibromofluoromethane	*12.3*		"	*12.5*		*98.0*	*83-119*			
Surrogate: Toluene-d8	*12.8*		"	*12.5*		*102*	*69-120*			
Surrogate: 4-Bromofluorobenzene	*13.9*		"	*12.5*		*111*	*79-125*			
Matrix Spike (B9D0445-MS1)	**Source: 1901881-02**		Analyzed: 04/16/19 20:31							
Benzene	8.39	0.50	ug/L	10.0	ND	83.9	70-141			
Chlorobenzene	8.52	0.50	"	10.0	ND	85.2	86-124			QM-07
1,1-Dichloroethene	8.57	0.50	"	10.0	ND	85.7	61-143			
Toluene	8.18	0.50	"	10.0	ND	81.8	66-135			
Trichloroethene (TCE)	9.03	0.50	"	10.0	ND	90.3	80-139			
Surrogate: Dibromofluoromethane	*13.3*		"	*12.5*		*106*	*83-119*			
Surrogate: Toluene-d8	*12.4*		"	*12.5*		*99.4*	*69-120*			
Surrogate: 4-Bromofluorobenzene	*13.8*		"	*12.5*		*110*	*79-125*			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Organochlorine Pesticides by GC/ECD/ECD - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0441 - EPA 8081A Preparation: EPA 3510C 04/16/19 09:19										
Blank (B9D0441-BLK1)			Analyzed: 04/16/19 16:58							
alpha-BHC	ND	0.10	ug/L							
alpha-Chlordane	ND	0.10	"							
Aldrin	ND	0.10	"							
beta-BHC	ND	0.10	"							
delta-BHC	ND	0.10	"							
4,4'-DDD	ND	0.10	"							
4,4'-DDE	ND	0.10	"							
4,4'-DDT	ND	0.10	"							
Dieldrin	ND	0.10	"							
Endosulfan I	ND	0.10	"							
Endosulfan II	ND	0.10	"							
Endosulfan sulfate	ND	0.10	"							
Endrin	ND	0.10	"							
Endrin aldehyde	ND	0.10	"							
Endrin ketone	ND	0.10	"							
gamma-BHC	ND	0.10	"							
gamma-Chlordane	ND	0.10	"							
Heptachlor	ND	0.10	"							
Heptachlor epoxide	ND	0.10	"							
Methoxychlor	ND	0.10	"							
Chlordane (tech)	ND	0.50	"							
Toxaphene	ND	0.50	"							
Surrogate: Decachlorobiphenyl	*0.220*		"	*0.250*		*88.0*	*10-202*			
Surrogate: 2,4,5,6 Tetrachloro-m-xylene	*0.0667*		"	*0.250*		*26.7*	*10-145*			
LCS (B9D0441-BS1)			Analyzed: 04/16/19 15:58							
alpha-BHC	0.130	0.10	ug/L	0.200		65.0	21-91			
alpha-Chlordane	0.149	0.10	"	0.200		74.6	37-99			
Aldrin	0.0893	0.10	"	0.200		44.6	16-87			
beta-BHC	0.155	0.10	"	0.200		77.4	40-98			
delta-BHC	0.155	0.10	"	0.200		77.6	45-104			
4,4'-DDD	0.166	0.10	"	0.200		83.0	54-117			
4,4'-DDE	0.160	0.10	"	0.200		80.1	46-112			
4,4'-DDT	0.224	0.10	"	0.200		112	57-124			
Dieldrin	0.165	0.10	"	0.200		82.7	46-100			
Endosulfan I	0.157	0.10	"	0.200		78.6	38-104			
Endosulfan II	0.174	0.10	"	0.200		87.0	54-110			
Endosulfan sulfate	0.205	0.10	"	0.200		103	64-112			
Endrin	0.175	0.10	"	0.200		87.5	54-105			
Endrin aldehyde	0.192	0.10	"	0.200		96.0	56-104			
Endrin ketone	0.191	0.10	"	0.200		95.5	61-106			
gamma-BHC	0.138	0.10	"	0.200		69.2	26-94			
gamma-Chlordane	0.145	0.10	"	0.200		72.7	39-100			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Organochlorine Pesticides by GC/ECD/ECD - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0441 - EPA 8081A Preparation: EPA 3510C 04/16/19 09:19										
LCS (B9D0441-BS1)				Analyzed: 04/16/19 15:58						
Heptachlor	0.116	0.10	ug/L	0.200		57.9	26-88			
Heptachlor epoxide	0.151	0.10	"	0.200		75.6	40-98			
Methoxychlor	0.247	0.10	"	0.200		124	62-129			
Surrogate: Decachlorobiphenyl	*0.241*		"	*0.250*		*96.3*	*10-202*			
Surrogate: 2,4,5,6 Tetrachloro-m-xylene	*0.0832*		"	*0.250*		*33.3*	*10-145*			
LCS Dup (B9D0441-BSD1)				Analyzed: 04/16/19 16:18						
alpha-BHC	0.127	0.10	ug/L	0.200		63.4	21-91	2.41	25	
alpha-Chlordane	0.150	0.10	"	0.200		75.1	37-99	0.644	25	
Aldrin	0.0893	0.10	"	0.200		44.6	16-87	0.0347	25	
beta-BHC	0.162	0.10	"	0.200		80.8	40-98	4.38	25	
delta-BHC	0.158	0.10	"	0.200		79.0	45-104	1.77	25	
4,4'-DDD	0.161	0.10	"	0.200		80.4	54-117	3.14	25	
4,4'-DDE	0.161	0.10	"	0.200		80.4	46-112	0.358	25	
4,4'-DDT	0.216	0.10	"	0.200		108	57-124	3.47	25	
Dieldrin	0.164	0.10	"	0.200		82.2	46-100	0.616	25	
Endosulfan I	0.155	0.10	"	0.200		77.4	38-104	1.51	25	
Endosulfan II	0.166	0.10	"	0.200		83.1	54-110	4.60	25	
Endosulfan sulfate	0.195	0.10	"	0.200		97.6	64-112	4.99	25	
Endrin	0.175	0.10	"	0.200		87.7	54-105	0.176	25	
Endrin aldehyde	0.183	0.10	"	0.200		91.6	56-104	4.72	25	
Endrin ketone	0.181	0.10	"	0.200		90.5	61-106	5.42	25	
gamma-BHC	0.136	0.10	"	0.200		67.9	26-94	1.77	25	
gamma-Chlordane	0.148	0.10	"	0.200		74.1	39-100	1.93	25	
Heptachlor	0.118	0.10	"	0.200		58.9	26-88	1.75	25	
Heptachlor epoxide	0.150	0.10	"	0.200		75.1	40-98	0.634	25	
Methoxychlor	0.239	0.10	"	0.200		119	62-129	3.41	25	
Surrogate: Decachlorobiphenyl	*0.237*		"	*0.250*		*95.0*	*10-202*			
Surrogate: 2,4,5,6 Tetrachloro-m-xylene	*0.0909*		"	*0.250*		*36.4*	*10-145*			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Polychlorinated Biphenyls by GC/ECD - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B9D0441 - EPA 8082 Preparation: EPA 3510C 04/16/19 09:19										
Blank (B9D0441-BLK2)			Analyzed: 04/16/19 23:19							
PCB-1016	ND	0.50	ug/l.							
PCB-1221	ND	0.50	"							
PCB-1232	ND	0.50	"							
PCB-1242	ND	0.50	"							
PCB-1248	ND	0.50	"							
PCB-1254	ND	0.50	"							
PCB-1260	ND	0.50	"							
Surrogate: Decachlorobiphenyl	*0.198*		"	*0.250*		*79.0*	*10-202*			
Surrogate: 2,4,5,6 Tetrachloro-m-xylene	*0.0586*		"	*0.250*		*23.4*	*10-145*			
LCS (B9D0441-BS2)			Analyzed: 04/16/19 22:19							
PCB-1016	1.19	0.50	ug/L	2.00		59.3	44-125			
PCB-1260	1.66	0.50	"	2.00		82.8	49-131			
Surrogate: Decachlorobiphenyl	*0.241*		"	*0.250*		*96.3*	*10-202*			
Surrogate: 2,4,5,6 Tetrachloro-m-xylene	*0.0823*		"	*0.250*		*32.9*	*10-145*			
LCS Dup (B9D0441-BSD2)			Analyzed: 04/16/19 22:39							
PCB-1016	1.26	0.50	ug/L	2.00		62.9	44-125	5.87	30	
PCB-1260	1.65	0.50	"	2.00		82.5	49-131	0.322	30	
Surrogate: Decachlorobiphenyl	*0.231*		"	*0.250*		*92.5*	*10-202*			
Surrogate: 2,4,5,6 Tetrachloro-m-xylene	*0.0854*		"	*0.250*		*34.1*	*10-145*			

Oilfield Environmental & Compliance, Inc.

Padre Associates-Ventura	Project: Grubb Lease	WO & Reported:
1861 Knoll Dr.	Project Number: Seawater Intake, Ventura	1901882
Ventura CA, 93003	Project Manager: Jenn Leighton	04/20/2019 19:01

Notes and Definitions

R-07	Reporting limits are at or below state/federal hazardous waste criteria limits.
QR-04	The RPD exceeded the QC control limits.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS and/or LCSD recovery and/or RPD values.
LC50	State of CA limit for Non-Hazardous Designation: LC50 > 500 mg/L Pass Screen: <40% dead in 750 mg/L (LC50 > 750 mg/L) Fail Screen: >40% dead in 750mg/L (Definitive Recommended) Fail Screen [CA Haz]: >60% dead in 400mg/L (LC50 < 400mg/L)
HT-pH	Water pH should be analyzed within 15 minutes of sampling. Soil pH should be analyzed as soon as possible.
>212	>212
_Pass	Pass
RL	Reporting Limit (Quantitation Limit)
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference

Oilfield Environmental & Compliance, Inc.

307 Roemer Way Suite 300, Santa Maria, CA 93454 Phone: (805) 922-4772 Fax: (805) 925-3376 www.oecusa.com

101 Adkisson Way, Taft, CA 93268 Phone: (661) 762-9143

CHAIN OF CUSTODY

Page 1 of 1

Company: PADRE ASSOCIATES, INC.
Address: 1861 KNOLL DR.
City/State/ZIP: VENTURA, CA 93003 ZACHARY.DRANSOFF@CRC.COM
Phone: 805-644-2220 Fax: 805-644-2050 E-mail: JLEIGHTON@PADREINC.COM
Report To: JENN LEIGHTON Sampler: PATRICK CROOKS (PC)
Report Format(s): FAX- ☐ PDF (std)- ☒ Colt/LUFT EDF- ☐ EDD- ☐
Turnaround Time: 10 Days- ☐ 5 Days (std)- ☒ 3 Days- ☐ 2 Days- ☐ 1 Day- ☐ ASAP- ☐
NOTES: Samples received after 4:00PM will be considered as received the next business day.
No Bac-T samples will be accepted after 12:00PM (noon) on Fridays.

Project Name/#: GRUBB SEAWATER INTAKE
Site: GRUBB LEASE - VENTURA

OEC Sample ID	Date/Time Sampled	Matrix** (see key)	# of Cont.	Client Sample ID	Analysis Requested: CAM 17 METALS	8081A PESTICIDES	8082 PCB	8260 FULL LIST	PH	BIOASSAY	FLASHPOINT	REACTIVES	TPH 8015M	OIL&GREASE EPA 1664A	Special Instructions:
1901882 01	4-10-19/0850	SW	10	GRUBB-SEA-041019	X	X	X	X	X	X	X	X	X	X	

Relinquished By: [signature] Date: 4-10-19 Time: 0930
Received By: OEC FRIDGE Date: 4-10-19 Time: 930
Relinquished By: Date: Time:
Received By: L. Crane (OEC) Date: 4-10-19 Time: 1320
Relinquished By: L. Crane Date: 4-10-19 Time: 1655
Received By: [signature] Date: 4/10/19 Time: 11655

Matrix Key**:
A = air / vapor
AQ = aqueous
DW = drinking water
F = filter
GW = ground water
P = product / oil
PW = product water
S = solid / sediment
SW = surface water
WP = wipe
WW = waste water

Comments/PO#:
P: 2006511
O: 009177
E: 2016
T: 0102

Rev. 11/06/2017

OEC

CLIENT: Padre WORK ORDER: 1901882 TEMPERATURE: 4.3 °C SAMPLE RECEIPT
Recorded Corrected; Acceptable Range: 0°C to 6°C [see exception notes below]
COC RECEIVED DATE/TIME: 4/10/19 1655 LOGIN DATE/TIME: 4/10/19 1716 REFRIGERATOR(S): 8 13

SAMPLE TRANSPORT
- ☑ OEC Courier/Sampler
- ☐ Delivery (Other than OEC)
- ☐ After-Hours Outside Drop-Off [Brought Inside]
  Initials/Date/Time: _____
- ☐ Shipment Carrier: _____
  Tracking #: _____

CUSTODY SEALS ☒ None Present
Cooler(s): ☐ Present, Intact ☐ Present, Not Intact ☐ None
Sample(s): ☐ Present, Intact ☐ Present, Not Intact ☐ None

SAMPLE RECEIPT, CONDITION, PRESERVATION
- ☒ Samples Received on Ice Within Temperature Range [Acceptable]
- ☐ Samples Received Outside Temperature Range [Acceptable]
  - ☐ Direct from Field, on Ice
  - ☐ Ambient: Air or Filter Matrix
  - ☐ Received Ambient, Placed on Ice for Transport
  - ☐ Sample Temperature Acceptable for Analysis Requested
- ☐ Samples Received Outside Temperature Range [Exception] *
  - ☐ Insufficient Ice or Unknown Cause
- ☐ Excessive Free Liquid in Sample Bags or Cooler

(*) Narration Comment Required	YES	NO	N/A
Completed COC(s) Received With Samples	☑	☐ *	
Correct Container(s)/Preserve for Analysis	☑	☐ *	
Container(s) Intact and in Good Condition	☑	☐ *	
Container Label(s) Consistent with COC	☑	☐ *	
OEC Preservation Added **	☐	☒	
Sample Quantity Sufficient & Appropriate	☑	☐ *	
VOA Containers Free of Headspace	☑	☐ *	☐
Tedlar Bag(s) Free of Condensation	☐	☐ *	☒

☐ See attached PROBLEM CHAIN for additional narration comments

(**) OEC Presrv. ID

CONTAINERS, COC CHANGES, AND/OR CORRECTIONS

OEC CONTAINER ID	CONTAINER DESCRIPTION	PRESERVATIVE	CHECKS: Cl⁻, S⁻ &/or pH	MATRIX	COMMENTS	INITIALS (Narration Comments Only)
01 A	1 L Amber	HCl	—	W	8	
01 B-E	1 L Amber	—	—	W		
01 F	1 L Poly	—	—	W		
01 G	250 mL Poly	HNO3	<2	W		
01 H-V	3 40mL VOA	HCl	—	W	3	

Rev. 02/25/2019

RECEIPT LOGIN BY: LWC RECEIPT REVIEWED BY: _____

Page 1 of 1