ATTACHMENT 4

L123 Example Project Execution Plan(s) for Reuse, Reefing, and Complete Removal Alternatives
California State Lands Commission
Rincon Phase 2 Decommissioning
Feasibility Study

PROJECT EXECUTION PLAN
Reuse Alternative

February 25, 2022
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SECTION ONE – PROJECT OVERVIEW

1.1 INTRODUCTION

This Project Execution Plan (PEP) describes the scope of work, means and methods, and preliminary schedule for decommissioning Rincon Island and associated facilities per the Reuse project alternative as defined by the California State Lands Commission (CSLC). This PEP is one of three PEPs prepared to support the decommissioning Feasibility Study being prepared by Padre Associates, Inc. (Padre) for the CSLC. Each PEP corresponds to one of the three project alternatives as summarized below:

- **Alternative 1 – Complete Removal** – This alternative is based on the proposition that the remaining structures contained on or within Rincon Island, the surrounding perimeter rock and tetrapods, the wharf, and the causeway are removed in their entirety. Rincon Island would be removed down to the seafloor, except for the decommissioned well conductors and causeway/wharf piling, which would be removed to points below the seafloor elevations. All materials would be recovered and disposed or recycled offsite, presumably at dockside facilities in Los Angeles or Long Beach harbors, with the recovered materials trucked to processing sites or landfills. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

- **Alternative 2 – Reuse** – This alternative is based on the proposition that the remaining structures and pavement on Rincon Island and the contaminated soil, including the well bay area, would be removed and replaced with clean fill (assumes elevation of contaminated soil stops at sea level). The well bay conductors, surrounding perimeter rock and tetrapods, as well as the submerged Island would be left intact. The Reuse alternative is intended to prepare the island for a potential lessee; and a separate evaluation of any proposed use would subsequently occur. The Rincon Island causeway and wharf would be left intact and available for use in some form. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

- **Alternative 3 - Reefing** – This alternative is based on the proposition that the remaining structures and pavement on Rincon Island, and the contaminated soil, including the well bay area, would be removed and replaced with clean fill (assumes elevation of contaminated soil stops at slightly below sea level), to an elevation and condition consistent with use of the remaining island structure as habitat by wildlife species. The well bay conductors, surrounding perimeter rock and tetrapods, as well as the submerged Island would be left intact. Under the Reefing Alternative, the causeway and wharf would be removed in their entirety with the pilings removed to 5 feet below the seafloor. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

1.2 LOCATION

Rincon Island is located approximately 3,000 feet offshore of Punta Gorda in Ventura County, approximately 7 miles northwest of the city of Ventura, California. Rincon Island is located immediately offshore of the community of Mussel Shoals and approximately 0.5 mile south of the community of La
Conchita. The Island is located in approximately 55 feet of water. A causeway, or access pier, connects the Island to the coast. The SCC parcel is located just east of the causeway landing/abutment.

The Onshore Facility consists of a 6.01-acre property owned by the State located 1.3 miles to the east of Rincon Island, at 5750 W. Pacific Coast Highway, Ventura. Rincon Island and the Onshore Facility were previously connected by an onshore pipeline system, until they were disconnected as part of the Phase 1 P&A process. Decommissioning of the Onshore Pipeline Connections from their current terminations at the causeway abutment to a valve box located on the northeast side of the Union Pacific Railroad tracks is included. Figure 1 – Vicinity Map and Figure 2 – Site Map below illustrate the location of Rincon Island and associated facilities.
1.3 PROJECT BACKGROUND AND OBJECTIVES

Rincon Island was constructed in 1959 by Atlantic Richfield Company (ARCO) for the specific purpose of well drilling and oil and gas production. Rincon Island and its appurtenant facilities were historically leased by the California State Lands Commission (CSLC) to oil and gas operators (State Oil and Gas Lease Nos. PRC 145, PRC 410, and PRC 1466), including most recently Rincon Island Limited Partnership, which quitclaimed its lease interests to CSLC in December 2017 after becoming financially insolvent.

With the completion of the P&A activities, Rincon Island provides approximately 1 acre of useable space within the interior of the revetment walls. Rincon Island that is surrounded at its perimeter with scattered palm trees. A single lane causeway connects the Island to shore at Mussel Shoals. Rincon Island was designed to support approximately 50 oil and gas production wells. Prior to the initial decommissioning activities, which have already been completed, the Island contained storage tanks, oil processing equipment, and other appurtenant facilities. Rincon Island has not produced oil or gas commercially since October 2008 due in part to the condition and integrity of the causeway that connects the Island to the shore.

Rincon Island was previously supported by a processing facility that operated until the completion of Phase 1 P&A activities. That original facility included both a parcel owned by the State (Onshore Facility) and a privately owned parcel referred to as the Coast Ranch Parcel, and contained 25 state oil wells, a handful of orphaned private wells, oil storage and processing facilities, and administrative offices. Only the parcel owned by the State (Onshore Facility) is included in the Phase 2 study...

In June 2018, CSLC selected Driltek, Inc. (Driltek) to perform engineering, operations, and administrative services for Rincon Island and the facilities onshore (Phase 1), under the oversight of CSLC engineers. In addition, Driltek undertook the development and execution of the program to plug and abandon onshore and offshore wells, perform all ancillary tasks associated with the plug and abandonment program, to provide essential personnel to continue the safe daily operations of the leases at the current baseline conditions, and to place the facilities into caretaker status or equivalent condition. Phase 1 began in January 2019 and was completed in June 2021.

With well abandonment completed, the next step in the decommissioning process is the development of a feasibility study (which this PEP is a part of) and decommissioning plan including planning, public outreach, and development of the CEQA documentation.

1.4 EXISTING FACILITIES

1.4.1 Rincon Island

Rincon Island is a manmade island a little over 2 acres in area constructed for oil and gas production and processing. Rincon Island is made up of 160,000 cubic yards of dredged sand and gravel. This core is surrounded with approximately 72,600 cubic yards of locally sourced riprap (boulders and gravel). See Figure 3 – Rincon Island Cross-Section below. Additionally, the seaside exterior is reinforced with 1,100 cement tetrapods, each weighing approximately 31 tons (Figure 4 – Concrete Tetrapods). Each tetrapod has four, 6-foot-long concrete legs that are greater than 2 feet in diameter at the end.

The working surface of Rincon Island is approximately 1.2 acres, which is paved with approximately 8 to 14 inches of concrete and asphalt. This area previously contained oil production facilities, piping systems, electrical supports, and various office and support building space. The perimeter of the island working area is surrounded by a 4.5-foot sea wall. As part of the recently completed P&A activities, the oil
production and injection wells have been permanently abandoned and the oil, gas, and water processing and storage facilities have been removed. Following removal of the oil production and processing facilities, the working area of the Island has been sealed with concrete and asphalt. All equipment and major structures have also been removed from the Island, and it is currently in “caretaker” status, meaning it does not require a full-time operator. An aerial photograph of the Rincon Island facility just prior to placement into caretaker status is depicted in Figure 5.

![Figure 3 - Rincon Island Cross-Section](image)

![Figure 4 - Concrete Tetrapods](image)
1.4.2 Rincon Island Causeway

The Rincon Island Causeway is a 2,732-foot-long wood and steel bridge that connects Rincon Island to the mainland coast at Punta Gorda (near Mussel Shoals) in northern Ventura County (Figure 6 – Rincon Island Causeway). The causeway provides vehicle, equipment, and personnel access to the island. The causeway was repaired during well abandonment activities to restore its load resistance to 65,000 pounds.

There were oil and gas pipelines that ran along the causeway which have been removed and are terminated at the landward end of the causeway. A locked entry fence and gate with barbed wire currently prohibits public access to the causeway and Island.
1.4.3 Onshore Facility

Rincon Island was supported by a facility onshore that operated until the completion of Phase 1 activities. That original facility included both a parcel owned by the State (Onshore Facility) and a privately owned parcel referred to as the Coast Ranch Parcel, and contained 25 state oil wells, a handful of orphaned private wells, oil storage and processing facilities, and administrative offices (Figure 7). The Onshore Facility consists of a 6.01-acre parcel owned by the State located 1.3 miles to the east of Rincon Island, at 5750 W. Pacific Coast Highway (PCH), Ventura. The Onshore Facility was tide and submerged lands prior to the construction of Highway 101, when fill was brought in.

All surface facilities have been removed, but prior to completion of the well abandonment activities the site included an office building and associated support facilities including electrical distribution and perimeter fencing.

![Figure 7 – Onshore Facility](image)

1.4.4 Onshore Pipeline Connections

Oil and gas pipelines extend from the end of the abutment on the landward side of the Causeway and under U.S. Highway 101 and the Union Pacific railroad tracks. These pipelines terminate within a valve box on the northeast side of the railroad right of way. These pipelines then extend up the hill to the privately owned DCOR oil and gas processing facility and finally terminate at the Onshore Facility. Although CSLC jurisdiction does not extend past the causeway abutment in the area near the causeway entrance, the decommissioning of the pipelines from the abutment to the valve box is included as part of Phase 2 due to the likelihood of regulatory requirements regarding final disposition of pipelines under roadways and railway crossings.
SECTION TWO – REUSE ALTERNATIVE PROJECT DESCRIPTION

2.1 SCOPE OF WORK

The scope of work for the Reuse Alternative includes removal of asphalt at the Onshore Facility, remediation of petroleum hydrocarbon containing soil at the Onshore Facility, removal of the island and all facilities located on the island, decommissioning of the onshore pipelines from the causeway abutment to the valve box on the opposite side of the US 101 highway, and improvements to the SCC Parcel. The following subsections describe the proposed Reuse scope of work in more detail.

2.1.1 Onshore Facility Decommissioning

The Onshore Facility is a 6.01-acre parcel owned by the State (PRC 145). See Figure 8 – Onshore Facility Location. Approximately 2.80 acres are paved with recycled asphalt aggregate base material with an average thickness of 2.5-feet. In addition, an estimated 0.48 acre of the underlying ground of the State Parcel contains petroleum hydrocarbon contamination that will require remediation. Groundwater is found at approximately 12-feet below the ground surface at the Onshore Parcel.

![Figure 8 – Onshore Facility Location](image)

All buildings, equipment and materials have previously been removed from the Onshore Facility site and the site surface currently consists of bare dirt and the recycled asphalt aggregate base. Initial site assessments have been performed at the onshore site, including groundwater and soil sampling and monitoring. Site assessment activities are ongoing, and the assessment results have been used to ascertain and quantify the extent of hydrocarbon contamination at the Onshore Facility.

The proposed scope of work and methods discussed below rely on assumptions and estimates and may not reflect the actual remediation needed after site assessment activities and related analyses are complete. In making the assumptions and performing the analyses set forth herein, a conservative approach was used assuming the maximum level of remediation that could be necessary to bring the site
contamination to screening levels acceptable for public use. This maximum level of remediation may be inconsistent with the actual remediation needed for the future use ultimately approved for the site. CSLC also intends to look at the possibility of bioremediation options for the impacted soils at the Onshore Facility.

The initial laboratory analytical results for some of the soil and groundwater samples collected from the Onshore Facility site indicate the presence of petroleum hydrocarbons. The laboratory analytical results for select soil samples did not indicate the presence of VOCs or PCBs constituent concentrations in excess of ESL Leaching to Groundwater Levels (Table S-3) Non-Drinking Water values. The reported metals concentrations did not exceed CCR Title 22 values for hazardous waste classification. The laboratory analytical results did not indicate hazardous waste characteristics: corrosivity (pH), reactivity (reactive cyanide/reactive sulfide), ignitability (flashpoint), or toxicity (96-hour fish bioassay) (Padre, 2021).

The scope of work includes removal of the approximately 2.80 acres of recycled asphalt aggregate base material spread across much of the Onshore Facility. The recycled asphalt aggregate base material would be excavated to the underlying native soil and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-contaminated waste. Once the asphalt has been removed, the surface grade would be restored with clean imported soil to establish positive surface drainage. The final site restoration and revegetation plan consists of applying a hydroseed composed of a native seed to the disturbance area of the site.

The scope of work also includes remediation of approximately 0.48 acres of petroleum hydrocarbon-contaminated soil to a depth estimated at 12 feet below ground surface (anticipated to include approximately 7,500 cubic yards). This level of remediation would bring the site contamination to screening levels acceptable for public use. The contaminated soil would be excavated and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-containing waste. The excavation sites would be backfilled with clean soil and compacted. The restored surfaces would be revegetated with a hydroseed composed of native seed. (Padre, 2021).

An engineered grading plan would be prepared for submittal to the County of Ventura to obtain a grading permit for the excavation and backfill activities at the Onshore Facility. Import fill materials would be graded and compacted in-place to a minimum of 90% relative compaction. Equipment used for backfilling and compaction includes trucks, front end loaders, excavators and potentially dozers, graders or roller compactors.

The petroleum hydrocarbon-contaminated soil and asphalt would be excavated using standard commercial excavation equipment (e.g., hydraulic excavator, front-end loader, track-mounted dozer). The excavation area sidewalls would be sloped to provide safe access for the excavating equipment to excavate the vertical and lateral extent of petroleum hydrocarbon-contaminated soil. Groundwater dewatering wells would be installed around the excavation area. The extracted petroleum hydrocarbon-containing groundwater would be processed through a series of settling tanks, bag filters, granular activated carbon vessels to meet the requirements to discharge into the County of Ventura-operated wastewater system.

The excavated petroleum hydrocarbon-containing soil would be placed into trucks and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-contaminated waste.
Verification soil samples would be collected from the excavation area on a grid pattern with approximately 25-feet between sample locations. The soil samples would be chemically analyzed for the presence of petroleum hydrocarbons.

Once complete, the dewatering wells would be removed, and the excavation area would be backfilled to match surrounding grade with clean soil from a source located in Ventura County. The surface area would be graded with clean soil to establish positive drainage from the disturbed area.

Once the excavation activities were considered complete, hydroseed composed of a native seed mix would be applied to the disturbance areas of the Project.

Alternative remediation methods, such as bioremediation, are currently being assessed. However, since it is not yet known which alternative remediation methods may be feasible, the scope of work does not include such alternatives at this time.

### 2.1.2 Island Surface Structure Removal

Three buildings, including the Operator’s Building, Electrical Building and Communications Building, will be removed from Rincon Island. The location of each building is shown below in Figure 9 – Rincon Island Surface Structures. Details of each building are listed below:

1. The Operator’s Building is a concrete masonry unit (CMU) building that includes an office, tool room, storage room, restroom, and a locker room. An underground septic tank is also associated with the Operator’s Building, which would also be removed.

2. The Electrical Building is a CMU building that contains electrical equipment such as transformers, switchgear, conduits, and cables. Some of the electrical equipment is owned by Southern California Edison (SCE).

3. The Communications (Cell Phone) Building is a prefabricated, trailer-mounted building containing cellular communications equipment. A cell phone antenna tower is attached to the north wall of the Communications Building, which will also be removed.

The Operator’s Building, including the foundation and associated underground septic tank, will be demolished using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Prior to removal, any remaining underground septic tank waste would be pumped out, and the remaining tank removal would be coordinated through the Ventura County Environmental Health Division, Technical Services Department. Front-end loaders will be used to assist with materials handling. The debris will be loaded onto trucks and transported offsite for disposal. See Figure 10 – Illustration of Excavators Demolishing Surface Structures.

The electrical equipment within the Electrical Building will be disconnected by electricians, and SCE will be provided access to remove SCE owned equipment. Electrical equipment will be loaded onto trucks using truck mounted cranes, forklifts, or similar lifting equipment and transported offsite for recycling or disposal. Once electrical equipment has been removed, the Electrical Building and its foundation will be demolished using excavators and front-end loaders, and the debris will be loaded onto trucks and transported offsite for disposal.
Figure 9 – Rincon Island Surface Structures

Figure 10 – Illustration of Excavators Demolishing Surface Structures
A Driltek report (Rincon Island Discussion of Preparation for Caretaker Status, Driltek, 2020) indicates that both the Operator’s Building and the Electrical Building have non-friable asbestos containing material (ACM) in the roofing materials and parapet walls. A Cal/OSHA-Certified Asbestos Consultant (CAC) will prepare an Asbestos Abatement Work Plan (AAWP), which will include procedures for removal and handling of ACM, waste labeling and waste manifest requirements, transportation requirements, and acceptable disposal facilities.

It is assumed that the company that owns and operates the Communications Building will demobilize their equipment. The cell phone tower will most likely be disassembled and loaded onto a truck or trailer using a truck-mounted crane, and a truck will be used to tow the mobile building.

2.1.3 Island Well Bay Concrete Deck Removal

The concrete deck that has been constructed over the previously decommissioned well bay will be removed. The well bay concrete deck will be demolished using excavators equipped with hydraulic claw, cutter, shear, and breaker attachments, as well as buckets for moving material. Front-end loaders may be used to assist with materials handling. The concrete and steel debris would be transported to an offsite recycling or disposal facility. The location of the well bay is depicted below in Figure 11 – Rincon Island Well Bay.

![Figure 11 – Rincon Island Well Bay](image-url)
2.1.4 Island Pavement and Contaminated Soil Removal and Replacement

The scope of work for the Reuse alternative includes demolition and removal of the island’s approximately 3.5-inch-thick asphaltic pavement, removal of the contaminated island core (assumed to be sand and gravel) and replacement with clean fill. The surface area of the island site potentially containing hydrocarbon-containing soil is estimated to be 0.49-acres. The estimated maximum depth of excavation is 16-feet below ground surface. The total volume of contaminated soil is estimated at 9,605 cubic yards. See Figure 12 – Cross-Section Illustration of Contaminated Soil Removal.

![Figure 12 – Cross-Section Illustration of Contaminated Soil Removal](image)

The pavement will be removed using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Front-end loaders will be used to assist with materials handling. The asphalt debris will be loaded onto trucks and transported offsite for recycling or disposal. See Figure 13 – Illustration of Island Pavement Removal below.

Removal of the hydrocarbon contaminated soil from the Island core will require excavation and transportation of the contaminated soil to approved offsite disposal or recycling facilities. Initial site assessments have been performed, including interstitial water, ocean water, and soil sampling and monitoring. Site assessment activities have been completed to ascertain and quantify the extent of hydrocarbon contamination.

In making the assumptions and performing the analyses set forth herein, a conservative approach was employed where the maximum level of remediation that could be necessary to bring the site to screening levels acceptable for public use was assumed. This maximum level of remediation may be inconsistent with, and more than the actual remediation effort needed for the future use ultimately approved for the site.
The laboratory analytical results for samples collected from the Island identified the presence of petroleum hydrocarbon concentrations within certain areas of the Island core artificial fill material at depths from approximately 1-foot to 16-feet below ground surface. The estimated total volume of petroleum hydrocarbon-containing soil identified within the Island core is approximately 9,605 cubic yards. The depth to interstitial water measured at temporary monitoring wells ranged from approximately 11.96 feet to 14.61 feet below the surface of the Island, which correspond to elevations that range from approximately 0.47 feet to 3.18 feet mean sea level (msl). The laboratory analytical results for interstitial water samples collected from temporary monitoring wells indicated petroleum hydrocarbon concentrations that were less than the applicable screening levels, and the laboratory analytical results for three ocean water samples collected at the site did not indicate the presence of petroleum hydrocarbon constituents (Padre, 2021).

The petroleum hydrocarbon-containing soil would be excavated using standard commercial excavation equipment (e.g., hydraulic excavator, front-end loader, track-mounted dozer). Excavation of the petroleum hydrocarbon-containing soil will continue until the presence of petroleum hydrocarbons was not detected using a field portable handheld photoionization detector (PID), as well as visual and olfactory observations. The remaining clean fill materials would be sampled and chemically analyzed to confirm adequate removal of petroleum hydrocarbon-containing soil from the island core materials. See Figure 14 – Illustration of Contaminated Soil Removal below.
Petroleum hydrocarbon-contaminated soils will be loaded onto trucks and transported and to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-containing waste. Due to causeway weight limits, smaller loads may be transported from the island to the onshore facility for staging, and then loaded onto other trucks for subsequent transportation to the landfill in larger loads, resulting in fewer trips.

Once all contaminated soil has been removed the excavation will be backfilled and compacted using clean soil and the island surface will be repaved. See Figure 15 – Illustration of Island Backfill and Compaction below.
2.1.5 Onshore Pipeline Connection Decommissioning

The scope of work for the Reuse alternative includes decommissioning the 6-inch diameter gas pipeline and the 6-inch diameter oil pipeline from their terminations at the causeway abutment to the valve box located on the northeast side of the railroad tracks. See Figure 16 – Onshore Pipeline Connections below which depicts the locations of these pipeline components. The pipelines would be pigged and flushed from the abutment to the concrete valve vault to remove any potential contaminants. The pipelines would be filled with cement slurry from the abutment to the southern end of the casing. The pipelines would be removed from the 30-inch diameter casing north to the concrete vault, and then the casing would be filled with cement slurry. The decommissioning of the concrete vault and the gas pipeline that continues north of the vault are not within the scope of this assessment.
The first step in the decommissioning process for the onshore pipelines is to pig and flush the pipelines. Spherical or bullet-shaped foam pigs along with water and cleaning agents will be inserted into the pipeline and pushed from one end to the other with pumped water or compressed air. A water sample will be obtained and sent to a state-certified laboratory to ensure the total petroleum hydrocarbon (TPH) levels in the pipeline are less than 15 parts per million (ppm). Additional pigging and flushing runs will be performed until TPH test results indicate that the TPH within the pipeline is less than 15 ppm.

Wastewater generated by pigging and flushing will be collected in vacuum trucks or temporary storage tanks. Wastewater may be tested and treated onsite, and then transported offsite for disposal. This step assumes that the pipeline conditions (integrity and strength) will support pigging and flushing between the abutment and the concrete vault.

The ends of the casing will be excavated, the pipelines will be cut on each end of the casing and then pulled out from the casing. The pipelines will also be excavated and removed from the northern end of the casing to the outer wall of the concrete vault. Removed pipeline sections will be cut into pieces, loaded onto trucks, and transported to a disposal facility. This step assumes that the southwest end of the casing beneath the freeway and railroad can be accessed from Ocean Avenue, the northern end of the

Figure 16 – Onshore Pipeline Connections
casing can be accessed at the valve box or somewhere near the valve box and the railroad right-of-way, and that the pipelines are not currently grouted into the casing and can be removed from the casing.

Temporary flanges and fittings will be welded onto the ends of the remaining pipeline buried under Ocean Avenue in preparation for cementing the annulus. Temporary flanges will also be welded to the ends of the empty 30-inch casing in preparation for filling its annulus with cement. The temporary flanges will be blinded with blind flanges with appropriate fittings inserted into the blind flanges for pumping cement and venting the pipes and casing when filling with cement.

Cement slurry will be either mixed on-site or pre-mixed and trucked to the site in cement trucks. A trailer mounted concrete pump will be used to pump the cement into the pipelines and casing through hoses attached to the temporary flanges. The cement slurry will be allowed to cure, then the temporary flanges will be cut off and half-inch-thick steel plates will be welded onto the pipeline and casing ends.

The excavations will be backfilled and compacted using native soils where feasible, supplemented with imported fill if required. Pavement will be repaired, and the worksite will be restored to the pre-project condition.

Anticipated equipment used for decommissioning the onshore pipeline connections includes excavators equipped with buckets, hydraulic grapple, shear and roller compactor attachments, front-end loaders, vacuum trucks, cement trucks, cement mixer, temporary tanks, water pump, air compressor, cement pump, welding machine, temporary piping, pig launchers and pig receivers. Temporary shoring and traffic control measures may be required depending on the location and depth of burial at the casing ends.
SECTION THREE – PRELIMINARY SCHEDULE

3.1 SUMMARY SCHEDULE

The following high-level summary of the anticipated schedule for the Reuse alternative is preliminary and will most likely change. Note that while most of the tasks are sequential, some, such as the Onshore Facility Decommissioning, can occur in parallel with other tasks, and therefore the total estimated duration is less than the sum of the task durations. Please see Appendix A for a more detailed preliminary scheduled produced using Primavera P6.

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<thead>
<tr>
<th>Task</th>
<th>Estimated Duration (days)</th>
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<td>Onshore Facility Decommissioning</td>
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<tr>
<td>Removal of Island Surface Structures</td>
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<tr>
<td>Well Bay Concrete Deck Removal</td>
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<tr>
<td>Island Pavement and Petroleum Hydrocarbon Contaminated Soil Removal and Replacement</td>
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<td>Onshore Pipeline Connections Decommissioning</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>653</td>
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</table>

3.2 SCHEDULE CONSTRAINTS AND ASSUMPTIONS

The work schedule for activities at the onshore facility and on the surface of the island is assumed to be 5 days per week, day shifts only. Marine operations involving barges and/or diving crews are assumed to operate 7 days per week with two 12-hour shifts per day (day and night shifts).

No permit conditions with seasonal work constraints or downtime due to inclement weather was included in these preliminary schedules.
APPENDIX A – PRELIMINARY SCHEDULE
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<th>Activity ID</th>
<th>Activity Name</th>
<th>Original Duration</th>
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<th>Finish</th>
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<td>1A.1220</td>
<td>Develop: Site Restoration / Revegetation Plan</td>
<td>02-Aug-21 to 02-May-22</td>
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<td>1A.1150</td>
<td>Pre-Construction Surveys</td>
<td>02-Aug-21 to 20-Aug-21</td>
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<td>1A.1160</td>
<td>Mobilize Equipment &amp; Personnel To Onshore Facility Location</td>
<td>02-Aug-21 to 24-Aug-21</td>
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<tr>
<td>1A.1170</td>
<td>Excavate &amp; Stage Recycled Asphalt Base</td>
<td>30-Aug-21 to 16-Sep-21</td>
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<tr>
<td>1A.1180</td>
<td>Dispose Of Recycled Asphalt Base</td>
<td>17-Sep-21 to 19-Nov-21</td>
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<td>1A.1240</td>
<td>Excavate Public: Use Soil Remediation Area</td>
<td>22-Nov-21 to 12-Jan-22</td>
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<tr>
<td>1A.1250</td>
<td>Install Shovel: Pie Wall Around Hydrocarbon-Containing Soil</td>
<td>13-Jan-22 to 26-Jan-22</td>
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<td>1A.1260</td>
<td>Install Dewatering Wells</td>
<td>27-Jan-22 to 09-Feb-22</td>
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**Notes:**
- **Critical Remaining Work** indicates tasks that are critical to the schedule.
- **Milestone** denotes key milestones reached in the project.

**Timeline:**
- **25-Feb-22** - Printed Date
- **25-Feb-22** - SCHEDULE PAGE 1 OF 2
- **25-Feb-22** - ALTERNATIVE 2 - ORDINAL SCHEDULE PROJECTIONS
- **25-Feb-22** - RINCON ISLAND DECOMMISSIONING PLANNING
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California State Lands Commission
Rincon Phase 2 Decommissioning
Feasibility Study

PROJECT EXECUTION PLAN
Reefing Alternative

February 25, 2022
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SECTION ONE – PROJECT OVERVIEW

1.1 INTRODUCTION

This Project Execution Plan (PEP) describes the scope of work, means and methods, and preliminary schedule for decommissioning Rincon Island and associated facilities per the Reefing project alternative as defined by the California State Lands Commission (CSLC). This PEP is one of three PEPs prepared to support the decommissioning Feasibility Study being prepared by Padre Associates, Inc. (Padre) for the CSLC. Each PEP corresponds to one of the three project alternatives as summarized below:

- **Alternative 1 – Complete Removal** – This alternative is based on the proposition that the remaining structures contained on or within Rincon Island, the surrounding perimeter rock and tetrapods, the wharf, and the causeway are removed in their entirety. Rincon Island would be removed down to the seafloor, except for the decommissioned well conductors and causeway/wharf pilings, which would be removed to points below the seafloor elevations. All materials would be recovered and disposed or recycled offsite, presumably at dockside facilities in Los Angeles or Long Beach harbors, with the recovered materials trucked to processing sites or landfills. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

- **Alternative 2 – Reuse** – This alternative is based on the proposition that the remaining structures and pavement on Rincon Island and the contaminated soil, including the well bay area, would be removed and replaced with clean fill (assumes elevation of contaminated soil stops at sea level). The well bay conductors, surrounding perimeter rock and tetrapods, as well as the submerged Island would be left intact. The Reuse alternative is intended to prepare the island for a potential lessee; and a separate evaluation of any proposed use would subsequently occur. The Rincon Island causeway and wharf would be left intact and available for use in some form. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

- **Alternative 3 - Reefing** – This alternative is based on the proposition that the remaining structures and pavement on Rincon Island, and the contaminated soil, including the well bay area, would be removed and replaced with clean fill (assumes elevation of contaminated soil stops at slightly below sea level), to an elevation and condition consistent with use of the remaining island structure as habitat by wildlife species. The well bay conductors, surrounding perimeter rock and tetrapods, as well as the submerged Island would be left intact. Under the Reefing Alternative, the causeway and wharf would be removed in their entirety with the pilings removed to 5 feet below the seafloor. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

1.2 LOCATION

Rincon Island is located approximately 3,000 feet offshore of Punta Gorda in Ventura County, approximately 7 miles northwest of the city of Ventura, California. Rincon Island is located immediately offshore of the community of Mussel Shoals and approximately 0.5 mile south of the community of La...
Conchita. The Island is located in approximately 55 feet of water. A causeway, or access pier, connects the Island to the coast. The SCC parcel is located just east of the causeway landing/abutment.

The Onshore Facility consists of a 6.01-acre property owned by the State located 1.3 miles to the east of Rincon Island, at 5750 W. Pacific Coast Highway, Ventura. Rincon Island and the Onshore Facility were previously connected by an onshore pipeline system, until they were disconnected as part of the Phase 1 P&A process. Decommissioning of the Onshore Pipeline Connections from their current terminations at the causeway abutment to a valve box located on the northeast side of the Union Pacific Railroad tracks is included. Figure 1 – Vicinity Map and Figure 2 – Site Map below illustrate the location of Rincon Island and associated facilities.
1.3 PROJECT BACKGROUND AND OBJECTIVES

Rincon Island was constructed in 1959 by Atlantic Richfield Company (ARCO) for the specific purpose of well drilling and oil and gas production. Rincon Island and its appurtenant facilities were historically leased by the California State Lands Commission (CSLC) to oil and gas operators (State Oil and Gas Lease Nos. PRC 145, PRC 410, and PRC 1466), including most recently Rincon Island Limited Partnership, which quitclaimed its lease interests to CSLC in December 2017 after becoming financially insolvent.

With the completion of the P&A activities, Rincon Island provides approximately 1 acre of useable space within the interior of the revetment walls. Rincon Island that is surrounded at its perimeter with scattered palm trees. A single lane causeway connects the Island to shore at Mussel Shoals. Rincon Island was designed to support approximately 50 oil and gas production wells. Prior to the initial decommissioning activities, which have already been completed, the Island contained storage tanks, oil processing equipment, and other appurtenant facilities. Rincon Island has not produced oil or gas commercially since October 2008 due in part to the condition and integrity of the causeway that connects the Island to the shore.

Rincon Island was previously supported by a processing facility that operated until the completion of Phase 1 P&A activities. That original facility included both a parcel owned by the State (Onshore Facility) and a privately owned parcel referred to as the Coast Ranch Parcel, and contained 25 state oil wells, a handful of orphaned private wells, oil storage and processing facilities, and administrative offices. Only the parcel owned by the State (Onshore Facility) is included in the Phase 2 study...

In June 2018, CSLC selected Driltek, Inc. (Driltek) to perform engineering, operations, and administrative services for Rincon Island and the facilities onshore (Phase 1), under the oversight of CSLC engineers. In addition, Driltek undertook the development and execution of the program to plug and abandon onshore and offshore wells, perform all ancillary tasks associated with the plug and abandonment program, to provide essential personnel to continue the safe daily operations of the leases at the current baseline conditions, and to place the facilities into caretaker status or equivalent condition. Phase 1 began in January 2019 and was completed in June 2021.

With well abandonment completed, the next step in the decommissioning process is the development of a feasibility study (which this PEP is a part of) and decommissioning plan including planning, public outreach, and development of the CEQA documentation.

1.4 EXISTING FACILITIES

1.4.1 Rincon Island

Rincon Island is a manmade island a little over 2 acres in area constructed for oil and gas production and processing. Rincon Island is made up of 160,000 cubic yards of dredged sand and gravel. This core is surrounded with approximately 72,600 cubic yards of locally sourced riprap (boulders and gravel). See Figure 3 – Rincon Island Cross-Section below. Additionally, the seaside exterior is reinforced with 1,100 cement tetrapods, each weighing approximately 31 tons (Figure 4 – Concrete Tetrapods). Each tetrapod has four, 6-foot-long concrete legs that are greater than 2 feet in diameter at the end.

The working surface of Rincon Island is approximately 1.2 acres, which is paved with approximately 8 to 14 inches of concrete and asphalt. This area previously contained oil production facilities, piping systems, electrical supports, and various office and support building space. The perimeter of the island working area is surrounded by a 4.5-foot sea wall. As part of the recently completed P&A activities, the oil
production and injection wells have been permanently abandoned and the oil, gas, and water processing and storage facilities have been removed. Following removal of the oil production and processing facilities, the working area of the Island has been sealed with concrete and asphalt. All equipment and major structures have also been removed from the Island, and it is currently in “caretaker” status, meaning it does not require a full-time operator. An aerial photograph of the Rincon Island facility just prior to placement into caretaker status is depicted in Figure 5.

Figure 3 – Rincon Island Cross-Section

Figure 4 – Concrete Tetrapods
1.4.2 Rincon Island Causeway

The Rincon Island Causeway is a 2,732-foot-long wood and steel bridge that connects Rincon Island to the mainland coast at Punta Gorda (near Mussel Shoals) in northern Ventura County (Figure 6 – Rincon Island Causeway). The causeway provides vehicle, equipment, and personnel access to the island. The causeway was repaired during well abandonment activities to restore its load resistance to 65,000 pounds.

There were oil and gas pipelines that ran along the causeway which have been removed and are terminated at the landward end of the causeway. A locked entry fence and gate with barbed wire currently prohibits public access to the causeway and Island.
1.4.3 Onshore Facility

Rincon Island was supported by a facility onshore that operated until the completion of Phase 1 activities. That original facility included both a parcel owned by the State (Onshore Facility) and a privately owned parcel referred to as the Coast Ranch Parcel, and contained 25 state oil wells, a handful of orphaned private wells, oil storage and processing facilities, and administrative offices (Figure 7). The Onshore Facility consists of a 6.01-acre parcel owned by the State located 1.3 miles to the east of Rincon Island, at 5750 W. Pacific Coast Highway (PCH), Ventura. The Onshore Facility was tide and submerged lands prior to the construction of Highway 101, when fill was brought in.

All surface facilities have been removed, but prior to completion of the well abandonment activities the site included an office building and associated support facilities including electrical distribution and perimeter fencing.

![Figure 7 – Onshore Facility](image)

1.4.4 Onshore Pipeline Connections

Oil and gas pipelines extend from the end of the abutment on the landward side of the Causeway and under U.S. Highway 101 and the Union Pacific railroad tracks. These pipelines terminate within a valve box on the northeast side of the railroad right of way. These pipelines then extend up the hill to the privately owned DCOR oil and gas processing facility and finally terminate at the Onshore Facility. Although CSLC jurisdiction does not extend past the causeway abutment in the area near the causeway entrance, the decommissioning of the pipelines from the abutment to the valve box is included as part of Phase 2 due to the likelihood of regulatory requirements regarding final disposition of pipelines under roadways and railway crossings.
SECTION TWO – REEFING ALTERNATIVE PROJECT DESCRIPTION

2.1 SCOPE OF WORK

The scope of work for the Reefing Alternative includes removal of asphalt at the Onshore Facility, remediation of petroleum hydrocarbon containing soil at the Onshore Facility, removal of the remaining structures and pavement located on the island, removal of contaminated soil and replacement with clean fill from the island, removal of the causeway and wharf, decommissioning of the onshore pipelines from the causeway abutment to the valve box on the opposite side of the US 101 highway, and improvements to the SCC Parcel. The following subsections describe the proposed Reefing scope of work in more detail.

2.1.1 Onshore Facility Decommissioning

The Onshore Facility is a 6.01-acre parcel owned by the State (PRC 145). See Figure 8 – Onshore Facility Location. Approximately 2.80 acres are paved with recycled asphalt aggregate base material with an average thickness of 2.5-feet. In addition, an estimated 0.48 acre of the underlying ground of the State Parcel contains petroleum hydrocarbon contamination that will require remediation. Groundwater is found at approximately 12-feet below the ground surface at the Onshore Parcel.

Figure 8 – Onshore Facility Location

All buildings, equipment and materials have previously been removed from the Onshore Facility site and the site surface currently consists of bare dirt and the recycled asphalt aggregate base. Initial site assessments have been performed at the onshore site, including groundwater and soil sampling and monitoring. Site assessment activities are ongoing, and the assessment results have been used to ascertain and quantify the extent of hydrocarbon contamination at the Onshore Facility.

The proposed scope of work and methods discussed below rely on assumptions and estimates and may not reflect the actual remediation needed after site assessment activities and related analyses are
complete. In making the assumptions and performing the analyses set forth herein, a conservative approach was used assuming the maximum level of remediation that could be necessary to bring the site contamination to screening levels acceptable for public use. This maximum level of remediation may be inconsistent with the actual remediation needed for the future use ultimately approved for the site. CSLC also intends to look at the possibility of bioremediation options for the impacted soils at the Onshore Facility.

The initial laboratory analytical results for some of the soil and groundwater samples collected from the Onshore Facility site indicate the presence of petroleum hydrocarbons. The laboratory analytical results for select soil samples did not indicate the presence of VOCs or PCBs constituent concentrations in excess of ESL Leaching to Groundwater Levels (Table S-3) Non-Drinking Water values. The reported metals concentrations did not exceed CCR Title 22 values for hazardous waste classification. The laboratory analytical results did not indicate hazardous waste characteristics: corrosivity (pH), reactivity (reactive cyanide/reactive sulfide), ignitability (flashpoint), or toxicity (96-hour fish bioassay) (Padre, 2021).

The scope of work includes removal of the approximately 2.80 acres of recycled asphalt aggregate base material spread across much of the Onshore Facility. The recycled asphalt aggregate base material would be excavated to the underlying native soil and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-contaminated waste. Once the asphalt has been removed, the surface grade would be restored with clean imported soil to establish positive surface drainage. The final site restoration and revegetation plan consists of applying a hydroseed composed of a native seed to the disturbance area of the site.

The scope of work also includes remediation of approximately 0.48 acres of petroleum hydrocarbon-contaminated soil to a depth estimated at 12 feet below ground surface (anticipated to include approximately 7,500 cubic yards). This level of remediation would bring the site contamination to screening levels acceptable for public use. The contaminated soil would be excavated and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-containing waste. The excavation sites would be backfilled with clean soil and compacted. The restored surfaces would be revegetated with a hydroseed composed of native seed. (Padre, 2021).

An engineered grading plan would be prepared for submittal to the County of Ventura to obtain a grading permit for the excavation and backfill activities at the Onshore Facility. Import fill materials would be graded and compacted in-place to a minimum of 90% relative compaction. Equipment used for backfilling and compaction includes trucks, front end loaders, excavators and potentially dozers, graders or roller compactors.

The petroleum hydrocarbon-contaminated soil and asphalt would be excavated using standard commercial excavation equipment (e.g., hydraulic excavator, front-end loader, track-mounted dozer). The excavation area sidewalls would be sloped to provide safe access for the excavating equipment to excavate the vertical and lateral extent of petroleum hydrocarbon-contaminated soil. Groundwater dewatering wells would be installed around the excavation area. The extracted petroleum hydrocarbon-containing groundwater would be processed through a series of settling tanks, bag filters, granular activated carbon vessels to meet the requirements to discharge into the County of Ventura-operated wastewater system.

The excavated petroleum hydrocarbon-containing soil would be placed into trucks and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-contaminated waste.
Verification soil samples would be collected from the excavation area on a grid pattern with approximately 25-feet between sample locations. The soil samples would be chemically analyzed for the presence of petroleum hydrocarbons.

Once complete, the dewatering wells would be removed, and the excavation area would be backfilled to match surrounding grade with clean soil from a source located in Ventura County. The surface area would be graded with clean soil to establish positive drainage from the disturbed area.

Once the excavation activities were considered complete, hydoseed composed of a native seed mix would be applied to the disturbance areas of the Project.

Alternative remediation methods, such as bioremediation, are currently being assessed. However, since it is not yet known which alternative remediation methods may be feasible, the scope of work does not include such alternatives at this time.

2.1.2 Island Surface Structure Removal

Three buildings, including the Operator's Building, Electrical Building and Communications Building, will be removed from Rincon Island. The location of each building is shown below in Figure 9 – Rincon Island Surface Structures. Details of each building are listed below:

1. The Operator's Building is a concrete masonry unit (CMU) building that includes an office, tool room, storage room, restroom, and a locker room. An underground septic tank is also associated with the Operator's Building, which would also be removed.

2. The Electrical Building is a CMU building that contains electrical equipment such as transformers, switchgear, conduits, and cables. Some of the electrical equipment is owned by Southern California Edison (SCE).

3. The Communications (Cell Phone) Building is a prefabricated, trailer-mounted building containing cellular communications equipment. A cell phone antenna tower is attached to the north wall of the Communications Building, which will also be removed.

The Operator's Building, including the foundation and associated underground septic tank, will be demolished using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Prior to removal, any remaining underground septic tank waste would be pumped out, and the remaining tank removal would be coordinated through the Ventura County Environmental Health Division, Technical Services Department. Front-end loaders will be used to assist with materials handling. The debris will be loaded onto trucks and transported offsite for disposal. See Figure 10 – Illustration of Excavators Demolishing Surface Structures.

The electrical equipment within the Electrical Building will be disconnected by electricians, and SCE will be provided access to remove SCE owned equipment. Electrical equipment will be loaded onto trucks using truck mounted cranes, forklifts, or similar lifting equipment and transported offsite for recycling or disposal. Once electrical equipment has been removed, the Electrical Building and its foundation will be demolished using excavators and front-end loaders, and the debris will be loaded onto trucks and transported offsite for disposal.
Figure 9 – Rincon Island Surface Structures

Figure 10 – Illustration of Excavators Demolishing Surface Structures
A Driltek report (Rincon Island Discussion of Preparation for Caretaker Status, Driltek, 2020) indicates that both the Operator’s Building and the Electrical Building have non-friable asbestos containing material (ACM) in the roofing materials and parapet walls. A Cal/OSHA-Certified Asbestos Consultant (CAC) will prepare an Asbestos Abatement Work Plan (AAWP), which will include procedures for removal and handling of ACM, waste labeling and waste manifest requirements, transportation requirements, and acceptable disposal facilities.

It is assumed that the company that owns and operates the Communications Building will demobilize their equipment. The cell phone tower will most likely be disassembled and loaded onto a truck or trailer using a truck-mounted crane, and a truck will be used to tow the mobile building.

2.1.3 Island Well Bay Concrete Deck Removal

The concrete deck that has been constructed over the previously decommissioned well bay will be removed. The well bay concrete deck will be demolished using excavators equipped with hydraulic claw, cutter, shear, and breaker attachments, as well as buckets for moving material. Front-end loaders may be used to assist with materials handling. The concrete and steel debris would be transported to an offsite recycling or disposal facility. The location of the well bay is depicted below in Figure 11 – Rincon Island Well Bay.

![Figure 11 – Rincon Island Well Bay](image-url)
2.1.4 Island Pavement and Contaminated Soil Removal

The scope of work for the Reefing alternative includes demolition and removal of the island’s approximately 3.5-inch-thick asphaltic pavement and removal of the contaminated island core (assumed to be sand and gravel). The surface area of the island site potentially containing hydrocarbon-containing soil is estimated to be 0.49-acres. The estimated maximum depth of excavation is 16-feet below ground surface. The total volume of contaminated soil is estimated at 9,605 cubic yards. See Figure 12 – Cross-Section Illustration of Contaminated Soil Removal.

![Cross-Section Illustration of Contaminated Soil Removal](image)

Figure 12 – Cross-Section Illustration of Contaminated Soil Removal

The pavement will be removed using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Front-end loaders will be used to assist with materials handling. The asphalt debris will be loaded onto trucks and transported offsite for recycling or disposal. See Figure 13 – Illustration of Island Pavement Removal below.

Removal of the hydrocarbon contaminated soil from the Island core will require excavation and transportation of the contaminated soil to approved offsite disposal or recycling facilities. Initial site assessments have been performed, including interstitial water, ocean water, and soil sampling and monitoring. Site assessment activities have been completed to ascertain and quantify the extent of hydrocarbon contamination.

In making the assumptions and performing the analyses set forth herein, a conservative approach was employed where the maximum level of remediation that could be necessary to bring the site to screening levels acceptable for public use was assumed. This maximum level of remediation may be inconsistent with, and more than the actual remediation effort needed for the future use ultimately approved for the site.
The laboratory analytical results for samples collected from the Island identified the presence of petroleum hydrocarbon concentrations within certain areas of the Island core artificial fill material at depths from approximately 1-foot to 16-feet below ground surface. The estimated total volume of petroleum hydrocarbon-containing soil identified within the Island core is approximately 9,605 cubic yards. The depth to interstitial water measured at temporary monitoring wells ranged from approximately 11.96 feet to 14.61 feet below the surface of the Island, which correspond to elevations that range from approximately 0.47 feet to 3.18 feet mean sea level (msl). The laboratory analytical results for interstitial water samples collected from temporary monitoring wells indicated petroleum hydrocarbon concentrations that were less than the applicable screening levels, and the laboratory analytical results for three ocean water samples collected at the site did not indicate the presence of petroleum hydrocarbon constituents (Padre, 2021).

The petroleum hydrocarbon-containing soil would be excavated using standard commercial excavation equipment (e.g., hydraulic excavator, front-end loader, track-mounted dozer). Excavation of the petroleum hydrocarbon-containing soil will continue until the presence of petroleum hydrocarbons was not detected using a field portable handheld photoionization detector (PID), as well as visual and olfactory observations. The remaining clean fill materials would be sampled and chemically analyzed to confirm adequate removal of petroleum hydrocarbon-containing soil from the island core materials. See Figure 14 – Illustration of Contaminated Soil Removal below.
Petroleum hydrocarbon-contaminated soils will be loaded onto trucks and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-containing waste. Due to causeway weight limits, smaller loads may be transported from the island to the onshore facility for staging, and then loaded onto other trucks for subsequent transportation to the landfill in larger loads, resulting in fewer trips.

Once all contaminated soil has been removed the excavation will be backfilled and compacted using clean soil. See Figure 15 – Illustration of Island Backfill and Compaction below.
2.1.5 Island Causeway and Wharf Removal

The scope of work for the Reefing Alternative includes removal of the causeway and the wooden pile stubs on the seafloor running parallel with the pier (used in original construction of causeway), and the removal of the Island wharf. The causeway and wharf pilings and wooden pile stubs would be removed to 5-feet below the seafloor. This work would include removal of the abutment located on the shoreline groin and would consist of removal of the reinforced concrete walls, steel components, fencing, utilities and all pavement. The groin’s riprap and the point of land that currently supports the concrete abutment structure would be left intact. See Figure 16 – Rincon Island Causeway, Abutment and Wharf and Figure 17 – 3D Composite LIDAR and Multibeam Sonar Image of the Causeway.
Figure 16 – Rincon Island Causeway, Abutment and Wharf
The decommissioning methods anticipated for use in decommissioning the wharf and causeway are based on that assumption that the causeway’s current capacity of 65,000 pounds does not change due to storm damage, corrosion, or other means of deterioration prior to decommissioning.

If the wharf is to be removed, the removal would best take place before the causeway is removed so that the causeway could be used to transport recovered materials to shore for recycling or disposal. The wharf decommissioning would take place using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Front-end loaders may be used to assist with materials handling. The debris will be loaded onto trucks and transported offsite for disposal.

Once the wharf removal has been completed, the causeway demolition would be performed using a mobile crane operating from the causeway. The work would start at the offshore end of the causeway and work landward dismantling the causeway and removing its piling 5-feet beneath the seafloor one bent at a time. Working from the causeway, the wooden pile stubs from the causeway’s original construction would be excavated and removed to a depth of 5-feet below the seafloor. The supporting dive crew would also operate from the causeway. All components would be recovered, loaded on trucks and shipped to offsite recycling or disposal. See Figure 18 – Illustration of Causeway Removal below.
At the abutment, the riprap currently piled against the concrete walls of the abutment would be temporarily relocated and the concrete abutment demolished and transported to offsite recycling. Once the abutment demolition is completed, the riprap would be placed back over the existing point of land that supported the abutment within the abutment footprint. The existing riprap surrounding the groin and the groin itself would be left intact. See Figure 19 – Illustration of Causeway Abutment Removal and Figure 20 – Illustration of Causeway Abutment Location Final Condition below.
Figure 19 – Illustration of Causeway Abutment Removal

Figure 20 – Illustration of Causeway Abutment Location Final Condition
2.1.6 Onshore Pipeline Connection Decommissioning

The scope of work for the Reefing alternative includes decommissioning the 6-inch diameter gas pipeline and the 6-inch diameter oil pipeline from their terminations at the causeway abutment to the valve box located on the northeast side of the railroad tracks.

![Diagram of pipeline](image)

**Figure 21 – Onshore Pipeline Connections**

The pipelines would be pigged and flushed from the abutment to the concrete valve vault to remove any potential contaminants. The pipelines would be filled with cement slurry from the abutment to the southern end of the casing. The pipelines would be removed from the 30-inch diameter casing north to the concrete vault, and then the casing would be filled with cement slurry. The decommissioning of the concrete vault and the gas pipeline that continues north of the vault are not within the scope of this assessment.

The first step in the decommissioning process for the onshore pipelines is to pig and flush the pipelines. Spherical or bullet-shaped foam pigs along with water and cleaning agents will be inserted into the pipeline and pushed from one end to the other with pumped water or compressed air. A water sample will be obtained and sent to a state-certified laboratory to ensure the total petroleum hydrocarbon (TPH)
levels in the pipeline are less than 15 parts per million (ppm). Additional pigging and flushing runs will be performed until TPH test results indicate that the TPH within the pipeline is less than 15 ppm. Wastewater generated by pigging and flushing will be collected in vacuum trucks or temporary storage tanks. Wastewater may be tested and treated onsite, and then transported offsite for disposal. This step assumes that the pipeline conditions (integrity and strength) will support pigging and flushing between the abutment and the concrete vault.

The ends of the casing will be excavated, the pipelines will be cut on each end of the casing and then pulled out from the casing. The pipelines will also be excavated and removed from the northern end of the casing to the outer wall of the concrete vault. Removed pipeline sections will be cut into pieces, loaded onto trucks, and transported to a disposal facility. This step assumes that the southwest end of the casing beneath the freeway and railroad can be accessed from Ocean Avenue, the northern end of the casing can be accessed at the valve box or somewhere near the valve box and the railroad right-of-way, and that the pipelines are not currently grouted into the casing and can be removed from the casing.

Temporary flanges and fittings will be welded onto the ends of the remaining pipeline buried under Ocean Avenue in preparation for cementing the annulus. Temporary flanges will also be welded to the ends of the empty 30-inch casing in preparation for filling its annulus with cement. The temporary flanges will be blinded with blind flanges with appropriate fittings inserted into the blind flanges for pumping cement and venting the pipes and casing when filling with cement.

Cement slurry will be either mixed on-site or pre-mixed and trucked to the site in cement trucks. A trailer mounted concrete pump will be used to pump the cement into the pipelines and casing through hoses attached to the temporary flanges. The cement slurry will be allowed to cure, then the temporary flanges will be cut off and half-inch-thick steel plates will be welded onto the pipeline and casing ends.

The excavations will be backfilled and compacted using native soils where feasible, supplemented with imported fill if required. Pavement will be repaired, and the worksite will be restored to the pre-project condition.

Anticipated equipment used for decommissioning the onshore pipeline connections includes excavators equipped with buckets, hydraulic grapple, shear and roller compactor attachments, front-end loaders, vacuum trucks, cement trucks, cement mixer, temporary tanks, water pump, air compressor, cement pump, welding machine, temporary piping, pig launchers and pig receivers. Temporary shoring and traffic control measures may be required depending on the location and depth of burial at the casing ends.
SECTION THREE – PRELIMINARY SCHEDULE

3.1 SUMMARY SCHEDULE

The following high-level summary of the anticipated schedule for the Reefing alternative is preliminary and will most likely change. Note that while most of the tasks are sequential, some, such as the Onshore Facility Decommissioning, can occur in parallel with other tasks, and therefore the total estimated duration is less than the sum of the task durations. Please see Appendix A for a more detailed preliminary schedule produced using Primavera P6.

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3.2 SCHEDULE CONSTRAINTS AND ASSUMPTIONS

The work schedule for activities at the onshore facility and on the surface of the island is assumed to be 5 days per week, day shifts only. Marine operations involving barges and/or diving crews are assumed to operate 7 days per week with two 12-hour shifts per day (day and night shifts).

No permit conditions with seasonal work constraints or downtime due to inclement weather was included in these preliminary schedules.
APPENDIX A – PRELIMINARY SCHEDULE
# Alternatives 3 - Ordinal Schedule Projections

## Rincon Island Decommissioning Planning

### Activity ID | Activity Name | Original Duration | Start Date | Finish Date
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1 | Padre - CSLG Rincon Island Decommissioning Planning | | | |

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California State Lands Commission
Rincon Phase 2 Decommissioning Feasibility Study

PROJECT EXECUTION PLAN
Complete Removal Alternative

February 25, 2022
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SECTION ONE – PROJECT OVERVIEW

1.1 INTRODUCTION

This Project Execution Plan (PEP) describes the scope of work, means and methods, and preliminary schedule for decommissioning Rincon Island and associated facilities per the Removal project alternative as defined by the California State Lands Commission (CSLC). This PEP is one of three PEPs prepared to support the decommissioning Feasibility Study being prepared by Padre Associates, Inc. (Padre) for the CSLC. Each PEP corresponds to one of the three project alternatives as summarized below:

- **Alternative 1 – Complete Removal** – This alternative is based on the proposition that the remaining structures contained on or within Rincon Island, the surrounding perimeter rock and tetrapods, the wharf, and the causeway are removed in their entirety. Rincon Island would be removed down to the seafloor, except for the decommissioned well conductors and causeway/wharf pilings, which would be removed to points below the seafloor elevations. All materials would be recovered and disposed or recycled offsite, presumably at dockside facilities in Los Angeles or Long Beach harbors, with the recovered materials trucked to processing sites or landfills. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

- **Alternative 2 – Reuse** – This alternative is based on the proposition that the remaining structures and pavement on Rincon Island and the contaminated soil, including the well bay area, would be removed and replaced with clean fill (assumes elevation of contaminated soil stops at sea level). The well bay conductors, surrounding perimeter rock and tetrapods, as well as the submerged Island would be left intact. The Reuse alternative is intended to prepare the island for a potential lessee; and a separate evaluation of any proposed use would subsequently occur. The Rincon Island causeway and wharf would be left intact and available for use in some form. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

- **Alternative 3 - Reefing** – This alternative is based on the proposition that the remaining structures and pavement on Rincon Island, and the contaminated soil, including the well bay area, would be removed and replaced with clean fill (assumes elevation of contaminated soil stops at slightly below sea level), to an elevation and condition consistent with use of the remaining island structure as habitat by wildlife species. The well bay conductors, surrounding perimeter rock and tetrapods, as well as the submerged Island would be left intact. Under the Reefing Alternative, the causeway and wharf would be removed in their entirety with the pilings removed to 5 feet below the seafloor. The Onshore Facility would be left in a condition acceptable for future public use, the SCC Parcel would be improved (improvement level to be decided at a later date), and the Onshore Pipeline Connections would be decommissioned.

1.2 LOCATION

Rincon Island is located approximately 3,000 feet offshore of Punta Gorda in Ventura County, approximately 7 miles northwest of the city of Ventura, California. Rincon Island is located immediately offshore of the community of Mussel Shoals and approximately 0.5 mile south of the community of La...
Conchita. The Island is located in approximately 55 feet of water. A causeway, or access pier, connects the Island to the coast. The SCC parcel is located just east of the causeway landing/abutment.

The Onshore Facility consists of a 6.01-acre property owned by the State located 1.3 miles to the east of Rincon Island, at 5750 W. Pacific Coast Highway, Ventura. Rincon Island and the Onshore Facility were previously connected by an onshore pipeline system, until they were disconnected as part of the Phase 1 P&A process. Decommissioning of the Onshore Pipeline Connections from their current terminations at the causeway abutment to a valve box located on the northeast side of the Union Pacific Railroad tracks is included. Figure 1 – Vicinity Map and Figure 2 – Site Map below illustrate the location of Rincon Island and associated facilities.
1.3 PROJECT BACKGROUND AND OBJECTIVES

Rincon Island was constructed in 1959 by Atlantic Richfield Company (ARCO) for the specific purpose of well drilling and oil and gas production. Rincon Island and its appurtenant facilities were historically leased by the California State Lands Commission (CSLC) to oil and gas operators (State Oil and Gas Lease Nos. PRC 145, PRC 410, and PRC 1466), including most recently Rincon Island Limited Partnership, which quitclaimed its lease interests to CSLC in December 2017 after becoming financially insolvent.

With the completion of the P&A activities, Rincon Island provides approximately 1 acre of useable space within the interior of the revetment walls. Rincon Island that is surrounded at its perimeter with scattered palm trees. A single lane causeway connects the Island to shore at Mussel Shoals. Rincon Island was designed to support approximately 50 oil and gas production wells. Prior to the initial decommissioning activities, which have already been completed, the Island contained storage tanks, oil processing equipment, and other appurtenant facilities. Rincon Island has not produced oil or gas commercially since October 2008 due in part to the condition and integrity of the causeway that connects the Island to the shore.

Rincon Island was previously supported by a processing facility that operated until the completion of Phase 1 P&A activities. That original facility included both a parcel owned by the State (Onshore Facility) and a privately owned parcel referred to as the Coast Ranch Parcel, and contained 25 state oil wells, a handful of orphaned private wells, oil storage and processing facilities, and administrative offices. Only the parcel owned by the State (Onshore Facility) is included in the Phase 2 study...

In June 2018, CSLC selected Driltek, Inc. (Driltek) to perform engineering, operations, and administrative services for Rincon Island and the facilities onshore (Phase 1), under the oversight of CSLC engineers. In addition, Driltek undertook the development and execution of the program to plug and abandon onshore and offshore wells, perform all ancillary tasks associated with the plug and abandonment program, to provide essential personnel to continue the safe daily operations of the leases at the current baseline conditions, and to place the facilities into caretaker status or equivalent condition. Phase 1 began in January 2019 and was completed in June 2021.

With well abandonment completed, the next step in the decommissioning process is the development of a feasibility study (which this PEP is a part of) and decommissioning plan including planning, public outreach, and development of the CEQA documentation.

1.4 EXISTING FACILITIES

1.4.1 Rincon Island

Rincon Island is a manmade island a little over 2 acres in area constructed for oil and gas production and processing. Rincon Island is made up of 160,000 cubic yards of dredged sand and gravel. This core is surrounded with approximately 72,600 cubic yards of locally sourced riprap (boulders and gravel). See Figure 3 – Rincon Island Cross-Section below. Additionally, the seaside exterior is reinforced with 1,100 cement tetrapods, each weighing approximately 31 tons (Figure 4 – Concrete Tetrapods). Each tetrapod has four, 6-foot-long concrete legs that are greater than 2 feet in diameter at the end.

The working surface of Rincon Island is approximately 1.2 acres, which is paved with approximately 8 to 14 inches of concrete and asphalt. The surface of the island is primarily covered with asphalt and concrete that consumes approximately 1.2 acres of the island. This area previously contained oil production facilities, piping systems, electrical supports, and various office and support building space. The perimeter
of the island working area is surrounded by a 4.5-foot sea wall. As part of the recently completed P&A activities, the oil production and injection wells have been permanently abandoned and the oil, gas, and water processing and storage facilities have been removed. Following removal of the oil production and processing facilities, the working area of the Island has been sealed with concrete and asphalt. All equipment and major structures have also been removed from the Island, and it is currently in “caretaker” status, meaning it does not require a full-time operator. An aerial photograph of the Rincon Island facility just prior to placement into caretaker status is depicted in Figure 5.

Figure 3 – Rincon Island Cross-Section

Figure 4 – Concrete Tetrapods
1.4.2 Rincon Island Causeway

The Rincon Island Causeway is a 2,732-foot-long wood and steel bridge that connects Rincon Island to the mainland coast at Punta Gorda (near Mussel Shoals) in northern Ventura County (Figure 6 – Rincon Island Causeway). The causeway provides vehicle, equipment, and personnel access to the island. The causeway was repaired during well abandonment activities to restore its load resistance to 65,000 pounds.

There were oil and gas pipelines that ran along the causeway which have been removed and are terminated at the landward end of the causeway. A locked entry fence and gate with barbed wire currently prohibits public access to the causeway and Island.

Figure 5 – Aerial Photograph of Rincon Island

Figure 6 – Rincon Island Causeway
1.4.3 Onshore Facility

Rincon Island was supported by a facility onshore that operated until the completion of Phase 1 activities. That original facility included both a parcel owned by the State (Onshore Facility) and a privately owned parcel referred to as the Coast Ranch Parcel, and contained 25 state oil wells, a handful of orphaned private wells, oil storage and processing facilities, and administrative offices (Figure 7). The Onshore Facility consists of a 6.01-acre parcel owned by the State located 1.3 miles to the east of Rincon Island, at 5750 W. Pacific Coast Highway (PCH), Ventura. The Onshore Facility was tide and submerged lands prior to the construction of Highway 101, when fill was brought in.

All surface facilities have been removed, but prior to completion of the well abandonment activities the site included an office building and associated support facilities including electrical distribution and perimeter fencing.

![Onshore Facility](image)

Figure 7 – Onshore Facility

1.4.4 Onshore Pipeline Connections

Oil and gas pipelines extend from the end of the abutment on the landward side of the Causeway and under U.S. Highway 101 and the Union Pacific railroad tracks. These pipelines terminate within a valve box on the northeast side of the railroad right of way. These pipelines then extend up the hill to the privately owned DCOR oil and gas processing facility and finally terminate at the Onshore Facility. Although CSLC jurisdiction does not extend past the causeway abutment in the area near the causeway entrance, the decommissioning of the pipelines from the abutment to the valve box is included as part of Phase 2 due to the likelihood of regulatory requirements regarding final disposition of pipelines under roadways and railway crossings.
SECTION TWO – REMOVAL ALTERNATIVE PROJECT DESCRIPTION

2.1 SCOPE OF WORK

The scope of work for the Removal alternative includes removal of asphalt at the onshore facility, remediation of petroleum hydrocarbon containing soil at the onshore facility, removal of the island and all facilities located on the island, removal of the causeway, decommissioning of the onshore pipelines from the causeway abutment to the valve box on the opposite side of the US 101 highway, and improvements to the SCC Parcel. The following subsections describe the proposed Removal scope of work in more detail.

2.1.1 Onshore Facility Decommissioning

The Onshore Facility is a 6.01-acre parcel owned by the State (PRC 145). See Figure 8 – Onshore Facility Location. Approximately 2.80 acres are paved with recycled asphalt aggregate base material with an average thickness of 2.5-feet. In addition, an estimated 0.48 acre of the underlying ground of the State Parcel contains petroleum hydrocarbon contamination that will require remediation. Groundwater is found at approximately 12-feet below the ground surface at the Onshore Parcel.

All buildings, equipment and materials have previously been removed from the Onshore Facility site and the site surface currently consists of bare dirt and the recycled asphalt aggregate base. Initial site assessments have been performed at the onshore site, including groundwater and soil sampling and monitoring. Site assessment activities are ongoing, and the assessment results have been used to ascertain and quantify the extent of hydrocarbon contamination at the Onshore Facility.

The proposed scope of work and methods discussed below rely on assumptions and estimates and may not reflect the actual remediation needed after site assessment activities and related analyses are complete. In making the assumptions and performing the analyses set forth herein, a conservative
The approach was used assuming the maximum level of remediation that could be necessary to bring the site contamination to screening levels acceptable for public use. This maximum level of remediation may be inconsistent with the actual remediation needed for the future use ultimately approved for the site. CSLC also intends to look at the possibility of bioremediation options for the impacted soils at the Onshore Facility.

The initial laboratory analytical results for some of the soil and groundwater samples collected from the Onshore Facility site indicate the presence of petroleum hydrocarbons. The laboratory analytical results for select soil samples did not indicate the presence of VOCs or PCBs constituent concentrations in excess of ESL Leaching to Groundwater Levels (Table S-3) Non-Drinking Water values. The reported metals concentrations did not exceed CCR Title 22 values for hazardous waste classification. The laboratory analytical results did not indicate hazardous waste characteristics: corrosivity (pH), reactivity (reactive cyanide/reactive sulfide), ignitability (flashpoint), or toxicity (96-hour fish bioassay) (Padre, 2021).

The scope of work includes removal of the approximately 2.80 acres of recycled asphalt aggregate base material spread across much of the Onshore Facility. The recycled asphalt aggregate base material would be excavated to the underlying native soil and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-contaminated waste. Once the asphalt has been removed, the surface grade would be restored with clean imported soil to establish positive surface drainage. The final site restoration and revegetation plan consists of applying a hydroseed composed of a native seed to the disturbance area of the site.

The scope of work also includes remediation of approximately 0.48 acres of petroleum hydrocarbon-contaminated soil to a depth estimated at 12 feet below ground surface (anticipated to include approximately 7,500 cubic yards). This level of remediation would bring the site contamination to screening levels acceptable for public use. The contaminated soil would be excavated and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-containing waste. The excavation sites would be backfilled with clean soil and compacted. The restored surfaces would be revegetated with a hydroseed composed of native seed. (Padre, 2021).

An engineered grading plan would be prepared for submittal to the County of Ventura to obtain a grading permit for the excavation and backfill activities at the Onshore Facility. Import fill materials would be graded and compacted in-place to a minimum of 90% relative compaction. Equipment used for backfilling and compaction includes trucks, front end loaders, excavators and potentially dozers, graders or roller compactors.

The petroleum hydrocarbon-contaminated soil and asphalt would be excavated using standard commercial excavation equipment (e.g., hydraulic excavator, front-end loader, track-mounted dozer). The excavation area sidewalls would be sloped to provide safe access for the excavating equipment to excavate the vertical and lateral extent of petroleum hydrocarbon-contaminated soil. Groundwater dewatering wells would be installed around the excavation area. The extracted petroleum hydrocarbon-containing groundwater would be processed through a series of settling tanks, bag filters, granular activated carbon vessels to meet the requirements to discharge into the County of Ventura-operated wastewater system.

The excavated petroleum hydrocarbon-containing soil would be placed into trucks and transported to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-contaminated waste.
Verification soil samples would be collected from the excavation area on a grid pattern with approximately 25-feet between sample locations. The soil samples would be chemically analyzed for the presence of petroleum hydrocarbons.

Once complete, the dewatering wells would be removed, and the excavation area would be backfilled to match surrounding grade with clean soil from a source located in Ventura County. The surface area would be graded with clean soil to establish positive drainage from the disturbed area.

Once the excavation activities were considered complete, hydroleed composed of a native seed mix would be applied to the disturbance areas of the Project.

Alternative remediation methods, such as bioremediation, are currently being assessed. However, since it is not yet known which alternative remediation methods may be feasible, the scope of work does not include such alternatives at this time.

2.1.2 Island Surface Structure Removal

Three buildings, including the Operator’s Building, Electrical Building and Communications Building, will be removed from Rincon Island. The location of each building is shown below in Figure 9 – Rincon Island Surface Structures. Details of each building are listed below:

1. The Operator’s Building is a concrete masonry unit (CMU) building that includes an office, tool room, storage room, restroom, and a locker room. An underground septic tank is also associated with the Operator’s Building, which would also be removed.

2. The Electrical Building is a CMU building that contains electrical equipment such as transformers, switchgear, conduits, and cables. Some of the electrical equipment is owned by Southern California Edison (SCE).

3. The Communications (Cell Phone) Building is a prefabricated, trailer-mounted building containing cellular communications equipment. A cell phone antenna tower is attached to the north wall of the Communications Building, which will also be removed.

The Operator’s Building, including the foundation and associated underground septic tank, will be demolished using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Prior to removal, any remaining underground septic tank waste would be pumped out, and the remaining tank removal would be coordinated through the Ventura County Environmental Health Division, Technical Services Department. Front-end loaders will be used to assist with materials handling. The debris will be loaded onto trucks and transported offsite for disposal. See Figure 10 – Illustration of Excavators Demolishing Surface Structures.

The electrical equipment within the Electrical Building will be disconnected by electricians, and SCE will be provided access to remove SCE owned equipment. Electrical equipment will be loaded onto trucks using truck mounted cranes, forklifts, or similar lifting equipment and transported offsite for recycling or disposal. Once electrical equipment has been removed, the Electrical Building and its foundation will be demolished using excavators and front-end loaders, and the debris will be loaded onto trucks and transported offsite for disposal.
Figure 9 – Rincon Island Surface Structures

Figure 10 – Illustration of Excavators Demolishing Surface Structures
A Driltek report (Rincon Island Discussion of Preparation for Caretaker Status, Driltek, 2020) indicates that both the Operator’s Building and the Electrical Building have non-friable asbestos containing material (ACM) in the roofing materials and parapet walls. A Cal/OSHA-Certified Asbestos Consultant (CAC) will prepare an Asbestos Abatement Work Plan (AAWP), which will include procedures for removal and handling of ACM, waste labeling and waste manifest requirements, transportation requirements, and acceptable disposal facilities.

It is assumed that the company that owns and operates the Communications Building will demobilize their equipment. The cell phone tower will most likely be disassembled and loaded onto a truck or trailer using a truck-mounted crane, and a truck will be used to tow the mobile building.

2.1.3 Island Well Bay Concrete Deck Removal

The concrete deck that has been constructed over the previously decommissioned well bay will be removed. The well bay concrete deck will be demolished using excavators equipped with hydraulic claw, cutter, shear, and breaker attachments, as well as buckets for moving material. Front-end loaders may be used to assist with materials handling. The concrete and steel debris would be transported to an offsite recycling or disposal facility. The location of the well bay is depicted below in Figure 11 – Rincon Island Well Bay.

![Figure 11 – Rincon Island Well Bay](image-url)
### 2.1.4 Island Pavement and Contaminated Soil Removal

The scope of work for the Removal alternative includes demolition and removal of the island’s approximately 3.5-inch-thick asphaltic pavement and removal of the contaminated island core (assumed to be sand and gravel). The surface area of the island site potentially containing hydrocarbon-containing soil is estimated to be 0.49-acres. The estimated maximum depth of excavation is 16-feet below ground surface. The total volume of contaminated soil is estimated at 9,605 cubic yards. See Figure 12 – Cross-Section Illustration of Contaminated Soil Removal.

![Figure 12 – Cross-Section Illustration of Contaminated Soil Removal](image)

The pavement will be removed using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Front-end loaders will be used to assist with materials handling. The asphalt debris will be loaded onto trucks and transported offsite for recycling or disposal. See Figure 13 – Illustration of Island Pavement Removal below.

Removal of the hydrocarbon contaminated soil from the Island core will require excavation and transportation of the contaminated soil to approved offsite disposal or recycling facilities. Initial site assessments have been performed, including interstitial water, ocean water, and soil sampling and monitoring. Site assessment activities have been completed to ascertain and quantify the extent of hydrocarbon contamination.

In making the assumptions and performing the analyses set forth herein, a conservative approach was employed where the maximum level of remediation that could be necessary to bring the site to screening levels acceptable for public use was assumed. This maximum level of remediation may be inconsistent with, and more than the actual remediation effort needed for the future use ultimately approved for the site.
The laboratory analytical results for samples collected from the Island identified the presence of petroleum hydrocarbon concentrations within certain areas of the Island core artificial fill material at depths from approximately 1-foot to 16-feet below ground surface. The estimated total volume of petroleum hydrocarbon-containing soil identified within the Island core is approximately 9,605 cubic yards. The depth to interstitial water measured at temporary monitoring wells ranged from approximately 11.96 feet to 14.61 feet below the surface of the Island, which correspond to elevations that range from approximately 0.47 feet to 3.18 feet mean sea level (msl). The laboratory analytical results for interstitial water samples collected from temporary monitoring wells indicated petroleum hydrocarbon concentrations that were less than the applicable screening levels, and the laboratory analytical results for three ocean water samples collected at the site did not indicate the presence of petroleum hydrocarbon constituents (Padre, 2021).

The petroleum hydrocarbon-containing soil would be excavated using standard commercial excavation equipment (e.g., hydraulic excavator, front-end loader, track-mounted dozer). Excavation of the petroleum hydrocarbon-containing soil will continue until the presence of petroleum hydrocarbons was not detected using a field portable handheld photoionization detector (PID), as well as visual and olfactory observations. The remaining clean fill materials would be sampled and chemically analyzed to confirm adequate removal of petroleum hydrocarbon-containing soil from the island core materials. See Figure 14 – Illustration of Contaminated Soil Removal below.
Petroleum hydrocarbon-contaminated soils will be loaded onto trucks and transported and to an offsite disposal or recycling facility that accepts non-hazardous petroleum hydrocarbon-containing waste. Due to causeway weight limits, smaller loads may be transported from the island to the onshore facility for staging, and then loaded onto other trucks for subsequent transportation to the landfill in larger loads, resulting in fewer trips.

2.1.5 Island Core Removal

The scope of work for the Removal alternative includes removing the island core down to the seafloor, as well as removal of the south and north pipeways in their entirety and removal of the well conductors to approximately 5 feet below the seafloor.

Removal of the island core above the waterline would be performed using excavators. Front-end loaders will be used to assist with materials handling. The soil and debris will be stockpiled separately, and then loaded onto trucks and transported offsite for disposal.

The removal of the island core below the waterline would be performed using one or more derrick barges equipped with a crane, clam bucket, shear, rock tongs, grapple, and diving spread. The marine spread will also include at least two hopper barges to store and transport excavated spoils along with tugboats for transporting barges to and from the site as well as maneuvering barges around the marine worksite.

A crew boat would be required to transport marine crews between shore and the marine worksite. Excavation of core materials (sand and gravel) would be performed using the clam bucket.
Excavated core spoils (sand and gravel) would be placed in a hopper barge, which when fully loaded would be towed to a dock where the spoils will be loaded into trucks and transported to an appropriate upland disposal site. See Figure 16 – Illustration of Island Core and Armor Rock Removal below.

Figure 16 – Illustration of Island Core and Armor Rock Removal
Dredging equipment was considered as an alternative to using the clam bucket for underwater excavation, but the clam bucket was chosen as the preferred method. Dredging would mix a substantial
volume of water with the excavated soils, and it is assumed that both the soil and the water mixed with it will need to be transported to shore via hopper barge and disposed of in an upland location. The costs associated with disposing of the additional volume of material that dredging would produce makes dredging more expensive than using the clam bucket for excavation.

2.1.6 Island Protective Armor Removal

The scope of work for the Removal alternative includes removing the riprap and tetrapods which form the outermost layer of Rincon Island down to the seafloor. See Figure 17, Figure 18, and Figure 19 below which illustrate the location and nature of the riprap and tetrapods.

Removal of the riprap and tetrapods would be performed using a derrick barge equipped with a crane, clam bucket, rock tongs, grapple, and diving spread. The marine spread will also include two hopper barges to store, and transport removed riprap and tetrapods, tugboats for transporting barges to and from the site as well as maneuvering barges around the marine worksite, a crew boat to transport marine crews between shore and the marine worksite, an anchor handling vessel, and an inflatable skiff. Tetrapods will be individually rigged and lifted onto the hopper barge using the derrick barge crane. Larger rocks will be lifted by the derrick barge crane using rock tongs and deposited onto the hopper barge. Small rocks and gravel will be excavated using the clam bucket and placed onto the hopper barge. When the hopper barge is full, it will be towed to a dock where material will be loaded into trucks and transported to an appropriate upland disposal site.

Although no offshore dump site has been identified for disposal of the riprap and tetrapods, the creation of such a site in relatively close proximity to Rincon Island could greatly reduce the cost of transporting and handling these materials.
Figure 17 – Rincon Island Protective Armor Aerial View

Figure 18 – Cross-Section Illustration of Rincon Island Showing Tetrapods and Armor Rock
2.1.7 Island Causeway and Wharf Removal

The scope of work for the Removal alternative includes removal of the causeway and the wooden pile stubs on the seafloor running parallel with the pier (used in original construction of causeway), and the removal of the Island wharf. The causeway and wharf pilings and wooden pile stubs would be removed to 5-feet below the seafloor. This work would include removal of the abutment located on the shoreline groin and would consist of removal of the reinforced concrete walls, steel components, fencing, utilities and all pavement. The groin’s riprap and the point of land that currently supports the concrete abutment structure would be left intact. See Figure 20 – Rincon Island Causeway, Abutment and Wharf and Figure 21 – 3D Composite LiDAR and Multibeam Sonar Image of the Causeway.
Figure 20 – Rincon Island Causeway, Abutment and Wharf
The decommissioning methods anticipated for use in decommissioning the wharf and causeway are based on the assumption that the causeway’s current capacity of 65,000 pounds does not change due to storm damage, corrosion, or other means of deterioration prior to decommissioning.

If the wharf is to be removed, the removal would best take place before the causeway is removed so that the causeway could be used to transport recovered materials to shore for recycling or disposal. The wharf decommissioning would take place using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Front-end loaders may be used to assist with materials handling. The debris will be loaded onto trucks and transported offsite for disposal.

Once the wharf removal has been completed, the causeway demolition would be performed using a mobile crane operating from the causeway. The work would start at the offshore end of the causeway and work landward dismantling the causeway and removing its piling 5-feet beneath the seafloor one bent at a time. Working from the causeway, the wooden pile stubs from the causeway’s original construction would be excavated and removed to a depth of 5-feet below the seafloor. The supporting dive crew would also operate from the causeway. All components would be recovered, loaded on trucks and shipped to offsite recycling or disposal. See Figure 22 – Illustration of Causeway Removal below.

Figure 21 – 3D Composite LiDAR and Multibeam Sonar Image of the Causeway

The decommissioning methods anticipated for use in decommissioning the wharf and causeway are based on that assumption that the causeway’s current capacity of 65,000 pounds does not change due to storm damage, corrosion, or other means of deterioration prior to decommissioning.

If the wharf is to be removed, the removal would best take place before the causeway is removed so that the causeway could be used to transport recovered materials to shore for recycling or disposal. The wharf decommissioning would take place using excavators equipped with hydraulic claw, cutter and breaker attachments, as well as buckets for moving material. Front-end loaders may be used to assist with materials handling. The debris will be loaded onto trucks and transported offsite for disposal.

Once the wharf removal has been completed, the causeway demolition would be performed using a mobile crane operating from the causeway. The work would start at the offshore end of the causeway and work landward dismantling the causeway and removing its piling 5-feet beneath the seafloor one bent at a time. Working from the causeway, the wooden pile stubs from the causeway’s original construction would be excavated and removed to a depth of 5-feet below the seafloor. The supporting dive crew would also operate from the causeway. All components would be recovered, loaded on trucks and shipped to offsite recycling or disposal. See Figure 22 – Illustration of Causeway Removal below.
At the abutment, the riprap currently piled against the concrete walls of the abutment would be temporarily relocated and the concrete abutment demolished and transported to offsite recycling. Once the abutment demolition is completed, the riprap would be placed back over the existing point of land that supported the abutment within the abutment footprint. The existing riprap surrounding the groin and the groin itself would be left intact. See Figure 23 – Illustration of Causeway Abutment Removal and Figure 24 – Illustration of Causeway Abutment Location Final Condition below.
Figure 23 – Illustration of Causeway Abutment Removal

Figure 24 – Illustration of Causeway Abutment Location Final Condition
2.1.8 Onshore Pipeline Connection Decommissioning

The scope of work for the Removal alternative includes decommissioning the 6-inch diameter gas pipeline and the 6-inch diameter oil pipeline from their terminations at the causeway abutment to the valve box located on the northeast side of the railroad tracks.

The first step in the decommissioning process for the onshore pipelines is to pig and flush the pipelines. Spherical or bullet-shaped foam pigs along with water and cleaning agents will be inserted into the pipeline and pushed from one end to the other with pumped water or compressed air. A water sample will be obtained and sent to a state-certified laboratory to ensure the total petroleum hydrocarbon (TPH)
levels in the pipeline are less than 15 parts per million (ppm). Additional pigging and flushing runs will be performed until TPH test results indicate that the TPH within the pipeline is less than 15 ppm. Wastewater generated by pigging and flushing will be collected in vacuum trucks or temporary storage tanks. Wastewater may be tested and treated onsite, and then transported offsite for disposal. This step assumes that the pipeline conditions (integrity and strength) will support pigging and flushing between the abutment and the concrete vault.

The ends of the casing will be excavated, the pipelines will be cut on each end of the casing and then pulled out from the casing. The pipelines will also be excavated and removed from the northern end of the casing to the outer wall of the concrete vault. Removed pipeline sections will be cut into pieces, loaded onto trucks, and transported to a disposal facility. This step assumes that the southwest end of the casing beneath the freeway and railroad can be accessed from Ocean Avenue, the northern end of the casing can be accessed at the valve box or somewhere near the valve box and the railroad right-of-way, and that the pipelines are not currently grouted into the casing and can be removed from the casing.

Temporary flanges and fittings will be welded onto the ends of the remaining pipeline buried under Ocean Avenue in preparation for cementing the annulus. Temporary flanges will also be welded to the ends of the empty 30-inch casing in preparation for filling its annulus with cement. The temporary flanges will be blinded with blind flanges with appropriate fittings inserted into the blind flanges for pumping cement and venting the pipes and casing when filling with cement.

Cement slurry will be either mixed on-site or pre-mixed and trucked to the site in cement trucks. A trailer mounted concrete pump will be used to pump the cement into the pipelines and casing through hoses attached to the temporary flanges. The cement slurry will be allowed to cure, then the temporary flanges will be cut off and half-inch-thick steel plates will be welded onto the pipeline and casing ends.

The excavations will be backfilled and compacted using native soils where feasible, supplemented with imported fill if required. Pavement will be repaired, and the worksite will be restored to the pre-project condition.

Anticipated equipment used for decommissioning the onshore pipeline connections includes excavators equipped with buckets, hydraulic grapple, shear and roller compactor attachments, front-end loaders, vacuum trucks, cement trucks, cement mixer, temporary tanks, water pump, air compressor, cement pump, welding machine, temporary piping, pig launchers and pig receivers. Temporary shoring and traffic control measures may be required depending on the location and depth of burial at the casing ends.
SECTION THREE – PRELIMINARY SCHEDULE

3.1 SUMMARY SCHEDULE

The following high-level summary of the anticipated schedule for the Removal alternative is preliminary and will most likely change. Note that while most of the tasks are sequential, some, such as the Onshore Facility Decommissioning, can occur in parallel with other tasks, and therefore the total estimated duration is less than the sum of the task durations. Please see Appendix A for a more detailed preliminary scheduled produced using Primavera P6.

<table>
<thead>
<tr>
<th>Task</th>
<th>Estimated Duration (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onshore Facility Decommissioning</td>
<td>196</td>
</tr>
<tr>
<td>Removal of Island Surface Structures</td>
<td>40</td>
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<tr>
<td>Well Bay Concrete Deck Removal</td>
<td>26</td>
</tr>
<tr>
<td>Island Pavement and Petroleum Hydrocarbon Contaminated Soil Removal</td>
<td>196</td>
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<tr>
<td>Island Core Removal</td>
<td>565</td>
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<tr>
<td>Island Protective Armor Removal</td>
<td>345</td>
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<tr>
<td>Causeway and Wharf Removal</td>
<td>306</td>
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<td>Onshore Pipeline Connections Decommissioning</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1305</strong></td>
</tr>
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3.2 SCHEDULE CONSTRAINTS AND ASSUMPTIONS

The work schedule for activities at the onshore facility and on the surface of the island is assumed to be 5 days per week, day shifts only. Marine operations involving barges and/or diving crews are assumed to operate 7 days per week with two 12-hour shifts per day (day and night shifts).

No permit conditions with seasonal work constraints or downtime due to inclement weather was included in these preliminary schedules.
APPENDIX A – PRELIMINARY SCHEDULE
### Activity Name

<table>
<thead>
<tr>
<th>Activity Name</th>
<th>Original Start</th>
<th>Original Finish</th>
<th>Duration</th>
<th>Milestone</th>
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<tbody>
<tr>
<td>A.1 1000 Develop Site Restoration / Revegetation Plan</td>
<td>02-Aug-21</td>
<td>02-May-22</td>
<td>10</td>
<td>02-May-22</td>
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<td>A.2 1010 Pre-Construction Surveys</td>
<td>02-Aug-21</td>
<td>20-Aug-21</td>
<td>5</td>
<td>02-Aug-21</td>
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<td>A.2 1020 Mobilize Equipment &amp; Personal To Onshore Facility Location</td>
<td>02-Aug-21</td>
<td>20-Aug-21</td>
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<td>02-Aug-21</td>
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<td>A.2 1030 Excavate &amp; Stage Recycled Asphalt Base</td>
<td>30-Aug-21</td>
<td>16-Sep-21</td>
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<td>30-Aug-21</td>
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<td>A.2 1040 Dispose Of Recycled Asphalt Base</td>
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<td>01-May-22</td>
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<td>A.2 1060 Install Sheet Pile Wall Around Hydrocarbon-Containing Soil</td>
<td>13-Jan-21</td>
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<td>A.2 1070 Install Dewatering Wells</td>
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<td>A.2 1090 Scrub &amp; Dispose Of Ground Water Until Hydrocarbon Rates Are Deemed Acceptable</td>
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<td>02-May-22</td>
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<td>A.2 1110 Basdfit With Clean Imported Soil</td>
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<td>16-Mar-21</td>
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<td>A.2 1120 Mobilize Equipment &amp; Personal From Onshore Facility Location</td>
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<td>A.2 1140 Post-Construction Surveys</td>
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<td>02-May-22</td>
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<td>#2.1095 Remove Structure Footprints</td>
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<td>#2.1100 Demantle Asbestos Containment (If Necessary)</td>
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<td>COMPONENT PLAN 3 - REMOVE WELL BAY DECKING</td>
<td>08-Sep-21</td>
<td>08-Sep-21</td>
<td>26</td>
<td>08-Sep-21</td>
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<tr>
<td>#3.1000 Pre-Construction Site Surveys</td>
<td>08-Sep-21</td>
<td>14-Sep-21</td>
<td>5</td>
<td>08-Sep-21</td>
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<tr>
<td>#3.1010 Mobilize Equipment &amp; Personal To Well Bay Location</td>
<td>15-Sep-21</td>
<td>17-Sep-21</td>
<td>3</td>
<td>15-Sep-21</td>
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<td>#3.1020 Excavate &amp; Demo Well Bay Components</td>
<td>20-Sep-21</td>
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<td>#3.1030 Dispose Of Well Bay Components</td>
<td>28-Sep-21</td>
<td>08-Oct-21</td>
<td>9</td>
<td>28-Sep-21</td>
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<td>COMPONENT PLAN 4A - REMOVE ISLAND PAVING &amp; CONTAMINATED ISLAND CORE</td>
<td>04-Oct-21</td>
<td>04-Oct-21</td>
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<td>#4.1 1000 Pre-Construction Surveys</td>
<td>04-Oct-21</td>
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<td>04-Oct-21</td>
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<td>#4.2 1020 Demo Asphalt &amp; Stage</td>
<td>26-Oct-21</td>
<td>12-Nov-21</td>
<td>2</td>
<td>26-Oct-21</td>
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<td>#4.2 1030 Dispose Of Asphalt</td>
<td>27-Oct-21</td>
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<td>#4.2 1040 Excavate Contaminated Soil</td>
<td>15-Nov-21</td>
<td>12-Jul-22</td>
<td>172</td>
<td>15-Nov-21</td>
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<td>#4.2 1050 Dispose Of Contaminated Soil</td>
<td>17-Nov-21</td>
<td>14-Jul-22</td>
<td>172</td>
<td>17-Nov-21</td>
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<td>COMPONENT PLAN 5 - REMOVE ISLAND CORE TO SEAFLOOR</td>
<td>08-Sep-21</td>
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<td>565</td>
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<td>#5.1020 Excavate To Water Line</td>
<td>08-Sep-21</td>
<td>17-May-23</td>
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<td>08-Sep-21</td>
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<td>#5.1070 Dispose of Soil</td>
<td>12-Sep-21</td>
<td>19-May-23</td>
<td>180</td>
<td>12-Sep-21</td>
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<td>#5.1080 Demobilize Equipment &amp; Personal From Site</td>
<td>22-May-23</td>
<td>24-May-23</td>
<td>3</td>
<td>22-May-23</td>
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<td>#5.1090 Mobilize Barge &amp; Dike Spread</td>
<td>24-May-23</td>
<td>24-May-23</td>
<td>5</td>
<td>24-May-23</td>
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#6.1100 Remove Island Core To Seafloor 294 29-May-23 18-Mar-24
#6.1110 Dispose Of Island Core 294 05-Jun-23 25-Mar-24

COMPONENT PLAN 6 - REMOVE PROTECTIVE RIP RAP & TETRAPODS
#6.2100 Remove 1130 Tetrapods 141 18-Mar-23 06-Aug-24
#6.2101 Dispose Of Tetrapods 141 25-Mar-23 13-Aug-24

#6.2102 Remove Protective Armor Rock 197 06-Aug-24 19-Feb-25
#6.2103 Dispose Of Protective Armor Rock 197 13-Aug-24 26-Feb-25

#6.2104 Demobilize Barge & Dive Spread 2 19-Feb-25 21-Feb-25

COMPONENT PLAN 7A - REMOVE CAUSEWAY
#7A.2.1000 Remove Causeway Decking 142 28-Sep-23 12-Apr-24
#7A.2.1010 Dispose Of Causeway Decking 142 28-Sep-23 12-Apr-24

#7A.2.1020 Demobilize Causeway Equipment 19 06-Sep-24 12-Sep-24

COMPONENT PLAN 7B - REMOVE ISLAND WHARF
#7B.2.1000 Mobilize Island Wharf Removal 5 15-Jul-22 07-Sep-22

#7B.2.1010 Remove Island Wharf Decking 17 20-Jul-22 11-Aug-22
#7B.2.1020 Dispose Of Island Wharf Decking 17 20-Jul-22 11-Aug-22

#7B.2.1030 Remove Island Wharf Pilings 19 12-Aug-22 07-Sep-22
#7B.2.1040 Dispose Of Island Wharf Pilings 19 12-Aug-22 07-Sep-22

COMPONENT PLAN 8 - PIG & FLUSH, AND DECOMMISSION ON SHORE PIPELINE CONNECTIONS
#8.2.1000 Excavate Pipe Ends to Be Abandoned 20 13-Sep-24 23-Oct-24

#8.2.1010 Mobilize Pigging & Flushing Equipment 5 13-Sep-24 19-Sep-24

#8.2.1020 Pig & Flush Retired Line 3 20-Sep-24 24-Sep-24

#8.2.1030 Mobilize Pigging & Flushing Equipment 5 25-Sep-24 01-Oct-24

#8.2.1040 Mobilize Cementing Equipment 2 02-Oct-24 03-Oct-24

#8.2.1050 Cement In Abandoned Pipeline 1 04-Oct-24 04-Oct-24

#8.2.1060 Mobilize Cementing Equipment 1 07-Oct-24 11-Oct-24


#8.2.1080 Demobilize 2 22-Oct-24 23-Oct-24