

DECOMMISSIONING AND REMEDIATION OF THE CARPINTERIA OIL AND GAS PROCESSING FACILITIES - PROJECT DESCRIPTION

CARPINTERIA, SANTA BARBARA COUNTY

Project No. 2002-5211

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LIST OF ACRONYMS

ACCM	asbestos-containing construction materials
APCD	Air Pollution Control District
APN	Assessor's Parcel Number
AST	Above-Ground Storage Tank
BBL	Barrels
bgs	below ground surface
BZA	Buffer Zone Area
Cal GEM	California Geologic Energy Management Division
Cal OSHA	California Occupational Safety and Health Administration
CAO	Corrective Action Order
CAP	Clean Air Plan
CARB	California Air Resources Board
CCA	California Coastal Act
CCR	California Code of Regulations
CDP	Coastal Development Permit
CDI	Coastal Dependent Industry (Land Use Designation)
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Carpinteria
Chevron	Chevron USA, Inc.
County	County of Santa Barbara Department of Planning and Development – Energy, Minerals, and Compliance Division
CO ₂	carbon dioxide
COCs	Constituents of Concern
CSFPD	Carpinteria/Summerland Fire Protection District
CSLC	California State Lands Commission
CUP	Conditional Use Permit
DA4	Drainage Area Number Four
DCOR	formerly known as Dos Cuadras Offshore Resources, now DCOR
DP	Development Permit
DTSC	Department of Toxic Substances Control
D&R	Demolition and Reclamation
EA	Environmental Assessment
EPA	Environmental Protection Agency
ESA	Endangered Species Act

ESHA	Environmentally Sensitive Habitat Area
ERP	Emergency Response Plan
ESL	Environmental Screening Levels
FDP	Facility Development Plan (permit)
FNA	Former Nursery Area
FMT	Former Marketing Terminal Area
FSBA	Former Sandblast Area
FWS	U.S. Fish and Wildlife Service
GAC	Granular Activated Carbon
GHG	Greenhouse Gas Emissions
GIS	geographic information system
GP	General Plan
GPS	Global Positioning System
H ₂ S	Hydrogen sulfide
hp	Horsepower
IRAP	Interim Remedial Action Plan
JOFLO	Joint Oil Fisheries Liaison Office
lb.	pound(s)
LBP	lead-based paint
LCP	Local Coastal Plan
LOS	Level Of Service
LTS	Lower Temperature Separator
LUFT	Leaking Underground Fuel Tank
MBTA	Migratory Bird Treaty Act
M-CD	Coastal Industry District (Zoning Designation)
mg/kg	parts per million
MLLW	mean-low-low-water (line)
MMPA	Marine Mammal Protection Act
MSRC	Marine Spill Response Corporation
M/V	Marine Vessel
μR/hr	microrentgens per hour
MMSCFD	million standard cubic feet per day
MMTCO ₂ e	Million Metric Ton of CO ₂ equivalent
msl	mean sea level
nm	nautical mile

NESHAP	National Emission Standards for Hazardous Air Pollutants
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NORM	naturally occurring radioactive materials
NOx	oxides of nitrogen
OHP	Office of Historic Preservation
OS/R	Open Space/Recreation (Land Use Designation)
OSV	Offshore Service Vessel
PCBs	polychlorinated biphenyls
PERP	portable equipment registration program
PID	Photoionization detector
PLM	polarized light microscopy
PM	particulate matter
POLB	Port of Long Beach
POOI	Pacific Offshore Operators, Inc.
ppm	parts per million
PTO	Permit to Operate
PUC	California Public Utilities Commission
RACM	regulated asbestos-containing materials
RAO	Remedial Action Objective
RAP	Remedial Action Plan
REC	Recreation (Land Use Designation)
ROC	reactive organic compounds
ROV	Remotely Operated Vehicle
RRD	Railroad ditch
RSL	Regional Screening Level
RWQCB	Regional Water Quality Control Board
SBAPCD	Santa Barbara County Air Pollution Control District
SBC	Santa Barbara County
SBCEHS	Santa Barbara County Environmental Health Services
SBCFD	Santa Barbara County Fire Department
SCCAB	South Central Coast Air Basin
SCE	Southern California Edison
SHPO	State Historical Preservation Office
SoCalGas	Southern California Gas Company

SWPPP	Stormwater Pollution Prevention Plan
Sq ft	square foot
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
UPRR	Union Pacific Railroad
U.S. ACOE	U.S. Army Corps of Engineers
U.S. EPA	U.S. Environmental Protection Agency
U.S. FWS	U.S. Fish and Wildlife Service
U.S.C.G.	U.S. Coast Guard
UST	Underground Storage Tank
V/C	volume to capacity
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY OF PROPOSED ACTION

Table ES-1 provides a summary of the proposed Project components included within the Carpinteria Oil and Gas Processing Facilities Decommissioning and Remediation Project. Figure ES-1 provides a map of the Project areas of disturbance (outlined in purple). A complete discussion regarding these activities is provided in Sections 1 through 7 below.

Table ES-1. Summary of Project Decommissioning and Remediation Areas

<p style="text-align: center;"><u>Project Site Facilities – Proposed Activities</u></p> <p><i>Onshore Oil and Gas Plant</i></p> <ul style="list-style-type: none"> • Former Marketing Terminal - Surface facilities demolition and soil remediation. • Shop and Maintenance Area - Surface and subsurface facilities demolition and soil remediation. • MSRC Lease Area - Surface facilities demolition and soil remediation. • Peninsula Area – Possible soil remediation in coordination with SoCalGas facility demolition and City proposed skate park development. • Main Plant Area - Surface and subsurface facilities demolition, and soil remediation. • Chevron Pipeline Area - Surface and subsurface facilities demolition, and soil remediation. • Gravel Portion of Pier Parking Lot - Surface facilities restoration • Former Sand Blast Area – Onshore pipelines will be removed from the of the bluff edge to the public access trail where they will be abandoned in-place. Portions will be removed under railroad right of way and within the plant. (see Gail and Grace Pipeline Bundle). <p><i>Beach Crossing/Offshore</i></p> <ul style="list-style-type: none"> • Gail and Grace Pipeline bundle/and 10-inch Oil Pipeline – Complete removal from top of bluff to 3 nm State Waters Limit. • Marine/Marketing Terminal Pipeline Bundles - Complete removal through top of bluff. Onshore pipelines will be abandoned in-place. Portions will be removed under railroad right of way.
<p style="text-align: center;"><u>Project Site Facilities - No Proposed Activities</u></p> <ul style="list-style-type: none"> • Buffer Zone – Vacant. Previously remediated to acceptable cleanup levels. • Drainage Area No. 4 – Vacant. Previously remediated to acceptable cleanup levels. • Former Nursery Area – Vacant. Previously remediated to acceptable cleanup levels. • Railroad Ditch Area – Offsite, previously remediated to acceptable cleanup levels. • Dump Road – Ongoing use. • Asphalt Pier Parking Lot – Ongoing use. • Casitas Pier – Ongoing use.
<p style="text-align: center;"><u>Facilities Not Included in Proposed Project Activities</u></p> <ul style="list-style-type: none"> • Sales Gas/Peninsula Area - To be removed by SoCalGas. • Pitas Point Producer Facility (End of Marketing Terminal) – To be removed by SoCalGas. • Historic Onsite Idle Wells – Legacy wells managed by CalGEM. • Gas pipeline from Platform Habitat – Future abandonment by current operator. • Platform Hazel and Heidi pipelines offshore – Abandoned in place under previous approval by California State Lands Commission. • Power Cable from Platforms Hogan and Houchin – Future abandonment by assigned decommissioning party. • Naturally occurring tar seeps – Naturally occurring existing condition. • Former Burn Dump



Figure ES-1. Master Project Disturbance Area Map

1.0 INTRODUCTION

Chevron USA (Chevron) is currently planning to decommission and remediate the Carpinteria Oil and Gas Processing Facilities (Project Site). In support of this activity, an application for a Coastal Development Permit (CDP) is being filed with the City of Carpinteria (City).

The following Project Description describes the proposed demolition of surface and subsurface facilities and remediation of any subsurface impacted soil and groundwater at the Carpinteria Onshore Oil and Gas Processing Facility. The Project-related activities will also include the removal of nearshore/offshore pipelines out to three miles (State Waters limit).

1.1 PROJECT TITLE

Decommissioning and Remediation of the Carpinteria Oil and Gas Processing Facilities (Project)

1.2 PROJECT APPLICANT'S NAME AND ADDRESS

Chevron U.S.A. Inc.
3916 State Street, Suite 2114
Santa Barbara, CA 93105
Contact: Ms. Rebecca Trujillo
Phone: 805-979-3506
Email: rebecca.trujillo@chevron.com

1.3 PROJECT LOCATION, ASSESSORS PARCEL NUMBER, AND ZONING/LAND USE

Address: 5675 and 5663 Carpinteria Avenue, Carpinteria, CA 93013 (Onshore)

Assessor's Parcel Numbers: 001-170-003, 001-170-004, 001-170-014, 001-170-021, 001-170-022, 001-170-023, and 001-170-020 (parcel not owned by Chevron but contains Tarpits Park pipeline alignment) (Figure 1.3-2)

General Plan Land Use Designations: Coastal Dependent Industry (CDI), Open Space Recreation (OS/R)

Zoning: Coastal Industry District (M-CD), Recreation (REC) (Figure 1.3-2). Site-specific provisions in City Ordinance No. 75 (May 12, 1969) also apply.

Surrounding Land Uses:

North – City of Carpinteria City Hall/Industrial Development/Carpinteria Avenue/U.S. 101
South – Casitas Pier/Beach (City of Carpinteria Tar Pits Park)/Pacific Ocean
West – Low-density Residential (single-family homes)
East - Open Space/Agricultural

The onshore Project Site is located in the eastern portion of the City of Carpinteria, California, between U.S. Highway 101 and the Pacific Ocean (Figure 1.3-1, Site Location Map). The offshore Project Site is located within the 3-mile limit of the Santa Barbara Channel (Pacific Ocean). The onshore facilities developed at the Project Site historically have been used to process oil and gas produced from the Summerland, Carpinteria, Santa Clara, and Sockeye Fields located within the Santa Barbara Channel (Figure 1.3-3, Facilities Map). Ownership of the Project Site was originally obtained by Chevron (formerly Standard Oil Company) in 1959 and

subsequently sold to Venoco, Inc. (Venoco) in 1999. Chevron reacquired ownership of the Project Site in an agreement between Chevron and Venoco in 2017.

The Union Pacific Railroad (UPRR) easement bisects the southern portion of the Project Site from the north to south. A public access trail, coastal bluffs, and narrow sand beach are located south of the railroad tracks, and further south are the Chevron facility parking lot and Casitas Pier. The narrow beach directly east of the pier is a sensitive haul-out and nursery area for Pacific harbor seals.

A number of offshore pipelines previously associated with the onshore oil and gas processing facility are also proposed for removal from the shoreline out to the 3-mile State waters limit offshore within deeded tidelands to the City of Carpinteria and Santa Barbara County. These offshore pipelines are located within State Lease Nos. PRC 3133, 3150, 7911, and 4000 (Figure 1.3-1, Site Location Map) on submerged lands leased from the City (from shore to 2 miles offshore) and County (from 2 to 3 miles offshore).

1.4 PROJECT SUMMARY

Decommissioning and remediation of the Carpinteria Oil and Gas Processing Facilities will include the following activities:

Onshore

- Idling and removal of all existing surface and subsurface equipment, piping, and structures within the Oil and Gas Processing Plant
- Removal of concrete foundations, asphalt, oil spray and road base
- Excavation/remediation of any impacted soils in accordance with the Facilities' Interim Remedial Action Plan (IRAP) and appropriate regulatory guidance (once approved)
- Recycling/disposal of all materials removed from the Project Site(s)
- Restoration in accordance with the Site Restoration Plan (once approved)

Beach Crossing and Offshore Pipelines (State Waters)

- Pig and flush pipelines in preparation for removal
- Removal of offshore Project pipeline segments out to 3-mile State waters limit
- Removal of nearshore beach crossing pipeline segments
- Recycling/disposal of all materials removed from the Project Site(s)
- Restoration in accordance with the Site Restoration Plan (once approved)

1.5 PURPOSE AND OBJECTIVES

The Project's purpose is to demolish and remove surface and subsurface facilities and subsequent remediation of any impacted soils at the onshore Carpinteria Oil and Gas Processing Facility to accommodate the site's potential future redevelopment. Any residually impacted soils at the Project Site will be remediated to a unrestricted land use standard consistent with the approvals from the Santa Barbara County Public Health Department, Environmental Health Services Department (SBCEHS), Regional Water Quality Control Board (RWQCB) and U.S. Environmental Protection Agency (USEPA) to facilitate reuse of the property for land use acceptable under the City's current Draft General Plan/Local Coastal Plan Update (anticipated to be Planned Unit Development and Open Space/Recreation). Nearshore and offshore pipeline segments will be removed.

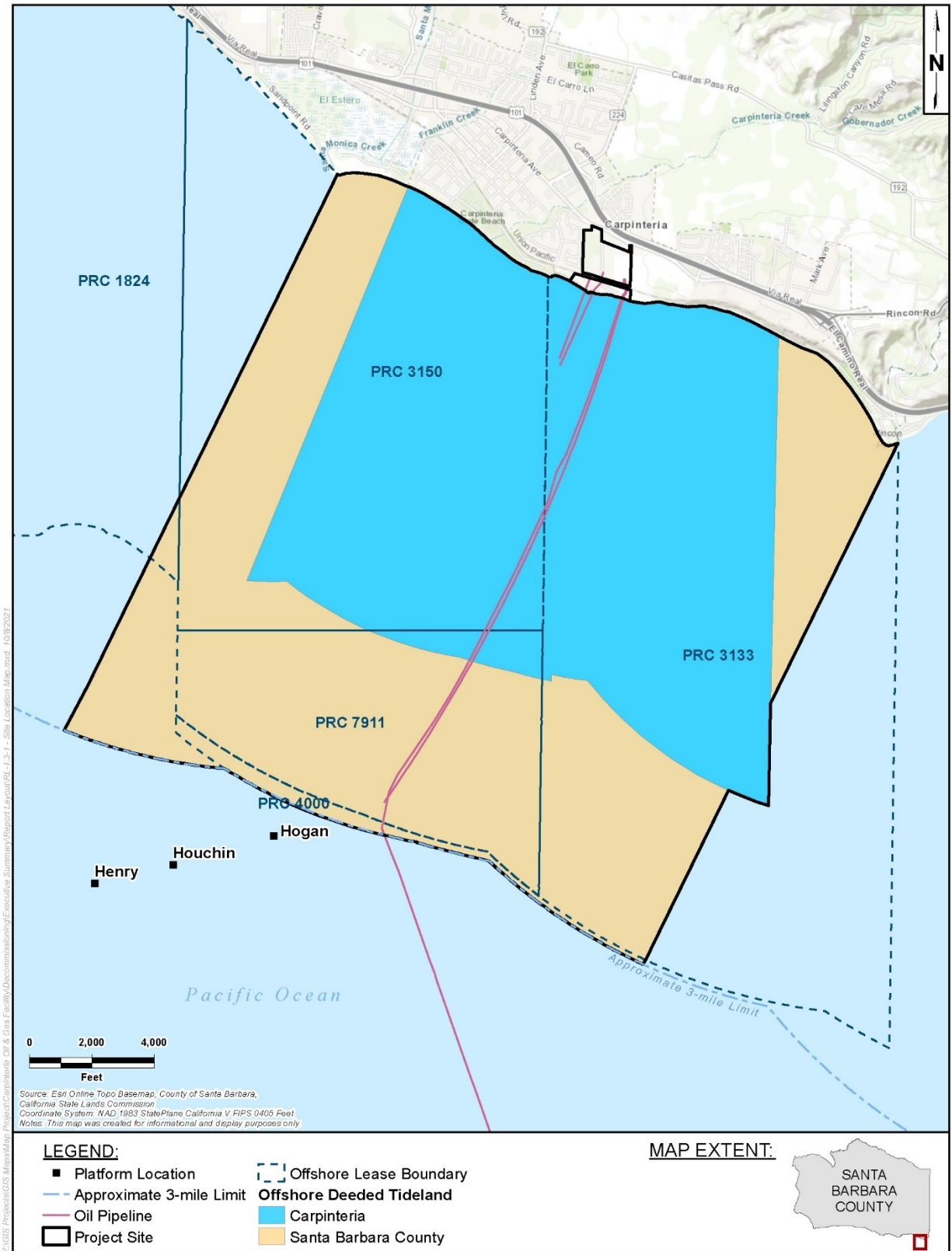


Figure 1.3-1. Site Location Map



Figure 1.3-2. Assessor's Parcel Map and Current Zoning Designations



Figure 1.3-3. Project Facilities Map

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2.0 BACKGROUND

2.1 SITE HISTORY AND USE

The Project Site is located within an area that has been historically utilized for agricultural production and more recently for oil and gas development support activities. Historical agricultural production activities documented at the Project Site from the 1920's through 1959 included dry farming, row crop production, orchards (fruit trees and nuts), and commercial flower production (plant nursery).

Oil and gas processing equipment was initially constructed onsite in the 1950s to support production from the offshore Summerland field developed by the Standard, Humble, and Summerland State (SHSS) joint venture. Oil and gas first flowed through Project Site in 1959 after the commissioning of offshore Platform Hazel. The processed oil was metered and transferred to Tank 861, a 217,000-barrel capacity above-ground storage tank (AST) with a floating top roof operated by Standard Oil's Pipeline Department (now Chevron Pipeline & Power). Produced gas that flowed to the Project Site from Platform Hazel and later other offshore platforms was processed onsite and then sold to Southern California Gas Company (SoCalGas) via the Sales Gas Area (pipes, valves, meters, and equipment), which was also constructed in the late 1950s.

Historically, processing levels at the Chevron facility have been as high as 20,000 barrels per day of crude oil and 20 million standard cubic feet (MMSCF) per day of natural gas. The Chevron processing plant consisted of offices, production pipelines from offshore platforms, a connected system of product separation, processing, and storage facilities. Processed natural gas from the plant was fed into the SoCalGas network. Processed crude oil and natural gasoline were blended and shipped from the Chevron facility by way of pipeline to Ventura, from where it was piped to refineries in the Los Angeles area.

Historically, refined products and crude oil were also transferred from the Carpinteria facilities via marine tanker. However, the marine terminal, formerly accessed by an offshore mooring, is no longer operational. From 1960 to 1989, the oil and gas plant received oil and gas from several other offshore platforms constructed in the Santa Barbara Channel, including Hilda, Hope, Hazel, and Heidi (Carpinteria Field), and Grace and Gail (Santa Clara Field and Sockeye Field). Upgrades and additions to the Plant facilities were completed to accommodate the varied quality of the additional oil and gas volume. Abandonment of the wells and decommissioning/removal of offshore Platforms Hazel, Hilda, Hope, and Heidi (4H Platforms) from the Santa Barbara Channel were completed in 1996.

Chevron sold its Santa Barbara Channel assets to Venoco, Inc. in 1998. Although Platform Grace ceased production in 1998, the Plant and Tank 861 continued to receive oil and gas production from Platform Gail until approximately 2017.

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3.0 FACILITIES NOT INCLUDED IN PROJECT ACTIVITIES

3.1 ONSHORE

The following areas within and adjacent to the onshore Project Site are not included in the proposed Project because they are owned and/or regulated by other parties and are therefore the responsibility of those parties. Please see Figure 3.1-1 below and Appendix I for a description of these facilities.

- Sales Gas Facilities in the Peninsula Area - To be removed by SoCalGas.
- Pitas Point Producer Facility (End of Marketing Terminal site) – To be removed by SoCalGas in coordination with the current operator.
- Historic Onsite Idle Wells – Legacy wells managed by CalGEM.
- Naturally Occurring Tar Seeps – Naturally occurring existing condition and will not be addressed as part of this Project.
- Former Burn Dump.

3.2 OFFSHORE

The following areas within and adjacent to the offshore Project Site are not included in the proposed Project because they have been previously abandoned as part of historical decommissioning events; or are operated by and are the responsibility of other parties. Please see Appendix I for a description of these facilities.

- Gas Pipeline from Platform Habitat – Future abandonment by current operator.
- Platform Hazel and Heidi Pipelines Offshore – Abandoned in place under previous approval by California State Lands Commission.
- Power Cable from Platforms Hogan and Houchin – Future abandonment by assigned decommissioning party.

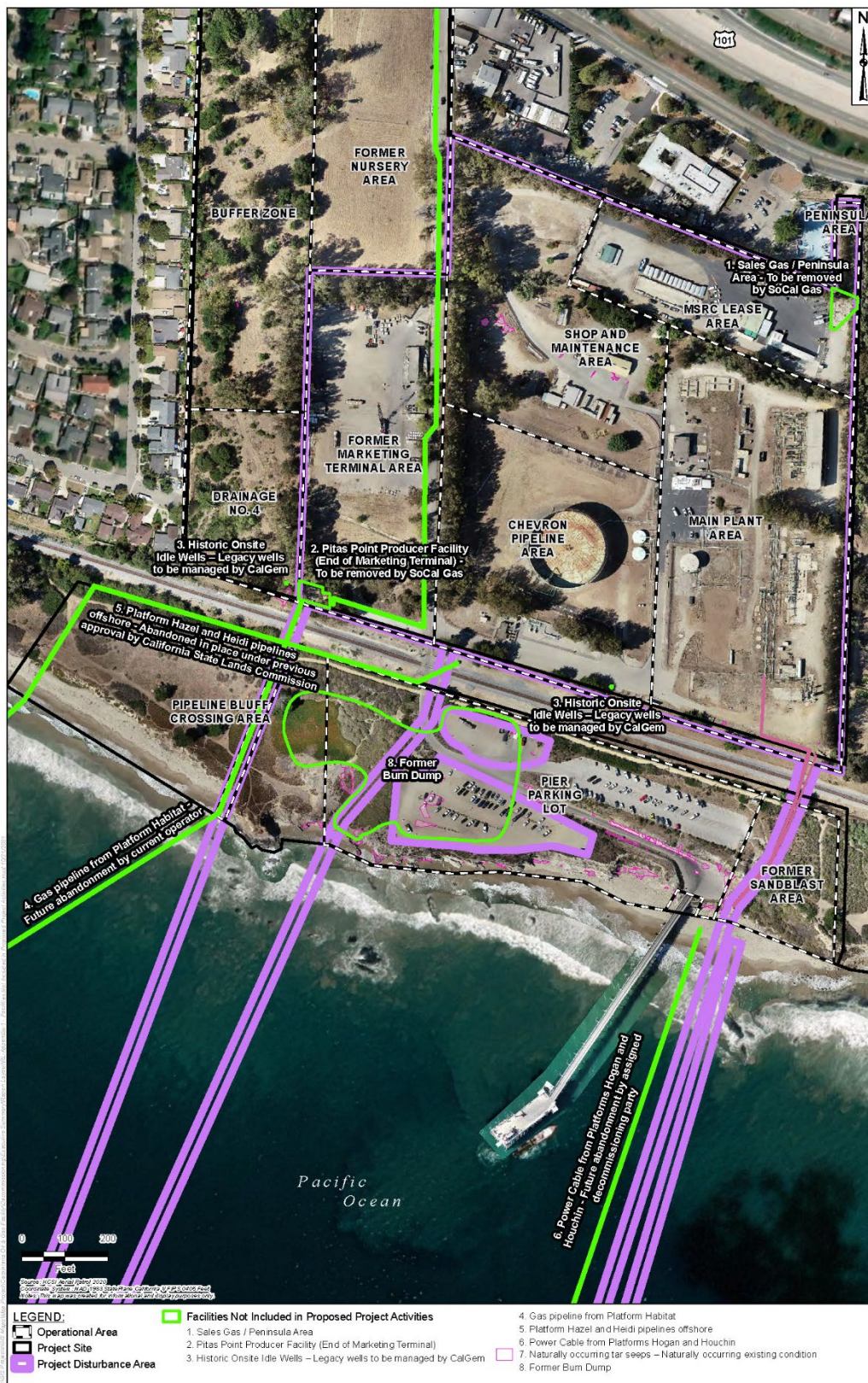


Figure 3.1-1. Facilities Not Included in Project Activities

4.0 DEMOLITION AND REMEDIATION PROJECT AREAS

The Project Site includes the onshore Carpinteria Oil and Gas Processing Facility, as well as the offshore pipelines and utilities leading into the Project Site from State waters, as further described below. Within the onshore Project Site, a number of Operational Areas/Plant Areas have been identified that contain idle structures, vessels, and piping proposed for demolition and remediation. The Offshore Project Site contains two primary pipeline and utility bundles that come to shore and lead into the Onshore Facility.

Proposed activities within each area are listed below.

Onshore Facilities and Proposed Activities:

- Main Plant Area - Surface and subsurface facilities demolition, and soil remediation.
- Chevron Pipeline Area - Surface and subsurface facilities demolition, and soil remediation.
- Former Marketing Terminal Area – Surface facilities demolition and soil remediation.
- Former Nursery Area – Vacant. No activities proposed. Previously remediated to acceptable cleanup levels.
- Shop and Maintenance Area – Surface and subsurface facilities demolition and soil remediation.
- MSRC Lease Area – Surface facilities demolition and soil remediation.
- Peninsula Area - Possible soil remediation in coordination with SoCalGas facility demolition and possible City of Carpinteria skate park development.
- Buffer Zone Area/Drainage Area No. 4 - Vacant. No activities proposed. Previously remediated to acceptable cleanup levels.
- Gravel Portion of Pier Parking Lot/Formal Sandblast Area – Surface and subsurface facilities demolition, and soil remediation/subsurface pipeline removal/abandonment in place.

Offshore Facilities and Proposed Activities:

- Platform Grace/Gail Pipeline Bundle and 10-inch Oil Pipeline - Complete removal from top of bluff to 3 nm State Waters Limit.
- Marketing and Marine Terminal Pipeline Bundles - Complete removal through top of bluff. Onshore pipelines will be abandoned in-place.

A summary of the current status of each Operational Project Area are provided in the discussion below.

4.1 ONSHORE FACILITY - OPERATIONAL PROJECT AREAS

The Onshore Facility and associated Project components comprise an area of approximately 55-acres that exists as an oil and gas processing facility. Within the facility, there are ten primary functional Operational Areas (comprising approximately 35 acres) that contain above ground and subsurface equipment, piping, and appurtenant facilities that will be removed entirely as part of the decommissioning Project. A description of these facilities and their status is provided below. A complete inventory of equipment remaining at the Project Site can be found in Appendix A.

4.1.1 Main Plant Area

The Main Plant Area is located on an approximately 9-acre parcel (APN 001-170-014) north of the UPRR right-of-way along the Project Site's eastern boundary. The Main Plant Area contains the Plant Control Room Building (3,880 square foot [sq ft]) and asphalt parking area, as well as various remaining idled equipment formerly utilized in support of oil and gas processing. There are a number of internal Plant equipment areas (Plant Equipment Areas 2 through 10) located within the larger Main Plant Operational Area boundary (Figure 4.1-1). A description of these areas and their current status is provided below. Representative photos of each Plant Equipment Area are provided in Table 4.1-1 below.

The Main Plant Area is bounded by a blue gum eucalyptus windrow on its eastern and northern boundaries (Figure 4.1-2). The trees located along the eastern Project boundary are parallel to an adjacent windrow offset onto the parcel adjacent to the east of the Project Site. There is also a 200-foot-long stand of eucalyptus located between Plant Equipment Areas 8 and 9, and two large cypress trees along the southern fence line. As shown in Figure 4.1-2, in order to remediate impacted soil present within the Main Plant Area, approximately 500 feet of eucalyptus windrow will need to be removed from the southeastern corner of the Main Plant Area (41 trees) and 200 feet from between equipment areas 8 and 9 (12 trees). An additional two Monterey cypress trees will be removed along the southern fence line of the Main Plant Area. Please see Appendix C2 for a copy of the arborists' Tree Report.

Table 4.1-1. Main Plant Area Descriptions and Representative Photographs



Plant Equipment Area(s)	Representative Photograph
<p>Area 2 is located at the northwestern corner of the parcel formerly utilized for butane storage, which was active 1960 – 1994. The vessels were removed in 2018 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).</p>	
<p>Area 3 is located in the middle of this parcel south of the Plant Control Room and parking lot. This area previously contained equipment associated with crude oil storage. This area has been active since 1960 and is still operational with one (1) remaining 5,000 bbl above ground storage tank (AST). One AST was removed in 2019 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).</p>	










Figure 4.1-1. Main Plant Area – Internal Plant Equipment Areas



Figure 4.1-2. Trees Proposed for Removal

Table 4.1-1. Main Plant Area Descriptions and Representative Photographs (Continued)

Plant Area	Representative Photograph
<p>Area 4 is located on the southernmost portion of this parcel and contained crude oil separators that were active from 1960-1993. The separators were removed in 2019 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).</p>	
<p>Area 5 contains LTS (Lower Temperature Separator) gas separation system components. The above ground gas treatment vessels were removed in 2019 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).</p>	
<p>Area 6 is located in the southeastern portion of the parcel and contains the therminol/glycol gas dehydrator, which was active from 1960-2000.</p>	
<p>Area 7 is located along the parcel's eastern boundary and included the bulk of the LTS gas separation system components. This area was active from 1960-2000. The LTS system vessels and equipment were largely removed in 2018 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).</p>	

Plant Area	Representative Photograph
<p>Area 8 is located at the northern end of the LTS gas separation system at the eastern area of the parcel. The White compressors and associated equipment were removed in 2018 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).</p>	
<p>Area 9 contains a large, rectangular compressor building (~5,100 sq ft) located at the northeast portion of this parcel. Area 9 includes six (6) IR Compressors, several vessels and associated equipment supporting the gas separation system that was active from 1960-2000.</p>	
<p>Area 10 located at the northwestern portion of the parcel includes equipment formerly utilized in support of the Cooper Gas Compressor/gas shipping system. This area was active from 1960-1998 and was partially removed in 2018 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).</p>	

4.1.2 Chevron Pipeline Area (Including Tank 861)

The Chevron Pipeline Area is located within APN 001-170-022, which is a 5.51-acre parcel located on the southern boundary of the Project Site adjacent to the UPRR right-of-way. The Chevron Pipeline Area contains Tank 861 (T861), which is a 217,000-barrel capacity above ground storage tank (Figure 4.1-3), as well as Tank 1 and Tank 2 (T1 and T2), which are both 2,000-barrel capacity above ground storage tanks. The area also includes a 510 sq ft concrete office building (Figure 4.1-4). A secondary entrance to the Oil and Gas Processing Facility is located at the southwestern corner of the former Chevron Pipeline Area. Approximately seven blue gum eucalyptus trees are proposed for removal within the Chevron Pipeline Area to allow for remediation of impacted soils (Figure 4.1-2).



Figure 4.1-3. Tank 861 and Chevron Pipeline Area



Figure 4.1-4. Former Office Building Within Chevron Pipeline Area

4.1.3 Former Marketing Terminal Area

The Former Marketing Terminal (FMT) Area is located within the southern half of APN 001-170-004, which is approximately 11.27 acres in total (Figure 4.1-5). The FMT was constructed in 1953 and taken out-of-service in 1985. The FMT was used for bulk storage of Chevron gasoline and diesel fuel products which were delivered to the site from the offshore marine terminal. These products were subsequently loaded into tanker trucks at the Marketing Terminal for distribution to retail gas stations and other fuel users. The above ground storage tanks (ASTs), underground storage tanks (USTs), and associated appurtenances were removed from the site in 1999. An approximately 2,409 sq ft office building and shop (Annex Building), numerous storage containers, and an equipment yard currently remain in use by Chevron.



Figure 4.1-5. Former Marketing Terminal (Annex Building)

4.1.4 Former Nursery Area

The Former Nursery Area (FNA) is located on the northern half of APN 001-170-004 (Figure 4.1-6). The FNA consists of currently undeveloped land that is the northern portion of the parcel of land that contains the former Marketing Terminal. The FNA was previously utilized for agricultural purposes consisting of row crops (pre-1935 to ~1959) and a plant nursery (~1959 to ~1975). These agricultural activities involved the use of chlorinated pesticides and other agricultural chemicals. No oil and gas facilities were historically constructed at the FNA, and it has served as a buffer area between the Chevron facilities and the adjacent land uses. In recent years, the FNA has been leased to Southern California Gas Company (SoCalGas) and Southern California Edison (SCE) as a staging area for several local construction and maintenance projects.



Figure 4.1-6. Former Nursery Area Looking South

4.1.5 Shop and Maintenance Area

The Shop and Maintenance Area is located north of the Chevron Pipeline Area within APN 001-170-023 (Figure 4.1-7). This parcel is approximately 10.80 acres and is located south of the City of Carpinteria City Hall. The Shop and Maintenance Area includes the primary entrance to the Oil and Gas Processing Facility and a 3,000 sq ft maintenance shop building. A welding shop area, including two smaller structures that are 2,314 sq ft total is also present. Plant Area 1 is located along the western boundary of this parcel. Plant Area 1 is an undeveloped area located at the western portion of the Shop and Maintenance Area and is known as the “Boneyard”. The Shop and Maintenance Area facilities were developed in the 1980s. The “Boneyard” was utilized for the storage of containers, sheds, equipment, and scrap accumulated over time from the 1980s to present. The majority of accumulated materials stored at the “Boneyard” were removed in 2018 as part of the idled equipment removal program previously approved by the City of Carpinteria (Permit No. 12547).



Figure 4.1-7. Shop and Maintenance Area

4.1.6 MSRC Lease Area

The MSRC Lease Area is located in the northeastern portion of APN 001-170-023. The area was formerly leased to Clean Seas but is now utilized by MSRC (Marine Spill Response Corporation); which supports local oil spill response operations and maintains this area for storage of oil spill response equipment. This area contains a 2,880 sq ft office/conference room building, as well as a small 64 sq ft storage building and a larger 2,100 sq ft garage and maintenance building. A large portion of this area is paved with asphalt or covered with gravel base. Figure 4.1-8 provides a view of the MSRC Lease Area.

An approximately 600-foot windrow of eucalyptus trees are partially located along the northern boundary of the MSRC Lease Area (behind City Hall). Additionally, an approximately 200-foot windrow of eucalyptus trees are located along the eastern boundary of the MSRC Area.



Figure 4.1-8. MSRC Lease Area

4.1.7 Peninsula Area

The Peninsula Area extends northward from the MSRC Lease Area and former Sales Gas Area within APN 001-170-023. The Peninsula Area is a narrow strip of land formerly developed and utilized in support of SoCalGas transmission pipelines corridor and access to the Sales Gas Facility and MSRC Lease Area. Decommissioning of any remaining facilities within the Peninsula area will be the responsibility of SoCalGas, however soil remediation is planned within this area as part of the Project. Additionally, an approximately 200-foot windrow of eucalyptus trees are located along the eastern boundary of the Peninsula Area. This windrow will be removed as part of a City of Carpinteria recreational project (skate park). Work within the Peninsula Area will be completed in coordination with SoCalGas and the City of Carpinteria.

4.1.8 Buffer Zone Area/Drainage Area No. 4

The Buffer Zone Area (BZA) is located within the northern portion of APN 001-170-003 (8.80 acres) (Figure 4.1-9). Drainage Area No. 4 (DA4) is located within the southern portion of APN 001-170-003 adjacent to the UPRR railroad right-of-way (Figure 4.1-10).

The BZA/DA4 was previously utilized for agricultural purposes consisting of row crops (pre-1935 to ~1943) and a walnut orchard (~1944 to ~1964). These agricultural activities involved the use of pesticides and other agricultural chemicals. The BZA/DA4 areas have served as a buffer area between the Chevron facilities and the adjacent land uses. With the exception of three oil wells (two drilled and abandoned and one idle non-Chevron owned oil well) noted below, no oil and gas facilities were constructed at the BZA/DA4.

There is no equipment remaining in the BZA or DA4, but the area includes a significant number of mature eucalyptus trees that were preserved during previous soil remediation efforts onsite. Additional areas were replanted with native vegetation following soil remediation activities. There are no proposed Project related activities within the Buffer Zone Area or Drainage Area No. 4.



Figure 4.1-9. Buffer Zone Area Looking Southwest



Figure 4.1-10. Drainage Area No. 4 Looking Southeast

4.1.9 Pier Parking Lot/Former Sandblast Area

The Pier Parking Lot is located within the middle to eastern portion of APN 001-170-021 (10.02 acres) and is comprised of a paved access roadway extending from Dump Road, an upper and lower parking lot, and access roadway to the Casitas (Carpinteria) Pier causeway. The Pier Parking Lot was constructed in the late 1950s to service offshore oil and gas development operations in the Santa Barbara Channel. The upper parking lot is paved and contains approximately 7,405 square yards of asphalt. The lower parking lot is covered in gravel road base (Figure 4.1-11). The gravel portion of the upper parking lot will be cleared of any stored equipment disced to loosen and turn up the soils and augmented with clean topsoil intended to support revegetation. The remainder of the paved upper parking lot will be retained in support of the future uses of the Pier, which is not included in the Project. The lower gravel parking area will also be cleared of any equipment, disced to loosen and turn up the soils and augmented with clean topsoil intended to support of revegetation. Disturbance will be minimized to avoid subsurface impacted soils associated with the former County Burn Dump.



Figure 4.1-11. Pier Parking Lot Looking East

The Former Sandblast Area is located on the eastern portion of APN 001-170-021; a 10.02-acre parcel located south of the UPRR right-of-way and north of the beach along the bluffs (Figure 4.1-12). The Former Sandblast Area contains a series of shallow subsurface pipeline and power utility lines that were verified during soil investigation in 2011. This area was previously remediated for impacted soils containing heavy metals and subsequently revegetated with native species.



Figure 4.1-12. Former Sandblast Area Looking Northeast

4.2 BEACH PIPELINE CROSSINGS AND OFFSHORE PIPELINE SEGMENTS WITHIN STATE WATERS (MLLW TO 3 NM OFFSHORE)

A summary of the beach pipeline crossing and offshore pipeline segments included within the Project is provided below.

4.2.1 Platform Grace/Gail Pipeline Bundle and 10-Inch Oil Pipeline

East of the Casitas Pier, a concrete encased pipeline bundle makes landfall at the site (Figure 4.1-13). This bundle contains a 10-inch oil and 10-inch gas pipeline (pipeline bundle) which originate from Platforms Grace and Gail. Additionally, a 10-inch oil pipeline from the former Platform Hope, is located on risers east of the Platform Grace and Gail bundle.

The Grace and Gail pipelines extend from their landfall at the Project Site within PRC 3133, through the southeastern corner of PRC 3150 (in City of Carpinteria deeded tidelands), then out into PRC 7911 and 4000 (in County of Santa Barbara deeded tidelands) continuing to the three-mile State Waters boundary and then eventually southward to Platforms Grace and Gail in Federal waters.



Figure 4.1-13. 10-Inch Pipeline (on Pipe Rack), the Gail/Grace Pipeline Bundle, and the PACOPS Power Cable Located East of Casitas Pier (2019)

4.2.2 Marketing and Marine Terminal Offloading Line Bundle

The former Carpinteria Marine Terminal was located west of Casitas Pier and provided a west coast style mooring for coastal oil tanker operations. The Marine Terminal mooring area supported two separate pipeline corridors from the onshore facilities including refined products associated with the Marketing Terminal and a separate crude oil line from Tank 861.

Idle 10-inch Marketing Terminal Offloading Line. The idle 10-inch Marketing Terminal Offloading Line is located west of Tar Pits Park and leads into the southern boundary of the onshore Facility. This pipeline corridor contains the former 10-inch diameter Marketing Terminal Offloading Line, as well as two (2) 4-inch diameter subdrain pipelines and one (1) 6-inch diameter wastewater pipeline. The pipelines are located approximately 5 feet deep through the bluffs and continue offshore into PRC 3133 (City of Carpinteria deeded tidelands).

In 1984, a pipeline “wrap” was added as an inhibitor to corrosion on the elbow leading from the beach crossing into the bluff face. The 10-inch submarine line (34°22’46”N, 119°30’43”W) was abandoned in place in 1986. The line was purged of all petroleum products into the storage facility onshore. The line was filled with seawater and blind flanged at the end of the submarine line.

It was observed during a site reconnaissance in Spring 2019 that the offshore segment of the 10-inch pipeline is currently disconnected from what is believed to be the onshore connection that is cut and located within the bluffs. The offshore segment appears to be damaged while the onshore segment is primarily intact.

Idle 20-inch Crude Oil Loading Line/6-inch and 8-inch Wastewater Lines to Shore. A 20-inch diameter crude oil loading line, 6-inch diameter wastewater line, and 8-inch diameter wastewater line are located further east of the Marketing Terminal Offloading Line and extend from the Carpinteria Oil and Gas Processing facility beneath Dump Road toward the south. This loading line leads into a valve box located at the edge of the coastal bluff leading down to the beach and offshore into PRC 3133 (City of Carpinteria deeded tidelands).

It was observed during a site reconnaissance in Spring 2019 that the abandoned 8-inch wastewater line has sustained damage and the protective coating on the 6-inch wastewater line was partially missing. The protective coating on the 20-inch Crude Oil Loading Line was observed to be cracked in several places and partially missing in some small locations nearshore.

5.0 PAST SITE ASSESSMENTS AND REMEDIATION EFFORTS

5.1 HISTORIC REMEDIATION

Several site-wide and localized site assessment events and impacted soil remediation activities have been completed at the Project Site between the 1980s and 2019. Figure 5.1-1 shows previous remediation that has occurred historically onsite. As further described below, remediation activities within some areas of the Project Site (including portions of the Main Plant Area, the Former Nursery Area, the Buffer Zone, Drainage Area No. 4, and the Former Sandblast Area) were completed in accordance with regulatory standards established at the time of the activities.

5.1.1 Main Plant Area

Spills and evidence of oil and gas related soil and groundwater impacts have been documented at the Main Plant Area. Additionally, a diesel fuel UST was removed from the southern portion of the plant in 2000. A summary of the primary remedial actions and closure dates within the Main Plant Area that were previously completed is provided below.

PCB-Containing Soil Removal (1986). (U.S EPA - Case Closed). PCB-containing soil was excavated, and confirmation soil sampling was completed on December 8, 1986. The resulting excavation area was backfilled with imported clean fill material during the period of December 15 through 19, 1986. The excavation depths ranged from approximately 6-inches to 72-inches below ground surface (bgs). At the request of U.S. EPA, one confirmation soil sample was collected for every 300-square foot of excavated area. Padre understands the PCBs soil cleanup level was established at 25 mg/kg.

- Case Closure - In 1987 closure letters were prepared by the U.S. EPA, California Department of Health Services, and the County of Santa Barbara Health Care Services.

Diesel Fuel UST Removal (1999). (SBCEHS LUFT Site No.52334 - Case Closed). In December 1999 a 18,000-gallon capacity diesel fuel UST previously used to fuel boats at the Casitas Pier was removed and transported offsite to Standard Industries located in Ventura, California for recycling. Regulatory agency oversight was provided by the County of Santa Barbara Fire Department (SBCFD), as well as by Carpinteria/Summerland Fire Protection District (CSFPD).

- Case Closure - Based on the data presented in the Padre document dated November 1, 2010, LUFT Site No. 52334 was closed by SBCFD in a letter dated September 25, 2012.



Figure 5.1-1. Historical Remedial Excavation Footprint – Onshore Oil and Gas Processing Facility

5.1.2 Former Marketing Terminal Area

A summary of the previously completed primary remedial action and closure date for the Former Marketing Terminal Area is provided below.

Source Removal Project (1999 – 2000) (SBCEHS LUFT Site No. 50624 - Case Closed). Volatile petroleum hydrocarbon-containing soil remediation activities (~25,000 cubic yards of soil and ~1,400,000 gallons of groundwater). Soil excavation was completed to depths of up to 20 feet bgs using a conventional excavator and a wheel loader and excavated materials were stockpiled onsite. Impacted soil was loaded from the stockpile into end dumps/transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Groundwater remediation involved excavation dewatering, filtering the groundwater through sediment filters and granular activated carbon (GAC) vessels, temporary storage of raw groundwater and filtered groundwater onsite in 21,000-gallon frac tanks and discharge of the filtered water to the local sanitary sewer. Nuisance odors were managed using an array of scented misters located around the excavation and stockpile areas, wind direction was monitored, and onsite and perimeter VOCs monitoring was completed using a PID.

- Case Closure – A Case Closure Summary was prepared and SBCFD recommended RWQCB concurrence that LUFT case No. 50624 be closed in their letter dated March 24, 2011. RWQCB issued a case closure concurrence letter to the SBCFD dated May 6, 2011 and SBCFD issued a Remedial Action Completion Certification Letter dated May 18, 2011. At the request of RWQCB, eleven remaining groundwater monitoring wells were permanently abandoned in 2014.

5.1.3 Former Nursery Area

A summary of the previously completed primary remedial actions and closure date for the Former Nursery Area (FNA) is provided below.

Chlorinated Pesticide-Containing Surface Soil Removal (2011 and 2016). (California Regional Water Quality Control Board, Central Coast Region [RWQCB] CAO R3-2004-0081 - Case Closed). All chlorinated-pesticide and heavy metals-containing soil remediation activities were completed under the City of Carpinteria Coastal Development Permit No. 04-1167-DP/CDP. Shallow chlorinated pesticides-containing soil remediation activities (~6,100 cubic yards) were completed at the FNA to depths of up to 2.5 feet below ground surface (bgs). Soil excavation was completed using a conventional track-mounted excavator, and excavated materials were either direct loaded into end dumps or stockpiled onsite. Chlorinated pesticide-containing soil was loaded from the working stockpile into end dump truck trailers using a wheel loader, covered, and transported offsite for disposal at a disposal facility located in Santa Barbara County. The resulting excavation area was backfilled with imported clean fill material. At the conclusion of remediation activities, engineering controls were constructed at locations on and west of Dump Road to manage storm water locally by eliminating run-on and controlling run-off at the FNA/BZA/DA4 areas, and a RWQCB-approved Storm Water Monitoring Plan was implemented to report annually on any onsite storm water accumulation and potential transport of chlorinated pesticide containing sediment offsite into Waters of the State/U.S. Additionally, a one-time site-specific annual wildflower seed mix hydroseed site restoration effort was completed at the FNA.

- Rescind CAO - Based on the findings, conclusions, and request for site closure included in the July 25, 2012 report, the RWQCB rescinded the CAO R3-2004-0081 in a letter dated December 17, 2013.
- Case Closure - Following additional shallow pesticide-containing soil removal at the FNA in 2016 and associated report of soil remediation and site closure request dated April 15, 2016, a case closure summary was prepared by Padre and a case closure letter was issued by RWQCB on January 6, 2017.

Chevron is required to notify the RWQCB in the event soil excavation or tree removal at soil sampling locations of A4-11-A and A4-34-A (DA4) and soil sampling location EX3-SWNC2-1 (FNA) so that remaining pollution can be properly removed if access is available.

5.1.4 Buffer Zone/Drainage Area No. 4

Source Removal Project (1999 – 2000) (SBCEHS LUFT Site No. 50624 - Case Closed). Volatile petroleum hydrocarbon-containing soil and groundwater remediation activities (~10,000 cubic yards). Soil excavation was completed to depths of up to 20 feet bgs using a conventional excavator and a wheel loader and excavated materials were stockpiled onsite. Impacted soil was loaded from the stockpile into end dumps/transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Groundwater remediation involved excavation dewatering, filtering the groundwater through sediment filters and granular activated carbon (GAC) vessels, temporary storage of raw groundwater and filtered groundwater onsite in 21,000-gallon frac tanks and discharge of the filtered water to the local sanitary sewer. Nuisance odors were managed using an array of scented misters, wind direction monitored, and onsite and perimeter VOCs monitoring was completed using a PID.

- Case Closure - A Case Closure Summary was prepared and the Santa Barbara County Fire Department (SBCFD) currently managed by the County of Santa Barbara Department of Environmental Health Services (SBCEHS) recommended RWQCB concurrence that LUFT case No. 50624 be closed in their letter dated March 24, 2011. RWQCB issued a case closure concurrence letter to the SBCFD dated May 6, 2011 and SBCFD issued a Remedial Action Completion Certification Letter dated May 18, 2011.

Chlorinated Pesticide-Containing Surface Soil Removal (2011) (RWQCB CAO R3-2004-0081 - Case Closed). Shallow chlorinated pesticides-containing soil remediation activities (~1,400 cubic yards) were completed at the BZA/DA4/RRD to depths of up to 2.5 feet bgs. Soil excavation was completed at the BZA/DA4 using conventional and limited access excavators and excavated materials were loaded into 10-yard dumps and transferred to the working stockpile onsite. Impacted soil was loaded from the stockpile into end dumps / transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Additionally, shallow chlorinated pesticides-containing soil was removed from the Railroad Ditch (RRD), an offsite drainage channel located on UPRR property southwest of the southwest corner of DA4, using a “super-sucker” vacuum truck. Soils were loosened manually using picks and shovels, and the resultant loose material vacuumed from the RRD and added to the working chlorinated pesticide-containing soil stockpile. The presence of midden material identified by cultural resource monitors in the RRD and habitat

trees at DA4 limited the removal of soil containing chlorinated pesticide concentrations in excess of Project cleanup levels in some areas of the RRD and DA4. Engineering controls were constructed to manage storm water by eliminating run-on and controlling run-off at the FNA/BZA/DA4 areas and a Storm Water Monitoring Program implemented to report annually on any storm water accumulation and potential transport of chlorinated pesticide containing sediment offsite into Waters of the State/U.S. A native plant site restoration effort was completed at the BZA/DA4 and fulfilled over a 3-year period.

- Rescind CAO - Based on the findings, conclusions, and request for site closure included in the July 25, 2012 report, the RWQCB rescinded the CAO R3-2004-0081 in a letter dated December 17, 2013.
- Case Closure - Following additional shallow pesticide-containing soil removal at the FNA in 2016 and associated report of soil remediation and site closure request dated April 15, 2016, a case closure summary was prepared by Padre and a case closure letter was issued by RWQCB on January 6, 2017.

Chevron is required to notify RWQCB in the event soil excavation or tree removal at soil sampling locations of A4-11-A and A4-34-A (DA4) and soil sampling location EX3-SWNC2-1 (FNA) so that remaining pollution can be properly removed if access is available.

5.1.5 Former Sandblast Area

The Former Sandblast Area (FSBA) was utilized during the 1970s and 1980s for sandblasting onshore/offshore equipment planned for restoration/re-painting. This area was documented to contain elevated heavy metals concentrations in shallow soil including chromium, lead, and nickel.

Heavy Metals-Containing Surface Soil Removal (2011). (RWQCB CAO R3-2004-0081 - Case Closed). Shallow heavy metals-containing soil remediation activities (~650 cubic yards) were completed at the FSBA. Soil excavation was completed using a limited access excavator and excavated materials were either direct loaded into 10-yard dumps or stockpiled onsite. Impacted soil was loaded into end dumps/transfer trucks using a wheel loader, covered, and transported offsite for disposal at a disposal facility. The resulting excavation area was backfilled with imported clean fill material. Best Management Practices were constructed to manage storm water by diverting storm water around the FSBA excavation area. Additionally, a native plant site restoration effort was completed at the BZA/DA4 and fulfilled over a 3-year period.

- Rescind CAO - Based on the findings, conclusions, and request for site closure included in the July 25, 2012 report, the RWQCB rescinded the CAO R3-2004-0081 in a letter dated December 17, 2013.
- Case Closure - Following additional shallow pesticide-containing soil removal in 2016 and associated report of soil remediation and site closure request dated April 15, 2016, a case closure summary was prepared by Padre and a case closure letter was issued by RWQCB on January 6, 2017.

5.2 RECENT SOIL AND GROUNDWATER ASSESSMENTS

In preparation for planned site decommissioning, remediation, and site restoration activities, Chevron initiated supplemental site assessment activities at the Project Site. During the period of November 2018 to October 2019 site-wide soil and groundwater assessment activities were conducted at the Oil and Gas Processing Facility, Former Marine Terminal Area, and the Marine Spill Response Corporation (MSRC) Lease Area to verify and validate previously documented soil and groundwater impacts, as well as assess additional areas of potential concern. The results of the site assessment activities indicated constituents of concern (COCs) in excess of applicable soil screening levels including total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), California-regulated metals, and chlorinated pesticides, as well as localized TPH and PCB impacts to groundwater at the Project Site. A summary of the results of this assessment are contained in the Interim Remedial Action Plan (see Appendix B).

5.3 ASBESTOS AND LEAD-BASED PAINT ASSESSMENT

Asbestos and lead-based paint (LBP) surveys of equipment and construction materials at the Project Site were performed in 2018 to identify the potential presence of asbestos and LBP materials that may require special handling, disposal, or personal protective measures and procedures during the planned deconstruction, demolition, and disposal or recycling activities at the Project Site. The following information has been compiled from these Padre reports:

- *Asbestos and Lead-Based Paint Survey Report. Carpinteria Oil and Gas Processing Facility, 5675 Carpinteria Avenue, Carpinteria, Ventura County, California. June 2018.*
- *Supplemental Asbestos Survey – Carpinteria Oil and Gas Processing Facility, 5675 Carpinteria Avenue, Carpinteria, Santa Barbara County, California. October 2018.*

Based on 393 asbestos samples taken of various equipment and construction materials onsite, laboratory results indicated that 147 of the asbestos samples (primarily gaskets) contained asbestos concentrations at, or in excess of 1.0%, which categorizes the materials as ACM, in accordance with the California Division of Occupation Safety and Health's (Cal/OSHA) 8 CCR 1529.

Additionally, 116 paint chip samples were collected from exterior surfaces of various equipment and associated components. LBP was detected in paint chip samples collected ranging from 70 parts per million (ppm) to 210,000 ppm. A total of 67 of the 116 paint chip samples collected at the Project Site exceeded the California Lead in Construction Standard limit of 600 parts per million (ppm).

6.0 PERMITTING

The Carpinteria Oil and Gas Processing Facility (Facility) was constructed in 1959 within the City of Carpinteria and was originally built to receive oil and gas from Platforms Hilda, Hazel, Hope and Heidi; all of which were decommissioned in 1996. Approval for the construction and operation of the onshore Facilities were initially issued by the County of Santa Barbara in January 1961 under a Development Plan (County Ordinance No. 1206, subsequently modified by County Ordinance No. 1259 (61-R-230) in December 1961 and County Ordinance No. 1901 (68-R-2-5) in May 1968. The approved plan and related provisions were adopted by the City of Carpinteria in 1969 following the City's Incorporation in 1965 (City Ordinance No. 75).

In addition to the onshore facilities, the nearshore pipelines from shore out to 2-miles, as well as Casitas Pier are located within the sovereign tide and submerged lands held in trust for the State of California by the City of Carpinteria, within State Tidelands Lease Numbers PRC 3133 and 3150. The County of Santa Barbara was originally granted these sovereign tide and submerged lands in trust in 1931 (Chapter 846, Statutes), and the City of Carpinteria became the County's successor in interest to these lands upon the City's incorporation in 1965. In 1968, the State of California confirmed the City's title to the tide and submerged lands and provided that they be used for statewide purposes including a harbor, commercial and industrial facilities, transportation and utilities, public recreation and the protection of wildlife habitat and open space (Chapter 1044, Statutes of 1968).

Further offshore, the Project pipelines are located within approximately one-mile of Santa Barbara County submerged deeded tidelands located from approximately the two to three-mile State limit within State Tidelands Lease Numbers PRC 3150, 7911, and 4000. This segment is within the jurisdiction of SBC, who has assumed responsibility on behalf of the State of California. To decommission and quitclaim this segment of pipelines, an application to terminate the lease and pipeline decommissioning plan must be submitted to SBC. SBC will have the jurisdictional authority for approval of the decommissioning plan and issuance of the lease termination (R/P File No. 003657).

6.1 EXISTING FACILITY PERMITS

As discussed above, the existing Plant is permitted by a City of Carpinteria ordinance adopted in 1969 (City Ordinance No. 75, incorporating provisions of prior County Ordinance No. 1901 (68-R-2-5)). Additionally, there are two permits to operate from Southern California Gas Company related to the Pitas Point Odorant and Metering Station (where gas is transferred from DCOR's Platform Habitat) and (former) Venoco Carpinteria Gas Plant Odorant and Metering Station. Additionally, the Gas Plant has an independent Permit to Operate from the Santa Barbara Air Pollution Control District.

6.2 PROJECT PERMIT REQUIREMENTS

Table 6.1-1 provides a summary of the key local, State of California, and Federal agencies that have regulatory authority for the proposed Project activities. It should be noted that numerous other agencies will also be involved in the review and approval process and that this involvement includes resource consultation, notification and administrative approvals.

Table 6.1-1. Key Agency Review and Permitting

Agency	Regulated Activity	Applicable Project Components	Authority	Permit/Approval
Local				
City of Carpinteria (City)	Removal of project components located onshore and within City deeded tidelands (beach & offshore segments). Activities within designated coastal zone	Onshore operations and deeded tidelands	California Coastal Act and CSLC deeded tidelands, CEQA lead agency	Certification of CEQA Documentation Coastal Development Permit for onshore facilities removals and remediation Demolition and Grading Permit for onshore facilities removals and remediation Approval of Facility decommissioning plan within City Deeded Tidelands and Issuance of a Lease Quit Claim
Santa Barbara County Department of Planning and Building (County)	Removal of project components located within County deeded tidelands. Activities within designated coastal zone	Deeded tidelands	California Coastal Act and CSLC deeded tidelands	Approval of Pipeline Right of Way Lease Agreement within County Deeded Tidelands
Santa Barbara County Public Health Department, Environmental Health Services Department	Establishment of remediation levels for any onshore impacted soil	Onshore Facilities	Onsite Hazardous Waste Treatment ("Tiered Permit")- Authority: HSC Chapter 6.5 & Title 22 CCR Division 4.5; California Accidental Release Prevention ("CalARP") - Authority: Chapter 6.95, Article 2 & Title 19 CCR Chapter 4.5	Approval of Remedial Action Plan

Agency	Regulated Activity	Applicable Project Components	Authority	Permit/Approval
Santa Barbara County Air Pollution Control District (APCD) (offshore and onshore operations)	Air emission outputs associated with project decommissioning activities	Marine and onshore operations	1990 Clean Air Act CEQA review	County of Santa Barbara will conduct air quality emissions review under CEQA; Portable Engine Permits for the onshore facilities
State				
California Coastal Commission (CCC)	Any development within designated coastal zone	Marine component and onshore facilities within Coastal Zone	California Coastal Act Coastal Zone Management Act	Federal Consistency Determination for all Federal approvals and permits. Coastal Development Permit for actions within State Waters Appeal jurisdiction of Coastal Development Permits issued for onshore activities with the Coastal Zone
California Department of Fish and Wildlife (CDFW)	Activities affecting State Waters biological resources Onshore activities affecting onshore biological resources including streams and wetlands	Marine component and onshore facilities within Coastal Zone	State Endangered Species Act Section 1601	Consultation under State Endangered Species Act Section 1601 approval for work within designated waterways
Regional Water Quality Control Board (RWQCB)	Discharges that may affect surface and ground water quality in waters of the state Discharges associated with flushing pipes; runoff from facilities during storms	Marine and onshore operations	Clean Water Act Porter-Cologne State Water Quality Act	Section 401 certification in association with 404 Permit Approvals Stormwater permits for all onshore excavations Approval of Remedial Action Plan

Agency	Regulated Activity	Applicable Project Components	Authority	Permit/Approval
	Sanitary and domestic waters from the platforms or vessels Establishment of remediation targets of any impacted groundwater			
California State Office of Historic Preservation (OHP) and the State Historical Preservation Office (SHPO)	Impacts to historic and pre-historic resources	None identified at this time	National Historic Preservation Act Protection of Historic Resources (36 CFR 800)	Consultation under Section 106
California State Fire Marshal, Hazardous Liquid Pipeline Safety Division	Pipeline inspections and safety	Onshore and offshore pipelines	Federal 49 CFR Part 195 State CCR/Chapter 5.5 Sections 51010 through 51019	Consultation with CalGEM and California States Lands Commission (CSLC)
California Air Resources Board (CARB)	Air emission outputs associated with project decommissioning activities	Marine and onshore operations	1990 Clean Air Act	None identified at this time Air quality review will be conducted on the local level. Please refer to County Air Pollution Control Boards (APCDs) below for detail
Federal				
U.S. Army Corps of Engineers (U.S. ACOE)	Discharge of dredged or fill material into waters of the U.S. during construction. Jurisdictional waters include	Marine components	Section 404 Clean Water Act (33 USC 1344)	Issuance of a 404 Permit associated with excavation and related bottom disturbance

Agency	Regulated Activity	Applicable Project Components	Authority	Permit/Approval
	territorial seas, tidelands, rivers, streams and wetlands			
	Structures or work in or affecting navigable waters of the U.S. Review and issuance concurrent with Section 404	Marine components	Section 10 of the Rivers and Harbors Act (33 U.S.C. 403) (Section 4(f) of the OCS Act of 1953)	Issuance of a Section 10 Permit associated with excavation and related bottom disturbance in navigable waters
United States Fish & Wildlife Service (USFWS)	Impacts to federally-listed endangered and threatened species and species proposed for listing	Both terrestrial & marine components	16 USCA 1513 50 CFR Section 17	Consultation under the Endangered Species Act (Section 7) and Issuance of Biological Opinion/Incidental Take Permit (if necessary)
National Oceanic & Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS)	Impacts to federally-listed and species proposed for listing. Protection of Marine Mammals Managed Marine Fish Resources	Marine components	16 USCA 1513 50 CFR Section 17	Consultation under the Federal Endangered Species Act, Section 7, Marine Mammal Protection Act, Essential Fish Habitat Assessment Issuance of Biological Opinion/Incidental Take Permit (if necessary)
U.S. Environmental Protection Agency (EPA)	Discharges that may affect surface and ground water quality Establish remediation levels for onshore PCB-impacted soil and groundwater	Both terrestrial & marine components	Clean Water Act 40 CFR 761.61(a) 40 CFR 761.61(c)	Issuance of NPDES permit (if necessary) for offshore discharges. Termination of existing NPDES Permits associated with facility operations Approval of remedial activities for PCBs
United States Coast Guard (USCG)	Activities that may affect navigable waters	Activities in navigable waters	33 CFR Part 62, 67 and 153 OPA 90	Notice to Mariners

6.2.1 City of Carpinteria Proposed Zoning/Land Use Designation Revisions for Redevelopment

The City of Carpinteria General Plan/Local Coastal Plan (GP/LCP) is the primary planning document for the City. Since the City and the onshore Project area are located within the Coastal Zone, the City's LCP has been certified in accordance with, and enacts the regulation set forth by the California Coastal Act (CCA). The City of Carpinteria is currently in the process of updating the existing 2003 combined GP/LCP document.

The City of Carpinteria will require a CDP/CUP for demolition of the onshore Facilities and pipelines within City deeded tidelands. Zoning of the Project Site regulates the allowable site uses in accordance with the City's municipal zoning code, Title 14 (Zoning), Chapter 14.30 (M-CD – Coastal Industry District) and the site-specific City Ordinance No. 75. Uses permitted in the M-CD district subject to a development plan approval include the following:

1. Onshore facilities necessary for the exploration, development, production, and/or transportation of offshore oil and gas resources;
2. Marine terminals required for waterborne shipments of crude oil or petroleum products including a berthing system for vessels, loading/unloading equipment, storage tanks, terminal control and safety equipment, and navigational facilities;
3. Aquaculture, including fish hatcheries;
4. Oil spill and cleanup facilities including central office space and vehicles for the storage of floating oil/water separators, pumps, generators, hosing, assorted absorbent materials, stream cleaners, storage tanks, fuel tanks, and other beach and wildlife cleanup equipment; and
5. Structures, equipment, or facilities used in the exploration, development, or production of oil, gas, or other hydrocarbon substances from an onshore oil and gas field, or any appurtenances necessary thereto.

Additionally, based on the proposed land use(s) at that time, the extent of remediation needed to bring the site in compliance with clean up targets established by the RWQCB and Santa Barbara County Public Health Department, Environmental Health Services Department will vary. However, Chevron has committed to remediation of the Project Site to the unrestricted use land use standard as further described in Section 6.2.2 below.

6.2.2 Soil Cleanup Goals

The Carpinteria Oil and Gas Processing Facility and associated properties currently remain in operation to support ongoing offshore platform abandonment activities. Once these support operations are completed the site facilities will be decommissioned, the site restored, and later re-purposed for potential future unrestricted land use. Therefore, the Remedial Action Objective (RAO) is remediation to an unrestricted land use standard consistent with the approvals from SBCEHS, RWQCB and USEPA. The unrestricted land use cleanup goals (Soil Cleanup Goals) are conservative and used to develop an anticipated upper threshold for Project specific characteristics of expected soil volume and ancillary factors for traffic/truck trips and potential air emission impacts. Actual cleanup levels will be developed in consultation with the appropriate regulatory agency and will/may/could differ from those presented here. To meet this RAO, the

proposed unrestricted land use cleanup goals for COCs in soil at the Project Site include the following:

- **Total Petroleum Hydrocarbons (TPH)** - Chevron proposes using the Tier 1 ESLs as TPH cleanup goals.

Regulatory Threshold	TPH C ₄ - C ₁₂	TPH C ₁₃ - C ₂₂	TPH C ₂₃ - C ₄₀
<i>RWQCB Tier 1 ESL</i>	100	260	1,600

Values are in milligrams per kilogram (mg/kg)

- **PCBs** - Tier 1 ESL of 0.23 mg/kg (RWQCB-SFB, 2019).
- **Metals** - Cleanup goals established by RWQCB-CCR under CAO R3-2004-0081 (RWQCB-CCR, 2011) or applicable regional naturally occurring background concentration (Hunter, 2005).
- **Chlorinated Pesticides** - Cleanup goals established by RWQCB-CCR under CAO R3-2004-0081 (RWQCB-CCR, 2011); and
- **All Other Compounds** - Tier 1 ESLs for residential land use (RWQCB-SFB, 2019).

The remediation goal for total PCBs in soil proposed for the Project based on the U.S. EPA's residential regional screening level (RSL) for "high-risk" PCBs in soil is 0.23 milligrams per kilogram (mg/kg). The proposed unrestricted land use cleanup goal of 0.23 mg/kg total PCBs (as total congener or Aroclors) was selected based on the following two lines of evidence:

- 1) It is comparable to U.S. EPA's residential RSL for "high risk" PCBs (0.23 mg/kg; U.S. EPA 2018) which also is consistent with California EPA's recommendation for using the high-risk toxicity values when evaluating multiple Aroclors, homologs, or congeners in a sample (Cal/EPA, 2018).
- 2) It exceeds 99% of the upper end reporting limit values (≤ 0.06 mg/kg) for recent PCB analyses of soil collected from the Carpinteria Oil and Gas Processing Facility. While the actual laboratory reporting limit is 0.02 mg/kg, the maximum reporting limit ranged from 0.12 mg/kg to 0.6 mg/kg in <1% of the samples due to matrix and other interference issues.

Where warranted, additional evaluation of petroleum hydrocarbons at the Project Site shall include the collection of additional soil samples for TPH fractionation analyses (i.e., aliphatic and aromatic fractions in various discrete naturally occurring carbon ranges). However, final TPH cleanup goals will be developed with the regulatory agencies prior to initiation of work.

Another consideration in qualifying the use of TPH thresholds as cleanup levels in soil is the differentiation between naturally-occurring and suspected anthropogenic TPH. Naturally-occurring TPH at the Project Site emanates directly from the underlying Monterey Formation bedrock and resides within the bedrock and/or in overlying younger sediments. Anthropogenic TPH in soil at the Project Site is considered to be TPH deposited or released to the environment via human activity. Chemical distinction between the naturally occurring petroleum deposits and the suspected anthropogenic TPH-containing can be derived using forensic chemical analyses methods.

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7.0 DEMOLITION AND REMEDIATION PROCEDURES

Demolition and remediation activities will be broken into three primary areas according to their respective location and supporting construction methodologies. The three areas include the Onshore Facility (including the area extending to the bluff face), Beach Crossing (bluff face to mean high tide line), and Offshore Pipeline Segments (mean high tide out to 3 nm State waters limit). Proposed methodology for removal or abandonment in-place within each of these areas is further described below.

7.1 ONSHORE FACILITY

7.1.1 Idling and Removal of Existing Equipment, Above-Ground Piping, and Structures

Equipment removal at the Onshore Facility includes demolition and removal of existing above- and below-grade equipment and structures (Figure 7.1-1). A demolition contractor will be mobilized to dismantle and prepare equipment as necessary for the full removal and transport of the structures/equipment listed in the equipment inventory within the operational areas described in Section 4.1 (Onshore Facility) above.

As described in Section 5.3, onshore facilities have been inventoried and sampled for the presence of asbestos and lead-based paint. Prior to any structures/equipment being removed, additional assessments will be conducted (as needed), and a Health and Safety Plan will be prepared for the work.

Prior to equipment removal, the areas will be cleared of any smaller supporting equipment and all equipment will be de-energized (as necessary). Prior to removal, all structures/equipment will be inspected to confirm they have been properly vented, drained, and cleaned of any residual hydrocarbons. Any surrounding features will be disconnected/removed as required to facilitate the subsequent removal of the structures/equipment.

Removal of equipment within each of the operational areas will be accomplished utilizing standard dismantling and demolition techniques, equipment, and personnel. Hydraulic equipment such as excavators equipped with mechanical shears, loaders, and boom lifts (aerial work platforms) will be utilized to dismantle and handle the scrap equipment. Scrap materials will either be placed into a roll off bin or directly into transport trucks for offsite disposal and recycling.

It is anticipated that the Onshore Facility demolition will focus first on demolition of remaining large tanks, and specifically Tank 861 within the Chevron Pipeline Area. After completion of the work at the Chevron Pipeline Area, demolition will then continue in a generally clockwise pattern around the remaining Onshore Project Facilities (see Section 7.5 and Figure 7.5-1 for additional detail). The MSRC Lease Area will remain until a mutually agreed upon termination date (however, MSRC spill response support services will be maintained following their relocation). Additionally, the Main Plant Area will not be available for demolition until all related remaining support activities are completed.

Scrap material recovered during this process will be temporarily segregated and stockpiled or placed into 20 or 30-yard waste bins until transport to an appropriate receiving facility for recycling or disposal as further described in Section 7.3 (Recycling and Disposal Volumes).

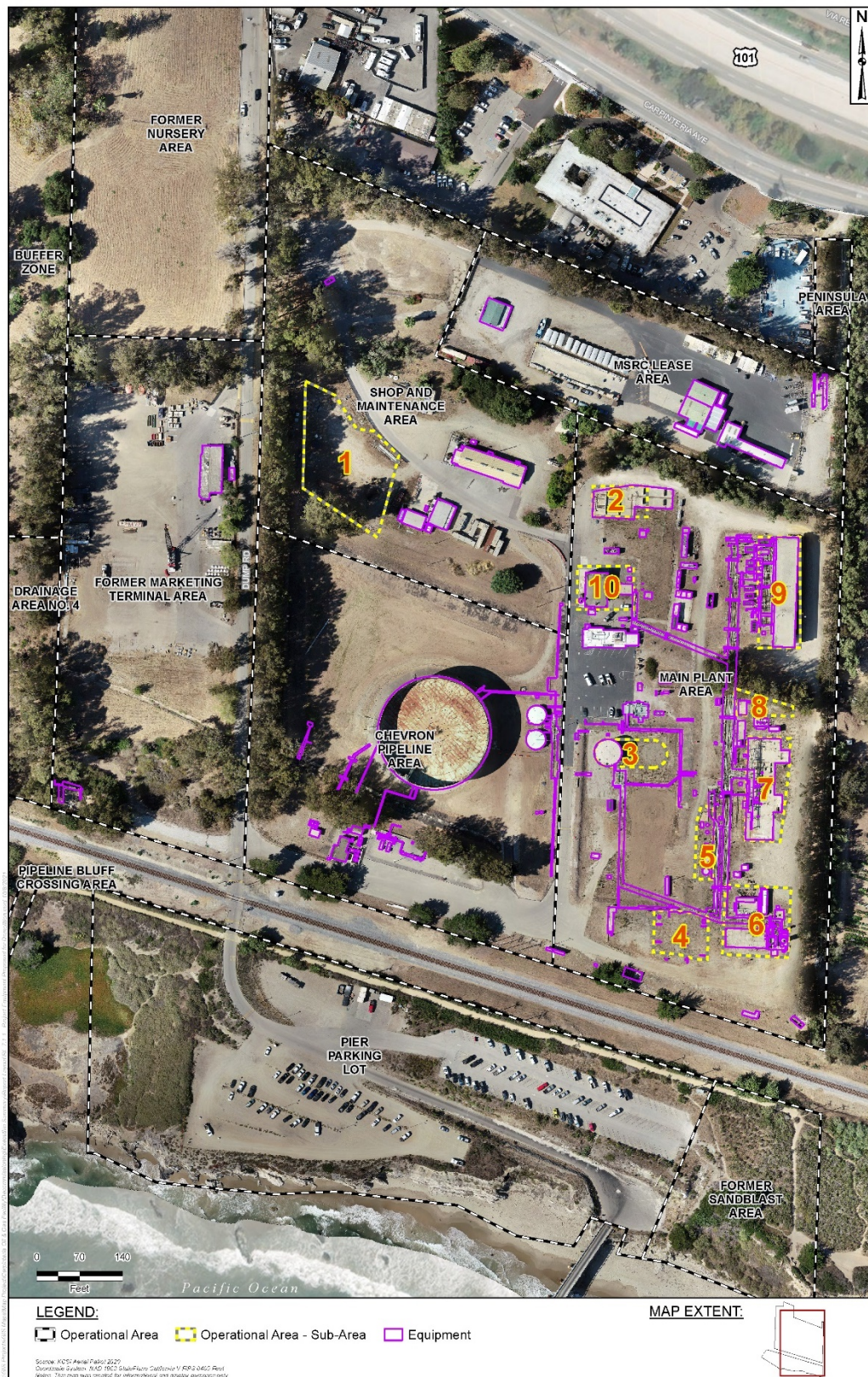


Figure 7.1-1. Project Equipment/Facilities Proposed for Demolition

7.1.2 Removal of Concrete Foundations, Asphalt, Oil Spray, and Gravel Pads

Following surface facilities equipment removal, demolition of the concrete foundations, asphalt, oil spray, and gravel pads will occur (Figure 7.1-2). It is estimated that approximately 21,374 tons of these materials will be recovered. Based on the results of planned concrete and asphalt assessment activities for the potential presence of PCBs, these building material wastes will be managed in accordance with local, State and Federal regulations. The concrete and/or asphalt will be identified as a non-hazardous PCB-containing waste (<50 mg/kg) and/or TSCA PCB remediation waste (≥50 mg/kg).

If PCB-containing concrete and/or asphalt is identified at the Project Site, Chevron's remedial construction contractor will provide the necessary construction equipment to remove the PCB-containing materials from the Project Site. The remedial construction contractor will implement engineering controls (i.e., dust suppression) as necessary during the course of the concrete/asphalt removal activities. Concrete/asphalt/road base materials will be loaded into end dump trucks or bins equipped with covers, or directly loaded into lined end-dump trucks or bins equipped with covers for appropriate off-site transportation and disposal.

Once all concrete foundations, asphalt, oil spray, and gravel pad materials have been removed, demolition will focus on the remaining removal or abandonment in-place of subsurface pipelines.

7.1.3 Subsurface and Abandoned Pipeline Removal

There is a known network of subsurface pipelines and utilities existing within the Onshore Facility area (Figure 7.1-3). Pipelines and utilities associated with below-ground equipment will be purged and de-energized prior to demolition activities. These pipelines and utilities are generally shallow and are located within five feet of the existing ground surface. Additionally, other unknown pipelines may be encountered during soil excavation activities. Pipelines that are not in use may also be removed during the course of remediation activities.

Subsurface pipelines (contents and any coating materials) will be assessed for the presence of impacted materials for waste characterization and removal planning purposes. Removal will be accomplished utilizing an excavator and/or hydro-excavation methods to safely excavate the pipeline corridor in consideration of other potential adjacent uses or lines, and the pipelines will be removed and cut into sections appropriate for hauling. If impacted materials (i.e. asbestos) are present, the pipelines will be managed accordingly as directed by a certified hazardous materials oversight specialist.



Figure 7.1-2. Surfaces Proposed for Demolition at the Onshore Project Site



Figure 7.1-3. Subsurface Piping to be Removed at the Onshore Project Site

7.1.4 Soil Remediation Excavation Procedures

The objective of the remediation portion of the Project is to remove for offsite disposal, soil containing COCs at concentrations above the respective Soil Cleanup Goals from the Project Site. Prior to remediation, additional soil and groundwater assessment activities will be completed at the Project Site to better define the lateral and vertical extent of COCs in soil and groundwater. Assessment findings will be summarized and assimilated into the Project Site analytical data set and a Remedial Action Plan prepared documenting the proposed limits of remedial excavation. Based on previous field assessments, an Interim Remedial Action Plan (IRAP, summary provided in Appendix B) will be submitted to the applicable agencies for preliminary review and will provide a finalized RAP and any other supplemental information to the agencies as additional field assessment is completed while the Project progresses.

The remedial contractor will implement the remedial actions at the Project Site in accordance with applicable local, State, and Federal requirements, including off-site disposal. The soil Remedial Action Objective (RAO) is remediation to an unrestricted land use standard.

Remediation of the Project Site will be achieved through the excavation of shallow onsite impacted soils as specified in the RAPs approved by the requisite regulatory agency. The Interim Remedial Action Plan (IRAP) provides a conceptual conservative approach to meeting the unrestricted future land use goal. The actual extent may differ based on the approved RAPs. Soil excavation limits were defined using in-situ soil sample results for total PCBs, TPH, Title 22 metals, and chlorinated pesticides (see Figure 7.1-4 for the estimated excavation areas). In total, an estimated 65,792 cubic yards of soil has been identified in the IRAP targeted for removal. The remedial construction contractor will implement engineering controls (i.e., dust suppression) as necessary during the course of the soil excavation activities. Non-hazardous remediation waste will be excavated and stockpiled separately, and then loaded into trucks or bins equipped with covers, or directly loaded into lined end-dump trucks or bins equipped with covers for appropriate off-site transportation and disposal. At the conclusion of soil remediation activities each day, the excavation will be secured by constructing a temporary fence around the limits of the excavation, as necessary.

As further described in Section 7.3.1 (Estimated Disposal Volumes for Onshore Equipment Removal and Remediation), non-hazardous soils will be taken to Waste Management (WM) in Simi Valley, California; WM in McKittrick, California; and/or Clean Harbors (CH) in Buttonwillow, California. Hazardous soils will be transported to Kettleman City and/or CH Buttonwillow receiving facilities. To facilitate off-hauling logistics, excavated debris and soil may be temporarily stored in stockpiles within the area from which they were excavated. Also, where unanticipated deposits of debris and/or impacted soil are encountered, these materials may be temporarily stockpiled near the excavation locations to facilitate profiling, loading, and off-site disposal. Soils that appear to be impacted will be stockpiled and sampled. The stockpiled soil will be field screened for odors and staining, and air monitor readings will be collected and recorded. Samples collected will be submitted to a California-approved analytical laboratory for analysis. Dust and odors will be limited through best management practices including, but not limited to: periodic spraying with clean water to limit dust generation, sweeping of facility roadways to limit offsite migration of dirt and dust, and monitoring of the Project vicinity utilizing an odor detector to ensure excavation limits are within the agency approved thresholds.

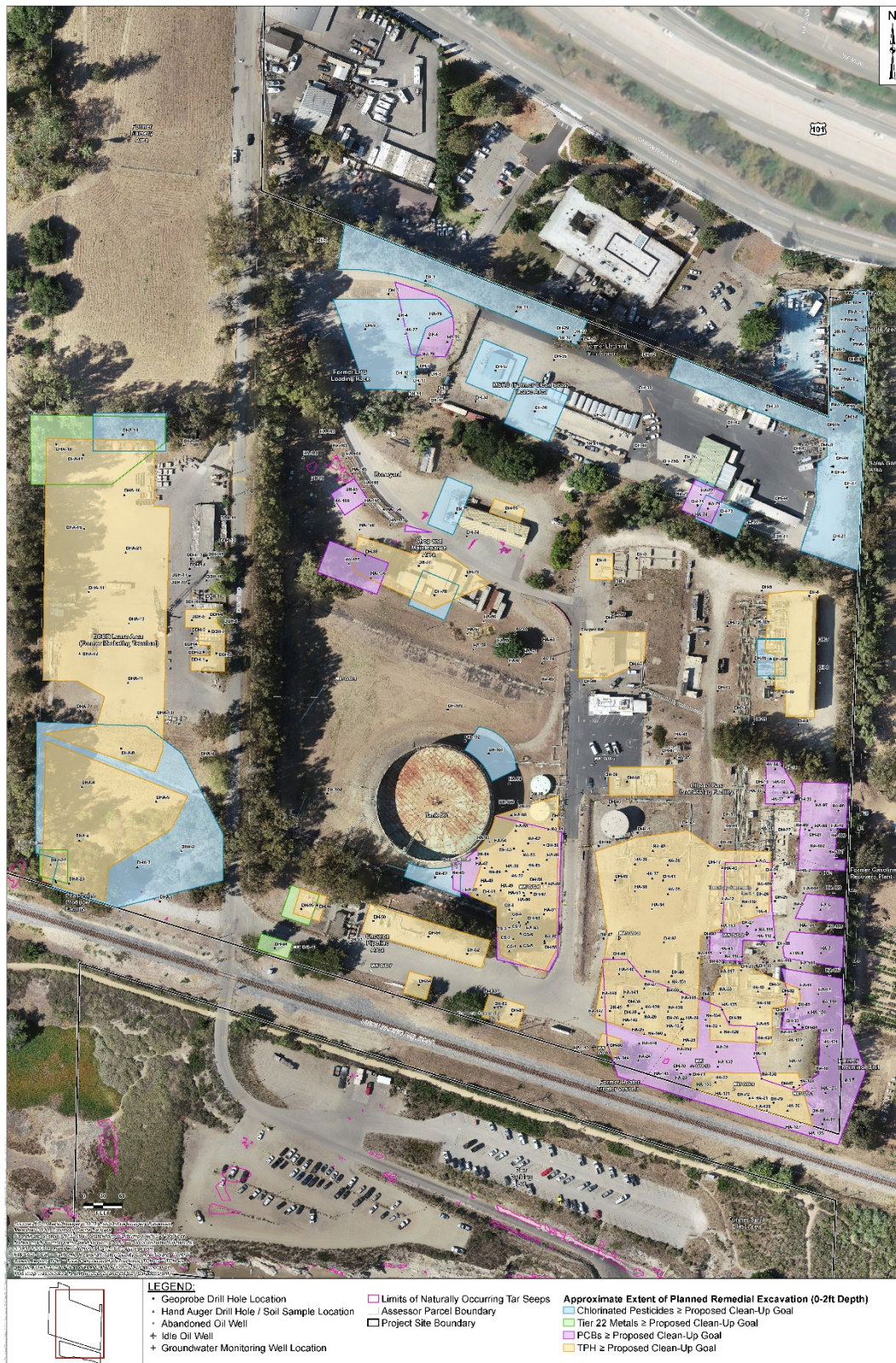


Figure 7.1-4. Estimated Soil Excavation Areas

If new areas of potentially impacted soil beyond the initial excavation limits are identified as a result of visual observations during implementation or subsequent verification soil sampling activities included in the approved RAP, then Chevron may proceed with removal of the additional debris or soil. Following completion of the additional excavation, verification soil samples will be collected to assess the removal of impacted material by comparing analytical results to the cleanup goal. If verification soil sample analytical results indicate further excavation is required to meet the cleanup goal, then additional material may be excavated and subsequent verification sampling and analysis performed, as needed and in accordance with the following:

- If COCs are not detected, or are detected at concentrations below the remedial goal, then excavation will not extend farther and backfilling, re-grading, and site restoration activities will commence.
- If COCs are detected at concentrations exceeding the remediation goal in verification samples collected at the excavation limits, the contractor will continue to excavate and collect additional verification samples until laboratory analytical results indicate that total concentrations are below the remedial goal in each sample collected.

After the RAO has been achieved, the excavations will be backfilled using imported certified-clean backfill material that meets or exceeds requirements outlined by the State of California Department of Toxic Substances Control (DTSC) document titled *Information Advisory, Clean Imported Fill Material*, dated October 2001. Clean, compatible backfill material will be obtained from Grimes Rock, Inc. in Fillmore and will be comprised of materials consistent with the existing soils onsite. The excavations will be backfilled and compacted by the remedial construction contractor using mechanical compaction equipment in accordance with the approved Grading Plan/Permit. Remediation staff will oversee the compaction testing during the course of the project to achieve a minimum of 90% of the maximum dry density of the selected fill material, as determined by ASTM Method D-1557.

Compliance with the Project's Stormwater Pollution Prevention Plan (SWPPP) and Grading and Sediment Control Plan will be monitored and recorded during all excavation activities. Please see Section 7.6 (Impact Avoidance and Minimization Measures) below for a complete list of all mitigations to be implemented during construction.

7.1.5 Site Restoration

North of the UPRR tracks, the Onshore Project Site will be graded, backfilled, and compacted to regulatory specifications. A soil binder and/or native grass mix will be utilized to stabilize any exposed soils on the northern Operational Areas onsite. South of the UPRR tracks, disturbed areas within the bluffs and within the lower gravel pad parking lot in the Pier Parking Lot Area will be disked, soil augment added and planted with a native seed mix to match the existing native shrubs and vegetation onsite. Refer to the proposed Site Restoration Plan included as Appendix C3 for additional detail.

7.2 BEACH CROSSING AND OFFSHORE PIPELINE REMOVAL

Two operational areas are present within the beach crossing and offshore Project Site: The Marketing and Marine Terminal Offloading Lines Bundle and the Gail and Grace Pipeline Bundle/10-inch oil pipeline area. Table 7.2-1 below lists the pipeline components for each operational area, lengths of pipeline to be removed, and the recommended removal methods.

Table 7.2-1. Proposed Offshore Final Disposition Summary

Offshore Operational Area	Bundle Components	Pipeline Corridor Length (approximate feet)	Proposed Removal Methods
Gail and Grace Bundle/10-inch Oil Pipeline Area	10-inch oil pipeline 10-inch gas pipeline	19,030	Offshore: Reverse installation/under running pipeline utilizing crane barge to lift and cut pipe into sections on barge deck. Removal out to State Waters boundary (three nautical miles).
	10-inch oil pipeline (on risers)	17,909	Surf Zone: Shore-side and dive crews, remove concrete armoring, excavate and recover pipelines to Casitas Pier, to top of bluff via winch and crane, or utilizing the derrick barge. Bluff: Shore-side crews remove concrete armoring and recover concrete pieces and pipelines to the top of bluff via crane.
Marketing and Marine Terminal Offloading Line Bundle	10-inch offloading crude oil line 2, 4-inch subdrain pipelines 6-inch wastewater pipeline	2,843	Offshore: Diver-directed hydraulic pipe shear to cut into sections on seafloor and pipe grapple to recover pipe sections to barge deck. Removal out to existing offshore termini.
	20" crude oil pipeline 6" wastewater pipeline 8" wastewater pipeline Valve box (on bluff)	3,285	Surf Zone: Shore-side and dive crews, excavate, as needed, in surf zone and on beach, and recover pipelines to top of the bluff via winch and crane (2 locations). Alternatively, a derrick barge could be utilized. Bluff: Shore-side crews remove rip rap armoring and recover boulders and pipelines to the top of bluff via crane and/or heavy equipment. Excavate and remove valve box following pipeline removal.

7.2.1 Pre-Decommissioning Activities

7.2.1.1 Pre-Project Surveys

During Project workplan development and prior to the start of the offshore work, Chevron will conduct a pre-decommissioning low-energy, multi-beam geophysical survey along the pipeline alignment and extended out as necessary to encompass all Project anchor positions and points of interest. The purpose of the pre-decommissioning debris survey will be to provide a

baseline image of the seafloor that will be used to check against a post-decommissioning debris survey and as-builts to ensure that any decommissioning related debris is identified and recovered.

7.2.1.2 Pigging and Flushing

Prior to decommissioning activities, pipeline segments will be pigged and flushed to ensure they are hydrocarbon free. Several of the offshore pipelines associated with the former marine terminal appear to have structural damage or are already open to the seawater therefore pigging and flushing operations will be limited to those segments of the pipeline that remain intact. Once the pipeline contents reach a level of less than 15 parts per million (ppm) total TPH, the pipelines will be left filled with seawater. The pigging and flushing of Project pipelines will require the development of portable wastewater storage and treatment facilities prior to disposal. Recovered flush water will be treated onsite and either trucked to a suitable disposal site or discharged to the onsite sewer system under a discharge agreement with the Carpinteria Sanitary District

7.2.2 Equipment Mobilization

The proposed Project will require the mobilization of an offshore marine equipment spread consisting of either a dynamically positioned or anchored work barge(s) with support vessels. A commonly used offshore spread for pipeline removal projects consists of a derrick barge with deck crane (i.e. M/V Salta Verde or equivalent sized barge) and tending tug, a materials barge (M/V Abalone Pt. or equivalent) and tending tug, and a crew boat for transit between the nearest harbor and the offshore Project Site. In addition, a commercial dive support vessel and an offshore survey and surface navigation vessel may be required to locate and track progress during pipeline removal operations. A proposed equipment list for the derrick barge, material barge and/or dive vessel may include but is not limited to:

- An underwater excavation system with supporting electrical generator and jet pump;
- Hydraulic pipe shear;
- Hydraulic pipe grapple;
- Supplied-air dive support vessel;
- Certified asbestos containment and cleanup crew (if necessary); and
- Appropriate number of generators, winches, hoses, gear and spill kits to perform all offshore operations.

7.2.3 Gail and Grace Pipeline Bundle Decommissioning

The Gail and Grace pipeline bundle and 10-inch oil pipeline area includes a 10-inch oil pipeline and 10-inch gas pipeline (pipeline bundle) from Platforms Grace and Gail and a separate 10-inch oil pipeline on risers (formerly through Platform Hope) to shore (passing through PRCs 4000, 7911, 3150, and 3133). These pipelines come to shore immediately east of Casitas Pier northward to the eastern boundary of the Carpinteria Oil and Gas Processing Facility. Based on a 2019 ROV inspection of the pipeline bundle, it appears the Gail and Grace bundle is buried offshore from the -50 isobath to -135-foot isobath inshore the Platform Hope bypass.

7.2.3.1 Offshore Pipeline Removal – Reverse Installation

The offshore portion of the Gail and Grace pipeline bundle is to be removed in entirety from the surf zone out to the State Waters boundary (three nautical miles). Pipeline removal operations will begin at the three nautical mile line and progress shoreward. The proposed methods to remove the Gail and Grace pipeline bundle and 10-inch oil pipeline involves several steps:

- Divers will excavate and cut each of the three pipelines at the State Waters boundary (approximately 150-foot water depth); Divers will continue the excavation from the offshore terminus landward to expose each pipeline, as needed, and possibly attach flotation at predesignated locations on the pipelines to prevent them from buckling when the offshore end is raised to the surface. Pipeline removal methods consist of deck crews sectioning the pipeline as it is lifted to the deck and then transferring pipe segments to the materials barge. The recovered pipe segments will be transported to the decommissioning contractor's shore base and will be offloaded dockside onto end dump trucks and shipped to an approved landfill or recycler.
- The under running pipeline removal method will involve the following general set of procedures:
 - Following diver's cuts at the State Water boundary, the first several hundred feet of the initial pipeline segment will be excavated, if necessary, using one or a combination of the excavation methods described in Section 7.2.3.3. Each of the offshore pipeline segment will need to be provided with enough vertical scope for each pipeline to be lifted to the surface without exceeding the ultimate strength of the steel pipe (minimum bend radius);
 - Once the initial pipeline has been cut and prepared for lifting, the derrick barge will be positioned over the offshore end of an offshore pipeline segment. Flotation of pre-calculated lift might be placed at predetermined intervals on the submerged pipeline segment in preparation for lifting the pipe end to the surface. The flotation will be used to support the suspended pipeline catenary when it is lifted to the surface;
 - Once the flotation is installed, the derrick barge crane will lift the end of the pipeline segment to the surface and suspend it above the deck of the barge. The pipeline landing facility on the barge may include a short stinger to provide a smooth transition of the pipeline onto the deck of the barge;
 - The derrick barge will then move landward (using its thrusters, support tugs or anchor system) to underrun the suspended pipeline. The size of the derrick barge will determine the length of pipeline to be under run at one time. Once the targeted amount of pipeline has been brought aboard the barge the crane will lower the pipeline to the deck, or possible onto a special pipe rack welded to the deck of the barge;
- The recovered pipeline will then be cut into predetermined lengths on the deck. Sectioning will start by removing a band of weight coating at the planned cut point of each joint using handheld mechanical equipment such as an air chisel. All debris from

the weight coating removal will be contained and transported to offsite approved disposal sites;

- Upon completing the removal of the band of coating the marine crews will cut the pipeline. The cut sections will be rigged, lifted and placed on the deck of the materials barge, side-tied to the derrick barge, for transport to shore;
- After the section of pipe has been cut, the pipeline will continue to be pulled up to the deck to cut another segment. Additional excavation may be required as the removal processes progresses landward. The flotation buoys, if needed, will also be moved landward to maintain the required minimum catenary in the suspended section of pipeline; and
- The offshore segment removal work will be terminated at the 15-foot bathymetric contour line (approximate) in preparation for the surf zone removal.

7.2.3.2 Underwater Excavation Methodologies

Once the depth of burial of the Gail and Grace pipeline bundle is confirmed, the most efficient underwater excavation method(s) will be determined. Underwater excavation may be accomplished using any one or combination of several potential underwater excavation methodologies. These potential underwater excavation methodologies consist of hand jetting, airlifting, or Toyo pump excavation, as described below:

Hand Jet Excavation. “Jetting” typically refers to the use of low-pressure water by a diver to cut a trench in seafloor sediments. In operation, the diver directs a low pressure but high-volume stream of water through a handheld nozzle provided by a diesel-powered jet pump operating from the supporting barge or vessel.

The handheld nozzle is generally a tee configuration fabricated from simple metal pipe fittings with the hose attached to the supply side of the tee and smaller “nozzle” pipes on each of the two discharge sides of the tee. The discharge nozzles oppose each other and thereby neutralize the thrust created by the water exiting the nozzles.

In operation, the diver places the hand jet under one arm so that one of the discharge nozzles is facing forward and the opposing discharge nozzle is facing behind him. Standing or laying on the seafloor, the diver then moves in a forward direction while pointing the forward nozzle into the sediments and moves the nozzle up and down and side to side as it fluidizes the sediments. The plume created by this method is generally isolated to the immediate area of the excavation as the sediments quickly fall out of the water column and return to the seafloor.

Airlifting. Airlifting is a common method of limited, focused underwater excavation. It consists of an open-ended vertical tube or pipe suspended by a crane, flotation, or by a diver, depending on the size and function of the airlift, with high pressure air injected into the lower end of the tube or pipe.

In operation, compressed air is pumped down to an airlift via an air hose from a large industrial air compressor located above the water (deck, shoreline, etc.) and the air is injected into the side of the tube or pipe through a fitting. Suction is created at the bottom end of the open tube or pipe as the injected air rapidly ascends inside the water column inside the tube or pipe and is discharged out the top of the tube or pipe.

Small airlifts, generally ranging between 4-inches and 8-inches in diameter, may be handheld and guided by a diver while larger airlifts, generally ranging from 8-inches to 24-inches in diameter, are typically suspended from cranes and manipulated by the crane operator. Airlifts are a very precise means of underwater excavation and are quite efficient when properly applied and deployed. The airlift will side-cast the discharged sediments which will fall back to the seafloor in and around the excavation. However, due to the precision of an airlift, the required excavation is comparatively minimal, and the amount of discharged sediments are limited which in turn limits the turbidity in the surrounding water column.

Toyo/Submersible Pump Excavation. Another possible excavation system is a Toyo submersible pump which is a high-pressure jetting system. The electrically or hydraulically powered submersible pump is typically suspended from a barge mounted crane.

The submersible pump may be equipped with downward directed water jets to fluidize the sediments as the suction pump is lowered by the crane. The suction for the pump is located at the bottom of the pump and it discharges from the top or side of the pump through a large hose. The discharge may be placed as much as 50 feet or more from the pump and is typically discharged below the waterline.

In operation, the pump is suspended from a barge mounted crane that has been equipped with differential Global Positioning System (GPS) positioning equipment to provide the crane operator with a real-time display of the horizontal position of the pipeline buried beneath the seafloor and the submersible pump. The operator aligns the pump with the buried pipeline and lowers the pump until it contacts the seafloor and begins excavation. The pump is lowered as it excavates and stops when it touches the top of the buried pipeline or reaches the planned maximum excavation depth. The pump is then raised to the seafloor, moved approximately 4 to 5 feet further along the pipeline alignment and then the process is repeated, essentially creating a series of connected potholes.

7.2.3.3 Surf Zone Pipeline Removal

Beginning at the shoreward termination, in approximately 15 feet of water, the Gail and Grace pipeline bundle will be removed from the surf zone utilizing a combination of shore side construction crews and offshore dive crews. Surf zone removal operations will be scheduled during seasonal work windows with the least amount of sand cover, avoiding the harbor seal rookery beach closure (December 1 through May 31st), and at extreme low tides when necessary to facilitate safe recovery of each pipeline out to the mean low low water (MLLW) line.

Working from the beach and the adjacent Casitas Pier, shore side crews will first have to remove the concrete armoring from the 10-inch oil lines that run to Platform Gail and Grace. The concrete currently protects the pipelines from damage through the surf zone and up to the base of the bluff. Removal of the concrete armoring will require concrete saws and/or jack hammers and will be done with precision, as to not damage the pipelines underneath. As they are removed, pieces of concrete will be loaded in containers and lifted to the asphalt staging area adjacent to the north end of the Casitas Pier.

Pipeline Recovery to Offshore Spread. Following removal of the concrete armoring, crews will remove pipe coatings at the base of the bluff, as needed, and cut and remove a three-foot (minimum) section of each of the pipelines and plug both sides of the open-ended pipe. The three-foot segment and remaining equipment will be removed from the beach.

A derrick barge and dive support vessel will be mobilized and positioned at the offshore cut end of the pipelines. Due to shallow depths, the derrick barge will require an anchor-handling vessel to run all the vessels anchors to pre-determined anchor locations. Divers will then locate the cut end of each pipeline and excavate as needed to prepare the pipe to be pulled offshore. Similar to offshore pipeline removal methodology, each nearshore pipeline will be attached to a pull winch or crane and lifted to the deck of the derrick barge. Once the maximum length of pipe has been pulled on the deck, the pipe will be lowered and cut into manageable sections and transferred to a materials barge. The rigging will then be reattached to the next segment and the process will continue until the pipelines are removed from the surf zone and beach in their entirety.

Pipeline Recovery to Pier Staging Area. As an alternative option to pulling the surf zone pipeline segments offshore, the surf zone and beach segments of the Gail and Grace pipeline bundle could also be recovered to the top of the Casitas Pier staging area.

This removal methodology will consist of mounting a winch or crane up at the staging area, at the shortest possible distance to the pipeline bundle, and lifting each pipe segment up to the top of the bluff. Shore-based crews on the beach will cut pipe into pre-determined lengths from the pipelines' exposure on the beach down to the MLLW line. Cut pipe sections will be bundled utilizing soft slings and lifted by crane to a truck bed for disposal.

Dive crews will still be utilized to excavate and/or recover the remaining segments of pipeline within the surf zone from the MLLW line to an approximate depth of 15 feet from an anchored offshore dive spread positioned at the offshore terminus of the pipelines. The specific means and methods of surf zone retrieval by divers will depend on how much of the pipeline has been recovered to shore and how much remains offshore. The dive vessel spread will include a vessel crane, jet pump, air lift, cutting equipment, and recovery rigging to provide options for uncovering, pulling, cutting and recovery. All remaining sections of the offshore pipeline will be recovered to the dive spread for transport to the nearest harbor and disposal or recycling.

Dive crews will be utilized to excavate and/or recover the remaining submarine concrete armoring and segments of pipeline within the surf zone from the MLLW line to an approximate depth of 15 feet. An anchored offshore dive spread will be positioned at the offshore terminus of the pipeline bundle. The specific means and methods of surf zone retrieval by divers will depend on how much of the pipeline has been recovered to shore and how much remains offshore. The dive vessel spread will include a vessel crane, jet pump, air lift, cutting and sawing equipment, and recovery rigging to provide options for uncovering, pulling, cutting and recovery. All remaining sections of concrete and offshore pipeline will be recovered to the dive spread for transport to the nearest harbor and disposal or recycling.

Pipe rack and risers associated with the 10-inch oil line (formerly to Platform Hope) will also be removed from the surf zone. Depending on their size, depth of burial, and distance from the MLLW line, either shore side or dive crews will excavate each riser and remove it using either methodology discussed above, after the 10-inch gas line had been fully removed from the work area.

7.2.3.4 Bluff Pipeline and Vault Removal

The decommissioning of the Gail and Grace pipeline bundle to the top of the bluff will be scheduled following the removal of the offshore and surf zone pipelines. All concrete armoring currently surrounding the Gail and Grace pipeline bundle up the bluff will be removed using similar

methods as surf zone removal. Concrete pieces will be systematically cut from the top of the bluff down and placed into a container suspended from a crane to be lifted to the staging area. Exposure and removal of the pipeline bundle through the bluff may require trenching techniques into the bluff face, dependent on bluff stability and depth of burial, to expose the pipelines and winch them to a safe location away from the bluff or into the adjacent asphalt staging area at the north end of the Casitas Pier, where they can be cut into disposable pieces and loaded into transport trucks.

The pipeline segments located across the Former Sand Blast Area and leading into the Onshore Facility will be abandoned-in-place, with exception of the portion located beneath the UPRR ROW, which will be removed.

7.2.4 Marketing and Marine Terminal Offloading Pipeline Bundle Decommissioning

The Marketing and Marine Terminal pipeline bundle runs from the shore plant west of the Casitas Pier and is comprised of a 10-inch and 12-inch pipeline which extend approximately 2,600 feet offshore to the previous location of the marine terminal. Following the termination of marine terminal operations in the 1980's, several facilities were removed from offshore including the tanker mooring systems, marker buoys, and loading hoses. In addition, blind flanges with ¾-inch ball valves and plugs were installed at the offshore ends of each pipeline.

The idle 10-inch Marketing Terminal Offloading Line is located east of Tar Pits Park and leads into the southern boundary of the onshore Facility. This pipeline corridor contains the abandoned former 10-inch diameter Marketing Terminal Offloading Line, as well as two (2) 4-inch diameter subdrain pipelines and one (1) 6-inch diameter wastewater pipeline. The pipelines are located through the bluffs and offshore. The 10-inch pipeline within the surf zone is seasonally exposed in the surf zone and historically ran under the sand but is no longer connected from the surf zone to the bluff. The water depth of the offshore end of the pipeline is approximately 65 to 70 feet. Near the previous location of the marine terminal, a 10 by 8-inch reduces with an 8-inch 300 series blind flange was installed.

A 20-inch diameter crude oil loading Line, 6-inch diameter Wastewater Line, and 8-inch diameter Wastewater Line are located further east of the Marketing Terminal line and extends from the Carpinteria Oil and Gas Processing facility beneath Dump Road toward the south. This Loading Line leads into a valve box located at the edge of the coastal bluff leading down to the beach and offshore. From the valve box the pipeline runs toward the ocean beneath a four-foot-thick layer of rip rap comprised of two to four-foot stone. During the periods of winter storm beach scour, these lines may be exposed in the intertidal zone. The 6-inch Wastewater Line was bundled to the top of the 20-inch Crude Oil Loading Line. The 20-inch pipeline has a 7/16-inch-thick concrete lining and a ¾-inch-thick external concrete weight coat. The water depth of the pipeline end is approximately 65 to 70 feet deep. Near the offshore end of the pipeline, a 20-inch sweep was installed follow by a 20 by 12-inch reducer. Offshore of the reducer, a 12 by 12 by 6-inch tee was installed. There are 300 series blind flanges on both the 6-inch and 12-inch ends of the pipeline and tee sections.

7.2.4.1 Offshore Pipeline Removal – Sectioning on Seafloor and Recovering Sections to Barge

The former marine terminal offshore pipeline segments will be removed by sectioning the pipeline on the seafloor and lifting the cut pipe segments to the deck of the barge one section at a time. The procedure will be implemented as follows:

- Divers working from the derrick barge will dive to the pipeline and excavate and uncover the offshore terminus segment of pipeline. A variety of excavation methods may be implemented depending on the seafloor conditions (refer to Section 7.2.3.2). The initial segment length will be dependent on the depth of burial. Once uncovered, a “bell hole” will be excavated underneath the pipeline at an appropriate point to be determined by the desired recovery segment length. Lifting rigging will be attached to the pipe segment in accordance with a Project-specific rigging and lifting plan;
- The derrick barge crane will then lift the offshore end of the pipeline off the seafloor. At this point, there are two potential options to removing the coating and cutting each pipe segment:

- i. Option 1: Hydraulic Shear Cut and Hydraulic Pipe Grapple. Once the excavated pipeline is lifted off the seafloor, a hydraulic shear cutter will be deployed from the crane barge. In addition to underwater survey equipment to position the shear, divers will assist in the placement of the shear over the pipeline and then move to a designated safe zone prior to operation of the shear. Following the initial cut, the crane boom could potentially boom out along the pipeline corridor to make additional cuts along parallel sections of each of the pipelines within the bundle. Cuts will be made over the existing pipeline coatings and may require additional debris clean-up following shear cutting on the seafloor.

Once the pipelines are cut, the shear cutter will be replaced with a hydraulic grapple deployed from the crane. In addition to underwater survey equipment, divers will again assist in the placement of the grapple over the midpoint of the cut segment of pipe and move to a pre-designated safe zone. The grapple will then grab the cut pipeline section and recover it to the material barge. The crane can then potentially boom out along the pipeline corridor to pick up the additional cuts, if made along the parallel sections of pipe if the barge configuration allows for additional grapping.

- ii. Option 2: Underwater Cutting by Divers Utilizing Guillotine Saw. Once the pipe segment is exposed, the diver will remove a band of weight coating from the pipeline at the planned cut point. The diver will do this with a pneumatic or hydraulically actuated, handheld pavement breaker. This will be done in preparation for cutting the pipeline. The diver will attempt to recover any pipe weight coating debris and load it into a basket for recovery to the deck of the barge. The crane will be used to raise the basket and set it on the deck of the barge, as needed. Depending on the condition and content, the recovered weight coating debris will be placed in a specially lined container on the deck of the barge in preparation for transport to an appropriate recycling and/or disposal facility.

Once the band of weight coating has been removed the diver will cut the pipe using a guillotine saw or other comparable underwater cutting equipment. When the pipeline is cut it will be lifted by the derrick barge crane and placed on a supporting materials or deck barge, side-tied to the derrick barge, for transport to the shore base.

In both options, the barge spread will be moved shoreward to the next segment and continue to excavate, cut and recover pipe. The offshore segment removal work will be terminated at the 15-foot bathymetric contour line (approximate).

7.2.4.2 Surf Zone Pipeline Removal

Beginning at the shoreline termination, in approximately 15 feet of water, the Marketing and Marine Terminal pipeline bundle will be removed from the surf zone utilizing a combination of shore side construction crews and offshore dive crews. Surf zone removal operations will be scheduled during seasonal work windows with the least amount of sand cover and at extreme low tides to facilitate safe recovery of each pipeline out to the MLLW line.

Pipeline Recovery to Offshore Spread. Working from the beach, shore side crews will expose the 20-inch pipeline on the beach, if needed, from the shoreward extent of rip rap at the base of the bluffs to the MLLW line. Each pipe will be uncovered as far into the surf zone as safely practicable. Beach crews will cut and remove a three-foot (minimum) section of the 20-inch pipeline and plug both sides of the open-ended pipe. The three-foot segment and remaining equipment will be removed from the beach.

A derrick barge and dive support vessel will be mobilized and positioned at the offshore cut end of the pipelines. Due to shallow depths, the derrick barge will require an anchor-handling vessel to run all the vessels anchors to pre-determined anchor locations. Divers will then locate the previously cut end of each pipeline and excavate as needed to prepare the pipe to be pulled toward the offshore spread. Similar to offshore pipeline removal methodology for the Gail and Grace pipeline bundle, each nearshore pipeline will be attached to a pull winch and lifted to the deck of the derrick barge. Once the maximum length of pipe has been pulled on the deck, the pipe will be lowered and cut into manageable sections and transferred to a materials barge. The rigging will then be reattached to the next segment and the process will continue until the pipelines are removed from the surf zone and beach in their entirety.

Pipeline Recovery to Bluff Top. As an alternative to pulling the pipeline segments offshore, the recovery of surf zone segments to the top of the bluff may be considered, based on contributing factors and Project requirements including, but not limited to:

- Depth of burial of pipelines that run across the bluff and their need for removal;
- The stability and erosion concerns of the bluff face;
- Concerns regarding impacts to biological resources along the beach and the top of the bluff; and
- The potential for equipment to be already staged and present for the removal of other Project facilities.

Surf zone removal methodology will consist of mounting a winch and/or crane on the bluff in two separate locations for each landfall, at the shortest distance to the pipeline bundle, and pulling/lifting each pipe segment parallel to shore to the base of the bluff. Shore-based crews on the beach will cut pipe into pre-determined lengths from the pipelines' exposure on the beach down to the MLLW line. Cut pipe sections will be lifted with soft slings by crane to a truck bed for disposal.

Dive crews will be utilized to excavate and/or recover the remaining segments of pipeline within the surf zone from the MLLW line to an approximate depth of 15 feet. An anchored offshore dive spread will be positioned at the offshore terminus of the pipelines. The specific means and methods of surf zone retrieval by divers will depend on how much of the pipeline has been recovered to shore and how much remains offshore. The dive vessel spread will include a vessel crane, jet pump, air lift, cutting equipment, and recovery rigging to provide options for uncovering, pulling, cutting and recovery. All remaining sections of the offshore pipeline will be recovered to the dive spread for transport to the nearest harbor and disposal or recycling.

The 20-inch loading line and associated 6-inch and 8-inch wastewater pipelines continue from the surf zone up the beach and enter the bluff through a rip rap armament. Following surf zone removal, the remaining pipe along the beach will be removed utilizing the same cut and lifting methods to the top of the bluff. Beach removal will be terminated at the pipelines' entrance into the rip rap armament. Although the preferred work schedule will occur during seasons when the pipe is already exposed, there is the potential that sand may still be covering portions, or all of the beach pipeline segments. As a contingency, Chevron may plan to excavate the pipelines utilizing a small skid steer lowered to the beach from a crane on the bluff or, depending on the depth of burial, excavate using crews with hand tools.

7.2.4.3 Bluff Facilities Removal

The decommissioning of the pipelines within the bluff and vault along the top of the bluff will be scheduled following the removal of the offshore and surf zone pipelines as well as any pipeline segments that run south from the Project plant facilities toward the shore.

The 10-inch offloading and associated subdrain and wastewater pipelines of the Marketing Terminal bundle are documented visibly protruding from the bluff and disconnected from their surf zone segments. The removal of pipelines from the bluff will require an excavator, positioned safely away from the bluff edge, to dig a trench to uncover buried segments of pipe. Further geologic and engineering studies may be required to ensure bluff stability and to avoid potential collapse. Once the pipe is uncovered, the exposed pipes will be lifted or winched to a safe location, cut into liftable segments, and loaded via loader or truck for disposal or recycling.

All rip rap currently surrounding the 20-inch loading line and associated pipelines will be removed to expose the bluff face. Rip rap will be systematically removed up the bluff to extent necessary with an approved lifting and rigging plan, an excavator with a thumb and soft sling attachments, and loader positioned safely on the bluff. Similar to the Marketing Terminal pipelines, exposure and removal of the 20-inch loading line and associated pipelines will require trenching techniques into the bluff, dependent on bluff stability and depth of burial, to expose the pipelines and lift or winch them to a safe location where it could be cut into disposable pieces.

Following the removal of all pipelines and additional facilities in the area, the valve box vault will be excavated, if not already exposed during pipeline removal, and either cut into sections with a hydraulic steel saw or excavator attachment and/or pulled out with soft slings and cut after removal for disposal or recycling.

7.3 RECYCLING AND DISPOSAL VOLUMES

7.3.1 Estimated Disposal Volumes for Onshore Equipment Removal and Remediation

7.3.1.1 Equipment and Piping (Above and Below Ground)

Based on the type of material to be generated by the Project activities, including a small portion of related hazardous materials (e.g., regulated asbestos-containing materials [RACM]) existing onsite, it is estimated that at least 95% of the equipment will be recycled in accordance with the County of Santa Barbara's solid waste reduction goals. As shown in Table 7.3-1, based on an estimated truck volume of 18 tons, approximately 3,048 tons, requiring 169 truckloads will be required for onshore equipment and pipeline disposal (above-ground and subsurface). Please see Project Inventory included in Appendix A for additional detail.

Table 7.3-1. Estimated Equipment and Piping Disposal Volumes and Weights

Equipment Removal Area	Estimated Disposal Weight (in tons)	Number of Truck Loads (18 tons per truckload)
Main Plant Area (Oil and Gas Processing Facility)	2,102	117
Chevron Pipeline Area (Including Tank 861)	787	44
Former Marketing Terminal Area	25	1
Shop and Maintenance Area	71	4
MSRC Lease Area	63	3
TOTAL:	3,048	169

7.3.1.2 Estimated Disposal Volumes for Surface Materials (Concrete Foundations, Asphalt, Oil Spray, Gravel Surfaces) Removal

Table 7.3-2 provides anticipated disposal volumes for removal of surface materials from the Onshore Project Operational Areas:

Table 7.3-2. Anticipated Volume of Surface Materials Removal

Material	Square Footage (ft ²)	Average Thickness (ft)	Volume (ft ³)	Unit Weight (lbs. per ft ³)	Weight (lbs.)	Weight (tons)	Unit Weight/load (tons/load)	Truck Trips
Concrete Surface	66,175	0.5	33,087	150	4,963,097	2,482	19	130.6
Asphalt Surface	248,112	0.33	81,877	147	12,035,929	6,018	20	300.9

Material	Square Footage (ft ²)	Average Thickness (ft)	Volume (ft ³)	Unit Weight (lbs. per ft ³)	Weight (lbs.)	Weight (tons)	Unit Weight/load (tons/load)	Truck Trips
Gravel Materials	555,492	0.33	183,312	125	22,914,051	11,457	22	520.8
Oil Spray Erosion Control	75,219	0.25	18,805	125	2,350,598	1,175	22	53.4
Concrete Wall	3,156	0.5	1,578	135	213,030	107	19	5.6
Concrete Vessel Supports	--	--	1,000	150	150,000	75	19	3.9
Concrete Vertical Pipe Supports	--	--	810	150	121,500	61	19	3.2
TOTAL			317,082	--	42,263,676	21,132	--	1,018

Based on these anticipated volumes, approximately 1,119 truckloads (1,018 + 10% contingency) will be required to haul the surface materials from the Project Site. Please see Project Inventory included in Appendix A for additional detail.

7.3.1.3 Soil Excavation Volumes

Based on existing information, Table 7.3-3 provides estimated volumes of soil impacted with constituents of concern (COCs) at the Project Site. Please see Figure 7.1-4 and the Draft IRAP Executive Summary in Appendix B for maps showing proposed soil excavation areas. These volumes are based upon conservative soil cleanup levels and the actual cleanup levels will be determined in consultation with the requisite regulatory agency.

Table 7.3-3. Summary of Estimated Soil Volumes to be Removed from the Project Site

Constituent of Concern	Oil and Gas Processing Facility: Estimated Volume (cubic yards)	MSRC Lease Area: Estimated Volume (cubic yards)	Former Marketing Terminal: Estimated Volume (cubic yards)
PCBs	12,572	818	293
Anthropogenic TPH	30,097	0	7,873
Pesticides	961	6,243	5,562
Metals	200	0	1,171

Combined Estimated Totals (cubic yards): <i>65,792 CY for 3 Areas</i>	43,831	7,061	14,899
Combined Estimated Totals (tons) (cy to tons = x 1.39 ton/cy): <i>91,451 Tons for 3 Areas</i>	60,925	9,815	20,710

Calculation date: 6/16/21

Utilizing an estimated truck volume of 22 tons, it is estimated that approximately 4,157 truckloads will be required to transport the total of 65,792 cubic yards/91,451 tons of soil removed from the Project Site.

7.3.1.4 Onshore Disposal Traffic Routes

Table 7.3-4 provides a summary of proposed onshore hauling routes associated with each waste stream that will be generated from the Project. In order to reduce truck traffic, when feasible and timely, offloaded trucks will be routed for clean backfill before returning to the Project Site.

Table 7.3-4. Proposed Onshore Hauling Routes and Disposal Facilities

Waste Stream	Disposal Facility (County)	Haul/Backhaul Routing
Hazardous Soil, Concrete, Pipelines	Buttonwillow (Kern County) and / or Kettleman City (Kings County)	<u>Haul:</u> Carpinteria to Buttonwillow /Kettleman City <u>Backhaul (if required):</u> Buttonwillow/Kettleman City to Fillmore (clean soil) to Carpinteria
Non-Hazardous Soil	Waste Management (Simi Valley, Ventura County) and / or McKittrick, Buttonwillow (Kern County)	<u>Haul:</u> Carpinteria to Waste Management <u>Backhaul (if required):</u> Waste Management/McKittrick/ Buttonwillow to Fillmore (clean soil) to Carpinteria
Scrap Steel, Clean Asphalt, or Clean Concrete for Recycling	State Ready Mix Recycling - Asphalt and Concrete (Oxnard, Ventura County) Standard Industries - Steel, (Ventura, Ventura County)	<u>Haul:</u> Carpinteria to State Ready Mix or Standard Industries <u>Backhaul (if required):</u> State Ready Mix (Oxnard) or Standard Industries (Ventura) to Fillmore (clean soil) to Carpinteria

Waste Stream	Disposal Facility (County)	Haul/Backhaul Routing
Non-Hazardous Municipal Waste (Trash)	Gold Coast Recycling and Transfer Station (Ventura, Ventura County)	<u>Haul:</u> Carpinteria to Gold Coast Recycling/Transfer Station (Ventura)

Project activities are estimated to take approximately 3 years (intermittently) to complete. An estimated total of 5,445 truckloads total (including 169 loads for equipment removal, 1,119 loads for surface materials removal, and 4,157 loads for soil remediation) will be required to transport the various waste streams from the Project Site (including steel scrap material, foundation and surface materials, subsurface piping, and remediated soils). Depending upon the material loaded for hauling, approximately 18-22 tons/9-16 cubic yards per truckload will fit into each high side truck. The conservative worst-case day utilizing the shortest trucking route to WM Simi Valley or State Ready Mix could allow for up to 2.5 trips/day x 16 trucks or approximately 40 truck roundtrips per day to/from the Project Site; however, the average day will more likely utilize approximately 16 trucks total per day. As 5,445 truckloads total are required, (5,445/16 trucks per day); approximately 340 hauling days throughout the 3-year Project construction timeframe would therefore be required.

Please see Figures 7.3-1 and 7.3-2 for the anticipated trucking routes to and from the Carpinteria Plant to the respective disposal facilities for the onshore waste streams.



Figure 7.3-1. Transportation Route from Carpinteria Onshore Facility to McKittrick or Kettleman City and Back

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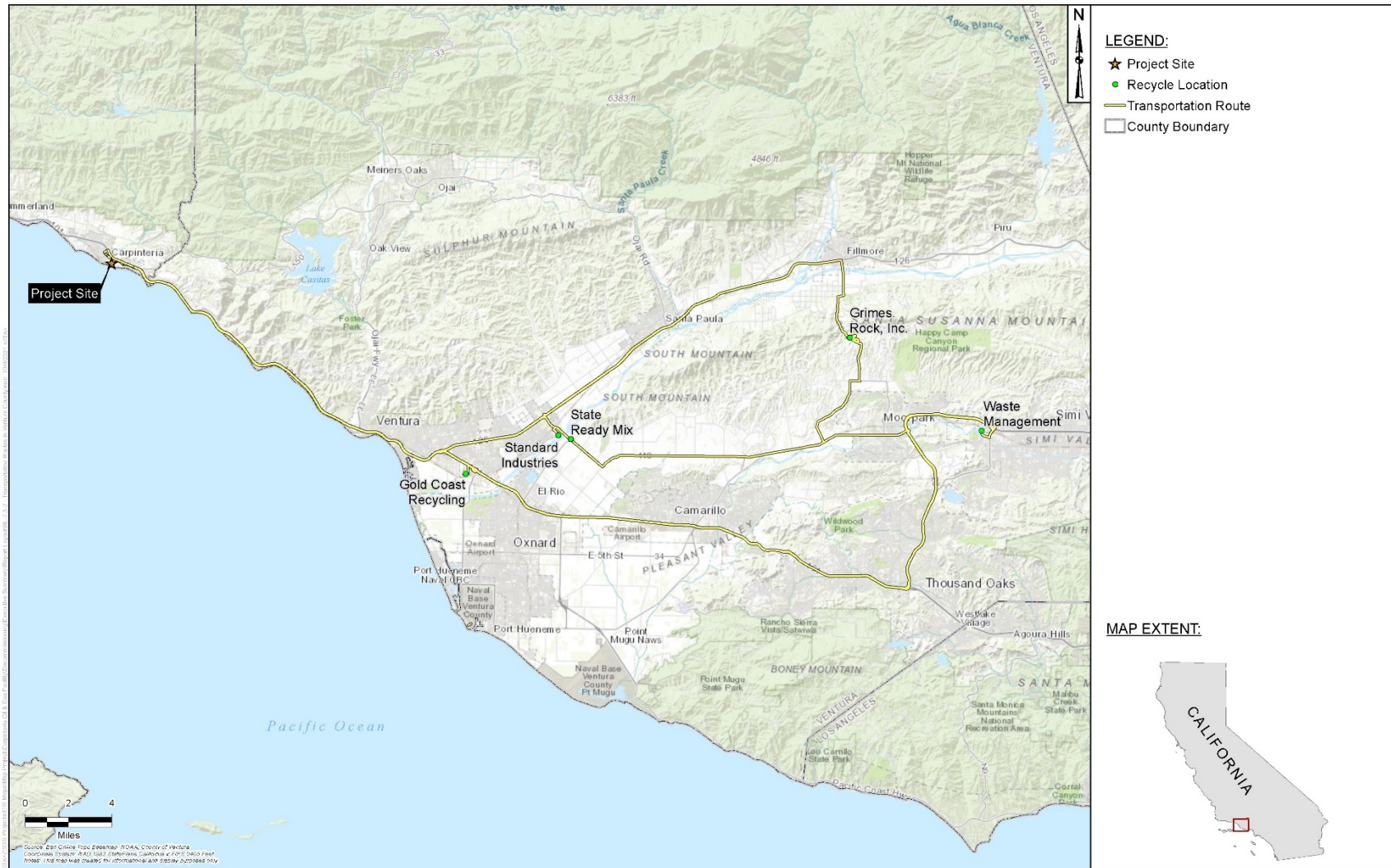


Figure 7.3-2. Transportation Route from Carpinteria Onshore Facility to Ventura or Simi Valley and Back

7.3.2 Estimated Disposal Volumes and Vessel Traffic Routes for Offshore Pipelines

7.3.2.1 Beach Crossing and Offshore Pipelines

The estimated total volume of pipe that will be removed from the beach crossing and offshore to State waters is provided in Table 7.3-5 below. In total, the pipeline segments include approximately 2,538.68 tons (2,498.59 long tons) of steel and concrete weight coating (as applicable). The carrying capacity of the Abalone Point materials barge (or equivalent) is approximately 2,000 long tons. Therefore, 2 barge loads will be required to transport the offshore pipeline material to the receiving facility for recycling/disposal.

Table 7.3-5. Offshore Pipeline Disposal Volume

Pipeline Bundle/Segment	Estimated Pipeline Length to be Removed	Pipeline Weight (lbs./foot) <i>(including cement weight coating – as applicable)</i>	Total Pipeline Segment Weight (pounds)	Total Pipeline Segment Weight (tons)
Marketing and Marine Terminal Pipeline Bundle				
10-inch Marketing Terminal	2,843	73.27	208,306.61	104.15
20-inch Crude Oil Loading Line	3,285	190.49	625,759.65	312.88
6-inch Wastewater	3,285	17.11	56,206.35	28.10
8-inch Wastewater	3,285	26.25	86,231.25	43.11
Gail and Grace Pipeline Bundle				
10-inch Oil Line	19,030	73.27	1,394,328.10	697.16
10-inch Gas Line	19,030	73.27	1,394,328.10	697.16
10-inch Oil Pipeline				
10-inch Oil Line on Risers	17,909	73.27	1,312,192.43	656.10
Total:			5,077,352.49	2,538.68

7.3.2.2 Offshore Vessel and Truck Traffic Route

POLB/SA Recycling Alternative. As indicated above, approximately 2 trips will be required to transport the recovered pipeline segments (approximately 1 trip per offshore pipeline removal bundle). It is estimated that the materials barge Abalone Point (towed by an assisting tug) will take approximately 10 hours (one way) to transit 90 nm from the offshore Project Site to SA Recycling (or equivalent) in the POLB. The vessel will follow the proposed offshore traffic scheme provided in Figure 7.3-3, adhering to the established U.S. Coast Guard (USCG) Vessel

Traffic Separation Scheme (VTSS). The proposed offshore traffic scheme has been selected based on existing Joint Oil Fisheries Liaison Office (JOFLO) corridors in order to avoid commercial fishing areas to the extent feasible. The pipeline segments will be offloaded at SA Recycling within the POLB for separation and recycling. No further transport will be required.

Port Hueneme/Standard Industries Recycling Alternative. As an alternative to transport to and recycling within the POLB, the materials barge Abalone Point (towed by an assisting tug) could alternatively take the cut pipeline segments to Port Hueneme (a distance of approximately 25 nautical miles) for onshore transit to Standard Industries (or equivalent) in Ventura County, California (Figure 7.3-3). As noted above, approximately 2 vessel trips will be required to transport pipeline segments from offshore Carpinteria to Port Hueneme. Once offloaded in Port Hueneme, the pipeline segments will then be trucked to Standard Industries (or equivalent) located in Saticoy, Ventura County, California for recycling. Standard Industries is located approximately 12.5-miles (or approximately 30 minutes) from Port Hueneme. From Port Hueneme, the most immediate route for hauling will be northward on Victoria Avenue and eastward onto Vineyard Avenue to access the industrial area of Saticoy and Standard Industries. Alternative routing could be northeast on Pleasant Valley Road and northward on Rice Avenue to avoid populated areas or peak traffic conditions.

Based on a maximum single truck weight of 18 tons, it is estimated that approximately 141 round trips total to Standard Industries will be required to transport 2,538.68 tons of pipeline waste. These trips will be spread over a four-day period (2 days each x 2 barge loads), therefore the maximum truck trips in a day is anticipated to be approximately 35 trips from Port Hueneme to Standard Industries in Saticoy, depending on truck availability and loading/unloading speed.

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Figure 7.3-3. Offshore Vessel Transportation Route from Offshore Carpinteria to POLA/POLB

7.4 EQUIPMENT AND MANPOWER REQUIREMENTS

7.4.1 Equipment Requirements

Table 7.4-1 provides a summary of equipment to be utilized for the demolition and remediation Project:

Table 7.4-1. Equipment Summary – Onshore Decommissioning Tasks

Equipment Type	Quantity	Operating Hours/Day	Days/Loads
Onshore Facility: Equipment, Surfaces, and Piping Removal (Intermittent)			
Excavators	2	8	160 Days
Loader	2	8	160 Days
Boom lift	1	8	160 Days
Dozer	1	8	160 Days
Backhoe	2	8	160 Days
Disposal of Materials			
Western Star Roll off Truck (2017)	TBD	8	1,288 Loads
Soil Remediation, Backfill, and Compaction (Intermittent)			
Excavators	1	8	272 Days
Loader	2	8	272 Days
Dozer	1	8	272 Days
Grader	1	8	272 Days
Backhoe	2	8	272 Days
Soil Compactor	1	8	272 Days
Disposal of Materials			
Western Star Roll off Truck (2017)	TBD	8	4,157 Loads
Final Grading and Restoration (Intermittent)			
Grader	1	8	202 Days
Excavator	1	8	202 Days
Loader	1	8	202 Days

Table 7.4-2. Equipment Summary – Offshore Decommissioning Tasks

Equipment Type	Quantity	Operating Hours/Day	Days
Pipeline Beach Segments Decommissioning			
Excavator	1	8	20
Loader	1	8	20
Pipeline Removals from Beach to State Waters			
Derrick Barge - Generator	2	24	50
Derrick Barge - Crane	1	10	50
Anchor Winches: 1 engine driving hydraulic pump	4	8	50
Tugboat (Crane Barge Assist) – Mains	2	4	50
Tugboat (Crane Barge Assist) – Generator	2	24	50
Tugboat (Materials Barge Assist) - Mains	2	4	50
Tugboat (Materials Barge Assist) - Generator	2	24	50

Equipment Type	Quantity	Operating Hours/Day	Days
Dive Support Vessel - Mains	2	4	50
Dive Support Vessel - Generator	2	24	50
Crew boat – Mains	2	4	50
Crew boat – Generator	1	24	50
Survey Vessel	1	12	2
Pull Winch - RB-90	1	6	50
Jet Pump	1	4	50
Industrial Air Compressor - 750CFM	1	4	50
Welding Machine	1	2	50
300kW Electrical Generator (Toyo Pump)	1	10	50
5120 Diver's Air Compressor	1	10	50

7.4.2 Personnel Requirements

7.4.2.1 Onshore Equipment Removal and Soil Remediation

Approximately 10-15 personnel will be required to support the onshore equipment removal and soil remediation activities.

7.4.2.2 Offshore Pipeline Removal

Bluff pipeline segments decommissioning will require approximately 15 personnel. Offshore pipeline removal will require approximately 25 personnel.

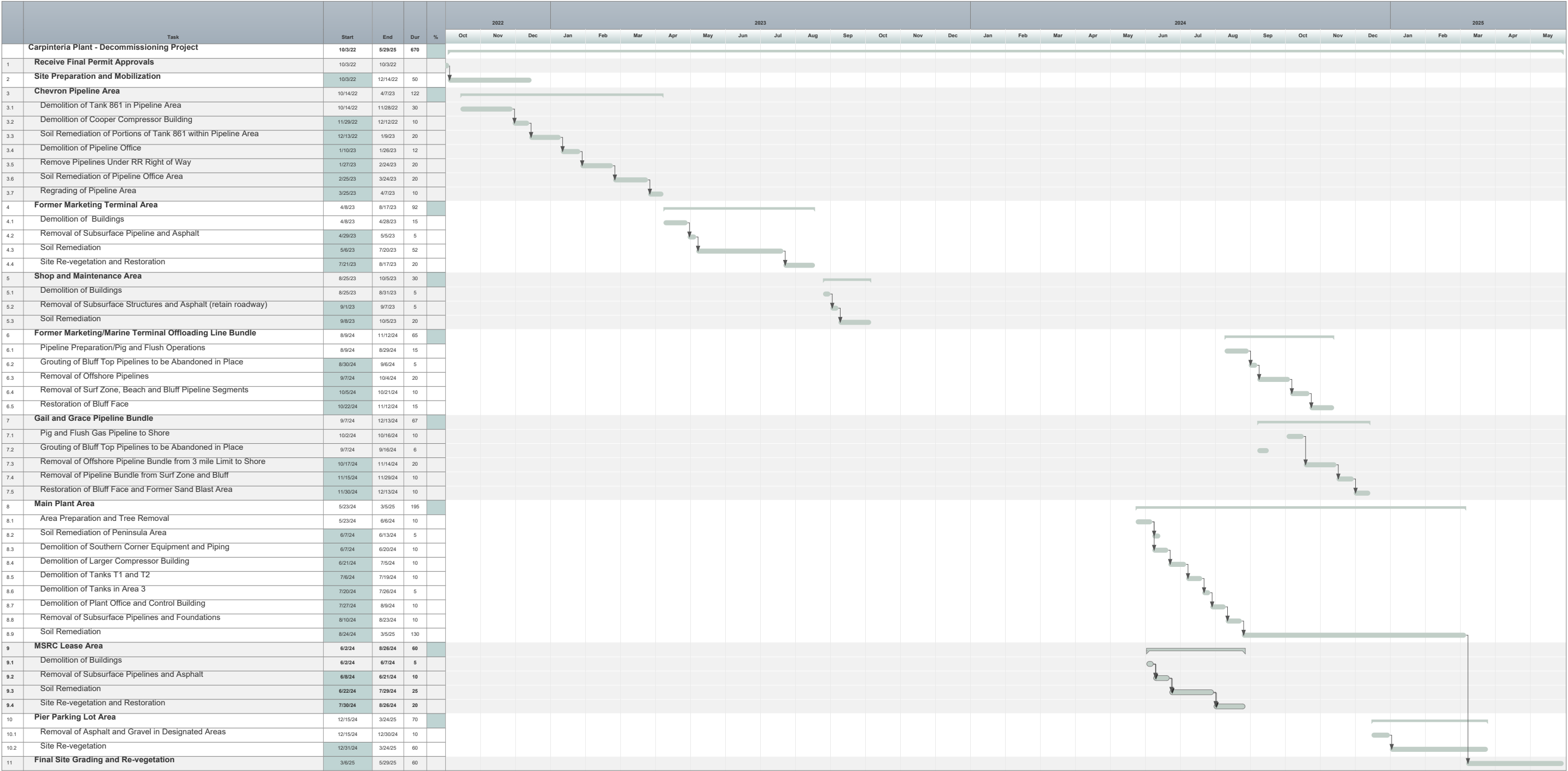
7.5 PROJECT TIMING/SCHEDULE

As shown in Table 7.5-1, the proposed activities are expected to occur within 670 days intermittently over the course of approximately 3 years. Demolition of certain Project areas is dependent upon completion of activities related to unmanning of the associated Platforms offshore. Work activities will be conducted Monday through Friday approximately 8-10 hours per day onshore, and up to 12 hours a day, 7 days a week offshore to account for variations in tide and resulting access to the pipelines. Estimated key timing associated with the Project includes the following:

- Project initiation (following receipt of permits): October 2022
- Onshore Surface Facilities Demolition:
 - Chevron Pipeline Area: October 2022 – December 2022
 - Former Marketing Terminal Area: April 2023 – August 2023
 - Shop and Maintenance Area: August 2023 – October 2023
 - Main Plant Area: May 2024 – March 2025
 - MSRC Lease Area: June 2024 – August 2024
- Offshore Facilities Demolition:
 - Former Marketing Terminal/
Marine Terminal Offloading Line Bundle: August 2024 – November 2024

- Gail and Grace Pipeline Bundle: September 2024 – December 2024
- Grading and Revegetation:
 - Pier Parking Lot Area: December 2024 – March 2025
 - Final Site Grading and Revegetation: March 2025 – May 2025
- Project Completion: May 2025

Table 7.5-1. Anticipated Project Schedule



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7.6 IMPACT AVOIDANCE AND MINIMIZATION MEASURES

The following measures will be implemented during Project activities (as applicable) to reduce potential impacts.

- PERP Requirements – A copy of all applicable PERP registration forms for construction equipment that is onsite shall be available for inspection and review.
- Dust Reduction - Dust generated by the decommissioning activities shall be kept to a minimum with a goal of retaining dust on the site by following the dust control measures listed below. During clearing, grading, earth moving, excavation or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease. The contractor shall designate a person or persons to monitor the dust control program and to order increased watering as necessary to prevent transport of dust off-site. Duties shall include holiday and weekend periods when work may not be in progress.
 - During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this shall include wetting down such areas in the late morning and after work is completed for the day, and whenever wind exceeds 15 mph.
 - Soil stockpiled for more than two days shall be covered, kept moist or treated with soil binders to prevent dust generation.
- Monarch Butterfly Overwintering Season – Any project activities in proximity to observed and recognized monarch butterfly overwinter trees shall be scheduled to avoid the monarch butterfly over winter season (October 1 through March 1), as feasible. If any work must unavoidably be conducted after October 1, no vegetation removal or mechanized excavation or grading shall occur within 100 feet of the drip line of anticipated butterfly roosting trees, as determined by the City Biologist.
- Harbor Seal Rookery Season - All project work in the FSBA or Pier Parking Lot shall be scheduled to avoid the Harbor Seal rookery season (December 1 through May 31).
- Tree Protection - A Tree Protection Plan will be prepared and implemented by a qualified arborist or botanist.
- Revegetation Plan - A Revegetation Plan will be prepared and implemented, applicable to all areas disturbed by the Project.
- Avian Nesting Season - If work is scheduled to occur during the avian nesting season (February 1 to August 31), a qualified, City-approved biologist will conduct pre-construction bird surveys to avoid impacts to raptors, special status breeding birds and other nesting birds protected by the Migratory Bird Treaty Act. The survey shall include approximately 500 feet around construction work areas or to the limits of the property lines if they are closer than 500 feet of these areas. The applicant shall delay construction work until (a) after August 31; or (b) until continued monitoring demonstrates that the nest is vacated, and juveniles have fledged; or (c) a sufficient

species-specific buffer zone established in accordance with applicable requirements and/or best management practices.

- Cultural Resources Monitoring - All earth disturbances including scarification and placement of fill shall be monitored by cultural resources monitor and a Native American representative pursuant to City Archaeological Guidelines.
- Lighting – No unobstructed or unshielded beam of exterior lighting shall be directed towards any area outside the exterior boundaries of the property.
- Nighttime Noise Restrictions – Where feasible, noise generating Project activities shall be restricted between the hours of 10p.m. and 7a.m.
- Construction Equipment Ingress/Egress and Travel on U.S. Highway 101 – Construction equipment ingress/egress and travel on U.S. Highway 101 shall be limited to the hours from 9:00 a.m. to 4:00 p.m. to prevent potential conflicts associated with construction equipment movement during peak hour traffic flow.
- Excess Equipment Removal Project Road Impact Assessment – Chevron shall document the existing condition of all public roadways including Carpinteria Avenue between Dump Road and US Highway 101 and provide for repair of these roads should project activities cause significant damage to the road surface.
- Recycling Plan – Project activities will be conducted in accordance with the site-specific Recycling Plan developed for the Project Site.
- Erosion - Grading and erosion and sediment control plans shall be designed to minimize erosion in all Project areas.
- Emergency Response Plan – The Project Emergency Response Plan (ERP) shall be implemented during all Project activities in the event of a release. The ERP delineates prevention measures including daily inspection of equipment, refueling at designated stations, and secondary equipment containment for equipment to prevent spills. Additionally, the onshore and offshore work sites shall maintain onsite response equipment to clean up minor spills.
- Hazardous Materials Management Plan – The Project's Hazardous Materials Management and Contingency Plan shall be implemented during all Project activities which includes identification of appropriate equipment fueling and maintenance areas, testing for potential hazardous materials prior to facility demolition and/or removal, daily equipment inspection schedule, a spill response plan, and maintenance of on-site spill response supplies.
- ACM/LBP – Asbestos Containing Materials and Lead-Based Paint removal, transport, and disposal will be performed under the direction of a certified professional.
- Marine Wildlife Contingency Plan – A Project Marine Wildlife Contingency Plan (MWCP) will be implemented during all offshore Project activities. A Marine Wildlife Monitor (MWM) shall be present on the offshore Project vessel and within the Beach and Offshore Operational Areas to monitor designated avoidance zones and have the authority to halt Project activities that may impact marine wildlife.

Additionally, the following Project-incorporated plans and environmental analyses have been conducted on behalf of the Project. Measures have been included within the following attached studies to reduce potential impacts associated with the Project:

- B Summary of Interim Remedial Action Plan (IRAP)
- C1 Biological Resources Studies
- C2 Tree Report
- C3 Restoration Plan
- C4 Essential Fish Habitat Assessment
- C5 Harbor Seal Protection Plan
- C6 Wetland Delineation Report
- D Traffic Study
- E Air Quality/GHG Spreadsheets
- F Cultural Resources Assessment
- G Bluff Retreat Study
- H Noise Study
- K Bluff Crossing Pipeline Depth of Burial Survey

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8.0 REFERENCES

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