
Appendix E

Cultural Memo Final

Memorandum

To: Chris Swartz
From: Patricia Ambacher
Denise Jurich
Elizabeth Copley
Date: April 15, 2013
Subject: ConocoPhillips Port Costa Wharf Cultural Resources Memorandum Report

AECOM has completed a cultural resources analysis of the former Port Costa Wharf and its associated structures for the project to remove a non-operation marine oil terminal (MOT) wharf (Project). This analysis also included an archaeological survey for the proposed Project's staging area located at the former TXI/Pacific Custom Materials, Inc. property (TXI property). This memorandum provides the Project background, regulatory requirements, methodology, findings, and sources cited that constitute the cultural resources analysis.

PROJECT AREA

The Project area is located in Contra Costa County along the western shoreline of the Carquinez Strait. The Project area is 8.89 acres and includes a 200-foot buffer surrounding the remnants of a wharf, wharf approaches, dolphins and mooring platforms. Located 700 feet southwest and upland from the shoreline and the wharf (and its associated structures), the Project area includes two locations to be used for temporary facilities (parking and storage facilities) on the site of a former brick factory.

A copy of the Project location map and the Project area is located in Attachment A.

Project Description

The proposed Project would remove the existing non-operational MOT located near Port Costa in the Carquinez Strait.

MOT Deconstruction

MOT deconstruction would be initiated using a California State Lands Commission (CSLC)-approved, Project-specific Marine Safety Plan. Key MOT deconstruction work activities would include:

- Wharf fixtures removal;
- Concrete and wood deck and mooring dolphin deconstruction;
- Wood, concrete, and steel pile deconstruction; and
- Removal of debris and marker buoys

Fixtures Removal/Deconstruction

Deck fixtures and remnants of equipment will be removed and deconstructed. Deck fixtures include metal fenders, mooring bits, mooring cleats, nails, coils, wiring, chain link fencing, and mooring posts. Fixture removal may proceed concurrently with deck deconstruction.

Concrete Deck Deconstruction

The MOT includes two mooring dolphin decks made of concrete. Each mooring dolphin deck measures approximately 9 feet by 15 feet. The average deck thickness is about 2 feet. It is anticipated that each mooring dolphin will be cut into multiple pieces for removal. The actual size of the concrete pieces will depend on the availability of equipment at the time deconstruction services are procured, and will be detailed in a Project-specific Rigging and Lifting Plan that will be prepared for review and approval by the CSLC prior to implementing the deconstruction and removal work.

It is anticipated that each concrete structure will be cut into smaller pieces, if necessary, using a diamond-wire saw. Rigging will be secured to each piece prior to it being cut free from the pile caps. Alternatively, the top slab may be removed by cutting piles with cutting torches. Prior to implementing the concrete deconstruction process, provisions will be made to contain debris and cutting fluids associated with the concrete deconstruction process. If cutting fluids are used during the drilling or concrete sawing process, the process will be conducted in accordance with Federal and State environmental protection regulations. Debris and cutting fluid containment details will be provided by the selected contractor in a Work Execution Plan.

Wooden Deck Deconstruction and Removal

The MOT facility includes a central, predominantly wood landing platform measuring approximately 103 feet by 34 feet, and three smaller pier platforms approximately 24 feet by 30 feet, 18 feet by 36 feet, and 18 feet by 36 feet, respectively. In addition, there are two mooring platforms with wood decking on concrete piles; one is approximately 30 feet by 18 feet and the other is approximately 21 feet by 18 feet. The timber decking is likely creosote-treated and will be removed and disposed of at facilities licensed to take creosote.

Wood, Concrete, and Steel Pile Deconstruction and Removal***Removal of Timber Piles***

Phillips 66 proposes pile removal to approximately 2 feet below the mudline. The MOT facility has approximately 117 timber piles that are likely creosote-treated. Associated with the main wharf structure are approximately 63 timber piles. There are approximately 28 piles lying on the Carquinez Strait bottom. The three smaller piers/platforms running perpendicular to the shore are supported by approximately 13 timber piles total. Last, the two wood pile dolphins in the northern section of the Project area are supported by approximately 13 timber piles total: 6 for the southern dolphin and 7 for the northern dolphin.

The MOT is located in the central area of the Carquinez Strait adjacent to the southern edge of the shipping channel, which is approximately 0.5 mile wide in this area. The location of the MOT is a high energy environment where water moves through the Carquinez Strait between Suisun Bay upstream and San Pablo Bay downstream. Predictions for several water years indicate that Suisun Bay exports sediment during the wet season, and imports sediment from San Pablo Bay during the dry season (Ganju and Schoellhamer, 2006). There is little net deposition within the Project area. A May 2012

bathymetric survey conducted by eTrac Engineering, Inc. (eTrac) indicated that the general water depth under the MOT structures is currently approximately -20 feet referenced to mean lower low water (MLLW). The federal channel is maintained to -30 feet MLLW. The water level in this area of the Strait increases to depths of -90 feet MLLW within approximately 500 feet of the wharf.

Phillips 66 proposes that creosote-treated timber pile removal will occur using a barge-mounted crane consistent with a CSLC-approved Marine Safety Plan. Because of the embedded depth (likely 40 feet below mudline) and age (well over 50 years) of the timber piles, it is likely not feasible to completely remove the timber piles, which have a high probability of breaking during the removal procedure. In addition, extraction of piles near the shoreline has the potential to destabilize the embankment that supports the rail line. Finally, there are many battered piles that are difficult if not impossible to extract. Phillips 66's proposed method will utilize a barge-mounted crane to grab the timber piles and break them off. After pile removal, a diver will inspect the area and provide further direction on how to remove any timber remnants to a depth 2 feet below the existing mudline.

The following best management practices (BMPs) will be used to minimize creosote release, sediment disturbance, and total suspended solids generation: (a) install a floating surface boom to capture floating surface debris; (b) keep all equipment (e.g., bucket, steel cable) out of the water and grip piles above the waterline; (c) slowly lift the pile from the sediment and through the water column; and (d) dispose of all removed piles, floating surface debris, sediment spilled on work surfaces, and all containment supplies at a permitted upland disposal site that accepts creosote-treated wood and materials contaminated with creosote.

Removal of Concrete Piles

The various structures associated with the MOT include an estimated total of 11 20-inch square concrete piles. The two wood-deck mooring platforms to the south of the wharf are supported by eight and three concrete piles each. Neither the main wharf structure nor the three wood-deck platforms running perpendicular to the shoreline and formerly connecting to the wharf are supported by concrete piles.

Concrete piles will be removed after the timber decking is removed. Given their proximity to the embankment that supports the active rail line, these piles, if attempted to be completely removed, could destabilize the rail bed embankment. Therefore the piles will be cut off to no lower than the mean high water line using a hydraulic shear or another suitable device.

The proposed Project will attempt to process and recycle the concrete as aggregate rather than dispose of it at a local landfill. An alternative may be to use it as rip rap on site to shore up the existing embankment. If this alternative is not approved, reduction of the concrete will be conducted at the on shore staging area and recycling or disposal of the debris will occur at a permitted facility.

Removal of Steel Piles

Each mooring dolphin is supported by approximately 12 steel piles for a total of up to 24 steel piles. Once the concrete decking and fixtures have been removed, the steel piles will be extracted using a vibratory hammer or cut off just below the mud line if extraction proves too difficult. The steel pile remains will be loaded onto a barge and transported to a staging area, and transported to a recycling center if the waste material is acceptable for recycling.

Removal of Debris

There are a number of concrete slabs that serve as riprap along the shoreline. These slabs should stay in place to reduce the potential for destabilizing the embankment supporting the rail bed.

A pre-deconstruction bathymetric survey, conducted in May 2012 by eTrac, identified pile remnants and other debris on the seafloor. A follow-up underwater inspection was conducted on March 19-21, 2013, by trained divers aided by a scanning sonar head. Results of the survey are summarized below.

The underwater inspection identified two steel pipe sections lying within a few feet of each other near the south end of the main wharf structure. One pipe section is 8 inches in diameter and 228 feet long pipe, and the other is 12 inches in diameter and 275 feet long. These pipe sections will be recovered and disposed of during deconstruction activities. The 8-inch diameter pipe has two timber piles lying on top of it that are in generally good condition and can be easily recovered. The 8-inch pipe terminates in a "tee" fitting; one side of the tee is open, with the opposite side blind flanged. The northern end of the pipe is flanged and blanked. The diver reported that there may be some support members attached at a few points along the 8-inch pipe that are presently buried. Excavation would be required to determine if this is the case, however these miscellaneous supports, if they exist, will not likely present a significant impediment to removal of the piping.

The 12-inch diameter pipe trails down-slope at its northern extremity to a depth of approximately 66 feet of water. It has a flanged valve in place on the south end of the pipe, and northern end of the pipe is blind flanged. Three flanged couplings were reported along the length of pipe, and appeared to be secure and tight.

Due to the extreme currents experienced in the area, there is some scour occurring on the offshore sides of the two pipes, with mud cover accumulated on the inshore sides of the piping. This scour is relatively minor and will lessen the difficulty of establishing recovery rigging. Recovery of the two steel pipes will likely require lifting one end up to the barge deck, and cutting the piping into lengths required for handling and transport.

The underwater inspection also detected a number of piles and a large truck tire on the seafloor. These objects appeared to be in satisfactory condition to allow for easy rigging and intact recovery to the surface. The submerged piles and truck tire will be removed and disposed of during deconstruction activities. The materials will be lifted by crane onto a barge and transported to the staging area for transport by truck to a landfill that is permitted to accept the waste.

Following completion of the deconstruction, final confirmation of whether timber pile stubs or debris remain on or above the mud line will be made during a post-deconstruction survey. Remaining timber pile stubs or debris will be removed and disposed of using the same method used during the initial deconstruction phase.

Removal of Two Timber Pile Dolphins

The two wood-pile dolphins (likely creosote treated) are located in the north of the Project area. The southern dolphin has approximately five vertical pilings and two bracing pilings while the northern dolphin has approximately five vertical pilings, one bracing piling, and one horizontal beam. These structures will be removed in a similar fashion as the other timber piles associated with the wharf.

Phillips 66 proposes pile removal to approximately 2 feet below the mudline. Including the additional 13 timber piles from the wood dolphins, the facility has approximately 117 timber piles that are likely

creosote treated. Phillips 66 proposes that creosote-treated timber pile removal will occur using a barge-mounted crane consistent with a CSLC-approved Marine Safety Plan. Because of the embedded depth (likely 40 feet below mudline) and age (well over 50 years) of the timber piles, it is likely not feasible to completely remove the timber piles, which have a high probability of breaking during the removal procedure. In addition, extraction of piles near the shoreline has the potential to destabilize the embankment that supports the rail line. Finally, there are many battered piles that are difficult if not impossible to extract. Phillips 66's proposed method will utilize a barge-mounted crane to grab the timber piles and break them off. After pile removal, a diver will inspect the area and provide further direction on how to remove any timber remnants to a depth 2 feet below the existing mudline.

The following Best Management Practices (BMPs) will be used to minimize creosote release, sediment disturbance, and total suspended solids generation: (a) install a floating surface boom to capture floating surface debris; (b) keep all equipment (e.g., bucket, steel cable) out of the water and grip piles above the waterline; (c) slowly lift the pile from the sediment and through the water column; and (d) dispose of all removed piles, floating surface debris, sediment spilled on work surfaces, and all containment supplies at a permitted upland disposal site that accepts creosote treated wood and materials contaminated with creosote.

Temporary Construction Easements

Temporary construction easements may be required during the Project to support the safe and efficient execution of the work. Most temporary facilities will be located on a barge or in the water (i.e., marker buoys) within the 8.89-acre Project area. The deconstruction activities will only be conducted from vessels located offshore and at the selected contractor's existing shore base and associated facilities. To facilitate completing the deconstruction work, the selected contractor's existing shore base and associated facilities may include secured storage facilities, shore-side staging areas, and landings/dock facilities. These facilities already exist, should they be needed, and will not require any construction. An example of this is the existing 4-acre paved dockside facility at Mare Island in Vallejo, California operated by C.S. Marine Constructors, Inc.

There also may be a need to provide other incidental temporary facilities such as parking, storage, and sanitary stations located on shore near the Project site. This will allow for access from onshore locations for Phillips 66, its contractors, site monitors, agency representatives or others wishing to observe the operations. A temporary construction easement will be needed within the adjacent uplands to accommodate these incidental temporary facilities. The proposed locations are located approximately 700 feet southwest and upland of the Project area on the adjacent TXI property. This property contains existing developed roads and parking areas that can accommodate upland access and the aforementioned incidental temporary facilities. There is existing parking at the site so there will be no need to construct any new facilities, and agreements will be made with the property owner to use the property for these temporary purposes. To provide some flexibility in planning, incidental parking, sanitary and storage facilities will not exceed 1.5 acres total. Finally, shore-side staging will be situated within the selected contractor's existing shore base and facilities located separately from the Project area.

Site Access and Staging

Site access will occur by water vessel or by road. Wharf deconstruction activities will be conducted from barges situated adjacent to the wharf remnants, offshore. A contractor shore base and the facilities for equipment, barges, materials, and waste handling will be at a commercial/industrial facility located away from the Project area selected by the contractor chosen to perform this task. Included within the

contractor's shore base and plans will be secured storage facilities, shore-side staging areas, and landings/dock facilities. Most workers will access the deconstruction site by vessels from the shore base or other existing docks or landings. At the present time, Phillips 66 has not selected a deconstruction contractor to perform this deconstruction Project; however, once a contractor is selected, a more precise location of the shore base and facilities away from the Project area will be provided to CSLC.

For access from upland areas at the site, incidental parking, sanitary and storage facilities for managers, compliance monitors, agency representatives, and others involved in the Project are planned to be located on the TXI property, as previously described. No secured storage facilities, shoreside staging areas, or landings/dock facilities will be utilized or constructed for the purposes of this Project in upland areas at or adjacent to the Project site.

METHODOLOGY

Research

Staff at the Northwest Information Center (NWIC) of the California Historic Resources Information System, located at Sonoma State University in Rohnert Park, California, conducted a cultural resources records search in August 2011. At the request of AECOM, the NWIC conducted a records search that consisted of a review of the state's database of cultural resources studies and recorded cultural resource sites in or within ½-mile radius of the Project site. Other sources consulted included the national and state inventories and registers of cultural resources and pertinent historic maps.

The records search determined there were no cultural resources recorded within the proposed Project area and that two cultural resources surveys have been conducted within the proposed Project area. Both of these studies were for fiber-optic installation projects. Sixteen cultural resources overview reports have been completed within ½ mile of the proposed Project area.

The records search indicated that three previously recorded sites are located within a ½ mile radius of the proposed Project area. Site P-07-841 is a historic-era trash scatter recorded in January 2000, but has not been evaluated for significance. The recordation form states that the scatter appears to be the result of multiple dumping episodes. This site is on a hillside southwest of the Project location. Site P-07-842 is a 1915 concrete bridge that was also recorded in January 2000, but was not evaluated for significance. It is located On Carquinez Scenic Drive in the bluffs southwest of the Project location. Site P-07-2942 is a segment of the Carquinez Scenic Drive (formerly State Route 14) that was recorded in August 2007 but has not been evaluated for significance. The recorded segment is located in the bluffs to the north, south, and southwest of the Project location.

Additional research was conducted at the California History Room of the California State Library, Sacramento and at the AECOM cultural library.

Field Methods

In order to assess the potential for cultural resources to be present within the Project area, an AECOM archaeologist and architectural historian conducted a pedestrian field survey of the land-based portion of the Project site on February 21, 2013. The following AECOM cultural resources staff conducted the investigation:

- Denise Jurich, M.A. in Anthropology, RPA, 17 years of experience in California archaeology
- Patricia Ambacher, M.A. in History, emphasis in Public History, 10 years of experience in cultural resources practice

Buildings and/or structures in the Project area that were more than 45 years old were recorded with digital photography and evaluated for National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) eligibility. Findings were recorded on Department of Parks and Recreation (DPR) 523 forms (see Attachment B).

SURVEY RESULTS

Archaeology

As part of the field survey, the archaeologist walked a series of transects spaced approximately 5 meters apart covering the upland portions of the Project area (i.e., TXI property). These upland areas have been heavily altered by grading, paving, and construction of two buildings. Most of the TXI property has been covered with gravel or is paved. Modern debris observed included small scraps of metal, lumber, and other construction material. No native soil was identified during the survey. No historic debris was identified in the Project area.

Built Environment

The remains of the Port Costa Wharf and its associated structures (four dolphins, and two mooring platforms) are located in the Project area and were recorded by AECOM's architectural historian. The Port Costa Wharf is located southwest of the town of Port Costa in Contra Costa County. Located along the western shoreline of the Carquinez Strait are the remains of a wharf, four dolphins, and two mooring platforms. The mooring platforms are located south of the wharf concrete abutments underneath wood beams and metal sheets. The platforms are approximately 18 feet and 21 feet by 18 feet.

The main portion of the wood wharf is no longer connected to the wharf approaches. The wharf is approximately 34 feet by 103 feet and is supported by wood pilings approximately 12 inches in diameter, and the structure is partially collapsed on the south side. Metal springs on the east side of the wharf are the remnants of pier fenders. The remains of the former wharf approaches include concrete abutments and wood pilings and feature a wood railing with metal cyclone fencing strung between the rails. The approaches are approximately 24 foot by 30 foot, 18 foot by 36 foot, and 18 foot by 36 foot size, respectively, each perpendicular to the shoreline.

Four dolphins (groups of piles driven close together and bound into a single structure) flank the remains of the wharf. The two dolphins nearest the remains of the pier are steel pipe pile and concrete deck mooring dolphins (Dolphin 1 and 2). They feature 12 round metal pilings (approximately 12 inches in diameter) that are partially submerged and extend approximately two feet above water. On the top of each dolphin is a thick slab of reinforced concrete. Each of these dolphins has a metal ladder on its west side. These dolphins are approximately 9 feet by 15 feet. The two northernmost dolphins are likely creosote-treated (Dolphin 3 and 4). One has approximately five vertical pilings, a bracing piling, and a horizontal beam. The other has approximately five vertical pilings and two bracing pilings.

The area in the vicinity of the wharf is largely unused, rural and is located next to an active railroad.

FINDINGS

The records search, archival research, and pedestrian survey of the project area indicate that there are no archaeological resources in the project area.

The Port Costa Wharf remnants and its associated structures were evaluated using the criteria for the NHRP and the CRHR. The structures are historically and functionally related and are evaluated as such

with a period of significance between 1908, the date the Port Costa Wharf was constructed, and 1966, the year oil operations ended at the facility.

The Port Costa Wharf is located southeast of Port Costa, a small town founded in 1878. Port Costa served as the port for the Central Pacific Railroad's ferry transfer operations. Several slips, and docks and a ferry terminal were constructed to support the ferry transfer operations. Port Costa grew quickly and became a focal point for shipping grain and wheat. Additional docks and wharves were constructed along Port Costa's waterfront for easy transport of these goods. The waterfront, however, declined after the grain market weakened and most of the shipping business transferred to San Francisco. Less than a mile east of Port Costa was the Port Costa Brick Works, which built the Nevada Docks, which were the largest docks on the Carquinez Strait in 1883. After the initial docks burned in 1909, the plant expanded its waterfront operations and rebuilt the docks with large warehouses (Robinson and Crane 2007:7–8, 15, 83–84; Treadway 2007).

Southeast of Port Costa, Associated Oil Company (Associated Oil) began construction on new facilities in 1906. The company officially began in 1901, after 35 independent oil producers in the San Joaquin Valley agreed with W. S. Porter to join forces and create one company. By 1905, Associated Oil owned the pipe-line facilities from the Coalinga oil field to tidewater at Monterey and the following year it completed its eight-inch pipeline from the San Joaquin oil field to its Port Costa wharf under its subsidiary company Associated Pipe Line Company. The Southern Pacific Railroad Company (SPRR) allowed the oil company to construct the pipeline within their right-of-way because SPRR used the fuel for operation of their steam engines (Hulaniski 1917:424; Royal Petroleum Company 2012). By 1909, SPRR owned a controlling interest in Associated Oil (Bean 1973:372). In the early years of operation Associated Oil's facility at Port Costa included storage tanks, pipelines, pumps, a rail car loading rack and a wharf (URS 2002:1–2). A wharf existed at the current location by 1886 but burned several times and was subsequently rebuilt (United States Coast and Geodetic Survey 1886; Robinson and Crane 2007:11).

At the same time that Associated Oil was created in California, Tidewater Oil, founded in 1887 in New York, was becoming a major company in the petroleum industry on the East Coast and Midwest. By the 1930s, Tidewater was purchased by Standard Oil of New Jersey and created a subsidiary, Mission Corporation, which managed Tidewater operations. By 1932, J. Paul Getty owned Associated Oil Company and in 1934 he purchased the Associated Pipe Line Company, which included the Port Costa Terminal. The terminal complex then consisted of 33 acres of land, 12 storage tanks, pipelines and the wharf. In 1937, Getty purchased Mission Corporation and merged Tidewater with Associated Oil to create Tidewater-Associated Oil. By the 1950s, the Port Costa wharf shipped the majority of the company's residual fuel oil products. Tidewater-Associated Oil's West Coast operations were purchased by Phillips Petroleum in 1966 (Royal Petroleum Company 2012). In 2001, Phillips Petroleum merged with Conoco to become ConocoPhillips. That same year Phillips purchased Tosco Corporation, which owned the wharves beginning in 1976 (ConocoPhillips 2012; URS 2002:5). Today, the structures are owned by Phillips 66 (formerly Conoco-Phillips).

The Port Costa Terminal underwent several changes during its operation, including modifications to the wharf area. By 1938, the wharf contained an office and a lean-to, later converted to a washroom. As operations increased in the 1940s, the wharf was extended for mooring lines and in the mid-1950s, new gates and fencing were installed on the wharf approaches (Tidewater Associated Oil Company 1938, 1944, 1956, 1960). Operations at the terminal and the wharf area ended under Phillips' ownership and remained closed when Tosco acquired the property (URS 2002:4–5).

These structures do not appear to meet the criteria for either the NRHP or the CRHR. The structures do not appear to meet NRHP/CRHR Criterion A/1 because they do not have important associations with significant events in history. The wharf was one of several constructed in the Port Costa area along the Carquinez Strait in the early 1900s and was used for shipping petroleum products. The wharf and the platform moorings and dolphins, which are all functionally related, were built out of necessity for the transfer of the petroleum products. They did not, however, play a significant role within this context. Research revealed little about the individuals who worked at this facility, but the structures have no known direct associations with individuals who made significant contributions to history. Therefore, they do not appear to meet NRHP/CRHR Criterion B/2. As an engineering feature the structures are not important examples of their type, period, or method of construction. The dolphins and anchor shores are of a standard design and do not embody distinctive characteristics. The remains of the wharf also are not distinctive and the wharf's construction is typical for the time period and used standard materials, including wood, steel and concrete. In consideration of all the elements of NRHP/CRHR Criterion C/3, these structures do not appear to meet this criterion. Under NRHP/CRHR Criterion D/4 the structures do not appear likely to yield information important to history because as engineering features they are not the principal source of important information.

In addition to lacking historical or engineering significance, the structures lack historic integrity. They lack integrity of design because they are remnants of their original design of a large wooden wharf with mooring dolphins. As such the resource no longer conveys proportion and scale. Because most of the wharf was burned and has large sections missing, it lacks integrity of materials. Materials are also missing from the dolphins and anchor shores. Because of a loss of key historic materials, these structures cannot reflect the physical elements that were originally combined to create them. The loss of design and materials, as a result of fire damage, also resulted in a loss of integrity of workmanship. The structures no longer provide evidence of the technology or engineering that went into their original design and construction. The setting for the structures was altered when the oil facilities closed and the tanks were removed, and when the buildings that originally rested on the wharf were removed in the late 1960s through the 1970s. It no longer conveys a setting of an industrial area. Those alterations also caused a loss of integrity of feeling and association. The wharf and its associated structures have lost their ability to express a sense of time and place, and no longer have an association with Tidewater-Associated Oil Company or its storage and transfer facility.

In summary, the Port Costa wharf and associated structures do not appear to meet the criteria for listing in the NRHP and/or the CRHR and are also not considered historical resources for the purposes of the California Environmental Quality Act. Please see Appendix B for more detailed information on this resource.

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