3.11 Historic and Cultural Preservation

Historic and cultural preservation refers to the idea that a place's value is in part derived from its heritage and that this heritage is worth preserving. In this section, the term *cultural resources* is used to refer to the broad range of resources that represent or convey this heritage, or help tell the story of a region's past. A cultural resource can be considered any building, structure, object, site, landscape, or district associated with human manipulation of the environment. These resources are often valued by a particular group of people (monetarily, aesthetically, or religiously), and can be historic in character or date to the prehistoric past (i.e., prior to written records).

Three categories of cultural resources are discussed in this section: archaeological resources, historic resources, and culturally significant properties. Archaeological resources encompass features and deposits located on or below the ground surface that are evidence of prior human occupation or use in a particular area. Historic resources include elements of the built environment, such as buildings or structures, or human-made objects or landscapes. Finally, culturally significant properties are sites or locations considered culturally important to the history of a group or people, or where culturally important events or practices are known to have occurred.

In contrast, *tribal resources* refers to the collective rights and resources associated with a tribe's sovereignty or formal treaty rights, or their interest in and use of resources within a particular sphere of influence. Such resources may include cultural resources but may equally encompass elements of the natural environment, such as fisheries or the use and availability of plants and wildlife. Because tribal resources span many of the resource areas addressed in this environmental impact statement, the analysis of potential impacts on tribal resources is addressed separately, in Section 3.12, *Tribal Resources*.

This section describes cultural resources in the study area. It then describes impacts on these resources that could result under the no-action alternative or as a result of the construction and routine operation[1] of the proposed action. Finally, this section presents any measures identified to mitigate impacts of the proposed action and any remaining unavoidable and significant adverse impacts.

3.11.1 What is the study area?

The study area for cultural resources consists of the cultural resources on and near the project site that could be affected by construction and routine operation at the project site. The study area also includes cultural resources that could be affected during routine rail transport along the Puget Sound & Pacific Railroad (PS&P)[2] rail line and vessel transport through Grays Harbor.

[1] Chapter 4, *Environmental Health and Safety*, addresses the potential impacts from increased risk of accidents (e.g., storage tank failure, train derailments, vessel collisions) and related consequences (e.g., release of crude oil or other proposed bulk liquids).
[2] The PS&P rail line refers to the rail line between Centralia and the project site.

3.11.2 What laws and regulations apply to cultural resources?

Laws and regulations for determining potential impacts on cultural resources are summarized in Table 3.11-1. More information about these laws and regulations is provided in Appendix B, *Laws and Regulations*.

Table 3.11-1. Laws and Regulations for Cultural Resources

Laws and Regulations	Description
Federal	
National Historic Preservation (16 U.S.C. 470a)	The NRHP is the official list of the nation's historic places worthy of preservation and is administered by the National Park Service as part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historical and archeological resources.
State	
Indian Graves and Records (RCW 27.44)	Protects Native American graves and burial grounds, encourages voluntary reporting of said sites when they are discovered, and mandates a penalty for disturbance or desecration of such sites.
Archaeological Sites and Resources (RCW 27.53)	Governs the protection and preservation of archaeological sites and resources and establishes DAHP as the administering agency for these regulations.
Abandoned and Historic Cemeteries and Historic Graves (RCW 68.60)	Protects and preserves abandoned and historic cemeteries and historic graves.
Local	
Municipal Historic Preservation Ordinances (HMC 10.06 and AMC 17.50)	Safeguards the heritage of Aberdeen and Hoquiam by the identification, evaluation, designation, and protection of historic properties. Maintains a local register of historic places in each community.

U.S.C. = United States Code; NRHP = National Register of Historic Places; RCW = Revised Code of Washington; DAHP = Washington State Department of Archaeology & Historic Preservation; HMC = Hoquiam Municipal Code; AMC = Aberdeen Municipal Code

3.11.3 How were impacts on cultural resources evaluated?

This section describes the sources of information and methods used to evaluate impacts.

3.11.3.1 Information Sources

A literature review and records search was conducted to establish the historic context for the study area using the following sources of information.

- Washington State Department of Archaeology & Historic Preservation's (DAHP) Washington Information System for Architectural and Archaeological Records Database (WISAARD) for previously completed cultural resources studies and previously documented archaeological, ethnographic, and historic resources within a 1-mile radius of the project site.
- Additional primary and secondary resources from local repositories.

- Cultural resources studies recently performed for the proposed action, supplemented by additional historical and geological documentary research. No subsurface investigations within or near the project site were conducted by these studies.
- Geological and historical documents that characterize the local geology and landform development history.
- Property-specific archival information about the project site and immediate vicinity.
- A reconnaissance-level survey of all buildings and structures determined to be 45 years of age or older at or within 300 feet of the project site.
- Excavation of three subsurface geoarchaeological borings and nine mechanical trenches. The locations and methods of these units were determined based on the consideration of previous cultural resource studies performed in the study area, a review of supplemental historical and geological research documents, and consultation with DAHP. The subsurface investigations were performed in accordance with the cultural resources workplan, which was developed based on comments and feedback from DAHP.
- Review of the sedimentary and stratigraphic data obtained during the subsurface archaeological investigations.

3.11.3.2 Impact Analysis

Data used in the identification and evaluation of cultural resources in the study area were collected from the sources described above. Appendix J, *Cultural Resources Technical Report*, describes these efforts and their results in detail.

For historic resources, identified buildings and structures 45 years of age or older on or adjacent to the project site were evaluated to determine their eligibility for listing in the National Register of Historic Places and the Washington Heritage Register. For archaeological resources, subsurface investigations at and near the project site included mechanical trenching and geoarchaeological borings. The mechanical trenches were excavated in unpaved areas to a maximum vertical reach of 24 feet, where possible. Geoarchaeological borings were used in paved areas and to supplement the mechanical trenching. They were excavated to a minimum depth of 40 feet below the ground surface in all instances. Sediment samples from the geoarchaeological borings were screened through 0.25-inch hardware cloth to identify any artifacts.

An assessment of collected information identified the potential for impacts on cultural resources in or near the project site. A review of field notes combined with previous geotechnical and geoarchaeological findings, for example, were conducted to identify the stratigraphy and age of sediments within the project site and its vicinity. In addition, 68 radiocarbon samples from four studies, including one sample collected during the current archaeological investigations, were compiled to establish past changes of sea level in the Grays Harbor Basin. These efforts helped determine the chronology of the landform creation in the project site and its potential to contain archaeological resources.

Impacts on cultural resources along the PS&P rail line and within Grays Harbor were assessed qualitatively based on an expectation of the types of resources likely to be present and an assessment of how they could be affected by routine operations. WISAARD was used to review previously recorded cultural resources in these areas and, along with the aforementioned information sources, used to establish possible resource types in the vicinity that could be affected.

Impacts were determined by evaluating if construction and operations would alter any characteristic of a cultural resource (archaeological, historical, or culturally significant) that qualifies the resource for inclusion in the National Register of Historic Places or Washington Historic Register, or affect a recorded archaeological site.

3.11.4 What cultural resources are in the study area?

This section describes cultural resources in the study area that could be affected by construction and routine operation of the proposed action. This section provides the general context for cultural resources in the study area and describes archaeological resources, culturally significant properties, and historic resources at the project site, along the PS&P rail line, and in and along the shoreline of Grays Harbor.

3.11.4.1 General Cultural Setting

This section provides the context for cultural resources in the study area.

Precontact Context

Studies of the archaeology and prehistory of the Pacific Northwest divide the prehistory of the region into multiple phases or periods from about 12,500 to 225 years before present, and are delineated by changes in regional patterns of land use, subsistence, and tool types over time. These phases are academic constructs and do not necessarily reflect Native American viewpoints.

Although the earliest evidence of human occupation in the Pacific Northwest dates to nearly 12,500 years ago (Carlson 1990; Matson and Coupland 1995), the precontact[3] archaeological record for the Washington coast almost exclusively consists of sites with contents that are consistent with assemblages from, or have been dated to, the Middle (3800 to 1500 before present) and Late Pacific (1800 to 1500 to about 225 before present) periods. Older, unidentified sites likely exist locally as well, because they are found elsewhere on the Pacific Northwest coast and especially on the eastern Olympic Peninsula (Wessen 1984, 1990). Few excavated archaeological sites exist in the Grays Harbor region, and nearly all of those date to within the past 1,000 years.

Ethnographic Context

The vicinity of the project site was traditionally inhabited by the Hoquiam and Wishkah people. The waters near the project site—including the mouth of the Hoquiam River—were also seasonally used for fishing by the Quinault people (Gibbs 1877; Curtis 1913; Hajda 1990). Grays Harbor was an important hub for habitation, resource collection, and travel for coastal Native American groups. It served as a passage for coastal tribes to the Puget Sound by way of the Chehalis River and to the Columbia River by way of the Chehalis River and the Cowlitz River. As a productive fishing area, Grays Harbor was used by numerous Lower Chehalis–speaking groups, as well as the Quinault (Miller 2009).

The precontact peoples of Grays Harbor area relied on fish for a large portion of their diet (Welsh 1942:10; Van Syckle 1982:74). Salmon fishing occurred throughout Grays Harbor and its associated rivers and creeks and particularly at the mouth of the Hoquiam River. Precontact peoples also

[3] Precontact refers to the period before European explorers and settlers established contact with the indigenous Native American people who inhabited the region.

caught eulachon, flounder, herring, lamprey, smelt, sole, and sturgeon (Miller 2009). The Grays Harbor shoreline provided habitat for terrestrial mammals, avians, and plant resources. Game included bear, beaver, deer, elk, and otter. Edible plants, such as berries, roots, and bulbs, were collected along the rivers and tide prairie. Sweetgrass (a particularly important traditionally used plant), cattail, swampgrass, and stinging nettle were collected for weaving and textiles. Nettle was also used to make nets and line for fishing (Miller 2009).

Historic Context

The Washington Territory was established in 1853, and Chehalis County (whose name was changed to Grays Harbor County in 1915) was formed the following year. The area's earliest settlers were typically cattle and dairy farmers who cleared the land. Several communities emerged to support this early settlement. Cosmopolis, a lumber-company town, was founded in the early 1850s on the Chehalis River's south shore, approximately 3.5 miles east of present-day Aberdeen, followed by the towns of Hoquiam and Aberdeen in the late 1850s.

By the mid-1860s, the land along the lower Hoquiam River was largely settled. However, Hoquiam and other Grays Harbor communities remained largely isolated, with only a few farms and established transportation routes until the 1880s. Shipping routes between Grays Harbor communities and other cities nationwide soon enabled the development of the region's logging and timber industries (Van Syckle 1982). During this period, Hoquiam and Aberdeen transformed from small agricultural communities into modern industrial cities. By 1881, local lumber mills began to export lumber to distant markets. By 1890, the local lumber industry had evolved into a large-scale commercial business and one of the most important lumber-shipping ports on the west coast.

Because Grays Harbor was not the primary consumer of most of its wood products, transportation of the milled and raw lumber played a key role in the development of the region's industry and local economy. The two primary modes of transportation were by ship or by rail.

Initially, most finished lumber was shipped by water to distant customers, despite the difficulties of navigating Grays Harbor. The first dredging of the Grays Harbor Navigation Channel began in 1889. Regular dredging to provide safe passage for ships continued well into the 20th century and remains a significant issue today.

The Northern Pacific Railroad was the first major rail line to serve the Grays Harbor region, spurring the early growth of Aberdeen, Hoquiam, and other communities that competed to become the railroad's west coast terminus. The first portions of the Northern Pacific Railroad's Grays Harbor Branch were completed in 1892. In 1898, the Northern Pacific Railroad extended the Grays Harbor Branch rail line an additional 4.6 miles over the Wishkah and Hoquiam Rivers, through central Aberdeen to Hoquiam. The railroad was later connected to three transcontinental routes. Today, the route is operated by PS&P and services the Port of Grays Harbor (Port) and other area industries.

The Port was first established in 1911. Initial improvements included dredging navigation channels, adding piers and slips, filling tidelands, adding a railroad avenue in Hoquiam, and removing two bends in the Wishkah River. Terminal 1, the Port's first public terminal facility, was constructed at Cow Point in 1921 and 1922. It was purposely located between Hoquiam and Aberdeen to prevent disputes over which town would benefit more from future improvements. The dock at Cow Point, known as Pier 1, opened on September 22, 1922. It featured a 2000-foot by 300-foot dock with a slip along its west side (Slip 1). A second slip (Slip 2) was constructed east of the new pier shortly thereafter.

New development at the Port continued through the 1920s. The Great Depression abruptly ended the region's lumber boom, but the industry recovered in the postwar period. The Port established an industrial development district in the 1960s to attract new commercial and industrial industries to the area. This effort included the construction of new warehouses, manufacturing plants, and other facilities in the previously undeveloped lands around Terminal 1. The Port pursued further development in the late 1970s and 1980s, significantly altering waterfront facilities. The Port began the construction of Terminal 2 in 1979 and coordinated with the U.S. Army Corp of Engineers (USACE) to dike and fill Slips 1 and 2. Slips 1 and 2 were diked and filled by the Port beginning in 1983 to create new areas for development.

3.11.4.2 Archaeological Resources

This section describes the findings of archaeological investigations at and near the project site, considers the area's landform development, and identifies the types of archaeological resources that may occur along the PS&P rail line and in and along the shoreline of Grays Harbor.

Project Site

The project site is located in what were tidelands[4] prior development of the Port's Terminal 1 in the early 1920s (Boersema 2013: 6-7). The tidelands were initially formed by the inundation of the Grays Harbor basin due to sea level rise over several thousand years and subsequent sedimentation caused by the Chehalis River and tidal effects. Beginning in the early 20th century, widespread and deep dredge and fill activities within and along the shoreline of Grays Harbor physically altered its elevation and disturbed its naturally deposited soils. Figure 3.11-1 shows the historical shoreline near the project site.

[4] Tidelands are submerged lands with beaches that are exposed and submerged with the movement of the tides.

Figure 3.11-1.Historical Shoreline in the Vicinity of the Project Site

These changes are evident in comparisons of the U. S. General Land Office's 1860 cadastral survey map of the region and later environmental studies conducted by USACE in 1978 for the construction of Terminal 2, the expansion and modification of Terminal 1, and, in 1989, for proposed dredging and navigation channel improvements. Each of these studies provides information on changes to landforms within the project site (U. S. General Land Office 1860a, 1860b; U. S. Army Corps of Engineers 1978a, 1978b, 1989).

Beginning in the early 1920s, the Port constructed Terminal 1 over the tidelands at Cow Point, which involved both dredging and the placement of fill. As shown in Figure 3.11-2, Terminal 1 originally included a long dock with an excavated slip along its west side (Slip 1) and a second slip (Slip 2) along its east side (Ott 2010; Boersema 2013: 11–12). Both slips were diked and filled with dredge spoils from 1983 to 1992 (Boersema 2013: 11–12); Figure 3.11-3 shows conditions in 1984. Environmental impact statements prepared in response to the Port's application for these fill activities identified the fill depths of Slip 1, where the project site is located. Prior to diking, Slip 1 had maximum depth of 30 feet below mean lower low water (-30 feet) or 48 feet below the current ground surface with a mean depth of 10 feet below mean lower low water (-10 feet) or 28 feet below the current ground surface (U.S. Army Corps of Engineers 1989: 3-3, 3–15).

Geotechnical investigations in the project site performed from 1995 to 1996 and in 2006 and the subsurface archaeological investigations conducted within the project site confirmed the depths of prior dredging and fill activities in the area of Slip 1. The geotechnical investigations revealed the

presence of dredge fill to a depth of around 23 meters (75 feet) below the ground surface, although this appears to be significantly deeper than the depth of the dredged slip reported by USACE in 1989. Native soils were documented below the dredge fill to a terminal excavated depth of 39.5 meters (130 feet). Other prior geotechnical investigations performed in the project site vicinity indicate that native soils transition into dense alluvial gravels and sands—inferred to be glacial outwash—at depths ranging from 39.5 meters (130 feet) to 43 meters (140 feet) (Heller and Phelps 2014).

The subsurface archaeological investigations revealed no buried surfaces or archaeological resources in the project site. Although fill deposits were documented across the entirety of the project site, the terminal depth of these deposits was ambiguous. In many instances, there were no clear attributes that could be used to differentiate the fill from underlying native soils. This is most likely because most of the deposits used to fill Slip No. 2 consisted of native soils dredged from an area just east of the project site and therefore had comparable attributes. The results of the subsurface archaeological investigations, combined with a review of previous U.S. Coast and Geodetic Survey maps and fill plans indicates that fill deposits likely range from 15 to 34 feet in thickness. Based on the depth and the presence of in-situ bivalves, these deposits were considered native intertidal flat deposits. Although the terminal depth of these deposits was not established during subsurface investigations, previous geotechnical and geoarchaeological investigations in the study area vicinity, indicate that the interface is located between 120 and 130 feet below the ground surface.

No documented archaeological resources are known to exist in the project site and the potential to encounter yet undocumented archaeological sites is considered low. This conclusion is based on archaeological investigations conducted at and near the project site and consideration of the area's landform development.

Figure 3.11-2. Aerial View of Port of Grays Harbor circa 1920

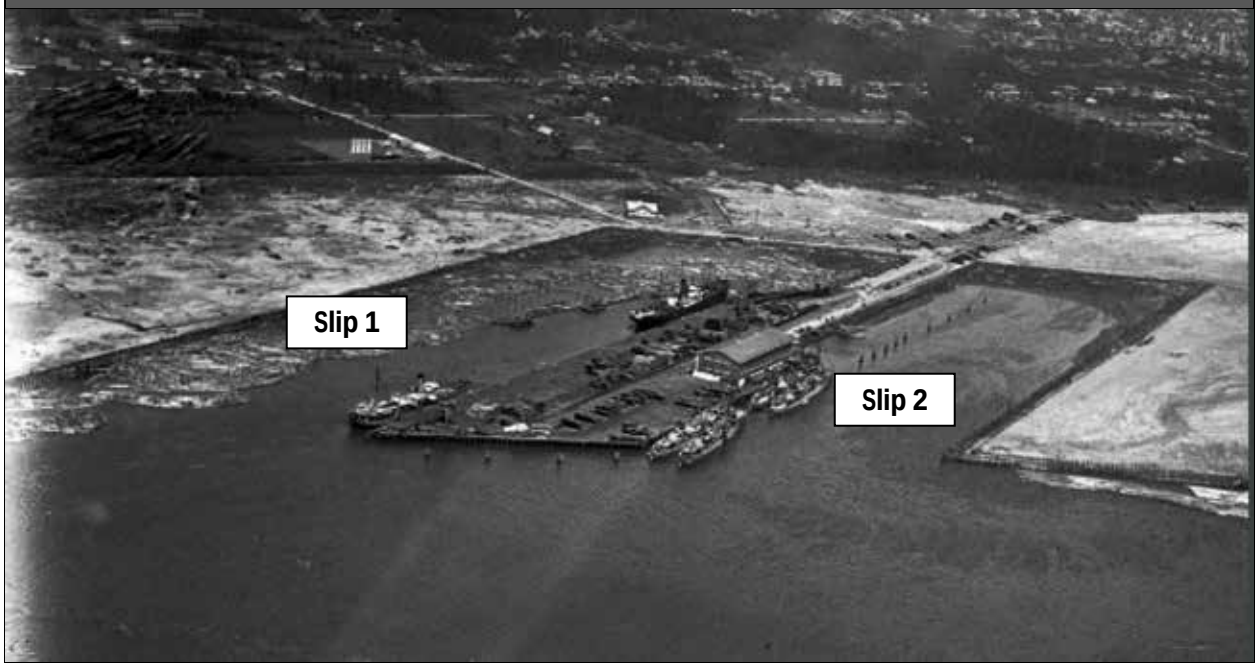

Figure 3.11-3. Aerial View of Port of Grays Harbor circa 1984

PS&P Rail Line

The precontact and ethnographic contexts of the Grays Harbor area indicate that the region was important for habitation and resource gathering, and as an inland travel corridor. Several types of archaeological resources may occur along the PS&P rail line, including historical agriculture, homestead, logging, and railroad-related properties, and precontact village sites, rock shelters, pictographs or petroglyphs, shell middens or mounds, cemeteries or burials, lithic scatters, rock alignments or stacked rock features, and fish weirs or traps.

Grays Harbor

Precontact peoples used the upland shorelines of Grays Harbor for habitation, plant gathering, and hunting; and the waters of Grays Harbor for fishing and shellfish harvesting. Of these activities, habitation and facility-based fishing tend to leave the most robust archaeological traces. Archaeological resources within and along the shoreline of Grays Harbor may consist of archaeological sites or culturally significant properties, such as historic water structures, precontact village sites, shell middens or mounds, cemeteries or burials, lithic scatters, and fish weirs or traps.

3.11.4.3 Culturally Significant Properties

No culturally significant properties are known to exist in the project site or its immediate vicinity. At least two ethnographically named places are located within a few miles, but outside, of the project site. These places are the xwəʼqwyamc (the Hoquiam River) and Ho-kwa-im-its (a village located at the mouth of the Hoquiam River). A third ethnographically named place, Cow Point is a portion of the project site, but the primary fishing area or camp is located east of the project site. (James and Martino 1986; Miller 2009). Although other areas of ethnographic significance are undoubtedly located near the study area, they do not appear to be documented in the available literature.

Additional information on tribal resources is presented in Section 3.12, *Tribal Resources.*

3.11.4.4 Historic Resources

This section describes the results of the historic resources survey of the project site and immediate vicinity and the types of historic resources that may be present along the PS&P rail line and in and along the shoreline of Grays Harbor.

Project Site

As described above, the project site has been subject to dredge and fill activities since the early 20th century and, since the 1970s, to industrial development.

The historic resources survey identified 18 buildings and structures on and immediately surrounding the project site. Four properties were identified as being 45 years of age or older: the Longshore Federal Credit Union building at 3107 John Stevens Way, erected in 1960; the Paneltech Products, Inc. Warehouse at 2999 John Stevens Way, built in the mid-1940s; the California Petroleum Corporation Warehouse at 2519 West 1st Street (also known as 2421 West 1st Street), built circa 1925; and Warehouse E on the Westway Terminals LLC property at 3128 Port Industrial Road, constructed in 1962. The Longshore Federal Credit Union building and the California Petroleum Corporation Warehouse were previously identified and evaluated as not eligible for the National Register of Historic Places by a prior cultural resources study (Schneyder et al. 2010). None of these buildings or structures was determined to be eligible for the National Register of Historic Places or Washington Heritage Register.

PS&P Rail Line

The railroad was important to the development of the region. Several types of historic resources occur along the PS&P rail line, including railroad-related structures, single-family and multifamily residences, and commercial and industrial properties.

Grays Harbor

Although a detailed evaluation of historic resources was not completed for the Grays Harbor shoreline, affected resources might consist of single-family and multifamily residences, commercial and industrial properties, and maritime-related resources.

3.11.5 What are the potential impacts on cultural resources?

This section describes impacts on cultural resources that could occur in the study area. Potential impacts of the no-action alternative are described first, followed by potential impacts of the proposed action.

3.11.5.1 No-Action Alternative

Under the no-action alternative, the applicant would continue to operate its existing facility as described in Chapter 2, Section 2.1.2.2, *Existing Operations*. Although the proposed action would not occur, it is assumed that growth in the region would continue under the no-action alternative, which could lead to development of another industrial use at the project site within the 20-year analysis period (2017 to 2037). Such development could result in impacts similar to those described below for the proposed action.

3.11.5.2 Proposed Action

This section describes the impacts that could occur in the study area as a result of construction and routine operation of the proposed action. First, this section describes impacts from construction of the proposed action. It then describes impacts of routine operation at the project site and of routine rail and vessel transport to and from the project site.

Construction

Construction at the project site would occur on the upland flats adjacent to the current shoreline. No in-water construction is proposed. No significant or protected cultural resources—archaeological resources, historic resources, or culturally significant properties—are known to exist on or in the project site. Therefore, construction of the proposed action would not be expected to affect any cultural resources.

Because the project site is known to have been subject to previous widespread and deep dredging, there is limited potential to encounter undocumented archaeological sites. However, as described in Chapter 2, *Proposed Action and Alternatives*, construction of the proposed action would require pile driving to a depth of approximately 75 feet. Although the likelihood of encountering cultural resources is anticipated to be low, based on the results of the subsurface archaeological investigations conducted in and near the project site, undocumented resources could exist in native soil below 36 feet. The preparation of an unanticipated discovery plan, as described in Section 3.11.7.2, Applicant Mitigation, would address the discovery of previously unidentified archaeological resources during construction.

Operations

This section describes impacts that would occur as a result of routine operations at the project site, rail transport along the PS&P rail line, and vessel transport through Grays Harbor.

Onsite

Routine onsite operations would occur within the boundaries of the project site and would be similar in nature to existing operations at the project site. Because there are no known significant or

protected cultural resources at the project site and because proposed operations would not involve ground-disturbing activities, routine onsite operations would have no impacts on cultural resources.

The operations would be similar to existing conditions. Increased traffic could affect resources located nearby as a result of visual and audible intrusions or vibrations. However, as discussed in in Section 3.7, *Noise and Vibration*, the proposed action would not increase noise or vibration on site that would adversely affect historic resources. As noted above, potential impacts related to increased risks associated with rail and vessel transport along the PS&P and within Grays Harbor are addressed in Chapter 4, *Environmental Health and Safety*.

Rail

Rail transport of bulk liquids under the proposed action would occur along the existing PS&P rail line. Increased rail traffic along the PS&P line under the proposed action could affect resources located nearby as a result of visual and audible intrusions or vibrations. However, as discussed in Section 3.7, *Noise and Vibration*, the proposed action would not increase vibration along the PS&P rail line that would adversely affect cultural resources. Moreover, if resources along the line contain prominent and distinctive character-defining visual features, the alteration of the views from increased traffic would not affect these resources to the extent that they would no longer be considered historically significant (Section 3.9, *Aesthetics, Light, and Glare*). Therefore, impacts on historic and cultural resources as a result of routine rail transport under the proposed action are considered low.

Vessel

Vessel transport of bulk liquids under the proposed action would occur within the existing navigation channel. As noted in Section 3.3, *Water*, increased vessel traffic under the proposed action could result in an incremental increase in shoreline erosion. Onshore resources could be affected if shoreline erosion altered or destroyed the landforms on or in which resources are located.

3.11.6 What required permits and plans apply to cultural resources?

No required permits or plans apply to cultural resources.

3.11.7 What mitigation measures would reduce impacts on cultural resources?

This section describes the applicant mitigation that would reduce impacts on cultural resources from construction and routine operation of the proposed action.

3.11.7.1 Applicant Mitigation

The applicant will implement the following mitigation.

- To address the risk of disturbing undocumented cultural resources, the applicant will prepare an unanticipated discovery plan to address previously unidentified archaeological resources should any be discovered during the construction of the proposed action. The applicant will submit the plan to DAHP before construction. The plan will contain provisions requiring that if

archaeological resources are uncovered during excavations, construction activities will cease immediately and the applicant will notify the City of Hoquiam, DAHP, the Quinault Indian Nation, and the Confederated Tribes of the Chehalis Reservation. In such cases, the applicant will provide for a site inspection and evaluation by a professional archaeologist to ensure that all possible valuable archaeological data are properly salvaged or mapped.

3.11.8 Would the proposed action have unavoidable and significant adverse impacts on cultural resources?

Compliance with the applicable regulations along with implementation of the mitigation measure described above would reduce impacts on cultural resources. There would be no unavoidable and significant adverse impacts. Potential impacts related to spills are addressed in Chapter 4, *Environmental Health and Safety*.