3.11 NOISE

NOISE – Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☐	☒
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.11.1 Environmental Setting

3.11.1.1 Ambient Noise Environment

Ambient noise levels were not measured at the Project's onshore pipeline location. UPRR's main line is located between the the onshore and offshore work areas and nearby residences (see Figures 2-1 and 1-3). Freight or passenger trains pass by the Project site approximately 50 times per day (Lopeman pers. comm. 2013).

3.11.1.2 Sensitive Receptors

In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries,

where people tend to pray, study, and/or contemplate are also sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

The entire Project is expected to take no more than 3 weeks with the onshore portion requiring approximately 1 week. Onshore pipeline work would occur adjacent to the shoreline in the riprap area, which is approximately 600 feet from the closest residences in the City at Subdivision (Google Earth 2013). The majority of the activity would be the offshore pipeline work and would be located between 600 and 2,550 feet from the nearest residences at that Subdivision (see Figure 2-1). The closest residences in the town of Rodeo would be located approximately 250 feet from the onshore work (Google Earth 2013). Rodeo Hills Elementary School (545 Garretson Ave. in Rodeo) is the closest school receptor at 0.38 mile from the nearest work location (Google Earth 2013).

3.11.2 Regulatory Setting

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3-1. Local goals, policies, and/or regulations applicable to this issue area are summarized below. Local regulation of noise involves implementation of General Plan policies and noise ordinance standards. General Plans identify general principles intended to guide and influence noise generating activities.

Since the Project is located within City boundaries, the City's noise ordinance applies. The Noise Element of the City's General Plan includes policies that address existing and foreseeable noise problems within the City (City of Hercules 1998). Policy 6 identified in the General Plan and Chapter 31, section 31.300, No. 11.B of the City's Municipal Code are applicable to the Project (City of Hercules 2012). These require performance standards to control the level of noise at noise-sensitive land uses generated by construction activities and implementation of the following measures:

- For construction near noise-sensitive areas, as determined by the Community and Business Development Department, require that noisy construction activities (including truck traffic) be scheduled for periods, according to construction permit to limit impact on adjacent residents or other sensitive receptors;
- Develop a construction schedule that minimizes potential cumulative construction noise impacts and accommodates particularly noise-sensitive periods for nearby land uses (e.g., for schools, churches, etc.);
- Where feasible, construct temporary solid noise barriers between source and sensitive receptor(s) to reduce offsite propagation of construction noise. This measure could reduce construction noise by up to 5 decibels; and
- Require internal combustion engines used for construction purposes to be equipped with a properly operating muffler of a type recommended by the

manufacturer. Also, require impact tools to be shielded per manufacturer's specifications.

The City does not have specific requirements for allowable hours of construction activity in its Zoning Ordinance (S. Mat pers. comm.). However, the closest residence in the City is approximately 600 feet from the proposed onshore work area (see Figure 2-1).

Within the County, the Project is located adjacent to the unincorporated town of Rodeo and the following policy from the County General Plan Noise Element may be applicable to the effects of the Project due to the Project's proximity to the town of Rodeo (Contra Costa County 2005):

- Policy 11-8: Construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods.

3.11.3 Impact Analysis

a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. As described in Section 2, the Project would be of short duration, approximately 3 weeks. All construction activity would occur between 7 AM and 5 PM during week days, unless the City authorizes other work hours, and would be thus concentrated during the hours of the day that are not noise-sensitive for adjacent land uses to provide relative quiet during the more sensitive evening and early morning periods. There would be very limited onshore activity because the pipeline would be capped and abandoned in place. Onshore work would be confined to a small work area between the UPRR railroad tracks and the riprap, and would occur over a period of approximately 1 week out of the 3-week construction period. The Project would comply with all City and County permit requirements.

b) Result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

No Impact. The Project would not expose persons to ground-borne vibration or noise levels. No heavy equipment is expected to be used onshore to abandon the pipeline.

c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. The Project consists of removing an 8-inch-diameter wastewater pipeline. The western 2,020 feet of this pipeline would be removed, and the eastern 140 feet would be capped and abandoned in place. The proposed activities would not affect the permanent ambient noise level above levels without the Project.

d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. The pipeline abandonment activities would require the use of a variety of equipment, including barge-mounted cranes, drills, saws, etc. over a 3-week period (see Section 2.5 for more details). During this period, noise levels generated by operation of equipment would vary depending on the particular type, number, and duration of use of the various pieces of equipment. As discussed earlier, proposed construction activities would occur between the hours of 7 AM and 5 PM Monday through Friday. The Project is not expected to have a significant impact due to the short duration of the Project and operation during the daytime, because the majority of the Project work would occur offshore. The distance from the nearest work on the pipeline to the nearest residential property line in the City is 600 feet and approximately 250 feet to the nearest residence in Rodeo (Google Earth 2013) (see Figure 2-1).

Typical noise levels at 50 feet for some of the loudest pieces of construction equipment that would be required for most of the Project are listed in Table 3.11-1. The types of equipment that would be used for the offshore work would include a crane, pump, tugboat, work skiff and crew boats, a generator, and a compressor (see Section 2.5 for more details).

Table 3.11-1. Maximum Noise Levels of Proposed Project Equipment

Project Equipment	Noise Levels in dBA at 50 feet
Derrick barge	88
Crane barge (clamshell excavator)	77
Generator	81
Air Compressor	81
Crane	88
Pump	76
Tugboat	82--87
Crew Boat/Work Skiff	72-88

Source: ESA 2009; Federal Transit Administration 2006; FHWA 2009.

Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. The equipment would not be used all at one time or throughout the duration of the Project, nor would the equipment typically be run at full load. Most equipment would be used intermittently. Thus, the higher noise levels would be short-term and intermittent. The greatest noise exposures would occur while the onshore

work is occurring; the noise levels at the residential receptors would be considerably lower for the portion of the work conducted farther out into the Bay.

Noise levels drop approximately 6 dB with every doubling of distance (shielding from topography, wind and other factors may affect this estimate). Thus, the closest receptors in the town of Rodeo may be exposed to noise levels of around 78 dBA during times when the noisiest equipment is running at high loads at the shoreline. The closest receptors in the City would be exposed to noise levels of up to 72 dBA. While there are residences near-by, no other unusually sensitive receptors, such as schools or churches, are in the immediate Project vicinity.

The severity of any potential noise impacts would be reduced by several factors. Noise may be partially shielded because the ground slopes from the residences down to the work area. In addition, the large number of trains passing through the area on a daily basis generates a relatively high level of intermittent background noise for residential areas. Furthermore, the overall construction period on and near shore would be less than 3 weeks, and would generally be limited to the hours of 7 AM to 5 PM Monday through Friday. The proposed approach to completing the construction is consistent with the policies laid out in the City's zoning ordinance (City of Hercules 2012). Consequently, the noise impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project is not located within 2 miles of a public use airport, and would not expose people to excessive airport noise. No impact would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The Project is not located within the vicinity of a private airstrip, and would not expose people to excessive airport noise. No impact would occur.

3.11.4 Mitigation Summary

The Project would not result in significant impacts; therefore, no mitigation is required.