

4.9 NOISE AND VIBRATION

4.9.1 Introduction and Methodology

The April 2005 Noise and Vibration Technical Report prepared for the project by Dudek and Associates serves as the main source of information for this section. This report is included as APPENDIX G to this EIR. Specific methods used to generate this technical report are contained therein.

Noise

The City of Carlsbad General Plan Noise Element (September 1994), Noise Guidance Manual (1995) and associated Municipal Code provisions regulating construction hours within the City, including the Encina Power Station. In addition, the offsite facilities located in the cities of Vista and Oceanside are subject to the relevant General Plan and Municipal Code provisions for those cities. These documents are utilized throughout the May 2004 Dudek Report, and are described in more detail below.

Noise is defined as unwanted or undesirable sound. Sound levels can be measured easily. However, the variability is subjective and physical response to sound complicates the identification of noise impacts. The impact of noise is generally described by a source's relationship to sensitive receptors. Sensitive receptors include private residences, wildlife, schools, churches, parks, hospitals and other public places.

Sound (noise) levels are measured in decibels (dB). Community noise levels are measured in terms of the A-weighted sound level (dBA). The A-weighted scale adjusts the measured sound levels to generally correspond with the way the human ear responds to sound. A civil defense siren would have an A-weighted sound level of 130 and be above the threshold of pain if a receptor was standing less than 100 feet away. On the other hand, soft whispering would have an A-weighted sound level of 30 and barely be audible.

Additional units of measurement have been developed to evaluate the long-term characteristics of sound. The equivalent sound level or L_{eq} , also referred to as the average sound level, is a single number representing the fluctuating sounds level in dB over a specified period of time. It is a sound-energy average of the fluctuating level and is equal to a constant unchanging sound of that dB level.

People are generally more sensitive and annoyed by noise during the evening and nighttime. Therefore, another noise descriptor used in community noise assessments, termed the Community Noise Equivalent Level (CNEL) was introduced. The CNEL scale represents a time-weighted 24-hour sensitivity during the evening (7:00 pm to 10:00 pm) and nighttime hours (10:00 pm to 7:00 am) by adding five and ten decibels, respectively, to the average sound levels occurring during these hours.

Vibration

Similar to the measurement of noise, vibration is characterized by its relationship to sensitive receptors. Sensitive receptors to vibration can include private residences, parks, schools, hospitals, other public places and wildlife.

Regulatory Setting

The desalination facility would be located within the City of Carlsbad. Offsite improvements would be located in the City of Carlsbad, City of Vista, and the City of Oceanside.

City of Carlsbad

The City of Carlsbad has established noise guidelines in the Noise Element of the City's General Plan (City of Carlsbad 1995). These limits are applicable for transportation noise sources. The noise guidelines identify compatible exterior noise levels for various land use types. Residential land uses are considered normally acceptable up to 60 dB CNEL. Commercial land uses are considered normally acceptable up to 65 dB CNEL and conditionally acceptable up to 75 dB. General industrial and utility uses are considered normally acceptable up to 70 dB CNEL and conditionally acceptable up to 80 dB CNEL.

The City of Carlsbad Municipal Code regulates construction noise by limiting the hours of operation. Construction activities are allowed to occur Monday through Friday between the hours of 7 a.m. to sunset; and on Saturdays from 8 a.m. to sunset, excluding legal holidays. The City does not have quantitative noise level limits (i.e., based on sound levels) for general nuisance noise such as that associated with stationary equipment located on private property.

City of Vista

The City of Vista regulates construction activity noise by limiting the hours of operation. Whenever a construction site is within 1,000 feet of any residential, hotel, motel, hospital or

similar facility, grading activities shall be conducted between the hours of 7:00 a.m. and 5:00 p.m. Monday through Friday, and 8:00 a.m. to 4:00 p.m. on Saturday.

City of Oceanside

The City has established noise guidelines in the Noise Element of the City's General Plan. These limits are applicable to transportation noise sources. The noise guidelines identify compatible exterior noise levels for various land use types. Residential uses are considered compatible with an exterior CNEL of up to 65 dB. Commercial and light industrial uses are not noise sensitive and the City does not have exterior noise standards for these uses.

Non-transportation noise sources are subject to the City's Noise Control standards (Municipal Code Chapter 38). The noise limits are in terms of a one-hour average sound level. The allowable noise limits depend upon the City's zoning district and time of day. The noise limits for various zones are depicted in *Table 4.9-1*. The sound level limit applies at any point on or beyond the boundary of the property on which the sound is produced. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two zones.

**TABLE 4.9-1
MAXIMUM ALLOWABLE ONE-HOUR AVERAGE SOUND LEVEL**

Zone	Time of Day 7:00 a.m. to 9:59 p.m.	Time of Day 10:00 p.m. to 6:59 a.m.
Residential (RE, RS, RM)	50 dB	45 dB
Residential (RH, RT)	55 dB	50 dB
Commercial	65 dB	60 dB
Industrial (IL)	70 dB	65 dB
Downtown (D)	65 dB	55 dB
Agricultural (A)	50 dB	45 dB
Open Space (OS)	50 dB	45 dB

The City's Grading Ordinance (Ordinance No. 81-20) states that grading and equipment operations within 0.5-miles of a structure used for human occupancy can only be conducted Monday through Friday between the hours of 7:00 a.m. to 6:00 p.m. Further, the noise levels associated with any construction equipment should not exceed 85 dB at a distance of 100 feet (City of Oceanside 1974).

4.9.2 Existing Conditions

The existing noise environment varies widely throughout the offsite pipeline project area, generally ranging from quiet uninhabited areas to urban residential. Major noise sources in the project area consist of vehicular traffic on local roadways, occasional aircraft flyovers, noise from students at schools, as well as noise associated with nearby industrial and commercial uses. The primary traffic noise sources in the area include Interstate 5, State Route 78, El Camino Real, Melrose Drive, Palomar Airport Road, Carlsbad Boulevard, College Boulevard, and Cannon Road. Other noise sources include passenger and freight trains along the SDNR railway and airplanes approaching and leaving McClellan-Palomar Airport. Land uses in the project vicinity vary widely and include single and multi-family residential, offices, business industrial parks, commercial, industrial, open space and parks.

Noise measurements were conducted along the proposed offsite pipeline project area to determine the approximate ambient daytime noise level. The measured average sound level varied from 41 to 68 dB. The greatest noise levels resulted at noise measurement sites that were exposed to traffic noise from Melrose Drive and Cannon Road. The lower noise levels were at sites where there was no traffic nearby or within residential areas such as Site 6 near Redwood Crest, or Site 8 at the existing terminus of Faraday Avenue in the City of Vista. The noise measurement results are depicted in *Table 4.9-2*.

TABLE 4.9-2. MEASURED NOISE LEVELS

Site	Location	L _{eq} (dB)
3	Cedar Lane Park	67
4	Breeze Hill Park	68
5	Cannon Rd. and Wisteria Dr.	62
6	Along alignment near Redwood Crest	41
7	Melrose Dr., south of Shadowridge Dr.	66
8	Faraday Avenue, west of Brookhaven Pass	49

Source: Dudek & Associates, Inc., 2004

4.9.3 Significance Criteria

The following criteria are used to determine the significance of an impact:

- 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. Thresholds applicable to each jurisdiction are outlined in *Section 4.9.1, Introduction/Methodology*;
- Exposure of persons to or generation of excessive groundbourne vibration or groundbourne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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; or
- 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.

4.9.4 Impacts

Potential noise impacts are commonly divided into two groups; short-term/temporary and long-term/permanent. Temporary impacts are usually associated with noise generated by construction activities. Short-term acoustic impacts are those associated with construction activities necessary to build the desalinization plant, pipeline facilities and pumps. Construction related noise occurs on two levels. The transport of workers, equipment and materials to the construction areas may incrementally increase traffic resulting in increased noise levels along roadways leading to and from the construction sites. Second, the noise generated by the actual on-site construction activities may also alter ambient noise levels.

Long-term impacts consist of noise generated from operation and maintenance of the project facilities and the effects that the noise has on surrounding land uses.

Short-Term/Temporary Impacts

Noise generated by construction equipment will occur with varying intensities and durations during the various phases of construction. The equipment operates in alternating cycles of full power and low power, thus, producing noise levels less than the maximum level. The average sound level of the construction activity also depends upon the amount of time that the equipment operates and the intensity of the construction during the time period.

Desalination Plant

The construction activities at the on-site facility would include the demolition of the on-site fuel storage tank, earthwork, building structures, trenching and pipe laying, paving and landscaping. The construction equipment would depend on the phase on construction. The greatest amount of equipment operating at the site would be during the earthwork and the building structure phases. Equipment would include approximately 3 excavators, 3 backhoes, 3 loaders, 2 graders and 2 compactors during the earthwork phase, and 3 cranes, 2 cement mixers, 4 forklifts, 1 aerial lift, 1 generator set and 4 welders when building the structures. Other types of equipment that would be used during different phases would include pumps, pavers, rollers, pile drivers, trenchers and a drill rig.

The closest residences would be located approximately 450 feet or more from the closest onsite ancillary facility construction area and more than approximately 1,800 feet from the proposed desalination plant. At both distances the maximum noise level would be approximately 70 dB or less. All construction activity will be limited to the City of Carlsbad's permitted hours of construction. Therefore impacts from onsite construction activities would be less than significant since the impact would occur only during permitted construction hours and would represent only a minor temporary increase in noise levels in the project vicinity.

Heavy trucks will be used to deliver materials to the site and remove soil and demolition materials. The number of heavy truck trips will vary considerably depending on the construction activity. The greatest number of trucks would occur during the assumed simultaneous construction of the desalination plant, intake pump station, and intake and discharge pipelines. The heavy trucks generated by the simultaneous activity would be 78 Average Daily Trips (ADT) during the approximate twenty-four month construction period. In the vicinity of the site, heavy truck traffic is anticipated to utilize Cannon Road, Carlsbad Boulevard, Interstate 5, Faraday Avenue, Palomar Airport Road and El Camino Real.

Construction traffic noise levels were calculated using Caltrans SOUND32 traffic noise model (Caltrans 1983) with California vehicle noise emissions (Caltrans 1987). Assuming worst-case that all the heavy trucks used the same route and the construction noise would generate a noise level of approximately 55 dB CNEL at a distance of 50 feet from the road. This noise level would result in a less than significant noise impact, since it would not exceed the applicable significance thresholds related to compliance with existing noise standards, and would not result in substantial temporary increases in noise levels.

Water Supply Pipelines

The project would include construction of a new water supply pipeline extending from the project site easterly into the City of Vista and northerly into the City of Oceanside. Various pipeline routes are included in this analysis, not all of which will ultimately be constructed. Existing residences are located along portions of the proposed pipelines. Residents are generally located along the portion of the pipelines that would be in the City of Vista and City of Oceanside, except for portions of Cannon Road and College Boulevard alignments in the City of Carlsbad, which are adjacent to homes.

Methods of construction would include open trench and trenchless installations. Construction along the pipeline corridor would be carried out in several phases, each of which would utilize a unique mix of equipment and consequently would generate a unique mix of noise characteristics. Construction phases associated with the open-cut pipeline installing would include trenching, pipe laying, backfill/compacting and pavement reinstatement.

Based on a review of the preliminary construction equipment list provided by the project engineer, the primary noise sources would include excavators, backhoes, loaders, dump trucks, cranes, welders, crew and delivery trucks, water trucks, and roller compactors.

The majority of the pipeline construction near residences would be completed using open trench methods within roadway rights-of-way such as Melrose Drive and Cannon Road. These areas are generally subject to relatively high ambient noise levels due to existing traffic noise. Near Maerkle Reservoir, the pipeline construction would occur within a utility easement, undeveloped land or residential roads. These areas are within a relatively quiet area. The closest noise sensitive receivers are generally located adjacent to the pipeline utility corridor and residential roads within the Shadowridge Community in Vista and Ocean Hills Community in Oceanside. The residences would be approximately 40 to 50 feet from the proposed pipeline construction area. At this distance, the maximum noise levels would range up to approximately 85 dBA. The average sound level for an eight-hour work day would be expected to be substantially less

because of the intermittent nature of construction work, and would range up to approximately 75 dB. The duration to complete any phase of the open trench phases of the project such as trenching, backfilling, etc., will vary, but, would typically proceed at a rate of approximately 75 feet per day. Thus, the forward progression of construction activities would mean that the noise impact may last for only two to three days at any one location. The construction activities would comply with the local jurisdictions' noise ordinance for allowable hours. Because the project will be required to comply with construction noise restrictions and would be short in duration, it is not anticipated that excavation and installation of the pipelines using open trench installation methods would result in a significant noise impact, based on the applicable significance criteria.

Trenchless methods would be used at several areas. Three types of trenchless methods consisting of microtunneling, horizontal directional drilling and auger boring may be used. Microtunneling generally involves excavating an entry pit and receiving pit. Next, a microtunneling machine starts from the entry pit and the machine and pipe segments are jacked forward by a hydraulic jack to the receiving pit. Horizontal directional drilling is a two-stage process that consists of drilling a small diameter pilot directional hole and then developing the pilot hole into a suitable sized bore hole that will accommodate the new pipe. The pipe is pulled back into place. Auger boring forms a bore hole between shafts by means of a rotating cutting head. Auger boring is typically a two-stage process: the pipe casing is jacked in place and the water pipe is installed inside the casing. The annular space between the pipe and casing is filled with grout.

Noise impacts associated with trenchless operations are similar to open trench pipeline construction. However, rather than the construction noise progressing linearly, the noise would be confined to the excavated pits. Thus, noise impacts could last for several weeks rather than a few days at the areas adjacent to the pits. Trenchless equipment would most likely include a microtunneling machine, auger/drill, a crane, front end loader, ventilation fans, air compressor, pumps, and dump trucks. Excavating the pits would generally be the most intense noise source. Thereafter, the noise impact would be less intense, but, a persistent noise source.

The trenchless methods would generally be limited to areas adjacent to major road crossings, railroad crossings, utility crossing and creek crossings. There are several areas where trenchless methods would be used near noise sensitive receptors (approximately 50 feet from existing residences in these locations). The locations are: 1) the area at the bridge on Melrose Drive and Agua Hedionda Creek in the City of Vista, 2) the area along Cannon Road just west of El Camino Real, 3) on Cannon Road near Faraday Avenue, 4) College Boulevard and AT&SF railroad, and 5) Hwy 78 crossing at Thunder Road. The closest residence in any of these locations would be located approximately 50 feet from a receiving pit.

Noise will be generated primarily during the excavation of the launch and receiving pits. The closest residences have existing sound walls that attenuate noise from the roadway, and would serve to also attenuate construction noise. It is not anticipated that the construction noise would exceed the existing ambient traffic noise in these locations. In addition, the construction noise would be restricted based on the requirements of the local jurisdiction relative to construction noise and would therefore not exceed established standards. Therefore, the noise impact is not anticipated to be significant.

Heavy trucks would be used to deliver materials along the pipeline corridor and remove soil. The heavy truck traffic associated with pipeline construction would generate a maximum 216 average daily trips (ADT). There are several potential haul routes including Melrose Drive, College Boulevard, El Camino Real, Cannon Road and Faraday Avenue. Assuming a worst-case scenario that all the heavy trucks are distributed along one road, the construction noise would generate a noise level of approximately 59 dB CNEL at a distance of 50 feet from the road. This noise level would not result in a significant noise impact, because it would not exceed ambient noise levels along these routes, and would therefore not exceed the applicable significance thresholds related to compliance with existing noise standards, and would not result in substantial temporary increases in noise levels.

Vibration

Construction activities such as blasting, pile driving, and demolition that may be associated with activities proposed at the desalination plant have the potential to generate ground vibrations. These activities are not proposed to be conducted in close proximity to residences or other sensitive structures or uses. Therefore, the equipment used for construction would not generate significant vibration levels, and would not result in the exposure of persons to or generation of excessive groundbourne vibration. Impacts would be less than significant.

Booster Pump Station

This off site booster pump station is located approximately 1,000 feet west of the intersection of Oceanside Boulevard and Melrose Drive in the vicinity of the City of Oceanside's equipment yard. This location is associated with the Faraday, or blue, alignment, as described in *Section 3.0* and shown on *Figure 3-5*. Multi-family residences are located on the north side of Oceanside Boulevard. Single family residential uses exist on the southwest corner of this intersection..

Construction equipment is expected to consist of a forklift, excavator, compactor, backhoe, crane, water truck and two concrete trucks. The closest residences to the pump station site would

be located approximately 180 or more feet from the site. The maximum noise levels associated with booster pump station construction would be approximately 75 dBA or less at the closest residence. The construction activities would comply with the City of Oceanside's noise criteria and would result in a less than significant noise impact.

Long-Term Operational Impacts

The project would construct several facilities at the Encina Power Station site including a building for a reverse osmosis process area, a product water pump station and a pretreatment filter area. The project would also include construction of a pump station located in the City of Oceanside. The facilities would contain mechanical equipment that would generate noise. A preliminary facility design and mechanical equipment list has been prepared by the project applicant. The noise levels are calculated using the maximum sound levels anticipated for the equipment based on the type and size of the equipment.

Intake Pump Station

A water intake pump station would be located near the southwestern corner of the power plant. The intake station would include three duty and one standby vertical turbine pumps. All the pumps would be rated at approximately 750 horsepower (HP) and would be installed along with auxiliary equipment outdoors on a concrete slab in a wet well structure approximately 30 feet below the grade of Carlsbad Boulevard. The pumps/motors would have a maximum sound level rating of 90 dBA at three feet.

The closest existing residence to the intake pump station would be located approximately 450 feet southwesterly from the pump station across Carlsbad Boulevard. There would be intervening topography that would block the line-of-sight to the residence. With all the equipment operating the noise level would be approximately 31 dB.

Pretreatment Filter Structure

The pretreatment facility would include filter service equipment (backwash blowers and pumps) and filtered effluent transfer pumps. The mechanical equipment would include two 150-HP centrifugal blowers and two 180-HP vertical turbine pumps. All the equipment would be located inside the reverse osmosis building discussed in the *Section 3.0* of this EIR. The maximum noise level of all the pumps and blowers would be 88 dB at three feet.

Product Water Pump Station

The water pump station would include five vertical turbine pumps (four duty and one standby) equipped with 550 to 600-HP motors. The water pumps and their auxiliary equipment would be located in the reverse osmosis building discussed in *Section 3*. The maximum noise level of all the pumps would be 88 dB at a distance of three feet.

Membrane Cleaning System

The membrane cleaning system would include membrane cleaning pumps (three 80-HP duty and one standby), storage tank mixing blowers (one 50-HP duty and one standby), flush pumps (two 150-HP duty and one standby), mechanical mixers (1-HP motor), and sewer system transfer pumps (one 25-HP duty and one standby). All the equipment would be located inside the membrane cleaning room of the reverse osmosis building discussed in the *Section 3.2.7*. The maximum noise level of all the pumps, blowers and equipment would be 88 dB at three feet.

Chemical Feed Equipment

The chemical feed facility would include mixers and chemical feed pumps. The mechanical equipment would include 15 duty and 7 standby pumps/motors ranging from 30 to 150-HP. The chemical day tanks and the pumps for all chemical feed systems would be located in the chemical feed room of the reverse osmosis building discussed in the *Section 3.2.7*. The maximum noise level of all the pumps and other equipment would be 88 dB at three feet.

Service Facilities

Service facilities for the desalination plant would include miscellaneous small service equipment such as sump pumps, storm drain pumps as well as a Heating, Ventilation and Air Conditioning (HVAC) system for the reverse osmosis building. The equipment, other than some of the HVAC equipment, would be located inside the reverse osmosis building. The maximum noise level of all the pumps and other equipment would be 88 dB at three feet.

Solids Handling Equipment

The solids removed from the source seawater during the pretreatment process will be settled and dewatered on site in a solids handling system. The equipment would consist of four sludge removal 50-HP pumps (two duty and two standby) located outdoors, adjacent to the settling tanks. Two 150-HP belt presses, two 2-HP clarifier sludge collection mechanisms, two 10-HP

sludge chemical conditioning system and two 60-HP sludge conveyors will be located inside the solids handling building, a new structure that would be constructed in one of two possible locations shown on *Figure 3-6*. The maximum noise level of all pumps and other equipment would be 88 dB at three feet.

Reverse Osmosis Process Area

The reverse osmosis process area would be located inside a cast-in-place concrete and steel building. A preliminary design plan indicates that building would include roll up doors, entry doors, louvers, and windows.

The building would house noise generating equipment including 13 high pressure reverse osmosis vertical turbine pumps (up to 3,500 HP with one standby), 13 filter effluent transfer pumps (350-HP with one standby), 13 energy recovery turbines (with one standby), five product transfer pumps (see *Section 3.2.3*), two centrifugal backwash blowers and two filter backwash pumps (See *Section 3.2.2*). The high-pressure reverse osmosis pumps and energy recovery turbines would have a maximum sound rating of 90 dB at three feet. The remaining pump/motors would have a maximum sound level rating of 88 dB at three feet. Additional equipment that would be located in the Reverse Osmosis area has been previously identified in Sections 3.2.4, 3.2.5, 3.2.6 and 3.2.7.

Combined On-Site Equipment Noise Impacts on Sensitive Receptors

The closest existing residence to the reverse osmosis process area would be located approximately 1,850 feet southwesterly from the pump station across Carlsbad Boulevard. There would be intervening buildings that would block the line-of-sight to the residence.

Without consideration of noise attenuation features that exist on the site, and/or are proposed with the project, including intervening structures and topography, the noise sources described in the preceding discussion would generate a combined noise level approximately 58 dB CNEL at the closest residential property. With the inclusion of noise attenuation provided by intervening structures as well as the proposed on-site structures the noise level would be less than approximately 35 dB CNEL at the closest residential property. As such, implementation of the proposed project is not anticipated to substantially increase the ambient noise level at the closest residences or generate noise levels in excess of the City's noise criteria. Thus, the operational noise impact is considered less than significant.

Off-Site Booster Pump Station

A booster pump station would be located approximately 1,000 feet west of the intersection of Oceanside Boulevard and Melrose Drive. There would be four duty and one standby vertical-turbine pumps with 150-HP motors. The maximum sound level rating for the pumps would be 90 dB at a distance of three feet. The pumps would be installed inside a concrete building. The block building would attenuate the noise. However, the level of noise attenuation will depend on the design of any air duct work, sound attenuators, louvers, and doors among other building features.

The property boundary of the closest existing residences is located approximately 180 feet north of the pump station across Oceanside Boulevard. The proposed pump station site is zoned limited industrial (IL). The closest residential property is zoned high density residential (RH). The applicable noise level limits at the residential property are that the hourly average sound level shall not exceed 62.5 dB between the hours of 7:00 a.m. to 9:59 p.m., and 57.5 dB between the hours of 10:00 p.m. to 6:59 a.m. Assuming worst-case that standard louver openings would face to the north, the mechanical equipment noise associated with the pump station would reach approximately 50 dB at the residential property boundary. This noise level would not exceed the City's noise criteria. Therefore, the noise impact would be less than significant.

Truck Traffic and Employee Traffic During Plant Operations

The plant will require heavy truck deliveries of chemicals, disposal of waste solids, solid residuals, and supply of equipment and spare parts. As shown in *Table 4.10-5* of the Traffic Section of this DEIR, under worst case scenario, the chemical delivery may require 4 truck trips, disposal of waste solids – 1 truck-trip; solids residual – 6 truck-trips and delivery of equipment and parts – 1 truck trip, for a total maximum of 12 daily truck-trips. In addition, the desalination plant would have an approximately eight employees on-site working regular day shift hours on weekdays. Assuming a worst-case scenario combination of six trips for each of the 8 employees and a total of 30 visitors, each visiting once with a personal vehicle at 2 trips/visit, the total of number of daily vehicle round-trips is 108. The combined number of truck and personal vehicle trips under worst case scenario is 120. There would be fewer employees during the nights and on weekends. The noise generated by the truck traffic and employees is not anticipated to be perceptible, considering the existing traffic volumes on surrounding roadways. The project-related traffic noise would not create a substantial permanent increase in ambient noise levels in the project vicinity above existing levels, and would therefore not result in a significant impact.

4.9.5 Mitigation Measures

Since no significant impacts related to noise issues have been identified, no mitigation measures are required.

4.9.6 Level of Significance After Mitigation/Residual Impact

Project noise related impacts would be less than significant.