

CHAPTER 12

NOISE

Issues related to potential noise impacts from the proposed Project are discussed in this chapter. As discussed in Chapter 3, the proposed Project includes the Bulk Materials Processing Center (BMPC) use permit changes and related actions. The analysis and evaluation of potential impacts includes a review of surrounding land use, discussion of potential sensitive receptors, and characterization of existing and projected noise levels.

A. SETTING

The discussion in this section includes a review of the basic characteristics of environmental noise and a summary of surrounding land use and existing noise environment. For purposes of this discussion, the Environmental Impact Report (EIR) for closure of the West Contra Costa Sanitary Landfill (WCCSL) Hazardous Waste Management Facility (HWMF) is incorporated by reference pursuant to Section 15150 of the California Environmental Quality Act (CEQA) and summarized below.³³ The HWMF is located within the WCCSL adjacent to the Class II landfill/BMPC site.

1. Fundamental Concepts of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is intensity of sound waves combined with the reception characteristics of the human ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales, that are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement that indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 dB represents a ten-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical acoustical terms are defined in Table 12-1.

Table 12-1. Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 miscronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Noise Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01} , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1 percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 dB in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 dB to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn} or DNL	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 dB to levels measured in the night between 10:00 p.m. and 7:00 a.m.
L_{max} , L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Illingworth & Rodkin, Inc., February 2003.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level or dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 12-2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq} . The most common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise depending upon the distance the receptor is located from the noise source. Close to the noise source, the models are accurate within about plus or minus 1 or 2 dBA. As a general guideline, a 6 dBA reduction in noise level can occur for every doubling of distance, depending on land uses and weather conditions.

New noise is evaluated by comparing it to the existing noise environment, called the “ambient noise level.”⁶ In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers.

Changes in A-weighted noise level are perceptible as follows:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside the laboratory, a 3 dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly result in community response, recognizing an adverse change in their environment.

Since the sensitivity to noise increases during the evening and at night—because it is quieter than the day and excessive noise interferes with the ability to sleep—24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level, CNEL*, is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 p.m. to 10:00 p.m.) and a 10 dB addition to nocturnal (10:00 p.m. to 7:00 a.m.) noise levels. The *Day/Night Average Sound Level, L_{dn}* , is essentially the same as CNEL, with the exception that the evening time period is excluded and all occurrences during this 3-hour period are grouped into the daytime period.

Table 12-2. Typical Sound Levels Measured in the Environment and Industry

At a given distance from noise source	A-weighted sound level in decibels (dBA)	Noise environments	Subjective impression
	140		
Civil defense siren (100')	130		
Jet takeoff (200')	120		Pain threshold
	110	Rock music concert	
Diesel pile driver (100')	100		Very loud
	90	Boiler room Printing press plant	
Freight cars (50')			
Pneumatic drill (50')	80		
Freeway (100')		In kitchen with garbage disposal running	
Vacuum cleaner (10')	70		Moderately loud
	60	Data processing center	
Light traffic (100')			
Large transformer (200')	50	Department store	
	40	Private business office	Quiet
Soft whisper (5')	30	Quiet bedroom	
	20	Recording studio	
	10		Threshold of hearing
	0		Silent

Source: Illingworth & Rodkin, Inc., February 2003

2. Existing Conditions

The WCCSL is located partially in the City of Richmond (City) and partially in the North Richmond unincorporated area of Contra Costa County (County) at the end of Parr Boulevard near San Pablo Bay. As discussed in Chapter 4, the site is surrounded by non-noise sensitive activities, including a variety of industrial facilities and open space. The nearest residential development is located in North Richmond, approximately 1 mile to the southeast. Implementation of the Public Access Trail (Trail) would expose users to Project activities at varying distances around the perimeter of the facility. Finally, there are residences (single and multi-family) scattered along Richmond Parkway north and south of the WCCSL (Figure 4-2).

A variety of measurements were taken in 1996 in support of the noise impact assessment for the HWMF EIR.³³ Noise levels along the Trail ranged from 50 to 58 dBA (L_{eq}), 52 to 72 dBA along the south side of the WCCSL near Area A, 70 to 78 dBA near the landfill gas (LFG) power plant, and 51 to 56 dBA at the residential area about 1 mile from the WCCSL to the southeast. Activities at the WCCSL have not changed significantly since 1996. Therefore, these noise data are relevant.

A visit to the existing single-family residential neighborhood located about 1 mile to the southeast of the site during December 2002 revealed that noise from the existing WCCSL operation is not audible at this location. Noise levels nearer the WCCSL are dominated by various activities that take place on site and in other facilities near the WCCSL. Chief among these are the sound of trucks driving to and from the WCCSL, the sound of large earthmoving equipment operating in the landfill, the sound of the existing LFG power plant, and the sound of the existing concrete/asphalt processing facility.

For this EIR on the proposed Project, spot noise measurements were taken at various locations along the southern and western property boundaries to characterize the existing noise environment at the WCCSL. It was not possible to access the north boundary of the site because extremely wet conditions made this area impassable. Along the south boundary (and Phase 1 alignment of the Public Access Trail [Trail]), approximately 1,365 feet from the LFG power plant, the average sound level was 57 to 58 dBA with the noise level dominated by the sound of the generators at the LFG power plant. Farther west along the southerly boundary (and Phase 1 Trail alignment), approximately 3,900 feet from the LFG power plant, average noise levels were about 50 dBA. At this location, the sound of backup beepers from equipment operating on top of the landfill reached 53 dBA, and the sound of the equipment at the LFG power plant was about 45 dBA. In this southern area, noise levels generated by aircraft overflights, distant equipment at the Chevron Refinery, and traffic on Richmond Parkway generated as much noise as activity at the WCCSL.

Noise levels along the northerly perimeter of the site would be similar to those along the west boundary except near the existing concrete/asphalt processing facility. In this area, noise levels would be expected to reach about 85 dBA at a distance of 100 feet from the facility. In

summary, noise levels at the WCCSL operation are significant only in the close proximity and do not impact any existing noise sensitive receptors.

Continuous 24-hour measurements were also made along Richmond Parkway north and south of Parr Boulevard to provide information on the existing noise levels due to truck and automobile traffic on the Parkway. One measurement was made south of Parr Boulevard at Gertrude Avenue near a residential use at a distance of 210 feet from the centerline of Richmond Parkway and the other measurement was made along Goodrick Avenue north of Parr Boulevard at a distance of 350 feet from the centerline of Richmond Parkway. Noise measurements at these locations indicate that there is a high level of activity on Richmond Parkway, even during the nighttime hours. The DNL at these locations was 66 dB. The hourly average noise level ranged from 60 to 66 dBA in the daytime and from 53 to 60 dBA at nighttime.

B. REGULATORY AND PLANNING FRAMEWORK

The state and local regulatory and planning framework for noise abatement is provided below.

1. State

Title 14 of the California Code of Regulations (14 CCR) and 27 CCR provide regulatory framework for noise abatement at landfills, and composting and transfer/recycling facilities, as follows:

- 27 CCR §20840. Noise at landfills shall be controlled to prevent health and safety hazards to persons using the site and nearby residents.
- 14 CCR §17867. All composting activities shall be conducted in a manner that minimizes noise impacts.
- 14 CCR §17408.3. Noise shall be controlled at transfer/processing facilities to prevent health hazards and to prevent nuisance to nearby residents. Measures to control noise include, but are not limited to: posting of warning signs that recommend or require hearing protection; separation by barriers that limit access to authorized personnel only; or enclosures to reduce noise transmission. Compliance with specific provisions regarding noise control in a local land use approval, such as a conditional use permit or CEQA mitigation measures, shall be considered compliance with this standard.

2. Local

The Project vicinity is subject to both the requirements of the County General Plan and the City General Plan. These general plans contain noise elements that describe the goals and policies of the County and City for controlling noise, as summarized below. The North Richmond Shoreline Specific Plan does not contain a planning framework for noise as does the County and City General Plans, but rather specifies that all activities and uses in the plan area must meet the standards of operation which are detailed in the City Zoning Ordinance. The Zoning Ordinance is discussed in subsection c.

a. County General Plan Noise Element. The Noise Element of the County General Plan contains the following policies applicable to the Project:

- 11.1 New projects shall be required to meet acceptable exterior noise level standards as established in the Noise and Land Use Compatibility Guidelines.
- 11.2 The standard for outdoor noise levels in residential areas is a DNL of 60 dB.
- 11.3 Public projects shall be designed and constructed to minimize long-term noise impacts on existing residents.
- 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.

The Noise Element does not contain guidelines for the amount of noise considered compatible with open space or trails. The closest category contained in the Noise Element would be playgrounds and neighborhood parks, which are considered to be compatible with an L_{dn} of up to 70 dB without mitigation.

b. City General Plan Noise Element. The City's General Plan Noise Element contains goals and policies similar to those in the Noise Element of the County General Plan:

- NE-A.1 Discourage development, where such development will significantly increase existing noise levels, unless mitigation measures are designed as part of the project to limit noise emissions to an acceptable level compared to the existing sound level.
- NE-A.6 Require new commercial and industrial development with potential noise and vibration-producing activities to provide noise study reports

by a qualified professional with demonstrated experience in noise control engineering.

- NE-A.9 Seek to limit the impact of nuisance noise sources upon noise-sensitive land uses and consider noise and vibration impacts to land use planning decisions.
- NE-A.10 Require parties responsible for noise producing sources or activities to limit noise that affects nearby noise-sensitive land uses.

As with the County General Plan Noise Element, the City General Plan Noise Element contains the same guidelines for establishing the compatibility of land uses with various noise environments. Public trails are not included in the matrix, but again, playgrounds or neighborhood parks, which are the closest similar use to the Trail, are considered to be compatible up to an L_{dn} of 70 dB without mitigation.

c. City Zoning Ordinance. The City Zoning Ordinance sets forth the following standards applicable to the BMPC:

- Zoning Section 15.04.840.170, Hours of Operation Standards: Industrial and manufacturing operations close to residential land uses shall discontinue operations which produce noise levels above 60 dBA between 10 p.m. and 7 a.m.
- Zoning Section 15.04.840.190, Construction Operation Standards: All construction and transport equipment shall be muffled in accordance with state and federal laws. Grading and pile driving operations shall be limited to between 7 a.m. and 7 p.m.
- Zoning Section 15.04.840.020, Noise Standards: This performance standard identifies the maximum noise levels not to be exceeded at various types of land uses for more than 30 minutes in an hour. The standards are based on 21 CCR and 24 CCR. For residential land uses, the maximum allowable noise level is 60 dBA, L_{50} . The maximum allowable noise levels are lowered by 10 dBA between 10 p.m. and 7 a.m. Noise generated by movement of railroad equipment and warning devices are excluded from this performance standard.

The City has adopted the above performance standards from the City Zoning Ordinance into the Municipal Code.

d. County and City Use Permits. County and City Use Permits for the BMPC require the Applicant to manage the BMPC in the manner that minimizes noise impacts to sensitive receptors in the area. If noise complaints are received, the Applicant is required to conduct monitoring and, if necessary, implement noise reduction measures. BMPC vehicles are required to be equipped with the best available noise suppressing equipment to minimize sound generation.

C. SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines indicates a project will normally have a significant noise and vibration impact if it will:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Expose persons or generate excessive groundborne vibration or groundborne noise levels.
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Create 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, expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, expose people residing or working in the area to excessive noise levels.

For purposes of this evaluation, 3 dB increase in ambient noise levels over those existing without the Project at a sensitive land use would be considered a significant impact.

D. IMPACTS AND MITIGATION MEASURES

Potential noise impacts associated with the proposed Project are discussed below. It should be noted that previous CEQA documents on existing WCCSL and BMPC activities have not identified significant noise impacts or required mitigation. These documents include the EIR on the West County Integrated Resource Recovery Facility (1991),⁹ Initial Study and Mitigated Negative Declaration (IS/MND) on the WCCSL Soil Remediation Facility (1995),¹³ the IS/MND on the WCCSL Solid Waste Facilities Permit and Landfill Closure and Postclosure Plans (1996),²³ and the EIR on the WCCSL HWMF Closure and Postclosure Plans (1998).³³ Health and safety issues associated with increased noise levels are discussed in Chapter 11 of this EIR.

1. Impacts Considered not to be Significant

Significance criteria applicable to noise impacts are discussed in Section C. Criteria that are not applicable to the proposed Project relate to a project's location within an airport land use plan or in the vicinity of a private airstrip.

2. Noise and Vibration

IMPACT 12-1. The proposed Project would involve expanded activities and equipment usage, expanded hours of operation, as well as relocated operations, which could result in increased noise levels in excess of standards and/or a permanent increase in ambient noise levels. This impact is considered to be less than significant.

The proposed Project includes expanded operations (hours, material types, and quantities) of existing facilities, several new operations, relocation of the concrete/asphalt processing facility to the western portion of the landfill's central plateau, a new Waste Recycling Center (WRC), and extended landfill operations (height increase). Table 3-2 summarizes the proposed facility operating hours. Appendix 3-J provides detailed information on existing and proposed equipment usage.

It can be seen from the data in Appendix 3-J that, with the exception of three crawler tractors associated with the WCCSL operation, future equipment to be operated on site would be essentially the same as it is today. The elimination of the crawler tractors would not result in a measurable change in noise emissions generated at the site. Similarly, the proposed relocation of the Concrete/Asphalt Processing Facility to the landfill plateau would not result in any significant changes in offsite noise levels and not at any existing noise-sensitive receptors. This is due to the fact that this equipment is located already at a considerable distance (over a mile) away from the nearest existing residential area and that the slight change in distance associated with relocating this activity would make no difference in sound levels a mile away. The mixed waste processing area would be operated within the WRC building and similar operations now occurring in an exposed area (e.g. the Waste Shuttle Facility) on the landfill's central plateau would cease. Also, the noise generated by the LFG power plant is the most likely facility to be noise heard off site, and the noise at this facility would not change as a result of the proposed Project.

During 1993, the Applicant completed a noise assessment for the Composting Facility involving an operating grinder, the loudest individual piece of equipment operated at the WCCSL. Table 12-3 summarizes the noise measurements that were recorded.

Table 12-3. Noise Measurements at the Composting Facility (1993)

Noise	20-foot distance	40-foot distance	1,700-foot distance ^a
Operating grinder and track-hoe excavator	95 dBA ^b	86.2 dBA ^c	69.7 dBA ^d
Background without grinder or excavator operation	--	--	71.7 dBA

Notes:

- a. Monitoring location was at the bottom boundary of the WCCSL site and within line-of-sight of the equipment. The background measurement was taken when operation of the composting equipment and all landfill operations on the south side of the landfill were temporarily suspended. Off-site activities may have contributed to the slightly higher noise measurement for background sources.
- b. 30-second measurement.
- c. 5-minute measurement.
- d. 10-minute measurement.

Source: Harding Lawson Consultants, reference 4.

The measurement made at the 1,700-foot distance without the grinder or excavator operation indicates that other equipment in the area (most likely the LFG power plant) is dominating the noise environment. Accounting for standard noise reduction with distance, the grinder operation would have generated a noise level of approximately 53 dBA at this distance. This noise level is far below the noise generated off site due to the combination of other non-WCCSL activities and the LFG power plant noise.

Extending the hours of operation of the onsite activity will result in no change in the noise levels measured at the nearest sensitive receptors a mile away because noise levels emanating from the site would continue to be dominated by the noise generated at the LFG power plant which operates 24 hours per day. The LFG power plant noise is not audible in the nearest neighborhood. It is concluded that the extension of the operating hours and the relocation of some activities on the site would result in no audible change in off-site noise levels or exposure.

Noise levels along the proposed Trail around the perimeter of the WCCSL site would be greatest along the portion of the Phase 1 Trail closest to the LFG power plant where noise levels of about 80 dBA would be expected. However, this would be only a temporary exposure for a few minutes as Trail users walk past this area. It is important to note that this Trail is required by the City and County use permits and specified in the North Richmond Shoreline Specific Plan. Otherwise, the vast majority of the Trail would be exposed to an L_{dn} of less than 70 dBA. This noise level is consistent with the

requirements of the County and City Noise Elements. Lower noise levels would be experienced along the Trail alignment that borders the western and northern portions of the WCCSL due to the distance from operating equipment and noise buffering afforded by site topography.

The 340-acre WCCSL is a large area within an even larger industrial zone of North Richmond. Noise attenuation is afforded by the distance to sensitive areas as well as shielding provided by local topography. The Applicant maintains equipment mufflers in good operating condition as required by County and City use permits.

Control Measures Incorporated by Applicant: None.

EIR Recommendations:

MITIGATION MEASURE 12-1. None required.

IMPACT 12-2. The proposed Project could expose persons to excessive noise or vibration levels. This impact is considered to be less than significant.

Based on the above discussion in Impact 12-1, excessive noise levels would not be generated. Appropriate hearing protection devices would continue to be used by WCCSL personnel as required by OSHA regulations (Chapter 11). Based on a site reconnaissance, WCCSL operations do not generate perceptible ground vibration off site and this would not be expected to change as a result of the proposed Project (Richmond Parkway is a major industrial thoroughfare designed to accommodate truck traffic).

Control Measures Incorporated by Applicant: None.

EIR Recommendations:

MITIGATION MEASURE 12-2. None required.

IMPACT 12-3. The proposed Project could result in a temporary or periodic increase in ambient noise levels. This impact is considered to be less than significant.

Operation of the grinding equipment could be viewed as an occasional noise generating source, as discussed under Impact 12.1. Otherwise, various construction activities would be required for the proposed Project. These include rehabilitation and expansion of the Soil Remediation Building for the WRC and relocation of the concrete/asphalt processing operation and equipment maintenance building. These activities would temporarily increase ambient noise levels near the construction sites but these would not be audible off site. Potential impact on ambient noise level from Project traffic is discussed in Impact 12-4.

Control Measures Incorporated by Applicant: None.

EIR Recommendations:

MITIGATION MEASURE 12-3. None required.

IMPACT 12-4. The proposed Project would increase traffic on the local street system serving the WCCSL and would extend the hours that materials could be transported to the BMPC, thereby potentially exposing sensitive land uses adjacent to the roadways to new and increased ambient noise levels. This impact is considered to be less than significant.

Richmond Parkway and I-80/I-580 are designated truck routes. Traffic to and from the WCCSL site thereby avoid sensitive land uses. This roadway system serves the existing industrial facilities in the area, including during nighttime hours. Project facility operating hours are proposed to change as follows:

Maintenance, repair, and servicing of construction equipment	Change from 7:00 a.m. to 6:00 p.m. Monday through Saturday to 5:00 a.m. to 10:00 p.m.
Transporting of BMPC materials	Change from 7:00 a.m. to 5:00 p.m. daily to 24-hour
Operation of concrete processing equipment	Change from 7:00 a.m. to 5:00 p.m. Monday through Saturday to 5:00 a.m. to midnight
Chipping and grinding of wood	Change from 7:00 a.m. to 5:00 p.m. daily to 5:00 a.m. to midnight
WRC	All activities to occur 24 hours per day, 7 days per week.

The Applicant is proposing the same facility operating hours for the WRC as now permitted for the landfill (24 hours per day, 7 days per week).

Chapter 8, Traffic and Circulation, includes an analysis of traffic impacts associated with the proposed Project. As illustrated on Figure 8-5, during the WCCSL peak hour (10:00 a.m. to 11:00 a.m.) in 2015, the Project would generate 18 trucks per hour on the Richmond Parkway north of Parr Boulevard and 10 trucks per hour south of Parr Boulevard. At night, the Applicant estimates that the current 10 trucks per night would likely increase to over 30 trucks per night and occasionally more on a short-term basis, depending on the needs of the Applicant’s customers.

A conservative “worst-case” scenario for nighttime truck traffic was developed by the Applicant involving little or no waste diversion at the WRC, resulting in the need to

transfer haul 1,000 TPD of waste to the Potrero Hills landfill in Solano County. Five-hundred TPD could be hauled during daytime and 500 TPD would need to be hauled during nighttime. The travel route for the trucks would be Parr Boulevard and then northbound on Richmond Parkway to I-80. This scenario would involve eight transfer trucks leaving the WRC every third hour, beginning at 7:00 p.m., two every 15 minutes or eight per hour.

The Caltrans LEQV2 traffic noise prediction model was used to calculate the noise level increase expected due to the added truck traffic. Calculations indicate that hourly noise levels even during the quietest daytime or nighttime hour along Richmond Parkway would not increase by a measurable amount (less than 1 dBA) due to the additional truck trips. This is because noise levels at night are already substantial and the amount of acoustic energy added by the additional trucks would not be noticeable to the human ear. Thus, this impact is considered to be less than significant. Similarly, on the projected peak day of the year (Chapter 3, Table 3-3), noise levels are calculated to increase by 1 dBA, a less-than-significant impact.

Control Measures Incorporated by Applicant: None.

EIR Recommendations:

MITIGATION MEASURE 12-4. None required.

3. Impacts of Mitigation Measures

No mitigation measures were required in this section.

E. CUMULATIVE IMPACTS

The discussion and analysis of potential noise impacts in Section D addressed individual Project components as well as the entire Project in the context of the local setting. The WCCSL noise environment is dominated by the existing LFG power plant, and would not change as a result of the proposed Project. An operating grinder used at the Composting Facility is considered to be the loudest piece of equipment associated with existing and proposed Project activities. Measurements indicate that its continued use would not change offsite noise exposure at the nearest residential area. No significant cumulative impacts related to noise at the WCCSL would occur.

The traffic projections included under the cumulative traffic impact discussion (Chapter 8, Traffic and Circulation) was also evaluated for potential noise impacts. The projected noise level increases for the cumulative traffic in the study area, even under conditions

of an expanded Central Integrated Resource Recovery Facility (Central IRRF), are calculated to be less than 3 dBA along the Richmond Parkway and, therefore, less than significant.