D. Noise

Several noise assessments have been prepared for this project. The most recent studies were completed by Pacific Noise Control in January, 1995 and October, 1995. The following discussion is based on the studies included in Appendix I, the San Diego County General Plan and the San Diego County Zoning Ordinance. The following discussion will focus on noise impacts to human receptors. Potential noise impacts to the least Bell's vireo are discussed in the Biological Resources section of this FEIR.

1. Existing Conditions

Applicable Noise Limits

Community noise levels are measured in terms of the "A-weighted decibel" (dB(A)). Human hearing is more sensitive to sound energy at higher frequencies than at lower frequencies, and the relative sensitivity to different frequencies changes somewhat with the level of the sound. The dB(A) is a noise level that has been corrected to correspond to the noise frequencies to which the human ear is sensitive. Comparative noise levels for a variety of sound sources in the home, work, and ambient environments are summarized in Figure 73.

An average noise level for a specified time period is an "equivalent noise level" (L_{eq}). It can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level.

The Noise Element of the San Diego County General Plan establishes general noise exposure standards for determining land use/noise compatibility. These standards are described in terms of Community Noise Equivalent Level (CNEL), which is the average noise level for a 24-hour period. The CNEL standards are most frequently applied in describing the relationship of a relatively continuous noise source, such as traffic, to the desirable ambient noise level for the land use type. The CNEL is adjusted to reflect the greater sensitivity to noise intrusion during evening and night hours, with a 5 dB(A) penalty for noise occurring between 7:00 p.m. and 10:00 p.m. and a 10 dB(A) penalty for noise occurring between 10:00 p.m. and 7:00 a.m.

The above mentioned Noise Element establishes outdoor and indoor noise limits for new residential developments. The outdoor noise standard for exterior living areas for residential land use is 60 CNEL. The indoor noise standard for residential land use is 45 CNEL. Mining operations are relatively insensitive to noise, and therefore there are no standards regulating the noise impacting the mining site itself.

The San Diego Noise Ordinance also establishes other exterior noise standards. They are designed to protect residential and other land uses from non-transportation related noise sources. The noise limits are expressed in terms of a one-hour equivalent noise level (L_{eqh}). Sound level limits by zone are listed in Table 6.

Table 6. County of San Diego Noise Ordinance Sound Level Limits

Zone		Applicable Limit One-Hour Average Sound Level (Decibels)
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-88, S-90, S-92, R-V, and R-U Use Regulations with a density of less than 11 dwelling units per acre	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45
R-RO-R-C, R-M, C-30, S-86, R-V and R-U Use Regulations with a density of 11 or more dwelling units per acre	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50
S-94 and all other commercial zones	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55
M-50, M-52, M-54	Anytime	70
S-82, M-58, and all other industrial zones	Anytime	75

Section 36.404 of the Noise Ordinance discusses sound level limits applicable to various designated zones and it reads as follows:

> Unless a variance has been applied for and granted pursuant to this chapter, it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced, exceeds the applicable limits set forth below except that construction noise level limits shall be governed by Section 36.410 of this chapter.

The proposed site is zoned A-70 and the surrounding properties are zoned A-70, A-72, and S-88. Thus, under existing conditions, the area belongs to the first category shown in Table 6 with an applicable hourly L_{eqh} of 50 decibels from 7:00 a.m. to 10:00 p.m. and 45 decibels from 10:00 p.m. to 7:00 a.m.

By comparing the noise levels generated by the mining activities to the Noise Ordinance, the acceptability of the noise levels can be determined. Usually, the sound level is measured at the property boundary. If the location is between two zoning districts, the limiting sound level is the arithmetic mean of the limits for the two districts. For extractive industries, however, an exemption is made. Specifically the Noise Ordinance states "...the sound level limit applicable to extractive industries including but not limited to borrow pits and mines, shall be 75 decibels at the property line regardless of the one where the extractive industry is actually located." A Major Use Permit (MUP) is proposed which, if approved, would reclassify the site as an extractive use. Therefore, if approved, the proposed mining operation must not exceed a L_{eq} noise level of 75 dB(A) at the property boundary to be in compliance with the San Diego Noise Ordinance.

Existing Noise Levels

The Proposed Project site is located on a steep hillside covered with rock outcroppings interspersed with chaparral. The project area is best characterized as rural and undeveloped. Many of the surrounding hillsides are planted with grove crops. Houses are scattered among the hillsides and flatter areas. Three of the houses are located in relatively close proximity to SR-76 between the project site and Interstate 15. One home is located on top of a knoll approximately 1,000 feet east of Interstate 15 and 400 feet south of SR-76, and two existing farm worker homes are located on Pankey Ranch approximately 50 feet north of SR-76 between the project site and I-15.

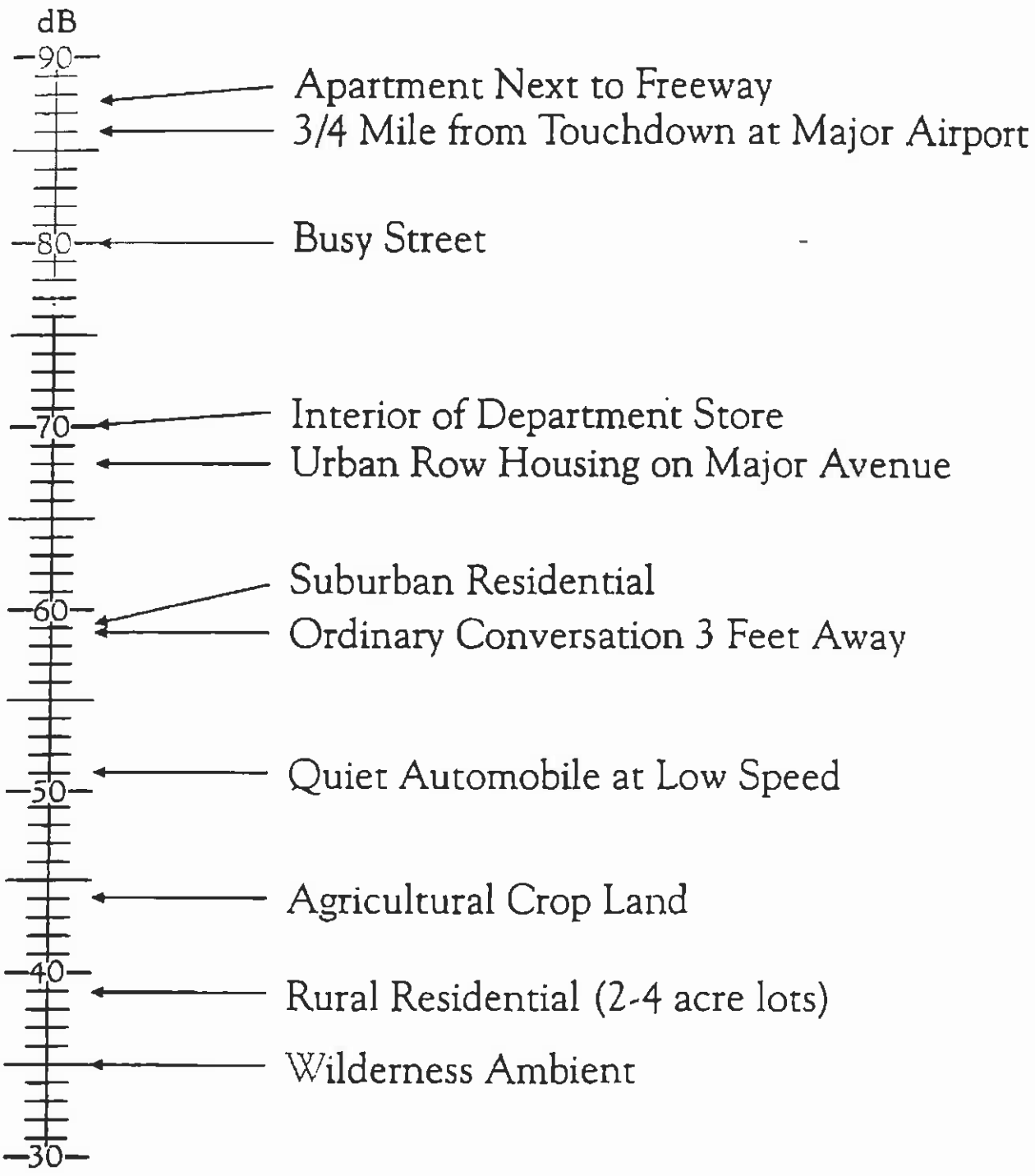
The primary source of noise in the project site vicinity is vehicular traffic along State Route 76 (SR-76). The current traffic volume on SR-76 east of the Interstate 15/SR-76 interchange is 4,800 ADT (Willdan Associates 1995). Tables 7 and 8 depict the existing and the existing plus project CNEL noise contours west of the project site. The noise contours are based on the results of the long-term noise measurement and assume vehicle speeds of 55 mph, without the s-curve, and no intervening topography or barriers.

A long term noise measurement was conducted adjacent to SR-76 between October 10, 1995 and October 12, 1995 to assess existing noise conditions. The long-term noise measurement site was along the same segment of SR-76 as previously measured (Illingworth and Rodkin 1991). The sound level meter was positioned approximately 50 feet south from the center line of the road (Figure 74). The highest one-hour noise level was 70.0 dB L_{eq} and occurred between 7:00 and 8:00 a.m. on October 12, 1995.

The existing unattenuated noise levels due to traffic on SR-76 were calculated to be 70 dB(A) for both hard- and soft-site conditions, at 50 feet from centerline. Existing roadside conditions are characterized as soft-site, though this could change with future development west of the site pursuant to the I-15/SR-76 Interchange Specific Plan (see Land Use/Community Character section of this FEIR). Soft-site conditions occur when the intervening ground between the source and receiver is relatively flat and the ground cover is grass, loose dirt or soft ground. Hard site conditions occur when the intervening ground surface is reflective such as a parking lot or hard ground; or the average elevation difference between the source and receiver is approximately 10 feet or more. The approximate distance to CNEL contours for SR-76 are depicted in Table 7. The contour distances are shown for both hard and soft site conditions.

Table 7. Existing CNEL Noise Contours at the Project Site

Roadway	Distance to CNEL Contours		
	70 CNEL	65 CNEL	60 CNEL
Highway 76 (soft) (assumes soft site begins at 50 ft.)	50 ft.	85 ft.	180 ft.
Highway 76 (hard)	50 ft.	185 ft.	370 ft.



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Typical Sound Levels

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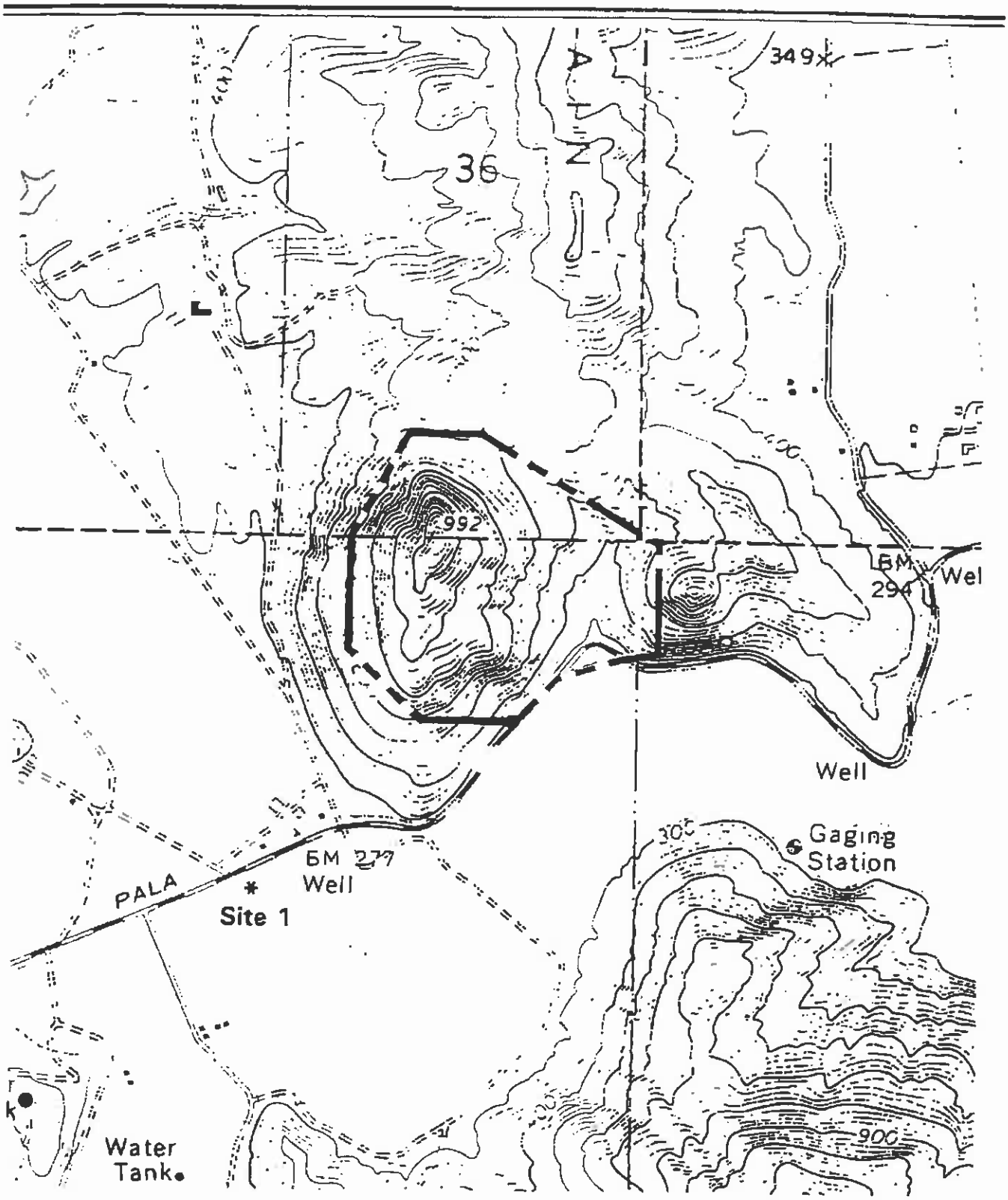
Figure 73



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Noise Monitoring Locations

Figure 74

Table 8. Existing + Project Noise Contours

Roadway	Distance to CNEL Contours		
	70 CNEL	65 CNEL	60 CNEL
State Route 76 (soft)	60 ft.	110 ft.	225 ft.
State Route 76 (hard)	70 ft.	185 ft.	495 ft.

2. Environmental Impacts

State Route 76 Traffic Noise

The proposed project would typically generate 514 ADT (Willdan Associates 1995). Total project traffic would consist of 452 heavy trucks and 62 automobiles. It is estimated that 18.75 percent of the heavy truck traffic would operate during the 7:00 to 8:00 a.m. peak hour (Willdan Associates 1995). Of particular concern is the increase in truck traffic. Based on the remote location of the proposed project, a 10/90 percent east/west split from the proposed access onto SR-76 was assumed.

Due to the nature of the construction industry and the timing of projects that use aggregate, Project ADT would have the potential to vary from day to day. Also, weather related delays are often offset by intensified material deliveries to get back on schedule. Therefore, in addition to normal operational ADT, a worst case scenario of a 100% increase in ADT (1,028 trips) was analyzed. According to the traffic analysis prepared by Willdan Associates (1995) no catastrophic failures would occur if truck trips temporarily doubled. The only degradation evident would be the left turn from minor movement for both the ramps. The northbound ramp intersection would be LOS D and the southbound ramps would operate at LOS C.

As a part of the project, the applicant is proposing to expand and realign State Route 76 from the site to Interstate 15. The alignment would primarily affect two existing farm-houses located west of the project site. After the realignment, the distance from the farm-houses to the highway would increase from approximately 50 feet to 135 feet for one house and to 250 feet for the other.

Project generated increases in roadway noise were determined for both CNEL and peak hour L_{eq}. Traffic noise levels in terms of CNEL were computed, using the Federal Highway Administration (FHWA) Stamina 2.0 computer noise prediction model (FHWA DF-82/001a). The FHWA model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry in computing the equivalent noise levels to determine the CNEL. As a result of the Proposed Project, the existing CNEL of 70 dB(A) at 50 feet from the centerline of SR-76 would increase by approximately 1 dB(A) to 71 dB(A) between the project site and I-15 and decrease at the two existing farm homes adjacent to SR-76, between the project site and Interstate 15. In community noise assessment, noise level increases greater than 3 dB(A) are often identified as significant, while changes less than 1 dB(A) are not discernible to local receptors. Therefore, an increase of 1.0 dB(A) is not considered significant. The distances to the future CNEL contours for SR-76 west of the project site are given in Table 8. Note that these values do not take into account the effect of any noise barriers or topography that may affect future ambient noise levels.

As compared to the existing conditions, the peak hour L_{eq} would increase by approximately 3 dB from west of the project site to Interstate 15. During the worst-case scenario, the peak hour L_{eq} would increase by approximately five to six dB west of the project site to Interstate 15. East of the site, the existing daytime noise levels would increase by less than one dB(A) total noise level as a result of the project's traffic. The CNEL would remain essentially the same. During peak hour (7:00 a.m. to 8:00 a.m.) the project would increase noise levels by approximately 0.5 dB(A). The increase would not be discernible to local receptors.

Quarry Operations

An increase in noise levels generated by the proposed mining operations would result from various sources. These include excavation equipment, drilling, blasting, rock crushing and aggregate sizing operations, asphalt plant and concrete batch plant operations. Each of these operations is discussed separately below. The noise levels are based on anticipated implementation of applicant-proposed noise control measures that are outlined in the following mitigation section. To determine equipment noise levels, noise measurements and published information were obtained for various types of equipment and materials. Although the exact type of equipment used may vary, or change as operations proceed, the following is considered indicative of what may be expected for the Proposed Project.

Excavation Equipment. Excavation equipment will work the mining face. Noise measurements for similar mining and earth moving operations made previously are indicative of what may be expected for the Proposed Project, though the exact type of equipment used may vary, or change as operations proceed. An electric power shovel would be operated within the excavation area. Electric equipment is typically quieter than diesel powered equipment of similar size. Several manufacturers were contacted to obtain noise level data for the proposed electric power shovel/excavator, however, this information was not currently available for the size of power shovel required for this project. Therefore, manufacturers of diesel powered shovels were contacted. Based on noise level data provided for a John Deere model 992 excavator, the maximum sound level would be 75 dB at 50 feet. To further reduce noise impacts, resilient materials such as rubber pads shall be installed inside the portable rock crushing unit. Approximately 5 dB of noise attenuation would be expected by using the resilient materials. Therefore, with the resilient materials the portable crushing unit would be expected to generate a one-hour average sound level of approximately 75 dB L_{eq} at 100 feet. Worst case measurements from existing construction and mining sites, given in terms of the equivalent noise level for the measurement period, are presented in Table 9.

Drilling. Drilling equipment would also be used along the mining face. According to Mr. Bing Yen, the project geotechnical consultant, a 3½ in diameter drill bit would be used. One drilling rig will operate 40 hours per week at the project site. Operations will take place during the daytime hours. Drilling operations are expected to remain constant over the lifetime of the project.

Measurements of drilling operations have been conducted by Illingworth & Rodkin. Small diameter rock drills generate average noise levels of approximately 79 dB L_{eq} at 100 feet. Large diameter rock drills typically generate average noise levels of approximately 81 dB L_{eq} at 100 feet.

Table 9. Quarry Equipment Source Noise Levels

Source	Source Level (L_{eq})
Rock Processing Area	
Secondary Crushers (2)	86 dB per crusher at 25 ft.
Screens	86 dB at 25 ft.
Shorthead Crusher	86 dB at 25 ft.
(With Proposed Enclosure)	
Secondary Crushers[1] (2)	76 dB per crusher at 25 ft.
Screens[1]	76 dB at 25 ft.
Shorthead Crusher[1]	76 dB at 25 ft.
Asphalt Plant[2]	72 dB at 150 ft.
Concrete Plant	82 dB at 100 ft.
Excavation/Drilling[3]	
Power Shovel	75 dB at 50 ft.
Drill Rig	79 dB at 100 ft.
Primary Crusher	75 dB at 100 ft.
(Cumulative)	81 dB at 100 ft.

1 Assumes crushing and screening equipment is enclosed and resilient materials are placed on the impact surfaces of the screening and secondary crushing units.

2 Equipment assumed to be similar to the All-American Asphalt Plant in Irvine, CA.

3 Assumes either electric power shovel/excavator or diesel power shovel with maximum noise level of 75 dB or less at 50 feet; drill rig with noise level of 79 dB at 100 feet; and resilient materials would be placed on the impact surfaces of the portable crusher.

Blasting. The mining face would be blasted once a week. Noise levels measured at similar blasting operations by Mestre Greve were used as the basis for determining the noise which would be generated at the proposed Palomar Aggregates site. Blasting noise was expressed in terms of the Noise Ordinance L_{eq} standard rather than the CNEL standard because it is a relatively infrequent impulsive noise. Measurements were also expressed in terms of A-weighted decibels because, the human ear is less sensitive to low frequency noises than it is to high frequency noises, and the A-weighted noise scale has a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. The resultant A-weighted maximum noise level is 59 dB(A) at 1,300 feet, which is significantly less than the unweighted peak noise level of 84 dB(A) measured at a low noise frequency of 31 Hz (Hertz: A unit of frequency equal to one cycle per second).

Rock Crushing and Aggregate Sizing. Noise measurements have been previously made for operations at existing sand and gravel plants. Based on these noise measurements, the equivalent noise level associated with unenclosed crushers and screens, would be 86 dB L_{eq} at 25 feet. To reduce noise impacts, screens and secondary crushers would be fully enclosed except for the openings necessary to accommodate the conveyor belts. Also, the screens and crushing units would have resilient materials, most likely rubber linings, installed on the impact surface areas. Several studies have been conducted for the U.S. Bureau of Mines assessing the effectiveness of enclosures, barriers and resilient materials. These studies generally showed noise attenuation of 10 to 15 dB using an acoustical enclosure and an overall 3 to 7 dB noise attenuation using resilient material. The

acoustical enclosure was custom designed and manufactured by an acoustical noise control manufacturer and used sound absorbing materials on the inside surfaces. Assuming the crushers and screens are enclosed and resilient materials are used, the noise level would be approximately 76 dB L_{eq} at 25 feet as shown in Table 9.

Asphalt Plant. Sand and crushed rock will be moved by conveyor belts to the asphalt plant (see proposed location on Figure 6). Aggregate will be dried and mixed with tar in an enclosed rotating drum. Noise measurements at a similar operation, taken at approximately 150 feet from the asphalt plant, yielded an L_{eq} of 72 dB (see Table 9).

Concrete Batch Plant. Sand and crushed rock is also conveyed to the enclosed concrete batch plant where it is mixed in a sealed drum (to prevent fugitive dust pollution) with imported cement. Measurements taken at a distance of 100 feet from a concrete batch plant yielded an L_{eq} of 82 dB (see Table 9). The loudest noise levels measured from this process were due to the truck engines. The trucks used very high engine speeds while being loaded increasing the engine noise levels. The conveyors and other equipment were much quieter than the trucks.

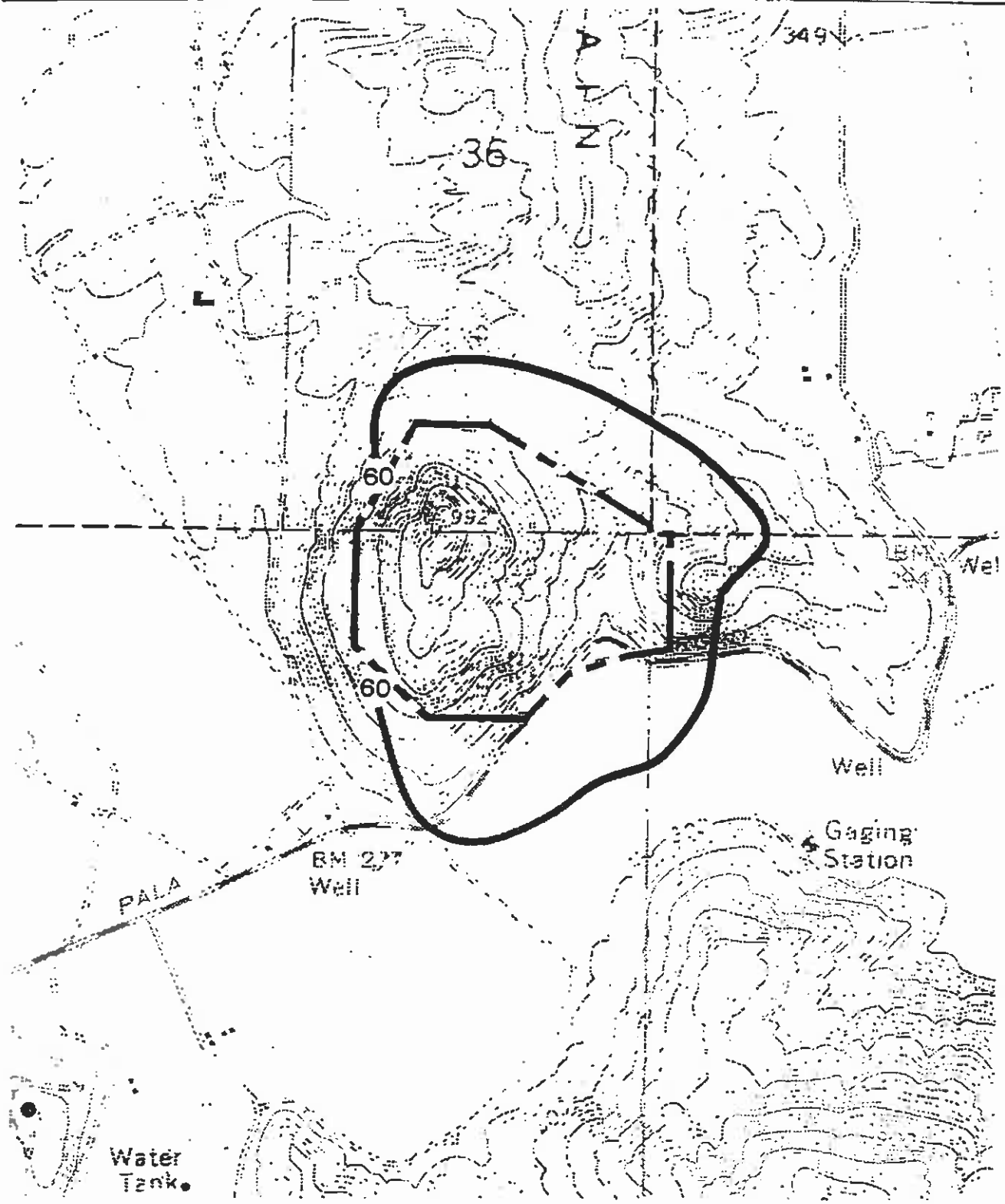
Cumulative On-Site Noise Impacts

Cumulative on-site noise levels were determined at the permit boundary, areas zoned for residential development on land not owned by the mining property owner/lessor and at the closest existing residential home.

According to the mining plan, the site would be mined so that an earthen barrier would remain between the mining operations and receptors to the north, south, and west. The barrier would attenuate noise levels by 5 to 20 dB(A) depending on the depth of excavation. However, worst-case noise conditions would occur for about one to six months when the initial cut of the mining face is occurring adjacent to the closest permit boundary. Figure 75 depicts the approximate location of the worst case 60 dB noise contour. This contour assumes that excavation equipment is operating at the existing ground elevation, and at the limits of grading adjacent to the closest permit boundary line. Noise attenuation associated with the intervening topography beyond the limits of grading is included. Because excavation operations would continuously be moving lower in elevation, transmission of noise beyond the permit boundary and exceeding 60 dB will gradually be eliminated adjacent to most of the excavation areas. This worst case noise contour location is only applicable until the ground attenuation at the adjacent locations. It should be further noted that sound levels exceeding 60 dB would not be constant, but rather intermittent.

In the following, worst-case noise levels refer to noise levels anticipated when all quarry equipment is operating, and the excavation equipment is operating at the existing ground elevation at the limits of grading, adjacent to the closest major use permit boundary line.

Permit Boundary. To determine compliance with the County's noise ordinance criteria worst case noise levels were calculated at the north, south, east, and west major use permit boundaries (Locations 6-14 in Figure 76 and in Table 10). As indicated in Table 10, the worst case noise levels would be hourly L_{eq}'s of 75 dB(A) (north), 60 dB(A) (south), 72 dB(A) (east), and 44 dB(A) (west).



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Worst Case 60 dB One Hour Average Noise Level Contour

Figure 75

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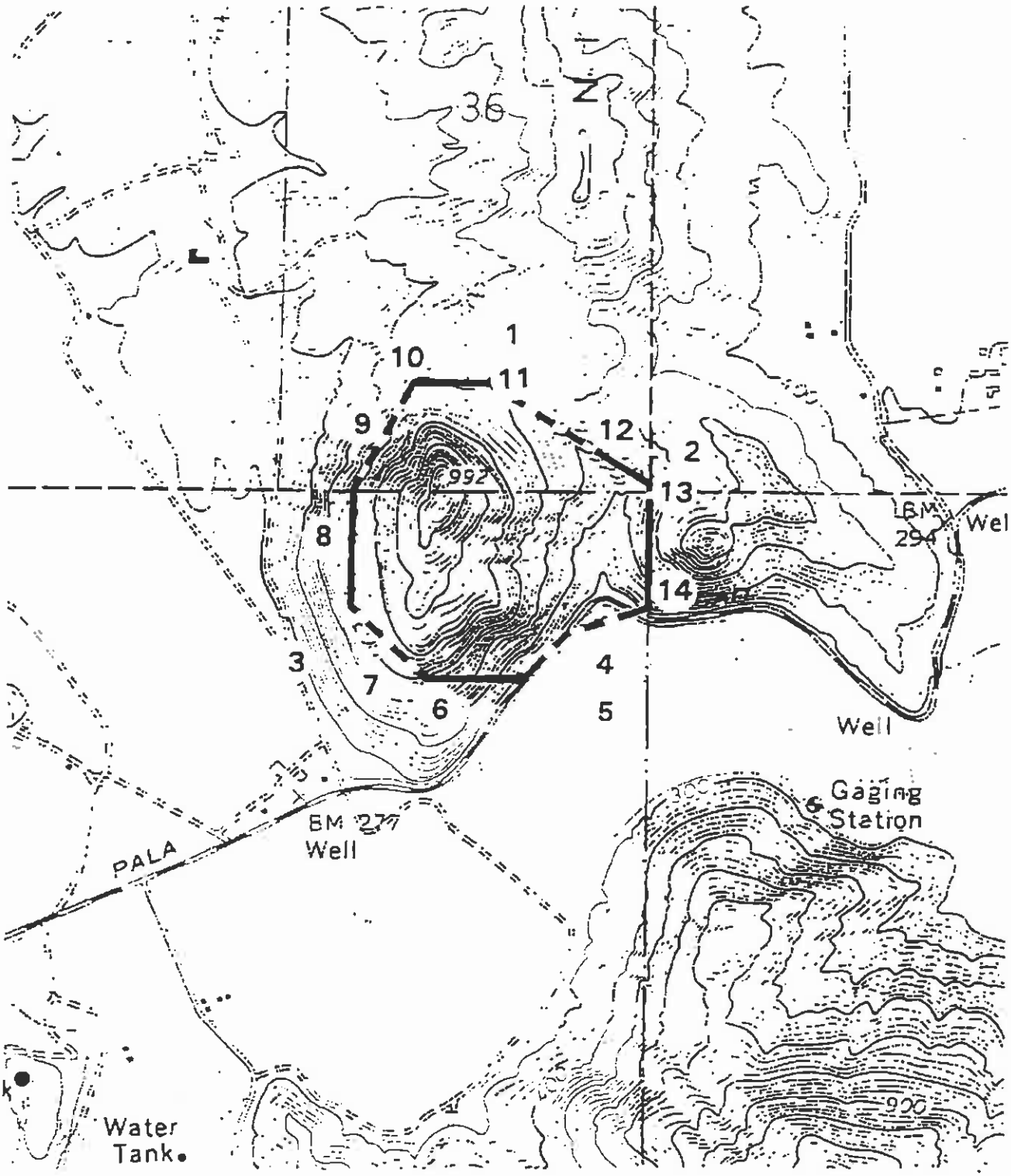

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Noise Receptor Locations

Figure 76

Table 10. Worst Case Cumulative Noise Levels at Various Locations

Location	Description	Worst Case Cumulative Noise Level (L_{eq})	Existing Daytime Noise Level
1	Pankey Residence	65	42[4]
2	Hodges Property	66	45[3]
3	Future Residential	40	45[3]
4	South of SR-76	63	
5	South of SR-76	60	
6	Southern Boundary	60	
7	Southwestern Boundary	46	
8	Western Boundary	44	
9	Northwestern Boundary	47	
10	Northwestern Boundary	66	
11	Northern Boundary	75	
12	Northern Boundary	75	
13	Northeastern Boundary	72	
14	Eastern Boundary	72	

[1] Blasting activities would not occur while other activities are occurring and were not included in the cumulative noise level.

[2] Calculations assume worst case conditions (e.g., all equipment operating, excavation and drilling activities occurring adjacent to receiver location.)

[3] Estimated noise level.

[4] Measured noise level (ABC Acoustics 1989).

The project would comply with the 75 dB L_{eqh} criteria. At the north, south, and west permit boundary locations the noise would primarily be the result of excavation and drilling activities occurring in close proximity to the boundaries. The noise level at the eastern boundary would be primarily associated with the concrete batch plant which is located adjacent to the eastern boundary.

The noise levels at the north, south and east permit boundary locations would exceed the currently allowed sound level limits of 50 dB(A) L_{eq} during the entire life expectancy of the project. If the project is approved as an extractive industry, then the applicable sound level limit would be 75 dB(A) L_{eq}.

Areas Zoned For Residential Development. There are lands zoned for residential development adjacent to the site which are under separate ownership than that of the mining property. The first area is located 500 feet at its closest point to the project area permit boundary. It is a minimum of 1,200 feet from the nearest location that mining would occur, approximately 1,800 feet from the center of the proposed mining operations, and 2,400 feet from the processing plant (Location 3 in Figure 76). The noise level at this potential residential site was calculated for cumulative on-site operations. The worst-case noise level would be an hourly L_{eq} of 40 dB (see Table 10). This noise level would comply with the County's noise ordinance sound level limit for extractive industries, and would meet the County's Noise Element guidelines (60 CNEL dB(A)) for future residential development.

The nearest property line where future residenual development may occur is to the northeast of the processing plant area (Location 2 in Figure 76). However, this is a remote corner of the 450-acre Hodge Brothers Agricultural Preserve, and is on the back side of a steep ridge. It is unlikely, due to topographic constraints, that residential development would occur in this area, or elsewhere within 1,000 feet of the processing plant. Under a worst-case scenario, the equivalent noise level at 1,000 feet would be 66 dB(A). After excavation in the northeastern portion of the quarry the predominant noise source would be from the processing plant, which would have a L_{eq} less than 60 dB. Should this remote area be developed prior to the completion of mining activities, additional noise mitigation measures could be required to meet County guidelines. The Hodge brothers understand the potential ramifications of the proposed project and they have written a letter of support (see Appendix J).

Existing Residence. The William Pankey residence is the closest home to the project site (Location 1 in Figure 76). This residence is approximately 400 feet north of the permit boundary. As indicated in Table 10, the noise level would be an L_{eqh} of approximately 65 dB(A). This noise level would not exceed the County noise ordinance 75 dB(A) criteria during worst case conditions, however, as compared to the existing allowable noise level limits of 50 dB(A) and existing noise level during the daytime hours, this would be a significant increase. Impacts to the Pankey residence are not, however, considered to be a significant impact for the following reasons. This condition would occur during a relatively short-term period of one to six months during the initial excavations at areas immediately adjacent to the permit boundaries. During this time, the quarry noise would result in a short-term significant noise impact at the existing residence. Pankey Ranch is the owner and lessor of the mining property and can affect the conduct of mining operations (e.g., hours of operation or equipment used) while this initial cut is being made. The resident of the home has indicated that they have no objection to this short-term noise impact (William Pankey personal communication).

After the initial excavation is made, operations would be below grade and the worst case conditions at the residence would no longer occur. The noise level after the initial excavation is made would be less than 60 dB which includes the attenuation of the intervening topography. As the excavation continues noise levels would eventually be below 50 dB L_{eq}. The quarry noise at this noise level would be audible but would not interfere with indoor or outdoor activities and would not be considered significant.

Although no adverse noise impacts from on-site operations, except for short-term impacts at the Pankey residence and the vacant land located adjacent to the northeast corner of the site, are anticipated, it should be noted that granting of the major use permit would not preclude application of County Noise Ordinance standards, or determination of a noise nuisance based on complaints from future residents.

3. Summary of Impact Significance

Impacts to noise from on-site operations are considered significant but mitigable. Noise sensitive receptors which would be significandy impacted during worst case conditions include the Pankey residence and the vacant residential land located adjacent to the northeast corner of the site.

4. Mitigation Measures

D-1. Prior to operation, screens and secondary crushers shall be fully enclosed except for the openings necessary to accommodate the conveyor belts. Also, the screens and crushing units shall have resilient materials, most likely rubber pads, installed and maintained on the impact surface areas.

D-2. Prior to operation, sound absorbing materials on the inside surfaces of the enclosures shall be installed and maintained throughout the life of the permit.

D-3. Prior to operation, the material used for enclosing the secondary crushers and screens shall have a minimum surface density of approximately 2.0 lb/ft^2.

D-4. Prior to operation, the applicant shall demonstrate that the power shovel/excavator does not exceed a maximum noise level of 75 dB at 50 feet. The applicant shall also demonstrate that the drill does not exceed 79 dB at 100 feet. Or, the cumulative noise level associated with the excavation equipment including the portable primary crusher shall not exceed a one-hour average noise level of 81 dB at 100 feet.

D-5. Prior to operation a minimum 30-foot high berm as measured from pad elevations of the asphalt and concrete batch plant shall be constructed adjacent to SR-76.

D-6. Prior to operation the permittee shall demonstrate that all moving parts on batch plant facilitates are enclosed in baghouses.

D-7. Prior to operation, the enclosures shall be designed so that the screens and cone crushers, as well as their support structures shall not contact the enclosure walls or ceilings. All wall to wall, wall to roof, wall to floor joints, and holes cut for control and power lines shall be sealed.

D-8. Prior to operation, enclosure doors shall be metal with an insulating foam core. Door frames shall have gaskets and seals to provide a tight seal.

D-9. Prior to the project being placed in operation, noise testing shall be conducted for the proposed equipment. The design noise levels shall be attained for the individual pieces of equipment as shown in Table 9 in the EIR. For excavation/drilling equipment, the individual design noise levels shall be met; or the cumulative noise level associated with the excavation equipment including the portable primary crusher shall not exceed a one-hour noise level of 81 dB L_{eq} at 100 feet.

Alternatively, it may be possible that even though an individual piece of equipment may exceed the noise design criteria, that with all of the equipment operating the cumulative on-site operation noise level would still meet the County's noise ordinance limits at the permit boundary. This would result if greater than anticipated noise attenuation is achieved due to intervening topography and structures, or other individual pieces of equipment are quieter than the design criteria. Therefore, if all the equipment is operating, and the cumulative

noise level with equipment that does not meet the individual design criteria would still not exceed the County's noise standard at the permit boundary, then the nonconforming individual piece(s) of equipment would not be required to meet the specific design noise levels in Table 9 in the EIR. This must be shown to the satisfaction of the Department of Planning and Land Use.

D-10. Every three months for the first year of operation and every six-months thereafter, noise testing shall be conducted along the permit boundary to ensure design noise levels are maintained during ongoing operations. The noise testing protocol shall be conducted in accordance with the County's noise ordinance and performed by a County certified acoustical consultant. Also, this condition specifies that the 60 CNEL exterior noise level shall not be exceeded by the project as measured at any residential building site or other noise sensitive location which may be developed in the future. The results of the noise tests shall be submitted in a written report to the County Department of Planning and Land Use within one week after conducting the noise tests. If the design noise levels are not met, the quarry operator will have 60 days to correct the problem. If after 60 days, the problem has not been corrected, the quarry operator will only be allowed to operate the remaining equipment which will meet the design noise levels. The quarry operator shall fund the noise testing and County's staff time to review the results of the noise tests.

5. Summary of Impacts After Mitigation

Mitigation for on-site noise consists of three general measures. The measure required would include the installation of noise control treatments, conducting noise tests on the equipment prior to start-up to ensure successful implementation of the noise abatement treatments, and implementing a noise monitoring plan for the ongoing operation. Potential noise impacts will be reduced to a level below significance.