

**Table 4.9-6  
Baseline Plus Proposed Project Noise Levels (in dB)**

		<i>Day</i>	<i>Evening</i>	<i>Night</i>
<b>Azusa (R6 – Mirador)</b>	<b><u>From Acoustic Noise</u></b>			
	<b><u>Center</u></b> Baseline	51	50	49
	Project	29	29	29
	Combined	51	50	49
	Standard	50	50	45
	Significant Increase (> 5 dB)	No	No	No
<b>Duarte (R3 – Brookridge)</b>	<b><u>From Acoustic Noise</u></b>			
	<b><u>Center</u></b> Baseline	45	44	48
	Project	35	35	35
	Combined	45	44	48
	Standard	50	50	40
	Significant Increase (> 5 dB)	No	No	No
<b>Duarte (R2 –Van Tassel Creek)</b>	<b><u>From Nearest Mining</u></b>			
	Baseline	45	44	48
	Project	36	36	36
	Combined	46	45	48
	Standard	55	45	45
	Significant Increase (> 5 dB)	No	No	No
<b>Duarte (Direct LOS)</b>	<b><u>From Direct LOS Mining</u></b>			
	Baseline	42	45	49
	Project	40	40	40
	Combined	44	46	50
	Standard	55	50	45
	Significant Increase (> 5 dB)	No	No	No

Source: "Noise Impact Analysis", Giroux & Associates for VMC, 2009.

## Mitigation Measures

### Mitigation Measure N-1

*Mining activities shall only be permitted within Phases I-W and II-W along the western and southern boundary of the Project Site during the defined construction hours of 7 a.m. to 6 p.m. At such time as the excavations result in the creation of a line-of-sight (LOS) barrier of*

~~20 feet or greater in height between the operational face and the sensitive receptors, nighttime operations may then commence.~~

### **Mitigation Measure N-2**

*During all excavation, hauling, and processing of materials, the operator shall equip equipment with properly operating and maintained mufflers, stationary engine enclosures, or other noise suppression devices consistent with manufacturers' standards.*

### **Mitigation Measure N-3**

*Blasting shall only be conducted between the hours of 10 a.m. and 6 p.m. Monday through Saturday with no blasting allowed on Sundays or holidays.*

### **Level of Significance After Mitigation**

Implementation of Mitigation Measures N-1 through N-3 would reduce potentially significant impacts during nighttime hours to less than significant and reduce noise impacts to residences in Duarte to less than significant.

### **N-2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

#### **Impact: Potentially Significant Impact**

Blasting vibrations were measured in terms of the peak particle velocity (PPV) for existing blasting events by an independent contractor at two locations on the Project Site. One monitoring station was located approximately 2,700 feet from the blast to reasonably simulate the maximum plausible vibration exposure at the closest residence for the current mining plan and one monitoring station was located approximately 2,200 feet from the blast site representing potential vibration impacts from future blasting near the southwestern corner of the proposed West Side mining area. A threshold of 0.20 ips is used as the standard of significance in this analysis.

Eleven blast events were monitored to establish vibration levels as a function of ground-borne propagation distance. The measured peak particle velocities for these events at two locations that best simulate possible residential exposure are shown in Table 4.9-7.

By way of a reference, a PPV of 0.005 inch/sec is a magnitude 0.0 on the Richter Scale. A level of 0.009 inch/sec is approximately a magnitude 0.2. The maximum of 0.015 ips is below a magnitude 1.0. The measured vibration levels were extrapolated to the closest plausible residential separation distance for the proposed westward operation (1,800 feet) using a standard power law spreading equation. The vibration level for a blast at 1,800 feet is calculated as 0.012 ips average, 0.020 ips worst-case. These levels are at least 10 times less than the adopted significance threshold of 0.20 ips. They correspond to a Richter Scale magnitude of 0.5 average and 0.9 worst-case. Such levels are barely perceptible to people and would not cause damage to