Appendix H

Noise and Vibration Calculations

Project Diablo Canyon Power Plant
Project No.
Date

Type	FTA Database Substitute
Spike Driver	Large Bulldozer
Truck	Loaded Truck
Forklift	Loaded Truck
Generator	Small Bulldozer

[redacted]

Veh. #	Index	Equipment	PPV_{ref}	L_v at 25ft (VdB)	Distance to Nearest Receptor (ft)	PPV_{equip}	L_v (VdB)	PPV Damage Criteria	L_v Damage Criteria	Annoyance Criteria	Damage Assessment	Annoyance Assessment
1	10	Large Bulldozer	0.089	87	25	0.089000	87.0	0.5	90	72	**No Impact**	**Impact**
2	12	Loaded trucks	0.076	86	25	0.076000	86.0	0.5	90	72	**No Impact**	**Impact**
3	12	Loaded trucks	0.076	86	25	0.076000	86.0	0.5	90	72	**No Impact**	**Impact**
4	14	Small bulldozer	0.003	58	25	0.003000	58.0	0.5	90	72	**No Impact**	**No Impact**
TOTAL (All equipment simultaneously)						0.244000	**91.1**	0.5	90	72	**Impact**	**Impact**

Project Diablo Canyon Power Plant
Date

Type	FTA Database Substitute
Spike Driver	Large Bulldozer
Truck	Loaded Truck
Forklift	Loaded Truck
Generator	Small Bulldozer

[redacted]

Veh. #	Index	Equipment	PPVref	Lv at 25ft (VdB)	Distance to Nearest Receptor (ft)	PPVequip	Lv (VdB)	PPV Damage Criteria	Lv Damage Criteria	Annoyance Criteria	Damage Assessment	Annoyance Assessment
1	10	Large Bulldozer	0.089	87	625	0.000712	45.1	0.5	90	72	**No Impact**	**No Impact**
2	12	Loaded trucks	0.076	86	625	0.000608	44.1	0.5	90	72	**No Impact**	**No Impact**
3	12	Loaded trucks	0.076	86	625	0.000608	44.1	0.5	90	72	**No Impact**	**No Impact**
4	14	Small bulldozer	0.003	58	625	0.000024	16.1	0.5	90	72	**No Impact**	**No Impact**
TOTAL (All equipment simultaneously)						0.00195	**49.2**	0.5	90	72	**No Impact**	**No Impact**

Ground-borne noise = Lv - 30 = 19.2 dBA

Project Diablo Canyon Power Plant Decommissioning Project
Date 8/29/2022

Type	
Loaded Trucks	

Veh. #	Index	Equipment	PPV_{ref}	L_v at 25ft (VdB)	Distance to Nearest Receptor (ft)	PPV_{equip}	L_v (VdB)	PPV Damage Criteria	L_v Damage Criteria	Annoyance Criteria	Damage Assessment	Annoyance Assessment
1	12	Loaded trucks	0.076	86	50	**0.026870**	77.0	0.12	90	72	**No Impact**	**Impact**
TOTAL (All equipment simultaneously)						0.026870	**77.0**	0.12	90	72	**No Impact**	**Impact**

Ground-borne noise = Lv - 30 = 47.0 dBA

Project Diablo Canyon Power Plant Decommissioning Project
Date 8/29/2022

Type	FTA Database Substitute
Gantry Crane	Large Bulldozer
Truck-mounted crane	Loaded Truck
Truck-mounted crane	Loaded Truck
Sissor Lift	Small Bulldozer
Sissor Lift	Small Bulldozer
Reach Lift	Small Bulldozer
Reach Lift	Small Bulldozer
Forklift	Small Bulldozer
Forklift	Small Bulldozer
Generator	Small Bulldozer

Veh. #	Index	Equipment	PPV_{ref}	L_v at 25ft (VdB)	Distance to Nearest Receptor (ft)	PPV_{equip}	L_v (VdB)	PPV Damage Criteria	L_v Damage Criteria	Annoyance Criteria	Damage Assessment	Annoyance Assessment
1	10	Large Bulldozer	0.089	87	625	0.000712	45.1	0.5	90	72	**No Impact**	**No Impact**
2	12	Loaded trucks	0.076	86	625	0.000608	44.1	0.5	90	72	**No Impact**	**No Impact**
3	12	Loaded trucks	0.076	86	625	0.000608	44.1	0.5	90	72	**No Impact**	**No Impact**
4	14	Small bulldozer	0.003	58	626	0.000024	16.0	0.5	90	72	**No Impact**	**No Impact**
5	14	Small bulldozer	0.003	58	627	0.000024	16.0	0.5	90	72	**No Impact**	**No Impact**
6	14	Small bulldozer	0.003	58	628	0.000024	16.0	0.5	90	72	**No Impact**	**No Impact**
7	14	Small bulldozer	0.003	58	629	0.000024	16.0	0.5	90	72	**No Impact**	**No Impact**
8	14	Small bulldozer	0.003	58	625	0.000024	16.1	0.5	90	72	**No Impact**	**No Impact**
9	14	Small bulldozer	0.003	58	625	0.000024	16.1	0.5	90	72	**No Impact**	**No Impact**
10	14	Small bulldozer	0.003	58	625	0.000024	16.1	0.5	90	72	**No Impact**	**No Impact**
TOTAL (All equipment simultaneously)			0.262			0.002095	**49.2**	0.5	90	72	**No Impact**	**No Impact**

Ground-borne noise = Lv - 30 = 19.2 dBA

Project **Diablo Canyon Power Plant Decommissioning Project**
Date **8/26/2022**

Project Description says "no changes to the existing grade are expected"

Equipment List

Equipment Number	Equipment Type	Subcontractor	Number	Horsepower	Load Factor
1	Truck				
2	Forklift				
3	Spike Driver				

Calculation of sound pressure levels

Equipment Number	Equipment Index Number	Equipment	Reference Sound Pressure Level @ 50 ft (dBA re: 20µPa)					Reference Utilization (%)		Distance to Nearest Noise-Sensitive Receptor (ft)	Sound Pressure Level @ Receptor (dBA re: 20µPa)
			FTA	FHWA (Predicted)	FHWA (Measured)	VA	Used	FHWA	Used		
1	65	Truck	88	N/A	N/A	88	88	N/A	20%	700	58
2	37	Forklift	N/A	85	75	N/A	85	20%	20%	700	55
3	60	Spike Driver	77	N/A	N/A	N/A	77	N/A	40%	700	50
TOTAL SOUND PRESSURE LEVEL (dBA re: 20µPa)											60

COMPARISON TO CITY OF PISMO BEACH NOISE ORDINANCE:

	Distance	L50 dBA	Barrier & Berm Losses	Total L50 dBA	L50 Ambient	L50 Total Noise Level	Delta	Pismo Beach Limits, L50
Price Canyon home	700	58.3	-7.5	50.8	52.4	54.7	2.3	55.0
Dell Court	900	56.1		56.1	49.4	56.9	7.5	55.0
Dell Court with Mitigation	900	56.1	-4.5	51.6	49.4	53.7	4.3	55.0
Judkins School	1150	54.0	-18	36.0	49.4	49.6	0.2	55.0
Reef Court/Coral Court*	1400	52.3	0	52.3	56.4	57.8	1.4	60.0
Vincente Ct.	1250	53.3	0	53.3	49.4	54.8	5.4	55.0

* - Residences on Coral Court are closer to the noise source.
** - L50 noise level is approximately 2 decibels lower than the Leq noise level.

CHANGE IN AMBIENT NOISE CALCULATION

	Distance	dBA	Barrier & Berm Losses	Total dBA	Ambient	al Noise Level	Delta
Price Canyon home	700	60.3	-7.5	52.8	53.8	56.3	2.5
Dell Court	900	58.1		58.1	50.8	58.8	8.0
Dell Court with Mitigation	900	58.1	-4.5	53.6	50.8	55.4	4.6
Judkins School	1150	56.0	-18	38.0	50.8	51.0	0.2
Reef Court/Coral Court*	1400	54.3	0	54.3	58.8	60.1	1.3
Vincente Ct.	1250	55.3	0	55.3	53.5	57.5	4.0

* - Residences on Coral Court are closer to the noise source.

Project Diablo Canyon Power Plant Decommissioning Project
Date 8/26/2022

Equipment List **PBR Operational Noise**

Equipment Number	Equipment Type	Subcontractor	Number	Horsepower	Load Factor
1	Sissor Lift				
2	Sissor Lift				
3	Reach Lift				
4	Reach Lift				
5	Forklift				
6	Forklift				

Calculation of sound pressure levels

Equipment Number	Equipment Index Number	Equipment	Reference Sound Pressure Level @ 50 ft (dBA re: 20µPa)					Reference Utilization (%)		Distance to Nearest Noise-Sensitive Receptor (ft)	Sound Pressure Level @ Receptor (dBA re: 20µPa)
			FTA	FHWA (Predicted)	FHWA (Measured)	VA	Used	FHWA	Used		
1	37	Sissor Lift	N/A	85	75	N/A	85	20%	20%	625	56
2	37	Sissor Lift	N/A	85	75	N/A	85	20%	20%	625	56
3	37	Reach Lift	N/A	85	75	N/A	85	20%	20%	625	56
5	37	Forklift	N/A	85	75	N/A	85	20%	20%	625	56
TOTAL SOUND PRESSURE LEVEL (dBA re: 20µPa)											62

COMPARISON TO CITY OF PISMO BEACH NOISE ORDINANCE:

	Distance	L50 dBA**	Barrier & Berm Losses	Total L50 dBA	PBR L50 Ambient	L50 Total	L50 Delta	Pismo Limits, L50
Price Canyon home	625	60.1	-7.8	52.3	52.4	55.4	3.0	55.0
Dell Court	850	57.4		57.4	49.4	58.1	8.7	55.0
Dell Court with Mitigation	850	57.4	-7.5	49.9	49.4	52.7	3.3	55.0
Judkins School	1100	55.2	-19.5	35.7	49.4	49.6	0.2	55.0
Reef Court/Coral Court*	1500	52.5	0	52.5	56.4	57.9	1.5	60.0
Vincente Ct.	1420	53.0	0	53.0	49.4	54.5	5.1	55.0

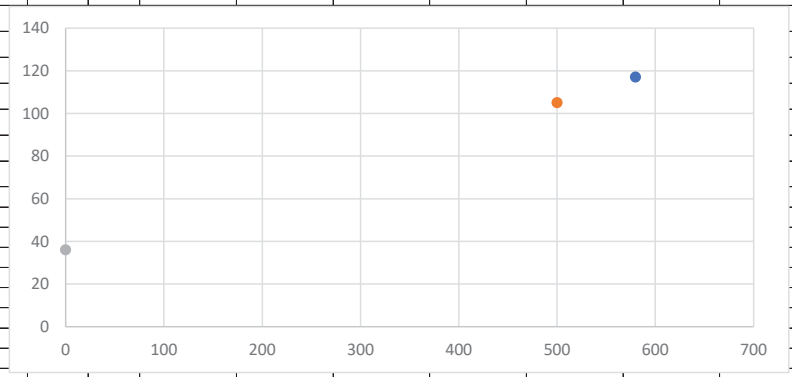
* - Residences on Coral Court are closer to the noise source.
** - L50 noise level is approximately 2 decibels lower than the Leq noise level.

CHANGE IN AMBIENT NOISE CALCULATION

	Distance	Leq dBA	Barrier & Berm Losses	Total Leq dBA	PBR Ambient	Leq Total	Leq Delta
Price Canyon home	625	62.1	-7.8	54.3	53.8	57.1	3.3
Dell Court	850	59.4		59.4	50.8	60.0	9.2
Dell Court with Mitigation	850	59.4	-7.5	51.9	50.8	54.4	3.6
Judkins School	1100	57.2	-19.5	37.7	50.8	51.0	0.2
Reef Court/Coral Court*	1500	54.5	0	54.5	58.8	60.2	1.4
Vincente Ct.	1420	55.0	0	55.0	53.5	57.3	3.8

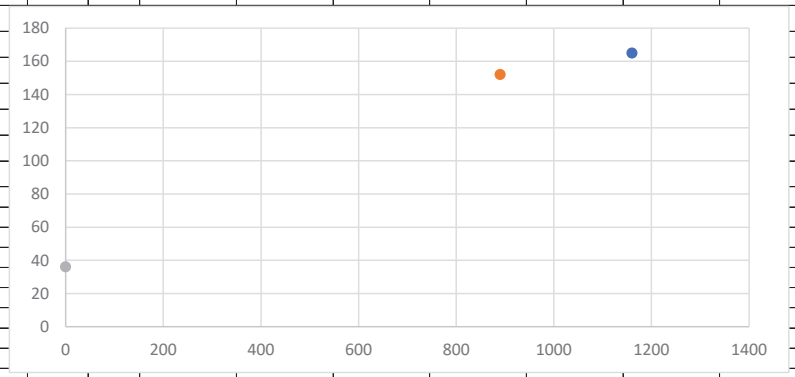
* - Residences on Coral Court are closer to the noise source.

Barrier Insertion Loss for Point Source																				
(Use same units as sound speed in cell M4)																				
Source to barrier distance	500		**A**	504.74							**Speed of Sound**	1126	ft/s							
Source height	36		**B**	80.895																
Observer to barrier distance	80		**C**	585.63																
Observer height	117																			
Barrier height	105																			
			Using Price Canyon Road as a berm																	
Barrier: 0, Berm: 1	1																			
Zone	Bright																			
Distance from Source	580																			
Octave band (Hz)	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**dBA**											
PWL at source	100	100	100	100	100	100	100	100	107.0											
Directivity (10log(Q)) OR																				
Directivity (Q)	2	2	2	2	2	2	2	2												
SPL at receiver (distance loss only)	47	47	47	47	47	47	47	47	53.7											
Attenuation due to barrier (dB)	8	8	8	8	8	8	7	7	7.5											
SPL at receiver with barrier	39	39	39	39	39	39	39	40	46.2											
Fresnel Number	-5E-04	-0.001	-0.002	-0.004	-0.009	-0.017	-0.034	-0.068												



Barrier Insertion Loss for Point Source

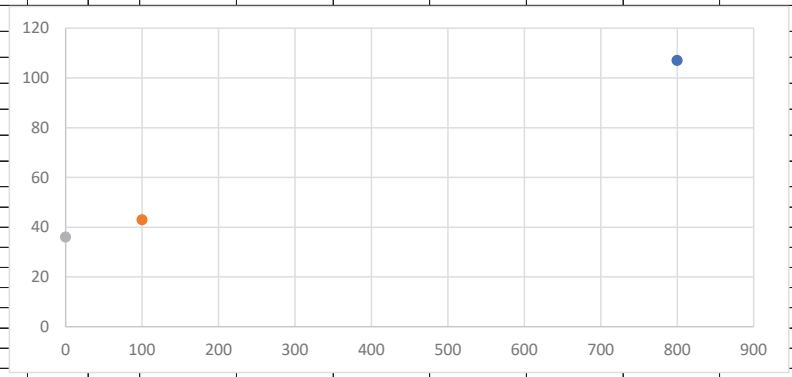
(Use same units as sound speed in cell M4)																				
Source to barrier distance	890		A	897.53							**Speed of Sound**	1126	ft/s							
Source height	36		B	270.31																
Observer to barrier distance	270		C	1167.2																
Observer height	165																			
Barrier height	152	18.3 dBA loss from PBR construction to Judknis School																		
Barrier: 0, Berm: 1	1																			
Zone	Shadow																			
Distance from Source	1160																			
Octave band (Hz)	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**dBA**											
PWL at source	100	100	100	100	100	100	100	100	107.0											
Directivity (10log(Q)) OR																				
Directivity (Q)	2	2	2	2	2	2	2	2												
SPL at receiver (distance loss only)	41	41	41	41	41	41	41	41	47.7											
Attenuation due to barrier (dB)	9	10	12	14	17	20	23	23	18.3											
SPL at receiver with barrier	31	30	29	26	24	21	18	18	29.4											
Fresnel Number	0.0772	0.1531	0.3063	0.6125	1.225	2.4501	4.9001	9.8003												
Source to barrier distance	780	19.5 dBA loss from PBR operations to Judkins Shool																		
Source height	36																			
Observer to barrier distance	270																			
Observer height	165																			
Barrier height	152																			
Barrier: 0, Berm: 1	1																			
Attenuation due to barrier (dB)	10	11	13	16	18	21	23	23	19.5											



Barrier Insertion Loss for Point Source

(Use same units as sound speed in cell M4)

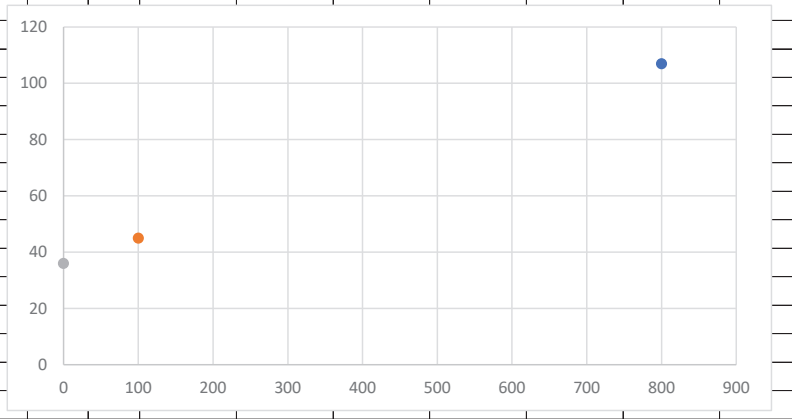
Source to barrier distance	100		A	100.24							**Speed of Sound**	1126	ft/s							
Source height	36		B	702.92																
Observer to barrier distance	700		C	803.14																
Observer height	107																			
Barrier height	43																			
		12' barrier for PBR Construction noise at Dell Court																		
Barrier: 0, Berm: 1	1																			
Zone	Bright																			
Distance from Source	800																			
Octave band (Hz)	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**dBA**											
PWL at source	100	100	100	100	100	100	100	100	107.0											
Directivity (10log(Q)) OR																				
Directivity (Q)	2	2	2	2	2	2	2	2												
SPL at receiver (distance loss only)	44	44	44	44	44	44	44	44	50.9											
Attenuation due to barrier (dB)	8	8	8	8	7	7	5	0	4.5											
SPL at receiver with barrier	36	36	36	36	37	37	39	44	46.4											
Fresnel Number	-0.002	-0.004	-0.009	-0.018	-0.035	-0.071	-0.141	-0.282												



Barrier Insertion Loss for Point Source

(Use same units as sound speed in cell M4)

Source to barrier distance	100		A	100.4							**Speed of Sound**	1126	ft/s							
Source height	36		B	702.7																
Observer to barrier distance	700		C	803.1																
Observer height	107																			
Barrier height	45																			
		12' barrier for PBR Operations noise at Dell Court																		
Barrier: 0, Berm: 1	1																			
Zone	Shadow																			
Distance from Source	800																			
Octave band (Hz)	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**dBA**											
PWL at source	100	100	100	100	100	100	100	100	107.0											
Directivity (10log(Q)) OR																				
Directivity (Q)	2	2	2	2	2	2	2	2												
SPL at receiver (distance loss only)	44	44	44	44	44	44	44	44	50.9											
Attenuation due to barrier (dB)	8	8	8	8	8	8	8	8	8.0											



SPL at receiver with barrier	36	36	36	36	36	36	36	36	42.9											
Fresnel Number	1E-05	2E-05	4E-05	8E-05	2E-04	3E-04	6E-04	0.001												

Project Diablo Canyon Power Plant Decommissioning Project
Date 8/25/2022 SMVR Construction Noise

Enter list of equipment provided by client/contractor for record

Equipment List

Equipment Nu	Equipment Type	Subcontractor	Number	Horsepower	Load Factor
1	Spike Driver				
2	Truck				
3	Forklift				
4	Generator				

Calculation of sound pressure levels

Equipment Number	Equipment Index Number	Equipment	Reference Sound Pressure Level @ 50 ft (dBA re: 20µPa)					Reference Utilization (%)		Distance to Nearest Noise-Sensitive Receptor (ft)	Sound Pressure Level @ Receptor (dBA re: 20µPa)
			FTA	FHWA (Predicted)	FHWA (Measured)	VA	Used	FHWA	Used		
1	60	Spike Driver	77	N/A	N/A	N/A	77	N/A	40%	700	50
2	65	Truck	88	N/A	N/A	88	88	N/A	20%	700	58
3	37	Forklift	N/A	85	75	N/A	85	20%	20%	700	55
4	29	Generator (<25KVA, VMS Signs)	N/A	70	73	N/A	73	50%	50%	700	47
TOTAL SOUND PRESSURE LEVEL (dBA re: 20µPa)											60

		Distance	dBA	Ambient	Total	Delta
Daytime	SMVR-SM	700	60	65.9	67.0	1.1
	SMRV-SB	6800	41	69.6	69.6	0.0

No nighttime construction

Project Diablo Canyon Power Plant Decommissioning Project
Date 8/25/2022 SMVR Operations

Equipment List

Equipment N	Equipment Type	Subcontractor	Number	Horsepower	Load Factor
1	Gantry Crane				
2	Truck-mounted crane				
3	Truck-mounted crane				
4	Sissor Lift				
5	Sissor Lift				
6	Reach Lift				
7	Reach Lift				
8	Forklift				
9	Forklift				
10	Generator				

Calculation of sound pressure levels

Equipment Number	Equipment Index Number	Equipment	Reference Sound Pressure Level @ 50 ft (dBA re: 20µPa)					Reference Utilization (%)		Distance to Nearest Noise-Sensitive Receptor (ft)	Sound Pressure Level @ Receptor (dBA re: 20µPa)
			FTA	FHWA (Predicted)	FHWA (Measured)	VA	Used	FHWA	Used		
1	19	Crane, Derrick	88	85	81	88	88	16%	16%	700	57
2	20	Crane, Mobile	83	85	85	82	85	16%	16%	700	54
4	37	Sissor Lift	N/A	85	75	N/A	85	20%	20%	700	55
5	37	Sissor Lift	N/A	85	75	N/A	85	20%	20%	700	55
6	37	Reach Lift	N/A	85	75	N/A	85	20%	20%	700	55
7	37	Forklift	N/A	85	75	N/A	85	20%	20%	700	55
8	29	Generator (<25KVA, VMS Signs)	N/A	70	73	N/A	73	50%	50%	700	47
TOTAL SOUND PRESSURE LEVEL (dBA re: 20µPa)											63

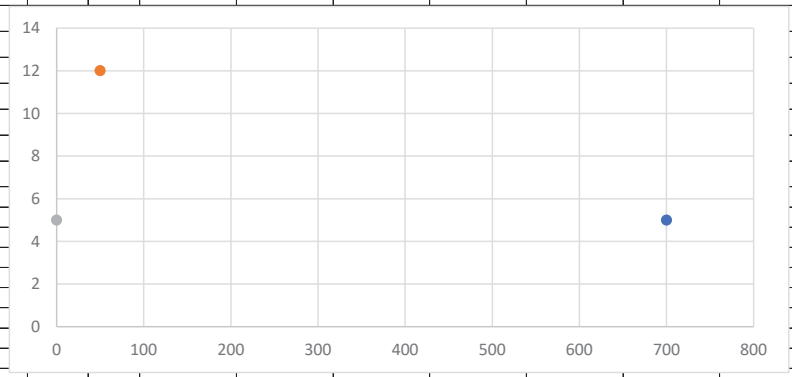
		Distance	dBA	Barrier	Total dBA	Ambient	Total	Delta
Daytime	SMVR-SM	700	63.3		**63.3**	**65.9**	67.8	1.9
	SMVR-SM with Mitigation	700	63.3	-14.0	49.3	65.9	66.0	0.1
	SMRV-SB	6800	41.0		**43.5**	**69.6**	69.6	0.0
Nighttime	SMVR-SM	700	63.3		63.3	50.0	63.5	13.5
	SMVR-SM with Mitigation	700	63.3	-14.0	**49.3**	**50.0**	52.7	2.7
	SMRV-SB	9504	41.0		**41.0**	**60.7**	60.7	0.0

Bold numbers indicate SMVR-SM
operational noise does not exceed ambient noise level
as stated in City of Santa Maria Municipal Code

Barrier Insertion Loss for Point Source

(Use same units as sound speed in cell M4)

Source to barrier distance	50		**A**	50.488							**Speed of Sound**	1126	ft/s							
Source height	5		**B**	650.04																
Observer to barrier distance	650		**C**	700																
Observer height	5																			
Barrier height	12																			
Barrier: 0, Berm: 1	0																			
Zone	Shadow																			
Distance from Source	700																			
Octave band (Hz)	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**dBA**											
PWL at source	100	100	100	100	100	100	100	100	107.0											
Directivity (10log(Q)) OR																				
Directivity (Q)	2	2	2	2	2	2	2	2												
SPL at receiver (distance loss only)	45	45	45	45	45	45	45	45	52.1											
Attenuation due to barrier (dB)	6	7	8	10	13	16	19	20	14.3											
SPL at receiver with barrier	39	38	37	35	32	29	26	25	37.8											
Fresnel Number	0.0588	0.1166	0.2333	0.4665	0.9331	1.8661	3.7322	7.4645												



DIABLO CANYON DECOMMISSIONING PROJECT CUMULATIVE AND ALTERNATIVES NOISE CALCULATIONS

Diablo Canyon Truck Route Calcs

Location	Trucks	Ambient	Total
1	**37.9**	**61.8**	**61.8**
2	**44.5**	**62.2**	**62.3**
3	53.9	66.4	66.6
4	46.3	52.2	53.2
5	53.2	58.5	59.6
6	**53.4**	**59.4**	**60.4**
7	45.4	60.5	60.6
8	46.2	58.6	58.8
9	46.6	60.0	60.2
10	46.7	64.3	64.4
11	47.5	65.6	65.7
12	45.5	52.0	52.9
13	35.9	64.6	64.6
14	25.3	53.5	53.5
15	19.0	58.8	58.8
16	37.3	50.8	51.0
17	29.9	50.8	50.8
18	42.2	53.8	54.1

DCPP Cumulative Projects

Cumulative Project 4

Cumulative Project 6 is close -

Cumulative Project 3

CUMULATIVE PROJECT #6

3 is 230' from Avila Beach Road

6 is 730' from Avila Beach Road

10 log (230/730) = -5.016 line source loss

20 log (230/730) = -10.03 point source loss

ALTERNATIVES ANALYSIS FOR ALTERNATIVE 7

DCPP to PBR Truck Route Calcs					Doubled			Non-Alternative
Location	Trucks	Ambient	Total	Delta	Trucks	Ambient	Total	Delta
1	37.9	61.8	61.8	0.0	40.9	61.8	61.8	0.0
2	44.5	62.2	62.3	0.1	47.5	62.2	62.3	0.1
3	53.9	66.4	66.6	0.2	56.9	66.4	66.9	0.2
4	46.3	52.2	53.2	1.0	49.3	52.2	54.0	**0.8**
5	53.2	58.5	59.6	1.1	56.2	58.5	60.5	**0.9**
6	53.4	59.4	60.4	1.0	56.4	59.4	61.2	**0.8**
7	45.4	60.5	60.6	0.1	48.4	60.5	60.8	0.1
8	46.2	58.6	58.8	0.2	49.2	58.6	59.1	0.2
9	46.6	60.0	60.2	0.2	49.6	60.0	60.4	0.2
10	46.7	64.3	64.4	0.1	49.7	64.3	64.4	0.1
11	47.5	65.6	65.7	0.1	50.5	65.6	65.7	0.1
12	45.5	52.0	52.9	0.9	48.5	52.0	53.6	0.7
13	35.9	64.6	64.6	0.0	38.9	64.6	64.6	0.0
14	25.3	53.5	53.5	0.0	28.3	53.5	53.5	0.0
15	19.0	58.8	58.8	0.0	22.0	58.8	58.8	0.0
16	37.3	50.8	51.0	0.2	40.3	50.8	51.2	0.2
17	29.9	50.8	50.8	0.0	32.9	50.8	50.9	0.0
18	42.2	53.8	54.1	0.3	45.2	53.8	54.4	0.3

ALTERNATIVES ANALYSIS FOR ALTERNATIVE 7

SMVR Truck Route Calcs					Doubled			Non-Alternative
Locatior	Trucks	Ambient	Total	Delta	Trucks	Ambien	Total	Delta
1	40.9	67.5	67.5	0.0	43.9	67.5	67.5	0.0
2	36.5	54.9	54.9	0.0	39.5	54.9	55.0	0.1
3	31.8	59.9	59.9	0.0	34.8	59.9	59.9	0.0
4	46.7	65.4	65.5	0.1	49.7	65.4	65.5	0.0
5	42.6	67.9	67.8	-0.1	45.6	67.9	67.9	0.1
6	42.4	66.8	66.8	0.0	45.4	66.8	66.8	0.0
7	39.5	68.3	68.3	0.0	42.5	68.3	68.3	0.0
8	54.7	74.3	74.3	0.0	57.7	74.3	74.4	0.1
9	38.1	59.9	60	0.1	41.1	59.9	60.0	0.0
10	37.8	61.4	61.4	0.0	40.8	61.4	61.4	0.0
11	36.9	55.6	55.7	0.1	39.9	55.6	55.7	0.0
12	35.8	64.8	64.8	0.0	38.8	64.8	64.8	0.0
13	36.9	66.8	66.8	0.0	39.9	66.8	66.8	0.0
14	43.8	62	62.1	0.1	46.8	62.0	62.1	0.0
15	46.3	70.1	70.1	0.0	49.3	70.1	70.1	0.0
16	50.5	67.7	67.8	0.1	53.5	67.7	67.9	0.1
17	40.1	58.4	58.5	0.1	43.1	58.4	58.5	0.0
18	53.7	71.9	72	0.1	56.7	71.9	72.0	0.0
19	54.7	70.1	70.2	0.1	57.7	70.1	70.3	0.1
20	58.8	72.3	72.5	0.2	61.8	72.3	72.7	0.2
21	52.7	65.9	66.1	0.2	55.7	65.9	66.3	0.2
22	63.2	73.1	73.5	0.4	66.2	73.1	73.9	0.4
23	58.8	69.6	70	0.4	61.8	69.6	70.3	0.3