

## APPENDIX D

### Noise Modeling Results

---

Intentionally blank page

# EQUIPMENT NOISE MODEL

Project: Lindero Feeder Slurrying  
 Date: 22-Apr-09  
 Scenario: De-Construction  
 Receptor: home at 30 feet

NOISE SOURCE (Data Source) A	NUMBER OF UNITS B	ASSUMED USE FACTOR C	MAX SOUND PRESSURE LEVEL @ 50 FT (dBA) D	DISTANCE (Feet) E	DIVERGENCE ATTENUATED NOISE LEVEL Leq (dBA) F	GROUND ATTENUATION Leq (dBA) G	ATTENUATED NOISE LEVEL Leq (dBA) H	NOISE LEVEL BELOW LOUDEST Leq (dBA) I	ADDITIVE NOISE LEVEL Leq (dBA) J
BACKHOE (1)	0	0.70	85	110					
COMPACTOR (1)	0	0.73	83	250					
CONCRETE MIXER (1)	1	1.00	85	30	89.4	-17.0	89.4	0.0	3
CONCRETE PUMP (1)	1	1.00	82	30	86.4	-17.0	86.4	3.0	1.83
COMPRESSORS (1)	0	0.73	81	50					
CRANE (1)	0	0.70	83	110					
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	100					
D8 DOZER (enhanced enclosure, est.)	0	0.73	82	225					
DRILL RIG (WATER) (3)	0	1.00	80	100					
ELECTRIC GENERATOR (50 KW, insulated engine cover) (3)	0	1.00	59	133					
ELECTRIC GENERATOR (Non-insulated engine cover) (3)	0	1.00	77	133					
WATER PUMPING PLANT (Motors + outlet splash) (3)	0	1.00	54	90					
GARBAGE TRUCK (COMPACTOR) (1)	0	1.00	90	50					
GENERATOR (1)	0	1.00	78	60					
MOTOR GRADER (4)	0	0.73	82.5	50					
HOE EXCAVATOR (1)	0	0.73	85	250					
JACK HAMMERS (1)	0	0.73	88	60					
966F WHEELED LOADER (std) (4)	0	0.73	78	140					
966F WHEELED LOADER (enhanced enclosure) (4)	0	0.73	77	50					
PAVER (1)	0	0.73	89	50					
PICK-UP TRUCK (1)	0	0.75	79	100					
PICK-UP (2.5 tn) (1)	0	0.75	79	100					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.73	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	400					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.73	82	50					
TUB GRINDER (estimated)	0	0.73	85	50					
SHEEPSFOOT ROLLER (1)	0	0.73	78	50					
SHREDDER (1)	0	0.73	75	50					
TRUCK TRACTOR (1)	0	0.20	82	110					
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
Welder	0	0.73	78	100					
WATER TRUCK (1)	0	0.25	88	250					
WATER WAGON (1)	0	0.73	83	50					

TOTAL Leq DURING NORMAL OPERATIONS (Maximum from column H + Sum of column J - 3):

91

ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION:  
 ASSUMED NIGHTTIME AMBIENT:  
 NUMBER OF DAYTIME HOURS OPERATING:  
 NUMBER OF EVENING HOURS OPERATING:  
 NUMBER OF NIGHTTIME HOURS OPERATING:  
 ESTIMATED Ldn:  
 ESTIMATED CNEL:

58  
 45  
 8  
 0  
 0  
 87  
 87

Ground attenuation estimates assume soft sites, average transmission path of 2 meters above the ground

Data Sources:

- (1) EPA (1971), Noise From Construction Equipment and Operations, EPA PB 206 717
- (2) Harris, C.M. (1991), Handbook of Acoustical Measurements and Noise Control, 3rd. Ed.
- (3) Actual measurements by Padre staff
- (4) Quinn Company-Caterpillar distributor

## EQUIPMENT NOISE MODEL

Project: Palo Comado Pump Station  
 Date: 19-Feb-09  
 Scenario: De-Construction  
 Receptor: trail at 110 feet

NOISE SOURCE (Data Source) A	NUMBER OF UNITS B	ASSUMED USE FACTOR C	MAX SOUND PRESSURE LEVEL @ 50 FT (dBA) D	DISTANCE (Feet) E	DIVERGENCE	GROUND	ATTENUATED	NOISE	ADDITIVE
					ATTENUATED NOISE LEVEL Leq (dBA) F	ATTENUATION Leq (dBA) G	NOISE LEVEL Leq (dBA) H	LEVEL BELOW LOUDEST Leq (dBA) I	NOISE LEVEL Leq (dBA) J
BACKHOE (1)	1	0.70	85	110	77.3	1.7	75.5	0.0	3
COMPACTOR (1)	0	0.73	83	250					
CONCRETE MIXER (1)	0	0.05	85	50					
CONCRETE PUMP (1)	0	1.00	82	85					
COMPRESSORS (1)	0	0.73	81	50					
CRANE (1)	1	0.70	83	110	75.3	1.7	73.5	2.0	2.12
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	100					
D8 DOZER (enhanced enclosure, est.)	0	0.73	82	225					
DRILL RIG (WATER) (3)	0	1.00	80	100					
ELECTRIC GENERATOR (50 KW, insulated engine cover) (3)	0	1.00	59	133					
ELECTRIC GENERATOR (Non-insulated engine cover) (3)	0	1.00	77	133					
WATER PUMPING PLANT (Motors + outlet splash) (3)	0	1.00	54	90					
GARBAGE TRUCK (COMPACTOR) (1)	0	1.00	90	50					
GENERATOR (1)	0	1.00	78	60					
MOTOR GRADER (4)	0	0.73	82.5	50					
HOE EXCAVATOR (1)	0	0.73	85	250					
JACK HAMMERS (1)	0	0.73	88	60					
966F WHEELED LOADER (std) (4)	0	0.73	78	140					
966F WHEELED LOADER (enhanced enclosure) (4)	0	0.73	77	50					
PAVER (1)	0	0.73	89	50					
PICK-UP TRUCK (1)	0	0.75	79	100					
PICK-UP (2.5 tn) (1)	0	0.75	79	100					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.73	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	400					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.73	82	50					
TUB GRINDER (estimated)	0	0.73	85	50					
SHEEPSFOOT ROLLER (1)	0	0.73	78	50					
SHREDDER (1)	0	0.73	75	50					
TRUCK TRACTOR (1)	1	0.20	82	110	72.8	1.7	71.0	4.5	1.28
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
Welder	0	0.73	78	100					
WATER TRUCK (1)	0	0.25	88	250					
WATER WAGON (1)	0	0.73	83	50					
TOTAL Leq DURING NORMAL OPERATIONS (Maximum from column H + Sum of column J - 3):									79
ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION:									44
ASSUMED NIGHTTIME AMBIENT:									35
NUMBER OF DAYTIME HOURS OPERATING:									8
NUMBER OF EVENING HOURS OPERATING:									0
NUMBER OF NIGHTTIME HOURS OPERATING:									0
ESTIMATED Ldn:									74
ESTIMATED CNEL:									74

Ground attenuation estimates assume soft sites, average transmission path of 2 meters above the ground

**Data Sources:**

- (1) EPA (1971), Noise From Construction Equipment and Operations, EPA PB 206 717
- (2) Harris, C.M. (1991), Handbook of Acoustical Measurements and Noise Control, 3rd. Ed.
- (3) Actual measurements by Padre staff
- (4) Quinn Company-Caterpillar distributor

## EQUIPMENT NOISE MODEL

Project: Cheeseboro Tank Decommissioning  
 Date: 19-Feb-09  
 Scenario: De-Construction  
 Receptor: trail at 110 feet

NOISE SOURCE (Data Source) A	NUMBER OF UNITS B	ASSUMED USE FACTOR C	MAX SOUND PRESSURE LEVEL @ 50 FT (dBA) D	DISTANCE (Feet) E	DIVERGENCE ATTENUATED NOISE LEVEL Leq (dBA) F	GROUND ATTENUATION Leq (dBA) G	ATTENUATED NOISE LEVEL Leq (dBA) H	NOISE LEVEL BELOW LOUDEST Leq (dBA) I	ADDITIVE NOISE LEVEL Leq (dBA) J
BACKHOE (1)	1	0.70	85	110	77.3	1.7	75.5	0.0	3
COMPACTOR (1)	0	0.73	83	250					
CONCRETE MIXER (1)	0	0.05	85	50					
CONCRETE PUMP (1)	0	1.00	82	85					
COMPRESSORS (1)	0	0.73	81	50					
CRANE (1)	1	0.70	83	110	75.3	1.7	73.5	2.0	2.12
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	100					
D8 DOZER (enhanced enclosure, est.)	0	0.73	82	225					
DRILL RIG (WATER) (3)	0	1.00	80	100					
ELECTRIC GENERATOR (50 KW, insulated engine cover) (3)	0	1.00	59	133					
ELECTRIC GENERATOR (Non-insulated engine cover) (3)	0	1.00	77	133					
WATER PUMPING PLANT (Motors + outlet splash) (3)	0	1.00	54	90					
GARBAGE TRUCK (COMPACTOR) (1)	0	1.00	90	50					
GENERATOR (1)	0	1.00	78	60					
MOTOR GRADER (4)	0	0.73	82.5	50					
HOE EXCAVATOR (1)	0	0.73	85	250					
JACK HAMMERS (1)	0	0.73	88	60					
966F WHEELED LOADER (std) (4)	0	0.73	76	140					
966F WHEELED LOADER (enhanced enclosure) (4)	0	0.73	77	50					
PAVER (1)	0	0.73	89	50					
PICK-UP TRUCK (1)	0	0.75	79	100					
PICK-UP (2.5 tn) (1)	0	0.75	79	100					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.73	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	400					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.73	82	50					
TUB GRINDER (estimated)	0	0.73	85	50					
SHEEPSFOOT ROLLER (1)	0	0.73	78	50					
SHREDDER (1)	0	0.73	75	50					
TRUCK TRACTOR (1)	4	0.20	82	110	74.6	1.7	72.8	2.7	1.9
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
Welder	0	0.73	78	100					
WATER TRUCK (1)	0	0.25	88	250					
WATER WAGON (1)	0	0.73	83	50					

TOTAL Leq DURING NORMAL OPERATIONS (Maximum from column H + Sum of column J - 3):

80

ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION:

44

ASSUMED NIGHTTIME AMBIENT:

35

NUMBER OF DAYTIME HOURS OPERATING:

8

NUMBER OF EVENING HOURS OPERATING:

0

NUMBER OF NIGHTTIME HOURS OPERATING:

0

ESTIMATED Ldn:

75

ESTIMATED CNEL:

75

Ground attenuation estimates assume soft sites, average transmission path of 2 meters above the ground

**Data Sources:**

- (1) EPA (1971), Noise From Construction Equipment and Operations, EPA PB 206 717
- (2) Harris, C.M. (1991), Handbook of Acoustical Measurements and Noise Control, 3rd. Ed.
- (3) Actual measurements by Padre staff
- (4) Quinn Company-Caterpillar distributor

*Est. 8dB reduction due to barrier effect of topography  
 80 dBA - 8 = 72 dBA*

## EQUIPMENT NOISE MODEL

Project: Slurry operation  
 Date: 19-Feb-09  
 Scenario: De-Construction  
 Receptor: trail at 240 feet same elevation

NOISE SOURCE (Data Source) A	NUMBER OF UNITS B	ASSUMED USE FACTOR C	MAX SOUND PRESSURE LEVEL @ 50 FT (dBA) D	DISTANCE (Feet) E	DIVERGENCE ATTENUATED NOISE LEVEL Leq (dBA) F	GROUND ATTENUATION Leq (dBA) G	ATTENUATED NOISE LEVEL Leq (dBA) H	NOISE LEVEL BELOW LOUDEST Leq (dBA) I	ADDITIVE NOISE LEVEL Leq (dBA) J
BACKHOE (1)	1	0.70	85	240	70.5	3.6	66.8	0.0	3
COMPACTOR (1)	0	0.73	83	250					
CONCRETE MIXER (1)	0	0.05	85	50					
CONCRETE PUMP (1)	0	1.00	82	85					
COMPRESSORS (1)	0	0.73	81	50					
CRANE (1)	1	0.70	83	240	68.5	3.6	64.8	2.0	2.12
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	100					
D8 DOZER (enhanced enclosure, est.)	0	0.73	82	225					
DRILL RIG (WATER) (3)	0	1.00	80	100					
ELECTRIC GENERATOR (50 KW, insulated engine cover) (3)	0	1.00	59	133					
ELECTRIC GENERATOR (Non-insulated engine cover) (3)	0	1.00	77	133					
WATER PUMPING PLANT (Motors + outlet splash) (3)	0	1.00	54	90					
GARBAGE TRUCK (COMPACTOR) (1)	0	1.00	90	50					
GENERATOR (1)	0	1.00	78	60					
MOTOR GRADER (4)	0	0.73	82.5	50					
HOE EXCAVATOR (1)	0	0.73	85	250					
JACK HAMMERS (1)	0	0.73	88	60					
966F WHEELED LOADER (std) (4)	0	0.73	78	140					
966F WHEELED LOADER (enhanced enclosure) (4)	0	0.73	77	50					
PAVER (1)	0	0.73	89	50					
PICK-UP TRUCK (1)	0	0.75	79	100					
PICK-UP (2.5 tn) (1)	0	0.75	79	100					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.73	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	400					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.73	82	50					
TUB GRINDER (estimated)	0	0.73	85	50					
SHEEPSFOOT ROLLER (1)	0	0.73	78	50					
SHREDDER (1)	0	0.73	75	50					
TRUCK TRACTOR (1)	4	0.20	82	240	67.8	3.6	64.1	2.7	1.9
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
Welder	0	0.73	78	100					
WATER TRUCK (1)	0	0.25	88	250					
WATER WAGON (1)	0	0.73	83	50					

TOTAL Leq DURING NORMAL OPERATIONS (Maximum from column H + Sum of column J - 3):

71

ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION:

44

ASSUMED NIGHTTIME AMBIENT:

35

NUMBER OF DAYTIME HOURS OPERATING:

8

NUMBER OF EVENING HOURS OPERATING:

0

NUMBER OF NIGHTTIME HOURS OPERATING:

0

ESTIMATED Ldn:

66

ESTIMATED CNEL:

66

Ground attenuation estimates assume soft sites, average transmission path of 2 meters above the ground

Data Sources:

- (1) EPA (1971), Noise From Construction Equipment and Operations, EPA PB 206 717
- (2) Harris, C.M. (1991), Handbook of Acoustical Measurements and Noise Control, 3rd. Ed.
- (3) Actual measurements by Padre staff
- (4) Quinn Company-Caterpillar distributor