E Noise Data

EQUIPMENT NOISE MODEL

Project: CVWD
Date: 12-Dec-07
Scenario: EL Carro Well construction General
Receptor: 20 feet from center of work activity

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	0.60	85	20	91.8	-38.6	91.8	0.0	3
COMPACTOR (1)	0	0.50	83	200					
CONCRETE MIXER (1)	0	0.08	85	200					
CONCRETE PUMP (1)	0	0.08	82	200					
COMPRESSORS (1)	0	1.00	81	50					
CRANE (1)	0	0.50	83	550					
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	550					
D8 DOZER (enhanced enclosure, est.)	0	0.50	82	225					
DRILL RIG (WATER) (3)	0	1.00	80	200					
ELECTRIC GENERATOR (50 KW, insulated engine cover) (3)	0	0.60	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	1.00	85	50					
JACK HAMMERS (1)	0	0.73	88	60					
966F WHEELED LOADER (std) (4)	1	0.73	78	20	85.1	-38.6	85.1	6.6	0.82
966F WHEELED LOADER (enhanced enclosure) (4)	0	0.73	77	50					
PAVER (1)	0	0.73	89	50					
PICK-UP TRUCK (1)	1	0.25	79	20	84.7	-38.6	84.7	7.1	0.76
PICK-UP (2.5 tn) (1)	0	0.25	79	30					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.05	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	50					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.50	82	30					
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	0.75	82	550					
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
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): **93**

ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION: 43
ASSUMED NIGHTTIME AMBIENT: 40
NUMBER OF DAYTIME HOURS OPERATING: 10
NUMBER OF EVENING HOURS OPERATING: 0
NUMBER OF NIGHTIME HOURS OPERATING: 0
ESTIMATED Ldn: 90
ESTIMATED CNEL: 90

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: CVWD
Date: 12-Dec-07
Scenario: EL Carro Well construction General
Receptor: 200 feet from center of work activity

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	0.60	85	200	71.8	3.4	68.4	0.0	3
COMPACTOR (1)	0	0.50	83	200					
CONCRETE MIXER (1)	0	0.08	85	200					
CONCRETE PUMP (1)	0	0.08	82	200					
COMPRESSORS (1)	0	1.00	81	50					
CRANE (1)	0	0.50	83	550					
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	550					
D8 DOZER (enhanced enclosure, est.)	0	0.50	82	225					
DRILL RIG (WATER) (3)	0	1.00	80	200					
ELECTRIC GENERATOR (50 KW, insulated engine cover) (3)	0	0.60	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	1.00	85	50					
JACK HAMMERS (1)	0	0.73	88	60					
966F WHEELED LOADER (std) (4)	1	0.73	78	200	65.1	3.4	61.8	6.6	0.82
966F WHEELED LOADER (enhanced enclosure) (4)	0	0.73	77	50					
PAVER (1)	0	0.73	89	50					
PICK-UP TRUCK (1)	1	0.25	79	200	64.7	3.4	61.3	7.1	0.76
PICK-UP (2.5 tn) (1)	0	0.25	79	30					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.05	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	50					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.50	82	30					
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	0.75	82	550					
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
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): **70**

ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION: 43
ASSUMED NIGHTTIME AMBIENT: 40
NUMBER OF DAYTIME HOURS OPERATING: 10
NUMBER OF EVENING HOURS OPERATING: 0
NUMBER OF NIGHTIME 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

EQUIPMENT NOISE MODEL

Project: CVWD
Date: 12-Dec-07
Scenario: EL Carro Well Construction Drilling
Receptor: 20 feet from center of work activity

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	0.40	85	20	91.2	-38.6	91.2	0.0	3
COMPACTOR (1)	0	0.50	83	200					
CONCRETE MIXER (1)	0	0.08	85	200					
CONCRETE PUMP (1)	0	0.08	82	200					
COMPRESSORS (1)	0	1.00	81	50					
CRANE (1)	0	0.50	83	550					
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	550					
D8 DOZER (enhanced enclosure, est.)	0	0.50	82	225					
DRILL RIG (WATER) (3)	1	1.00	80	20	88.0	-38.6	88.0	3.2	1.62
ELECTRIC GENERATOR (50 KW, insulated engine cover) (3)	0	0.60	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	1.00	85	50					
JACK HAMMERS (1)	0	0.73	88	60					
966F WHEELED LOADER (std) (4)	0	0.73	78	20					
966F WHEELED LOADER (enhanced enclosure) (4)	0	0.73	77	50					
PAVER (1)	0	0.73	89	50					
PICK-UP TRUCK (1)	0	0.25	79	20					
PICK-UP (2.5 tn) (1)	0	0.25	79	30					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.05	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	50					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.50	82	30					
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	0.75	82	550					
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
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):	**93**
ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION:	43
ASSUMED NIGHTTIME AMBIENT:	40
NUMBER OF DAYTIME HOURS OPERATING:	10
NUMBER OF EVENING HOURS OPERATING:	8
NUMBER OF NIGHTIME HOURS OPERATING:	6
ESTIMATED Ldn:	98
ESTIMATED CNEL:	99

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: CVWD
Date: 10-Dec-07
Scenario: EL Carro Well Drilling
Receptor: 200 feet from center of work activity

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	0.40	85	200	71.2	3.4	67.8	0.0	3
COMPACTOR (1)	0	0.50	83	200					
CONCRETE MIXER (1)	1	0.08	85	200	70.2	3.4	66.8	1.0	2.62
CONCRETE PUMP (1)	1	0.08	82	200	67.2	3.4	63.8	4.0	1.45
COMPRESSORS (1)	0	1.00	81	50					
CRANE (1)	0	0.50	83	550					
DERRICK (1)	0	0.73	88	50					
D8 DOZER (std) (1)	0	0.50	83	550					
D8 DOZER (enhanced enclosure, est.)	0	0.50	82	225					
DRILL RIG (WATER) (3)	1	1.00	80	200	68.0	3.4	64.6	3.2	1.62
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	1.00	85	50					
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	0.25	79	30					
PICK-UP (2.5 tn) (1)	0	0.25	79	30					
PICK-UP (4-W DRIVE) (1)	0	0.73	79	50					
PILE DRIVER (PEAK) (1)	0	0.73	101	50					
PNEUMATIC TOOLS (1)	0	0.05	86	50					
PUMP (1)	0	1.00	76	90					
ROLLER (1)	0	0.73	74	50					
SAW (1)	0	0.50	78	60					
SCRAPER (3)	0	0.50	82	30					
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	0.75	82	550					
TRUCK TRACTOR (1)	0	0.73	82	700					
VAN (1)	0	0.73	77	50					
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):	**73**
ASSUMED DAYTIME AMBIENT WITHOUT CONSTRUCTION:	43
ASSUMED NIGHTTIME AMBIENT:	40
NUMBER OF DAYTIME HOURS OPERATING:	10
NUMBER OF EVENING HOURS OPERATING:	8
NUMBER OF NIGHTIME HOURS OPERATING:	6
ESTIMATED Ldn:	79
ESTIMATED CNEL:	79

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

Wall Site Barrier Effect of Wall to Closest Residence

NOISE BARRIER CALCULATION*

DATA	INPUT	
Elevation of barrier top, feet:	8	
Elevation at source, feet:	0	
Height of source above elevation, feet:	2	
Elevation (ground or floor) at observer:	0	
Distance from source to barrier, feet:	190	
Distance from barrier to observer, feet:	20	

RESULT		
Barrier Height =	3.3	
Distance R =	190	
Distance D =	20	
Smaller of D/R or R/D =	0.10	
Barrier Effect:	-7.8	dBA
Ground-level Observer?:	yes	
Adjustment for loss of Ground Atten.:	0.0	dBA
Actual Barrier Attenuation:	-7.8	dBA
Finite Barrier Adjustment		
Enter angle subtended by barrier :	90	degrees
Enter Noise Level Without Barrier:	89	dBA
Enter Reference Distance for Noise Level:	100	feet
FINITE BARRIER AVERAGE LEVEL:	75.0	dBA
AVERAGE LEVEL w/t BARRIER:	81.2	dBA
SUMMED AVERAGE LEVEL:	82.1	dBA

* Assumes a sound wavelength of 2 feet.

Well pump motor impact @ residential neighbor w/o wall attenuation

TO DETERMINE NOISE CONTOURS FOR A GIVEN NOISE LEVEL

ATTENUATION RATE: 6 dBA/DOUBLING OF DISTANCE
hoice: 3, 4.5, or 6)
NOISE LEVEL: 82 dBA
REFERENCE DISTANCE: 3 FEET

NOISE CONTOUR	DISTANCE FROM SOURCE	SPECIFIC DISTANCE	NOISE LEVEL
75	7	200	45.5
70	12	2,000	25.5
65	21	2,500	23.6
60	38	5,000	17.6
55	67	7,000	14.6
50	119	10,000	11.5

Well pump motor impact @ Girls Inc. w/o Wall attenuation

TO DETERMINE NOISE CONTOURS FOR A GIVEN NOISE LEVEL

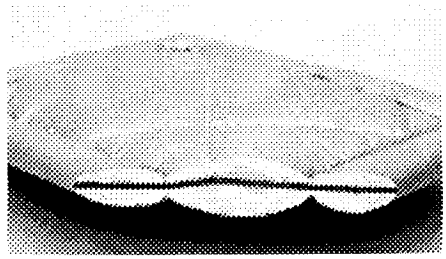
ATTENUATION RATE: 6 dBA/DOUBLING OF DISTANCE
hoice: 3, 4.5, or 6)
NOISE LEVEL: 82 dBA
REFERENCE DISTANCE: 3 FEET

NOISE CONTOUR	DISTANCE FROM SOURCE	SPECIFIC DISTANCE	NOISE LEVEL
75	7	10	71.5
70	12	2,000	25.5
65	21	2,500	23.6
60	38	5,000	17.6
55	67	7,000	14.6
50	119	10,000	11.5

TECHNICAL DATA SHEET

AudioSeal Absorber/Barrier Combination Blanket ABSC-26

Print Data Sheet



The barrier septum configuration offers the benefits of both sound absorption and noise barriers. The ABSC-26 consists of a non-reinforced 1 lb. psf loaded vinyl barrier sandwiched between two 1" thick absorbers with a silicone-coated fiberglass cloth. Curtain panels are constructed with grommets across the top and Velcro along the vertical edges. Rolls are available 4' wide x 25' long and can be supplied with edges bound or unbound.

Silicone faced quilted fiberglass absorbers are typically used to reduce reverberant noise energy within a piece of equipment, room or building where the product may be subjected to high temperature, sunlight, water or oil.

FEATURES

- Class A Flammability per ASTM E84
- Available Color: Gray

PRODUCT DATA

- Description: Silicone coated fiberglass cloth facing on 1" quilted fiberglass / 1 lb-psf non-reinforced lovinyl barrier / silicone coated fiberglass
- Weight: 1.5 lb psf
- Flame Spread: 4.017
- Smoke Density: 19.209
- Nominal Thickness: 2.08 inches
- Temperature Range: -90° to +550° F

ACOUSTICAL PERFORMANCE

SOUND TRANSMISSION LOSS							
OCTAVE BAND FREQUENCIES (Hz)							
Product	125	250	500	1000	2000	4000	STC
BSC-26	12	16	27	40	44	43	29

ASTM E-90 & E 413

SOUND ABSORPTION DATA							
OCTAVE BAND FREQUENCIES (Hz)							
Product	125	250	500	1000	2000	4000	NRC
BSC-26	.19	.99	.96	.80	.57	.33	.85

ASTM C 423

Acoustical Solutions, Inc