

APPENDIX A

NOISE EVALUATIONS

A-1. Noise Surveys. All noise evaluations (surveys) will be recorded on DD Form 2214 (Noise Survey). The form shall be used in accordance with instructions on the reverse side except for the following:

a. Under "Sound Level Data", "Meter Action", record the total work time per day the worker is normally exposed to the noise level recorded on that line under column "dB(A)" (see figures A-1 and A-2).

b. Under "Sound Level Data" "dBC", record the duration of the Noise Dose or Leg measurements when a noise analyzer is used (see figure A-2).

c. Under "Remarks" calculate a Risk Assessment Code for the workers' exposure to the measured sources. If engineering controls are technologically feasible, also calculate a cost effectiveness index for implementation engineering controls to reduce the noise exposure.

A-2. Examples. See figure A-1 for example noise survey using a sound level meter. See figure A-2 example noise survey using a noise analyzer.

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NOISE SURVEY (Sound Level Meter Survey)									
DATE (Year Month Day) 8/20/87				TYPE SURVEY 2 1-INITIAL SURVEY 2-RE-SURVEY 3-OTHER					
SOUND LEVEL METER			MICROPHONE			CALIBRATOR			
MANUFACTURER General Radio			MANUFACTURER General Radio			MANUFACTURER General Radio			
MODEL 1565 B		SERIAL NO 10571	MODEL MK 101		SERIAL NO 1275	MODEL 1562		SERIAL NO 1100	
LAST ELECTROACOUSTIC CALIB DATE 8/10/87			LAST ELECTROACOUSTIC CALIB DATE 8/10/87			LAST ELECTROACOUSTIC CALIB DATE 8/10/87			
WIND SCREEN <input type="checkbox"/> USED <input type="checkbox"/> NOT USED			MEASUREMENTS OBTAINED <input type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS						
DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED (Illustrate on additional sheet and attach to form) Area on diesel powered bank grader (OLIN II), LMD - check equipment every hour - standby on catwalk						PRIMARY SOURCE OF NOISE Engine			
						SECONDARY SOURCE OF NOISE Drum Train			
SOUND LEVEL DATA					PROTECTION REQUIRED (re. dBA Level)				
LOCATION	METER ACTION	dBc	dBA	RISK ASSESSMENT CODE	NONE less than 85	PLUG OR MUFF 85-108	PLUG AND MUFF 108-118	PLUG + MUFF + TIME LIMIT greater than 118	
Inside Superstructure	45 min 24 hr		110				✓		
Outside, on catwalk	465 min 24 hr		106				✓		
NOTES: Range of levels noted by /, i.e., 102/109. At operator work stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.									
REMARKS (i.e., Area and equipment posted, hearing protection in use, etc.) $RAC: 45/63 + 465/12.6 = 45 > 1, RAC 2$ Severity/probability multiplication 21 $21 \times 2 = 44$ Number of persons exposed 2 $44 / 2 = 22$ Cost for booth for use during standby \$5,000 $CEI = 22$									
MORE DETAILED NOISE EVALUATION REQUIRED <input type="checkbox"/> YES <input type="checkbox"/> NO (If "YES", identify type evaluation needed.)									
NAME(S) OF PERSONS IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form) Jim Jones, John Smith (Alternate)									
NAME, PHONE NO. AND ORGANIZATION OF SUPERVISOR OF NOISE-HAZARDOUS AREA OR OPERATION Frank Doe 634-0000, Plant Engineer									
SURVEY PERFORMED BY (Last Name, First Name, MI) Al Peters					HEARING CONSERVATION MONITOR (Last Name, First Name, MI) Fred Ellis, Safety Officer				

Figure A-1. Example of Completed DD Form 2214 Using a Sound Level Meter.

NOISE SURVEY (Sound Level Meter Survey)										
DATE (Year, Month, Day) 8/21/87					TYPE SURVEY 2 1-INITIAL SURVEY 2-RE-SURVEY 3-OTHER					
SOUND LEVEL METER			MICROPHONE			CALIBRATOR				
MANUFACTURER Metrasonic			MANUFACTURER Metrasonic			MANUFACTURER Metrasonic				
MODEL DB 306		SERIAL NO 1526		MODEL MK301P		SERIAL NO 261		MODEL C1302		SERIAL NO 1451
LAST ELECTROACOUSTIC CALIB DATE 8/1/87			LAST ELECTROACOUSTIC CALIB DATE 8/1/87			LAST ELECTROACOUSTIC CALIB DATE 8/1/87				
WIND SCREEN <input type="checkbox"/> USED <input type="checkbox"/> NOT USED			MEASUREMENTS OBTAINED <input type="checkbox"/> INDOORS <input type="checkbox"/> OUTDOORS							
DESCRIPTION OF AREAS/DUTIES WHERE NOISE SURVEY CONDUCTED (Illustrate on additional sheet and attach to form) Clerk on diesel powered backhoe loader (CLIN II), LIND - Check equipment every hour - Standby on catwalk						PRIMARY SOURCE OF NOISE Engine				
						SECONDARY SOURCE OF NOISE Dance Trolls				
SOUND LEVEL DATA					PROTECTION REQUIRED (re dBA Level)					
LOCATION	METER ACTION	dBC	dBA	RISK ASSESSMENT CODE	NONE less than 85	PLUG OR MUFF 85-108	PLUG AND MUFF 108-118	PLUG + MUFF + TIME LIMIT greater than 118		
1 work cycle (equip. check + standby)			510min 60min 10:7 24hrs 17 min max. ch.				<input checked="" type="checkbox"/>			
NOTES: Range of levels noted by /, i.e., 102/109 At operator work stations, measure at ear level. METER ACTION: Enter F for fast meter action and S for slow meter action.										
REMARKS (i.e., Area and equipment posted, hearing protection, etc.) $RAC: \frac{51}{10.6} = 48 > 1$ , <b>RAC 2</b> severity probability multiplication 21 $21 \times 2 = 44$ Number of persons exposed 2 $\frac{5200}{44} = 122$ Cost for sound booth for use during standby \$5000 <b>CEI = 122</b>										
MORE DETAILED NOISE EVALUATION REQUIRED <input type="checkbox"/> YES <input type="checkbox"/> NO (If "YES", identify type evaluation needed.)										
NAME(S) OF PERSONS IDENTIFIED FOR AUDIOMETRIC MONITORING (Use additional sheet if more space is needed and attach to form) Jim Jones, John Smith (Alternate)										
NAME, PHONE NO. AND ORGANIZATION OF SUPERVISOR OF NOISE-HAZARDOUS AREA OR OPERATION Frank Doe 634-0000, Plant Engineer										
SURVEY PERFORMED BY (Last Name, First Name, MI) Al Peters					HEARING CONSERVATION MONITOR (Last Name, First Name, MI) Fred Ellis, Safety Officer					

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Figure A-2. Example of Completed DD Form 2214 Using a Noise Analyzer