



DOW CHEMICAL U.S.A.

LOUISIANA DIVISION
PLAQUEMINE, LOUISIANA 70764
RD4 887-4321

ENVIRONMENTAL HEALTH REPORT

NOISE SURVEY
PORTABLE AIR COMPRESSORS

FILE NO. 105-25-2

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CHECKED Charlie Halphen

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SUMMARY

A noise survey on portable air compressors in the Louisiana Division was made with the Bruel & Kjaer Sound level meter (type 2205). Results indicated the dB(A) readings were above OSHA standards in the areas surrounding the equipment with one exception being noted. (The sound level meter was calibrated before and after each series of readings.)

Sandblasters and personnel responsible for operating and servicing compressors must wear hearing protection while attending these duties. Due to the many variables involved with mobile equipment, supervision will have to make judgement decisions on each individual situation to determine if workers need hearing protection in their areas.

Selecting a remote site for the compressor away from the workmen is helpful and suggested when possible. The potential danger of ear damage and hearing loss must be stressed and understood by each individual working in these areas.

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PORTABLE AIR COMPRESSORS

The Bruel & Kjaer Sound level meter (type 2205) was used to monitor the noise levels. The monitoring equipment was calibrated before and after each series of readings and all readings were recorded in dB(A).

The compressors monitored were employed in different functions. One supplied supplemental air to the Cellulose block, two were used to operate air movers and pneumatic tools, while another was used to sandblast.

The data was collected from the front, back and both sides of the compressor at distances of 5, 15 and 25 feet. Three of the four compressors were operating above the OSHA standards and would require ear protection for workers having to work in the area.

The Joy Quiet Power RPQ 650 performed at a considerably lower noise level despite operating at a higher rpm level than the other compressors. Discussed the advantages of the Joy Quiet Power unit with Dow personnel responsible for renting and leasing this equipment who related that they were aware of these advantages and were attempting to obtain more compressors of this type.

There are so many variables involved in determining noise levels that we can not establish any rigid rules covering mobile equipment. The exception being that people working near compressors must wear hearing protection anytime they are operating unless it is one of the Joy Quiet Power units that has been monitored and found to be within OSHA Standards.

Continued efforts should be made to place the compressors in remote areas away from the workmen and heavily utilized work areas. The potential danger of hearing loss and damage must be stressed with each individual working in these areas.

NOISE SURVEY RESULTS

<u>TYPE AND MODEL NUMBER</u>	<u>dba READINGS AT 5', 15' and 25'</u>			<u>RPm MAX RATING</u>	<u>RPm RUNNING DURING SURVEY</u>	<u>MACHINE NUMBER</u>
	<u>5'</u>	<u>15'</u>	<u>25'</u>			
Joy RPS 800	104	99	96	2100	1350-1400	800-1
Joy RPS 650	104	96	92	1900	1100	650-3
Joy Quiet Power RPQ 650	88	83	80	1800	1200-1275	650-7
Ingersol Rand Super Flo 600	97	92	88	-	1200	Sline 41

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