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SOL (MSHA) V. N.A. DEGERSTROM
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Federal Mine Safety and Health Review Commission
Office of Administrative Law Judges

SECRETARY OF LABOR, MINE SAFETY AND HEALTH ADMINISTRATION (MSHA), PETITIONER

v.

N. A. DEGERSTROM, INCORPORATED, RESPONDENT

CIVIL PENALTY PROCEEDINGS

DOCKET NO. WEST 79-14-M
WEST 79-331-M
WEST 79-362-M
WEST 79-363-M

Appearances:
Ernest Scott, Jr., Esq., Office of Daniel W. Teehan
Regional Solicitor, United States Department of Labor
Seattle, Washington 98174,
For the Petitioner

James A. Fish, Esq.
Winston and Cashatt
Spokane, Washington 99201,
For the Respondent

Before: Judge John J. Morris

DECISION

The Secretary of Labor, on behalf of the Mine Safety and Health Administration, (MSHA), charges respondent, N.A. Degerstrom, Incorporated, (Degerstrom), with violating safety and health regulations promulgated under the Federal Mine Safety and Health Act, 30 U.S.C. 801 et seq.

After notice to the parties a hearing was held in Spokane, Washington on January 30, 1980. At the conclusion of the hearing the Secretary moved for a continuance in order to conduct a feasibility study of respondent's equipment involved in the citations. Respondent consented to the motion and the hearing was adjourned (Tr. 134, 135, 215, 216). On September 23, 1981, the hearing was resumed and concluded.

The parties filed post trial briefs.

Issues

The principal issues involve the construction of the noise exposure regulation. Such issues may be resolved by several cases now pending on review before the Commission. These include: Callahan Industries, Inc., York 79-99-M and Todilto Exploration Co., CENT 79-91-RM.

Summary of the Decision

Three of these four consolidated cases involve alleged violations of the excessive noise standard. The principal fact issues are in WEST 79-362-M. Accordingly, that case will be initially reviewed.

The succeeding noise case, WEST 79-14-M, is relatively less complex. WEST 79-331-M ultimately was settled at the second hearing.

The fourth case, WEST 79-363-M, involves two alleged violations of the fire extinguisher regulation.

The resolution of the several credibility issues in the cases is apparent in the context of the decision.

Stipulation in all Cases

The parties stipulated as follows: respondent, a corporation, operated State Pit G-T-175, Theatre Pit, and State Pit PWS-48 as an operator. Further, the operation of these pits involves materials, products, or goods brought to respondent from points outside of the State of Washington.

In addition the parties agreed that dosimeters used by the MSHA inspectors were properly calibrated and when operated properly they give accurate readings of noise levels.

Further, respondent's income averaged seven or eight million dollars a year for the four years before the hearing; further, respondent has employed, on the average, 120 employees (Tr. 6-7).

If respondent pays the proposed penalties it will not have the effect of putting the company out of business (Tr. 8).

Respondent has shown good faith by doing what it could do to achieve compliance by the proposed abatement date (Tr. 8).

WEST 79-362-M

In this case the Secretary issued his citations numbered 346416, 346417, and 346418 under Section 104(a) of the Act. He alleges Degerstrom violated 30 C.F.R. 56.5-50(b), in that it permitted its Terex bulldozer operator, its primary crusher operator, and its plant oiler to be exposed to excessive concentrations of noise.

The cited section, in Title 30, Code of Federal Regulations, Section 56.5-50 provides as follows:

> 56.5-50 Mandatory. (a) No employee shall be permitted an exposure to noise in excess of that specified in the table

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below. Noise level measurements shall be made using a sound level meter meeting specifications for type 2 meters contained in American National Standards Institute (ANSI) Standard S1.4-1971, "General Purpose Sound Level Meters," approved April 27, 1971, which is hereby incorporated by reference and made a part hereof, or by a dosimeter with similar accuracy. This publication may be obtained from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018, or may be examined in any Metal and Nonmetal Mine Safety and Health District or Subdistrict Office of the Mine Safety and Health Administration.

PERMISSIBLE NOISE EXPOSURES

Duration per day hours of exposure	Sound level dBA, slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

No exposure shall exceed 115 dBA. Impact or impulsive noises shall not exceed 140 dB, peak sound pressure level.

NOTE: When the daily noise exposure is composed of two or more periods of noise exposure at different levels, their combined effect shall be considered rather than the individual effect of each.

If the sum

$$(C1/T1)+(C2/T2)+ \ldots (Cn/Tn)$$

exceeds unity, then the mixed exposure shall be considered to exceed the permissible exposure. Cn indicates the total time of exposure at a specified noise level, and Tn indicates the total time of exposure permitted at that level. Interpolation between tabulated values may be determined by the following formula:

$$\text{Log } T=6.322 - 0.0602 \text{ SL}$$

Where T is the time in hours and SL is the sound level in dBA.

(b) When employees' exposure exceeds that listed in the above table, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce exposure to within permissible levels, personal protection equipment shall be provided and used to reduce sound levels to within the levels of the table.

Petitioner's Evidence

Citation 346416
Terex Bulldozer Operator

On July 13, 1978 Elvin Fischer, an MSHA inspector experienced in mining, inspected Degerstrom at State Pit PSW 48. This was a small normal crusher operation employing 23 men working two shifts. He conducted his noise test by placing a DuPont dosimeter on the operator of the Terex bulldozer for eight hours and twenty minutes (Tr. 59-63, 76). The diesel dozer, the second largest available, is similar to the Caterpillar D-8 bulldozer (Tr. 62, 63). The principal noise sources on the Terex are: The engines, the tracks, the transmissions, and the transfer case (Tr. 63). At the time of the inspection the dozer was backing downhill into a pit, picking up material, and then pushing it uphill into the hopper (Tr. 63).

The calibrations of the dosimeter are checked periodically at the MSHA Lab. Driscoll (superintendent) was present when the inspector removed the readout from the dosimeter. The readout, which is in digital form, indicated the noise exposure was 1152 percent of the permissible limits. This exposure translates to 108 dBA (Tr. 64). According to MSHA's regulation the permissible limit here would be 90 dBA (Tr. 64). Only the dozer operator was in the immediate vicinity. The MSHA inspector didn't see any administrative or engineering controls being used (Tr. 65).

The inspector also accompanied the dozer operator on several round trips and took readings with a sound level meter. Such a device gives an instant reading in dBA rather than measuring in percentages of exposure. The inspector during the trips with the dozer operator held the sound level meter near the operator's ear (Tr. 58-60, 68, 69). Both the sound level meter and the dosimeter meet the specifications required by 30 C.F.R. 56.5-50 (Tr. 71).

On the Terex dozer Inspector Fischer expected to see some acoustical equipment or sound barriers around the operator. But he couldn't say what the effect of controls would be unless he measured the noise level with a dosimeter (Tr. 77-78).

Citation 346417
Primary Crusher Operator

The inspector placed the dosimeter on the crusher operator. At the time of the inspection large rocks one and a half to two feet in diameter

were being crushed (Tr. 66, 67). The noise exposure readout was 478 percent. This translates to 101 dBA. The crusher operator was tested for 8 hours and 25 minutes (Tr. 69, 92). The maximum exposure listed in the regulation is 90 dBA (Tr. 69-70). The crusher operator could not retreat into a booth or enclosure (Tr. 70).

Citation 346418
Plant Oiler

The plant oiler for Degerstrom also serves as the cleanup man. He removes the spillage from the conveyor belts. He oils and greases the machinery during "down time" (Tr. 72).

The dosimeter indicated the oiler was exposed at 313 percent of the permissible noise limit. This exposure translates to 98 dBA. The testing equipment was on the oiler for eight hours and ten minutes. Under the regulation 90 dBA is a permissible limit (Tr. 72, 73).

At the closing conference Hubner, the company engineer, indicated to the inspector that he was aware of the overexposure to the noise (Tr. 73-74). But he thought that the use of personal protective equipment was adequate (Tr. 74). No one indicated administrative or engineering controls were being used (Tr. 74).

All of the workers tested by Inspector Fischer were wearing personal protective equipment consisting of ear muffs or ear plugs (Tr. 80). Witness Fisher writes a citation if there is exposure over the TLV [threshold limit value] (Tr. 86).

MSHA's Evidence Concerning Feasibility

MSHA's health specialist Kenneth High testified that noise reduction controls for the bulldozer include: an improved muffler, extending the exhaust pipe, lining the ROPS and treating the firewall with acoustical material. In addition, a windshield or sound barrier around the operator could reduce the noise level, as could floor mats extended over the fenders (Tr. 108-109). Portable sound barriers are commercially available (Tr. 109). It would probably cost $700 to $2,500 to install partial barriers. A D-10 cab costs $5,000 to $27,000 (Tr. 110). A cab will have the effect of reducing the noise level to within permissible limits, and it will also attenuate the dust (Tr. 111). In High's opinion 75 percent of all dozers can reach compliance (Tr. 111).

Reductions of 5 to 14 dBA and 8 to 12 dBA can be accomplished by installing various engineering controls on dozers. The net reduction

depends on many factors, including the workmanship of the installation (Tr. 130-132). The cost of dozer modifications in some instances runs as low as $700 to $1,400. However, Inspector High could not state if his suggestions would bring the dozers into compliance. He would have to verify the results (Tr. 133).

In the opinion of witness Fischer his recommended treatment of the engine transmission would cost $180 to $200 (Tr. 271). He also states that the extension of the muffler, the changes to the engine transmission and the recommended change in the cooling fan would not bring the dozer within permissible limits (Tr. 271, 272). On dozers MSHA gets an average reduction of around 4 decibels, plus or minus one decibel (Tr. 272). It is feasible if such a reduction can be attained even though the changes do not bring the equipment within the 90 dBA range for eight hours (Tr. 272).

On June 10-12, 1980, John Rabius, an MSHA industrial hygienist experienced in his field, conducted a noise survey at the Degerstrom site (Tr. 232-235, 237). If MSHA has the materials available and the company has the time and the equipment MSHA will work on the noise sources to devise controls (Tr. 236).

In witness Rabius's opinion an expenditure of $1,000 could reduce a bulldozer noise level four or five decibels (Tr. 273-274). During tramming, the normal operating mode of the dozer, witness Rabius believed they could obtain a four or five decibel reduction (Tr. 277). MSHA didn't test any of its controls here. But MSHA offered to do so and Degerstrom seemed receptive (Tr. 275).

Administrative controls, according to Rabius, are unsatisfactory. This is because of occupations, unions, difficulty of administering, worker resistance, and having to hire two employees for one job (Tr. 272-273).

The purpose of the MSHA survey of the Degerstrom equipment was to develop a feasibility study for the purpose of establishing noise controls for the following job classifications: Terex dozer operator, primary crusher operator, and the plant oiler (P 11).

The MSHA officials measured and graphed the noise level with their equipment. Extensive measurements were taken at the Degerstrom site (P 11).

The study consists of measurements taken, charts, tables, graphs, and tape segments (Tr. 240-242). The noise exposures at various work areas were calculated and programmed into a computer. A statistical summary was also prepared (Tr. 242-247, P11).

Concerning the dozer operator: the recording microphone was placed in various locations on the dozer and the noise level was measured while the dozer was operating at high idle and tramming

(P 11 at 3).

A calculation, called a Leq, is the equivalent noise level in dBA (P 11 at 3). Octave band spectra from the graphs form the basis to determine the major sources of noise (P 11 at 3).

The dominate noise source of the bulldozer, in addition to the fan behind the operator, is caused by the squealing brakes of the bulldozer (P11 at 3). As a result of its study MSHA reached certain conclusions as to the job classifications. These conclusions follow.

Terex Dozer Operator

An effective approach to noise control begins by isolating and controlling the primary noise sources before progressing on to the lesser sources. Figures 8 through 13 [in P11] show the spectral signatures of various components of the dozer during tram and high idle testing. As discussed earlier, there appear to be two major noise sources - the engine cooling fan and the motor. The following steps, followed in the given order, will provide significant reduction to the operator.

1) Cooling fan - a shroud should be constructed for the cooling fan located behind the operator. The shroud must accomplish two things: it must be of sufficient size and mass (i.e. 1/4 inch steel plate) to deflect the fan noise away from the operator and it must be open enough to allow for adequate engine cooling.

2) Tracks - The operator view of the tracks should be blocked(FOOTNOTE 1) by the use of small steel panels placed at the supports. The exact location, dimensions and configuration of the barrier panels must be determined by trial and error analysis. Noise reduction efficiency, fastening, and operator view are all of critical importance. The treatment of the crawler tracks recommended by MSHA has not been done elsewhere (Tr. 270).

3) Muffler exhaust stack - Figure 4d [in P11] shows the operator's view of the exhaust. This stack should be extended approximately 18 inches so that the opening will be well above the level of the canopy. Thus, the canopy will act as a barrier against this source.

4) Transmission/Engine - Considerable noise is radiating from the floor and firewall, necessitating the need for a great deal of mass in these areas for control. Conveyor belting, containing both mass and flexibility should be used to cover as much of the floor as possible and continued up the firewall under the instrument panel. A layer of barrier-foam material should then be placed over the belting and then the entire treatment covered with a skid-abrasion resistant pad.

In addition, the engine side of the firewall should be treated with a fiberglass-barrier material with a heat resistant facing. This will reduce the engine/mechanical noise coming through the instrument panel and firewall.

At this point in its report MSHA lists 12 manufacturers of barrier type equipment.

The MSHA report relating to the dozer continues to the effect that the remaining four recommendations constitute treating the somewhat lesser noise sources. However, their importance should not be neglected since, if untreated, these "minor" sources can short-circuit the cure. The recommendations follow:

5) Hang a section of belting from the left side of the engine cowling near the firewall. This will refract the mechanical engine noise in a wider pattern, away from the operator.

6) Lift up the operator chair and cover the transmission with belting or any other material with significant mass. A foam will not work.

7) Cover all holes around gear levers with rubber boots or stuff them with belting.

8) Line the inside of the canopy with a foam material to prevent reverberation. Since the canopy is also acting as a shield for the exhaust noise, a barrier material might provide even better results. Manufacturers of these materials are listed.

These steps should provide significant reduction. When they are complete, additional work may be needed for the air intake and the Jimmy Blower. However, at this stage, these sources were masked by the others.

(Exhibit P11 at 6-8).

Primary Crusher Operator

Concerning the primary crusher operator (feederman): after the citations were issued and before the feasibility study in June 1980 Degerstrom constructed a booth for the operator. Noise levels were

measured in the booth under varying perimeters (P 11 at 1, 2). A partial history of the operator's time inside and outside the booth was calculated. The operator's duties divide his activities and he is in and out of the booth at various times. In a three hour and 43 minute period the operator was exposed to a 89.9% noise exposure. This translates to an eight hour exposure of 193% (P 11 at 2).

Witness High indicated that the noise exposure to the primary crusher operator can be reduced by building a control booth for the operator (Tr. 97, 98). Control booths are commercially available and 75 percent of all crushing operations use such booths (Tr. 99). A 4 x 4 booth costs $2,745. A plywood enclosure costs between $500 and $1,200, up to $2,000 (Tr. 100, 101). The use of a booth will reduce the operator's exposure 20 dBA to within permissible limits (Tr. 100, 101).

Concerning the crusher itself: MSHA suggests that the feed hoppers of the discharge chute, the catch basins, and screens be lined with rubber. Expensive impact resistant rubber is commercially available but an operator could use old conveyor beltings (Tr. 101-103).

In MSHA's view hearing protection is not an administrative or engineering control because it is only a temporary remedy (Tr. 105, 106). Administrative controls would include staggering work shifts and rotating workers out of high exposure areas (Tr. 98).

Witness High has, in his experience, seen the noise exposure on some crushers reduced from 139 dBA to 90 dBA (Tr. 125-126).

MSHA's feasibility study at the Degerstrom site caused the Secretary to reach certain conclusions concerning the crusher operator. These were as follows:

An immobile steel panel with a glass viewing window placed between the jaw crusher and operator will offer a more constant noise reduction compared to a door that is constantly opening and closing. Such a panel already exists in the booth opposite the existing access door and it would be in the proper position if the booth were relocated to the opposite side of the crusher.

The following recommendations will further reduce the noise exposure to the operator:

Relocate the booth from its present location to the opposite side of the crusher.

Rehinge front door so when it is open, it still blocks out the crusher noise.

While the access door can be left open for ventilation, a safer design would be to seal it shut and use an adjustable window.

Cover all holes and leaks with belting; cover the floor with belting and a skid resistant cover.

Plant Oiler

The plant oiler is the most difficult of all to protect (Tr. 122-123). A history of the operator's time in some 15 tasks was calculated. The oiler received an exposure of 29.8% from 12:30 p.m. to 2:30 p.m. This translates to an eight hour exposure of 119 percent which is in compliance (P11 at 4). The MSHA report indicates that "a better candidate for [noise] control would be while the oiler is at CP2 (this is one of his tasks where he spent eighteen minutes and the additional task is while he is relieving the primary crusher operator) (P11 at 4). Between 6:15 a.m. and 2:30 p.m. the oiler's time and exposure was calculated at 78 different locations (P11 at Table 4).

Concerning the plant oiler the Secretary reached the following conclusions:

This worker will automatically get noise reductions by suggested modifications to the crusher booth where he spends about 30 minutes each day in levels of 92-98 dBA with the door opened. In addition, since he was already in compliance, at least on the day of the feasibility study, any recommendations might be academic. Finally, since the plant does not have the same orientation each time, severe constraints are put on any recommendations. Nonetheless, the following steps will reduce the noise exposure to the oiler: (P11).

Require skirts on all the belts. Skirts keep material from falling off of the belt and thereby reduce the time the oiler spends in close proximity to excessive noise (Tr. 266, 267).

Locate or orientate the M-30 trailer or any similar vehicle away from the plant so that the levels at the entrance way are well below 90 dBA (P11).

Place sound screens made of belting or plywood in front of the CP-2 generator or any similar generator (on the day of the study at this particular plant the oiler received 18 percentage points from this source) (P11).

Place one or two sound screens made of belting or plywood in strategic locations to make a quiet area for conversations with the foreman (P11).

The summary in MSHA's report concludes as follows:

A study was conducted to determine feasible noise controls for the crusher operator, plant oiler, and dozer operator at a Degerstrom portable crushing operation. Controls exist which will reduce the noise exposure of these three operations. If desired, DTSC [Denver Technical Support Center] can work with the company in the fabrication, installation and evaluation of these controls.

Respondent's Evidence

Eugene Friend, Degerstrom's safety director since 1972, is a person experienced in safety (Tr. 138-140). The company crushes round river rock varying in size from 3/4 of an inch to 10 inches in diameter (Tr. 298). In the basalt pit the diameters of the rocks vary from 2 1/2 inches to 18 inches (Tr. 298). The greatest noise intensity is generated by large round rocks from river beds and by basalt rocks (Tr. 299).

Friend took noise level readings on the Terex C6 and Caterpillar D-8. He found the equipment was not within permissible limits (Tr. 140, 141). Degerstrom educates its workers and insists they wear personal hearing protection such as ear plugs or ear muffs (Tr. 141, 142).

Since 1972 Degerstrom has observed and measured the sound levels of its various pieces of equipment, and educated its employees (R1, R2).

Friend has inquired about sound suppression devices (without much success from industry or MSHA) and since 1979 Degerstrom has, at varying costs, sound proofed some 36 pieces of equipment (Tr. 145, 149-150, 160, 182-183, R2). The total cost of such sound proofing was $21,034 (R2). The costs of Degerstrom's efforts averaged $600 to $800 per dozer (Tr. 160). After installing its engineering controls over the years Degerstrom still continues to monitor noise readings in the 90's on the dBA scale (Tr. 166).

Concerning the hearing protection devices themselves: Friend relies on the manufacturer's information to determine their effectiveness (Tr. 147). But he didn't take noise readings under the ear muffs. His knowledge of the effectiveness of this equipment is limited to the manufacturer's claims (Tr. 175, 176).

Friend, in his search for compliance, also contacted the local Terex and Caterpillar dealers since he felt there was nothing available on an engineering basis except hearing protection (Tr. 145, 146).

Friend was advised by Terex and Caterpillar dealers that the cost of a full cab on a new Caterpillar is $10,000 to $14,000 (Tr. 151-152).

After receiving the citations in this case and without adding on cabs, Degerstrom installed new mufflers. These presented back pressure problems and reduced the effectiveness of the machines. Further, the company lined the roll over protective cabs with a one inch sound foam and installed a teflon-lead impregnated mat (Tr. 153, 154, 186, 187). They also built a windshield screen. But they felt the screen was a greater hazard since it reduced visibility (Tr. 154-155). Degerstrom was able to reduce the noise level three decibels on the Terex (106 reduced to 102) and four on the Caterpillar (104 but not below 100). But they are still not within permissible limits (Tr. 156, 157, 177-178).

Witness Friend agrees that extending the muffler stack will lower the decibel rating and Degerstrom has made those changes (Tr. 286). The installation of belting over the transmission can cause heat problems. The equipment, when at maximum output, approaches its heat capacity (Tr. 287, 288). Before the citations were issued Degerstrom installed sound mats on the tractor floor boards and lining on the inside of the canopy. This was fairly successful [in reducing the noise] (Tr. 287-289).

Degerstrom does not know how to avoid the citations. In Friend's opinion the personal protective equipment such as ear plugs and ear muffs provide adequate protection (Tr. 166-168).

Friend indicates that the proposed partial barrier and fenders for the dozers obstructed the operator's vision. They had experimented with a partial barrier (Tr. 168, 169, 284). Friend's operators also object to a fully enclosed cab because it would obstruct the operator's vision and constitute a safety hazard (Tr. 169-171). Before the MSHA study Degerstrom put a deflector on the top of the Terex radiator. This cost $70 and only lowered the noise level one dBA (Tr. 282, 284).

Concerning the noise from the primary crusher: Degerstrom built a small booth for the feederman. They also bought the best muffler available and generally tried to quiet the plant (Tr. 157, 279). The crusher operator's activities require him to be in and out of the booth. His outside activities depend on how the rock is being crushed (Tr. 158). Degerstrom found that its booth did not materially reduce the noise levels (Tr. 159). The booth, after it was rebuilt, lowered the noise level 2 dBA (Tr. 279). The company is unable to predict how much time the crusher operator will spend outside of the booth (Tr. 280).

Degerstrom considers it more expensive to put engineering controls on its portable equipment as compared to permanent equipment. If the equipment is portable the company must consider how it can be moved and whether it remains practical to move it on the highway. (Tr. 164, 165, 176). Each engineering control gives rise to other problems (Tr. 165). There are also problems involved in moving the booth for the feederman (Tr. 176-178).

The company previously requested but did not receive any technical assistance from MSHA (Tr. 165). Degerstrom does not know what is technologically or economically feasible to abate the citations (Tr. 167). The company did not seek technical assistance "from the outside" (Tr. 172). But there is better technical assistance available now since this law went into effect (Tr. 173).

The company does not have the manpower to rotate its workers. In addition, while it has not, the union might object (Tr. 162, 174). Before the issuance of the citations no administrative controls were used to reduce noise levels (Tr. 174). Degerstrom considers hearing protection to be an administrative control (Tr. 174-175). Degerstrom now uses a lighter ear muff with greater attentuation (Tr. 189).

Workers wear personal protective equipment at all times (Tr. 191). George Berglund and H.J. Breredon, distributors of Caterpillar and Terex, were contacted by Degerstrom about problems with the equipment (Tr. 194, 195, 205). The Caterpillar noise abatement solution requires isolation of the operator and then suppression of the noise from his environment (Tr. 207). The Caterpillar controls must be redesigned (Tr. 208-209). This involves enormous problems. The cost would be approximate $25,000. At the time of the hearing a D-8 (Caterpillar) cost just under $200,000 (Tr. 208, 209). The price for a sound suppression canopy is $10,850 (Tr. 209-210).

The Caterpillar representative has no knowledge of MSHA's claim that compliance can be achieved for $700 to 1400. The best information from Caterpillar, and all such crawler tractor manufacturers, confirms that old machines cannot be brought into compliance (Tr. 210, 211). Bower Machinery, witness Berglund's Company, would not attempt to bring a 5 year or older D-8 into compliance (Tr. 212). Nor would Caterpillar (Tr. 212). Caterpillar does not install partial barriers on old machines (Tr. 213). But Caterpillar will guarantee a 90 decibel rating on a new machine (Tr. 213).

In the opinion of witness Breredon, (the branch manager of Evans Eugene Equipment Company and the Terex distributor) it would cost $15,000 to $20,000 to change the equipment. But neither he nor the Terex engineers could guarantee that the dozer would comply with MSHA standards (Tr. 197, 198). Breredon has not installed cabs on any old tractors (Tr. 199). And they have never brought a track type dozer into compliance (Tr. 295).

Terex, a division of General Motors, is making extensive changes to reduce the noise levels on its new dozers (Tr. 199, 200). A new dozer costs $179,000 and incorporating noise suppression devices would add an additional 15 to 20 percent to that cost (Tr. 200).

At the time of the hearing the trade in value on a C-6 would be approximately $15,000 to $20,000 (Tr. 202-203). According to Breredon, even though someone requested it, a C6 it could not be brought into compliance. He didn't know to what extent the noise exposure could be reduced (Tr. 200, 201).

In addition to the testimony of its witnesses, Degerstrom also submitted a written rebuttal to MSHA's feasibility study. Inasmuch as MSHA's report was in the main incorporated here (P11), I deem it necessary to restate the Degerstrom written report (R3). Its rebuttal basically provides as follows:

Degerstrom understood that the request for an extension of time on the hearing was for a feasibility study which would in fact establish the amount of monies necessary to guarantee the noise levels to meet the regulatory requirements. As far as the survey is concerned Degerstrom can see very little has been done toward that end.

Dozer Operator

The cooling fan shroud recommended in the MSHA report was installed some time before this survey on one of the company's other machines (Terex C-6 dozer) with a design they felt would help. However it only lowered the noise level at the operators ear level 1 dBA. Not significant in the company's estimation.

Blocking the view of the tracks of the machine for noise suppression met with vigorous objections from the operators. And the company feels they are adding a much more serious hazard to the safe operation of the machine than we are accomplishing in noise suppression.

The extension of the exhaust muffler stack was installed on almost all the dozers for more than a year before the survey. This particular machine just happened not to have a long extension at the time. The company concurs that a proper exhaust stack lowers the noise approximately 2 to 3 dBA at the operator's station.

The procedures for treating the transmission/engine outlined by MSHA (in paragraph 4) were accomplished on the company machines sometime before this survey was made. Degerstrom found this procedure lowered noise levels about 2 dBA on a typical machine.

The company contemplated noise barrier of fiberglass with heat resistant facing on its dozers earlier, but felt the small area of the engine fire-wall would allow only a very insignificant noise reductions. Less than 1 dBA.

The suggestion to hang belting from the left side of the engine cowling would amount to very insignificant changes in noise level, less than 1 dBA. Covering the transmission with any belting or other material cannot be used on this dozer. This is a critical heat problem with automatic transmissions, and this suggestion would add to that problem so it is unacceptable.

The closing of as many holes on the deck as possible would help with noise suppression, but in this case the company feels it would amount to less than 1/10 of a decibel. This application would be very insignificant.

The suggestion that the canopy be lined with foam has been applied to all company dozers, and had some effect on noise suppression. Degerstrom concurs that it is probably the most effective control for ROPS cabs on dozers. That is why all Degerstrom dozers have such foam.

As far as a barrier material suggestion is concerned, the company experimented with it. Sound foam was much less effective than foam.
(Exhibit R3)

Primary Crusher Operator

Concerning this job classification Degerstrom's rebuttal of the MSHA report states:

Relocation of the booth as suggested would involve considerable expense. Degerstrom estimates the cost at approximately $600 in time, materials, and labor. They have no way of knowing what the noise levels will be at that station without doing the work. Degerstrom feels that it would not reduce it more than 3 to 4 dBA (Exhibit R3).

Rehinging of the front door has already been done along with window modifications and with the booth in its present position. The company reduced the noise level approximately 2 dBA with the door open with these adjustments (R3).

Regarding the booth changes: Degerstrom does not understand how the design would be safer by sealing the door shut and using an adjustable window as stated by MSHA (R3).

Present booth design has special sound proof matting as a floor cover with holes in the floor sealed. The company made this design in its original construction and were only waiting for suppliers to furnish the matting at the time of this survey.
(Exhibit R3)

Plant Oiler

Concerning this job classification:

Degerstrom's witness Friend states that the dosage to the plant oiler depends on where he wanders in his duties (Tr. 289). On the day of the feasibility study he was within the permissible limits (Tr. 289). Witness Friend states that MSHA's report suggests skirts for the conveyor. The company has skirts at the belt intersections (Tr. 290).

Degerstrom's written rebuttal also addresses the plant oil job classification. It states:

To locate the trailers away from the plant to any degree will be difficult in many of our crusher settings.

To place sound screens of belting or plywood around the generator adds to the heat problem of these units. The company does not feel this is a good method to pursue (R3).

The practicability of building conversation areas in portable crushing sites is difficult because of space limitations (R3).

Discussion

In noise cases the Secretary contends he meets his burden of proof by establishing that the miners were exposed to excessive noise and by then offering general evidence as to the type of administrative or engineering controls the operator might use (Brief at 5, 6). The Secretary contends that the burden then shifts to an operator to establish that compliance is not feasible under the conditions unique to the operator's mine (Brief at 7).

The Secretary specifically urges the Commission to reject any test of feasibility involving a weighing of costs and benefits (Brief at 8).

On the other hand, and directly contrary to the Secretary's position, Degerstrom asserts the Secretary must show the cost of controls and he must weigh those costs against the amount of noise reduction and health benefits (Reply brief at 2). In support of its position Degerstrom cites RMI Company v. Secretary of Labor, 594 F. 2d 566 (6th Cir. 1979). A review of RMI confirms this ruling. However, since RMI the Supreme Court inter

preted the word "feasible" in Section 6(b)(5)(FOOTNOTE 2) of the OSH Act as meaning "capable of being done" or "achievable." The Court held that Congress intended employee health to outweigh "all other considerations save those making the attainment of this "benefit unachievable." American Textile Manufacturers Institute, Inc. v. Donovan 101 S. Ct 2478, 2490 (1981). In (ATMI) the Court specifically held that "feasible" does not require, and indeed precludes, a weighing of costs and benefit, 101 S. Ct. at 2491.

But the law on this point continues in a state of flux. Since ATMI United States Court of Appeals for the Ninth Circuit affirmed an Occupational Safety and Health Review Commission (OSHRC) decision that applied the cost-benefit test developed originally by OSHRC in its Continental Can doctrine. Donovan v. Castle & Cooke Foods, a Div. of Castle & Cooke, Inc., 692 F. 2d 641, (9th Cir., Nov 19, 1982). The Ninth Circuit considered in Supreme Court's interpretation of the term "feasible" to be inapplicable to the noise standard.

The Ninth Circuit held ATMI inapplicable, in its review, because the Supreme Court was deciding a case under the toxic materials section and the

authority for the noise standard arose under Section 6(a)(FOOTNOTE 3) of the Occupational Safety and Health Act, 692 F. 2d at 657.

But to continue: The Occupational Safety and Health Review Commission, whose case had been affirmed by the Ninth Circuit subsequently ruled that the term "feasible" in the statute was identical in meaning to its twin in the noise standard. The OSHRC held that when Congress authorized the Secretary to adopt established federal standards and national concensus standards as occupational safety and health standards, it understood the Walsh-Healey standards would be the primary source of established federal standards for covered workplace hazards.

OSHRC, in its later decision, indicated that several of these standards, like the noise standard, regulated exposure to "toxic materials" and "harmful physical agents" and contained feasibility requirements. Further, at the same time that Congress authorized the adoption of section 6(a) standards, it authorized the promulgation of standards dealing with toxic materials or harmful physical agents under section 6(b)(5). This section contains a feasibility requirement. The OSHRC further ruled there was no indication that Congress intended the feasibility requirement of existing standards (that the Secretary was authorized to implement immediately) to be measured by a different criterion than feasibility under section 6(b)(5).

In sum, the OSHRC declined to acquiesce in the Ninth Circuit's divergent interpretation of the term "feasible." Rather, in a two to one decision, they ruled the ATMI interpretation to be applicable to the OSHA noise regulation. Sun Ship, Inc., Docket No. 16118 December 17, 1982. In overturning its cost benefit doctrine OSHRC abandoned its precedent established in 1976 in cases arising with the advent of Continental Can Co., 76 OSHRC 109/A2, 4 BNA OSHC 1541, 1976-77 CCH OSHD 21,009 (No. 3973, 1976) appeal withdrawn, No. 76-3229 (9th Cir. April 26, 1977).

A sharp parallel exists in this case with the reasoning of the majority in Sun Ship, Inc.

In the 1977 Mine Act the Secretary's statutory authority concerning the adoption of standards lies in Section 101 of the Mine Safety Act. The pertinent portions of the section provide as follows:

> Sec. 101. (a) The secretary shall by rule in accordance with procedures set forth in this section and in accordance with section 553 of title 5, United States Code (without regard to any reference in such section to sections 556 and 557 of such title), develop, promulgate, and revise as may be appropriate, improved mandatory health or safety standards for the protection of life and prevention of injuries in coal or other mines.
>
> (6)(A) The Secretary, in promulgating mandatory standards dealing with toxic materials or harmful physical agents under this subsection, shall set standards which most adequately assure on the basis of the best available evidence that no miner will suffer material impairment of health or functional capacity even if such miner has regular exposure to the hazards dealt with by such standard for the period of his working life. Development of mandatory standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the miner, other consideration shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the mandatory health or safety standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

In addition, the 1977 Mine Act contemplates the continued enforcement of all of the then existing metal, and nonmetal and coal standards. Legislative History of the Federal Mine Safety and Health Act of 1977, 95th Congress, 2nd Session, at 374 (July 1978). The noise standard, 30 C.F.R. 56.5-50, originally appears on July 31, 1969 at 34 FR 12511.

After carefully reviewing the above cited statutes and cases I conclude that a weighing of costs and benefits is not required by the Secretary.

Concerning technologic feasibility: no one seriously contends that the technology is unavailable to achieve compliance. Such ability is apparent on the facts relating to the Terex dozer, the primary crusher, and the plant oiler.

Concerning economic feasibility: MSHA's estimates of $700 to $1400 to bring the dozers into compliance conflicts with Degerstrom's estimate of $25,000 per machine. The person in the business of making the engineering changes and charging for that service, will, in my judgment, more closely estimate the actual costs involved. Further, I do not credit MSHA's evidence on this point because there was no foundational basis to cause me to conclude that MSHA's estimates are credible.

For these reasons I conclude that the cost of noise suppression on the Terex bulldozer will be approximately $25,000. However, in view of Degerstrom's substantial annual income, as stipulated, I infer that such an expenditure does not render the costs economically infeasible.

I appreciate the difficulty faced by Degerstrom and the suppliers of its heavy equipment. As they state there are no doubt "enormous problems" with bringing a used vehicle into compliance. However, their knowledge and expertise should be enhanced by their recent efforts since at least one tractor supplier, Caterpillar, now "guarantees" less than 90 dBA on a new vehicle (Tr. 213).

This appears to be an appropriate place to address the remaining legal issues. Degerstrom attacks the Secretary's evidence as being legally insufficient. Degerstrom states that "at no time during the trial did the government indicate what engineering or administrative controls were feasible" (Brief at 1). "There was much general testimony concerning this but no definite answers" (Brief at 1).

True, there was no credible evidence of feasible administrative controls. However, the analysis and recommendations concerning engineering controls discussed in the evidence causes me to conclude that the use of such controls would cause a substantial reduction in the noise level. In this area MSHA's expertise clearly outweighs Degerstrom's contrary evidence. I compliment Degerstrom's efforts since 1972 in attempting to reduce the noise levels. But I credit MSHA's evidence that further substantial reductions can be made.

Degerstrom attacks MSHA's feasibility study as set forth in the testimony of Degerstrom's witnesses and in Exhibit R3. This presents a basic credibility confrontation. On this issue I credit MSHA's evidence. As a foundational matter MSHA's witnesses clearly outweigh Degerstrom's witnesses in expertise and in experience concerning engineering controls. On the merits MSHA's evidence is more persuasive.

Degerstrom asserts its tractors cannot be made to comply without the expenditure of approximately $25,000 and the equipment suppliers could not guarantee that even with that expenditure the machines would comply (Brief at 2-3). We have previously discussed the dollar costs. Concerning the second feature the Supreme Court indicated the Congressional mandate of feasible means "achievable." Substantial, if not full, compliance appears achievable on this record.

Degerstrom complains that this case was adjourned in order for MSHA to conduct at feasibility study and, after a substantial delay, when the cases were reconvened the Judge was advised there had been no such study (Brief at 3-4).

I disagree. The purpose of MSHA's visit was to "develop a feasibility study for engineering noise controls" for the plant oiler (313%), primary crusher operator (478%), dozer operator (1152%), Euclid C48 operator (710%), feederman of crusher (164%), and front end loader operator (390%). Degerstrom may disagree with the weight to be attached to the study but that feature is, I trust, encompassed in this decision. I do note that both parties to this case have fully cooperated with each other in an effort to resolve the excessive noise exposures. True, there was a substantial delay between the issuance of the citations and the later hearing involving the feasibility study. But Degerstrom was not prejudiced by this delay. All of its witnesses were available at the later hearing. In addition, abatement was accomplished here when Degerstrom removed its equipment from the work sites. (See orders terminating all noise citations) Degerstrom has apparently not incurred any expenses in complying with the MSHA's citations other than what Degerstrom undertook to do to reduce the noise levels.

Degerstrom declares MSHA must prove that its controls will make this equipment conform to the minimum noise levels. In other words, the Terex operator (WEST 79-362-M, Citation 346416) is exposed to 108 dBA. If the controls can only reduce the level to say, 99 dBA, the case should be dismissed since the permissible limit is 90 dBA (Tr. 64). A long line of OSHRC cases reject this view. In Continental Can Company, supra, OSHRC construed 29 C.F.R. 1910.95(b)(1).(FOOTNOTE 4) OSHRC stated that "the standard thus contemplates that there will be some situations where engineering or

administrative controls are to be considered feasible even though they fail to reduce the noise below G-16 levels. 4 OSHC at 1545.

Further, "for employees who do not receive the full benefit possible from personal ear protectors, any significant reduction in the ambient noise levels provides a benefit", 4 OSHC at 1545. OSHRC observed that in determining how great a reduction is significant, the logarithmic nature of the decibel scale must be considered.

In Continental Can OSHRC found a reduction of 3 dBA. This represented a halving of the air pressure. Accordingly, such a reduction was held to be clearly significant. 4 OSHC at 1545, footnote 13.

Degerstrom also argues that MSHA witness Rabius was extremely damaging to the government since he testified that very little could be done to reduce the noise levels and hearing protection had to be worn at all times and in any event (Brief at 4).

Degerstrom misconstrues the evidence. Witness Rabius (Tr. 232-277) testified administrative controls are not feasible since for various reasons since they are not generally satisfactory (Tr. 251). The only other possible reference to Degerstrom's assertion appears at pages 261-262 of the transcript. At that point witness Rabius was referring to the noise levels outside of the crusher booth. The witness was explaining: "I would recommend wearing hearing protection anytime there is a noise, as a personal thing, but where the levels are less than 90 [dBA], in the 80's, it would not be necessary to do so, but as soon as he leaves that protection [of the booth], then he would definitely have to wear hearing protection." (Tr. 262). For wearing hearing protection while operating the dozer see the transcript at 272.

Degerstrom states that its dozer operators will not operate machines that have vision barriers above the tracks (Brief at 5).

This point is uncontroverted. But the tracks are only one of the four main noise sources. The MSHA feasibility study treats the vision problem as follows:

> Tracks - The operator view of the tracks should(FOOTNOTE 5) be blocked by the use of small steel panels placed at the supports (Figure 16). The exact location, dimensions and configuration of the barrier panels must be determined by trial and error analysis. Noise reduction efficiency, fastening and operator view are all of critical importance.
>
> (P11 at 7).

Degerstrom's post trial brief further insists that its dozer operators will not operate any dozers placing the operators in a totally enclosed cab (Brief at 5).

This is simply not credible. Totally enclosed cabs with ROPS can be seen today on virtually any construction site.

Degerstrom claims that MSHA suggests that the site generator should be blanketed or veiled to prevent the dispersion of noise. It is true there is such a suggestion in the record and it related to a possible method of noise reduction for the plant oiler (Tr. 255, 256). It is only a suggestion. Since the plant oiler was found by MSHA to be in compliance I decline to rule on that feature of the case. In short, compliance was met without a blanket for the generator. There are sufficient issues in this case without delving into a problem that is purely hypothetical.

Degerstrom's brief further states that MSHA has no standards whatsoever to guide an operator as to what is, or is not, feasible (Brief at 5-6). I take Degerstrom's argument to be a vagueness attack on the regulation. Remedial legislation, when considering the purported vagueness of a standard, is based not in its face but rather in the light of its application to the facts of the case. PBR, Inc. v. Secretary of Labor, 643 F. 2d 890 897 (1st Cir 1981); McLean Trucking Company v. OSHRC 503 F. 2d 8, 10-11 (4th Cir 1974). It is axiomatic that defects in the constititional sufficiency of a regulatory warning may be cured by authoritative judicial or administrative interpretations which clarify obscurities or resolve ambiguities. Diebold, Inc. v. OSHRC 585 F. 2d at 1338 citing Rose v. Locke, 423 U.S. 48, 52 (1975), Parker v. Levy 417 U.S. 733, 752-54.

IN ATMI, supra, the Supreme Court determined that the term "feasible" has an ascertainable meaning based on the statute, 101 S. Ct. at 2490. The definition set forth by the Supreme Court is applicable to the regulation at issue. I reject Degerstrom's suggestion that the term is devoid of meaning.

The Secretary argues he needs only show exposure to noise in his cases and then the burden shifts to the operator to prove infeasibility. I reject the Secretary's contention: Where the standard makes feasibility an element of the violation, the burden of proving that controls are feasible is on the Secretary. Carnation Co., v. Secretary of Labor, 641 F. 2d 801, 803 (9th Cir. 1981); Diversified Industries Division, Independent Stove Co., v. OSHRC, 618 F. 2d 30, 32 (8th Cir. 1980). As noted in Carnation Company, 641 F. 2d 803, realism and common sense should dictate how the Secretary may meet his burden of providing substantial evidence of feasibility.

Further when the Secretary seeks enforcement of a citation alleging a violation of the noise standard, he bears an initial burden of showing that technologically feasible engineering controls are available to the cited employer.

Although the Secretary will generally have access to information on the average development and installation cost of the proposed controls, he will not have knowledge of the specific economic impact implementation of the controls will have on the cited employer. Therefore, once the Secretary meets his initial burden, the burden must shift to the employer, who may raise the issue of economic feasibility particularily with the knowledge of the operator. Castle and Cooke Foods, supra, 692 F. 2d at 650.

For the above reasons I conclude that the citations in case WEST 79-362-M should be affirmed.

WEST 79-14-M

In this case the Secretary issued his citations numbered 350839 and 350840 under Section 104(a) of the Act. He alleges Degerstrom violated 30 C.F.R. 56.5-50 when its Caterpiller operator and feederman were exposed to excessive concentration of noise.

Petitioner's Evidence
Citation 350839

On November 22, 1978 MSHA's representative, Richard Perron, inspected Degerstrom's C48 Caterpillar(FOOTNOTE 6) tractor at its Theater Pit (Tr. 20, 21, 29). Although he extended an invitation neither Degerstrom management nor the miner representative accompanied him on the inspection (Tr. 21-22). There were seven employees on the site (Tr. 30).

Perron put a dosimeter on the operator of the Caterpillar. At the time the Caterpillar was pushing material into the jaw crusher. No administrative controls were being used to reduce the noise level of the Caterpillar, although the operator was using ear plugs (Tr. 23). Inspector Perron issues a citation if an operator is over exposed (Tr. 43, 44). Feasibility and costs are not witness Perron's job. But he is aware if some general controls to reduce noise (Tr. 50, 51).

The dosimeter collects and stores noise levels. At the end of an eight hour shift a readout device calculates the noise exposure (Tr. 23-25).

In this work environment the noise exposure was 710 percent of the permissible limit. This translates to 104 dBA (Tr. 26). The allowable limit, in accordance with 30 C.F.R. 56.5-50, is 90 dBA for eight hours (Tr. 26).

The inspector's dosimeter met specifications and it had been calibrated at the MSHA office (Tr. 26).

Citation 350840

The inspector observed an employee operating a crusher (Tr. 27, 251). A dosimeter was placed on the operator who was standing at the top of the primary rock crusher about seven feet from the noise source (Tr. 27-28, 48). In an eight hour period the dosimeter indicated the operator was exposed to noise at 164 percent of the permissible rate. This translates to 93 dBA (Tr. 27-28).

Mr. Gallagher, management representative was aware of the over exposure to noise. Degerstrom had made no effort to reduce the noise. The inspector gave the company one month to abate (Tr. 29, 30).

The workers were wearing some type of personal protection (Tr. 32-33). Inspector Perron didn't know if it is possible or feasible to bring the machine into compliance and he didn't feel qualified to address the areas of engineering controls concerning technological and economic feasibility (Tr. 35, 36). However, he didn't observe any administrative or engineering controls being used (Tr. 55).

Various contractors, including Degerstrom, crush rock at this pit for their individual use in highway construction work (Tr. 52, 53).

Evidence from MSHA Feasibility Study

The Euclid C-48 operator and the feederman(FOOTNOTE 7) of the crusher could not be analyzed in June 1980 because of operational reasons (P11 at 1). MSHA's witness Rabius indicated the feederman and loader operator were either not present at the time of the feasibility study or the job descriptions had been changed (Tr. 247).

Respondent's Evidence

In 1979 Degerstrom spent $696 which consisted of sixteen hours labor and $296 of material in an effort to reduce the noise level of the C-48 dozer (R2 at 1).

Respondent's additional evidence generally relevant and material to these citations is discussed, supra, in Case No. WEST 79-362.

Discussion

The Secretary bears the burden of establishing technogolical and economic feasibility. No such evidence was offered. Accordingly, the citations and proposed penalties should be vacated.

WEST 79-331

In this case the Secretary issued his citation numbered 346490 under Section 104(a) of the Act. He alleges that Degerstrom violated 30 C.F.R. 56.5-50(b) in that the noise level around the operator of the front end loader was 390 percent, [100 dBA], of the permissible limit.

At the initial hearing there was evidence concerning this violation (Tr. 227-229). At the later hearing, after the feasibility study by MSHA, Degerstrom advised the Judge that Fischer (MSHA) had tested this equipment. The front end loader had been brought into compliance. Accordingly, Degerstrom was withdrawing its contest to the citation and the proposed civil penalty (Tr. 229, 230).

According to witness Friend compliance was attained on the front end loader by installing a new muffler and directing it away from the operator. Further, sound foam was installed in the interior of the cab (Tr. 291).

Pursuant to Commission Rule 29 C.F.R. 2700.11 the motion was granted and it is formalized in this decision.

WEST 79-363-M

In this case the Secretary issued his citations numbered 349040 and 349061 under Section 104(a) of the Act. He alleges that Degerstrom on two instances violated 30 C.F.R. 56.4-24(d). The section cited, Title 30 Code of Federal Regulations, Section 56.4-24(d) provides as follows:

> 56.4-24 Mandatory. Fire extinguishers and fire suppression devices shall be:
>
> (d) Inspected, tested, and maintained at regular intervals according to the manufacturer's recommendations.

Petitioner's Evidence

Theodore P. Herrara, an MSHA safety inspector experienced in mining, inspected the Degerstrom site (Tr. 10-13). Management and miner's representatives declined to accompany him (Tr. 13, 14).

The ABC ANSUL fire extinguisher in the oil storage room had not been checked periodically. The manufacturer recommends it be checked twice a year. The tag on the extinguisher indicated it was last checked in September, 1976 (Tr. 15, 16).

In the main control room the tag indicated the wall hanging fire extinguisher was last inspected in February, 1977 (Tr. 16). The manufacturer suggests bi-annual inspections (Tr. 16). There were no other extinguishers in these rooms (Tr. 17).

Inspector Herrara talked to Sanford (foreman) and Grimm about fire extinguishers (Tr. 13, 17). They said they looked good to them. The gauges confirmed that fact (Tr. 17). Herrara didn't attempt to contact the Degerstrom safety engineer (Tr. 19).

The inspector terminated the citation when Degerstrom complied (Tr. 18).

Discussion

The foregoing uncontroverted evidence establishes a prima facie case for the violation of the regulation.

Degerstrom's post trial brief does not state any position as to these citations. They should be affirmed.

Civil Penalties

In view of the stipulation and in considering the statutory criteria for assessing civil penalties, 30 U.S.C. 820(i), I deem that the penalties in WEST 79-362-M, WEST 79-331-M, and WEST 79-363-M are appropriate. They should be affirmed.

The Solicitor and Degerstrom's counsel filed detailed briefs which have been most helpful in analyzing the record and in defining the issues. I have reviewed and considered these excellent briefs. However, to the extent they are inconsistent with this decision, they are rejected.

Based on the foregoing findings of fact and conclusions of law I enter the following:

ORDER

1. WEST 79-362-M:

Citations 346416, 346417, and 346418 are affirmed and penalties respectively, of $34, $28, and $28 are assessed.

2. WEST 79-14-M:

Citations 350839 and 350840 and all proposed penalties are vacated.

3. WEST 79-331-M:

Citation 346490 is affirmed and a civil penalty of $28 is assessed.

4. WEST 79-363-M:

Ciations 349040 and 349061 are affirmed and civil penalties of $26 for such violations are assessed.

John J. Morris
Administrative Law Judge

FOOTNOTES START HERE-

1 See discussion of this portion of the report, infra, page 22.

2 This portion of the Occupational Safety and Health Act, 29 U.S.C. 655(b)(5), reads as follows:

(5) The Secretary, in promulgating standards dealing with toxic materials or harmful physical agents under this subsection, shall set the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity even if such employee has regular exposure to the hazard dealt with by such standard for the period of his working life. Development of standards under this subsection shall be based upon research, demonstrations, experiments, and such other information as may be appropriate. In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws. Whenever practicable, the standard promulgated shall be expressed in terms of objective criteria and of the performance desired.

3 The cited section, now codified at 29 U.S.C. 655(a), reads as follows:

(a) Without regard to chapter 5 of title 5, United States Code, or to the other subsections of this section, the Secretary shall, as soon as practicable during the period beginning with the effective date of this Act and ending two years after such date, by rule promulgate as an occupational safety or health standard any national consensus standard, and any established Federal standard, unless he determines that the promulgation of such a standard would not result in improved safety or health for specifically designated employees. In the event of conflict among any such standards, the Secretary shall promulgate the standard which assures the greatest protection of the safety or health of the affected employees.

4 The standard, 29 C.F.R. Sec. 1910.95(b)(1) provides:

When employees are subjected to sound exceeding those

listed in Table G-16, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table G-16, personal protective equipment shall be provided and used to reduce sound levels within the levels of the table.

Table G-16 - Permissible Noise Exposure

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

5 One would believe that the word "not" was omitted in the typing of MSHA's report. But the drawing in Figure 16 indicates the operator's view would be blocked. In any event the vision problem is not insurmountable.

6 The citation and the testimony refers to the "C 48 Cat and D8" (Tr. 21-22, 31). But the feasibility study refers to this equipment as the "Euclid C-48" (P11 at 1). I believe Caterpillar and Euclid are separate manufacturers. In any event it does not have to be determined whether the vehicle was a Caterpillar or a Euclid because MSHA did not present any feasibility evidence as to this particular unit.

7 There is evidence in the cases concerning the reduction of the feederman's noise exposure but in view of MSHA's written report I consider that such evidence refers only to the primary crusher operator (also occasionally called a feederman). That employee was protected by the construction of a booth. After Degerstrom placed the booth MSHA recommended changes in its position to further reduce the noise (Tr. 253-255, P11 at Figure 15).