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ASARCO V. SOL (MSHA)  
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Federal Mine Safety and Health Review Commission (F.M.S.H.R.C.)  
Office of Administrative Law Judges

ASARCO, INC.,  
CONTESTANT

v.

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

CONTEST PROCEEDINGS

Docket No. SE 89-24-RM  
Citation No. 3253415; 10/25/88

Docket No. SE 89-25-RM  
Citation No. 3253416; 10/25/88

Docket No. SE 89-26-RM  
Citation No. 3253417; 10/25/88

Docket No. SE 89-27-RM  
Citation No. 3253418; 10/25/88

Docket No. SE 89-37-RM  
Citation No. 3253702; 12/8/88

Docket No. SE 89-38-RM  
Citation No. 3253703; 12/8/88

Immel Mine  
Mine ID 40-00170

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

v.

ASARCO, INC.,  
RESPONDENT

CIVIL PENALTY PROCEEDINGS

Docket No. SE 89-60-M  
A.C. No. 40-00170-05521

Docket No. SE 89-75-M  
A.C. No. 40-00170-05522

Docket No. SE 89-105-M  
A.C. No. 40-00170-05524

Docket No. SE 89-108-M  
A.C. No. 40-00170-05525

Immel Mine

DECISION

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Appearances: Henry Chajet, Esq., Laura E. Beverage, Esq., and Thad S. Huffman, Esq., Jackson and Kelly, Washington, D.C., for Contestant/Respondent; Thomas A. Grooms, Esq., Office of the Solicitor, U.S. Department of Labor, Nashville, Tennessee, for Respondent/Petitioner.

Before: Judge Fauver

These consolidated proceedings involve ASARCO's contests of six citations and the Secretary's corresponding petitions for civil penalties under 105(d) of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. 801 et seq. The citations, which were issued following a fatal mine accident, allege violations of 30 C.F.R. 57.3401, 57.3200 and 56.3202 at ASARCO's Immel Mine.

Having considered the hearing evidence and the record as a whole, I find that a preponderance of the substantial, reliable, and probative evidence establishes the following Findings of Fact and further findings in the Discussion below:

#### FINDINGS OF FACT

1. ASARCO operates a number of mines, including zinc mines and associated mill operations in Knox County, Tennessee. In October, 1988, its Tennessee Mines Division employed about 450 miners. The citations in contest were issued at its Immel Mine in Tennessee, an underground zinc mine employing about 90 miners on three shifts. These Findings pertain to the Immel Mine unless stated otherwise.

2. The zinc ore is removed by the selective open stope method using conventional mining techniques. This includes drilling into the ore body, blasting the drilled area, removing the ore, then loading, hauling and crushing the ore preliminary to the milling operations.

3. On October 24, 1988, at about 7:25 a.m., George W. Norton, a jumbo drill operator, traveled to the 2C3 stope to drill blast holes in the heading. He was transported by his foreman, Carlyle Bales, on Mr. Bales' tractor.

4. As a drill operator, Mr. Norton generally worked alone. On October 24, 1988, he was visited by Mr. Bales on three occasions after their initial entry into the heading at 7:25 a.m. About 7:50 a.m., Mr. Bales made a brief visit to see if Mr. Norton needed anything. About 10:50 a.m., Mr. Bales spent 20-25 minutes with Mr. Norton while the drill operator ate his lunch, and about 12:25 p.m., Mr. Bales returned to the heading to bring "water washers" that Mr. Norton needed for drilling.

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5. About 12:10 p.m., Richard Abdella, a haul man, went to the 2C3 heading to service Mr. Norton's jumbo drill. He also supplied Mr. Norton with a piece of drill steel that the drill operator requested.

6. About 1:25 p.m., John Ellis, Jr., General Mine Foreman, discovered Mr. Norton in the 2C3 heading. Mr. Norton was crushed under a slab, which had fallen from the mine roof. He had been standing about 7 feet to the right and rear of the jumbo drill, outside the protective canopy on the drill, when the slab fell. He died of the injuries sustained.

7. The 2C3 heading, where Mr. Norton was working when he was struck by falling rock, was 47 feet wide, at its widest point, and 17 to 19 feet high. Remnants of three blast holes from a prior shift remained at the intersection of the roof and right rib.

8. The fatal ground failure extended from the right rib to the drill, a distance of 22.5 feet. Beginning at the right rib, the rock that fell increased in thickness from a feather edge to about 2 feet. Near the left side of the fall, drill holes had been started in the roof. Drill operators often used the jumbo drill to try to scale the back. In this process, they would drill in above loose roof material and then lower the drill boom in an effort to force the loose material down.

9. At the time of the accident, the face had been drilled from the left to the right. The left pillar contained a vertical row of holes that were to be used to blast off part of the pillar. The drill steel was in the last or next to last row of holes to be drilled in the face. The right drill steel was broken by the falling rock. The drill steel was 4 feet into the third hole from the top. The jumbo drill had been shut down and was not in operation when the fall was discovered. The drill had a protective canopy over the operator's controls. The canopy was struck by falling rock. Some of the structural support members were bent or broken; however, the operator's area was still protected. If the operator had been under the canopy, it is very likely that he would have survived the roof fall.

10. Mr. Norton's work area had not been roof-bolted. Approximately 174 feet outby the drill, the roof had been bolted with 5-foot long, Swellex bolts on 5-foot centers (normal bolting pattern). About 50 feet to the left of the left pillars, there was more bolting. The outby edge of the pillar that was drilled

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had loose vertical slabs that needed to be scaled. Other loose material in the roof needed to be scaled. The pillars showed no effects of overburden weight nor were the pillars punching the back or floor. The method of blasting used tended to leave fractured rock at the top of the pillar and to create dangerous slabs in the roof. In light of ASARCO's blasting methods, the roof and ribs required special attention for examination and testing.

11. The rock that fell on the drill operator had been exposed to two blasting cycles. The drill operator was in the process of drilling the face for the third blast. He was not "back stoping" (i.e. drilling the roof for blasting out the roof).

12. A partial list of ground fall accidents<sup>2</sup> from January, 1982, through September, 1988, revealed 10 falls of back, face, and ribs. Of these, nine were falls of scaleable material. These nine accidents occurred as follows: four while scaling, two while bolting, two during the process of loading the face holes, and one when a piece of loose material fell from between bolts. The tenth ground fall accident was in a haulageway, in an area that had been rehabilitated, and extended above the anchorage zone of the roof bolts.

13. The ground fall that killed Mr. Norton was a slab failure. The slab was cantilevered from the left to the right until the weight of the slab overcame the strength of the rock. The slab broke loose on the right rib side and the fall extended to his machine. The slab was probably formed as a result of fractures caused by the blast rounds near the back.

14. The dolomite formation in the Immel Mine was stable and the mine was not experiencing massive ground failures. The mine was, however, experiencing a problem with slab formation and loose back and rib material because of the mining methods used by ASARCO. The dolomite formation's rock strength probably contributed to this in that it requires a heavy explosive load to blast a face round. Shock waves and vibrations from the blasting and drilling contributed to formation of the fatal slab and its ultimate failure.

15. Over 90 percent of the reported ground fall accidents at this mine were the result of inadequate scaling or occurred during scaling operations.

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16. Mr. Vernon Denton, MSHA Supervisory Mine Inspector, and Mr. William Erickson, Mine Inspector, of MSHA's Lexington Field Office for the Southeastern District, Metal and Non-Metal Division, were assigned to investigate the fatality. They began their investigation on October 25, 1988. The report of the results of their investigation was issued on December 9, 1988.

17. Supervisor Denton and Inspector Erickson collaborated in the investigation, and issued six citations to ASARCO. These related not only to alleged violations that caused or contributed to the death of Mr. Norton, but also to other conditions in areas outside of the 2C3 heading, where the death occurred.

18. The six citations are:

Number	Date	30 C.F.R. Section
3253415	October 25, 1988	57.3401
3253417	October 25, 1988	57.3401
3253702	December 8, 1988	57.3200
3253416	October 25, 1988	57.3200
3253703	December 8, 1988	57.3202
3253418	October 25, 1988	57.3202

Citation Nos. 3253415 and 3253417

19. Citation No. 3253415 charges a violation of 57.3401, based on the following allegations:

A fatal accident occurred on October 24, 1988, in the 2C3 stope at this operation as loose rock fell from the back striking the driller as he stood near the drill. The work area had not been examined and tested for loose ground in that an investigation of the site on October 25, 1988, revealed multiple rock falls or a single large fall occurred and additional loose material remained in the back and on the ribs. Reportedly, the driller did not bring a scaling bar to the site with him.

20. Citation No. 3253417 charges a violation of 57.3401, based on the following allegations:

Two miners were observed arising from being seated directly below and in close proximity to high rib loose ground in the 3C4 stope. They had been sitting on flattened cardboard boxes at the junction of the floor and rib. The loose was about fifteen feet above them and consisted of various sizes over about a ten-foot wide area. There had been a fatal accident from fall

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of loose ground in a similar type stope in this mine the day prior to this.

21. The standard cited in these two citations is found at 30 C.F.R. 57.3401, which it provides in pertinent part:

Persons experienced in examining and testing for loose ground shall be designated by the mine operator. Appropriate supervisors or other designated persons shall examine and, where applicable, test ground conditions in areas where work is to be performed, prior to work commencing, after blasting, and as ground conditions warrant during the work shift. \* \* \*

22. There was no scaling bar at the accident scene; Mr. Norton did not use a scaling bar to test or scale the roof or ribs on the date of the accident.

23. Mr. Bales, who was Mr. Norton's supervisor, did not test or scale the roof or ribs on the date of the accident.

Citation Nos. 3253702 and 3253416

24. Citation No. 3253702 charges a violation of 57.3200, based on the following allegations: "A fatal accident occurred on October 24, 1988, in the 2C3 stope at this operation when loose rock fell from the back striking the driller. Loose material had not been taken down or adequately supported before work was done."

25. Citation No. 3253416 charges a violation of 57.3200, based on the following allegations:

Loose ground had not been removed from the ribs and back in places along the driller's travelway drifts between 2C3 stope and 2C3 back stope. Reportedly, the driller travelled this area to obtain his drill rig and returned through this area to the 2C3 stope prior to the fatal accident, which happened there on October 24, 1988. Reportedly, the victim did not bring a scaling bar with him.

26. The standard cited in these two citations, 30 C.F.R. 57.3200, provides, in pertinent part: "Ground conditions that create a hazard to persons shall be taken down or supported before other work or travel is permitted in the affected area."

27. The inspectors observed loose rock on the roof and ribs as they traveled through the 2C3 stope to reach the heading where Mr. Norton had been killed. Inspector Erickson, who issued Citation No. 3253416, observed 40 to 50 pieces of loose material in the roof and ribs along the travelway, each weighing, in his

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estimation, from 10 to 100 pounds. These pieces, if they fell, could cause serious injury or death to miners who traveled along this route. Inspector Erickson observed a greater quantity of loose roof material in this travelway than he had observed in any other underground mine for a long time. He attributed this condition to "poor ground control practices" at the Immel Mine (Tr. 416-41).

28. MSHA Supervisor Denton and Inspector Erickson observed the same "poor ground control practices" at the heading where Mr. Norton was killed. Using a series of photographs, which were taken by the operator shortly after the fatality, Supervisor Denton identified areas on the roof and rib where loose material had not been taken down or supported. This material was detectable and should have been taken down or supported before the accident.

29. Billy Owens, Chief of MSHA's Ground Control Division, went to the Immel Mine on November 2, 1988, at the request of MSHA's Subdistrict Manager in Knoxville, Tennessee. Mr. Owens made a thorough study of the ground conditions at the Immel Mine, particularly at the 2C3 heading where Mr. Norton was killed. During his examination of the 2C3 heading, he observed loose slabs on the left and right of the heading. He found that the slab that killed Mr. Norton should have been detected and taken down or supported before the accident.

30. In issuing Citation No. 3253702 for a violation of 57.3200, Supervisor Denton also found that the rock that killed Mr. Norton should have been taken down or supported. Based on the investigation he and Inspector Erickson conducted, Supervisor Denton found that the fatal rock could have been detected by proper examination and testing and he found this was not done.

31. The loose slab that killed Mr. Norton would have been detectable by using proper examination and testing methods. It should have been detected and taken down or supported before the accident.

Citation Nos. 3253703 and 3253418

32. Citation No. 3253703 charges a violation of 57.3202, based on the following allegations: "A fatal accident occurred on October 24, 1988, in the 2C3 stope at this operation when loose rock fell from the back striking the driller. A scaling bar of sufficient length to place the user out of danger of falling material was not provided."

33. Citation No. 3253418 charges a violation of 57.3202, based on the following allegations:



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The common ten-foot long scaling bar provided in many stope areas of the mine is not of sufficient length to manually scale loose ground from the fifteen to eighteen-foot high back and ribs. These bars should be about fifteen foot or longer to allow removal of high loose material without exposing the person performing the work to injury.

34. The standard cited in these two citations is 30 C.F.R. 57.3202, which provides: "Where manual scaling is performed, a scaling bar shall be provided. This bar shall be of a length and design that will allow the removal of loose material without exposing the person performing the work to injury."

35. At the time of the issuance of these two citations the maximum length of the scaling bar provided to ASARCO's miners was 10 feet.

36. In the 2C3 heading where Mr. Norton was killed the height of the back was from 17 to 19 feet and could not be adequately and safely reached by a miner standing on the mine floor and holding a 10 foot scaling bar. This would also be the case in other areas of the Immel Mine where the mine height exceeded the ability of a miner standing on the mine floor with a 10 foot bar to adequately and safely reach the roof.

37. Miners on foot in the 2C3 heading or in any other part of the Immel Mine where the mining height was above 17 feet had no adequate means of scaling at their immediate disposal. This included the foreman, Mr. Bales, who had to travel to a number of different areas of the mine.

38. The jumbo drill is not adequate as a total means of scaling in an underground metal and non-metal mine such as ASARCO's. It can be used to scale certain kinds of loose material, but a mechanical scaler or a scaling bar used on foot or from elevated equipment can reach, angle into, and scale down loose materials that cannot be scaled by a jumbo drill. It is not a safe practice to rely solely upon a jumbo drill as a means of scaling loose materials from the roof or ribs.

39. The jumbo drill is not an adequate device for testing a mine roof.

#### DISCUSSION WITH FURTHER FINDINGS

Citations Nos. 3253415 and 3253417

These citations allege a violation of 30 C.F.R. 57.3401, which provides:

57.3401 Examination of ground conditions.

Persons experienced in examining and testing for loose ground shall be designated by the mine operator. Appropriate supervisors or other designated persons shall examine and, where applicable, test ground conditions in areas where work is to be performed, prior to work commencing, after blasting, and as ground conditions warrant during the work shift. Underground haulageways and travelways and surface area highwalls and banks adjoining travelways shall be examined weekly or more often if changing ground conditions warrant.

One of the key issues is the meaning of "where applicable" as used in this standard. The Secretary contends that it means "where relevant" in the sense of "in the following cases," referring to the four situations specified in the standard. Under this interpretation, the operator would be required to test the ground "where work is to be performed, prior to work commencing, after blasting, and as ground conditions warrant during the work shift."

ASARCO contends that "where applicable" means "where appropriate," in the sense that testing is required "only where visual examination reveals a ground condition requiring closer scrutiny" (ASARCO Br. 18).

If the Secretary's interpretation is correct, there would be no reason for the phrase "where applicable," since the rule would simply mean "shall examine and test . . . ." Indeed, the prior rule did state "examine and test" but the qualifier "where applicable" was inserted in the current rule.

The plain meaning of the regulation is that designated personnel shall examine ground conditions in four situations and, in those situations, shall also test the ground as necessary or as ground conditions warrant. The legislative history of the rule does not indicate that a different meaning was intended.<sup>3</sup>

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The fact that testing is required "where applicable," that is, as necessary or as ground conditions warrant, does not mean that it lies within the unlimited discretion of the operator or a miner to decide when to test. Testing applies when conditions warrant, and this is a matter of sound practice to protect miners from roof falls. I credit the following testimony, of MSHA Supervisor Denton, as a reasonable and enforceable standard for applying the testing requirement:

[T]he old standard required the testing without any thought, without any exception. So the exception was put in to allow these rare instances when it's not needed.

But in an active area, in an area where you're continually blasting, developing, driving, or stoping, you're always changing the -- all of the transient pressures in the roof, all of the pressures that resettle every time you take a blast, resettle every time a bed sags, that move every time you scale off some rock or advance another shot, that's never the same. I think testing there is basic and fundamental. It should be done every time.  
[Tr. 97-98.]

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Under this standard, testing is required after the roof is disturbed by blasting, scaling, or mining or when examination of the roof shows loose material, cracks, or other conditions that would cause a reasonably prudent operator to check the stability of the roof by sounding it, in order to discharge his high duty of care to protect miners from roof falls.

Citation No. 3253415 alleges:

Accident work area had not been examined and tested for loose ground in that an investigation of the site on October 25, 1988, revealed multiple rock falls or a single large fall occurred and additional loose material remained in the back and on the ribs. Reportedly, the driller did not bring a scaling bar to the site with him.

I credit the testimony and expert opinions of the Secretary's witnesses concerning the roof and rib conditions at the accident site, the failure of the operator to properly examine and test the roof before the accident, and its failure to take down or support loose material before the accident.

The roof slab that fell was approximately 22-1/2 feet wide, 35 to 40 feet long, and tapered from a thickness of 2 feet (near the drill) down to a feathered end less than an inch thick (near the right rib). It was cantilevered from over the drill and extended to the right rib. Mr. Norton was killed about 7 feet to the right and rear of the drill. Had the roof to the right of the drill been tested with a scaling (or sounding) bar, the reliable evidence shows that it would have sounded drummy (hollow), showing the need to take down the drummy area or support it. There was no scaling bar at the accident scene because Mr. Norton and Mr. Bales did not test the roof with a scaling or sounding bar on the day of the accident.

The "belly" in the roof that miners had tried to take down about a week before the accident was part of the slab that fell in the fatal accident. The belly was a sign of trouble with the roof, and ample reason for testing the roof before Mr. Norton worked under it. Also, attempts to take down roof material can further weaken the roof, so that if the material cannot be taken down it should be supported or dangered off. This was not done.

Had Mr. Norton or Mr. Bales properly examined the roof before the accident, they would have seen the belly; they also would have seen the loose materials later observed by Mr. Denton, Mr. Owens and other witnesses who testified for the Secretary.

The requirement in 57.3401, to "examine" the roof "in areas where work is to be performed, prior to work commencing,

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after blasting, and as ground conditions warrant" is not an empty provision that can be satisfied simply by looking up at the roof. The provision requires that "Persons experienced in examining and testing for loose ground shall be designated by the miner operator" for examining and testing. This means a careful examination by an experienced person. While "examination" may be visual only, it means careful, informed observations with appropriate accountability. Where loose materials in a roof are present and left uncorrected (i.e. not taken down, supported or dangered off), where miners work or travel, there is a prima facie indication that the roof was not properly examined within the meaning of 57.3401. I find that on Mr. Norton's shift the roof was not properly examined before the accident. This constituted a violation of 57.3401.

I also find that the roof was not tested as required by 57.3401. The loose material in the roof and ribs observed by the Secretary's witnesses as well as the blasting-mucking-drilling cycle created a duty to test the roof before the accident. But the roof was not tested. Mr. Bales was at the site several times before the accident, and he did not test the roof. Mr. Norton did not have a scaling or sounding bar with him and therefore could not have tested the roof.

I reject ASARCO's contention that using the jumbo drill to "rattle the back" is a competent alternative method of testing a mine roof within the meaning of 75.3401. I fully credit the testimony of the Secretary's expert witnesses, including Mr. Owens, Mr. Goff, and Mr. Denton, on this point, and hold that the jumbo drill is not an adequate device for testing a mine roof.

Billy D. Owens, Chief of MSHA's Ground Support Division, testified that the jumbo drill is not an adequate device for testing or sounding the roof. Tr. 675. His testimony is most instructive in pointing out that miners can mislead themselves (or be misled) into believing that by using the jumbo drill to test the roof they can tell good roof from bad roof (Tr. 675-677):

Q. Mr. Owens, you heard the testimony of the miners who . . . who testified previously in relation to using the jumbo drill to test with. Can you use the jumbo drill to test the ground or the back?

A. No, the jumbo drill is not an adequate device for testing or sounding the back. In my experience with drillers -- rock drillers, roof drillers -- these are very proud people. They have a lot of confidence in their abilities, and they think they can do -- that -- that they can do almost anything with their drill. They know their equipment real well. Like I say,

they're extremely proud. I've been told that they can tell -- they can sound the roof with the drills. They can drill the roof, determine voids in the roof. They can tell when the roof is hitting partings or weak material in the roof -- going through different beds.

Q. When you say you've been told, have you talked to other drillers in the past --

A. Yes. Yes, I have.

Q. -- during the course of your investigations or evaluations?

A. Numerous times in -- in a lot of the investigations, we use a fiber optic fluoroscope which is a devise -- we have a nine foot and fifteen foot fluoroscope which runs a light through a fiber optic cable so that we can actually look up into a drill hole in the roof.

Q. Have you had occasion to try to verify whether or not the drill operator was accurate in his --

A. Yes.

Q. -- of the drill to test?

A. We've had places where people have told us that the roof is sound, no problems; it's in excellent shape. Then we've fluoroscoped the hole, and, about 18 inches up in the roof, we've found half-inch separations. The drillers have gone through small clay partings which they didn't pick up which could be of potential danger. It's -- once a clay parting gets wet or is -- it becomes lubricated, and it's usually a place where roof separation will occur. However, these drillers who have numerous years of experience have told us . . . with the utmost confidence that there's no problems with the roof -- no separations. It's solid and it's sound.

\* \* \* \* \*

Q. [U]nder current technology, what do you consider . . . the most efficient means of testing the -- the back of the roof?

A. It's still using a -- the best method is still to use a steel rod to test the roof. The -- what is called a sound in the roof. Infrared has been tried to be used with the theory that a slab would be colder

than the rest of the area because air gets in behind the slab, but that technology hasn't proven out yet. So far, it's still the physical touch of the man striking the roof with a steel object.

Q. [W]hat's the difference in the -- in the result of test -- striking the roof with the -- with the ground bar or the metal bar? . . . [H]ow do you compare the two results? [Using a jumbo drill or a sounding bar.]

A. The -- striking it, you get a different sound, plus the guy has the actual feel. It's been mentioned here that the people can tell that -- they can tell a roof by striking the -- the sound -- there's a different sound between hitting a dry wall with a two by four behind it and a dry wall with the two by four not behind it. All they're going by is sound.

When a person is going with a -- holding a -- a piece of metal rod hitting the back with it, not only do you get the sound, but there's a vibration difference. The same way when you hit a dry wall with the two by four behind it, it feels solid. When you hit the dry wall without the two by four behind it, there's a different feel to that dry wall and the same way with the rock in the back. The loose rock will -- will be drummy. It will have a little give. The -- you have a sound and a feel that is different than hitting solid rock.

Q. And you heard the testimony of these miners . . . and the testimony of Mr. Denton in relation to . . . the sound levels of the jumbo drill . . . and its use or non use for sounding the roof. What's your opinion about whether or not there is a sound or noise level -- difficulty with the drill?

A. The sounding with a jumbo drill, if two sound level[s] -- if two sources are emitting sound, the higher decibel level of sound will mask the second sound. It's called masking. In masking when the second sound is masked, . . . not only is it hard to tell exactly what the sound is, it is also difficult to tell direction and orientation of the sound or . . . the source of the lower decibel sound. The drill rigs put out a higher decibel level than striking the back; therefore, the decibel levels put out by the drill would mask the sound coming from . . . striking the back which would make it difficult to tell whether it

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was solid back, [or] bad back. It would also make it difficult to get the orientation of the signal.

Similarly, Mr. Goff, a noise expert with extensive experience, testified that the noise of the jumbo drill overshadows the information miners would need to test the roof and therefore the jumbo drill is not an adequate device to test the roof.

I hold that, before the accident, ASARCO violated 57.3401 by failing to test the roof at the accident site on October 24, 1988.

I find that it was highly negligent of ASARCO to permit and encourage its drillers to try use the jumbo drill instead of a sounding bar to test the roof. Mr. Norton was an experienced miner who lost his life because he and his supervisor did not detect a loose overhead slab that could have been detected by proper testing. Following ASARCO's faulty practice, they took that risk without using the best known, safest, and commonly accepted tool for detecting a loose roof -- a sounding bar.

The gravity of ASARCO's violation of 57.3401, i.e., its failure to properly examine and test the ground above Mr. Norton, was very high and plainly contributed to his death. The gravity is even higher in light of the fact that there was a "lag" in ASARCO's roof bolting and it had not roof bolted the area where Mr. Norton was killed. It is not being considered or decided here whether the failure to roof bolt was itself a violation of a separate regulation, because ASARCO is not charged with such a violation. However, the "lag" in the progress of roof bolting, which was known to the operator, is a factor in considering the gravity of ASARCO's failure to properly examine and test the ground at the accident site, because the failure to roof bolt Mr. Norton's work area increased the danger of a roof fall.<sup>4</sup>



This citation alleges:

Two miners were observed arising from being seated directly below and in close proximity to high rib loose ground in the 3C4 stope. They had been sitting on flattened cardboard boxes at the junction of the floor and rib. The loose was about fifteen feet above them and consisted of various sizes over about a ten-foot wide area.

There had been a fatal accident from fall of loose ground from similar type stope in this mine the day prior to this.

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The undisputed evidence sustains this citation. The inspectors gave their expert opinions that the loose material they observed above the two sitting miners was hazardous and obvious. ASARCO did not produce either of the miners to dispute this, although their names were known to management.

The fact that the miners were sitting beneath loose, hazardous materials is a prima facie indication that the rib had not been properly examined under 57.3401. Had it been properly examined, it would have been taken down, supported, or dangered off.

Considering that this violation occurred the day after a fatal ground fall accident, the facts indicate high negligence in ASARCO's failure to examine the ground before this violation and to properly train miners not to sit under a roof or rib without properly examining overhead conditions.

Citation Nos. 3253702 and 3253416

These citations allege violations of 30 C.F.R. 57.3200, which provides:

Ground conditions that create a hazard to persons shall be taken down or supported before other work or travel is permitted in the affected area. Until corrective work is completed, the area shall be posted with a warning against entry and, when left unattended, a barrier shall be installed to impede unauthorized entry.

Citation No. 3253702 alleges that: "A fatal accident occurred on October 24, 1988, in the 2C3 stope at this operation when loose rock fell from the back striking the driller. Loose material had not been taken down or adequately supported before work was done."

I credit the testimony and expert opinions of the Secretary's witnesses that the slab that killed Mr. Norton was hazardous, detectable, and should have been taken down, supported, or dangered off before the accident. Discussion of this evidence is included under Citation No. 3253415, above, and is incorporated here.

I find that ASARCO was highly negligent in failing to take the necessary precautions to protect Mr. Norton from the danger of a roof fall in his work area. ASARCO's negligence includes the negligence of Mr. Norton and his supervisor, Mr. Bales.

Citation No. 3253416 is based upon the inspector's observations of loose material in the roof and ribs of the travelway between the 2C3 stope and the 2C3 back stope.

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Inspector Erickson observed 40 to 50 pieces of loose material in the roof and ribs along the travelway, each weighing, in his estimation, from 10 to 100 pounds. These pieces, if they fell, could cause serious injury or death to miners who traveled along this route. Inspector Erickson observed a greater quantity of loose material in this travelway than he had observed at any other underground mining operation for a long time. He attributed the poor conditions of roof and ribs to "poor ground control practices" at the Immel Mine.

The inspectors observed the same "poor ground control practices" in or near the heading where Mr. Norton was killed.

The evidence fully supports this citation. The roof conditions were hazardous and obvious. I find that ASARCO was highly negligent in failing to correct them.

ASARCO contends that the citation fails to give adequate notice of the locations of the loose material in the roof and ribs. However, the inspectors pointed out these locations to the management representatives who were with them at the time the inspectors observed the loose material. This fact and the wording of the citation constitute adequate notice and specificity of the charge.

Citations Nos. 3253703 and 3253418

These citations allege a violation of 30 C.F.R. 57.3202, which provides: "Where manual scaling is performed, a scaling bar shall be provided. This bar shall be of a length and design that will allow the removal of loose material without exposing the person performing the work to injury."

Citation No. 3253703 alleges that a "scaling bar of sufficient length to place the user out of danger of falling material was not provided" at the accident site where Mr. Norton was killed. ASARCO contends that 57.3202 does not apply because "Norton was not manually scaling, but rather was scaling with a jumbo drill." ASARCO Br. 29.

It is clear that Mr. Norton was not engaged in manual scaling, because he did not take a scaling bar to his work site. If he did any scaling at all, he probably tried to use the jumbo drill. Although the jumbo drill can be used to scale certain

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kinds of loose material, it is not designed as a scaler; a mechanical scaler or a scaling bar used on foot or on elevated equipment can reach, angle into, and take down loose material that cannot be taken down by a jumbo drill. Thus, it is not a safe practice for an operator to rely solely on the jumbo drill for scaling -- because loose material could be missed. Nonetheless, since Mr. Norton was not engaged in manual scaling on the day of the accident, 57.3202 did not apply. Citation No. 3253703 will be vacated.

Citation No. 3253418 alleges that:

The common ten-foot long scaling bar provided in many stope areas of the mine is not of sufficient length to manually scale loose ground from the fifteen to eighteen-foot high back and ribs. These bars should be about fifteen foot or longer to allow removal of high loose material without exposing the person performing the work to injury.

The cited standard does not require that scaling bars be of any particular length. Indeed, standard practice shows that if a bar is too short to reach the roof or ribs safely and effectively, the bar may be used in conjunction with lift equipment. Accordingly, this citation will be vacated.

#### Multiple Violations

ASARCO contends that certain citations are duplicative, resting on the same factual allegations. However, discrete violations are alleged which are not duplicative. Citation

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No. 3253415 rests upon a failure to properly examine and to test the ground before Mr. Norton was killed, a violation of 57.3401. Citation No. 3253702 rests upon a failure to take down, support, or danger off hazardous, loose material before Mr. Norton was killed, a separate violation of 57.3200. Citation Nos. 3253703 and 3253418, which involve the length of scaling bars, are being vacated, and need not be considered under the issue of duplicative charges.

#### CONCLUSIONS OF LAW

1. The judge has jurisdiction in these proceedings.
2. ASARCO violated the safety standards as alleged in the following citations:

Citation	30 C.F.R. Section
3253415	57.3401
3243417	57.3401
3253702	57.3200
3253416	57.3200

3. The Secretary failed to prove a violation of 30 C.F.R. 57.3202 as alleged in Citation Nos. 3253418 and 3253703.

#### Civil Penalties

Considering each of the criteria for a civil penalty in 110(i) of the Act, I find that the following civil penalties are appropriate for the violations found herein:

Citation	Civil Penalty
3253415	\$6,000
3243417	\$ 200
3253702	\$6,000
3253416	\$ 200

#### ORDER

WHEREFORE, IT IS ORDERED THAT:

1. Citation No. 3253415 is AFFIRMED.
2. Citation No. 3253417 is AFFIRMED.
3. Citation No. 3253702 is AFFIRMED.
4. Citation No. 3253416 is AFFIRMED.
5. Citation No. 3253703 is VACATED.



whenever examinations are required.

4. Thus, in addition to finding that the rock that killed Mr. Norton was a detectable slab that should have been taken down or supported, Mr. Owens also testified in relation to the 47 foot width of this heading:

"[I]n dolomite and limestone, we have found that the best mining widths appear to be 35 to 40 feet. That -- for self-supporting -- for supporting without bolts. Then in the greater widths than 35 to 40 feet, there's no way it can be supported and typically no way it can be supported without bolts, so mining widths in these types of formation of greater than 40 feet tend to develop ground stability problems."

[Tr. 661-662].

Based upon his observations of the accident site and the testimony of many witnesses who testified at the hearing in regard to the adverse ground conditions in the Immel Mine in general and in the 2C3 stope in particular, Mr. Owens testified that he believed that the heading where Mr. Norton was killed should have been bolted. He stated that: "There's been quite a bit of testimony about people trying to pull loose down in that area, trying to bring down bellies, concern about the ground. In those kind of situations, that area should have been bolted." Tr. 703-704.

I credit Mr. Owens' expert opinion that, if the 2C3 heading had been roof bolted to within 14 feet of the face, according to the general recommendation in his report, the roof would have held and Mr. Norton would not have been killed.

Mr. Owens also testified that one of ASARCO's officials told him, at the time of his visit to the mine on November 2, 1988, that there had been a lag time in the bolting in the 2C3 stope, "that the area was intended to be bolted, however, there was a lag in their bolting -- getting the bolting up there." Tr. 664 and 725.

MSHA Inspector Charles McDaniel, who was the first MSHA Inspector to visit the Immel Mine after the fatal ground fall in the 2C3 heading, gave his opinion that this heading was too wide and should have been bolted and that bolting would have held the slab that fell and killed Mr. Norton. Tr. 1355-1356 and 1369.

Inspector McDaniel also testified that the Immel Mine had a history of ground stability problems.

Mr. Richard Hubbard, a roof bolter, testified that the ground conditions in the 2C3 stope were bad and required that the stope be roof bolted as it advanced. Tr. 259-260, 275.

Mr. Hubbard stated that in July or August, 1988, he had been sent into the 2C3 stope to roof bolt by Mr. Guy Bales, his foreman. The area where he was working at the time was about 90-100 feet from the point in the stope where Mr. Norton was

killed. He stated that after he had completed drilling five holes, Jim Jacques, the Mine Superintendent, directed him to stop because, according to Mr. Jacques, the area was going to be back stoped. Mr. Hubbard told Mr. Jacques that in order to make the area secure roof bolts were needed, then Mr. Jacques allowed him to continue. He was not able to complete his bolting, however, because the equipment he needed to do the bolting was taken away, and he went on vacation shortly thereafter. He stated that the next time he was in the 2C3 stope was when Mr. Norton's body was removed, and he saw the five, still unfilled, holes for roof bolts that he had drilled in July or August. Tr. 266 and 268-273.

Mr. William Ellis is a machine man at the Immel Mine. At the time of Mr. Norton's death, he was in training with Mr. Richard "Tommy" Frazier, drilling with the jumbo drill. They worked in the 2C3 stope about 1 week before the accident, in an area 10 to 20 feet from where the fatal ground fall occurred. He described the ground at the Immel Mine as ". . . bad about falling out. You have to bolt it a lot." Mr. Ellis stated that he and Mr. Frazier thought that this area needed bolting, but that they worked in it anyway. Tr. 315-320.

Mr. Ellis testified that the heading in the 2C3 stope where he had worked approximately 1 week before the fatal ground fall was too wide and needed to be bolted. Tr. 329.

Mr. Ellis stated that he and Mr. Frazier had attempted to drill down a "belly" in the ground a week before but were unable to get it down. He stated that he believed that this may have been the rock that killed Mr. Norton. Tr. 318 and 333-334.

Mr. Richard "Tommy" Frazier worked for ASARCO and its predecessor for 26 years until September, 1989. He worked at the Immel Mine from 1972 until his resignation. In October, 1988, Mr. Frazier was the jumbo drill operator on the second shift, using the same jumbo drill that Mr. Norton was using on the first shift when he was killed. Tr. 539-541.

Mr. Frazier testified that the ground conditions in the 2C3 stope were bad, and that roof bolts were needed. Tr. 550-551. It was Mr. Frazier's opinion that the 2C3 heading was too wide. Tr. 544.

Mr. Frazier stated that the "belly" which he and Mr. Ellis tried to pull down about 1 week before Mr. Norton's death was within 10 to 15 feet of the spot where Mr. Norton was killed. He stated that he had tried unsuccessfully to drill the belly down, spending about 45 minutes to 1 hour in the attempt. Mr. Frazier thought that this belly may have been the rock, or at least part of the rock, that fell from the roof and struck Mr. Norton. Tr. 543-545, 552, 585, 593-594 and R-16 (Erickson's Sketch Enlarged).

Inspector McDaniel testified that, based on his observation of the heading, he believed that the rock that fell was a "belly." Tr. 1341.



Hobart Tucker is a loader operator at the Immel Mine and had worked removing muck from the 2C3 heading on the 11:00 p.m. to 7:00 a.m. shift (Friday night-Saturday morning) prior to Monday, October 24, 1988, the date of Mr. Norton's death. He had been in the 2C3 stope about 50 times before the fatality. He stated that the 2C3 stope needed to be bolted:

"I feel that the ground needs to be bolted in that particular area. I mean as a general rule, because anywhere's trouble, you know, with some ground you need to keep it bolted. Of course, I think the ground ought to be bolted for the simple fact of support. I think it helps the ground a lot to stay safe, as a general rule, over periods of time."

[Tr. 377-380].

James Jacques, Immel Mine's Superintendent, testified in his deposition that 75 percent of the 2C3 stope had been bolted before Mr. Norton's death (G-40 [Jacques' Deposition] at 56-58).

John Ellis, Jr., Immel General Mine Foreman, testified in his deposition that it was Immel's practice to bolt all of the headings (G-42 at 11-12).

5. Some witnesses for ASARCO testified that the jumbo drill had been used for a long time to scale ground at the Immel Mine. However, the operator's Safety Rules Booklet makes no mention of the use of the jumbo drill to scale. It refers only to the use of a scaling bar. In pertinent part, it provides:

MINING DEPARTMENT

\* \* \* \* \*

6. It is the responsibility of every worker to scale down all loose ground that he finds. If for any reason this is not possible, he must notify his foreman.

7. Be sure you use a proper length bar which is sharp and has bit (sic) on only one end. Bars when not in use must be stored in a safe location out of vehicle traffic.

8. Barring down must be done from a safe location. Footing shall be secure.