FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

OFFICE OF ADMINISTRATIVE LAW JUDGES
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November 30, 2006

SECRETARY OF LABOR, MINE SAFETY AND HEALTH ADMINISTRATION (MSHA), Petitioner	:	CIVIL PENALTY PROCEEDING Docket No. SE 2006-6-M A. C. No. 38-00250-67174
v.	:	
HANSON AGGREGATES SOUTHEAST, Respondent	:	Anderson Quarry

DECISION

Appearances: Ann Paschall, Esq., Office of the Solicitor, U.S. Department of Labor, Atlanta, Georgia, on behalf of the Secretary of Labor;
Adele L. Abrams, Esq., Law Office of Adele L. Abrams, PC, Beltsville, Maryland, on behalf of Hanson Aggregates Southeast.

Before: Judge Zielinski

This case is before me on a Petition for Assessment of Civil Penalty filed by the Secretary of Labor ("Secretary"), pursuant to section 105 of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 815 ("Act"). The petition alleges that Hanson Aggregates Southeast ("Hanson") is liable for one violation of the Secretary's regulations applicable to surface, metal and non-metal mines, and proposes the imposition of a civil penalty in the amount of $228.00. A hearing was held in Greenville, South Carolina, and the parties filed briefs after receipt of the transcript. For the reasons set forth below, I find that the Secretary has failed to prove the alleged violation, and vacate the citation.

Findings of Fact - Conclusions of Law

Hanson operates the Anderson Quarry, a granite mine, located in Anderson County, South Carolina. Scott M. Blair, an inspector employed by the Secretary's Mine Safety and Health Administration ("MSHA"), conducted an inspection of the quarry in July 2005. On July 14, 2005, Blair, accompanied by David Stewart, the quarry's plant manager, inspected the plant and the load-out area. The load-out area was located at the end of the #2 Bench, and was accessed by a haul road approximately 1,000 feet in length. A highwall, approximately 50 feet in height, ran alongside the haul road. It had been created by mining operations conducted five years earlier. The face of the highwall was irregular and exhibited damage from mining process blasting. The focus of the dispute is the condition of the highwall, and whether loose or detached

granite blocks presented a hazard to miners using the haul road.

Blair and Stewart traversed the haul road to the load-out area in Stewart's pickup truck. The highwall was on the right-hand side as they traveled, and the ride was uneventful. Several pieces of equipment were being used at the load-out area. A front-end loader alternatively loaded two Catepillar 769D haul trucks. There was also an excavator equipped with a hammer which was used to break up larger rocks.

Blair testified that, because of space limitations, the driver of the haul truck that was waiting to be loaded would position it about 200 feet from the loading site, parallel to and within about two feet of the highwall, allowing the other equipment room to operate. After one of the trucks had moved, he was able to approach the highwall and noticed cracks in the highwall's face, indicating that there was loose material above where the truck had been parked. That particular area of the highwall is depicted in one of several photographs taken by Blair, in which the loose material is circled. Ex. G-2. He was concerned that one or more of the rocks would fall onto a truck and cause a fatal injury to the operator. He then walked back down the haul road and examined the highwall more closely. He noticed several areas where cracks in the granite indicated what he believed to be unstable conditions. The vertical cracks were angled toward the load-out area, and any displacement along the cracks was more visible when observed while looking back toward the plant. Tr. 25. Blair felt that vertical cracks were a sign of instability, whereas horizontal cracks were fairly stable. Tr. 42.

Blair notified Stewart that he was going to issue a citation for failure to control hazardous ground conditions. Stewart immediately protested the citation, contending that the ground conditions were stable and did not pose any threat or hazard to persons using the roadway. Citation No. 6113853 alleges a violation of 30 C.F.R. § 56.3200, 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.

Blair originally described the violation in the "Condition or Practice" section of the citation as follows:

> The Bench along the right side of the roadway going to the #2 Bench has loose unconsolidated material hanging from it.

Ex. G-1.

On July 22, 2005, Blair modified the Condition or Practice section of the citation to read:

> Loose material was observed on the #2 Bench roadway highwall. The highwall is approximately 50' in height and 1,000 feet in length. The loose material ranges in size from 8' by 6' down to 1' by 2'. Tire tracks are seen below the loose material. There is regularly traveled access within 2' of the highwall. This hazard exposed miners to falling material that could result in serious or fatal injuries.

Ex. G-1.

Blair determined that it was reasonably likely that the violation would result in a fatal injury, that the violation was significant and substantial, that two employees were affected, and that the operator's negligence was moderate. A civil penalty in the amount of $228.00 has been proposed for this violation. The alleged violation was abated by Hanson's placement of traffic control cones, and later construction of a berm prohibiting travel within 20 feet of the highwall. The highwall was removed entirely in early 2006.

Hanson protested the citation immediately, triggering a series of conference calls while Blair was at the site. It contends that the highwall face was stable and presented no danger of rock falls. It also contends that a rock falling off the face would not present a hazard because no miners worked or traveled close to the wall where they could be struck by a falling rock.

The Zone of Danger

The haul road and highwall are depicted in photographs taken by Blair on July 14, 2005. Ex. G-11; G-14, photo #7. The outer edge of the haul road was about 60 feet from the highwall. Broken rocks, or riprap, lay irregularly along the base of the wall, in places extending out ten or more feet.[1] The smooth portion of the roadway, where travel normally occurred, was generally no closer than 10 to 15 feet from the wall. However, travel closer to the base of the wall was possible in some areas because distribution of the riprap was not uniform, and the road was less than 60 feet wide in places.[2]

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[1] Hanson placed rocks that were too large for the crusher along the base of the highwall, where an excavator with a rock hammer would break them up. That location was used because there was limited space in the load-out area. The riprap also served to keep traffic away from the highwall, in furtherance of Hanson's policy that no pedestrian or vehicular traffic should be unnecessarily close to any highwall. The riprap is erroneously identified as "riffraff" in the hearing transcript.

[2] After the cones and berm were emplaced, there were a few areas where two haul trucks could not pass each other. Tr. 325.

Stanley J. Michalek, a supervisory civil engineer employed by MSHA, testified as an expert in rock fall analysis. Tr. 170-71. He testified that the distance a falling rock would land from the base of the wall would be about 25% of the height it fell from, here about 13 feet. Tr. 218. He also observed that a falling rock could be deflected horizontally if it struck a protrusion, the amount of the deflection depending upon its velocity. Tr. 235. However, Michalek and Hanson's expert, Marvin E. Adam, stated that there were no protrusions that could cause significant deflection to rocks falling from the highwall.[3] Tr. 237, 303. Michalek also believed that a falling rock might roll out away from the highwall, but generally agreed that the 20-foot set-off established by Blair prohibited travel within the zone of danger and was appropriate for the conditions. Tr. 235-39.

Despite Blair's concerns, falling or rolling rocks presented little hazard to the haul truck operators, because they were located seven-ten feet off the ground and approximately 12-13 feet from the passenger side of the truck, i.e., outside the zone of danger.[4] Tr. 188-89; ex. R-4. However, the road was also used by smaller vehicles. The person responsible for conducting the daily workplace examination of the highwall typically drove along the road in a pickup truck. Maintenance vehicles would also occasionally use the road. Those vehicles could travel within the zone of danger, and falling or rolling rocks would pose a hazard to operators of a small vehicles, which afford relatively little protection. A front-end-loader and an excavator also used the road. Both pieces of equipment were operated while facing the highwall. The excavator was used to break the larger rocks, and the loaders scooped up the broken rocks for transport to the crusher. While the loader operator was outside the zone of danger, a rock falling on the bucket or arms of a loader could severely jar the operator, and possibly could slide or roll down the loader's arms and strike the operator's compartment. Tr. 189-90.

Because miners were permitted to work and travel within the zone of danger presented by rocks falling from the highwall, and the area was not posted or barricaded, the critical question is whether the highwall posed a hazard to persons, i.e, whether there was a reasonable possibility that rocks would fall from it.

Stability of the Highwall

Both parties introduced expert testimony on the condition of the highwall face. Michalek, the Secretary's expert, did not visit the mine site. His testimony was based upon an examination

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[3] Both experts agreed that the highwall posed no threat of catastrophic failure, i.e., that the natural joints of the rock formation were positioned and angled such that the rock face was inherently stable.

[4] In addition to being located outside the zone of danger, the truck operators were protected by a canopy, a reasonably effective barrier to falling objects that might strike the operator's cab. Tr. 125-27, 188. It also appears that the haul trucks were at least five-six feet away from the highwall. Tr. 75, 193-94, 204.

of photographs of the wall and information provided by Blair and his supervisor.[5] In his opinion, there were fractures that created detached blocks of rock that "may be in a stable condition right now, but with the ongoing weathering process, and vibrations . . . it's totally unpredictable how long that rock is going to be able to stay up there." Tr. 179. He testified that it was reasonably likely that environmental factors would cause such rocks to fall at "some time." Tr. 186. When pressed for a time frame within which rocks could be expected to fall, he stated that it might be likely that nothing would fall for up to six months, but that it couldn't be predicted with any certainty, and that it was just as likely to fall now as opposed to a year from now, or even later. Tr. 210-11. He also testified that it was not necessary to consider specific information on environmental factors, such as freeze/thaw cycles and the magnitude of vibration or seismic activity generated by nearby blasting, because "that information isn't significant to there being a rock fall potential." Tr. 241-42.

Hanson's expert, Marvin E. Adam, a geological engineer, testified as an expert in mining engineering, specializing in soil and highwall stability. He was called by Hanson the day the citation was issued, visited the quarry the next day, on July 15, 2005, and examined the highwall. In his opinion, the fractures in the rock were caused by blasting when the bench had been mined five years earlier, there was no evidence of movement or instability, and the wall did not present any realistic possibility of rocks falling onto the haul road. Tr. 274. Adam obtained pertinent weather data, including freeze/thaw information for the mine site. He concluded that weather factors would not cause movement of any detached blocks. Tr. 290. He also analyzed data maintained by Hanson that showed the seismic activity generated by nearby blasting, and calculated the amount of seismic activity that would have been generated in the area of the highwall. He concluded that the relatively low amplitude of seismic activity would not have been sufficient to overcome the friction holding the granite blocks in place, i.e., that vibrations from blasting would not cause the rocks to move in the foreseeable future. Tr. 298-301.

The critical difference between Michalek's and Adam's opinions is their respective positions on whether the displacements observed, i.e., the widths of the vertical cracks, were the result of the original blasting, or whether they were the product of movement of the blocks over time. In Adam's opinion, the displacements were the result of the original blasting activity, and weathering factors and blasting vibration were insufficient to overcome the friction holding the blocks in place, i.e., they had not moved and would not move. The sum total of Michalek's testimony is that rocks that have been detached from the main formation will eventually fall to ground level because they won't "reattach" and have only one way to move, i.e., away from the wall until they eventually tip and fall. Tr. 185. He candidly admitted that no one can tell

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[5] I accept Michalek's testimony that formulating an expert opinion on the stability of a highwall through an examination of photographs is an acceptable methodology. Tr. 179-80. However, Adam testified that he could not have properly formed an expert opinion on the stability of the highwall without personally examining it, and without obtaining and analyzing pertinent data on environmental factors. Tr. 272. Michalek's failure to physically examine the highwall and pertinent environmental data affects the weight accorded his testimony.

whether the rocks have been moving simply by looking at them. Tr. 396. He identified various tests that could have been undertaken that would have established whether the rocks were moving. Tr. 398-99. However, none of those tests were conducted, and there is no objective evidence establishing whether the cracks had remained static or had grown larger, i.e., whether the detached blocks were stable or moving. He testified that, if the cracks had been produced by blasting, they would have been there since the bench was mined, and that they "may" or "may not" have been "open to that degree." Tr. 251. He also stated that the rocks may not have moved in the year before the inspection, and may have been in the same condition when Blair inspected the highwall in November 2004. Tr. 251.

Other evidence indicates that the rocks were stable, as Adam believed. Blair had inspected the highwall in November of 2004, and had not considered it unstable at that time. Tr. 50. Although he believed that the condition of the highwall had changed by July 2005, he was unable to identify any specific changes, or any rocks that had fallen from it.[6] Tr. 54-55. Blair was also at the mine in October of 2005, and did not note any changes in the condition of the highwall since his July visit, although he may not have carefully inspected it. Tr. 137, 147. Stewart, who has an undergraduate degree in mining engineering, testified that the highwall had been scaled in 2002. Tr. 379. He checked the highwall frequently between July and October of 2005, and did not see any problems with it. Tr. 369-71. He reported to Adam that he had never seen a rock fall from the highwall and was not aware of any rocks having fallen. Tr. 291-92. Gary D. McGaha has worked as an equipment operator for Hanson for five years. He has worked in proximity to the highwall, and shared responsibility for conducting daily workplace examinations of the highwall in and around July 2005. At other times, he would check its condition as part of his duties as an equipment operator. He testified that he had never seen any material sloughing off of the highwall, had not seen any structural problems with it, and had not seen any areas in need of scaling. Tr. 317. Michalek and Adam agreed that freshly fallen granite rocks could be identified because they would be a different color, i.e., less-weathered, and that the place they had fallen from would be similarly identifiable. Tr. 198, 270-72. In his inspection of the highwall, Adam did not see any evidence that rocks had fallen in the past year. Tr. 270-72, 275-76. No other witness contradicted his testimony.

In an enforcement proceeding under the Act, the Secretary has the burden of proving all elements of an alleged violation by a preponderance of the evidence. *In re: Contests of Respirable Dust Sample Alteration Citations*, 17 FMSHRC 1819, 1838 (Nov. 1995), *aff'd, Sec'y of Labor v. Keystone Coal Mining Corp.,* 151 F.3d 1096 (D.C. Cir. 1998); *ASARCO Mining Co*.,

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[6] Blair was a relatively new mine inspector, and had extremely limited experience with granite mines. He had worked with limestone, a sedimentary rock that has different characteristics than granite, an experience that, in Adam's opinion, could lead him to reach erroneous conclusions about the stability of a granite highwall. Tr. 264, 277-78. At the time of his inspection, Blair did not know that Hanson had placed the riprap at the base of the wall. It is highly likely that he erroneously believed that at least some of it had fallen from the highwall. Tr. 140-43.

15 FMSHRC 1303, 1307 (July 1993); *Garden Creek Pocahontas Co.*, 11 FMSHRC 2148, 2152 (Nov. 1989); *Jim Walter Resources, Inc.*, 9 FMSHRC 903, 907 (May 1987).

On the whole, the Secretary's evidence tended to establish only that, in theory, detached rocks had the potential to move and might eventually fall at some point in time. There is no evidence that any rocks had fallen from the highwall in the five years since it had been mined. The Secretary did not offer scientific testing or other evidence that could have established whether the rocks had moved or were stable. It may be that the rocks would have eventually found their way to ground level if the highwall had remained undisturbed. But, it appears more likely that the time frame for such activity would have been in the tens of years, as Adam testified, and that there was no realistic possibility of rocks falling from the face of the highwall and presenting a hazard to miners in July 2005.

I find that the Secretary has failed to carry her burden of proof on this violation. Specifically, it has not been established by a preponderance of the evidence that the condition of the highwall was a hazard to persons. *See Cyprus Tonopah Mining Corp.*, 15 FMSHRC 367, 370-73 (March 1993) (finding of violation affirmed on evidence that material on a highwall not only had the potential to move, but was, in fact, moving, and a considerable amount of material had fallen, filled catch benches and reached the bottom of the pit where miners were working).

ORDER

Citation No. 6113853 is hereby **VACATED,** and the petition is hereby **DISMISSED**.

Michael E. Zielinski
Administrative Law Judge
202-434-9981

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