FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

1244 SPEER BOULEVARD #280 DENVER, CO 80204-3582 303-844-3577/FAX 303-844-5268 October 28, 1997

SECRETARY OF LABOR. : CIVIL PENALTY PROCEEDINGS

MINE SAFETY AND HEALTH

ADMINISTRATION (MSHA), : Docket No. WEST 95-434-M

Petitioner : A.C. No. 26-00500-05542

:

v. : Docket No. WEST 95-467-M

A.C. No. 26-00500-05543

:

NEWMONT GOLD COMPANY, : South Area - Gold Quarry

Respondent :

DECISION

Appearances: Jeanne M. Colby, Esq., and Mark R. Malecki, Esq., Office of the Solicitor,

U. S. Department of Labor, San Francisco, California and Arlington,

Virginia, for Petitioner;

Henry Chajet, Esq., and David Farber, Esq., Patton Boggs, Washington,

D.C., for Respondent.

Before: Judge Manning

These cases are before me on petitions for assessment of penalties filed by the Secretary of Labor, acting through the Mine Safety and Health Administration (AMSHA@), against Newmont Gold Company (ANewmont@), pursuant to sections 105 and 110 of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. '815 and 820 (the AMine Act@). The petitions allege four violations of the Secretary=s safety and health regulations. A hearing was held in Elko, Nevada, and expert testimony was taken in Falls Church, Virginia. The parties presented testimony and documentary evidence, and filed post-hearing briefs.

I. FINDINGS OF FACT

1. The Citations and Orders

1. On March 13, 1995, MSHA Inspector Michael Drussel issued Citation No. 4140248 at the South Area - Gold Quarry (the Amine@) in Eureka County, Nevada, under section 104(a) of the Mine Act alleging a violation of 30 C.F.R. '56.20011. The condition or practice section of the citation states:

The old screen removed from the ZADRA was placed near the containment area at the AARL building. Visible mercury was on the screen. No warning signs were posted warning of the hazard.

The inspector determined that it was unlikely that the alleged violation would cause an injury or illness and that it was not of a significant and substantial nature (AS&S@). He determined that the violation was caused by Newmont=s moderate negligence. The Secretary proposes a penalty of \$50.00 for the alleged violation. Section 56.20011 provides as follows:

Areas where health or safety hazards exist that are not immediately obvious to employees shall be barricaded, or warning signs shall be posted at all approaches. Warning signs shall be readily visible, legible, and display the nature of the hazard and any protective action required.

2. On March 14, 1995, Inspector Drussel issued Citation No. 4140245 at the mine under section 104(d)(1) of the Mine Act alleging a violation of 30 C.F.R. '56.20014. The condition or practice section of the citation states:

The office in the AARL building contained mercury vapor as measured with a Jerome mercury vapor analyzer. The average reading was $23.3~\mu\text{g/m}^3$. The company routinely takes six Jerome readings a day in this office as part of [its] mercury monitoring program. These readings showed mercury has been present in this office. Visible mercury was found on the desktop on February 28, 1995. The AARL operator was required to use this office for eating his lunch. No person shall be allowed to consume food or beverages in any area exposed to a toxic material. This is an unwarrantable failure.

The inspector determined that it was reasonably likely that the alleged violation would cause an injury or illness and that it was S&S. He determined that the violation was caused by Newmont=s high negligence. The Secretary proposes a penalty of \$1,000.00 for the alleged violation. Section 56.20014 provides as follows:

No person shall be allowed to consume or store food or beverages in a toilet room or in any area exposed to a toxic material.

3. On March 14, 1995, Inspector Drussel issued Order No. 4140246 at the mine under section 104(d)(1) of the Mine Act alleging a violation of 30 C.F.R. ' 56.20014. The condition or practice section of the citation states:

The lunchroom for the ZADRA employees contained mercury vapors as measured with a Jerome mercury vapor analyzer. The average reading was 22.2 $\mu g/m^3$. The company routinely takes six Jerome readings a day in this lunchroom as part of [its] mercury monitoring program. These readings show that mercury vapors have been present in this lunchroom. The ZADRA employees were required to use this lunchroom for eating their lunch. No person shall be allowed to consume food or beverages in any area exposed to a toxic material. This is an unwarrantable failure.

The inspector determined that it was reasonably likely that the alleged violation would cause an injury or illness and that it was S&S. He determined that the violation was caused by Newmont=s high negligence. The Secretary proposes a penalty of \$1,200.00 for the alleged violation.

4. On March 14, 1995, Inspector Drussel issued Order No. 4140247 at the mine under section 104(d)(1) of the Mine Act alleging a violation of 30 C.F.R. ' 56.20011. The condition or practice section of the citation states:

The old scrubber removed from the AARL was cleaned then tested for mercury contamination. This scrubber was stored at the boneyard. Mercury contamination test results received in November 1994 showed mercury contamination. The scrubber was not removed from the boneyard or marked of the hazard. When the scrubber was inspected to show visible mercury, Jerome readings showed mercury vapors present. This is an unwarrantable failure.

The inspector determined that it was unlikely that the alleged violation would cause an injury or illness and that it was not

S&S. He determined that the violation was caused by Newmontss high negligence. The Secretary proposes a penalty of \$1,500.00 for the alleged violation.

2. Background

After gold-bearing rock is excavated at the mine, Newmont uses a complex benefaction process to remove the gold from the host rock. The procedure used to separate the gold from the rock includes, among other things, a cyanide leach process. of that process, carbon is impregnated with gold solution and then sent through the Acarbon-handling@ area, which consists of the AARL and ZADRA facilities. In the AARL facility, gold is chemically stripped from the carbon for further refining. ZADRA facility, the carbon is sized for reuse. Mercury is found in the gold-bearing rock at the mine. As a consequence, mercury is generated during the carbon-handling process. The mercury that is present is elemental mercury. Elemental mercury is commonly used in thermometers, thermostats, and batteries. vaporizes quickly in warm conditions and, as discussed below, is harmful in its vaporized form. In contrast, organic mercury compounds are readily absorbed by dermal contact and through ingestion. Organic mercury compounds and inorganic mercury salts are not present at the mine and are not involved in these cases. Except where I state otherwise, whenever I use the word Amercury@ in this decision, I am referring to elemental mercury.

II. SUMMARY OF THE PARTIES= ARGUMENTS

A. The Citation and Order Alleging Violations of Section 56.20014

1. The Secretary

The Secretary argues that section 56.20014 is a performance standard that requires the Secretary to establish two elements to prove a violation. First, she must establish that the area cited was a toilet room or a place where food or beverages were Second, she must establish that the cited area was consumed. Aexposed to a toxic material.@ She contends that there can be no dispute that the cited offices were used as lunch and break rooms where food and beverages were both consumed and stored. She also contends that these areas were exposed to mercury from the surrounding production areas. The Secretary contends that Newmont=s interpretation of the standard to require the Secretary to prove that the toxic material was present in sufficient quantities to present a clear health hazard is incorrect. maintains that the Secretary is not required to show that the

quantity of mercury detected presented a hazardous dose level. Similarly, she contends that she is not required to establish that mercury presents a serious health risk when ingested. Rather, the Secretary argues that mercury is a toxic material as a matter of law. She contends that mine operators Aare obliged, under the terms of this regulation, to take all reasonable steps to prevent mercury exposure in eating and dining areas. (S. Br. at 25). The Secretary states that the standard is clear on its face. She disagrees with Newmont—s position that unless the term Atoxic material is interpreted to have a dose level component, the standard is impermissibly vague and violates Newmont—s due process rights.

The Secretary also argues that Newmont=s failure to prevent its employees from eating in areas exposed to a toxic material demonstrates its unwarrantable failure to comply with the standard. She contends that Newmont had been aware of the conditions cited by the inspector for six years and did nothing to correct the conditions. She points to the fact that in 1992 Newmont improved the lunchroom at its refinery at the mine after determining that employees were eating and consuming beverages in areas that were exposed to mercury vapors. The Secretary also contends that Newmont=s defense that it was not in violation of the standard so long as mercury vapor did not exceed the threshold limit value (ATLV@) for mercury, incorporated by the Secretary through 30 C.F.R. '56.5001, is inherently unreasonable. The Secretary also relies on complaints made by miners to Newmont managers about the presence of mercury in the AARL and ZADRA offices (the Aoffices@) to establish aggravated conduct. The Secretary seeks to increase the penalty for these alleged violations to \$5,000 each.

2. Newmont

Newmont argues that to establish a prima facie case, the Secretary must prove that the mercury alleged to be present in the offices when food and beverages were consumed was a toxic It contends that the record establishes that the material. elemental mercury at issue in these cases was not a toxic material because it was not present in such quantities to present a health hazard. Newmont maintains that there is no dermal contact risk associated with elemental mercury. In addition, its states that ingestion of elemental mercury, at least at the levels present in the offices, does not present a health hazard. Newmont contends that inhalation of mercury vapor is the only exposure route of concern for elemental mercury. MSHA has a specific regulation addressing mercury vapor at section 56.5001. Under that regulation, the average permissible dose of mercury

vapor that MSHA allows miners to be exposed to over a working shift is 50 micrograms (μg) . Newmont contends that unless the amount of mercury vapor in the offices exceeds 50 micrograms, a health hazard is not present and the rooms have not been exposed to a toxic material as that term is used in the standard.

Newmont also contends that the Secretarys interpretation of section 56.20014 is arbitrary, capricious, and contrary to law. First, it contends that the Secretary failed to distinguish between the health risks associated with elemental mercury and the risks posed by other forms of mercury. Second, it argues that basic toxicology and industrial hygiene provide that the dosage of a substance determines whether it poses a health hazard. This is, because all substances are toxic to the human body at a given dosage level, a substance cannot be considered to be a toxic material unless the dose at which miners are exposed is taken into consideration. It believes that unless the Secretary establishes that the mercury detected by Inspector Drussel presented a significant risk of harm to employees, the citation and order must be vacated.

Finally, Newmont argues that the Secretarys prior inconsistent interpretation of the standard and prior inconsistent actions of her inspectors, precludes giving her present interpretation any deference. It contends that it was not provided with fair warning of the conduct that was prohibited by the standard because a reasonably prudent person familiar with the mining industry and the protective purposes of the Secretarys standards would not have known that the presence of mercury vapor below the TLV violated the standard.

B. The Citation and Order Alleging Violations of Section 56.20011

1. The Secretary

The Secretary argues that Newmont violated the standard when it placed a contaminated discarded mercury scrubber from the AARL in a boneyard without providing a barricade or warning. She contends that it also violated the standard when it placed a

¹ The TLV for mercury under section 56.5001 is 0.05 milligrams per cubic meter of air (mg/m³). Since Inspector Drussel measured mercury vapor in micrograms, I also use micrograms throughout this decision. 50 micrograms (µg) is equal to 0.05 milligrams (mg).

dewatering screen from the AARL in a containment area without providing a barricade or warning. She contends that the cited equipment contained mercury that presented a health hazard. The Secretary maintains that both pieces of equipment were in open areas where employees could come in contact with them. Finally, the Secretary contends that Newmonts violation with respect to the scrubber was the result of its aggravated conduct because it was aware of the hazard and did nothing to prevent employees from being exposed to the hazard.

2. Newmont

Newmont makes many of the same arguments with respect to this citation and order as it did with respect to the alleged violations of section 56.20014. It contends that the Secretary did not establish that the cited equipment presented a health or safety hazard within the meaning of the standard. Newmont argues that the citation and order were issued because of a Apotential hazard rather than because a hazard existed. Further, Newmont argues that, after the citation and order were issued, it monitored for mercury vapor at the scrubber and screen and the results were well below the TLV. Finally, it argues that the Secretary did not provide reasonable notice that a bead of mercury on a piece of equipment would require a warning sign or a barricade.

III. DISCUSSION WITH FURTHER FINDINGS AND CONCLUSIONS OF LAW

A. The Citation and Order Alleging Violations of Section 56.20014

1. Introduction

The cited standard is quite brief. For purposes of theses proceedings it provides that no person shall be allowed to consume or store food or beverages in any area exposed to a toxic material. Although Newmont introduced evidence designed to raise questions as to whether food or beverages were in fact stored or consumed in the offices on or about March 14, 1995, I find that the overwhelming evidence establishes that they were. Whether miners were encouraged by Newmont to take their meal breaks in other areas, or that consuming or storing food and beverages in the offices was not officially sanctioned by Newmont is irrelevant. The evidence shows that miners were not prohibited from drinking beverages, eating food, or storing beverages and food in the offices. The standard states that Ano person shall be allowed to@ consume food or beverages in an area exposed to a

toxic material or to store food or beverages in such area. The record demonstrates that Newmont allowed such activities in the offices.

The issue then is whether the offices were areas Aexposed to a toxic material,@ as that phrase is used in the standard. is no question that mercury vapor was present in the offices. Newmont=s own records show that mercury vapor was present. S-112). Newmont took mercury vapor samples six times a day in the offices using a Jerome monitor. The question is whether the presence of mercury vapor establishes that the area was exposed to a toxic material. The Secretary maintains that the evidence establishes that mercury is a toxic material at any dosage level. She states that mercury is a universally recognized poisonous substance. She believes that there is no known universally safe level for exposure to mercury and she rejects Newmont=s contention that at certain dose levels mercury is not toxic to She states that the dose level at which mercury is safe for all persons has not been definitively determined. Consequently, she believes that mercury must be presumed to be a toxic material at any dose that is detectable by standard industrial hygiene instruments. She further argues:

MSHA asserts mercury to be a Atoxic material@ as a matter of law. Mine operators are obliged, under the terms of this regulation, to take all reasonable steps necessary to prevent mercury exposure in eating or dining areas.

(S. Br. at 25). Accordingly, the Secretary contends that because she demonstrated that mercury vapor was present in a detectable amount in each office and that mercury is a toxic material, she established violations of section 56.20014.

Newmont strongly disagrees with the Secretary-s interpretation of the standard. As stated above, Newmont contends that the Secretary must establish that the mercury vapor that was detected by Inspector Drussel on March 14 was a toxic material. It maintains that the 23.3 $\mu g/m^3$ and 22.2 $\mu g/m^3$ readings obtained by Inspector Drussel show that a toxic material was not present because at that dose mercury is not toxic. Newmont characterizes the Secretary-s interpretation as a Azero tolerance policy. It contends that under this interpretation, the Secretary can issue a citation in the offices if an inspector detects any level of mercury that can be measured with a Jerome monitor. Newmont argues that this interpretation is inherently unreasonable.

Mercury can potentially enter the human body by three routes: through the skin, through the digestive tract, and through inhalation. In order to understand the issues raised in this case it is important to consider the relative risks posed by these three potential routes of entry. I discuss each in turn below.

a. Risks Posed by the Inhalation of Mercury

The inhalation of mercury fumes can present significant health risks. About 80% of all inhaled mercury vapor is absorbed into the human body through the lungs. If a person is exposed to mercury fumes at the TLV, he will absorb about 400 micrograms of mercury during an 8-hour shift.

b. Risks Posed by Dermal Contact with Mercury

I find that dermal contact with elemental mercury does not pose as significant a health risk. Very little mercury is absorbed through the skin. The dermal absorption rate is only 2.2% of the inhalation rate and only about 50% of the mercury that is absorbed into the skin enters the body. The rest stays in the skin and is sloughed off. I credit the evidence presented by Newmont that only about .8 percent of any mercury exposed to the skin is actually absorbed into the body.

c. Risks Posed by the Ingestion of Mercury

It is clear that ingestion of mercury in the quantities that would be possible in the offices does not present a health risk to miners. The ingestion rate for mercury is between .01 and .001 of a percent. If a miner ate a sandwich that contained a bead of mercury, only a negligible amount of mercury would remain in his body. I agree with Newmonts evidence that such an event is Atoxicologically irrelevant.@ It is highly unlikely that anyone would get mercury poisoning by eating small amounts of mercury, even over a period of time.

d. Conclusions

I conclude that inhalation is the primary exposure route for elemental mercury that is of concern in these cases. Of course, mercury vapor can enter the offices in a number of ways. It can come in through the doors and the ventilation systems. In addition, miners can get beads of liquid mercury on their clothing. If mercury is on a miners clothing or boots, the mercury can contaminate an otherwise clean environment.

2. Did Newmont Violate Section 56.20014?

There is no dispute that mercury is a toxic material if it is detected at levels above 50 $\mu g/m^3$ over a working shift. The issue is whether mercury is a toxic material, as that term is used in the standard, if it is detected at levels significantly less than that, around 22 to 24 $\mu g/m^3$. The Secretary maintains that the TLV is irrelevant in this case because all she needs to prove is that the offices were exposed to a toxic material. She argues that mercury is a toxic material at all detectable levels because Athe dose level at which mercury is assuredly safe for all persons (including female miners of childbearing age) has not been determined.@ (S. Br. at 25).

Newmont argues that a material is toxic if it is poisonous to humans. A toxic material is a poisonous material. It contends that any material is poisonous to humans if the exposure is sufficient. Thus, it maintains that one must consider the dose when determining if a material is toxic. Without taking the dose into consideration, everything is toxic and the term Atoxic material@ becomes meaningless. It argues that it is the dose that makes the poison. It relies on the testimony of its expert witnesses in making this argument. It also points to the fact that dental amalgams (fillings) are widely reported to produce between 3 and 29 µgs of mercury vapor within a person=s mouth, 24 hours a day, 365 days a year. Such fillings are not considered to be hazardous to humans. Because Inspector Drussel detected low levels of mercury vapor in the offices, Newmont contends that no health risk was posed and a toxic material was not present.

The Secretary argues that the offices were exposed to a toxic material because Newmont failed to adequately assure that liquid mercury and mercury vapors would not enter into and remain in the offices. She contends that because of Newmont=s deficient industrial hygiene practices, Newmont exposed the two offices to ambient mercury vapor and liquid mercury originating from the production areas. She points to the fact that during the years proceeding March 1995, Newmont did not have in place an industrial hygiene protocol to keep the offices clean. For example, miners would enter the offices without removing or washing their boots or personal protective equipment, which could be contaminated with mercury from the plant. Another example relied upon by the Secretary was the fact that the offices were not adequately ventilated so that air containing mercury vapor would enter the offices from the plant. As proof of this constant contamination, the Secretary relies on Newmont-s mercury monitoring results for the offices.

Although the parties presented extensive evidence at the hearing, the dispute primarily concerns the interpretation of the standard. Each side presented evidence to support its interpretation. Thus, it is important to carefully consider the legal issues raised to support the conflicting interpretations.

I find that detectable levels of mercury vapor were frequently present in the subject offices in the year preceding March 1995. (Ex. S-112). Mercury vapor was generally present in the offices during the first three months of 1995 in the range of 8 to 30 $\mu g/m^3$, but occasionally higher readings were obtained. There were several readings between 50 and 60 $\mu g/m^3$ and one in excess of 300 $\mu g/m^3$ because the AARL office had not been recently cleaned. (Ex. S-112 at 2880 and 2940). Newmont contends that Jerome mercury monitors do not provide accurate measurements to assess personal exposures, but only provides a rough measure of potential mercury vapor sources.

Jerome monitors take an instantaneous reading. several readings are taken, they may not represent the TLV because the readings are not time-weighted over the shift. agree with Newmont that a person can obtain a wide range of Jerome readings in a single room over a period of a few minutes, even when the instrument is properly calibrated and used. record also shows that certain chemicals used in the plants can cause a Jerome monitor to detect the presence of mercury. this instance, however, the record contains hundreds of Jerome readings taken in the offices over a long period of time. Accordingly, I find that I can properly conclude that mercury vapor was present in the offices on a consistent basis, but that the amount of such vapor was almost always below the TLV. Even in those instances where readings above 50 μ g/m³ were made, the TLV may not have been exceeded because the readings were not time-weighted.

a. Plain Meaning of Standard

Because the Secretary asserts that mercury is a toxic material as a matter of law, she argues that she is not required to establish that mercury was present at hazardous levels the time the citations were issued. She interprets section 56.20014 to presume that a hazard exists when detectable mercury vapor is found. She contends that the plain meaning of the words in the standard supports her interpretation. In addition, she states that the standard must be interpreted so as to Aeffectuate its purposes.@ (S. Br. at 26). In the alternative, the Secretary argues that the Commission should defer to her reasonable interpretation of the standard.

I find that the plain language of the standard does not automatically lead to the Secretary's interpretation. The concept of an area being Aexposed to a toxic material@ is somewhat ambiguous. In addition, the purpose of the standard is not entirely clear. Newmont interprets the standard to apply only to ingestion hazards. It believes that the standard is designed to keep food and beverages from becoming contaminated with toxic substances. Accordingly, I give Newmont's arguments the benefit of the doubt and reject the Secretary's position that the plain language of the standard precludes any interpretation of the standard other than her own interpretation.

b. Deference

It is well established that an agency-s interpretation of its own regulations should be given Adeference ... unless it is plainly wrong@ and so long as it is Alogically consistent with the language of the regulation and ... serves a permissible regulatory function.@ General Electric Co. V EPA, 53 F.3d 1324, 1327 (D.C. Cir 1995)(citations omitted); Buffalo Crushed Stone, Inc., 19 FMSHRC 231, 234 (February 1997). In addition, the legislative history of the Mine Act states that Athe Secretary-s interpretations of the law and regulations shall be given weight by both the Commission and the courts.@ S. Rep. No. 181, 95th Cong., 1st Sess. 49 (1977), reprinted in Senate Subcommittee on Labor, Committee on Human Resources, 95th Cong., 2nd Sess., Legislative History of the Federal Mine Safety and Health Act of 1977 at 637 (1978).

Newmont contends that no deference is owed the Secretarys interpretation because her interpretation of this standard has been inconsistent. Newmont relies on a number of factors in making this argument. First, it states that Inspector Drussel inspected these offices on many occasions; he knew or had reason to know that a low level of mercury vapor was generally present, and he drank coffee in the offices. Second, it states that the Secretarys prior written interpretation of the standard does not support her present interpretation. Third, it maintains that the Secretarys interpretation of an identical standard under OSHA is inconsistent with her interpretation under MSHA. Finally, it states that the Secretary does not consistently apply her interpretation.

I find that although the Secretary's policies have not always been clearly enunciated, her policies have been sufficiently consistent to consider the application of deference. Inspector Drussel admitted that prior to March 1995, he knew

that miners ate in the offices. (Tr. 1185). He admitted that prior to March 1995, he believed that the offices were in compliance with MSHA standards. *Id.* He also admitted that prior to March 1995, be believed that the Maction level@ for mercury vapor was 50 $\mu g/m^3$ for personal samples. Finally, Inspector Drussel testified that prior to March 1995, he knew that mercury vapor was in the AARL office and he personally drank coffee in that office, but he did not issue any citations for violating section 56.20014. (Tr. 1202-03). From this testimony, Newmont concludes that the Secretary did not consider mercury vapor at levels below 50 $\mu g/m^3$ to present a hazard in areas where food or beverages are consumed and did not believe that the conditions in Newmonts offices violated the standard. Newmont contends that this shows that the Secretary-s prior interpretation of the standard is inconsistent with her present interpretation.

Newmont has stretched Inspector Drussel-s testimony beyond The fact that one inspector drank coffee in an area recognition. in which mercury vapor was present does not indicate that the Secretary has changed her interpretation of the standard. this testimony, it appears that the local MSHA office relied on personal samples taken in accordance with section 56.5001 when testing for mercury. At most, it shows that MSHA was not enforcing section 56.20014 at the Newmont facility. An agency=s failure to strictly enforce a particular standard cannot be the basis for finding that its prior interpretations of the standard were inconsistent. As I stated at the hearing, an MSHA inspector=s failure to issue any citations at a mine does not establish that the Secretary has determined that the mine operator is in compliance with all MSHA safety and health regulations. The fact that previous citations had not been issued cannot be the basis for rejecting deference to the Secretary=s interpretation.

Newmont also relies on a prior written interpretation issued by the Secretary. In 1981, the Secretary issued a Metal and Nonmetal Mine Safety and Health Inspection and Investigation Manual (AI & I Manual@). For section 56.20-14, the old section number for the standard, the I & I Manual states: AI The purpose of this mandatory standard is to ensure that foods or beverages are not stored or consumed in areas where toxic materials or unsanitary conditions could contaminate the food and cause illness.@ (Ex. R-59A at 66-S-4). Newmont contends that the I & I Manual shows that the standard has previously been interpreted as a food contamination standard, not an airborne contaminant standard. It argues that this interpretation is entirely inconsistent with the position that the Secretary is taking in this case.

In July 1988, the Secretary issued MSHA=s Program Policy Manual (the Manual@), which superseded the I & I Manual. The Manual does not contain any interpretation of the standard at issue and states on the cover page that it Aincludes all policies currently in effect which were issued prior to July 1, 1988.@ Paul Balanger, one of the drafters of the Manual, testified that any applications contained in the old I & I Manual that were not applicable or were deemed unnecessary were not included in the new Manual. (Tr. 1421-1422). Thus, to the extent that the I & I Manual included an inconsistent interpretation, it was deleted about seven years prior to the date the citation and order were issued.

The introduction for the section of the I & I Manual discussing mandatory standards states:

The following application of standards is to assist inspectors in determining the intent and purpose of the given standard. They do not have the force of law and do not supersede or override the standards themselves, and are subject to policy change.

(Ex. R-59A at 66-A-1). Thus, the I & I Manual specifically provided that the applications were not binding, did not override the language of the standard, and could change over time.

Although I find that there is some tension between the application set forth in the I & I Manual and the Secretarys present interpretation of section 56.20014, it is not so inconsistent as to hold that the Secretarys interpretation in this case is not entitled to any deference. In the cases cited by Newmont to support its position, the agency in question had a history of prior inconsistent enforcement, the agency changed procedures through an internal staff memorandum that had been established by regulation, or the agency refused to adhere to the precedent of its own internal review board even though it followed such precedent in previous and subsequent cases that were very similar.

In this case, MSHA issued a policy statement in 1981 that was revoked in 1988 that generally indicated that the focus of the standard was to prevent the contamination of food. There has not been any showing of prior inconsistent enforcement. If there is any inconsistency, it is that the agency did not direct its resources to the enforcement of the cited standard until recently.

Newmont also relies on the Secretary's enforcement of the same standard under OSHA. It points to the analogous regulation of the Department of Labor's Occupational Safety and Health Administration (AOSHA@) that defines Atoxic material@ to mean a material that is present in a concentration that exceeds the TLV or, in the absence of an applicable standard, Awhich is of such toxicity so as to constitute a recognized hazard that is causing or is likely to cause death or serious physical harm.@ (N. Br. at 27, quoting 29 C.F.R. ' 1910.141(a)(2)(viii)). Thus, the Secretary limits OSHA\sigma\similar standard, at 29 C.F.R. ' 1910.141(g)(2), to situations where mercury is detected above the TLV. If mercury is detected in eating or drinking areas at levels below the TLV, the equivalent OSHA standard is not violated.

The Commission and the courts owe deference to the Secretary, not to the Assistant Secretary for Mine Safety and Health or to his staff. Thus, Newmont=s argument has some I find, however, that there are some important differences between the underlying OSHA and MSHA statutes. the OSHA statute, a safety or health standard must be Areasonably necessary or appropriate to provide safe or healthful employment and places of employment.@ 29 U.S.C. 652(8). The Supreme Court has interpreted this requirement to mean that the Secretary, when promulgating a health standard, must determine that the standard is Areasonably necessary and appropriate to remedy a significant risk of material health impairment.@ Industrial Union Dept v. American Petroleum Inst., 448 U.S. 607, 639 (1980). The Mine Act does not include such a requirement. The Secretary is not required to establish during rulemaking that a proposed MSHA standard is necessary to Aremedy a significant risk.@ Id. Under the Mine Act, the Secretary is authorized to promulgate standards has may be appropriate ... for the protection of life and prevention of injuries....@ 30 U.S.C. ' 811(a); National Mining Ass=n v. Mine Safety & Health Admin., 116 F.3d 520, 527 (D.C. Cir. 1997). The Secretary of the Interior originally promulgated section 56.20014, under the Federal Metal and Nonmetal Mine Safety Act, using the OSHA standard as a starting point. He did not incorporate the OSHA definition of Ahazardous material@ in the standard. Accordingly, I find that the Secretary's different interpretation of a similar standard under the OSHA statute is grounded in that statute and should not be the basis for refusing to defer to the Secretary=s interpretation of the standard in this case.

Finally, Newmont contends that deference is not owed the Secretary=s interpretation of the standard because she does not

consistently apply this interpretation. Newmont provides examples of inconsistent enforcement. Oxygen and carbon dioxide, for example, are hazardous at high doses, yet MSHA does not issue citations if oxygen or carbon dioxide are detected in a lunchroom. Silica dust is another example. It is well documented that silica presents a health hazard, yet MSHA does not cite mine operators if silica dust is detected in a lunchroom at levels below the TLV. Newmont asserts that the Secretary is enforcing the standard on an arbitrary and ad hoc basis. Secretary contends that she is not required to apply the standard to all other toxic materials in the same manner as mercury. states that AMSHA=s consistency of application from substance to substance is based on a decision-making process that will look to factors such as the nature of the material, its physical properties, warning properties, paths of exposure, feasibility of detection and control, and the standard of care.@ (S. Reply Br. She also states that she will Arationally apply the regulation to these other substances in other environments on the basis of the nature of the toxic material, including its health effects and routes of absorption, the nature of the environment and feasibility of detection and control, as well as the recognized levels and types of control mandated by reasonably prudent industrial hygiene and occupational health practice.@ (S. Br. at 35).

I agree with the Secretary that the fact that she does not enforce section 56.20014 with respect to silica dust, for example, in the same way that she enforces the standard with respect to mercury is not important when considering deference. There are many reasons why the Secretary may not be as stringent with silica dust in lunchrooms including, but not limited to, the impracticality of controlling low levels of silica dust at mines. It appears to me that the Secretary is concerned that Newmont was not doing all that it could to eliminate elemental mercury in the offices. She believes that Newmont was not following recognized industrial hygiene practices with respect to the control of mercury in the offices. Her interpretation is entitled to deference even though she may not interpret the standard as stringently with respect to other toxic materials.

In conclusion, I find that Newmont has not presented sufficient reason to not apply the concept of deference to the Secretary-s interpretation of section 56.20014. In addition, I find that the Secretary-s interpretation is reasonable and consistent with the purpose of the Mine Act. The prevention of occupational illness is one of the fundamental purposes of the Mine Act. Consolidation Coal Co., 8 FMSHRC 890, 895 (June 1986). Standards under the Mine Act are broadly interpreted to achieve

the goal of protecting the safety and health of miners. 56.20014 does not contain a dose level and there is no implication that the term Ahazardous material@ only applies if the material is detected at a level above the TLV. Thus, I conclude that the Secretary's interpretation of the standard is Newmont is not contending that reducing the level of mercury to detectable levels was technically or economically infeasible. The record makes clear that significant reductions in mercury vapor levels can be obtained using available industrial hygiene practices. Other gold mines in northeast Nevada have successfully implemented these practices at their Such practices include, for example, separating offices and control rooms from eating areas, locating changing rooms and boot washes adjacent to eating areas, and establishing positive pressure ventilation systems for eating areas. had previously instituted some of these measures for the lunchroom at its refinery and instituted such measures to abate the citation and order at issue here.

It is important to keep in mind that the Mine Act is a strict liability statute. Asarco v. FMSHRC, 868 F.2d 1195 (10th Cir. 1989). When a violation of a standard occurs, the Aoperator is automatically assessed a civil penalty.@ (Id. at 1197). The Mine Act imposes no general requirement that a violation of a standard create a safety or health hazard in order for the citation to be valid. Allied Products Co., 666 F.2d 890, 892-93 (5th Cir. 1982). Thus, if a condition violates a standard, a citation is proper. Newmont-s argument that the Secretary-s interpretation is unreasonable and not entitled to deference because she failed to demonstrate that the health of miners was directly affected is misplaced. I find that the Secretary established that the cited offices had been exposed to a toxic material as that term is used in the standard.

3. Would a Reasonably Prudent Person Have Reason to Know that Section 56.20014 Applied when Mercury is Detected at Levels Below the TLV?

As stated above, the plain language of the standard does not automatically lead to the interpretation that the Secretary advanced in this proceeding. I held that the Secretarys interpretation is entitled to deference, however, because it is reasonable and consistent with the purposes of the Mine Act. A final and distinct inquiry is whether the Secretary provided mine operators with sufficient notice of the requirements of the standard. Would a person of ordinary intelligence know what was required by the standard or would he have to guess at its meaning?

The language of section 56.20014 is <code>Asimple</code> and brief in order to be broadly adaptable to myriad circumstances.@ <code>Kerr-McGee Corp.</code>, 3 FMSHRC 2496, 2497 (November 1981); <code>Alabama By-Products Corp.</code>, 4 FMSHRC 2128, 2130 (December 1992). Such broadly written standards must afford notice of what is required or proscribed. <code>U.S. Steel Corp.</code>, 5 FMSHRC 3, 4 (January 1983). In <code>Aorder</code> to afford adequate notice and pass constitutional muster, a mandatory [health] standard cannot be <code>maximizer solution solution. A standard must <code>Agive a person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly.@ <code>Lanham Coal Co.</code>, 13 FMSHRC 1341, 1343 (September 1991).</code></code>

When faced with a challenge that a safety standard failed to provide adequate notice of prohibited or required conduct, the Commission has applied an objective standard, i.e., the reasonably prudent person test. The Commission recently summarized this test as Awhether a reasonably prudent person familiar with the mining industry and the protective purposes of the standard would have recognized the specific prohibition or requirement of the standard.@

Id. (citations omitted). To put it another way, a safety standard cannot be construed to mean what the Secretary intended but did not adequately express. AThe Secretary, as enforcer of the Act, has the responsibility to state with ascertainable certainty what is meant by the standard he has promulgated. Diamond Roofing Co. V. OSHRC, 528 F.2d 645, 649 (5th Cir. 1976).

Newmont argues that the Secretary failed to provide notice to mine operators that the safety standard applies when mercury is present in levels below the TLV. Newmont argues that based on MSHA=s past enforcement actions, prior policy statements, and the Secretary=s interpretation of the similar OSHA standard, a reasonably prudent person would agree with Newmont=s interpretation. Newmont relies on the I & I Manual, discussed above, arguing that the only written guidance the Secretary has issued is contrary to her current interpretation. Newmont argues that the mining industry reasonably believed that the section 56.20014 was a food contamination standard and that mercury vapor

below the TLV was never an issue with MSHA inspectors. It states that no policy statements were issued and no public announcements were made by the MSHA concerning its Anew@ interpretation of the standard.

Newmont also relies on the testimony of a number of witnesses. First, it points to the testimony of Margie Zalesak, MSHA=s chief of health, that the Secretary=s interpretation of the standard with respect to lunchrooms was never specifically communicated to the mining community. (Tr. 2758). argues that Ms. Zalesak could not articulate how MSHA exercises its enforcement discretion under the standard. (Tr. 2770-71). Michael Simmons, who was a foreman in the carbon-handling area at the time the citation and order were issued, testified on behalf of the Secretary. He testified that at the time the citation and order were issued he believed that the mine was in compliance with MSHA standards, as long as mercury vapor in the offices was kept below the TLV. (Tr. 1018-19). Dennis J. Tobin, MSHA=s manager of the Elko, Nevada, field office, testified that he had always thought in terms of the TLV and had not thought about applying section 56.20014 to levels below the TLV. (Tobin Dep. at 21-22).² Mr. Tobin further testified that if a mine operator were to ask him what the word Atoxic@ means in section 56.20014, he would refer to the TLV book. (Id. at 54-55).Drussel testified that, in March 1995, his application of the Alunch room standard@ changed. (Tr. 1203). Newmont contends that this change was made without any advance notice to Newmont or the mining community in general.

Thomas H. Koenning, chief of the toxic materials division of MSHA=s Denver Safety and Health Technology Center (ADenver Tech@), testified that MSHA would not normally cite a work area where mercury was detected below the TLV because such levels are generally considered to be safe. (Koenning Dep. at 67). Galen Trabant, an industrial hygienist with Denver Tech, testified that the MSHA standard for mercury is 50 $\mu \text{g/m}^3$ and that he is not aware of any other MSHA standard for mercury exposure. (Trabant Dep. at 23). Mr. Trabant visited the South Area Gold Quarry on March 28, 1995, along with other MSHA officials and conducted a mercury health hazard survey, as described in the Denver Tech report. (Ex. R-4).

At the hearing, upon joint motion of the parties, the deposition transcripts of a number of individuals were admitted into evidence in lieu of testimony.

The Secretary approaches the notice issue from a different direction. She contends that Newmont knew that mercury vapor was present in the offices. She believes that she established that Newmont had Asubjective knowledge that it needed to take effective steps to remedy mercury exposures in lunchrooms.@ (S. Br. At 36). The Secretary points to steps Newmont took in 1992 to clean up an eating area in its refinery. She states that the fact that Newmont implemented the measures required by the standard at the refinery shows that it knew what the standard required. For example, a change area was provided at the lunchroom in the refinery and employees are required to remove coveralls and personal protective equipment before entering the The Secretary also states that although Newmont=s industrial hygienist advised employees not to eat or drink in Many mercury exposure area, @ Newmont failed to provide an area for miners in carbon-handling where they could follow the industrial hygienist=s advice. (Ex. S-127 p. 1).

The Secretary also relies on a memorandum sent to Kim Redding, a miner at the facility, on March 2, 1995, from Frank Hanagarne, who was manager of carbon-handling and the refinery. (Ex. S-127 pp. 46-49). In that memo, Mr. Hanagarne discussed measures that Newmont uses to control employee exposure to mercury. Under the heading APersonal Hygiene,@ Mr. Hanagarne stated that the company is Aconcerned about the lack of a separate clean area for a lunch room for the workers.@ (Id. 48). He went on to explain that Newmont purchased a trailer for this purpose and that it would be installed as soon as other necessary work was completed. The Secretary maintains that this memo shows that mine management knew that the offices were exposed to mercury, were Apotentially contaminated,@ and knew that remedial steps were necessary. (S. Br. at 37). Secretary also contends that Newmont was put on notice of the requirements of the standard when, at an August 1994 meeting, Mr. Redding claimed that the offices violated section 56.20014 and read the standard aloud to management. (Tr. 377, 491-92, 920-21).

In addition, the Secretary relies on a NIOSH criteria document that Aindicates that food and beverages should not be consumed in mercury work areas.@ (S. Br. at 38; Ex. R-6 appendix III, Art. 7(a)). She also relies on the material safety data sheet for mercury that states: ADO not eat, drink, or smoke in any work area.@ (Tr. 2628). In conclusion, the Secretary maintains that the text of the section 56.20014 and the factors set forth above provided more than enough notice of the requirements of the standard.

The Secretary=s argument that Newmont had subjective knowledge of the requirements of the standard is not well taken. The fact that Newmont took actions to improve the lunchroom for the refinery, that internal memoranda stated that managers were concerned about the lack of a clean lunchroom, or that Newmont was in the process of installing a trailer for use as a lunchroom does not establish that Newmont had knowledge of the Secretary=s interpretation of section 56.20014. In Lanham, a citation was issued for the failure of an independent contractor to wear a safety line while placing a tarp over the bed of a haul truck. There is no dispute that a reasonably prudent person would see a danger of falling when standing on the top of a haulage truck unrolling a tarp. Indeed, in that case the driver of the truck fell about ten feet to his death while unrolling the tarp. issue in that case was whether a reasonably prudent person would know that the safety standard required the use of safety belts and lines when placing a tarp on a truck. The MSHA inspector testified that he had never observed a safety belt or line being used on a truck and had not previously Aconsidered the standard applicable to the tarping of trucks.@ 13 FMSHRC 1343.

The issue under the reasonably prudent person test in the present case is not whether Newmont was on notice that mercury is hazardous or that mercury was present in the offices. is whether a reasonably prudent person would have reason to know that mercury vapor in a range of 22 to 24 μ g/m³ was a toxic material that was prohibited in an area where food or beverages are consumed or stored. An agency provides notice of the meaning of the standard through the language of the standard itself, written interpretations that it has issued, prior enforcement actions, and other actions it has taken that shed light on its interpretation. Although this is a close issue, I find by a preponderance of the evidence that a reasonably prudent person with knowledge of the mining industry and the protective purposes of the standard would have recognized that beads of liquid mercury and mercury vapor in the range of 22 to 24 $\mu g/m^3$ were prohibited where food or beverages were stored or consumed under the standard.

First, the language of the standard itself indicates that areas where food or beverages are consumed require more stringent controls against toxic materials than work areas at a mine. If, as argued by Newmont, only substances above the TLV were prohibited in eating areas, then the regulation is redundant. The same standard of care would be required in lunchrooms as in the plant itself. If mercury is not a hazardous material, as that term is used in the standard, unless it is present in a quantity or dose greater than the established TLV, then section

56.20014 serves no purpose with respect to areas where people eat and store food and beverages. Such a reading does not square with the purposes of the Mine Act or the language of the standard when read in conjunction with section 56.5001. Construing sections 56.5001 and .20014 harmoniously, a reasonably prudent person would conclude that areas where persons eat or store food cannot be exposed to toxic materials, including mercury, even if the TLV were not exceeded. That is, section 56.20014 should not be construed to incorporate the TLV for mercury as a floor below which exposure is permitted under the standard. Such a person would realize that section 56.20014 is more stringent than section 56.5001 where food is stored and eaten.

The mercury readings obtained by Inspector Drussel were not a rare excursion above the norm; his readings were consistent with the readings that had been taken in the offices by Newmont for the previous year. In addition, the bead of mercury that was noted was not such an unusual event as to constitute an aberration. A reasonably prudent person would recognize that mercury is a toxic material. The fact that Inspector Drussel may not have detected a quantity of mercury that is universally considered to be a harmful dose at the time of his inspection does not change that fact. I find that a reasonably prudent person would interpret the standard to require an operator to reduce the amount of mercury in eating and drinking areas to levels that are as low as can reasonably be obtained. above, existing technology allows mine operators to reduce the amount of mercury in eating areas to levels that are significantly below that measured by Inspector Drussel. standard gives sufficient notice to reasonable persons that mine operators are required to take steps to prevent eating areas from being exposed to mercury, at least in the quantities detected by the inspector.

Newmonts argument that MSHAs prior inconsistencies were misleading is not well taken. Although I recognize that the I & I Manual was relied upon by the metal mining industry for a number of years, a reasonably prudent person would not rely on an interpretive manual in 1995 that was explicitly superseded in 1988. An interpretative manual is generally not binding on the Secretary when it is in effect, and it is unreasonable to rely on such a manual six years after it has been replaced.

In addition, the testimony cited by Newmont does not support its argument. Ms. Zalesak simply stated that MSHA had not issued a policy letter with respect to section 56.20014. The Secretary is not under a duty to issue interpretative bulletins for safety and health standards. The testimony of Mr. Tobin must be read in

context. At the time of the inspection, Mr. Tobin worked in a different MSHA district where mercury contamination was not an issue. He stated that he had not read the subject standard prior to becoming a field office supervisor in Nevada and was not experienced with mercury issues. (Tobin Dep. at 24, 50). A reasonably prudent person under the Commissions test is someone who is familiar with the subject matter at hand, not a person who has not thought about the issue.

Mr. Simmons testified that although he believed the mine was in compliance as long as the TLV was not exceeded, he had his Aown suspicions, but ... kept his mouth shut.@ (Tr. 1020). Mr. Simmons questioned in his own mind whether the conditions in the offices created a hazard. Finally, the testimony of MSHA personnel from Denver Tech does not support Newmont—s position. They testified about section 56.5001 and the TLV. They did not state that unless the TLV is violated, there can be no violation of section 56.20014.

Inspector Drussel testified that he had not applied section 56.20014 to the cited offices prior to March 1995. (Tr. 1203). Prior to the time of his inspection, he did not believe that readings below the TLV violated the standard. (Tr. 1205-06). As with Mr. Tobin, he had not previously considered whether section 56.20014 should be applied to mercury vapor in eating areas. MSHA=s failure to enforce a standard does not establish MSHA policy that can be relied upon by a reasonably prudent person. A mine operator cannot reasonably rely on the lack of enforcement by MSHA to establish that a standard was not violated.

I believe that this case presents a different situation than In that case, the only testimony on the issue was from the MSHA inspector. He testified that he had never cited an operator for failing to tie off when tarping a truck and that Ahe had never observed safety belts or lines used in such situations in more than 40 years of mining experience.@ 13 FMSHRC 1710-11(ALJ on remand). The issue was whether a reasonably prudent Aperson would have recognized that attaching a tarp to a truck without utilizing safety belts and lines was prohibited by the regulation.@ Id. at 1711. Based on the evidence, the judge determined that the Apractice of using safety belts and lines while tarping trucks is rarely if ever followed in the coal industry.@ Id. at 1712. In the present case, on the other hand, the record contains at least some evidence that other gold mine operators provided a separate eating area for its employees that was kept as free of mercury as was reasonably possible. (Tr. 160-63, 1533, 1542-45). The testimony cited by Newmont establishes than Inspector Drussel, had not previously considered how to apply the standard to Newmonts offices when mercury was present at levels below the TLV. He did not testify that he had previously thought about the issue and determined that the standard was not violated in such circumstances. Moreover, neither Inspector Drussel nor any other witness testified that metal mines rarely, if ever, provide clean lunchrooms for employees.

As stated above, I find that the mining industry was provided with sufficient notice of the requirements of section 56.20014. I believe, however, that the issue is a close one and that MSHA could and should have done a better job of communicating the standards requirements to the mining community for the benefit of miners. The failure to provide such guidance unnecessarily delayed the day when all mines provide clean lunchrooms for miners. I have taken Newmonts arguments into consideration when evaluating the unwarrantable failure allegations and the negligence criterion of section 110(i), as discussed below.

4. Were the Violations of a Significant and Substantial Nature?

An S&S violation is described in section 104(d)(1) of the Mine Act as a violation Aof such nature as could significantly and substantially contribute to the cause and effect of a ... mine safety or health hazard. A violation is properly designated S&S Aif based upon the particular facts surrounding that violation, there exists a reasonable likelihood that the hazard contributed to will result in an injury or illness of a reasonably serious nature. National Gypsum Co., 3 FMSHRC 822, 825 (April 1981). In Mathies Coal Co., 6 FMSHRC 1, 3-4 (January 1984), the Commission set out a four-part test for analyzing S&S issues. Evaluation of the criteria is made assuming Acontinued normal mining operations. U.S. Steel Mining Co., 6 FMSHRC 1573, 1574 (July 1984). The question of whether a particular violation is S&S must be based on the particular facts surrounding the violation. Texasgulf, Inc., 10 FMSHRC 498 (April 1988).

In order to establish that the violations are S&S, the Secretary must establish: (1) the underlying violation of the health standard; (2) a discrete health hazard, a measure of danger to health, contributed to by the violation; (3) a reasonable likelihood that the hazard contributed to will result in an illness; and (4) a reasonable likelihood that the illness in question will be of a reasonably serious nature. Consolidation Coal Co., 8 FMSHRC 890, 897 (June 1986).

I find that the Secretary established the first two elements of the Commission=s S&S test, but did not establish the third element. Under the third element, the Secretary must establish that it is reasonably likely that the hazard contributed to by the violation will result in an illness, but is not required to show that it is more probable than not that an illness will result from the violation. U.S. Steel Mining Co., 18 FMSHRC 862, In support of her position, the Secretary 865 (June 1996). argues that Congress unambiguously declared itself in favor of preventing disability from any occupationally related disease. She contends that Athe evidence supports the conclusion that the failure to control mercury exposures in the two break areas, if allowed to continue, assuming normal continued mining operations, could reasonably be expected to cause mercury-related illness.@ The Secretary relies on the level of mercury (S. Br. at 41). that was present in the offices in the weeks prior to March 14, 1995, the reports of beads of liquid mercury in the offices, and the lack of precautions to prevent employees from bringing contaminated clothing and personal protective equipment into the offices. The Secretary also relies on a different TLV for mercury that has not been adopted by MSHA.

I agree that the elimination of occupational illnesses is one of the key goals of the Mine Act. Nevertheless, there has not been any showing that the exposures resulting from the violations contributed to any mercury related illness. important to put the violations into context. Newmont violated section 56.20014 because it permitted employees to eat, drink, and store food and beverages in an area exposed to a toxic The fact that mercury was present in the offices was a violation only because of the presence of food and beverages. The testimony established that employees spent a significant amount of time in the offices, not because they were eating or drinking beverages, but because their work required them to be in the offices. If Newmont had established a separate lunchroom in 1994, the employees= exposure to mercury would not have been significantly reduced at the time of the inspection. would only be in the lunchroom while eating lunch and perhaps during breaks.3

³ I can safely assume that Newmont would not allow its employees to spend lengthy periods of time in a separate lunch room away from the plants and offices. Employers require employees to remain at their duty stations except during established breaks. In addition, the Secretary established that Newmont required its carbon-handling employees to remain in the offices or the plants at all times while the plants were running.

Assuming continued normal mining operations, employees would be working in the offices and the plants throughout the day and would be exposed to mercury vapor at about the same levels as detected by Inspector Drussel and measured by Newmont. nothing in the record to indicate that employees would have changed their behavior in the offices if food and beverages had been prohibited in the offices. They would have taken off their personal protective equipment, including respirators, upon entering the offices and worked at the desks and control panels. It is also highly likely that employees would have taken breaks in the offices, even though they could not eat or drink. employees would have been exposed to the same levels of mercury, except during their lunch break, without violating MSHA standards. The Secretary's witnesses were concerned about the exposures in the offices because employees take off their protective equipment and let Adown their guard@ when they eat and consume beverages. (Tr. 2370-71, 2377-78). But, as stated above, I find that these concerns would have existed in the offices whether or not Newmont violated section 56.20014. (Tr. 3109-10). Newmont abated the violations by establishing a separate lunchroom in a trailer adjacent to the AARL building. The issue is whether the two violations were S&S, not whether exposures to 24 $\mu q/m^3$ of mercury are S&S in the abstract. has been no showing that food or beverages were being contaminated with mercury and it is highly unlikely that anyone would become ill by ingesting small amounts of mercury.

The Secretary sought to establish the S&S nature of the violations by introducing evidence of the medical records of Kim Redding. I held that such records were not admissible, because they are not relevant. Even if I assume that Kim Redding suffered from a mercury-related illness, I cannot relate such an illness back to the violations at issue. Mr. Redding spent a considerable amount of time in the plants where his exposure to mercury was generally greater. He also spent a considerable amount of time in the offices. As stated above, he would have spent about the same amount of time in the offices even if the standard were not violated. Prior to mid-1994, Newmont employees were not required to use respirators while in the plant, so Mr. Redding was exposed to mercury vapor throughout the working day, even when he was not in the offices.

The Secretary also relies on the TLV established by the American Conference of Governmental Industrial Hygienists (AACGIH@) for mercury in 1996. This TLV has not been adopted by MSHA. The 1996 TLV is 25 μ g/m³ for an eight-hour shift. In early 1995, the employees in the Carbon-Handling Department were working 12-hour shifts. The Secretary argues that for a 12-hour

shift, the 1996 TLV should be 16.5 $\mu\text{g/m}^3$ because each shift is 50 percent longer.

I reject the Secretary's argument for several reasons. First, as stated above, employees spend the vast majority of their time in the offices working, not eating or drinking. Newmont had previously established a separate lunchroom, the employees= exposure to mercury vapor would not have been significantly different. The Secretary did not establish a connection between the violations and the exposure. Secretary has not adopted the 1996 TLV for mercury. Secretary cannot contend that the health of an employee is protected throughout the plant including areas where personal protective equipment is not generally worn so long as he is not exposed to more than 50 $\mu g/m^3$ over an eight-hour period, but that any exposure above 25 $\mu g/m^3$ in an area where food or beverages are consumed creates a significant and substantial health hazard.4 If food or beverages are not consumed or stored in the offices, the Secretary allows employees to be exposed to up to 50 µg/m³. Thus, if I accept the Secretary=s argument, employees can be legally exposed to levels of mercury in the plants that are reasonably likely to result in an illness. Under the Secretary=s regulatory scheme not only are such exposures not S&S, they are If the Secretary believes that a miner=s not even violations. health is endangered if he is exposed to more than 25 μ g/m³ of mercury vapor over an eight-hour shift, she should amend section 56.5001 through rulemaking.

Finally, Newmont established by a preponderance of the evidence that it had in place a mercury medical monitoring program to protect the health of all employees. Newmont established this program in mid-1994 under the supervision Dr. James Craner, an occupational health physician, and Dr. David Hogle, a local physician. The program was designed to monitor the mercury levels in Newmont employees. Employees in the carbon-handling department were given annual physical examinations to test for possible toxic effects of mercury and submitted 24-hour urine samples. The samples were analyzed for mercury content using a Biological Exposure Index (ABEI@). The

⁴ Although Newmont took a large number of mercury readings in the offices, these readings are not a time-weighted average. Thus, a high mercury reading may be an abnormal, short-term, excursion that would not be reflected in a time-weighted mercury reading.

BEI is a well-recognized method, developed by the ACGIH, of measuring the exposure of an individual to a hazardous substance such as mercury. It takes into consideration all exposure routes, not just inhalation of mercury vapor. Dr. Melissa McDairmid, an associate professor of medicine at the University of Maryland and former chief medical officer with OSHA, testified on behalf of the Secretary. (Tr. 2269-70). She testified that the BEI is a better indicator of individual exposure to a toxic substance than determining an individual=s exposure through the TLV for that substance because it Ameasures exactly what got into the worker.@ (Tr. 2313). The BEI for mercury is 35 micrograms per gram of creatinine in the urine. Newmont set its internal standard at 20 micrograms for an extra measure of protection. Dr. McDairmid testified that 20 micrograms is a well-recognized cut-off point for mercury. (Tr. 2347-48). In 1994 and 1995, no employee exceeded 30 micrograms while eight employees tested between 20 and 30 micrograms in 1994, and 2 employees tested in that range in 1995. (Ex. R-6 p. 7). Of course, this procedure measured mercury exposure from throughout the plants, not just from the offices.

Newmont also collected weekly urine samples from carbon-handling employees. These samples were not analyzed using the BEI in micrograms per gram of creatinine in the urine. Instead, mercury levels were measured in parts per billion. This measurement does not take into consideration such factors as the weight of the individual, the amount of liquid consumed, and the individuals age. (Tr. 2348-51). Without correcting for creatinine, outside factors can influence the reading and significantly skew the results plus or minus 30%. (Tr. 3001-04).

Nevertheless, such measurements provide a rough indication of an individuals mercury intake, at least if enough samples are taken over a period of time. Several individuals had readings above 35 micrograms. (Tr. 2356-57; Ex. S-206). If a group of individuals consistently provides samples at that level over a period of time and these samples are confirmed by samples that are corrected for creatinine, it is reasonably likely that some of the group will develop health problems. (Tr. 2358-59). These high readings, however, could have been caused by mercury exposure in areas of the AARL and ZADRA facilities where employees may be legally exposed to up to 50 $\mu \rm g/m^3$ of mercury vapor. There is no evidence to tie these readings to the offices, much less to exposure caused by the consumption or storage of food and beverages.

Dr. Jonathan B. Borak, associate clinical professor of internal medicine at Yale University, testified on behalf of Newmont. Dr. Borak teaches occupational medicine and is involved

in developing practice standards in occupational medicine. He reviewed the medical monitoring program in place in Newmont and concluded that the program was a Avery specific and complete protocol@ and it Aexceeded the standard of care.@ (Tr. 2999-3001, 3083-85). I credit Dr. Borak=s testimony in this regard. While Newmont=s program did not guarantee that no employee would be overexposed to mercury, it reduced the risk of overexposure.

Dr. McDairmid testified that one cannot determine an exposure limit, whether by TLV or BEI, Abelow which you can reliably guarantee that no one will suffer abnormal health consequences. (Tr. 2309). She further stated that Ait is very difficult to choose a specific exposure level and be able to say with surety that no [employees] will suffer health consequences if they are exposed below that concentration. (Tr. 2308, 2467-68). Such concerns cannot be the basis for an S&S finding in this case because they are too vague and undefined. There has been no showing that the violations in these cases presented a reasonable likelihood that the hazard contributed to by the violations will result in an illness, assuming continued mining operations.

4. Were the Violations the Result of Newmont=s Unwarrantable Failure?

The Commission has held that unwarrantable failure is aggravated conduct constituting more than ordinary negligence. Emery Mining Corp., 9 FMSHRC 1997, 2004 (December 1987). Unwarrantable failure is characterized by such conduct as Areckless disregard, @ Aintentional misconduct, @ Aindifference, @ or a Aserious lack of reasonable care.@ Id. at 2003-04; Rochester & Pittsburgh Coal Co., 13 FMSHRC 189, 193-94 (February 1991). Commission has held that Aa number of factors are relevant in determining whether a violation is the result of an operatorunwarrantable failure, such as the extensiveness of the violation, the length of time that the violative condition has existed, the operator-s efforts to eliminate the violative condition, and whether an operator has been placed on notice that greater efforts are necessary for compliance.@ Mullins and Sons Coal Co., Inc., 16 FMSHRC 192, 195 (February 1994)(citation omitted).

The Secretary argues that Newmont knew that mercury vapor was present in the offices for at least four years prior to the date the citation and order were issued. Newmont=s Afailure to remove employees from the hazard of exposure to mercury, a well-recognized toxic material, in view of the long history of exposure in the cited areas, was unjustifiable.@ (S. Br. at 46).

She also argues that Newmont had been warned of the violation. For example, the Secretary refers to a memorandum of a former industrial hygienist for the company warning that drawing air into the AARL office from the plant Acould potentially increase the mercury exposure@ for employees in the office. (Ex. S-127 p. 3). The Secretary also relies on the changes made at the refinery lunchroom in 1992 and the complaints made by employees. The Secretary also maintains that Newmonts reliance on the TLV was misplaced and that, in any event, some of the Jerome readings in the offices were above the TLV.

I have no difficultly in concluding that the Secretary did not meet her burden of proving that these violations were the result of Newmont=s unwarrantable failure. In reaching this conclusion, I have relied on a number of factors. First, for the reasons set forth above in discussing the reasonably prudent person test, I find that the Secretary made little effort to advise the mining industry of the requirements of section 56.20014. The Secretary had not been enforcing this standard with respect to mercury at gold mines. Newmont=s mine had been inspected on a number of occasions and MSHA inspectors had been in the subject offices. Inspector Drussel, for example, testified that he had not applied the provisions of the standard to the offices prior to 1995, because he did not believe that readings below the TLV violated the standard. (Tr. 1203-06). Although I found that the mining industry was provided with sufficient notice of the terms of the standard to meet the reasonably prudent person test, I hold that the evidence discussed with respect to that issue is relevant here. that such evidence helps to establish that Newmont=s failure to keep the level of mercury in the offices below that detected by Inspector Drussel was not the result of its reckless disregard or indifference to the requirements of the standard or a serious lack of reasonable care.

Second, Newmont relied, to a large extent, on its medical evaluation program to make sure that employees were not over-exposed to mercury. Rather that separately focusing on the offices, Newmont took into consideration employee exposure to mercury from all sources. This program is described in detail above. While Newmonts program was not perfect, it demonstrates that Newmont was concerned about employee exposure to mercury, at least since mid-1994.

Third, the Secretary-s argument that some of the Jerome readings in the offices Aexceeded the TLV@ is misplaced. The fact that Jerome readings above 50 $\mu g/m^3$ are detected does not indicate that the TLV was exceeded because Jerome readings are not time-weighted. In addition, the citation and order charge

that certain specified amounts of mercury vapor were detected in the offices. Although the historic readings kept by Newmont help validate Inspector Drussel—s measurements and establish a history of mercury vapor in the offices, I base my decision in this case on the conditions described in the citation and order. Newmont has never been cited for a violation of the TLV for mercury anywhere in its carbon-handling operations. It established a respirator program in mid-1994 to protect employees in the AARL and ZADRA plants. Although this is not an important factor in my decision, it establishes that Newmont was not indifferent to mercury exposure.

Fourth, Newmont was in the process of installing a trailer outside the AARL building in March 1995 to be used for storing and consuming food and beverages. The trailer was not being used at the time of the inspection because water and power lines needed to be connected. The trailer was used to abate the citation on the day the citation and order were issued.

I conclude that the Secretary did not establish that the violations were caused by Newmont=s aggravated conduct. Although the violations had existed for a considerable length of time, there were mitigating notice issues, as discussed above. Newmont had been making considerable efforts to monitor and control mercury exposure throughout the carbon-handling department without focusing specifically on the offices. Finally, Newmont had not been put on notice that greater efforts were necessary beyond what it was in the process of implementing at the time of the MSHA inspection. Although a case could be made that Newmont was not doing enough prior to August 1994, the record makes clear that it was making significant improvements in the fall of that year and in the first quarter of 1995.

I find that the Secretary established, however, that the violations were caused by Newmont-s moderate negligence. First, I agree with the Secretary that, given the presence of food and beverages in the offices, Newmont was not doing enough to control the entry of mercury into the offices. Standard industrial hygiene practices require that when employees enter eating areas certain Ahousekeeping@ precautions be taken. Personal protective equipment and any contaminated clothing should be removed prior to entering the eating area. Employees should be able to clean their boots and wash their hands prior to entry. In addition, the eating area should be designed so that it can be easily kept clean. Michael Lynham, an industrial hygienist with Denver Tech, described an optimal program for constructing and maintaining a clean lunch area. (Tr. 2047-65; Exs. S-20 & S-25). Although section 56.20014 does not necessarily require a program as

elaborate as the one described by Mr. Lynham, I find that Newmont could have been doing more to control mercury in the offices due to the fact that food and beverages were there.

Second, general principles of industrial hygiene provide that individuals should not eat or drink in the presence of mercury. The material safety data sheet and the NIOSH criteria document for mercury state that employees should not eat or drink in any mercury work area. (Tr. 2628; Ex. R-6 appendix III, Art. 7(a)). Moreover, MSHA developed a health hazard information card for mercury entitled Aworking with Mercury.@ (Ex. S-76). This card states, on the back, that A[f]ood should not be stored, dispensed, or eaten in any place that might be contaminated with mercury.@ (Id.; see also 2631-34) While these sources relate to all forms of mercury, not just elemental mercury, they help to establish that Newmont=s failure to provide a cleaner area for eating and storing food was the result of its moderate negligence.

B. The Citation and Order Alleging Violations of Section 56.20011

1. Introduction

The boneyard where the scrubber was stored is in remote areas of the mine property. Employees are not generally in the boneyard unless they are looking for a piece of equipment that may be of use. A piece of equipment may be removed from this area for reuse from time-to-time or parts from the equipment may be removed. In some instances, a torch may be used on the equipment to remove a piece. Thus, the boneyard was used as a salvage yard on an occasional basis.

At the time of the inspection, the boneyard was enclosed with a berm and was equipped with a gate. The gate was not locked and there were no warning signs indicating that mercury was present or could be present in the area. Inspector Drussel observed beads of mercury inside the pontoons of the scrubber. (Tr. 1137-40; Ex. S-5). He took a mercury reading with his Jerome meter at a hole in the pontoon and obtained a reading of 145 μ g/m³. (Tr. 1142-43; Ex. S-3 p. 8). He took another reading of 514 μ g/m³. *Id.* The scrubber had been originally used in the AARL and was placed on a leach pad for cleaning several months before the MSHA inspection. Baseline testing for mercury was conducted by Newmont \approx industrial hygiene department and readings around 3 μ g/m³ were obtained. (Tr. 1786; Harmon Dep. 113; Ex. R-28). The scrubber leaked mercury while it was at the leach pad. (Ex. S-126 AInvestigation Report@ dated 8/4/94). Newmont

cleaned the scrubber and also engaged an independent contractor to clean the scrubber at some point after that occurrence but before it was moved to the boneyard. (Tr. 954-56, 979) Wipe samples of the scrubber were taken for analysis in October 1994. (Tr. 1151-53; 614, Ex. S-110 pp 1-7). The scrubber was moved to the boneyard prior to Inspector Drussels inspection on March 14, 1995. The inspector issued Order No. 4140246 under section 104(d)(1) of the Mine Act alleging a non-S&S violation of section 56.20011. The condition was abated by moving the scrubber to a different location and labeling it as a hazard.

On the previous day, Inspector Drussel saw an old dewatering screen from the ZADRA facility near the AARL building. The screen was next to the ball storage area for the ball mills. He observed beads of mercury on the screen. (Tr. 941, 1114). He did not take any samples for mercury. (Tr. 1246-47). The area was not posted or barricaded. Inspector Drussel issued Citation No. 4140248 under section 104(a) of the Mine Act alleging a non-S&S violation of section 56.20011. The condition was abated by moving the screen to a different location and labeling it as a hazard.

2. Did Newmont Violate Section 56.20011?

The cited standard provides, as relevant here, that areas Awhere health or safety hazards exist that are not immediately obvious to employees shall be barricaded, or warning signs shall be posted at all approaches.@ Newmont contends that it did not violate this standard because the Secretary's witnesses only testified that the scrubber and screen presented a Apotential hazard@ to employees. Newmont contends that the language of the standard makes clear that an actual hazard must exist. addition, it points to the Secretary's Program Policy Manual, which provides that the standard applies to areas where Ahealth or safety hazards exist but are not obvious.@ Newmont maintains that any mercury on the scrubber or screen did not pose a hazard to anyone in those areas. As proof of its argument, Newmont refers to the sampling done at the scrubber and screen by its safety director after the order was issued. Devices used to measure an employee=s exposure to mercury were hung directly above the equipment for a full eight-hour shift, as if someone were standing above each piece for an entire shift. instances the results were below the TLV for mercury.

I find that the Secretary established a violation in each instance. Newmont=s argument that tries to draw a distinction between a hazard and a Apotential@ hazard is without merit. A potential hazard is simply a hazard that may cause harm. Any

hazard will fit that definition. If a wooden box filled with explosives were present in the boneyard, it would present a potential hazard. Such a box could sit there for 20 years and not harm anyone, or someone could be killed the day after it is put there. The issue is whether the scrubber and screen presented a health hazard that was not immediately obvious. find that the mercury on this equipment presented a hazard to employees. (Tr. 2691-99). An employee trying to move the equipment, for example, could get mercury on his hands or clothing. As a consequence, the employee could breathe the mercury fumes for a considerable length of time. If this exposure is the employee=s only exposure to mercury, it is highly unlikely that he will be harmed in any way. Employees at the mine, however, are exposed to mercury vapor from many sources so such an exposure would add to their total body burden. The fact that, at the time of the inspection, the mercury on the screen had formed an amalgam is not controlling. In addition, I find that the hazard presented by the mercury vapor, which cannot be seen or smelled, was not immediately obvious.

The Secretary interprets the phrase \mathbf{A} health or safety hazard@ in the standard broadly for the protection of miners. Given the purposes of the Mine Act, the Secretary=s interpretation is reasonable. She is not required to establish that the alleged hazard created an imminent danger or that the hazard was likely to cause an employee immediate harm. with respect to the violations of section 56.20014, I concluded that mercury vapor is a toxic material. I incorporate my analysis of those violations here and conclude that the mercury observed by Inspector Drussel created a health hazard for employees. As with the section 56.20014 violations, I find that the Secretary is not required to show that mercury vapor violated the TLV in order to establish a violation of section 56.20011. believe that the regulation is rather clear on its face and I defer to the Secretary=s interpretation, in any event. I also conclude that section 56.20011 does not present the notice issues that were presented by section 56.20014. I find that the language of the standard provides a reasonably prudent person with sufficient notice of its requirements. In addition, the Program Policy Manual makes clear that storage facilities and dumps commonly contain toxic substances such as acids, gases, dusts, and radiation that create imperceptible health hazards. reasonably prudent person would recognize that equipment in the boneyard that had mercury on its surfaces presented a hazard that was not immediately obvious.

I find that these violations were not serious. It was unlikely that anyone would be harmed by the mercury on the screen

and scrubber because of their location, the small quantity of mercury present, and the low levels of fumes emitted. It must be remembered that Inspector Drussel took his Jerome readings at the scrubber next to a hole that had been cut into the pontoons so the readings were much higher than what an employee would likely be exposed to if he were working on or around the scrubber. Inspector Drussel determined that the violations were not S&S.

3. Was the violation in the Boneyard the Result of Newmont=s Unwarrantable Failure?

The Secretary contends that the scrubber violation was caused by Newmonts unwarrantable failure because she believes that Newmont was aware of the hazard created by the scrubber but did nothing to prevent employees from being exposed. The Secretary relies to a large extent on conditions that existed when the scrubber was still at the leach pad, such as the report that mercury was leaking from the scrubber in August 1994. (Ex. S-126 AInvestigation Report@ dated 8/4/94). The Secretary contends that this report demonstrates that Newmont knew that the scrubber created a hazard and that it needed to be posted. The Secretary points to the testimony of a Newmont supervisor that he wanted the scrubber to be encased in concrete. (Sawyer Dep. at 182-83). The Secretary also maintains that the wipe samples that were taken after the scrubber was cleaned by a contractor indicated that mercury was still present.

I find that the Secretary did not establish that this violation was caused by Newmonts unwarrantable failure to comply with section 56.20011. First, the condition of the scrubber in August 1994 is of little relevance. While it might have been a good idea to encase the scrubber in concrete, the fact that Newmont did not do so does not establish its unwarrantable failure. Instead, Newmont attempted to clean the scrubber. When testing indicated that mercury residue was still present on the scrubber, Newmont had a contractor clean the scrubber more thoroughly before it was moved to the boneyard. (Tr. 979, 1043-45, 1635-36, 1784-87; Ex. R-28).

The Secretary states that a conversation between Inspector Drussel and Newmont officials demonstrates that Newmont was aware that the scrubber still contained a significant amount of mercury after it was cleaned a second time. (Tr. 1151-52, 614; Ex S-110 pp 1-7). This evidence is too imprecise to make an unwarrantable failure finding. The record does not reveal when the scrubber was cleaned by the contractor or when it was moved to the boneyard. The exhibit is not of much help because I am unable to interpret it or determine when the samples were taken in relation

to the events at issue. It is not clear to me that Newmont management knew that the scrubber contained significant amounts of mercury when it was moved to the boneyard. The Secretary bears the burden of proof on this issue. I find that the Secretary established that both violations of section 56.20011 were the result of Newmont-s moderate negligence.

IV. APPROPRIATE CIVIL PENALTIES

Section 110(i) of the Mine Act sets forth six criteria to be considered in determining appropriate civil penalties. that Newmont was issued about 58 citations and orders in the 24 months preceding March 14, 1995. (Tr. 1500-07; Ex. S-2). find that Newmont is a large gold mine operator. I further find that the penalties assessed in this decision will have no effect on Newmont=s ability to continue in business and that all of the violations alleged in the citations and orders were quickly abated in good faith. I find that the gravity of the section 56.10014 violations was low for the same reasons that I found that the violations were not S&S, as set forth above. that Newmonts negligence with respect to these violations was moderate for the reasons set forth in the unwarrantable failure discussion, set forth above. I find that the gravity of the section 56.20011 violations to be low, as acknowledged by Inspector Drussel. I also find that Newmonts negligence with respect to these violations was moderate. Based on the penalty criteria, I find that the penalties set forth below are appropriate for the violations.

V. ORDER

The parties presented a great deal of evidence in these cases. Because of the size of the record, I could not discuss in this decision all of the testimony and exhibits that were admitted into evidence. Any evidence in the record that is not consistent with my findings and conclusions in these cases is hereby rejected. The parties also presented a large number of motions in these cases. These motions were made in writing or were presented orally at the hearing. Such motions were made prior to the hearing, during the hearing, and after the hearing. I ruled on the vast majority of these motions. Any motions that were not granted or otherwise ruled upon are hereby denied.

Based on my findings and conclusions set forth above and the criteria in section 110(i) of the Mine Act, 30 U.S.C. '820(i), I enter the following order:

1. Citation No. 4140245 - This citation is affirmed, but is modified to a section 104(a) citation. The S&S and unwarrantable failure determinations are deleted, the gravity is found to be low, and the violation is found to have been caused by Newmont=s moderate negligence. A penalty of \$600.00 is assessed for this violation of 30 C.F.R. ' 56.20014.

- 2. Order No. 4140246 This order is affirmed, but is modified to a section 104(a) citation. The S&S and unwarrantable failure determinations are deleted, the gravity is found to be low, and the violation is found to have been caused by Newmonts moderate negligence. A penalty of \$600.00 is assessed for this violation of 30 C.F.R. ' 56.20014.
- 3. Order No. 4140247 This order is affirmed, but is modified to a section 104(a) citation. The unwarrantable failure designation is deleted and the violation is found to have been caused by Newmont=s moderate negligence. A penalty of \$300.00 is assessed for this violation of 30 C.F.R. ' 56.20011.
- 4. Citation No. 4140248 This citation is affirmed and a penalty of \$300.00 is assessed for this violation of 30 C.F.R. '56.20011.

Accordingly, the citations and orders set forth above are hereby **AFFIRMED**, as modified in this decision, and Newmont Gold Company is **ORDERED TO PAY** the Secretary of Labor the sum of \$1,800.00 within 30 days of the date of this decision.

Richard W. Manning Administrative Law Judge

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