

# Technical Assessment

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## 7.1 Question A: Is the remedy functioning as intended by the decision documents?

### 7.1.1 Atlas Mine Area OU

#### 7.1.1.1 Remedial Action Performance

The purpose of the remedy at the Atlas Mine Area OU is to prevent asbestos-containing material from leaving the site via air or surface water discharge. The remedy appears to be functioning as intended by the ROD based on observations made during the site inspection and based on a review of documents and ARARs. Asbestos-containing sediment collects in sedimentation ponds that have been constructed across the site, resulting in a decrease in loadings of asbestos to surface water downstream of the site. Fencing and signage prevent access to the site and paved roads are maintained to further mitigate the potential for generation of airborne asbestos. Deed restrictions are a component of the remedy selected in the ROD and have not been recorded for this site; however, DTSC is working with Northrop Grumman to develop the deed restrictions for the privately-owned portions of the site.

#### 7.1.1.2 Operations and Maintenance

O&M of the Atlas Mine Area OU has, on the whole, been effective. Annual inspections are performed to identify any need for maintenance activities at the site. Many of the concerns regarding erosion have been mitigated as a result of repairs made in 2005. A revised O&M Plan (currently being reviewed by USEPA) has been developed to include O&M activities pertaining to the site improvements made in 2005. The remedy is expected to be protective in the future if routine inspections continue and maintenance activities are performed as necessary.

#### 7.1.1.3 Opportunities for Optimization

Some indications of erosion were observed at the naturally-unstable highwall above Pond B along the road to Pond A and at the active landslide along the road to Rover Pit. Monitoring and regular maintenance of these areas should continue. Alternate access roads to Rover Pit and Pond A should be identified in the event that erosion and/or sliding prevent access to Channel A/Rover Pit area and Pond A in the future.

#### 7.1.1.4 Early Indicators of Potential Issues

There are currently no indicators of potential remedy failure at the Atlas Mine Area OU.

### 7.1.1.5 Implementation of Institutional Controls and Other Measures

Access controls at the Atlas Mine Area effectively prevent exposure to asbestos. Fences, gates, and locks at the site are intact and in good condition. It should be noted, however, that in past years, BLM has noted that the site has been accessed by unauthorized persons and vehicles. As such, BLM will continue to patrol the site.

While deed restrictions, a component of the selected remedy for the Atlas Mine Area OU, have not been recorded for the site, DTSC is currently working with Northrop Grumman on developing deed restrictions to restrict future uses of the site.

## 7.1.2 Johns-Manville Mill OU

### 7.1.2.1 Remedial Action Performance

The purpose of the remedy at the JMM OU is to divert surface water in the Pine Canyon Creek away from the tailings pile, minimize the release of asbestos to the creek, pave the road through the Mill Area to suppress dust, dismantle the mill building and dispose of the debris, and restrict access to the site. The remedy appears to be functioning as intended by the ROD based on observations made during the site inspection and based on a review of documents and ARARs. The remedial activities and subsequent monitoring have achieved the remedial objectives.

### 7.1.2.2 Operations and Maintenance

O&M at the JMM OU has been effective. The maintenance contractor regularly inspects the OU and makes minor repairs to the site. In 2002, the O&M Plan was updated and revised. There are no indications of any difficulties with O&M of the remedy. In addition, the revegetation project appears to be successful.

### 7.1.2.3 Opportunities for Optimization

There were no opportunities for system optimization identified during this review.

### 7.1.2.4 Early Indicators of Potential Issues

There are no indicators of potential issues identified at this time.

### 7.1.2.5 Implementation of Institutional Controls and Other Measures

Access controls at the JMM effectively prevent exposure to asbestos. The fence and signs around the site are intact and in good condition. The JMM and surrounding area appeared to be undisturbed and secure during the site inspection.

A deed restriction for the JMM was recorded on July 2, 1993 prohibiting anyone in possession of property from interfering with the implementation of remedy at the JMM OU. Through a review of institutional controls performed as part of this 5-year review, it was discovered that the deed restriction is not identified in the preliminary title report for this parcel. More importantly, the deed restriction is not legally enforceable and does not run with the land. Therefore, a new legally enforceable deed restriction needs to be recorded on this parcel consistent with the new DTSC regulations for LUCs.

### 7.1.3 City OU

#### 7.1.3.1 Remedial Action Performance

The purpose of the remedy at the City OU is to prevent exposure to asbestos-laden materials in Coalinga City that resulted from activities at the Atlas Mine Area OU and the JMM OU. The WMU appears to be functioning as intended by the ROD based on observations made during the site inspection, and based on a review of documents and ARARs. The City OU has achieved the remedial objectives to reduce exposure to asbestos.

#### 7.1.3.2 Operations and Maintenance

Operation and maintenance of the WMU has been effective. The Union Pacific maintenance contractor regularly inspects and performs minor repairs to the site. Holes from burrowing animals were identified around the perimeter/base of the cap, but the number and size of holes have decreased significantly since the addition of fences with a smaller screen size. There are no indications of any difficulties with O&M of the remedy.

#### 7.1.3.3 Opportunities for Optimization

There were no opportunities for system optimization identified during this review.

#### 7.1.3.4 Early Indicators of Potential Issues

There are no indicators of potential issues identified at this time.

#### 7.1.3.5 Implementation of Institutional Controls and Other Measures

As presented in Appendix D2, a deed restriction to prevent the disturbance of the cap on the WMU, and prevent possible release of asbestos fibers and nickel contaminants from the WMU, was recorded on June 22, 1990. On September 24, 1992, an amended deed restriction was recorded and provided a legal description of the area restricted under the June 22, 1990 deed restriction. Two issues associated with the institutional controls for this site were identified through this 5-year review: (1) the deed restriction is not legally enforceable and does not run with the land, and (2) the surveyed coordinates included in the deed restriction amendment are incorrect and do not include the portion of the restricted area that is within the Southern Pacific Railroad right-of-way. A new legally enforceable deed restriction needs to be recorded consistent with the new DTSC regulations for LUCs.

## 7.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives used at the time of the remedy selection still valid?

The ARARs for the Atlas and Coalinga Sites (as established in the RODs and reviewed in previous 5-year reviews) were evaluated as part of this 5-year review. The results of this evaluation are presented in Appendix I and summarized in the following sections. The basis for ARARs is the laws and regulations applicable to the sites' locations, remedy actions, and contaminants of concern. The contaminants of concern include asbestos, heavy metals including nickel, mining waste, and particulate matter less than 10 microns.

Changes in toxicity data and progress towards meeting remedial action objectives are also presented in the following sections.

## 7.2.1 Atlas Mine Area OU

### 7.2.1.1 Changes to ARARs

There were no changes to existing action-specific ARARs for the Atlas Mine Area OU identified during this 5-year review; however, the following changes to chemical- and location-specific ARARs were identified:

- **Chemical-specific ARAR.** The California Air Resources Board (CARB) issued the Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations on July 29, 2002. This regulation was not established in any of the decision documents; however, it is applicable as a chemical-specific ARAR for the Atlas Mine Area OU. It requires each Air Pollution Control District to implement and enforce this regulation. Road construction and maintenance activities are to be conducted in compliance with CARB ATCM, Section 93105(d) pursuant to the California Health and Safety Code, Section 39666(d) and CARB ATCM for construction and surfacing applications (that is, roads).
- **Location-specific ARAR.** A LUC regulation issued by DTSC (effective April 19, 2003) is a relevant and appropriate location-specific ARAR for the Atlas Mine Area OU. Title 22, California Code of Regulations, Chapter 39, Section 67391.1(a), (b), (d), (g), & (i) requires all LUCs to be signed by DTSC and the landowner, and to be recorded in the county where the land is located.

### 7.2.1.2 Changes in Toxicity and Other Contaminant Characteristics

No other information was identified as part of this 5-year review that calls into question the assumptions made during selection of the remedies. There have been no new contaminants or contaminant sources identified at the sites. There also have been no changes in the physical conditions at the sites that would affect the protectiveness of the selected remedies.

### 7.2.1.3 Expected Progress towards Meeting Remedial Action Objectives

According to the documents reviewed, site inspections, and interview, the remedial activities and subsequent inspections at the Atlas Mine Area OU have achieved the remedial action objectives of reducing the exposure to asbestos.

## 7.2.2 Johns-Manville Mill OU

### 7.2.2.1 Changes to Action-Specific, Chemical-Specific, and Location-Specific ARARs

Similar to the Atlas Mine Area OU, there were no changes to existing action-specific ARARs for the JMM OU identified during this 5-year review; however, changes to chemical- and location-specific ARARs identified for the Atlas Mine Area OU are also ARAR for the JMM OU.

### 7.2.2.2 Changes in Toxicity and Other Contaminant Characteristics

No other information was identified as part of this 5-year review that calls into question the assumptions made during selection of the remedies. There have been no new contaminants or contaminant sources identified at the sites. There also have been no changes in the physical conditions at the sites that would affect the protectiveness of the selected remedies.

### 7.2.2.3 Expected Progress towards Meeting Remedial Action Objectives

According to the documents reviewed, site inspections, and interview, the remedial activities and subsequent inspections at the JMM OU have achieved the remedial action objectives of reducing the exposure to asbestos.

## 7.2.3 City OU

### 7.2.3.1 Changes to Action-Specific, Chemical-Specific, and Location-Specific ARARs

Similar to the Atlas Mine Area OU, there were no changes to existing action-specific ARARs for the City OU identified during this 5-year review; however, changes to chemical- and location-specific ARARs identified for the Atlas Mine Area OU are also ARAR for the City OU.

### 7.2.3.2 Changes in Toxicity and Other Contaminant Characteristics

At the time of remedy selection for City OU, USEPA selected a cleanup goal of less than 1 area-percent asbestos by PLM, as consistent with CERCLA's requirements and with past agency decisions regarding asbestos cleanup levels at other Superfund sites. This level was assumed to be protective of human health and environment. Remedial activities included removal and consolidation of contaminated soils and other materials containing greater than 1 area-percent asbestos into an onsite WMU with an impermeable cap. Buildings were also decontaminated to less than or equal to 1 area-percent.

More recent experience at Libby, Montana and other sites has led USEPA to conclude that "the 1 area-percent threshold for asbestos in soil/debris as an action level may not be protective of human health in all instances of site cleanups" (USEPA 2004). In addition, the understanding of the types of dust-generating activities that might result in significant exposures has been evolving. This new information is a change from the exposure assumption made at the City OU that soils containing less than 1 area-percent asbestos are sufficiently protective of human health. This change may affect the protectiveness of the remedy in the unrestricted portion of the City OU.

No other information was identified as part of this 5-year review that calls into question the assumptions made during selection of the remedies. There have been no new contaminants or contaminant sources identified at the sites. There also have been no changes in the physical conditions at the sites that would affect the protectiveness of the selected remedies. USEPA has recently initiated a reassessment of the toxicity values used for asbestos risk assessment, although this effort is not expected to be finalized in the immediate future. It is recommended that the next 5-year review consider any revised toxicity values.

### 7.2.3.3 Expected Progress towards Meeting Remedial Action Objectives

While the remedy at the City OU reduced exposure to asbestos, it may not have adequately reduced the risk in the unrestricted portion of the OU, based on new toxicity information regarding potential risks associated with soil asbestos concentrations less than 1 percent.

## 7.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

### 7.3.1 Atlas Mine Area OU

An ecological risk assessment was performed as part of the RI for the Atlas Mine Area OU. Upon review of the RI, it was noted that “from an ecological standpoint, the most significant impacts of the site appeared to be associated with habitat destruction [from mining activities], rather than the effects of asbestos” (USEPA 1991b). In addition, an Environmental Impact Statement was issued for the CCMA in 1995 when BLM was evaluating land-use alternatives. Review of Environmental Impact Statement did not reveal any information that calls into question the protectiveness of the remedy (DOI et al. 1995). Because of the lack of changes in land use, it was deemed unnecessary to perform an evaluation of the previous ecological risk assessment as part of this 5-year review.

No weather- or seismic-related events have affected the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

### 7.3.2 Johns-Manville Mill OU

An ecological risk assessment was performed as part of RI activities for the JMM OU (USEPA 1991b). Because of the lack of changes of land use at the site and surrounding area, it was deemed unnecessary to perform an evaluation of the previous ecological risk assessment as part of this 5-year review.

No weather- or seismic-related events have affected the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

### 7.3.3 City OU

There have been no changes in the physical conditions of the City OU or any weather- or seismic-related events that would affect the protectiveness of the remedy. There is no other information, aside from the information provided in Section 7.2.2, that calls into question the protectiveness of the remedy.

## 7.4 Technical Assessment Summary

According to the documents and ARARs reviewed, site inspections, and interview, the remedies implemented at the Atlas Mine Area OU and the JMM OU are functioning as intended by the RODs. There have been no changes in the physical conditions at the sites that would affect the protectiveness of the remedies.

During the regulatory review, new ARARs were identified. A recent DTSC regulation for LUCs is identified as a relevant and appropriate location-specific ARAR for the Atlas Mine Area OU, JMM OU, and the City OU. The recorded deed restrictions for the City OU and

the JMM OU should be re-recorded consistent with the DTSC LUC regulation. The legal description presented in the deed restriction for the City OU should also be updated to include the portion of the restricted area (WMU) that is within the Southern Pacific Railroad right-of-way. Should Northrop Grumman sell its privately owned parcel that comprises part of the Atlas Mine Area OU, the new owner should file a deed restriction consistent with the DTSC LUC regulations.

A regulation for road construction and maintenance activities (CARB ATCM for Construction, Grading, Quarrying, and Surface Mining Operations) is identified as a chemical-specific ARARs for the three OUs.

The toxicity and exposure scenarios for asbestos are currently being evaluated by USEPA. Based on this evaluation, the assumption made in the ROD for the City OU that soils containing less than 1 area-percent asbestos are sufficiently protective of human health may be called into question. Based on new toxicity information, the toxicity and exposure of asbestos at the City OU should be re-evaluated. There has been no other information that calls into question the assumptions made during the remedy selection process.

Overall, O&M has been effective at the three OUs. Alternate access roads to Rover Pit/Channel A and Pond A at the Atlas Mine Area OU should be identified in the event that erosion and/or sliding prevent access to these locations in the future. At the City OU, an outdated DTSC phone number on signs on the perimeter fence around the WMU should be updated.