Colorado Department of Public Health and Environment

FACT SHEET

ASARCO GLOBE

PROPOSED PLAN TO AMEND RECORD OF DECISION

INTRODUCTION

The Colorado Department of Public Health and Environment (CDPHE) is proposing changes to parts of the cleanup approach at the former Asarco Globe Plant Site (Site) in Denver and Adams Counties, Colorado, and is soliciting public comment on the proposed remedy changes. [Public comment/public meeting info in box] The cleanup approach was originally approved in 1993. These changes are being proposed because CDPHE has determined the current remedies in parts of the Site are not sustainable or effective. In addition to smelting operations ending in November 2006, improved technology for groundwater treatment and additional data collected at the Site indicate that significant changes need to be made to some of the remedies selected in 1993.

During the Remedial Investigation/Feasibility Study (RI/FS), the Site was divided into several areas of concern known as "operable units" (OUs), and remedies were selected for each. Many of the remedies have been completed, and some are on-going. The current Proposed Plan addresses changes to remedies at OU 1 (Former Neutralization Pond, or FNP), OU2 (Groundwater and Surface Water), and OU4 (Plant Site – Soils and Other Sources of Contamination).

BACKGROUND

The former Asarco Globe Plant Site is located in north Denver and straddles the boundary between the City and County of Denver and Adams County. The Site has been the location of various metal and refining operations since 1886 when the Holden Smelter began producing gold and silver there. In 1901, the American Smelting and Refining Company (renamed Asarco Incorporated in 1975) bought the Site, which was then known as the Globe Smelter, and converted the plant to lead smelting. Lead smelting continued until about 1919, when the plant was converted to produce arsenic trioxide. Arsenic trioxide was principally produced from 1919 until 1926. Cadmium production commenced around 1926 and continued until 1993. Processing of indium ore began in 1944, and during the 1950s, the Globe Plant produced a variety of specialty metals including litharge (lead oxide), test lead, bismuth oxide, and occasionally thallium, indium and some small quantities of high purity metals such as antimony, copper and tellurium.

Asarco Inc. was purchased by Grupo Mexico in November 1999. It was restructured to a Limited Liability Company in 2005 and shortly thereafter, in August 2005, filed for protection under Chapter 11 of the US Bankruptcy Code. Operations had significantly declined by this time, with only small amounts of high purity metals processing taking place at the Site. The Globe Plant was shut down and processing of all metals ceased in November 2006. On December 9, 2009, the Site was transferred to the Asarco Multi-State Custodial Trust as part of the resolution of Asarco's bankruptcy proceedings.

ALTERNATIVES CONSIDERED:

1.No Further Action: maintains the site in its current condition

2.Implement 1993 Selected Remedy: complete remaining remedy items (see 1993 ROD for details)

3.Proposed Remedy Alternative (Preferred): consider new cleanup technologies and future use of the site

PUBLIC COMMENT PERIOD
Oct 25 - Nov 25, 2010
Submit Written Comments to:
Fonda Apostolopoulos
State Project Manager
CDPHE
4300 Cherry Creek Dr, South
Denver, CO 80246
Fonda.apostolopoulos@state.co.us

PUBLIC MEETING:
Date: Thursday, November 4, 2010
Time: 7:00-9:00 pm
Location: Laradon Hall
5100 Lincoln St.
Denver, CO 80216
303-296-2400
Written and verbal comments will be recorded at this meeting.

DOCUMENTS AVAILABLE:
Colorado Department of Public Health and Environment Records Center
303-692-3331
http://www.cdphe.state.co.us/hm/rpglobe.htm

REGULATORY HISTORY

In 1974, the Colorado Department of Health (CDH – the predecessor agency to the CDPHE) Water Quality Control Division collected water and sediment samples from the Industrial Drainage Ditch (IDD) located directly west of the Site and found elevated concentrations of cadmium, arsenic, lead, zinc, and other metals. In 1980 and 1981, the Globe Plant was found to be out of compliance with the Colorado Solid Waste Disposal Sites and Facilities Act. Subsequent to the investigations and inspections conducted by CDPHE, the EPA listed the Asarco Globe Plant Site on the open dump inventory for 1981 under the Resource Conservation and Recovery Act (RCRA). Three groundwater monitoring wells were installed at the Globe Plant Site during this time.

In December 1983, CDPHE sued Asarco for damages to natural resources under the Comprehensive Environmental Restoration Compensation and Liability Act (CERCLA), also known as Superfund. The site was proposed for the Superfund National Priorities List (NPL) on May 10, 1993. A July 1993 Consent Decree between the State of Colorado and Asarco, Inc. resolved all outstanding claims, including Natural Resource Damages (NRD) claims and prior compliance orders issued under the Colorado Hazardous Waste Management Act. After talking to community members and local officials, and respecting their concerns regarding stigmatizing the community, it was determined that the Consent Decree was sufficient enforcement action and the site was not listed on the NPL.

CLEANUP OBJECTIVES

Contaminants of concern at the Asarco Globe site are lead, arsenic, cadmium, and zinc. The objectives of the cleanup are to:

- Prevent direct contact with contaminated soils and wind-blown particles
- Prevent metals in soils from contaminating surface water
- Prevent leaching of metals from contaminated soil into the groundwater
- Prevent exposure of on-site workers to contaminated soils
- Prevent community member contact with contaminated soil and sediments
- Prevent use and/or ingestion of contaminated groundwater (no wells are used for drinking water; drinking water is supplied by Denver Water)
- Conduct remediation activities that will provide long-term restoration of the groundwater at the site

Response actions and remedies implemented at the site since 1993 have partially addressed groundwater contamination, reduced the flow of contamination off-site, and prevented additional releases. However, further review of existing and new data led CDPHE to the conclusion that different remedial approaches are needed to complete cleanup at OU1, OU2, and OU4.

OU1: Former Neutralization Pond (FNP)

The FNP is located in the north central portion of the sit
It was originally used to dispose of production-related wastewater streams. Its use was discontinued in May 1986, at which time, the pond was re-graded, capped with six inches of clay soil and re-vegetated as an interi remedial measure. Subsequently, sediments and sludge from the wastewater treatment plant were disposed in this area. Based on additional data collection and furthe review of existing data, CDPHE has determined that soils in this area are no longer a significant source of contamination to groundwater.

1993 remedy:
Contain, cap, and close the FNP in place, with long-term collection and treatment of groundwater beneath the cap

Proposed remedy change:
Treat, stabilize, grade, and contain the FNP materials; treat the groundwater as part of the OU2 proposed remedy.

EPA NINE CRITERIA

All three alternatives were evaluated using the U.S. Environmental Protection Agency's nine criteria:

THRESHOLD CRITERIA

1. Overall protection of human health and the environment
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

BALANCING CRITERIA

3. Long-term effectiveness
4. Reduction in toxicity, mobility, or volume through treatment
5. Short-term effectiveness
6. Implementability
7. Cost

MODIFYING CRITERIA

8. Supporting agency acceptance
9. Public acceptance

PREFERRED ALTERNATIVE

CDPHE prefers the Proposed Remedy Alternative because it achieves far greater treatment of contaminants at similar costs to the No Further Action alternative, and at less cost than the 1993 ROD alternative. The Proposed Remedy Alternative employs demonstrated technology that will restore the groundwater aquifer and complete surface soil and sediment remediation to allow for redevelopment of the site. This alternative is expected to be more effective over the long term, provide greater protection of human health and the environment, and have a greater ability to achieve ARARs than either the No Further Action or 1993 ROD alternatives. Based on current information, CDPHE believes the Proposed Remedy Alternative meets the threshold criteria and provides the best balance of trade-offs with respect to the balancing and modifying criteria.

OU2: Groundwater and Surface Water

This OU consists of the Terrace groundwater, Floodplain groundwater, Industrial Drainage Ditch (IDD) and 51st Avenue Retention Ponds, Northern Treatment Plant Pond, and the Groundwater Plume. Drinking water standards, known as Maximum Contaminant Levels (MCLs) established by the Safe Drinking Water Act were set as the performance standards for groundwater and surface water remedies at this OU.

1993 remedy:

- Install a terrace drain to cut off release of contaminated groundwater from the site to the floodplain aquifer
- Treat collected contaminated groundwater
- Excavate and dispose of IDD and Retention Ponds sediments to prevent ingestion
- Cap or remove detention pond sediments that exceed soil action levels to remove the possibility of ingestion

Proposed remedy change:

- Conduct active, site-wide treatment of soils and groundwater in place
- Continue operation of the terrace drain
- Excavate and dispose of re-contaminated portions of the industrial ditch sediments
- Monitor groundwater to reach MCLs at the property boundary
- Institutional controls

OU4: Plant Site (soils and other contamination sources)

The Plant Site includes buildings, point source and fugitive air emissions, surface soils, former sedimentation pond, and the spill and runoff control pond. Portions of the 1993 remedy apply to historical building operations and sources of air emissions that no longer exist.

1993 remedy:

- Excavate, cap, control exposure, or deep-till Plant Site soils to minimize worker and trespasser exposure through ingestion or inhalation
- Cover and vegetate the lead slag pile to minimize fugitive emissions from the area
- Excavate and stabilize contaminated Plant Site sediments to remove this source of groundwater contamination
- Before use, seal Plant floors and sumps in wet operations, with secondary containment to prevent groundwater contamination
- Install further air pollution point source and fugitive emission controls to reduce inhalation risk
- Institutional controls, maintain, and monitor to assure protectiveness

Proposed remedy change:

- Demolish buildings
- Treat and contain contaminated site soils
- Dust control
- Institutional controls

Document availability:

The 1993 Record of Decision and the Proposed Plan for an Amended Record of Decision can be found at:

Colorado Department of Public Health and Environment Records Center
4300 Cherry Creek Drive, South
Denver, CO 80246
303-692-3331
http://www.cdphe.state.co.us/hm/rpglobe.htm

Submit written comments to:

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State Project Manager
Colorado Department of Public Health and the Environment
4300 Cherry Creek Drive, South
Denver, CO 80246
fonda.apostolopoulos@state.co.us

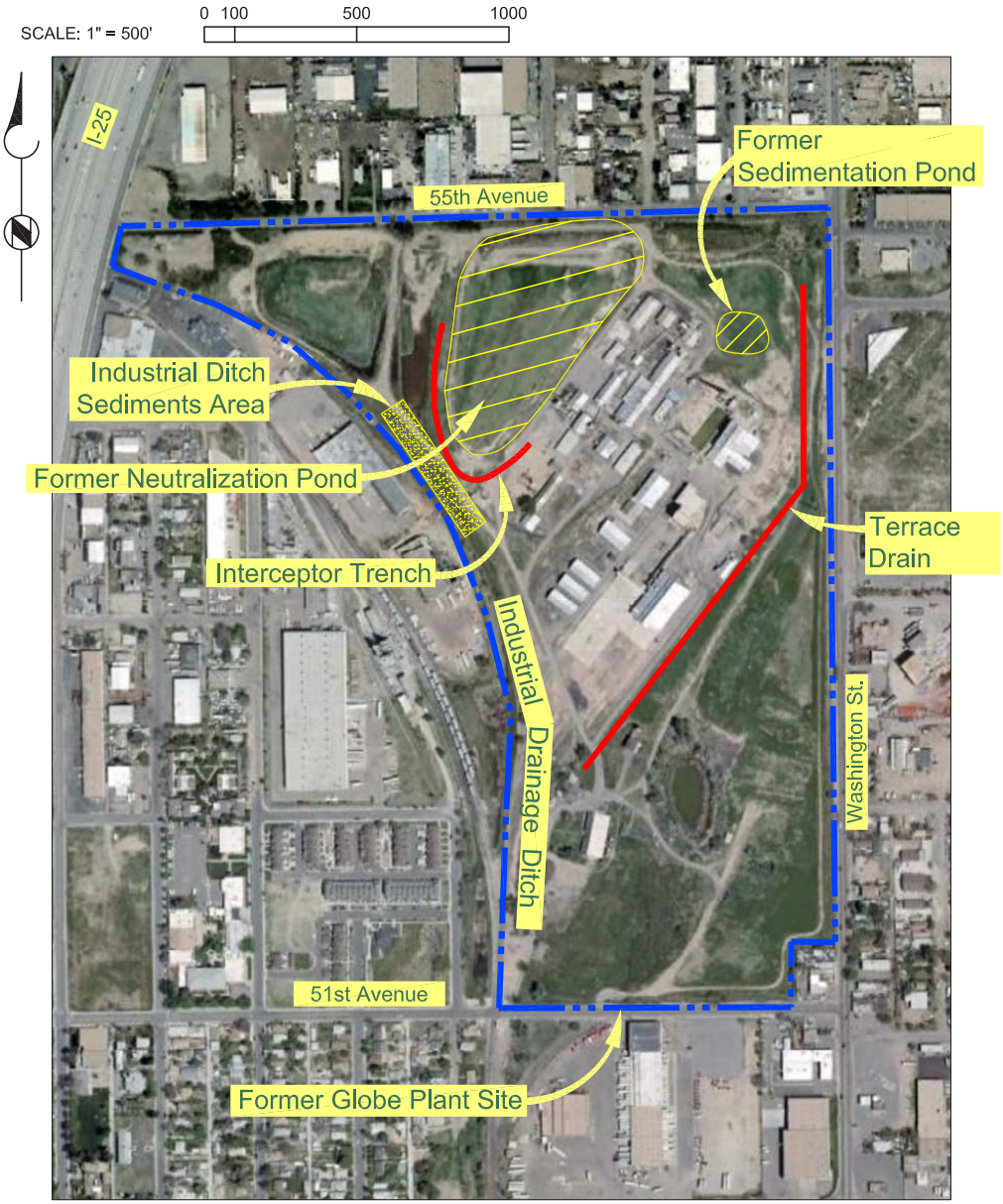

FIGURE 2 - FEATURES

For more information:

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