

ANACONDA YERINGTON MINE SITE

OU1 (Groundwater)
Community Meeting
August 6, 2015



U.S. Environmental Protection Agency
Region 9 Superfund Division



Meeting Agenda

- Welcome and Introductions (EPA)
- OU1 (Groundwater) Remedial Investigation / Feasibility Study Time Line (EPA)
- OU1 (Groundwater) Monitor Well Installation Program (Atlantic Richfield Company / Brown and Caldwell)
- OU1 (Groundwater) Feasibility Study Concepts (EPA)
- Q&A



Site Partners and Stakeholders

- Atlantic Richfield Company
- Singatse Peak Services
- Freeport-McMoRan
- State of Nevada Division of Environmental Protection
- Yerington Paiute Tribe
- Walker River Paiute Tribe
- US Bureau of Land Management
- US Fish and Wildlife Service
- Lyon County
- City of Yerington
- Elected Officials
- Yerington Community Action Group
- Mason Valley Environmental Committee
- Great Basin Resource Watch
- Community Members



OU1 – Groundwater



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OU1 – Example Cross-Section

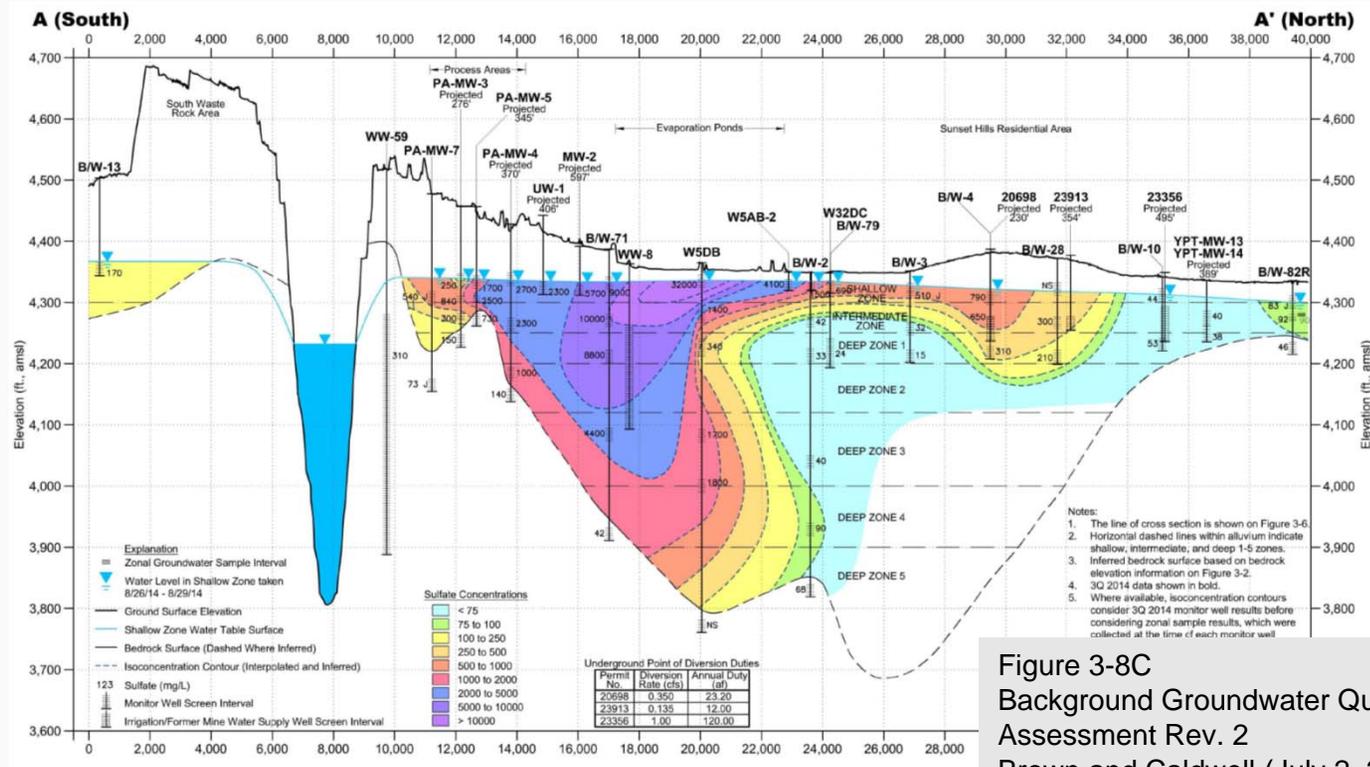


Figure 3-8C
Background Groundwater Quality
Assessment Rev. 2
Brown and Caldwell (July 2, 2015)



OU1 and the Superfund Process

➤ Remedial Investigation

- ✓ Monitoring well installation (alluvium and bedrock)
- ✓ Phased installation of wells to fill “data gaps”
- ✓ Data collection: quarterly monitoring program
- ✓ Development of groundwater flow model
- ✓ Data interpretation / risk assessment
- ❑ RI Report



OU1 and the Superfund Process

➤ Feasibility Study

- Establish Remedial Action Objectives
- Establish General Response Actions
- Screen Cleanup Technologies
- Develop Cleanup Alternatives
- Cost Alternatives
- Rank Alternatives
- FS Report



OU1 Remedial Investigation / Feasibility Study

2014

- ✓ Groundwater Flow Model Developed (Approved 5/18/15)
- ✓ Additional Monitor Wells (6/11/15 Data Summary Report)

2015

- ✓ Human Health Risk Assessment Started
- ✓ Background Water Quality Data Summary Report (7/2/15)
- ✓ Remedial Action Objectives / General Response Actions



Monitor Well Installation Program

*Presentation by Atlantic Richfield Company /
Brown and Caldwell*

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OU1 and the Superfund Process

- Feasibility Study
 - ✓ Establish Remedial Action Objectives
 - ✓ Establish General Response Actions
 - Screen Cleanup Technologies
 - Develop Cleanup Alternatives
 - Cost Alternatives
 - Rank Alternatives
 - FS Report



OU1 Feasibility Study Concepts

- ❖ Remedial Action Objectives
- ❖ General Response Actions



FS Concepts / Remedial Action Objectives

- ❖ RAOs are site specific cleanup objectives
- ❖ RAOs address the resources currently and potentially threatened
- ❖ RAOs are based on the potential for human and environmental exposure
- ❖ RAOs are used as the framework for developing detailed remedial alternatives

See: Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites (EPA 540 G-88 003 / December 1988)



FS Concepts / Remedial Action Objectives

- ❖ RAOs aimed at protecting human health and the environment should specify:
 - The contaminants of concern
 - Exposure routes and receptors
 - An acceptable contaminant level or range of levels for each exposure route

See: Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA 540 G-89 004 / October 1988)



Example Categories of General Response Actions for Groundwater

- ❖ Active restoration
- ❖ Plume containment or gradient control
- ❖ Limited or no active response
 - Natural attenuation with monitoring and institutional controls
 - Wellhead treatment or provision of an alternate water supply with institutional controls

See: Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites (EPA 540 G-88 003 / December 1988)



Additional Considerations Regarding General Response Actions for Groundwater

- Reasonable assumptions on type, timing, and volume of potential need for the contaminated ground water should be made to guide decisions concerning the restoration time frame.
- A cleanup approach may result in a decision to restore a part of an aquifer, with a combined set of response actions incorporated into a comprehensive remedial design.

See also: Groundwater Road Map: Recommended Process for Restoring Contaminated Groundwater at Superfund Sites (EPA OSWER 9283.1-34 / July 2011)



Question & Answer

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