

ANACONDA MINE SITE

Community Update Meeting

January 8, 2014



U.S. Environmental Protection Agency
Region 9
Superfund Division



Agenda

Topic	Presenter
Welcome and Introductions	Sarah Cafasso (EPA)
Overview of Domestic Well Water Replacement	Jack Oman (ARC)
Arimetco Fluid Management Pond Construction	David Seter (EPA)
Groundwater Investigation and Cleanup	Jere Johnson (EPA)
Process Area and Evaporation Ponds Investigations	Jere Johnson (EPA)
Comments and Questions	All



Primary Site Partners and Stakeholders

- Atlantic Richfield Company
- Singatse Peak Services
- 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
- Public



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Anaconda Yerington
Mine Site
Operable Units

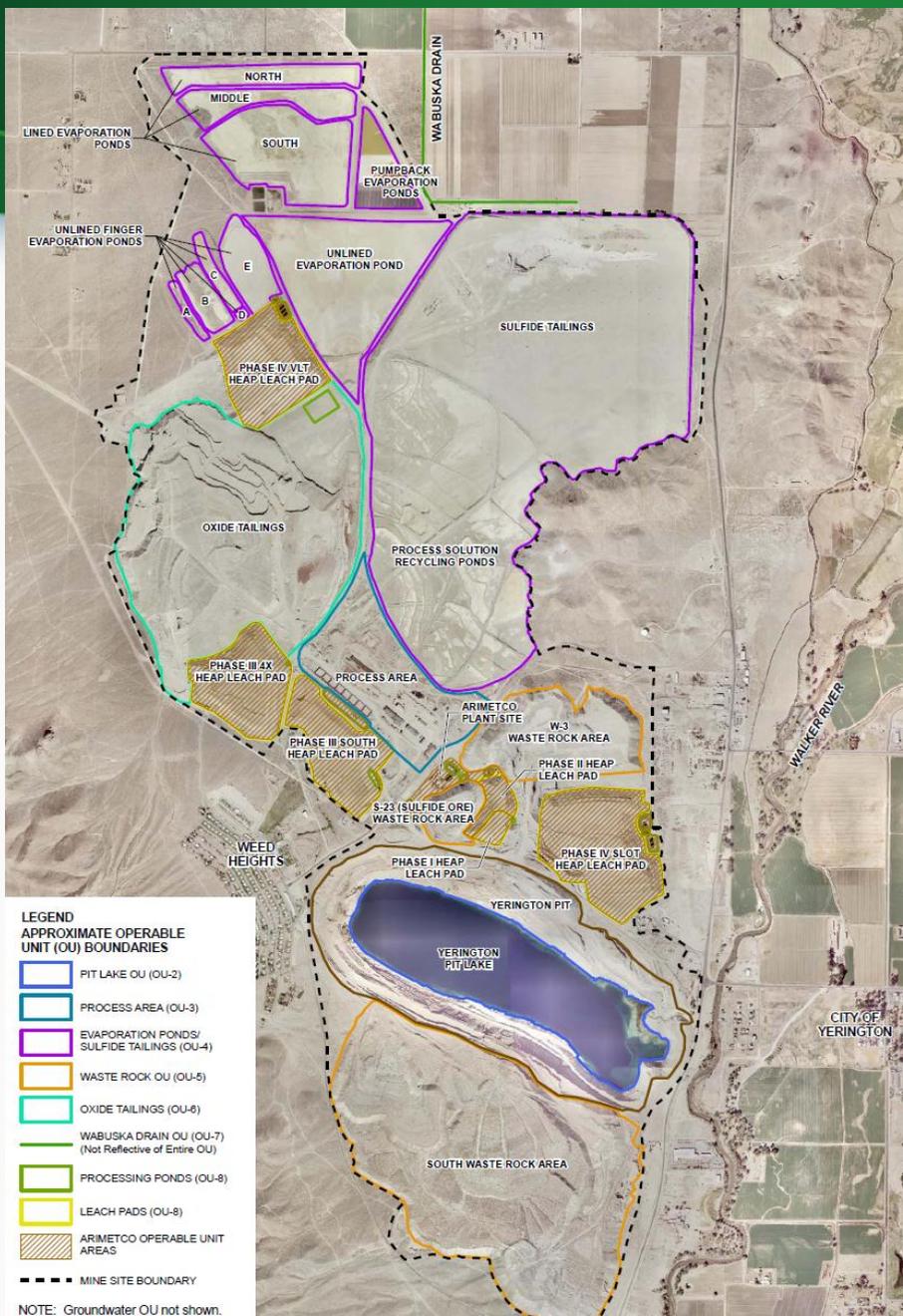


FIGURE 1-2
ANACONDA-YERINGTON MINE
OPERABLE UNITS (OU)
HISTORICAL SUMMARY REPORT
ANACONDA-YERINGTON MINE SITE



Overview of Domestic Well Water Replacement

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Arimetco Fluid Management Ponds Time Line (2011)

- **July** – Public Review Draft FS for OU-8
- **August** – EPA places final OU-8 remedy selection on hold pending exploration of re-mining option
 - Conditions: 5 year window, static condition, 10 year impacts
- **September** – ARC/SPS propose to fund additional interim FMS capacity (replacement of upper liner of VLT Pond) (EPA later decides rebuilding pond is necessary)



Arimetco Fluid Management Ponds Time Line (2012)

- **January** – EPA approves ARC proposal to raise operational level of 4 Acre Pond to from 8 feet to 9 feet, leaving 1 foot of freeboard (interim measure to increase FMS capacity)
- **May** – Draft Final FS (to be made final if mine re-use solution not implemented)
- **October** – VLT Pond rebuild complete (EPA lead, 50% ARC, 50% SPS funding)

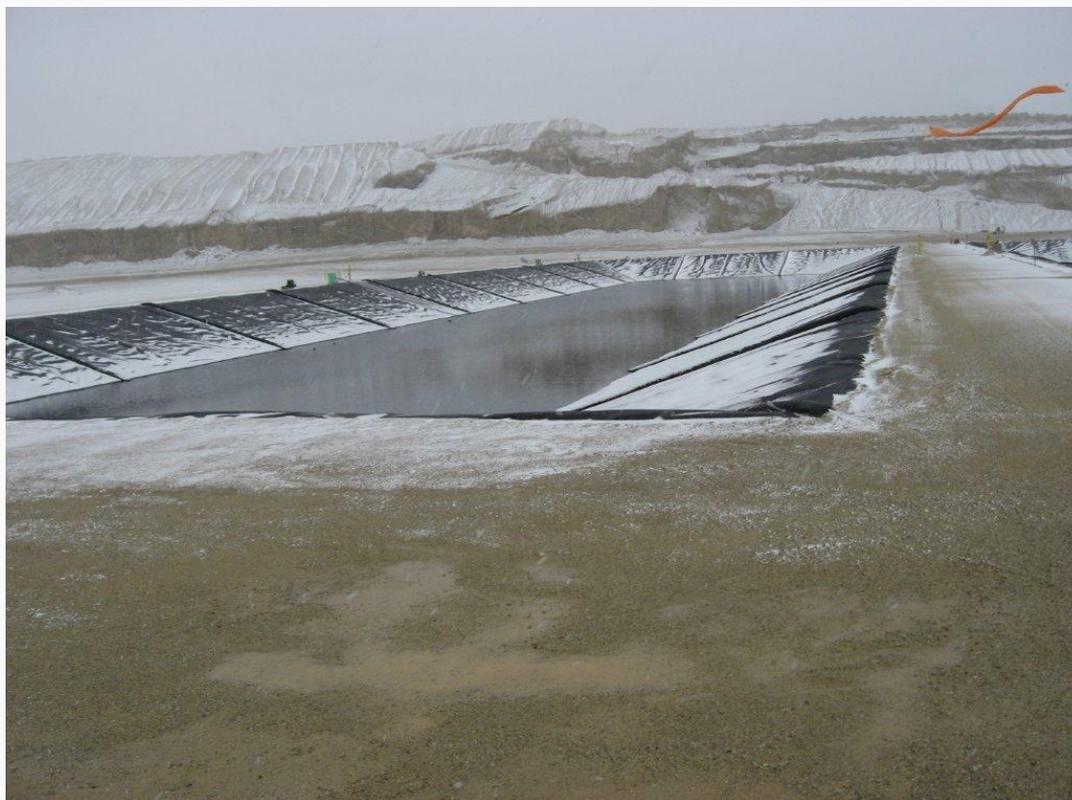


Arimetco Fluid Management Ponds Time Line (2013)

- **April** – SPS FMS Capacity Study recommends:
 - (1) Enhanced evaporation drip irrigation system; and
 - (2) New pond on top of VLT heap leach pad
- **May** – Stakeholder field meeting to discuss FMS Capacity Study recommendations
- **June** – EPA and NDEP select new alternative:
 - Pair of ponds adjacent to Four Acre Pond
- **October** – Plus Two ponds complete (NDEP lead, 50% EPA, 50% ARC funding)



Arimetco Fluid Management Ponds Construction



January 8, 2014

U.S. Environmental Protection Agency
Region 9 Superfund Division



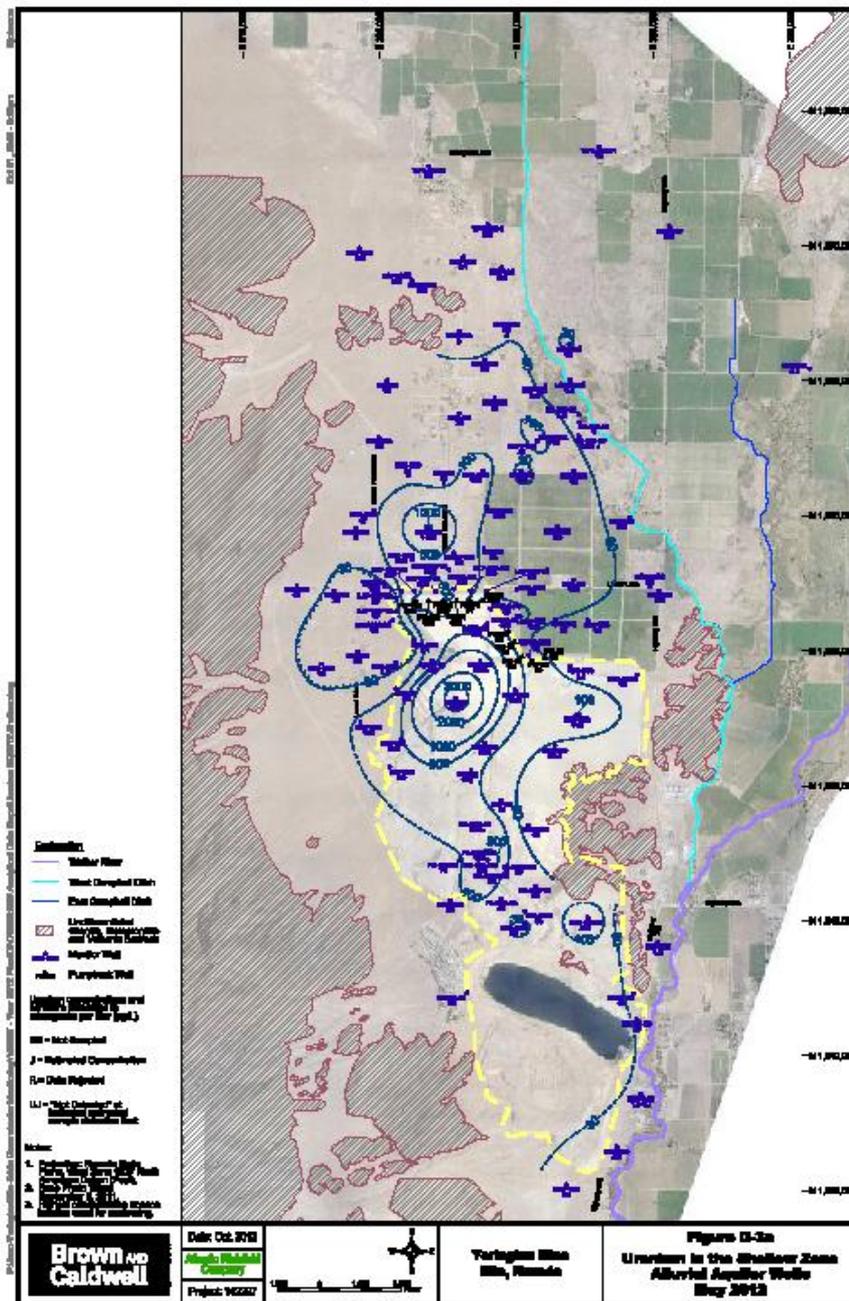
Groundwater Investigation and Cleanup

- Currently wrapping up data collection phase (Remedial Investigation)
- Beginning cleanup alternative development and evaluation phase (Feasibility Study)



Groundwater Investigation Status

- On-site and off-site monitor well installation program is almost complete
- Aquifer is rebounding from closure of agricultural well
- Groundwater flow and transport model, geochemical assessment, background study all underway
- Still have data gap on northeastern side of study area that requires additional investigation





Groundwater Cleanup

- Feasibility Study
 - Purpose is to identify and evaluate alternatives to meet long-term and short-term Remedial Action Objectives



Feasibility Study Process

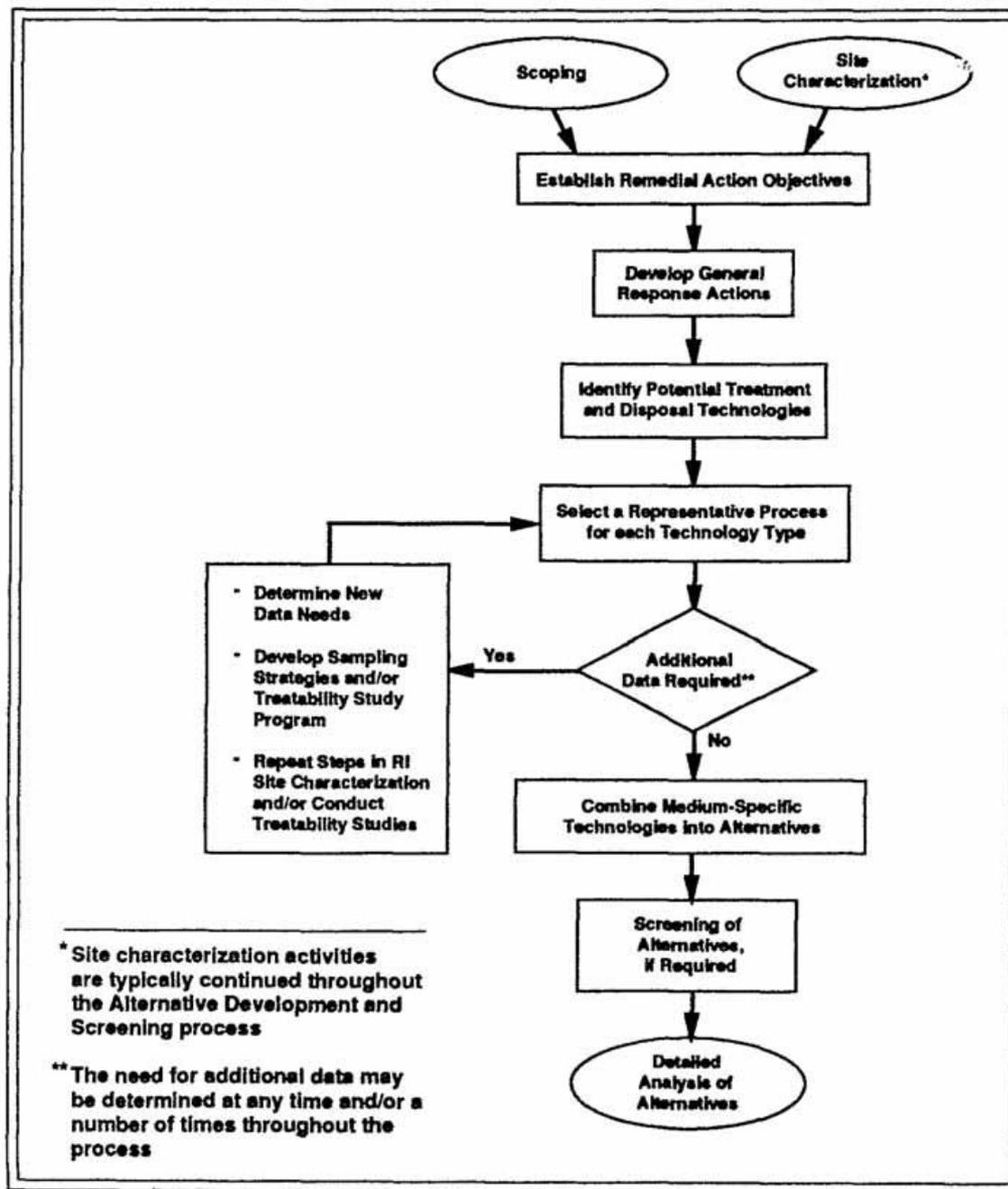


Figure 1. Alternative Development and Screening Process



Feasibility Study Process

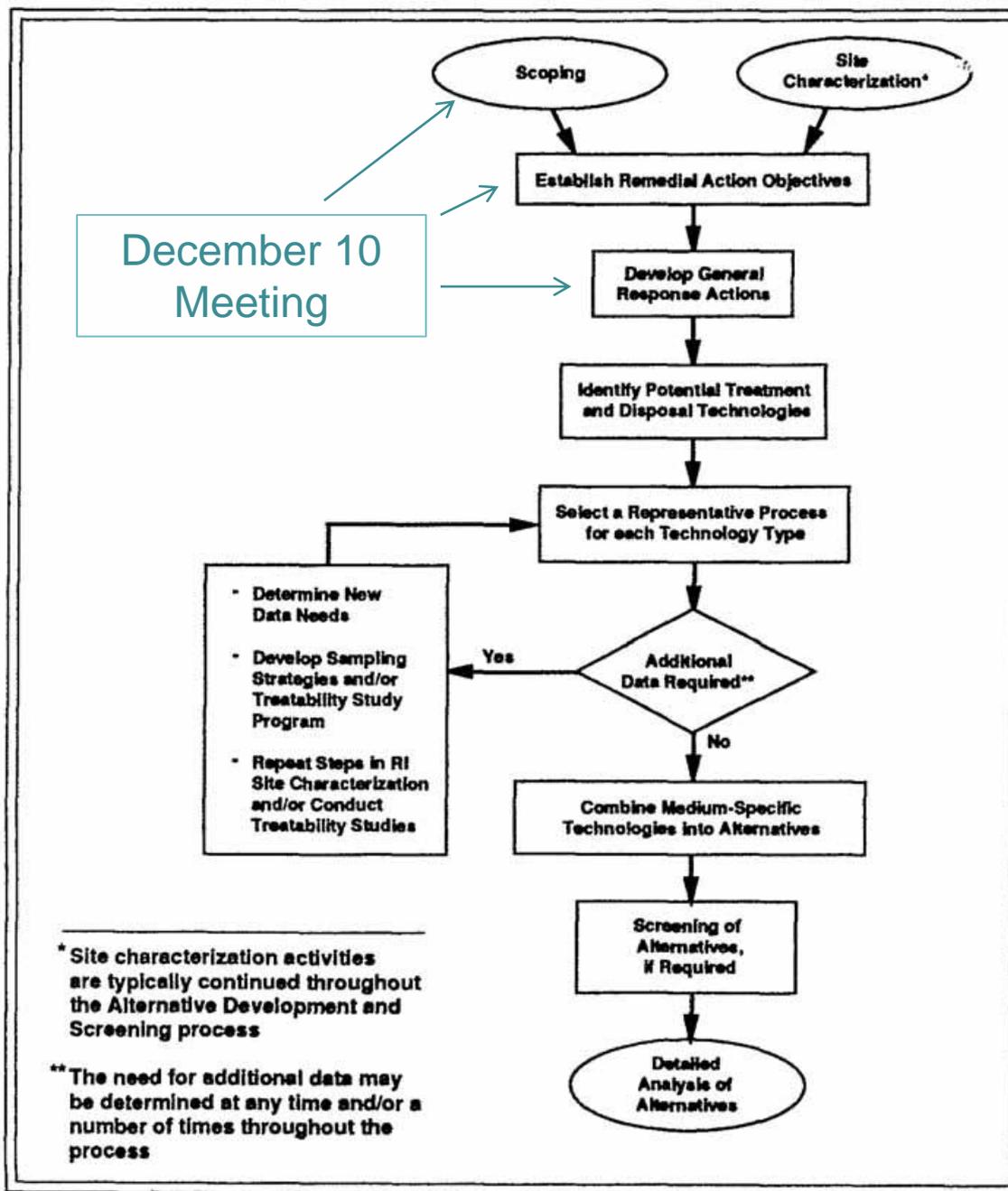


Figure 1. Alternative Development and Screening Process



Groundwater Cleanup

- Establish Remedial Action Objectives
 - What do we need to accomplish with the cleanup?
 - RAOs take into consideration:
 - Contaminants of concern
 - Exposure pathways
 - Preliminary cleanup standards

- ‡ ***Overall RAO is Management and Restoration of Aquifer***



Groundwater Cleanup

- Five Key Principles for Cleanup of Contaminated Aquifers:
 1. If current or potential source of drinking water, restore aquifer to drinking water standards wherever practicable.
 2. Groundwater contamination should not be allowed to migrate and further contaminate the aquifer or other media.
 3. If groundwater cleanup is impracticable, waivers may be considered. The waiver decision should be scientifically supported and clearly documented.
 4. Early actions (such as source removal, plume containment, or provision of an alternative water supply) should be considered as soon as possible.



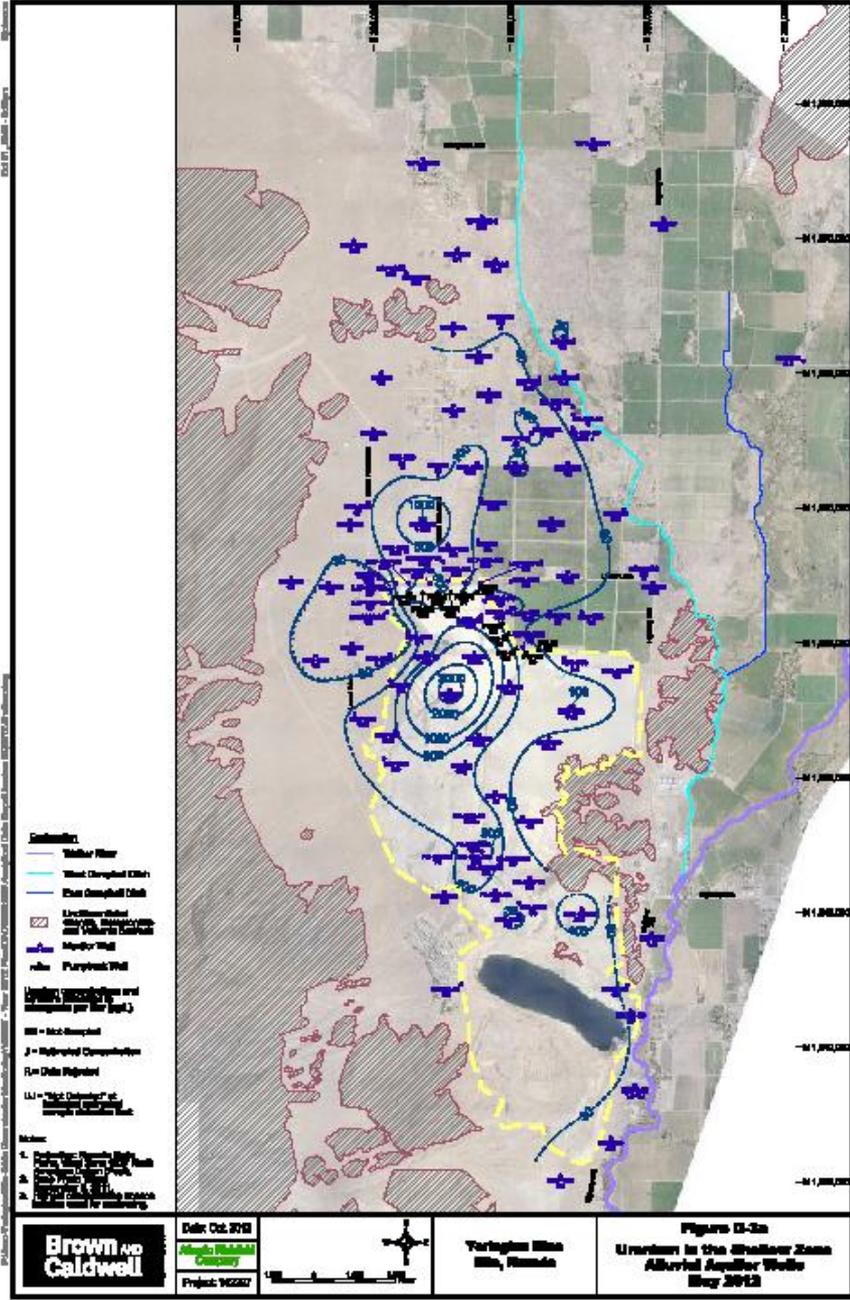
Groundwater Cleanup

- Five Key Principles for Cleanup of Contaminated Aquifers (continued):
 5. Institutional Controls related to groundwater use or even surface use may be useful to protect the public in the short-term, as well as in the long-term. But ICs should not be relied upon as the only response to contaminated groundwater or as a justification for not taking action. Cleanup levels for contaminated groundwater should generally address all pathways of exposure that pose an actual or potential risk to human health and the environment.



Groundwater Cleanup

- General Response Actions Brainstorming
 - Source Control
 - Very important and a high priority
 - Characterization of the evaporation ponds (OU4) is key to the evaluation of alternatives for source control/removal
 - Plume Management
 - Can include physical and hydraulic controls
 - Active monitoring



Brown and Caldwell

Date: Oct. 2012
 Project: 142227



Yavapai and Yuma Counties

Figure 13-2a
 Uranium in the Groundwater
 Alberici Aquifer Wells
 May 2012



Groundwater Cleanup

- General Response Actions Brainstorming (continued)
 - Remediation
 - In-situ treatment/immobilization
 - Active pumping/removal of groundwater and treatment
 - Water management with or without treatment is a major consideration
 - Options for the alluvial portion of the aquifer can proceed while bedrock flow is fully characterized
 - Institutional Controls
 - Need to be considered in the context of overall groundwater use in the study area



Groundwater Cleanup

■ Next Steps Highlights

- ARC will submit draft Remedial Action Objectives for Feasibility Study
- The final Remedial Investigation workplan will be submitted and will focus remaining data needs
- Scoping will commence for workplan for Baseline Risk Assessment
- EPA will work with ARC, NDEP, and other stakeholders to secure access for needed off-site wells
- EPA, ARC, NDEP, and other stakeholders will identify scenarios to be run by the groundwater model
- An overall Site Roadmap will be developed to coordinate and sequence RI/FS work at OU1 with work at OU4, OU7, and OU8 and will include activities at OU3

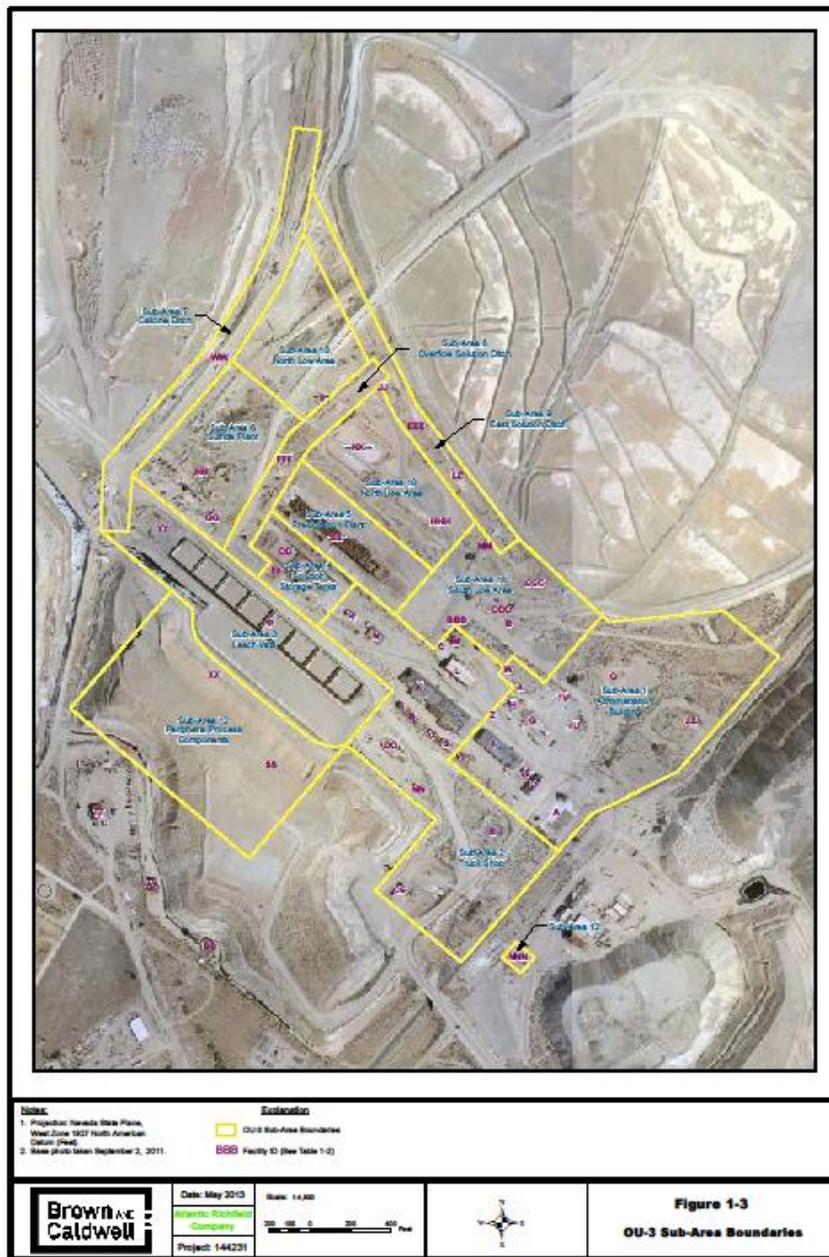


Process Area (OU3) and Evaporation Ponds (OU4)

- Process Area (OU3) Investigation
 - ARC implementing EPA workplan to characterize contamination in soil column above groundwater
 - Building on soil sampling conducted 2004 – 2005 and sub-surface investigation conducted 2011-2013
 - Investigating:
 - Areas with contamination above screening levels
 - Source areas identified since 2005
 - 2000+ samples will be collected from 342 borings



Process Areas (OU3) Subareas Map





Process Area (OU3) Investigation

- Field Work Started in late October
 - To date has focused on Subarea 1 (Admin building, grease shop, and filling stations) and Subarea 2 (Truck shop and maintenance buildings)
 - Notable findings are gasoline components at depth
 - Work will continue for most of 2014



Evaporation Ponds (OU4) Investigation

- Groundwater data indicate that ponds are a continuing source of contamination
- Wildlife and dust concerns also need to be addressed
- Workplan will be submitted in January 2014 to profile material in evaporation ponds so decisions can be made on mitigation



Comments and Questions

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