Barstow Perchlorate

Groundwater Results of December 2011 Site Investigation

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Lahontan Regional Water Quality Control Board
- November 2010 – Golden State Water Co. determines Soap Mine Road Well contaminated with perchlorate.
- Water Board staff sample 28 private wells in the area
- Potential source area identified and sampled by USEPA in December 2010
Why is the Water Board Involved?

• Preserve, enhance, and restore the quality of California's water resources

• Water Board would normally require the “responsible party” to perform site investigation

• No financially viable party was identified

• Water Board then requested funds to perform a limited site investigation.
Investigation Strategy

• Determine extent of perchlorate contaminated groundwater
• Knowing the extent – determine threat to public health
• Use temporary wells to maximize number of samples
• Focus sampling between suspected source area and Soap Mine Road Well
1. Drill to groundwater with hollow-stem auger rig

2. Install temporary well casing.

3. Take water level measurement.

4. Collect water sample with a bailer.
Groundwater Investigation Results

Barstow Perchlorate Groundwater Investigation
3/23/2012

Legend
- Temporary Monitoring Well with Detection
- Temporary Monitoring Well with No Detection
- Permanent Monitoring Well with Detection
- Permanent Monitoring Well with No Detection
- Discharge Source Area

HWY 58
Soap Mine Road
Poplar Street
Concentrations are in µg/L (or part per billion)
State Maximum Contaminant Level is 6.0 µg/L
PERCHLORATE ISOCONCENTRATIONS IN GROUNDWATER NEAR THE SITE
December, 2011
Barstow, California

NOTES:
1. Source from Nebo Quadrangle, 7.5 Minute Topographic Series, USGS 1953.
2. Groundwater samples collected between December 12 and 21, 2011.
Uncertainties

• Extent of contamination to the southeast along utility corridor is unknown
• Thickness of the perchlorate-contaminated groundwater is unknown
• Rate of perchlorate-contaminated groundwater migration
Summary & Conclusions

- Highest concentrations nearest the source area
- Majority of contamination is within an area approximately 1,400 feet wide & 3,500 feet long
- No imminent threats to additional drinking water wells
- Limited sampling to further determine the extent is planned in late spring/early summer
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Next Steps

- Monitoring of private water wells and permanent monitoring wells
- Soil cleanup of source area by USEPA
Copies of Site Investigation Reports

Electronic (.pdf) copies of:
• Perchlorate Fact Sheet,
• U.S. EPA’s Site Investigation Report,
• Water Board’s Site Investigation Report
• This PowerPoint® presentation can be downloaded from: