

# **Responsiveness Summary – Rocker Timber Framing and Treating Operable Unit**

The responsiveness summary includes comments received on the draft Rocker OU five-year review report (Volume 5) during the December 12, 2010 through January 31, 2011 comment period. The comments are shown as received but were edited to include only those comments pertaining to the Rocker OU. EPA responses are included in italicized text.



## Comments from Atlantic Richfield

### ROCKER

AR appreciates the level of data analysis incorporated into EPA's review of the Rocker OU.

*EPA Response: Comment noted.*

#### *Specific Comments*

1. Issue #2. Atlantic Richfield submitted a technical impracticability evaluation for a waiver of the arsenic standard in groundwater in 2007. Recommendation #2: Review the technical impracticability waiver petition submitted in 2007.

AR agrees with this recommendation and is willing to work cooperatively to facilitate EPA's review of the Technical Impracticability (TI) document petition.

*EPA Response: Comment noted.*

2. Issue #3: The Town Pump and Ayers wells exceed the recently-promulgated 10 ug/L drinking water standard for arsenic. Recommendation #3: Evaluate possible mitigation measures for nearby drinking water wells that exceed the arsenic Maximum Concentration Level (MCL) of 10 ug/L.

Both the Town Pump and Ayers wells had arsenic concentrations that were well below the 18 ug/L MCL when the remedy was implemented (1998). Since implementation of the remedy, the Ayers well has been on a steady decline of arsenic concentrations that has been most apparent since 2006. The quarterly water-sampling monitoring events for the Ayers well has demonstrated that arsenic concentrations have been at or below the new MCL of 10 ug/L since the third quarter of 2008. The Town Pump well has had quarterly arsenic concentrations at or below 10 ug/L since the end of the first quarter of 2010. The Town Pump well is not used as a source of drinking water. Therefore no mitigation measures are necessary.

*EPA Response: Subsequent to the release of the draft five year review, EPA re-examined well data for the Ayers residence. It also received a report from the Montana Bureau of Mines and Geology that looked at well data and ground water flow direction in depth. In response, EPA concludes that the Ayers domestic well is at or below the current 10 ug/l drinking water standard, and that the well is located outside the Rocker OU's arsenic contamination influence at this time. The recommendation regarding the Ayer's domestic well has been removed from the report. However, the MBMG report and further EPA data analysis confirms EPA's concerns with the Town Pump domestic well – both because full use of the well could expand the Rocker OU plume or otherwise affect the site remediation, and because full use of the well for domestic purposes could result in drinking water at or above the current drinking water standard. Accordingly, the recommendation regarding further action to prevent the Town Pump well from use has been retained and strengthened in the final report*

3. Issue # 4. Cleanup and restoration activities in the SSTOU (e.g. walking trails) have increased the likelihood recreationalists and trespassers could access the Rocker OU area.

Recommendation #4: Evaluate possibilities to integrate site with future recreational corridor plans while maintaining site security.

The Rocker OU has an O&M Plan and is inspected annually for issues related to integrity of the remedy, which includes security. Maintenance issues associated with fencing were addressed under the routine maintenance plan and were completed by the time of the issuance of the 5-Year Review Draft. Upgrades to the fencing are planned for 2011 and should address future security issues.

*EPA Response: EPA acknowledges the fencing repair and other site security measures that were taken by ARCO in recent months. EPA has modified the recommendation accordingly.*

4. Issue #5: Increasing concentrations in shallow well RH-44 adjacent to SBC may indicate plume expansion in the shallow groundwater. The shallow groundwater may be impacting SBC. Recommendation #4: Evaluate the current or potential contribution, if any, of arsenic contamination to SBC from shallow groundwater.

Monitor well RH-44 arsenic concentrations decreased significantly and steadily over the time period of 1998 to 2006, following remediation. Hydrologic changes likely associated with implementation of the Streamside Tailings remedy resulted in a slight rise in arsenic concentrations since 2006. However, the arsenic concentrations are currently about half the concentrations that existed immediately following remediation in 1998. The footprint of the arsenic plume has not increased based on the RH-44 well. It is AR's understanding that US EPA has asked the Montana Bureau of Mines and Geology (MBMG) to conduct a hydrologic study of the area, that will include an evaluation of whether shallow groundwater at monitor well RH-44 has any significant impacts to SBC. AR has offered to provide technical support to EPA and MBMG to help complete this study.

*EPA Response: The draft 2010 MBMG report is now completed and attached to the final five year review report as an appendix. That report indicates uncertainties concerning the contribution of the Rocker OU arsenic plume to in-stream contamination in Silver Bow Creek. The final five-year review report's text reflects these findings and the recommendation for additional sampling of Silver Bow Creek remains in the final report.*

5. Issue #6: The 1/4-mile radius controlled groundwater area may be overly restrictive. Recommendation: Evaluate the protectiveness and continuation of the 1/4-mile radius well ban. AR understands that the EPA/MBMG hydrologic study described above will include an evaluation of the protectiveness of the Controlled Groundwater Area (CGWA). One of the primary topics is whether the boundaries of the CGWA can be adjusted to provide a smaller CGWA and still maintain the protectiveness of the remedy. AR has offered to provide technical support to EPA and MBMG to help complete this study.

*EPA Response: The EPA/MBMG report indicates that some adjustments to the Controlled Ground Water Area may be appropriate. This recommendation remains in the report.*

6. Issue #7: Vehicle Tracks in repository cap have not been repaired. Recommendation #7: Repair tracks in repository cover and provide more appropriate road base for field truck access. The OU has an O&M Plan and is inspected annually for issues related to integrity of the remedy, which includes monitor wells and cap vegetation and stability. Maintenance issues associated with these items were identified and addressed under the routine maintenance plan and were completed by the time of the issuance of the 5-Year Review Draft.

*EPA Response: EPA acknowledges the repair efforts that ARCO has undertaken at the site, and has removed this recommendation from the report.*

7. Issue #8: Some well heads are not secure and show evidence of frost heave. Recommendation # 8: Repair and secure damaged well heads. Response same as for issue #7 above.

*EPA Response: Please see the response to the comment immediately above.*

8. Last Recommendation: Evaluate possible long-term groundwater monitoring optimization. The Rocker OU has a very high density of monitor wells, frequency of sampling, and number of analytes measured during each quarterly event. AR and US EPA have already initiated discussions about revising the monitoring program to optimize the appropriate level of monitoring with the efforts and resources required.

*EPA Response: The EPA/MBMG report also recommends changes to the ground water well monitoring program that include adding some wells and monitoring locations and reducing others. EPA agrees with ARCO that revisions to the well program are needed in response to this recommendation.*

### **Comments from CTEC**

15. CTEC supports the proposal for additional monitoring and evaluation of migration of the arsenic plume at the Rocker OU. Additional wells are needed between the arsenic plume and Silver Bow Creek to monitor the plume and determine if the plume is impacting the creek.

*EPA Response: EPA appreciates CTEC's comments and will be working to improve the monitoring program at the Rocker OU. Please see our responses to comments above for more information about these issues.*

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