

Draft Meeting Notes: Community Advisory Group (CAG) - Aerojet Superfund Issues, September 19, 2012

1. Introductions and Attendees

Attendees: Tim Murphy (Aerojet), Janis Heple (CAG), Jimmy Spearow (CAG), Steven Ross (DTSC), Jackie Lane (EPA), Kevin Mayer (EPA), Gary Riley (EPA), Travis Anderson (GSWC), George Waegell (Morrison Creek, Inc.), Alex MacDonald (RWQCB), Burt Hodges (SARA), Allen Tsao, Larry Ladd, Dan Waligora, Tara Fitzgerald (Recorder, Weston Solutions, Inc.).

2. Aerojet Community Update – Tim Murphy, Aerojet

Well HA pipeline on Reserve Drive is fixed.

The Aerojet meeting with the Save the American River Association, currently scheduled on October 1, 2012 may have to be rescheduled to allow the new Aerojet president to attend. The topics of the meeting include water supply wells.

Burt Hodges comment: Concerning the bicyclist safety questions, Tim Murphy gave information regarding notification of drilling operations that may affect the use of the American River Bike Trail to pass along to the bicycling groups. There have been no additional concerns voiced since last summer during construction of a well in Rossmoor Bar Park.

3. Design and cleanup in the Perimeter Groundwater Operable Unit (OU-5) – Kevin Mayer, EPA

Upcoming issue: after the soil cleanups, Aerojet plans to seek partial delisting of the remediated lands.

Within OU-5, two areas of contamination were selected for excavation. One area with perchlorate (Site C41) and one area with lead and dioxins (Site C4). The work plans for conducting excavations were approved by the Agencies in early summer 2012. Over 12,000 tons of soil was removed from the perchlorate-impacted area

Question: How many cubic yards is that?

Answer: The ratio of tons to cubic yards is almost 1:1 since the soil was not wet. Approximately 10,000 cubic yards.

EPA was on-site during excavation activities at C41. EPA was concerned about spillage of excavated soil off of the containment stockpile onto clean soil, as shown in a picture presented at the meeting. EPA required clean-up of the spilled material and sampling of the remaining soils in the spill locations to make sure that the entire site met the cleanup objectives. The excavation at C41 was extended an additional 10 feet to the west based on confirmation sampling. The excavation was continued, going out 10 feet on either side of a confirmation sample that exceeded the cleanup standard. One sampling point

containing perchlorate at a concentration of 140 µg/kg was not excavated due to its location.

Question: What was the original source of perchlorate contamination?

Answer: The source of the perchlorate is likely spillage from a railcar siding at the site. The perchlorate entered the ballast material along the tracks and was flushed along the ballast by subsequent rainfall.

Question: Where is this excavation?

Answer: In the middle of OU-5. Straight south along Aerojet Road, and a bit to the east, at the edge of the Central OU.

Jimmy Spearow: Was transporting perchlorate via rail the source of the perchlorate contamination at OU-5?

Question: Is it possible to provide coordinates for the perchlorate excavation? How large is the excavation?

Answer: Less than 250 by 250 feet. The excavation was dug down to 10 feet. The coordinates of the excavation will be surveyed.

Question: What will be done with the hole?

Answer: The excavation will be backfilled with clean soil.

Question: Where is the clean soil fill from?

Answer: Aerojet has locations on its property that lacks historical Aerojet operations and has sampled the soils to verify that they will be acceptable as backfill material.

Question: The clean-up level for perchlorate is 60 ppb. Was the soil excavated based on an average of perchlorate concentrations in soil samples or point-by-point?

Answer: Point-by-point.

Alex MacDonald: Perchlorate is present in soils above the cleanup standard down the water table, but Aerojet is not going to excavate down to 100 feet. Excavation to 10 feet is required to get unrestricted use of the property.

Question: Why was this spot picked for excavation?

Answer: This spot is the first of several areas planned for excavation. Several soil borings were collected during the Remedial Investigation (RI) phase for OU-5. Aerojet's development plans have selected this area to be developed in the not-to-distant future. Excavation of the soils allows for the development to proceed.

Question: Is the future land use for the excavated area industrial?

Answer: Future land use is residential/unrestricted.

Question: Any study of where perchlorate is located within the soil borings? Is it present in clays, etc.?

Answer: Clays don't seem to retain perchlorate.

Kevin Mayer: EPA and other agencies put high priority in capturing the expanding perchlorate plume. Western groundwater was a high priority as perchlorate was moving into groundwater used for drinking and thus was the first operable unit at Aerojet. At the same time Aerojet had an interest in areas for development that were not contaminated. So, the Agencies worked with Aerojet to carve these areas out while the Western Groundwater Operable Unit remedy was being implemented. Some of the area slated for carve-out were deemed to require additional investigation and were moved into the Perimeter Groundwater Operable Unit (OU-5). Two of those areas are C41 and C4. C-4, is approximately 1-acre in size and is planned to be excavated within the next couple of weeks as Aerojet completes the determination of the extent of lead contamination. The excavation will be backfilled when completed

Alex MacDonald: At C4 there is a thin layer, approximately 1-2 inches of contaminated soil from burnt municipal waste. There are areas where the contamination is a bit deeper.

Question: What is the action level for lead and what were the soil sample results?

Answer: Samples for lead have shown up to 8,000 mg/kg. The action level is 80 ppm for schools (unrestricted use or 127 ppm for residential use). Background concentrations of lead are 15 ppm.

Question: So not cleaning to background levels?

Answer: No.

Question: What is the future land use?

Answer: The future land use is undecided.

Janis Heple: The area will need future discussion as time goes on.

Tim Murphy: The area is currently planned to remain open space such as a parkway.

Alex MacDonald: The final potential use of the land has not been determined

Kevin Mayer: Once the area is excavated it will be unrestricted or restricted based on level of cleanup.

Tim Murphy: Aerojet will not use land in a manner not allowed by clean-up standards.

Burt Hodges: Is Aerojet looking at arsenic concentrations?

Alex MacDonald: Arsenic due to Aerojet activities is not a large concern at the Aerojet site. There are elevated naturally occurring arsenic in soils in many parts of California, including among many areas, Rancho Cordova, the Sierra foothill and Aerojet.

Kevin Mayer: Aerojet would like to delist parts of the site. A process to begin considering a partial delisting of the site will begin in the future. Possibly within 1-year after a number of remediation actions have taken place.

Question: Is the "carve-out" discussed earlier delisted?

Answer: The carve-out is redefined as not part of the Superfund site. So no delisting is required. The carve-out area had no contaminated site.

Tim Murphy: Aerojet was one of the first Superfund sites in California. As Superfund became more refined, the EPA policy on delisting became more refined. The current EPA policy is not to encumber uncontaminated land so carve-outs were legally defined as not part of the Superfund site.

Question: If part of the site is delisted, what happens if clean-up levels are lowered?

Answer: 5-year reviews are required for the site. A large portion of the site, such as the groundwater remediation actions, will take decades or centuries to reach No Further Action.

Question: Concerning areas where TCE is a concern, EPA lowered cleanup levels in 2011. There are concerns about perchlorate in home grown produce areas. Are levels of TCE and perchlorate in portions to be delisted protective of based on current requirements for TCE and perchlorate?

Answer: The areas considered for delisting in OU-5 are not TCE sites that have been remediated. The new cleanup values are considered when determining sufficient cleanup at a particular site, not just those in-place at the time to the decision document.

Question: Aren't 5-year reviews only for sites that are listed?

Answer: No, even sites that are delisted receive 5-year reviews.

Steven Ross: You have to check that site cleanup levels are still protective.

Kevin Mayer: Any remedies with waste left in place will continue to require 5-year reviews.

Question: Does a 5-year review require resampling for contamination migration?

Answer: A 5-year review uses established data. No additional samples are collected.

Question: With hot spots do we have the possibility of movement through soil that is not addressed through groundwater remediation?

Answer: Yes. Perchlorate will continue to move into groundwater below the 10 foot excavation conducted in OU-5.

Lateral migration of perchlorate discussed.

Kevin Mayer: The goal of an RI is to determine the extent of contamination. You start looking for contamination based on the history of the site and also consider potential migration pathways and accumulation areas (low spots). During development and execution of an RI, hot spots should not be missed.

Tim Murphy: The RI/FS will identify where contaminated areas are and address them.

Kevin Mayer: Within OU-5, PCBs in a ditch have been cleaned up. The PCB cleanup extended outside of the OU-5 in order to mitigate upstream areas and not allow that contamination to recontaminate the ditch in OU-5.

Larry Ladd: My primary concern is that the site is mostly slickens. There could be a pocket of contamination dug up that you would not have a way to know about ahead of time.

4. Responses to the CAG comments on the Boundary Operable Unit (OU-6) Remedial Investigation – Gary Riley, EPA

Status update on the response to the CAG letter. The majority of comments within the CAG letter related to risk assessment. Since the Agencies are overseeing Aerojet's Superfund response, Aerojet will respond to the CAG letter and the DTSC and EPA toxicologists will review the Aerojet responses. Issues brought to Aerojet and agencies will be considered as EPA develops the Proposed Plan for the Boundary OU. A written response will be issued from Aerojet but also will be reviewed by the DTSC, the Water Board, and EPA.

Question: Will we get response back to the letter will they be on agency letterhead?

Answer: No, the responses will be issued from Aerojet.

Question: Will agency clarifications be issued on agency letterhead?

Answer: Kevin Mayer: Not sure.

Answer: Gary Riley: It is a response by Aerojet to comments on their document. The overall intent of the Agencies is to address all issues. However, clarifications issued by the Agencies will be on Agency letterhead. [This is a clarification to the response provided by EPA representatives provided upon their review of the minutes of the September 19, 2012 CAG meeting.]

Janis Heple: Is this because we are commenting too late?

Answer: Jackie Lane: EPA has to accept the Feasibility Study and propose a plan before it formally responds to public comments.

Kevin Mayer: There is some sensitivity to respond outside of EPA protocol because the EPA position is evolving before setting a fixed stance.

Question: Is communication going on between Aerojet and EPA part of the public record?

Answer: Jackie Lane: Predecisional conversations aren't recorded until decisions are made.

Question: Comments within the CAG letter concern the Remedial Investigation/Feasibility Study (RI/FS). If agencies approve/endorse the Feasibility Study (FS) our concerns outlined in the CAG letter should be addressed by the EPA.

Answer: The proposed plan describes EPA's plan for cleanup, not the FS. The proposed plan represents EPA's proposed decision on how to clean up the site.

Kevin Mayer: I've not seen an RI/FS to date that answered all questions. Part of the proposed plan can be to obtain further info on the nature and extent of contamination. Even with relatively simple exaction we gathered more data than collected for the RI/FS.

Question: Does this change the conceptual site model (CSM)?

Answer: It refines the CSM.

5. Status of the revised Boundary Operable Unit (OU-6) Feasibility Study – Gary Riley, EPA

The EPA anticipates that under the process of submitting the RI/FS, Aerojet is revising the FS based on a number of agency comments. Aerojet will submit the final FS for OU-6 on September 30, 2012. The final FS is expected provide enough information to prepare a Proposed Plan for OU-6. There will be a formal public comment period on the Proposed Plan. The EPA is obligated to respond to all comments formally in its decision document (Record of Decision). A proposed plan should be available by the next meeting.

6. Regional Board Aerojet Cleanup Overview – Alex MacDonald, RWQCB

Mr. MacDonald reviewed the attached handout, Aerojet Activities 2012 – September 2012 CAG Meeting.

GET-E/F is purchasing ion-exchange unit.

GET D well be closed because of future development at the site Get D treatment is being moved to the ARGET facility

Question: Are plumes still moving?

Answer: All plumes are still moving, but the remediation system is doing a good job of holding plumes in place in most areas.

7. Document schedule; review & discussion – All

Janis Heple: I suggest a discussion of documents with Gary Riley on the telephone as we are running out of time.

8. Report on a field visit to the Line 5 North Area that the regulators planned to take September 18th – EPA, RWQCB, DTSC

This field visit occurred. Time for discussion of this action item was limited, but participants did note that this is an area that will have less dense redevelopment. Agency personnel are working to understand the area and the area's constraints.

9. Next meeting date December 5, 2012 – Action Items

Meeting dates for 2013 will be set.