

Final Meeting Notes: Community Advisory Group (CAG) - Aerojet Superfund Issues, September 18, 2013

Janis Heple, CAG Chair, began the meeting with Introductions at 7:00 p.m.

1. Introductions and Attendees

Attendees:

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| Alex MacDonald (Regional Water Quality Control Board [RWQCB]) | George Waegell (Morrison Creek Group) |
| Allen Tsao (CAG) | Jackie Lane (EPA) |
| Alta Tura (Sacramento Area Creeks Council) | Janis Heple (CAG) |
| Blair Stone-Schneider via teleconference (Skeo Solutions) | Jessica Cooper (Recorder, Sullivan International Group, Inc.) |
| Brit Snipes (City of Rancho Cordova) | Jimmy Spearow (CAG) |
| Bruce Cline (City of Folsom) | Katherine Lawson (Golden State Water Company) |
| Burt Hodges (Save the American River Association) | Kevin Mayer (EPA) |
| Chris Fennessy (Aerojet) | Miranda Maupin (Skeo Solutions) |
| David Miller (City of Folsom) | Rick Bettis (Sierra Club and others) |
| Gary Riley via teleconference (U.S. Environmental Protection Agency [EPA]) | Stephen Green (Save the American River Association) |
| | Steven Ross (Department of Toxic Substances Control [DTSC]) |
| | Tricia Stevens (Sacramento County) |

The July 17, 2013 Draft Minutes were finalized.

2. Aerojet Community Update – Chris Fennessy, Aerojet

The community may have noticed drill rigs in various areas; these are generally installing and developing monitoring wells and extraction wells.

Public notices will be submitted. There will be new monitoring wells installed at Gold Strike Road and one extraction well in the Sailor Bar area. Aerojet worked with the agencies to find the most appropriate locations.

3. Aerojet Cleanup Updates – Gary Riley and Kevin Mayer, EPA

Kevin Mayer: There is a lot of activity going on; we wish we were hitting more milestones before the end of the fiscal year.

Operable Unit (OU) 5 soil cleanup is progressing. OU 5 is located north of where OU 6 is. Aerojet has already excavated the soil scoped for removal at Area C4, but there are additional areas near the original garbage dump that may need to be removed due to lead contamination. For Area 49000, there is measured TCE and other volatile organic compounds in the vadose zone (the area between surface soil and the top of

groundwater); therefore, there is a concern there may be an exposure route by migrating through cracks and into buildings that may be constructed in the future. Cleanup projects will continue until all contamination is cleaned. These projects illustrate two lessons: 1) during initial remedial investigations, we don't know everything about site conditions, and 2) we must follow the trail and continue until we can confirm we are cleaning up the full extent of contamination that poses a risk.

Gary Riley: EPA will be focusing on the effort on the Record of Decision for OU 6 after the Proposed Plan public comment period ends. Aerojet is focusing effort on Island OU late this year or the beginning of next year. The overall cleanup is progressing and Boundary OU is the focus now.

4. Boundary Operable Unit (OU) 6 Proposed Plan Working Session Technical Assistance Services for Communities

– **Miranda Maupin, Skeo Solutions**

– **Janis Heple, CAG**

Janis Heple thanked the City of Folsom, City of Rancho Cordova, and Sacramento County representatives for attending the meeting.

Miranda Maupin presented the technical assistance document and other handouts discussed in these meeting notes (see attached with final minutes). She said she planned to discuss the development of the Institutional Controls (ICs) and provided an overview of the maps created. The handouts included two figures overlaying the recommended remedial alternatives with the proposed residential land use. The first figure included the Aerojet General Corp. Superfund Site OUs & Proposed Gencorp Developments. The second map included the Administration Area. The difference in this second map included the addition of the TCE groundwater plume.

Question: Is there low-density residential use planned for this area?

Response: The proposed Easton Place development includes commercial mixed-use and high-density residential use depicted on the map.

Tricia Stevens: To the south, there is low-density residential planned, but it is not depicted on the map.

Ms. Maupin discussed the third map, which included Buffalo Creek, Line 2, Line 5, and West Lake Open Space Areas.

Comment: There appear to be no coordinates on this map and, therefore, the public is unable to know where this site is located.

Question: What is the region to the west in OU 6, where the map shows the concentration of TCE at 50 micrograms per liter ($\mu\text{g/L}$) in groundwater? Is this a part of the "carve-out" lands?

Alex MacDonald: The map only shows carve-out lands in the vicinity of OU 6. In 2001, deed restrictions were placed on these carve-out lands. There were select areas where

volatile organics in groundwater led to the placement of restrictions that did not allow residential development and similar higher exposure uses of the property.

Question: Are there restrictions for OU 5?

Alex MacDonald: Not yet.

Question: What is the risk in the area where TCE is 500 ppb?

Alex MacDonald: This area will be addressed under OU 9.

Question: What is the risk for vapor intrusion in the Line 2 Area?

Alex MacDonald: There are deed restrictions (the hashed area) where ICs will be placed.

Question: Will there be more than just deed restrictions, such as soil-vapor extraction (SVE) as well?

Kevin Mayer: Just as in OU 5, if there is still a source of contamination posing a threat, there will be some remedial action, such as SVE, to remove the source.

Question: What if there is groundwater contamination coming from another source other than the site in question and it poses a threat? What kind of ICs will be put in place for that instance?

Kevin Mayer: Remediation and mitigation will be conducted in such an instance. Additionally, a property may have ICs, which are requirements that will stay with a deed as it passes with the chain of title. Cleanup levels and goals are examined every year with the most recent potential exposure from that source. The simplest step is to not build something there, thus controlling the exposure route. However, if a residence is built, engineering controls can be installed to prevent vapors from entering the home. This step, however, is not defined, just that it needs to be achieved.

Question: Do you have examples of vapor barriers installed in CA?

Kevin Mayer: Yes, there is a new site close to where I live that includes vapor barriers, retrofitted fans, and passive systems to mitigate vapor intrusion.

Question: Is there monitoring? Who does the monitoring and when?

Kevin Mayer: Yes, there is monitoring. There are some touchy areas as to what the OU 6 remedy will be, as it will be site-specific.

Steven Ross: There will be negotiations with the property owner and, if warranted, land use covenants, but we will ensure the condition is in place.

Kevin Mayer: We set a performance standard, come up with a plan to achieve the standard and test for it.

Question: Who is responsible to ensure it is maintained down the line, 50 years from now?

Kevin Mayer: The ICs place restrictions on the land owner and the land owner is invoiced by the state agencies responsible for enforcement.

Steven Ross: There are annual requirements for reporting and the agencies are responsible for reviewing the reports. The agencies will need to follow up on enforcement.

Question: Who continues to fund the State's involvement?

Steven Ross: With covenants, the owner is responsible for enforcement costs.

Alex MacDonald: For example, Aerojet agreed to pay agency oversight costs for enforcing ICs for an Aerojet property going to a new owner to the east near Grant Line Road and they set aside funds for that cost.

Janis Heple: Do the costs include future enforcement and technical reports?

Steven Ross: The regulatory agencies will continue to enforce requirements, and the property owners are responsible for reports.

Janis Heple: Is there a potential for monitoring?

Steven Ross: Yes.

Alex MacDonald: Ideally, there will be a homeowners association to do a combined report.

Kevin Mayer: EPA will also be responsible for 5-year reviews.

Janis Heple: Will an SVE system be for cleaning up a source area or for remediating a plume?

Alex MacDonald: SVE would be done for removing a source area, not for mitigation from soil vapor that is from volatile organics in the groundwater.

Miranda Maupin: The Technical Assistance Document includes the specific deed language and systems still in question. The annual inspection will be the responsibility of the property owner.

Kevin Mayer: The deed restriction does say no day care, etc. to be built.

Alex MacDonald: The “carve-out” lands are restricted to commercial/industrial use only.

Kevin Mayer: The annual inspection will include looking at...if unrestricted land use was done, and there may be two steps involved: 1) build tire shops, offices, etc., but do not build hospitals, day cares, or housing; and 2) if residential use is constructed, make sure that the protection of desired land use is achieved by the applied mitigation measures.

Question: Will there be monitoring to ensure concentrations are still below screening levels, and who is responsible for that monitoring?

Steven Ross: Yes, and the property owner will be responsible.

Kevin Mayer: I have seen instances where new buyers see a deed restriction and do not want to buy the property due to the added expense. If a property owner wishes to change to a prohibited use, then provisions on the ICs would be needed.

Janis Heple: When something gets developed, at what point does it change hands from Aerojet to the property owner? When will SVE systems be installed?

Alex MacDonald: Properties will not be developed until concentrations meet current screening criteria.

Question: Can the properties be transferred?

Chris Fennessy: The property cannot be released until EPA approves release of the property – until cleanup goals are met.

Question: Could there potentially be a buffer zone to ensure surrounding areas of an SVE system are not at risk?

Alex MacDonald: There will be permitting requirements for all areas, such as air permits.

Question: Does that include contaminant mass or concentrations?

Alex MacDonald: Both.

Question: Does the district review plans before installation?

Alex MacDonald: Yes. Houses will not be near SVE systems and, if so, the area must meet protective criteria.

Miranda Maupin: Do the carve-out lands have a restriction on groundwater use?

Alex MacDonald: Yes, there is a restriction on groundwater use and future monitoring will be required.

Question: The restrictions prevent the extraction or injection in groundwater, but does that also prohibit installation of wells?

Alex MacDonald: Yes.

Question: What administrative document are these restrictions under?

Alex MacDonald: The Deed Restrictions for all 2,600 acres. ICs for OU 6 will be done once we get to that stage. The OU 6 ROD will have the requirement to develop the ICs. ICs will be developed in the future.

Chris Fennessy: A Remedial Action Completion Report will be needed to ensure ICs are implemented.

Question: Are ICs mentioned in the OU 6 Proposed Plan?

Gary Riley: Yes, where appropriate, and they are detailed in the Feasibility Study. The performance standard is to be protective, and how this is done will be included in the Remedial Design stage.

Question: For No. 9 on page 3 of the Technical Document, will there be government agency oversight in a case when a homeowners association would be responsible for inspecting and maintaining a vapor mitigation system and reporting?

Kevin Mayer: Yes, and ultimately it is the individual land owner's responsibility, but a homeowners association can combine the effort.

Question: Will the homeowners association have the appropriate expertise?

Kevin Mayer: They may collectively hire a consultant for the work. Also, after it's done once, it should be easy to do for future reporting.

Question: Is there any proposed use for groundwater?

Alex MacDonald: Groundwater extraction treatment (GET) water is proposed for use by Aerojet for industrial purposes, but there has been no proposal for irrigation use or potable uses. The water will have to meet protection standards for each of the specific use types.

Tricia Stevens: The County will do some research and get back to the group regarding the purple pipes discussion.

David Miller: Achieving performance standards can be problematic when a property owner is responsible for reporting. On a local level, it's a perception thing.

Tricia Stevens: We may wish to explore alternatives for giving the responsibility to a homeowners association. Maybe there should be a fee for them to hire someone else to do the reporting – another responsible entity.

Janis Heple: The Proposed Plan public comments were discussed, which will be submitted to the EPA soon. [Ms. Heple discussed No. 1.] Does OU 6 have source areas?

Kevin Mayer: Yes, there are areas of OU 6 where the plume from OU 7 is migrating to, but shallow water is not impacted.

Comments: There appears to still be a concern for OU 6 development while cleanup for OU 7 is ongoing.

Kevin Mayer: Please note: whatever is said during this meeting is not a formal response to public comments.

At this point, Additional Proposed Plan public comments were read. Ms. Heple discussed No. 9; with the help of Skeo, the CAG has developed more detail. Ms. Heple discussed No. 12; the EPA is aware of this calculation. Ms. Heple further stated that “There is still a lot of work to be done before the deadline, but [she has] received help from CAG members, such as Allen Tsao.”

Question: On No. 13, are there any other chemicals not included here?

Allen Tsao: This comment just highlights the chemicals where a lower value or more protective screening criterion should be used based on the CAG’s opinion.

Question: Will there be restrictions for installing drinking-water wells?

Alex MacDonald: Yes, there will be a blanket restriction on the entire OU.

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

Presentation notes and activities map were handed out (see attachments with final minutes).

Aerojet is constructing GET D to the American River groundwater extraction and treatment (ARGET) pipeline. Ion-exchange units for perchlorate removal are to be installed by December 2013.

GET AB, in the far eastern corner of the property, is being modified to allow increased capacity from 1,500 gallons per minute (gpm) to 3,000 gpm by Spring 2014.

GET EF modifications underway and in the process of being expanded with Perimeter OU water.

Ion-exchange units were added to GET H, there was too much pressure loss and the added flow with new extraction wells are now operational.

There are new monitoring and extractions wells to report. In the far southeast portion of the property, a well was installed to help define the capture zone of extraction wells. Two wells were replaced near White Rock Road. An extraction well was installed near Grant Line Road to help capture the N-Nitrosodimethylamine (NDMA) plume.

Aerojet may need an additional extraction well to protect the Teichert well.

Question: Is that well contaminated?

Alex MacDonald: Yes, with TCE and perchlorate; this currently has a treatment system. Additionally, 3 extraction wells are located on the Teichert property to prevent contamination of the Tracy well. There are water supply wells located near the west side of Teichert – the on-site wells are not in use. In Sailor Bar Park, well No. 1186 is used by Sacramento County to supply water to the pond and Aerojet has provided treatment to remove volatile organics. The Agencies have asked Aerojet to operate the well all the time to help control the plume migration in that area. The overflow from the pond is into cobbles and infiltrates. There currently is a permit for the discharge and it will be revised to allow for an increase in flow up to 400 gpm.

For the Perimeter OU, Aerojet is working on revisions to the Preliminary Design Reports for groundwater zones No. 1, 2, and 3.

Mr. MacDonald mentioned the soil contamination and cleanup ongoing at Sites C4 and 49000 Area previously discussed by Mr. Mayer.

The Human Health and Ecological Risk Assessment reports for Island OU will be submitted to the agencies soon. These reports are based on versions of the Hogout site that the Agencies submitted comments on.

Question: Will there be a work plan submitted as well?

Alex MacDonald: Yes, the Aerojet consultant submitted an example for the Hogout site that was approved and will be used.

Allen Tsao: Is the most recent version of the White Paper available?

Chris Fennessy: Yes, it was from January 2013. [He will get Mr. Tsao a copy.]

Alex MacDonald: The Boeing Company will be constructing a satellite GET south of Douglas Road to treat the groundwater from the extraction wells there as part of the remedy for the Inactive Rancho Cordova Test Site.

Janis Heple: There was a test site south of White Rock Road, but Boeing and Aerojet were both responsible parties because the property used to be owned by Aerojet.

Ms. Heple indicated this will be a discussion item for a future CAG meeting.

Alex MacDonald: Aerojet is installing a treatment system at the end of the plume, south of Douglas Road.

For White Rock Road Dump 1 and 2, the County approved findings and Aerojet expects to begin work at the beginning of October. The remaining soils in Dump 2 will be delivered to Dump 1. Aerojet is consolidating the waste, adding a cap, and it will be redeveloped as a park.

Question: What is the timeframe for Item Z, the permitting?

Alex MacDonald: The draft permits will be available soon on the RWQCB website. The boilerplate is 196 pages.

Question: Are there changes on the cleanup – is the general Aerojet cleanup speeding up?

Alex MacDonald: Physics comes into play in limiting the ability to remove the contaminants from the groundwater in an efficient and expeditious manner. There are no new technologies at this time that have demonstrated that they can significantly reduce the cleanup time. For a plume this size, only so much pump and treat or *in-situ* applications can be done, and these in-situ technologies are not feasible for extremely large areas.

Question: Has there been any success on the overall cleanup?

Alex MacDonald: Concentrations in some groundwater plumes – American River Study Area and Zone 4 have decreased significantly since the remedy began.

6. Tentative 2013 Meeting Dates – Action Items

The next Aerojet CAG meeting is scheduled for November 20, 2013. Tentative dates for 2014 are shown below:

Next meeting date: November 20, 2013

- Tentative meeting date: January 15, 2014