

Final Meeting Notes: Community Advisory Group (CAG) - Aerojet Superfund Issues, January 16, 2013

1. Introductions and Attendees

Attendees: Tim Murphy (Aerojet), Jonathan Glatz (Assemblyman Ken Cooley), Janis Heple (CAG), Jimmy Spearow (CAG), Tom Lae (CH2M Hill), Keaton Riley (Congressman Ami Bera), Steven Ross (DTSC), Kevin Mayer (EPA), Gary Riley (EPA), Jackie Lane (EPA), Daniel Stralka (EPA), Lynn Suer (EPA), Travis Anderson (GSWC), George Waegell (Morrison Creek, Inc.), Alex MacDonald (RWQCB), Stephen Green (SARA), Burt Hodges (SARA), Rick Bettis (Sierra Club), Larry Ladd (Folsom Area Democrats), Tara Fitzgerald (Recorder, Weston Solutions, Inc.).

Larry Ladd has coordinated a public tour of Area 40 located within the Folsom sphere of influence on January 17, 2013 at 3 PM.

2. Aerojet Community Update – Tim Murphy, Aerojet

Mr. Murphy noted that he will give a presentation on Area 40 after the EPA Proposed Plan presentation for the Boundary Operable Unit (OU6).

3. Preview of the information and cleanups that will be in the Proposed Plan for the Boundary Operable Unit (OU6) – Gary Riley, EPA

Gary Riley gave a preview of the Proposed Plan process and information that may be included within the Proposed Plan for the Boundary Operable Unit (OU6). It was noted that Lynn Suer, EPA Site Manager, attended the Aerojet CAG meeting due to the importance of the presentation. It was also noted that Dr. Dan Stralka (USEPA human health toxicologist) will become more involved with the Aerojet site now that Dr. Smucker has retired. Tom Lae of CH2M Hill was also present at the CAG meeting; he is the EPA oversight contractor's project manager for the Aerojet project.

Mr. Riley gave a presentation that will be provided along with the Final minutes for the meeting. The Aerojet site is divided into operable units (OUs) for ease in managing cleanup efforts. Offsite groundwater plumes are addressed separately from OU6 as part of two OUs with Records of Decision, the Western GW OU and the Perimeter GW OU.

The Proposed Plan will include EPA's preferred cleanup action and a formal solicitation for public comments. A Remedial Investigation (RI) was completed for OU6 in 2010, and the CAG provided comments. A Risk Assessment (RA) was completed for OU6 in 2011. The Remedial Investigation/Risk Assessment reports allow agencies to assess where contamination is present and if it needs to be cleaned up or otherwise managed. A Feasibility Study (2012) for OU6 was recently prepared. The Feasibility Study evaluated potential remedies of contamination including groundwater protection. The Proposed Plan is the next step in the cleanup process for OU6.

EPA's selected remedy to meet Remedial Action Objectives will be established in the Record of Decision. The selected remedy may include placement of restrictions on land use where the presence of residual constituents of concern (COCs) do not allow for unrestricted use.

The DTSC and RWQCB will provide input on the Proposed Plan to the EPA.

The following information is from the EPA Boundary Operable Unit (OU6) Proposed Plan Preview presentation:

Remedial Action Objectives:

- 1) Protect human health and the environment from exposure to concentrations of constituents of concern (COCs) in soil, soil vapor, and groundwater that pose an unacceptable risk
- 2) Contain and/or control migration of site-related chemicals from source areas in Boundary OU to minimize future migration of constituents of concern (COCs) until cleanup is achieved
Develop Contain.
- 3) Land use controls
- 4) Reduce or contain the chemical mass.

Human health chemicals of potential concern are discussed as an abbreviated list in the Proposed Plan presentation. The Proposed Plan will provide a full list of human health and ecological chemicals of concern.

Four types of Remedial Technologies are considered within a Proposed Plan:

- 1) No action
- 2) Institutional controls
- 3) Containment/Operational controls
- 4) Source Removal

As shown in the first presentation figure (draft), draft Preferred Alternatives for the Administration area (eastern side – AJ operations; western side – Easton development) includes:

- 1) Capping
- 2) Excavation
- 3) Soil vapor extraction

As shown in the second presentation figure (draft), draft Preferred Alternatives for the Westborough #2 area include:

- 1) Excavation
- 2) Soil vapor extraction - TCE plume from Island OU7. Housing would need systems to prevent soil vapors.

As shown in the third presentation figure (draft), draft Preferred Alternatives for the Magazine, Chem Plant, and Dredge Pit areas include:

- 1) Backfill
- 2) Excavation
- 3) Soil vapor extraction

Question: Where is AMPAC (chemical production company and tenant of Aerojet) located in relation to OU6?

Answer: OU-6 is actually adjacent to AMPAC in the Line 05 northern area. The main AMPAC facilities are about 3000 feet from the closest OU-6 area.

Question: Is n-nitrosodimethylamine (NDMA) present as soil vapor?

Answer: NDMA is not present as soil vapor because there were not sources of NDMA in OU-6. NDMA is found in groundwater due to sources upgradient of OU-6, but does not volatilize from the groundwater into soil vapor. NDMA is in the groundwater plume moving out of the Island OU7 and under OU6.

Comment: A woman used to rent an old farmhouse just south of Chem Plant 2 at OU6 in between White Rock Rd and Old White Rock Rd. Her 38 year old daughter died of breast cancer. Apparently, Prowl herbicide was manufactured at Chem Plant 1 and Chem Plant 2. Nitrosamine is a byproduct of Prowl. Are the nitrosamines associated with Prowl detected using EPA Method 521?

Two underground injection wells at OU6 were used to dispose of wastes from Prowl manufacturing located at Chemical Plants 1 and 2. When the injection well became plugged, waste was disposed for a short period of time in an old dredger pit northeast of Chemical Plant 2. Low areas commonly received wastes generated from manufacturing processes and are some of the main areas requiring cleanup.

Question: Was soil analyzed using EPA Method 521 near Chem Plant 2?

Answer: Not sure, the RI will have to be reviewed. Note: It was confirmed that soil was not analyzed using EPA Method 521 near the Chem Plant 2 during the Aerojet CAG meeting on April 17, 2013.

Alex MacDonald: We are not looking for NDMA since OU6 is not a rocket fuel area. We were previously not looking at nitrosamines in OU6 as a breakdown of Prowl. Just analyzing for Prowl. We only recently were made aware of the potential connection between Prowl and nitrosamines.

Tim Murphy: This area is not slated for development. It is currently open space and Aerojet intends to keep it as open space. Land Use Controls will be applied.

1,2-Dichloroethane (DCA) is the primary VOC of concern at Chemical Plant 2. DCA is not migrating to groundwater. Is it just in soil? DCA was previously detected in groundwater but is not currently present.

Prowl is still present in dredge pits and is mainly a risk to ecological species. Dredge pits will be backfilled up to 6 feet to keep animals from burrowing into contaminated areas.

May not include vapor extraction.

Planned path forward: Inclusion of feedback, 3/13 Proposed Plan, Public Hearing, Public Comment period, and EPA Responsiveness Summary (Responsiveness Summary is part of the Record of Decision). A Record of Decision is planned for Summer 2013.

Comment: Area 40 land was rented to burn perchlorate and laboratory wastes, including radiated rocket fuel. We need to find out what exactly radiated rocket fuel is.

Question: As an institutional control, a vapor membrane is used to coat the foundation in order to prevent vapor intrusion to indoor air. DTSC does not currently recognize that as an acceptable sole remedy because the membrane can be broken and would then no longer be effective. How will EPA address this?

Gary Riley: Institutional controls require approval by the DTSC.

Steven Ross: It's too early to discuss specific institutional controls at this point.

Question: Will you go back and sample indoor air at newly constructed residential areas?

Answer: No.

Daniel Stralka: We have performed tests on membranes. The Institutional Control is not just a membrane. Plumbing is also installed that offers a path of least resistance to allow potential volatile contaminants to migrate away from the building and not enter it

Comment: There are questions about long term effectiveness.

Question: Are conduits always used along with membranes?

Answer: Yes. If the membrane fails, gas moves into the porous materials and moves around the residence into the surrounding air.

Kevin Mayer: The Record of Decision usually doesn't prescribe method design for the selected remedy.

Comment: You may also need a ventilation fan.

Gary Riley: Regardless of additional methods used, you can't use just a membrane as an Institutional Control.

4. Discussion of Area 40 issues; Area 40 is located in the Island Operable Unit (OU7) – Tim Murphy

Mr. Murphy gave a presentation on Area 40, which is to the east of the Aerojet Property. Mr. Murphy provided a presentation that will be attached to the final meeting minutes.

Area 40 is an area north of Grantline Road that is slated to be part of the Hillsborough Development in Folsom. Volatile organic compounds, the entire range, are beneath the site. The land use planning process made changes in the plan to accommodate the site.

Area 40 is now planned for oak tree mitigation, and oak trees will be planted at an increased ratio. The Ettinger model was used. Unimproved space at Area 40 will include a 100 foot buffer surrounding areas containing constituents of concern.

Open space will include 265 acres that encompasses the groundwater plume at Area 40. Single family residences are planned to the north. Within the groundwater plume, trichloroethene (TCE) has been detected at concentrations up to 50,000 parts per billion and perchlorate has been detected at up to 10,000 parts per billion.

Comment: When the residential area was originally planned, a closer look needed to be taken.

Response: Environmental Impact Report/Environmental Impact Statement reports are written for all planned residential areas and all planned residential areas are subject to regulatory compliance.

Question: Has Area 40 always been a part of the Island OU?

Answer: Yes, because of high TCE and perchlorate concentrations. Remediation requirements for Area 40 will be similar to the rest of the Island OU.

Question: How is what Tim Murphy is presenting related to cleanup?

Alex MacDonald: We know where contamination is located but not what to do about it. When the Remedial Investigation comes out we'll check and see that assumptions made in the Area 40 presentation are still correct.

Gary Riley: Putting Area 40 in open space land use doesn't inform remediation requirements. Open space will allow remediation to occur. Some areas within Area 40 may not be acceptable for residential use without remediation.

Question: What is the closest distance of the groundwater plume to a single family residence?

Answer: The areas restricted to residential development due to potential of volatile organics to migrate from groundwater is based on a TCE concentration of 5 micrograms per liter or greater in groundwater, along with an additional 100-foot buffer added to that as a safety factor.

TCE is not the only constituent of concern in Area 40. Perchlorate and the other contaminants are present at Area 40.

Due to disposal in sumps – contamination is primarily in groundwater at depths of 10-15 feet below ground surface and not soil.

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

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

A map showing existing water wells was discussed during the meeting but will not be provided as the exact location of water wells for public and private water systems is not

generally provided to the public. A general discussion of wells that are shut down was had.

Comment concerning NDMA within drinking water wells from Travis Anderson of the Golden State Water Company: NDMA has a State of California notification level, which is different from a federal Maximum Contaminant Level. If the notification level is exceeded in a well, the water company has to notify regulatory agencies. The water company is not required to notify the public when the notification level is surpassed. The Department of Public Health recommends that the water provider notify the customers of the exceedance.

Discussion of two wells located just south of White Rock Road. One is on Aerojet property. Well 1028 has never contained any contaminants and was used for cattle ranch irrigation. Well 1029 is being used for industrial purposes by a concrete reuse company. Perchlorate and TCE have been detected in well 1029 below the Maximum Contaminant Levels. The well is being treated to remove TCE and is currently being equipped with treatment units to remove perchlorate.

From the presentation notes on bullet G: GET D is being demolished and water will be rerouted to ARGET for treatment.

Bullet E: A water supply well is being changed to an extraction well that will be connected to the GET K facility. That is taking longer than expected.

Bullet I: Existing pipeline is being replaced with HDPE pipeline.

Bullet O: New monitoring wells and extraction wells are being constructed.

Bullet S: Geotechnical borings are being installed to test soil for porosity and to test for other parameters in order to design a soil vapor extraction system as well as to decide whether a soil vapor extraction system will be constructed at all.

6. Tentative 2013 meeting dates – Action Items

The December 15, 2012 minutes were finalized. The next Aerojet CAG meeting is scheduled for April 17, 2013. Tentative dates for 2013 are shown below:

- May 15
- July 17
- September 18