Community Advisory Group - Aerojet Superfund Issues
Wednesday, November 16, 2022, | 7 p.m.
WebEx Meeting

1. Welcome & Introductions – Janis Heple, CAG Chair

Janis Heple, CAG Chair began the meeting with introductions and thanked everyone for participating in the online meeting. The meeting took place virtually through WebEx.

Attendees:

- Allyson Jeffers, EA/HDR
- Alta Tura, Sacramento Area Creeks Council
- Christopher Fennessy, Aerojet Rocketdyne
- Craig Locke, City of Woodland
- Daewon Rojas-Mickelson, EPA
- Dalia Fadl, City of Rancho Cordova
- Derek Jacks, Sacramento County
- Geoff Rader, Water Board
- Grace Ma, EPA
- Janis Heple, CAG Chair
- Jimmy Spearow, Community Member
- Kevin Thomas, Sacramento Suburban Water District
- Lisa Miller, Golden State Water Company
- Peter MacNicholl, DTSC
- Stephen Green, Community Member
- Tammy Pickens, DTSC

Note: A list of abbreviations and acronyms used on this project are provided on the last page.

Between the September and November CAG meetings, DTSC's legal counsel provided follow-up comments on the Removal of Area 49000 from the Partial Consent Decree. The Chair provided these comments to the CAG via screen share during the meeting:

• How will AR be responsible for remediating any contamination that still remains at the Site not previously discovered or identified?

Response: If there is a newly discovered release of hazardous substances, Aerojet, as a present or prior owner or operator of the Aerojet NPL Site, will be required by regulators to investigate and remediate any such newly discovered release.

• Is the Site still part of the NPL Superfund? PCD has nothing to do with removing Site from NPL Superfund status?

Response: According to U.S. EPA, Area 49000 is still part of the Aerojet NPL Site. The 1989 Partial Consent Decree (PCD) imposes land use restrictions on the Site. This PCD modification document, when approved by the federal court, would remove Area 49000 from the land use restrictions imposed by the PCD. DTSC signed and recorded two Land Use Covenants with Aerojet regarding Area 49000 in December 2021, and the land use restrictions in these two Land Use Covenants will ensure that the use of the property does not interfere with ongoing and long-term remediation, monitoring, operation and maintenance activities and the implementation of the agencies-approved remedy remains fully protective of human health and the environment.

• What is the enforcement mechanism? UAO takes place of PCD?
Response: The 1989 PCD is an enforceable document entered into by Aerojet and the regulatory agencies as a result of reaching a settlement among the parties. Agencies reserve their rights and authority to issue a unilateral order against responsible parties (RPs) when the RPs fail to comply with any terms or conditions of an enforceable document such as a PCD.

• What advantage if any occurs for new landowner by removing Property from PCD?

Response: After the regulatory agencies approved the implementation of the final remedy for Area 49000, the law allows and U.S. EPA's long-standing policy allow the RPs to request removal of Area 49000 from the land use restrictions of the PCD. The current and future owners of Area 49000 are still required to comply with the abovementioned two Land Use Covenants.

This information was provided by Peter MacNicholl, DTSC, to Janis Heple, AJ CAG Chair, on 10/7/2022, via email.

Janis also mentioned that Daewon (EPA) provided the September 2022 Site Inspection Report and Ally provided this to the CAG.

Draft meeting minutes from the September CAG meeting were finalized and the finalized minutes were distributed to the CAG.

2. Aerojet Community Updates – Chris Fennessy, Aerojet Rocketdyne

- Aerojet submitted the Boundary Operable Unit Preliminary Design Investigation Report to the agencies the week of 11/7.
- One of Aerojet's old buildings (Building 49015) has been taken down on the Area 49000 site and they are getting ready for the construction of new buildings.

3. EPA Updates – Grace Ma, Daewon Rojas-Mickelson, EPA

- No updates from EPA at this time.

4. **DTSC Updates – Peter MacNicholl, Susan Scudder, DTSC**

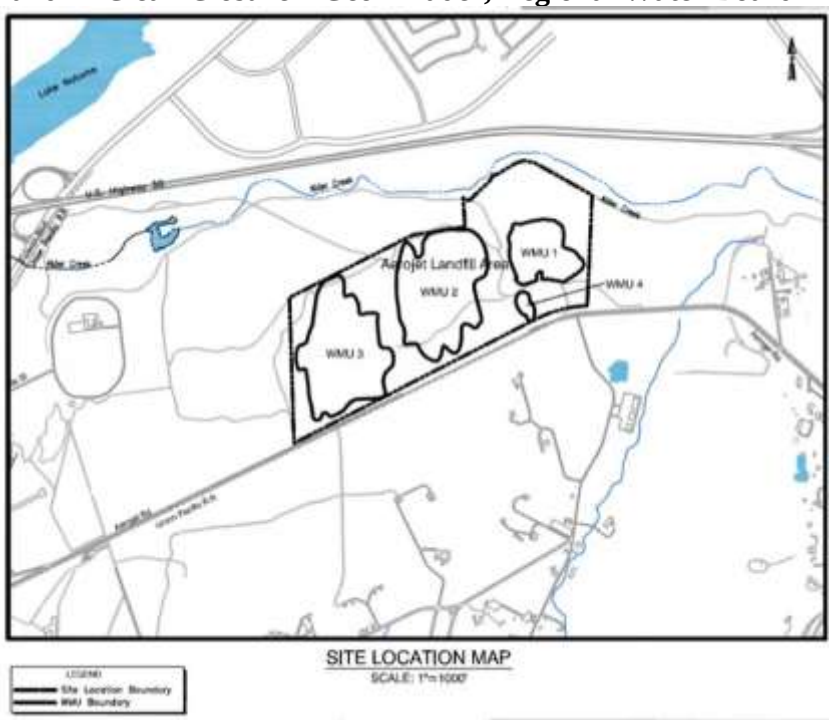
- DTSC had a meeting on 11/16 with Aerojet and the agencies to discuss the Area 40 Remedial Action Plan (RAP) and the proposed enhancements to meet the air cleanup objectives for the northwestern sector.
- The agencies also met and discussed a possible change in the land use with Aerojet. Aerojet is now proposing moving the boundary of the residential area east.
- The western area would be changed to commercial-industrial land use.
- Regardless of the change in land use, more cleanup needs to be conducted on the Site, specifically for the remediation of the existing contaminant mass.
- Splitting the northern area into two different land uses may help with achieving the cleanup goals.

- DTSC is also discussing more intensive ambient air monitoring efforts for the boundary around the open space and the northern area.

5. Water Board Updates – Geoff Rader, Regional Water Board

- No updates from Water Board at this time.

6. Aerojet Landfill Clean Closure – Geoff Rader, Regional Water Board



- Background
  - Landfill disposal operations began in 1964
  - Landfilled materials consist of:
    - Office trash
    - Metal Turnings
    - Construction and demolition waste
    - Garden cuttings
  - Landfilling approach was influenced by historical gold mining operations
    - Waste material was placed in pre-existing valleys which were created by past mining
    - Mounds of cobbles and soil were used as daily cover over waste
  - The landfill waste management units were capped and closed in the 1990s under Sacramento County oversight

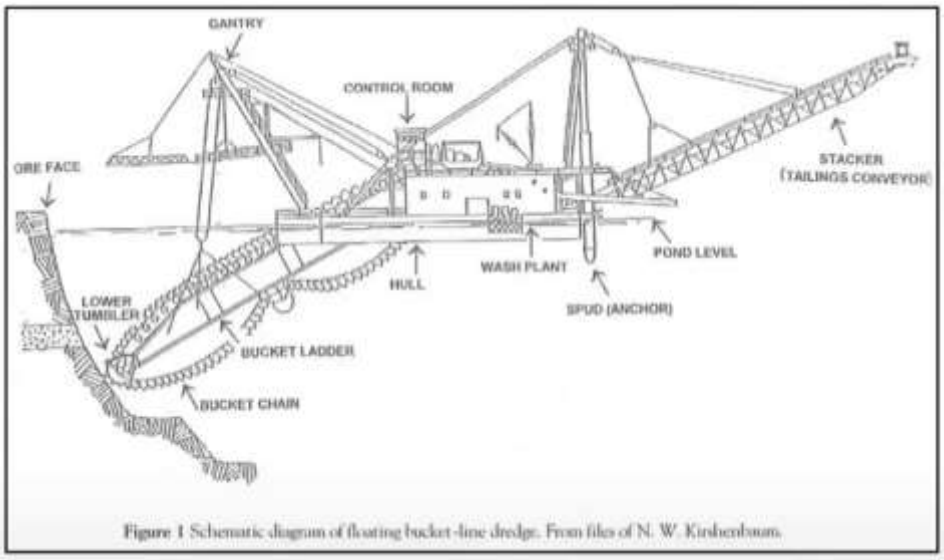


Figure 1 Schematic diagram of floating bucket-line dredge. From files of N. W. Kirshenbaum.

- California Gold Dredging
    - The image above depicts a floating bucket-line dredge operation which was the same type of dredging operation conducted at the Aerojet site
        - Can be conducted on a river or over flooded land
    - When this process is conducted on land:
        - Dig an excavation
        - Fill the excavation with water to float the dredge
    - Rebel Hill ditch was used to convey water from the American River to some of the mining activities on the Aerojet site
    - The process:
        - The bucket ladder grabs materials from the side walls of the excavation
        - Brings gold-bearing material to the dredge where it is processed
        - Cobbles and coarse material are discharged from the stacker and create cobble mounds
        - Silt and clay was released and allowed to float to the bottom of the pond

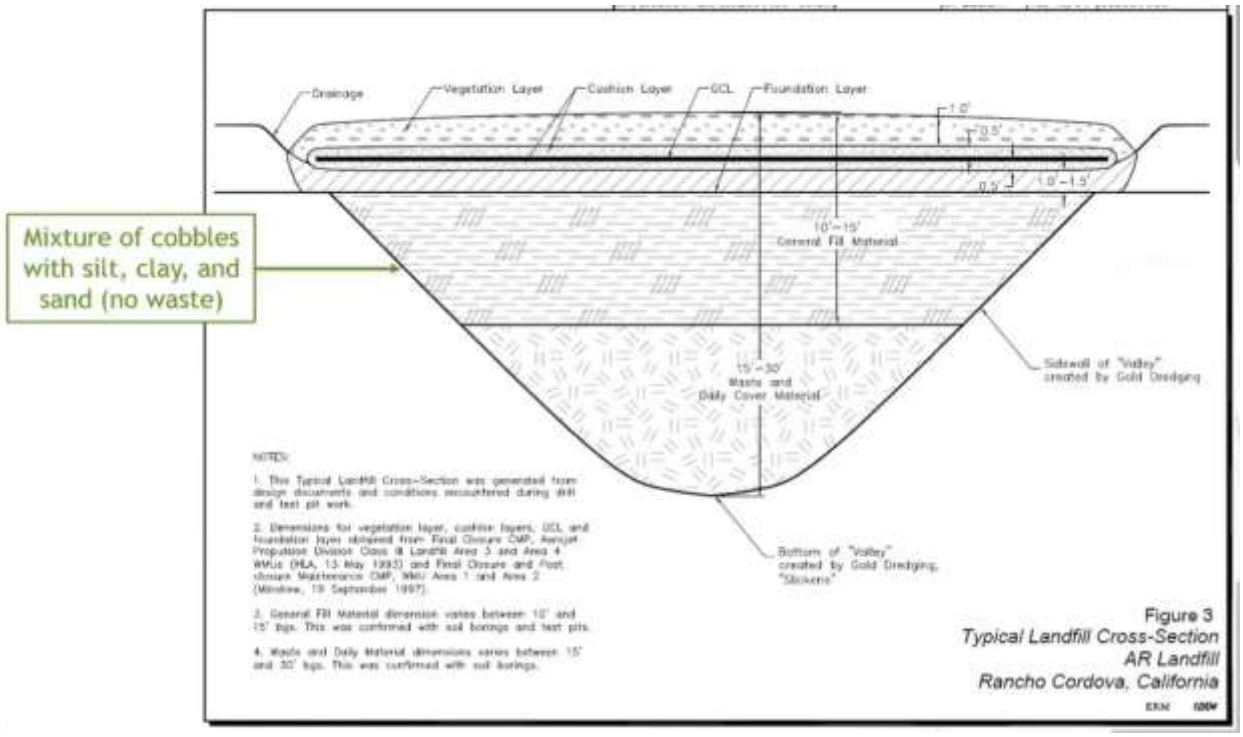
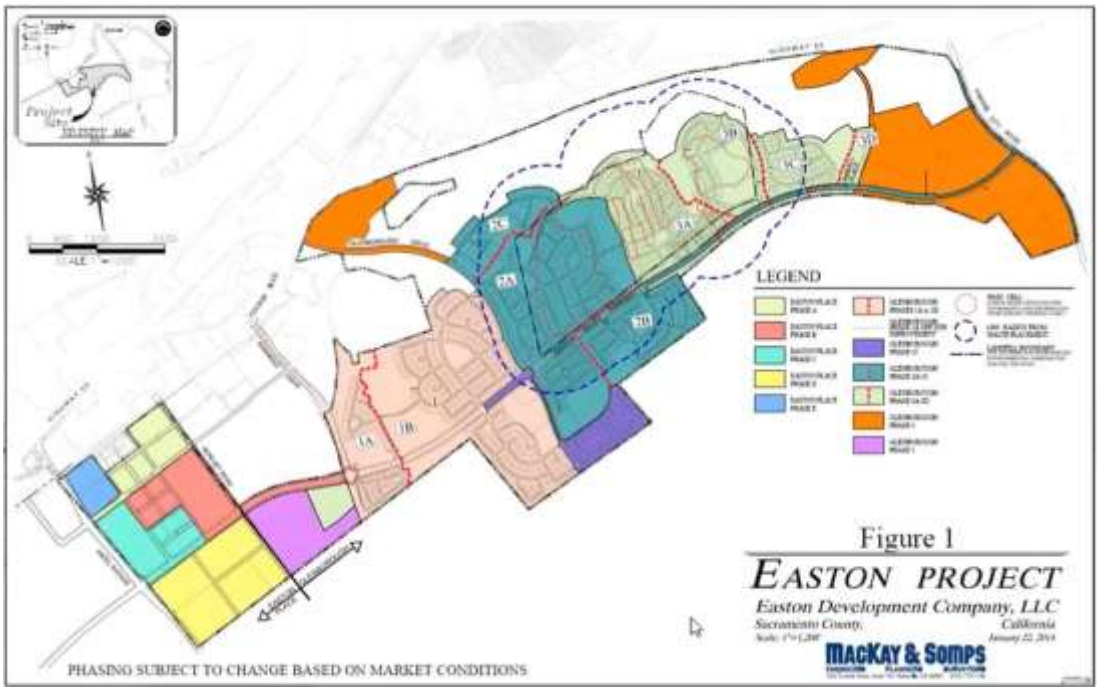


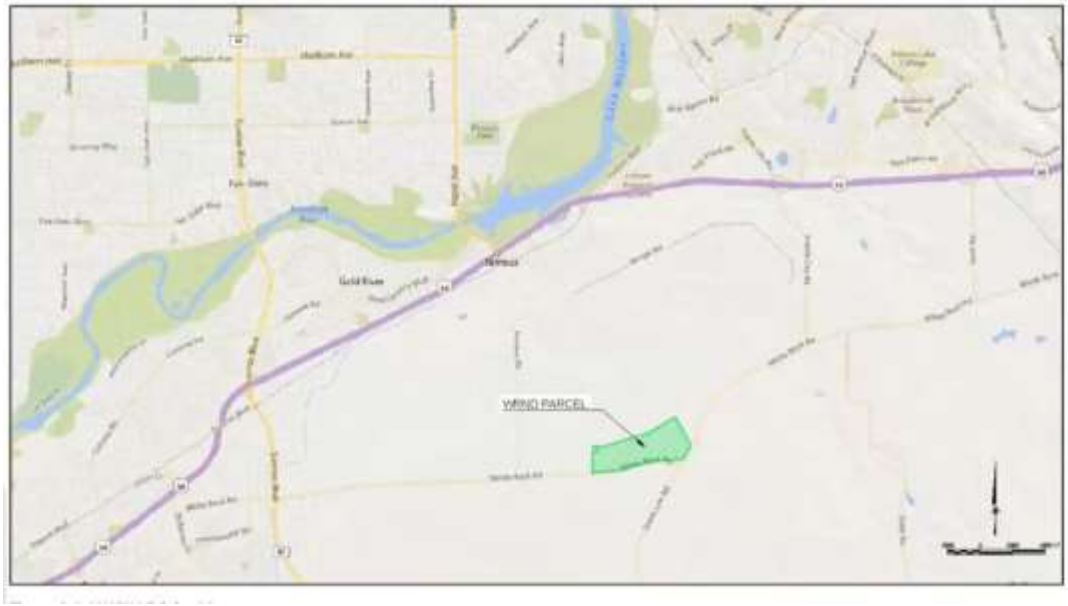
Figure 3
Typical Landfill Cross-Section
AR Landfill
Rancho Cordova, California

- Aerojet Landfill Typical Cross-Section
  - Preexisting valley created by gold dredging
  - Bottom 15-30 ft is waste and daily cover material
  - 10-15 ft is general fill material (cobble, silt, clay, and sand)
  - This landfill included an engineered cover – Top layer is a vegetative layer
- Aerojet Landfill Regulatory Oversight
  - From the OU-5 Record of Decision (ROD):
    - The landfill in Zone 4 is not included in the actions for OU-5 selected in this ROD. EPA expects that all potential risks from this landfill will be satisfactorily addressed by State and County approval and oversight of the landfill closure process.
  - Sacramento County Environmental Management District responsibilities:
    - Review Quarterly Landfill Gas Monitoring Reports
    - Review Tri-Annual (3x/year) Inspection Reports
    - Conduct annual inspections
  - Central Valley Water Board responsibilities:
    - Review annual groundwater monitoring reports
    - Adopted WDR Orders (72-21 and 88-150) regulating disposal operations and MRP 88-150 establishing monitoring requirements

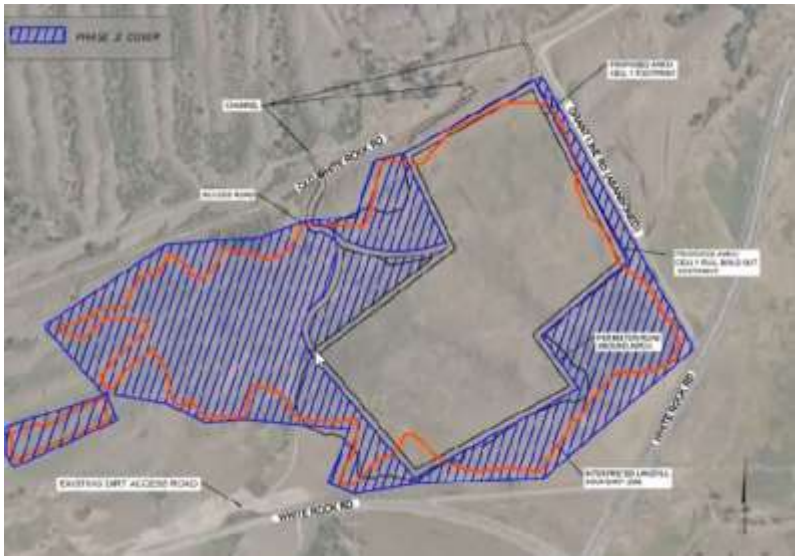


- Planned Glenborough Development
    - The end goal is the planned Glenborough Development
    - The dashed red lines outline the waste management units; these units are within the Glenborough residential development area.
    - Aerojet will clean close the landfill to allow the development process to proceed
- What is Clean Closure?
    - Clean closure has been achieved when:
        - 1. All waste materials, contaminated components of the containment system, and affected geologic materials – including soils and rock beneath and surrounding the Unit, and groundwater polluted by a release from the Unit – are either removed or discharged to an appropriate Unit or treated to the extent that the RWQCB finds they no longer pose a threat to water quality.
        - 2. All remaining containment features are inspected for contamination and, if contaminated, discharged.
- Clean Closure Process
    - Process is outlined in the *Clean Closure Plan* prepared by Tetra Tech
        - Finalized in 2015 and updated in 2022 for changes in security/emergency response and potential waste disposal locations
    1. Landfill material is excavated to the landfill limits
    2. Confirmation soil sampling conducted in accordance with *Sampling and Analysis Plan*
    3. Excavated material is stockpiled, profiled, and screened
        a. Cobbles will remain on-site
        b. Debris will be stockpiled and processed for recycling
        c. Non-hazardous fines and waste will be disposed of at the Aerojet Waste Consolidation Unit (any hazardous waste will be hauled off-site to a Class 1 facility)
    4. Placement and compaction of unimpacted excavated material and other on-site clean fill which has been pre-approved by the Agencies

5. Submittal of Clean Closure Verification Report



- Landfill Waste Disposal at the AWCU
    - The green highlighted figure shows the White Rock North Dump Parcel (WRND)
        - South of the Site

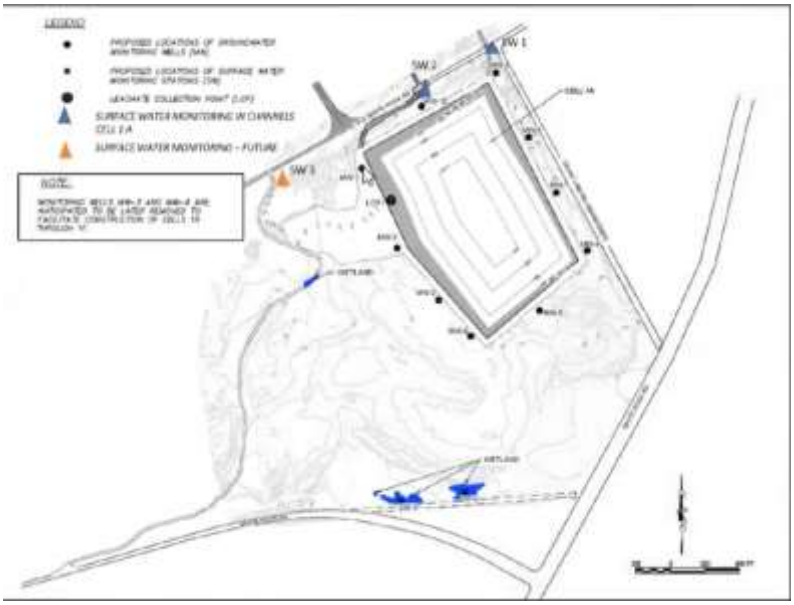


- Waste from the landfill will be placed at the planned Aerojet Waste Consolidation Unit (AWCU)
    - Shown by the black outline
    - Red line shows the footprint of the WRND landfilled area
    - Blue hashing indicates portions of WRND that will not be covered by the waste consolidation unit
        - Aerojet will construct a cap over this area to isolate the waste
    - Aerojet is constructing the AWCU on top of the existing WRND
- Existing White Rock North Dump
    - Inactive unlined waste disposal site on a 242-acre parcel owned by Aerojet
        - WRND is not part of the Superfund site

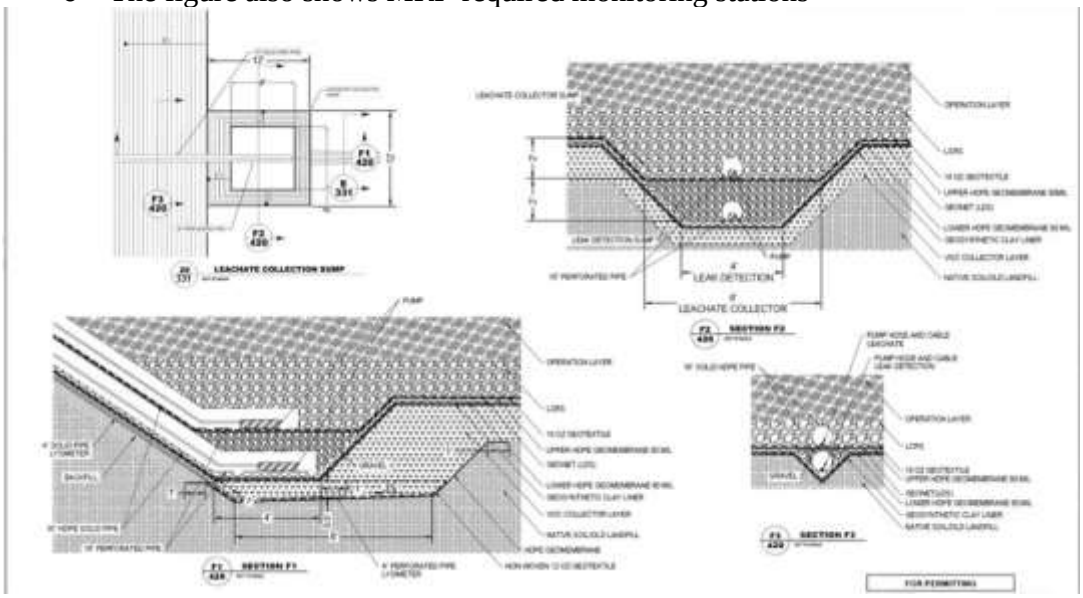
- Permitted waste disposal from 1958 to 1964
  - Unauthorized waste disposal continued into the 1970s
- Investigation of WRND began in 1983
  - VOCs and other contaminants detected in soil and underlying groundwater
- In 1996, the Regional Board issued a Cleanup and Abatement Order 96-150, requiring:
  - Submittal of an investigation work plan
  - "Cleanup and abate the pollution. . ."
- Cleanup has involved groundwater extraction and treatment east, west, and south of WRND
- Regional Board is drafting a new Cleanup and Abatement Order requiring closure and post-closure maintenance of WRND

- Planned Aerojet Waste Consolidation Unit (AWCU)
  - AWCU will be a Class II Waste Management Unit constructed up to 50 acres of the 100-acre WRND landfilled area
  - AWCU will receive waste from the landfill clean closure and Superfund site cleanup activities
  - In December 2020, the Regional Board adopted:
    - Waste Discharge Requirements (WDRs) Order R5-2020-0059 prescribing requirements for the AWCU construction, operation, closure, and post-closure maintenance
    - Monitoring and Reporting Program (MRP) R5-2020-0059 prescribing monitoring and reporting requirements for the AWCU and WRND
    - AWCU construction is planned to begin in 2023
    - Aerojet plans to complete the AWCU final closure by 31 December 2035

- AWCU Design and Construction
  - Cell 1A: First cell to be built and will hold 500,000 cubic yards of waste
  - The remaining cells will be constructed on an as-needed basis and will contain 100,000 cubic yards of waste each



- AWCU Design and Construction (continued)
  - This figure shows 10 groundwater monitoring wells that Aerojet has installed around the planned AWCU
    - Monitor groundwater for the release of waste from the AWCU
  - The figure also shows MRP-required monitoring stations



- AWCU Design and Construction (continued)
  - This figure was taken from the AWCU construction design plans
  - With this being a modern waste management unit, it will have multiple protections in place to reduce potential for a release

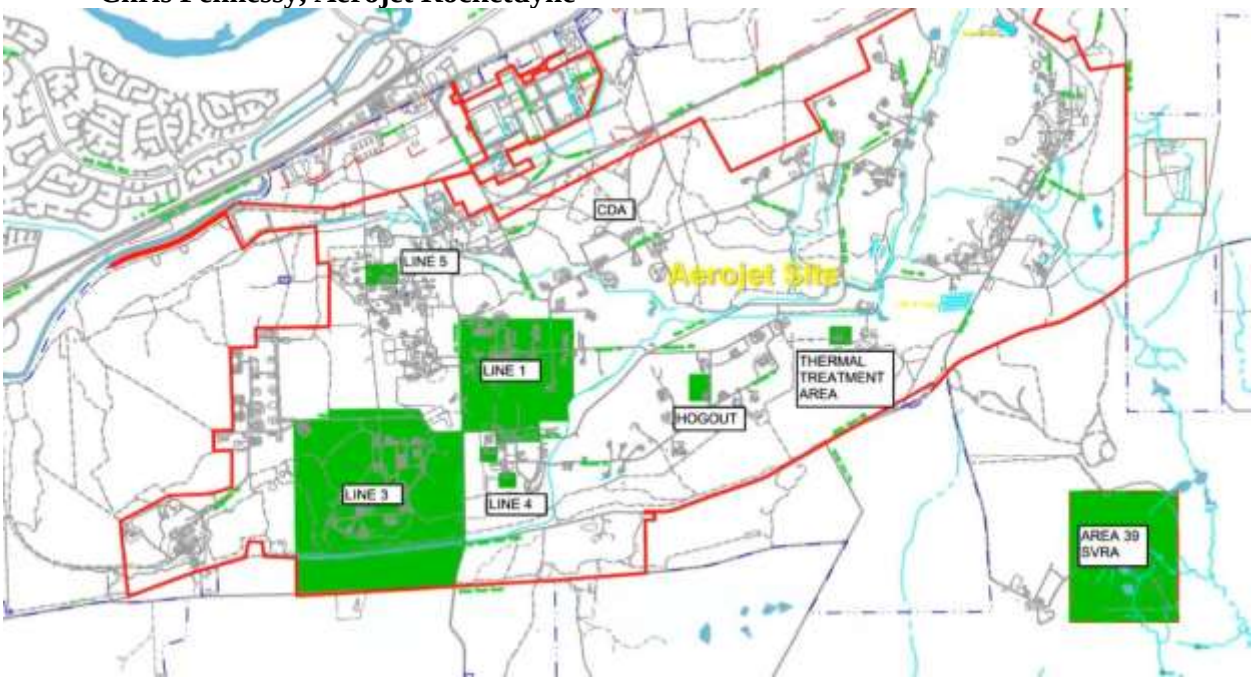
How will the investigation detect hazardous waste and address the concern of making sure that there is no hazardous waste below the solid waste sites (below the Aerojet landfill)?
G. Rader: That should be identified through the confirmation sampling effort. The hope and expectation is that as the waste is removed based on field observations and knowledge of the footprint of the landfill, Aerojet's contractors will be able to tell where the landfill waste ends and

where the "Valley" walls begin. If it's unclear or any of the waste has caused contamination, that should be identified through confirmation sampling.

Does the old landfill that Aerojet is removing have perchlorate in it?
G. Rader: Based on Aerojet's description and knowledge of materials disposed at the landfill along with investigations to assess the type of material, there should be no perchlorate.

Are the metal turnings mainly iron?
G. Rader: I am not super familiar with this term. My understanding is that is the metal scraps produced from metal working.

7. Review of OU-7 Remedial Investigation and Risk Assessment: Part 1 - Chris Fennessy, Aerojet Rocketdyne



- This map shows OU-7 or the Island Operable Unit (IOU)
- The red boundary is the Aerojet Superfund site
- When Aerojet first developed the OUs, Aerojet looked at the source areas individually (over 300 areas) and identified the locations where the most chemicals remained in the groundwater or soil vapor
    - Those areas got placed into the IOU
    - Because those areas were spread out across the site, they created little islands of areas – shown in green on the map
- Aerojet began investigating the IOU with the Boundary OU in 2006/2007
- IOU consists primarily of the Line Areas: Line 1, Line 3, Line 4, Line 5 (manufacturing lines for rockets)
    - Once the rockets were tested, there was residual propellant left in the rocket casing
    - Aerojet took those casings to the Hogout facility where a water jet was used to remove the propellant from the rocket casing
    - Aerojet would use trichloroethylene (TCE) to clean the inside of the rocket casings and the solution would be disposed of in the gunite-lined pond

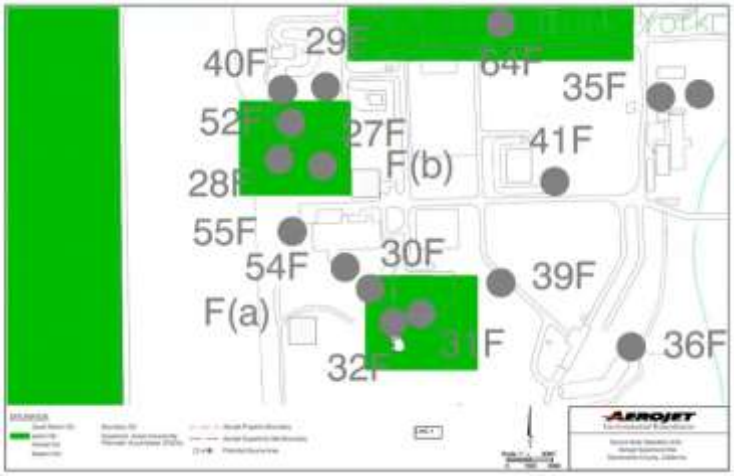
- Once the residual propellant is removed, Aerojet took the solid propellant to different areas of the site (Thermal Treatment Area, Area 39, Area 40, etc.) and open burned the propellant on the ground

- This map highlights Line 3
  - There are storage facilities in this area for the finished rocket casings which typically do not have chemical concerns associated with them
  - All of the gray dots indicate identifiers of the source areas
    - Areas 22F-24F are where Aerojet would have mixed the propellant or filled rocket casing with the propellant
    - The crystalized propellant could be set off by a spark
  - Aerojet operators would wash down the equipment with water and the water was collected in a French drain and directed to a pond area
    - Perchlorate was found in this water
  - TCE was used to clean the tools

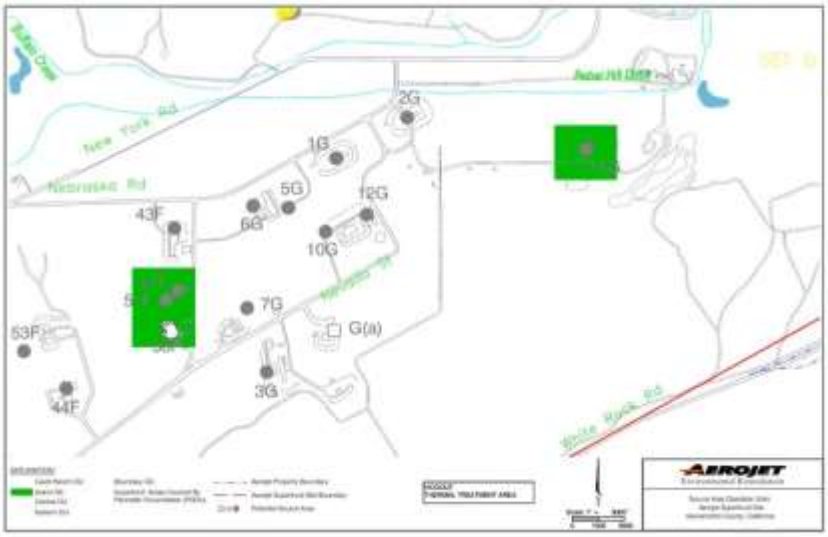
- Line 1
  - Source areas 12E, 6E, 10E, and 15E are where all of the main releases occurred

- The IOU contains 68 potential source areas

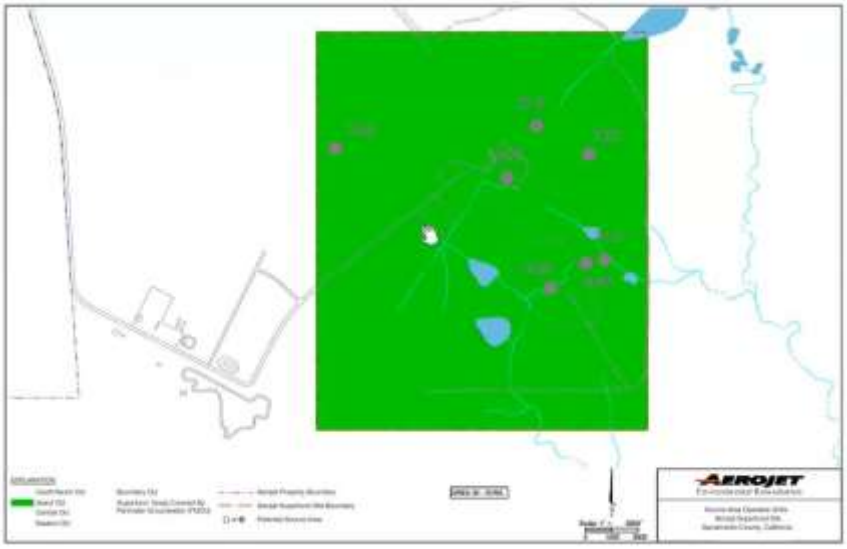
When you mention the 68 potential source areas, was that within all of the IOU?
C. Fennessy: The entire IOU has 68 source areas.



- Line 4 (additional areas within Line 4)
    - High-concentration areas where chemical releases occurred
    - Similar to Line 3, Line 1, and Line 5



- Hogout Facility
    - Location where Aerojet cleaned the rocket casing
    - Took the solid perchlorate and moved it to the thermal treatment and ignited it



- Area 39
    - State vehicular recreation area
    - All of the gray areas were waste areas for propellant and laboratory waste

- Site 44D
    - Disposal site
    - Perchlorate release in this area which caused it to meet the IOU criteria
- Aerojet completed the remedial investigation in 2007 along with the preparation of the RI Report and Risk Assessment
    - Between 2012-2015, the draft RI and draft Risk Assessment were submitted
        - Both have been submitted as “draft final”
        - The agencies have accepted the approach
- When Aerojet drafted the Risk Assessment they found potentially significant risks to ecological receptors based on the higher concentrations of chemicals in the surface soil
    - Required to perform a Baseline Ecological Risk Assessment in 2016
    - Aerojet finished data collection 2022 and is in the process of analyzing the data
- Aerojet is also in the process of comparing screening levels from 2006 to current screening levels to determine if additional data is necessary to update the Risk Assessment
    - 2023 – A Sampling and Analysis Plan to conduct data gap sampling to finish the remedial investigation for IOU
    - 2024 – Revised Risk Assessment to the agencies for review

On the map, there are a number of green areas and some of them are off of the Aerojet property. Is there a reason for the placement of these green areas? It looks like a pattern.
C. Fennessy: The smaller lighter green areas are street names.

What about the hydrazine and methyl hydrazine fuel which was a large source of NDMA?
C. Fennessy: The Aerojet site was split up into solid rocket motor builds and liquid rocket engine builds. The Line areas are solid rocket engine builds and the eastern OU is where all of the liquid rocket engines were filled and tested. The primary sources for NDMA on the Site are in the eastern OU (OU-8). NDMA and hydrazine are not the primary chemicals of concern in the IOU.

8. Area 49000 Vapor Mitigation – Susan Scudder, Peter MacNicholl, DTSC

- Area 49000 Background and Historic Use
    - Southwest corner of Folsom Blvd and Nimbus Rd
    - "Area 49": Perimeter Groundwater Operable Unit (PGOU or OU-5) soil areas 32D-38D, C14, C15
    - "Central Area 4900": The subset of Area 49 soil areas required soul vapor extraction (SVE), 32D, 34D, 35D, 38D
    - Rocket motor manufacturing and testing; cleaning/degreasing activities; bulk chemical storage; other industrial machining.

- The photo shows Area 49000
    - The dotted black line outlines the boundary of Area 49000
    - At Nimbus Road and Folsom Blvd
- Remedial Actions – 2011 PGOU Record of Decision
    - Groundwater (Interim ROD):
        - Active remediation ongoing per PGOU GET systems
        - Groundwater Land Use Covenant to prevent extraction/recharge
    - Soil (Final ROD):
        - SVE for Central 49000
        - Land use restrictions and vapor mitigation
- Remedial Actions Completed: SVE System
    - Operated January 2016 – December 2019 under Agency oversight
    - Remedial Action Completion Report (Stantec, 2021):

        - VOC concentrations in influent decreased by 96%
        - Removed more than 320 lb. TCE, 155 lb. cis-1, 2-DCE, 499 lb. total VOCs
        - No longer cost-effective to continue; asymptotic removal rates
    - August 2021: EPA issues approval of Remedial Action Completion Report. 49000 Area remedy would not be complete until LUCs were recorded
- Remedial Actions Completed: Land Use Covenants
    - Groundwater LUC recorded December 2021
        - No drilling, boring, constructing, or using a well for extracting water except: agency approved site remediation, or unless expressly approval in writing by USEPA and RWQCB
        - No extraction of groundwater encountered during excavations for construction
        - No installing, operating, or maintaining a recharge or sedimentation control basin designed to infiltrate water. No injection.
- Remedial Actions Completed: Land Use Covenants
    - Vapor mitigation LUC recorded December 2021
        - 60.389 acres
        - Prohibits structures intended for use as residence, hospital, school for persons under 21 years of age, day care, or other permanently occupied human habitation
        - No contaminated soils or materials distributed without a soil management plan approved by DTSC. No activity that may interfere with site investigation, remediation, monitoring, or O&M activities
        - No new construction except as approved and with DTSC approved Vapor Mitigation design, plan and O&M plan, indoor air sampling plan approved by DTSC and implemented with results below threshold values prior to occupancy
- Area 49000 Remedial Action Agreement
    - Signed May 2022
    - Agreement for NorthPoint to conduct response actions consistent with requirements of vapor mitigation LUC for any new buildings on the property
    - Requires DTSC approval of RAP and remedial design document, including O&M plan and O&M agreement prior to construction

- NorthPoint is planning on building at least five buildings in phases
    - Phase 1: Buildings 1 and 2
    - NorthPoint will be conducting a RAP
    - DTSC is working with NorthPoint for CEQA process and community outreach
- NorthPoint RAA Activities
    - Phase 1 Environmental Site Assessment – 2021
    - Phase II Environmental Site Investigation Summary Report – 2021
    - Site Management Plan – approved by DTSC August 2022
    - Preliminary design plan and O&M plans (building 1 & 2) – DTSC is reviewing
    - Draft O&M agreement – DTSC legal reviewing Draft RAP – not yet received
    - Draft Remedial Design document – to be prepared after final RAP

There are multiple detention basins on the NorthPoint map. Why are those located in Area 49000?
P. MacNicholl: In this location, there is not a stormwater system in place. At this point, natural filtration has been used but because the LUC prohibits recharge, DTSC is working with NorthPoint to make sure that the basins are not going to percolate down.

Could the retention basins house fish in them or could they be used for recreation?
P. MacNicholl: That has not been discussed yet.

You mentioned conducting community outreach for the Remedial Action Plan. Is that an official decision point in the Superfund site process?
P. MacNicholl: The land sold to NorthPoint is now private land. The LUC specifically identifies that the remedy needs to be implemented and carried out. That is why the RAP was chosen which includes public outreach requirements.

Is EPA done with Area 49000 and it is now in DTSC's hands?
P. MacNicholl: Yes.

9. Next Meeting Date: January 18, 2023

Acronyms and abbreviations used on this project:

ARAR	Applicable or Relevant and Appropriate Requirements
AWCU	Aerojet Waste Consolidation Unit
BERA	Baseline Ecological Risk Assessment
BTU	British thermal unit
BGS	below ground surface
DCE	Cis/Trans-1,2-Dichloroethylene
CAG	Community Advisory Group
CalAm	California American Water
CCl_4	carbon tetrachloride
CEQA	California Environmental Quality Act
CIP	Community Involvement Plan
COC	contaminants of concern
CSM	Conceptual Site Model
DTSC	California Department of Toxic Substances Control
ECOS	Environmental Council of Sacramento
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
EW	extraction well
FS	Feasibility Study
FYR	Five-Year Review
GET	groundwater extraction and treatment
GPM	gallons per minute
HASP	Project Health and Safety Plan
HHERA	Human Health and Environmental Risk Assessment
HiPOx	hydrogen peroxide ozone
HOA	homeowner's association
HPT	Hydraulic profiling tool
HVAC	heating ventilation & air conditioning
IC	institutional controls
IRCTS	Inactive Rancho Cordova Test Site
ISCR	in-situ chemical reduction
LAFCo	Local Agency Formation Commission
LUC	land use covenant
LWRCP	Long-term water replacement contingency plan
MCL	Maximum contaminant level
MDL	method detection limit
MOU	Memorandum of Understanding
NDMA	N-Nitrosodimethylamine
NPDES	National Pollutant Discharge Elimination System
O&M	Operations & Maintenance
OU	operable unit
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PCD	Partial Consent Decree
PCE	tetrachloroethylene / perchloroethylene
PFAS	Per- and polyfluoroalkyl substances
PFC	perfluorinated compound
POA	property owner's association
PPB	parts per billion
PPM	parts per million
PPT	parts per trillion
PRB	permeable reactive barrier
QA	quality assurance
QAAP	Quality Assurance Project Plan
RA	remedial action
RAA	remedial action areas
RAB	Remedial Advisory Board
RAO	Remedial Action Objectives
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RD	remedial design
RDIP	Remedial Design Implementation Plan
RI	remedial investigation
ROD	record of decision
ROI	radius of influence
RPM	remedial project manager
RWP	remedial work plan
RWQCB	Regional Water Quality Control Board
SAP	Sampling Analysis Plan
SARA	Save the American River Association
SIM	selective ion monitoring
SOI	Sphere of Influence
SOP	Standard Operating Procedures
SOW	Scope of Work
SP	sampling points
SVE	soil vapor extraction
SVOC	semi volatile organic compounds
SRWTP	Sacramento Regional Wastewater Treatment Plant
TCE	trichloroethylene
UAO	Unilateral Administrative Order
USACE	United States Army Corps of Engineers
UV	ultraviolet
VI	vapor intrusion
VC	vinyl chloride
VOCs	volatile organic compounds
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter

Department of Toxic Substances Control

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December 8, 2022

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Planning and Environmental Review

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DRAFT ENVIRONMENTAL IMPACT REPORT FOR WHITE ROCK NORTH MINE – DATED NOVEMBER 2022 (STATE CLEARINGHOUSE NUMBER: 2022110169)

Dear Ms. Inman:

The California Department of Toxic Substances Control (DTSC) is providing comments on the County of Sacramento Planning and Environmental Review Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for White Rock North Mine (PLNP2021-00216 and SCH #2022110169). The proposed project consists of aggregate mining on an approximately 2,125-acre portion of the Aerojet Rocketdyne Facility in Sacramento County. The project proponent, Granite Construction Company (Granite), proposes to mine and transport up to 25 million tons of material over a period of approximately 20 years. The mined materials are planned to be transported off-site by a new conveyor connecting to an existing aggregate processing plant which is operated by Teichert under separate permit.

Aerojet-General Corporation Superfund Site Background

Aerojet Rocketdyne, Inc. (Aerojet) and its subsidiaries have operated the approximately 8,500-acre facility in Sacramento County from the 1950s; operations primarily included solid rocket motor manufacturing and testing, liquid rocket engine manufacturing and testing, and chemical manufacturing. These operations resulted in the release of unknown quantities of hazardous substances/materials, including trichloroethene (TCE), perchlorate, and N-nitrosodimethylamine (NDMA), resulting in impacted soil and groundwater. Aerojet discontinued rocket motor component manufacturing and testing activities at this location in 2019.

The Site, Aerojet-General Corporation, was added to the National Priorities List (NPL) in 1983. In 1989, Aerojet, the United States Environmental Protection Agency (USEPA), the California DTSC, and the California Central Valley Regional Water Quality Control Board (RWQCB) entered into a Partial Consent Decree (PCD), obligating Aerojet to perform Remedial Investigation (RI)/Feasibility Study (FS) at the Site and take specific interim obligations. The PCD was later modified in 1998 and 2002. The 1989 PCD established procedures for completion of the Sitewide RI/FS in three phases: Scoping Phase, Phase I RI/FS, and Phase II RI/FS. Sitewide preliminary characterization (Scoping Phase) was completed in the 1990s. The 2002 modification to the PCD allowed for an Operable Unit (OU) approach to the RI/FS, resulting in the formation of multiple OUs. Approximately 5,900 acres of the Aerojet Rocketdyne Facility are currently included in the Aerojet-General Corporation Superfund Site (Site) and undergoing investigation, monitoring, and remediation under the various OUs.

DTSC Review of the Provided Documents

The DTSC reviewed the NOP as well as the Granite, 2022, Project Description for the White Rock North Mine Project, Revised July 2022 (Project Description), viewed online at:
https://planningdocuments.saccounty.net/ViewProjectDetails.aspx?ControlNum=PLNP2021-00216

The NOP was provided for agency comment on the scope and content of environmental information pertinent to the proposed project. The NOP includes a subsection on *Hazards and Hazardous Materials,* which states: “The area of the project site is within the Aerojet Superfund remediation project area. Specific areas that contain hazardous materials sites will be identified in the vicinity of the proposed excavation area. Project compatibility with any existing hazardous materials sites will be examined. In addition, potential mining-related impacts of the Project regarding the potential spill of hazardous materials will also be examined.”

The Project Description includes the following: “Granite has coordinated extensively with Aerojet’s remediation team in developing this application to ensure that mining will not conflict with or impede the ongoing clean-up activities at the site. Areas that have been identified as containing environmental constraints related to the Superfund order have been excluded from mining under the proposed Project. In addition, Granite proposes no uses, such as settling or process water ponds, that would discharge waters in a manner that would affect the groundwater plume or impede Aerojet’s remediation activities.”

The NOP includes a Site Vicinity Map with the planned project boundary and location of conveyor connection. Based on DTSC review of the planned project boundary and comparison to Aerojet Superfund Site maps, the following observations are made:

- The proposed mining area includes large portions of the Superfund Site OUs 8 and 9. OU-8 (Eastern OU) completed a Final RI/FS Sampling and Analysis Plan (SAP) in 2009; the SAP RI fieldwork is not currently scheduled to begin until 2024. OU-9 (Central OU) completed a Draft RI/FS SAP in 2008; the SAP RI fieldwork is not currently scheduled to begin until 2025. However, the regulatory agencies may require Aerojet to begin RI efforts at OU-8 and OU-9 sooner than the current schedules.
- The proposed mining area includes Hogout source areas 50F, 51F, and 57F, and Thermal Treatment Area (TTA) source area 11G of the Island Operable Unit

(IOU, or OU-7). OU-7 RI is currently ongoing with a Baseline Ecological Risk Assessment in progress.

- Several Resource Conservation and Recovery Act (RCRA) units have been referred to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to be addressed under OU-7, OU-8, and OU-9 cleanup activities.
- Several septic tanks identified during previous RI/FS activities that require additional investigation are also being addressed under OUs 8 and 9. Thirty-two septic tanks were assigned to OU-8 source areas, and 55 septic tanks were assigned to OU-9 source areas to address potential releases and cleanup under CERCLA.
- The proposed mining area also encompasses and/or is adjacent to Perimeter Groundwater Operable Unit (PGOU, or OU-5) remedial operations, including active monitoring wells, extraction wells, and groundwater extraction and treatment system (GET) AB.

DTSC Comments for Consideration of Environmental Information Pertinent to the Proposed Project

As described above, the NOP and Project Description indicate that the mining will not conflict with or impede the ongoing remedial activities at the Site, and that areas identified as potential hazardous materials sites will be/have been excluded from the proposed mining activities. The proposed mining area boundary includes large portions of OUs 8 and 9, and two source area management areas within OU-7, which still require completion of remedial investigation, risk characterization, and remedy determination. Additionally, multiple RCRA units and septic tanks have been referred to CERCLA to be addressed under these OUs within the proposed mining boundary. The proposed surface mining area overlays contaminated groundwater plumes undergoing monitoring and remediation in accordance with the PGOU Groundwater interim remedy.

DTSC provides the following comments on the proposed project:

1. The land within the proposed project boundary is included in and subject to land use restrictions pursuant to the PCD. The proposed mining operations must not violate any restrictions or requirements as described in the PCD or any applicable current or future Land Use Covenants recorded for the Site.
2. While potential contaminated areas have been identified within these OUs during the Sitewide Scoping Phase in the 1980s and 1990s, the vertical and lateral extent of contamination within these OUs have not been fully characterized. RCRA units and septic tanks that have been deferred to CERCLA since the Scoping Phase to be addressed under these OUs also require evaluation for cleanup. Mining and soil disturbance activities conducted within these OUs that have not had remedial investigation and risk assessment completed and remedy identified could potentially put mine workers and nearby communities at risk to exposure from contaminated materials; potentially impact end user health and safety from mined material; and/or have impacts on the future remedial actions not yet planned for these areas.

   Should the proposed mining project planning activities proceed, DTSC recommends that the specific areas planned for soil disturbance within the proposed project boundary be defined and assessed as having no evidence of soil contamination that would pose risks to human health or the environment prior to soil disturbance or mining activities being conducted. Samples should be collected from areas the mining company intends to mine or disturb to verify and reduce these risks. DTSC also recommends that appropriate caution be used, and contingency plans be in place should unknown soil contamination be encountered during these mining activities.
3. The mining operations must not impede or interfere with the schedule or implementation of the cleanup process for the Site.
4. The mining operation must not in any way introduce new contamination or spread or exacerbate existing contamination in soil and groundwater. Any person

that causes new contamination or exacerbates the existing contamination would be held jointly, severally, and strictly liable for investigating and remediating such contamination or potential contamination.

Should you have any questions or comments regarding this matter, please contact Susan Scudder at (916) 255-3601, or Susan.Scudder@dtsc.ca.gov.

Sincerely,

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