



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 Hawthorne Street
San Francisco, California

Sent Via Electronic Mail Only

July 30, 2013

See Addressee List

Subject: EPA Comments on Grab-Groundwater Assessment and Proposed Well Installation Report and Next Steps for Evaluation of Hydraulic Containment Middlefield-Ellis-Whisman (MEW) Superfund Study Area Mountain View and Moffett Field, CA

Dear MEW Regional Program, Navy, and NASA representatives:

EPA has reviewed the Grab-Groundwater Assessment and Proposed Well Installation Report (hereinafter, "Report") prepared by the Regional Groundwater Remediation Program (RGRP), dated March 27, 2013. The main purpose of the field work summarized in the Report was to confirm and better define the MEW plume boundary to demonstrate hydraulic containment in specific portions of the plume. The areas evaluated were specified by EPA in its letter dated September 27, 2012, consistent with comments on the 2009 5-Year Review (EPA 2009) which required further confirmation of hydraulic containment and capture of the MEW groundwater contamination. The RGRP completed approximately 42 cone-penetrometer tests and collected over 100 grab groundwater samples as part of this effort. Based on the results of the field work conducted, additional monitoring wells are proposed to fully demonstrate hydraulic containment in certain areas and to further refine the MEW plume boundary. EPA is requesting four additional wells to achieve this objective along with the seven wells currently proposed in the Report. EPA is also requesting an evaluation of groundwater flow in the B1/A2 Zone north of Highway 101 once the new wells are installed as specified in the attached comment letter.

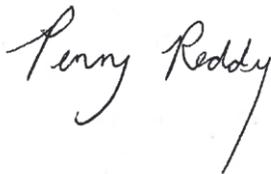
While this past sampling effort confirmed the plume boundary in most areas and is consistent with previous results, as you know, significantly elevated concentrations of trichloroethene (TCE) were detected in groundwater on the western boundary of the plume along Evandale Avenue. EPA has been discussing with RGRP the approach to address the TCE hotspots, and additional evaluation and field work has been underway to assess potential options, including the potential to pilot test chemical oxidation within the hot spot areas. While this Report proposes two additional B1/A2 wells in the residential area along Evandale Avenue to monitor the plume, additional shallow A/A1 wells will be needed in the Evandale Avenue area to evaluate the performance of cleanup activities and to characterize groundwater sufficiently to define the vapor intrusion study area boundary. Thus, EPA expects that the additional work along Evandale Avenue will continue on a separate path from the well installation work to support hydraulic containment and will be summarized in a separate report.

The table below lists the tasks to be completed and due dates for the well installation work to confirm hydraulic containment of the plume.

Task	Due Date
Submit Final Grab-Groundwater Assessment and Proposed Monitoring Well Report	45 days from receipt of letter
Install Monitoring Wells	45 days from EPA approval of the final report
Report summarizing well installation, initial sampling and evaluation of groundwater flow in B1/A2 Zone	60 days following completion of field work
Quarterly Sampling of Wells	Provide laboratory data once received

Thank you for your efforts to complete this work. EPA appreciates the significant sampling work conducted by the RGRP to evaluate the plume boundary and the responses taken thus far once the hot spots on Evandale Avenue were identified. If you have any questions, please do not hesitate to contact me at (415) 972-3108 or Reddy.Penny@epa.gov.

Sincerely,



Penny Reddy
Remedial Project Manager, Superfund Division

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List of References

EPA 2009. Final Second Five-Year Review Report for Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View and Moffett Field, California. September.

EPA 2012. EPA Comments on Work Plan for Hydraulic Containment of Groundwater Plume MEW Superfund Study Area, Mountain View and Moffett Field, CA. September 27.

EPA Comments on Grab-Groundwater Assessment and Proposed Well Installation Report as follows:

Section 3 –Results and Discussion -Area identified on Evandale Avenue, Page 8.

The last sentence of page 8 states the following: “These significantly lower TCE concentrations between the newly identified area and the MEW plume demonstrate that these higher TCE concentration areas are not hydraulically connected to the MEW Plume.” The lower concentrations in these areas could suggest that the plume may not be hydraulically connected. However, the lower concentrations may also be the result of contamination, which has already migrated and there is no evidence of a hydraulic barrier. Please remove the sentence.

Section 3 – Results and Discussion- Western Margin of Plume in the B1/A2 Zone, Page 8 and Figure 3. The plume boundary is not drawn on Figure 3 for the section of the plume north of Highway 101 in the B1/A2 Zone between Berry Court and Fairchild Drive. The figure should be revised to show the plume extending into the other area with a dashed line indicating that the boundary is not yet fully determined. At this point, the boundary of the MEW plume in this area has not been defined. While the report indicates that the VOCs may be the result of contamination commingled with another source, it has not been determined whether the VOCs are the result of another source or an extension of the MEW plume. The RGRP has one data point (CPT 34) in this area where TCE was detected in grab groundwater boring at concentrations of 12 ug/L (54 to 58 feet bgs) in the B1/A2 Aquifer. TCE was not detected in the shallower sample collected at 33 to 36 feet bgs. There is one data point collected further to the west by EPA that contained TCE at a concentration of 19 ug/L. EPA requests that the RGRP conduct additional work to assess the plume boundary in the B1/A2 Zone. The RGRP should prepare potentiometric surface maps using water level data from the proposed wells to be installed in the area to refine groundwater flow. Limited water level data is currently available and groundwater flow is shown to the north which does not necessarily indicate that there is a commingled source. Historical groundwater data and flow in the area should also be reviewed to evaluate the plume boundary.

Section 4 -Supplemental Grab Groundwater Sampling Program

Modify 1st sentence. Supplemental grab groundwater sampling will be conducted to evaluate VOC concentrations upgradient of CPT-15 pending property owner access.

There is limited data immediately downgradient of CPT 21. EPA understands the challenges with property access but please review if there is a property that could be sampled closer to the hot spot area.

Section 5 - Proposed Monitoring Well Installation, Page 11.

This section indicates that proposed monitoring wells located within the treatment zone footprint for the Evandale Avenue will be provided separately with the remedy design. As indicated in the

cover letter, additional shallow A/A1 wells will also necessary to monitor the performance of cleanup activities and to define the vapor intrusion study area boundary.

The information regarding the installation of NASA-6-A2 needs to be included in this report. This well is critical for demonstrating hydraulic containment.

Section 5- Proposed Monitoring Well Installations Western Margins Shallow A/A1 Aquifer – North of Highway 101 and Figure 2

In addition to the well proposed at S. Akron Road (near CPT 23), monitoring wells should also be proposed at locations CTP 25 and SB2 to provide plume delineation in the shallow aquifer and refine the vapor intrusion boundary.

Section 5- Proposed Monitoring Well Installations - Western Margins B1/A2 and Figure 3

Monitoring wells should be installed at CPT 27 and CPT 34. While CPT 34 appears to be in the area which may be comingled with contamination to the east, the boundary still needs to be monitored.

Reporting

Add that groundwater potentiometric surface maps will be included in the Monitoring Well Installation Report.

Sections 5.6 and 7.1 Schedules

Please update schedules in these sections.

Section 7 Evandale Avenue Remedy

At the end or first sentence under Section 7, delete “that do not appear to be connected to the MEW plume.” This has not been ascertained.

Table 1

Table 1. Please add to Table 1 the additional data that have been collected since the work plan was submitted. For example, the data collected near the CPT 21 hotspot.

Table 2.

Table 2. The depths designated for the shallow aquifer A/A1 in the table should be consistent with the depth intervals specified in previous reports for the project. Otherwise, the rationale for modifying the depth intervals for the shallow A/A1 aquifer should be included.