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Subject:	Comments on Phase 2 Site Investigation Report, Crystal Geyser Roxane Olancha Water Bottling Facility
Date:	Monday, October 26, 2015 4:10:00 PM

Water Board staff has reviewed the August 2015 Phase 2 Site Investigation Report for the Crystal Geyser Roxane Olancha Water Bottling Facility (Facility). Thank you for this submittal. The Phase 2 report documents adverse impacts to shallow groundwater as a result of unauthorized wastewater discharges from the Facility, and recommends additional investigation to delineate the extent of impacts to groundwater near the former Arsenic Pond. Water Board staff concurs that additional investigation is required near the former Arsenic Pond. Further investigation is also needed in the vicinity of the East Pond and Fire Pond to define the extent of adverse impacts at the site. The Phase 2 investigation results document groundwater pollution (concentrations exceeding their respective maximum contaminant levels [MCLs] for drinking water) from the following constituents of concern (COCs): Antimony, Arsenic, Barium, Lead, pH, Conductivity, Sulfate, Total Chlorine, and Total Dissolved Solids (TDS). Additionally, the results indicate groundwater degradation (concentrations below MCLs but exceeding apparent background levels) from Chromium, Copper, Molybdenum, Vanadium and Zinc, as well as Alkalinity, Chloride, Phosphate, Phosphorous, Sodium and other constituents. Further investigation is necessary to determine the full lateral and vertical extent of groundwater pollution and degradation at the site, determine the extent of adverse impacts to site soils and soil vapor, and investigate the potential for impacts to deeper groundwater resources at and near the Facility. Please submit a Work Plan addressing the proposed scope of work for the additional investigation **by November 30, 2015**.

Specific Comments on Phase 2 Report

1) The table of contents (TOC) for the report has some bookmarking errors. Please correct and resubmit the TOC.

2) The soil screening levels listed in Table 1, and the soil vapor screening levels in Table 3, are not current. Please correct and resubmit Tables 1 and 3.
The current tables can be found online at:

http://www2.epa.gov/risk/risk-based-screening-table-generic-tables (US EPA Region 9 Screening Levels); and

https://www.dtsc.ca.gov/assessingrisk/humanrisk2.cfm (CA DTSC Human Health Risk).

Also for your information, California water quality objectives, including MCLs, can be found at:

http://www.waterboards.ca.gov/water_issues/programs/water_quality_goals/ (SWRCB Compilation of Water Quality Goals).

3) Table 5 lists a pH of 3.14 for MW-9. The field sampling log indicates the actual pH measured upon completion of purging was 7.14. Please correct and resubmit Table 5.

4) Please provide a copy of the licensed land surveyor's results for the groundwater monitoring well location and elevation survey and map of the wells drawn to scale. If a map was not included in the current surveyors report, please include in the Work Plan that the surveyor will prepare and include a scaled map of the wells as part of the next phase of well installation activities at the site.

Please submit the items requested in Comments 1 through 4, above, by November 10, 2015.

5) The proposed well at the former location of Fire Pond Discharge on the adjacent property to the east was not installed. Staff understands this well was postponed due to delay in obtaining an offsite access agreement with the adjacent property owner. Please be sure to include installation of this well in the Work Plan for the proposed additional investigation.

6) The analytical detection limit of 15.0 micrograms per liter (µg/L) for Antimony (Sb) exceeds the MCL of 6.0 µg/L. Please work with your analytical laboratory to determine an alternate analytical method (i.e., EPA Test Method 200.8-ICPMS) for this analyte that is capable of achieving a detection limit below the MCL so that the extent of this constituent can be adequately characterized.

7) A high concentration of Total Residual Chlorine (>14 ppm) was detected in the initial groundwater sampling of MW-7, down-gradient from the East Pond. Please be sure to continue monitoring (field analyses) for Free and Total Residual Chlorine in all monitoring wells.

8) Future reports should include isoconcentration maps (or other appropriate graphical depiction) of all COCs exceeding their respective MCLs, in addition to Arsenic.

9) Elevated concentrations of numerous metals (Arsenic, Barium, Beryllium, Cobalt, Copper, Lead, Molybdenum, Vanadium and Zinc) and other constituents (Nitrogen, TDS) were detected in the soil sample from monitoring well MW-1. The concentrations of these constituents in MW-1 appear anomalously high compared to the levels detected in the other soil samples from the site. MW-1 is located adjacent to the northwest corner of the Fire Pond, and may have been intended to serve as a background well in this area. The elevated concentrations may indicate leakage from the Fire Pond and/or some other source of contamination in this area. Further investigation is needed to determine the source(s) and extent of the elevated metals and other constituents in the soils in this area.

10) Analytical results from soil vapor sampling probe AP-4/SV-01 detected nine volatile organic compounds (VOCs) in the soil vapor adjacent to the wastewater valve distribution box near the former Arsenic Pond. As previously discussed, please continue quarterly sampling and analysis of the soil vapor probe for VOCs constituents.

11) As previously discussed (Water Board email dated 9/3/15), staff does not concur with the request for reductions to the analytical program requirements at this time. The analytical requirements for the next phase of investigation remain unchanged from those specified in the Investigative Orders for the site.

Water Board staff look forward to receipt of the Work Plan for additional investigation by November 30, 2015. Feel free to call or email should you have any questions.

Thank you,
lisa

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