



# California Regional Water Quality Control Board

## Central Coast Region



Winston H. Hickox  
Secretary for  
Environmental  
Protection

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Gray Davis  
Governor

February 10, 2003

Mr. Richard W. McClure  
Olin Corporation  
Environmental Remediation Group  
PO Box 248  
Charleston, TN 37310-0248

Dear Mr. McClure:

### **SLIC: 425 TENNANT AVENUE, MORGAN HILL; RESULTS OF THE PHASE 2 SOIL AND GROUNDWATER INVESTIGATION REPORT AND FOLLOW UP ACTIONS**

Regional Board staff has reviewed MACTEC Engineering and Consulting's December 3, 2002, Phase 2 *Soil and Groundwater Investigation Report* (report) for the subject site. MACTEC conducted the investigation to fill data gaps from previous investigations and to assess the extent of perchlorate contamination in groundwater. Results of this investigation and follow up actions were discussed during a January 7, 2003, meeting in Morgan Hill among staffs of the Regional Board, Santa Clara Valley Water District, Olin Corporation (Olin) and MACTEC.

The Phase 2 investigation consisted of additional soil and groundwater sampling to assess the extent of perchlorate contamination and additional investigation in the former north septic tank area to determine if chromium and hexavalent chromium should be considered constituents of concern at the site. Concentrations of chromium and hexavalent chromium in the former north septic tank area did not exceed background levels or health-based screening levels. Therefore, we do not consider chromium and hexavalent chromium to be constituents of concern at this site.

Olin's investigation for perchlorate in soil appears to have characterized the extent of contamination in the former flare production building and the former materials storage area. Results in these areas indicate they may represent continuing sources of perchlorate to groundwater. However, additional soil investigation is needed in the former evaporation pond area to verify the non-detect results for perchlorate in soil due to the elevated detection level (66 µg/kg) used in a previous investigation.

Olin's groundwater investigation confirmed the southeasterly migration of the perchlorate plume. The lateral distribution of perchlorate in groundwater has been partially characterized through the onsite investigation and offsite well sampling programs. The offsite well sampling results show that the downgradient extent of perchlorate has not been defined. Additional offsite well sampling will be conducted to delineate the perchlorate plume. The vertical distribution of perchlorate beneath the site has been characterized via the discrete water quality samples collected from deep wells and borings. Perchlorate concentrations in offsite wells indicate that perchlorate has migrated to at least 200 feet below ground surface. However, the offsite domestic wells are screened at unknown intervals and few owners could provide detailed descriptions of well construction and screen intervals. Downward transport of perchlorate may have occurred through discontinuities and preferential pathways through the interbedded sands and clays under a downward hydraulic gradient.

**California Environmental Protection Agency**



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We request Olin to submit a workplan by **February 12, 2003**, to fill characterization data gaps and determine the extent of perchlorate groundwater contamination. The workplan, at a minimum, shall contain the following items:

- Data Gap Analysis – Databases provided by the Water District should be reviewed to address hydrogeologic data gaps. MACTEC will conduct additional well construction investigation to determine the depth and screen intervals of domestic wells with perchlorate detections.
- Installation of three on-site nested shallow borings (~200 ft. deep) adjacent to existing deeper wells to assess vertical distribution of perchlorate in this zone.
- Installation of 2 nested shallow monitoring wells (200 ft deep), one along the northerly property boundary to assess upgradient groundwater characteristics and the second installed on the easterly property boundary to assess sidegradient groundwater characteristics.
- Implementation of Tier 3 offsite domestic well sampling - This includes 33 wells located one to five miles southeast of the Olin site to determine the lateral extent of perchlorate plume and to identify wells impacted with perchlorate.
- Additional soil perchlorate investigation in the former evaporation pond area.

We request submittal of the workplan pursuant to Section 13267 of the California Water Code. The reason the Regional Board needs the revised workplan is to ensure appropriate and timely implementation of the follow-up investigation to determine the extent of contamination at and in the vicinity of the subject site. The evidence that supports requiring Olin Corporation to provide the workplan includes available soil and groundwater data from the site. More detailed information is available in the Regional Board's public file on this matter.

Any person affected by this action of the Regional Board may petition the State Water Resources Control Board to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Board within 30 days of the date of this order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

If you have any questions, please contact **A. John Mijares at (805) 549-3696** or Harvey Packard at (805) 542-4639.

Sincerely,

Roger W. Briggs  
Executive Officer

ajm/rick mcclure phase 2 SWI report 5feb03

see next page for list of cc's



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