California Regional Water Quality Control Board

Central Coast Region

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Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

May 25, 2007

Mr. Curt Richards
Olin Corporation
Environmental Remediation Group
P.O. Box 248
Charleston, TN 37310-0248

Dear Mr. Richards:

SITE CLEANUP PROGRAM: 425 TENNANT AVENUE, MORGAN HILL; LETTER RETRACTING REQUIREMENT TO PROVIDE DEEP AQUIFER CHARACTERIZATION WORK PLAN

This letter is to retract the Central Coast Regional Water Quality Control Board's (Water Board) requirement that Olin must prepare and submit a Deep Aquifer Characterization Work Plan. Our requirement for a Deep Aquifer Characterization Work Plan was included in our May 9, 2007 *Response to Olin's 2006 Llagas Subbasin Characterization Report* (Response Letter) and was made pursuant to Section 13267 of the California Water Code. The Water Board required the Work Plan to ensure that Olin fully characterizes and monitors perchlorate concentrations in the deep aquifer, and then implements the appropriate groundwater remedial actions.

Our May 9, 2007 letter identified three areas in the deep aquifer zone where data gaps exist and required Olin to take the following actions:

- Consider the installation of at least one additional multi-level well between existing wells MW-17 and MW-21. An additional well at this location will help address the identified data gap in the deep aquifer zone in the area south of existing wells MW-16, MW-17, MW-52, and MW-53.
- Proceed with its efforts to delineate perchlorate west of the area between the site and well MW-53.
- Evaluate perchlorate data from MW-55 to determine the need for additional characterization activities in the area southeast of the Olin Site and between PZ-05 and MW-52.

After subsequent discussion with Olin staff and its consultants concerning the status of perchlorate characterization activities in the deep aquifer zone, Water Board staff determined that our requirement for a specific Deep Aquifer Characterization Work Plan

is not needed at this time, and may actually delay implementation of characterization activities that Olin had planned for the deep aquifer.

We understand that Olin's characterization approach is to characterize the deep aquifer zone in a phased manner. Water Board staff concurred with Olin's proposed well locations MW-55 and MW-58 in our May 9, 2007, Response Letter. Olin recently installed well MW-55 and will proceed with data collection activities to evaluate the need for additional characterization activities southeast of the site. Olin also plans to install MW-58 in the near future.

Olin proposes the installation of an additional deep aquifer zone, well MW-60, to address the data gap south of existing wells MW-16, MW-17, MW-52, and MW-53. The installation and location of well MW-60 is proposed in Olin's April 30, 2007 *Area I Extraction Well Installation Work Plan*. Water Board staff concurs with Olin that the proposed location of MW-60 is the most appropriate location to help define the southern extent of the plume core within the deep aquifer zone. We believe this well will serve as a monitoring point for plume delineation purposes and as a performance monitoring point to evaluate the effectiveness of the groundwater remedy when it is implemented.

We understand that Olin has already scheduled a well-drilling company to install wells MW-58 and MW-60. Olin scheduled the well installations based in part on oral concurrence from Water Board staff and our directive to expedite characterization activities within the deep aquifer zone. Our May 9, 2007, requirement for a Work Plan would result in significant delays because Olin would have to cancel and reschedule well installation activities until the Water Board approves the required Work Plan. Such delays are not productive and could potentially result in significant delays in the implementation of planned groundwater remedial activities.

Therefore, to avoid any necessary delays in the installation of proposed deep aquifer wells MW-58 and MW-60, we hereby rescind our requirement for the Deep Aquifer Characterization Work Plan by June 15, 2007. We request that Olin include a "Characterization Progress Report" section in future quarterly monitoring reports to summarize the results and discuss upcoming work of the ongoing phased characterization activities in the deep aquifer.

We understand that full characterization of the deep aquifer zone will take time and will be very costly. However, we also understand that in order to design the most appropriate and effective groundwater cleanup system, Olin must first delineate the plume core to the extent feasible. We concur with Olin that a phased characterization approach is appropriate. Following is an outline of our understanding concerning Olin's phased approach towards characterization of the deep aquifer zone, including delineation of the plume core.

- Based on data from well MW-55 and PZ-05, additional characterization may not be necessary in the area between wells PZ-05 and MW-52.

- The data gap south of wells MW-17, MW-16, MW-53, and MW-52 has been addressed with proposed well MW-60.

- Well MW-58 does not address the data gap between the site and well MW-53. However, delineation of the deep aquifer between the Site and well MW-53 is low priority at this point because when the Tennant well pumps, a strong response is observed in well MW-53. This suggests that the area where the data gap is identified is influenced by pumping of the Tennant well. Therefore, as long as the Tennant well is pumping, additional delineation is not a priority in this area. In addition, it is important to evaluate what the capture zone of the groundwater extraction system in the deep aquifer zone looks like before an additional monitoring well is installed in that area.

  While we understand that site access issues must be resolved before any characterization activities may occur, we continue to encourage Olin to seek to resolve access restrictions for placement of CPT borings (if the desired depth can be obtained) in this area so that Olin may delineate perchlorate in the deep aquifer west of MW-53.

- Based on our review of recent monitoring data, we noted elevated detections of perchlorate in well PZ-05. These results suggest that elevated concentrations of perchlorate may extend further east than originally anticipated. Since these detections are significant, Olin must evaluate additional groundwater monitoring results to determine if the concentrations are consistently elevated.

We appreciate your continued cooperation and proactive approach to expedite completion of necessary characterization activities. We look forward towards successful implementation of offsite groundwater cleanup activities. If you have any questions, please contact **Hector Hernandez at (805) 542-4641** or via e-mail at Hhernandez@waterboards.ca.gov, or Harvey Packard at (805) 542-4639.

Sincerely,

Roger W. Briggs
Executive Officer
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ENCLOSURE:
cc via E-mail:
Ms. Lori Okun
Office of the Chief Counsel
State Water Resources Control Board

Olin Technical Contacts IPL

cc via U.S. Mail:
Olin Correspondence IPL