California Regional Water Quality Control Board
Central Coast Region

Terry Tamminen
Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

February 19, 2004

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

Mr. Jay McLaughlin
President and CEO
Standard Fusee Corporation
PO Box 1047
Easton, MD 21601

Dear Mr. McClure and Mr. McLaughlin:

SLIC: 425 TENNANT AVENUE, MORGAN HILL; GROUND WATER FLOW ASSESSMENT WORKPLAN APPROVAL

Regional Board staff has reviewed the Groundwater Flow Assessment Work Plan (GFAW) submitted November 25, 2003, and have considered information obtained in our recent teleconference meeting with Olin on February 4, 2004. The teleconference meeting was held to discuss and clarify issues arising from our GFAW review. In addition, we have received and considered GFAW comments from the Santa Clara Valley Water District (SCVWD), City of Morgan Hill, City of Gilroy, and the Perchlorate Community Advisory Group. Related written comments are attached for your review and consideration. The GFAW outlines Olin's plan to determine if perchlorate detections between Olin's property and Morgan Hill's Nordstrom Park well are related to Olin's perchlorate release.

We hereby approve the Groundwater Flow Assessment Work Plan, including the elements identified below. As we understand, once Olin's data acquisition and analysis is complete, Mr. Mc Clure will arrange a meeting with us to present initial results and present final well locations and details. As Olin officials stated in our February 4th meeting, the final assessment details will be submitted approximately two months from the date of this letter. Our expectation is that a final report will be submitted by April 16, 2004. As discussed and agreed to in the recent meeting, the following elements will be evaluated in the combined report:

- Olin will include current and future water level measurements from appropriately screened existing supply and proposed monitoring wells. In addition, Olin will be submitting boring logs for all new and existing offsite wells used for groundwater level measurements.

- Olin proposes to use historic data to estimate projected groundwater flow paths. As discussed, data should not be combined from different years or hydrologic cycles. As we understand, if data is combined the report will include a justification and rationale for doing so.

- As cited by the SCVWD in their Dec 19, 2003, comment letter, the SCVWD does not believe their data should be used to estimate local groundwater flow conditions. If you are planning to use such data to estimate local groundwater flow patterns, the limitations of their data should be fully understood. The SCVWD has offered and we recommend meeting with them to discuss the limitations of their data. Mr. Thomas Mohr, RG, has offered to meet with Olin officials. He may be reached at (408) 265-2607 to arrange for a meeting.

- All monitoring wells used in the GFAW should be located out of the onsite groundwater extraction systems zone of influence. Please be aware that additional piezometers will need to be installed, if it is shown that the onsite groundwater extraction system is influencing GFAW monitoring wells. Any new onsite or offsite wells used in the GFAW analysis will need to be installed outside the extraction systems zone of influence.

- Olin proposes to install two additional offsite wells (clustered wells) to characterize groundwater flow. Please be aware that we expect Olin to install as many offsite wells as needed to adequately characterize groundwater elevations and to produce accurate contour and flow direction maps between the site and the Nordstrom Park well. This includes installing piezometers in all aquifer intervals identified between the site and the Nordstrom Park well.

- The GFAW states that the wells will be "fully screened across the entire selected aquifer interval". A sample of on-site estimated aquifer thicknesses range from 15 feet in aquifer zone B2 to more than 60 feet in aquifer zone C3. At this time, the thicknesses of the offsite aquifers are unknown. However, California EPA guidance[1] recommends that monitoring well screen lengths should not usually exceed 10 feet in length. Please provide justification for screen lengths longer than 10 feet, if proposed.

- As we understand none of the new offsite monitoring wells will be BARCAD® type wells. New wells will consist of clusters of individually screened and sited monitoring wells.

- The GFAW states that a boring will be advanced prior to well construction at each location. As clarified during our meeting, continuous borehole logging will be used for all new monitoring wells. Please be aware that regardless of what type of borehole logging is used, it must be of sufficient quality to adequately characterize the subsurface.

- The GFAW proposes a 90-day monitoring period. We believe it is necessary to monitor for a minimum of one hydrologic cycle to more fully understand offsite groundwater conditions. At the end of this full cycle, Regional Board staff will evaluate your data and recommendations to determine if additional monitoring is needed. The final GFAW report is due July 30, 2005 and may be combined with the Second Quarter 2005 Groundwater Monitoring Report. Additionally, GFAW updates shall be included in your

[1] Monitoring Well Design and Construction for Hydrogeologic Characterization – *Guidance Manual for Groundwater Investigations*, State Of California, Environmental Protection Agency, July 1995

Quarterly Groundwater Monitoring Reports due July 30, 2004, October 30, 2004, January 30, 2005 and March 30, 2005. Updates shall include groundwater flow direction maps and data. Final recommendations, maps and data shall be included in the July 30, 2005, GFAW report.

- As we understand, the anticipated report will make recommendations, as discussed above, on well locations. We also request that the report clarify, which monitoring wells will receive pressure transducers and why.

- Olin shall submit a final monitoring well installation report no more than thirty days after end of construction. The report shall include all data pertinent to well installation. This data should also be included in the final report.

- As we have discussed, a final decision regarding perchlorate sampling will be made after we receive the anticipated April 16, 2004 report.

Pursuant to Section 13267 of the California Water Code, Olin is required to submit the detailed groundwater flow assessment report by April 16, 2004 and the above-requested final well installation report no later than **30-days** after end of construction. Additionally, pursuant to Section 13267 of the California Water Code, Olin is required to provide the above-requested GFAW updates **July 30, 2004, October 30, 2004, January 30, 2005** and **March 30, 2005** and the final GFAW report on **July 30, 2005**. Failure to submit adequate or complete information may subject you to a Regional Board enforcement action based on the original due date of the GFAW, October 10, 2003. The Regional Board requires Olin Corporation to submit the required reports in accordance with Section 13267 of the Water Code to determine the concentrations and movement of the perchlorate plume near the Olin site. We require Olin Corporation to submit the information as the owner of the property and one of the previous operators of a flare manufacturing facility that caused soil and groundwater perchlorate contamination at and near the Olin site at 425 Tennant Avenue, Morgan Hill.

We are enclosing copies of comments received from the SCVWD and the Cities of Morgan Hill and Gilroy via Komex consulting for your review and consideration. If you have any questions, please contact **David Athey at (805) 542-4644** or Eric Gobler at (805) 549-3467.

Sincerely,

Roger W. Briggs
Executive Officer

Enclosures:

1. Santa Clara Valley Water District
2. Komex – For the Cities of Morgan Hill and Gilroy

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