California Regional Water Quality Control Board
Central Coast Region

Terry Tamminen
Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

August 3, 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
P. O. Box 1047
Easton, MD 21601

Dear Mr. McClure and Mr. McLaughlin:

SLIC: 425 TENNANT AVENUE, MORGAN HILL; FINAL APPROVAL OF THE REMEDIAL ACTION WORK PLAN & 90% DESIGN REPORT FOR SOIL REMEDIATION, 425 TENNANT AVENUE FACILITY, SANTA CLARA COUNTY

Regional Board staff have reviewed Olin's responses to our June 10, 2004 *Remedial Action Work Plan & 90% Design Report for Soil Remediation* (RAWP) comment letter. For the purposes of this letter, Olin Corporation and Standard Fusee Corporation are hereafter referred to collectively as "Discharger". The RAWP details the design and implementation of treatment option *4A: Focused excavation and ex situ bioremediation coupled with in situ bioremediation*, as presented in the Soil Remediation Feasibility Study. The two main components of the treatment option include: ex situ anaerobic bioremediation of perchlorate-contaminated soils containing concentrations equal to or greater than 7,800 µg/kg, the US Environmental Protection Agency (USEPA) residential Preliminary Remedial Goal (PRG), and in situ bioremediation of soils above the site-specific soil screening level of 50 µg/kg. The site specific soil remediation goal is derived from the methods described in the US EPA's *Soil Screening Guidance: Users Guide* and is the calculated perchlorate concentration in soil that would not result in groundwater impacts above 4 µg/kg.

We have also considered information discussed during our meetings on July 15th and 21st. During the July 15th meeting, Regional Board staff, Olin, and GeoSyntec discussed comments 3a, 3c, 4, 5, and 6, from our June 10, 2004 comment letter. In a follow up meeting on July 21st, comments 3a and 3c, 5 and 6 were further discussed. This letter outlines the resolutions to comments 3a, 3c, 5 and 6. We will transmit the Revised Monitoring and Reporting Program 2001-161 (MRP No. 01-161). Revised MRP No. 01-161 will be changed to include the proposed monitoring locations, constituents, and frequencies. Regional Board staff considers the remaining comments, 1, 2, 3b, 3d, and 4 to have been adequately addressed. The following paragraphs apply to Regional Board staff comments 3a, 3c, 5 and 6:

Regional Board staff comment 3a and 3c outline concerns with the lack of pre-remediation soil sampling and the proposed soil sampling methodology. As we understand, Olin did not propose pre-remediation soil sampling because perchlorate soil results have been previously collected. Regional Board staff is concerned that remediation status and efficiency would be difficult to

asses if baseline sampling was not conducted. Our concern is based on the differing soil sampling methodology used to characterize site perchlorate concentrations. During initial and subsequent characterization activities, samples were collected at 0-1', 1'-5', 5'-10' and 10'-15' intervals. The proposed remediation soil sampling method consists of a 16' soil core that will be composited into a single homogeneous sample. Since the existing pre-remediation soil sampling data were collected at different discrete intervals, Regional Board staff is not willing to wait up to 2 years for Olin to collect comparable data. In response, Olin has proposed to collect twelve 16' riffle split pre-remediation samples at conformational soil boring locations. Regional Board staff accepts this proposal, considers comments 3a and 3c satisfied, and requests the pre-remediation data be forwarded to us, in letter report format, no later than 30 days after Olin receives the results.

Regional Board staff comment 5 outlines concerns with the lack of treatment of perchlorate-contaminated soils situated south and outside the Target Soil Area (TSA). These soils are located outside the TSA and active remediation and sampling was not proposed. In response to Regional Board staff's concerns, Olin has agreed to treat these soils and collect a confirmatory soil boring during the first and second year. Regional Board staff concurs with your treatment proposal and confirmatory sampling location and considers comment 5 satisfied.

Regional Board staff comment 6 outlines concerns with the location and number of soil moisture sensors surrounding the TSA. Regional Board staff requested the additional soil probes so that the vadose zone could be monitored for potential lateral contaminant migration in areas not currently covered by the proposed monitoring system. In response to these concerns, Olin has agreed to install five additional soil probe/lysimeter monitoring points with two separate depth intervals per location. To install the additional monitoring points, Olin will be allowed to reduce the monitoring interval in the ten originally proposed locations from three separate depth intervals to two. Regional Board staff concurs with your proposal and considers comment 6 satisfied.

Regional Board staff, as described above, now considers all comments satisfied that were outlined in our June 10, 2004 comment letter. As you know, the Regional Board issued Resolution No. R3-2004-119 Waver of Waste Discharge Requirements (Waiver) on July 9, 2004. The Waiver requires groundwater, vadose zone and soil moisture monitoring in and around the TSA. The Revised MRP No. 2001-161 will incorporate the groundwater, vadose zone and soil sampling proposed in your RAWP and as described above. As mentioned above, the revised MRP will be sent to you separately.

Pursuant to Section 13267 of the California Water Code, Discharger is required to provide the above-requested information no later than 30 days after you have received the pre-remediation soil sample data. Failure to submit adequate or complete information may subject you to a Regional Board enforcement action back to the date of the June 10, 2004 comment letter. The Regional Board requires the Discharger to submit your response in accordance with Section 13267 of the Water Code to determine the concentrations and movement of perchlorate contaminated soil and groundwater near the Olin site. We require Discharger to submit the information as the current and former owner of the property, and as one of the previous operators

of a flare manufacturing facility that caused soil and groundwater perchlorate contamination at and beyond the Olin site at 425 Tennant Avenue, Morgan Hill.

Any person affected by this action (request for soil sampling data) of the Regional Board may petition the State Water Resources Control Board (State 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 State Board must receive the petition 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 **David Athey at (805) 542-4644** or Eric Gobler at (805) 549-3467.

Sincerely,

Harry Packard

for Roger W. Briggs
Executive Officer

DA: S:\SLIC\Regulated Sites\Santa Clara Co\Olin\OLIN-425 TENNANT AVENUE\COMMUNICATIONS - RICK McCLURE\RAWP&90_07272004Final Approval.doc

cc via E-mail:

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