STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF FEBRUARY 11, 2005
Prepared on January 20, 2005

ITEM NUMBER: 13

SUBJECT: Perchlorate Sites

DISCUSSION:

New information is shown in ***italics***. Please refer to the Central Coast Regional Water Quality Control Board's (Regional Board), July 9, 2004 and December 3, 2004 staff reports for additional historical background information.

General Information: The Department of Health Services (DHS) released the draft Maximum Contaminant Level (MCL) for perchlorate, on October 27, 2004. The draft MCL is 6 ppb. The DHS must now formally adopt the MCL through a statutorily defined process. The main steps in DHS' Drinking Water Program's regulations process include: Review by DHS' Office of Regulations; DHS' Budget Office, the Department of Finance; and the Health & Human Services Agency. It is then released to the Office of Administrative Law (OAL) for publication in the *California Regulatory Notice Register* announcing the availability of the regulation for a 45-day public comment period. A second 15-day public comment period will be held, but only if changes are made in response to public comments received during the first comment period. The draft MCL will then be approved by the DHS Director's Office followed by a final review by OAL. Following OAL approval, the regulation is filed with the Secretary of State, and becomes effective 30 days later. Regional Board staff anticipates the MCL will be adopted within the next 12 months and will provide updates as the draft MCL makes its way through the review and adoption process.

Olin Corporation Facility, 425 Tennant Avenue, Morgan Hill, Santa Clara County [David Athey 805-542-4644]

Current milestones in the investigation of perchlorate contamination on and offsite of the former Olin facility include:

Onsite Groundwater Treatment and Containment:

On November 18, 2003, Regional Board staff approved the installation and operation of the Onsite Groundwater Containment and Perchlorate Removal System (System). The System's purpose is to provide hydraulic containment and removal of perchlorate through onsite groundwater extraction and treatment. The System began operation on February 23, 2004. By April 7, 2004, System startup was completed and has been operated continuously since that time.

On October 29, 2004, Olin Corporation (Olin) submitted the Third Quarter 2004 On-Site Groundwater Containment & Perchlorate Removal System Performance and Discharge Monitoring Report. Olin is required to submit these reports quarterly and highlights include:

- *Total groundwater extraction as of September 28, 2004, was 27.3 million gallons.*
- *Based on an average quarterly concentration of 28 µg/l, approximately two pounds of perchlorate were removed from onsite groundwater during the third quarter.*
- *Samples collected at the discharge pipe sample port were consistently less than 4 ppb.*
- *The average extraction rate for all three wells was approximately 66 gallons per minute or 95,000 gallons per day during the reporting period.*

On and Off-site Groundwater Monitoring and Reporting:

On April 30th, Olin submitted the 1st Quarter, 2004 groundwater monitoring report. This report includes information related to groundwater monitoring activities, including greater detail on groundwater flow conditions, and provides Olin's justification for their proposed groundwater monitoring system. Regional Board staff is reviewing and incorporating, where appropriate, comments from the Cities of Morgan Hill and Gilroy, the Santa Clara Valley Water District and PCAG.

Update: Olin has requested that Regional Board staff delay issuing comments on the proposed monitoring program, so that Olin and the Santa Clara Valley Water District could meet and discuss issues related to offsite monitoring and cleanup. The District and Olin continue to meet and discuss coordination of monitoring resources. Olin has indicated that an updated offsite-monitoring plan will be submitted by January 31, 2005.

Northeast Groundwater Flow Assessment:

Regional Board staff met with Olin and their consultants on May 17th to discuss their preliminary findings. Olin verbally presented findings related to regional groundwater flow conditions and a simplified model of upgradient municipal well capture zones. However, Olin did not present any information on local groundwater conditions including groundwater elevations.

Olin submitted the Northeast Groundwater Flow Assessment Report on September 10, 2004. Regional Board staff met with Olin, the City of Morgan Hill, and Santa Clara Valley Water District on September 22, 2004 to discuss the report's findings.

Update: Regional Board staff have finished review of Olin's Northeast Groundwater Flow Report and have provided comments to Olin in a December 8, 2004 letter. Olin's Northeast Groundwater Flow Report was submitted before the July 31, 2005 due date. The Report included additional information in response to the Regional Board's request to determine if groundwater has migrated northeast from the site. The additional information was in the form of a groundwater flow model, which Olin used to predict groundwater flow directions. Regional Board staff disagreed with Olin's model results and has since issued a letter directing Olin to continue with the Northeast Groundwater Flow investigation. Regional Board staff's December 8, 2004 letter, is included as Attachment 1. The December 8th letter directs Olin to continue with the Northeast Flow Assessment Work Plan by installing piezometers in the Northeast Groundwater Flow Study Area. In addition, Regional Board staff directed Olin to monitor northeast private supply wells for perchlorate and develop and submit a forensic investigation work plan to determine if perchlorate detections upgradient can be attributed to the Olin property.

On December 28, 2004, Regional Board staff sent a follow-up letter to Olin regarding three requests Olin made in a December 16, 2004 meeting. Olin had requested that they be allowed to submit a piezometer installation work plan and schedule on January 7, 2005, delay perchlorate sampling in the Northeast Flow Study Area private wells and that we clarify if the Santa Clara Valley Water District would be performing the forensic investigation, as Olin believes they are. Regional Board staff allowed Olin to submit the work plan and schedule for well installation on January 7, 2005, denied Olin's other request for a delay of sampling and clarified Regional Board staff's understanding of the Water District's forensic investigation position. Regional Board staff's response letter is included as Attachment 2.

On December 30, 2004, Olin requested an Evidentiary Hearing and stay of the December 8, 2004 letter. Olin is requesting a hearing to review the 13267 letter requirements for sampling of upgradient wells and the development of a forensic analysis. Olin has stated that they still plan to move forward with the installation of offsite monitoring wells. Regional Board staff will be responding to Olin's request and will inform the Regional Board of its decision. Olin's request for an

Evidentsory Hearing is being reviewed by legal counsel.

Onsite Ex Situ and In Situ Soil Treatment:

Olin has proposed to treat onsite perchlorate impacted soils using both ex situ and in situ methods. The two main components of the treatment option include: ex situ anaerobic bioremediation of perchlorate-contaminated soils greater than 7,800 µg/kg, the United States Environmental Protection Agency (USEPA) residential Preliminary Remedial Goal, 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

USEPA's *Soil Screening Guidance*: *Users Guide* and is the calculated concentration of perchlorate that would not result in groundwater impacts above 4 µg/L.

Regional Board staff conditionally approved *Olin's Remedial Action Work Plan & 90% Design Report For Soil Remediation* on June 10, 2004. Olin subsequently responded to comments and Regional Board staff provided final approval on August 3, 2004. Olin has begun In Situ system construction and has completed the Ex Situ Soil treatment pile. Figures 1 and 2 in the October 22, 2004, Staff Report, show the completed Ex Situ pile without the cover.

Olin continues to construct the In Situ system and will initiate operation at the conclusion of Ex Situ soil treatment.

Update: *Olin representatives, District staff, and Regional Board staff met on December 6, 2004, to discuss ex situ soil treatment status. According to Olin representatives, ex situ soil treatment had not yet reached the 95% Upper Confidence Limit (UCL_{95}) treatment goal of 50 ppb. As of December 6, 2004, the treatment regimen has successfully reduced perchlorate concentrations from a high of 7,000 ppb to an average concentration of 50 ppb. While the average is at the treatment goal, some samples exhibit a higher concentration, which causes the UCL_{95} to exceed the 50 ppb treatment goal. Olin collected soil pile samples on November 20-21, 2004, and calculated a UCL_{95} high of 72 ppb. In response, Olin decided to continue with ex situ soil treatment. Olin collected additional soil samples on December 20-22, 2004, to determine if the goal has been achieved. Olin representatives will be providing Regional Board staff with an update once sample results have been determined. Once the treatment goal has been achieved, Olin will backfill the In Situ excavation and begin in situ soil treatment.*

City of Morgan Hill Water - Tennant Well:

In a letter dated March 17, 2004, Regional Board staff requested that Olin comment on whether the Tennant well can or cannot be operated based on updated site hydrogeologic information. The City of Morgan Hill has voluntarily shut down the Tennant well because of perchlorate detections. The City has now requested that the City be allowed to restart the well, based on an anticipated water shortage in the coming months. Olin has previously objected to the operation of the Tennant well based on their belief that it could potentially pull perchlorate into deeper aquifer zones. Regional Board staff requested that Olin review the City's report and respond by April 30, 2004.

Olin Corporation responded to Regional Board staff's request with a letter dated April 30th, 2004. The response outlined their technical and non-technical position on why the Tennant well should not be operated. Staff has reviewed the response and does not agree with Olin's technical response. In a letter dated May 19th, staff requested Olin supply additional technical data to support Olin's position. Olin responded to the May 19th letter on June 21, 2004. After careful review, Regional Board staff does not believe Olin's response includes any additional information. In response, Regional Board staff sent a letter to the City of Morgan Hill informing them that Regional Board staff has no objection to Tennant well operation. In addition, a letter was sent to Olin directing them to closely monitor their groundwater containment and treatment system if the Tennant well is operated. If impacts are shown, Olin is required to show the impacts extent and

propose remedies. If Olin can adequately demonstrate that remedies cannot be proposed, Regional Board staff will ask the city to shut down the well. However, any request to stop Tennant well pumping will only be sent upon careful review and concurrence with Olin data.

Update: Tennant well operation has resumed full time.

Cleanup or Abatement Order No. R3-2004-101:

The July 9, 2004 Cleanup Order, directs Olin and Standard Fusee to supply uninterrupted replacement water to well owners with perchlorate-contaminated wells. The Order requires Olin and Standard Fusee to provide interim uninterrupted water to well owners whose wells meet two important criteria. The first criteria is for wells that test at or higher than 4 ppb. Well owners with wells that test at or higher than 4 ppb shall be supplied interim uninterrupted water service (currently bottled water). The Order also establishes a mechanism for stopping bottled water supply to these wells and includes follow up monitoring. The second criterion is for wells that test less than 4 ppb. For those wells, Olin and Standard Fusee may cease supply of uninterrupted water service if, after four quarters of testing, the results remain less than 4 ppb. However, the Order requires additional testing to monitor perchlorate groundwater concentrations.

On August 5, 2004, Olin petitioned the State Water Resources Control Board (State Board) to review the Order. The State Board is currently reviewing the petition and will be issuing a determination on completeness shortly. In the meantime, Olin is continuing to comply with the ordered requirements. Wellhead treatment for the West San Martin Water Company and the San Martin County Water District wells will not be affected by Olin's appeal. Olin has made individual agreements with these water purveyors and perchlorate will continue to be removed from those supply sources. Staff is working on the response to the Olin Petition.

Regional Board staff submitted their response to the Olin petition on September 20, 2004. Support for the Cleanup and Abatement Order No. R3-2004-0101 was also provided to the State Board from Stan Williams and Sylvia Hamilton on behalf of the Perchlorate Working Group and the Perchlorate Community Advisory Group. (see Attachment 1 in the October 22, 2004, Staff Report) and from Assemblyman John Laird (see Attachment 2 in the October 22, 2004, Staff Report). The State Board has up to 270 days to review and act on the response. On September 22, 2004, the State Board denied Olin's stay request that sought to hold Cleanup and Abatement Order R3-2004-0101 in abeyance (see Attachment 3 in the October 22, 2004, Staff Report) until the petition is acted on by the State Board.

The State Board is still considering Olin's petition and Regional Board staff's response. The state Board has 270 days from September 20, 2004, to act on the petition.

The Cleanup or Abatement Order requires Olin to submit an Alternative Water Supply Implementation Work Plan (Work Plan) by October 29, 2004. The report was received. The Work Plan will detail Long Term alternative water supply for wells with perchlorate concentrations from, and including, 4 ppb to 9.9 ppb. The Work Plan is required to include a detailed evaluation of water production rates, infrastructure needs, water usage rates, and estimated times for implementation. Following Executive Officer concurrence with the Work Plan, Olin will be required to implement the Work Plan on a schedule approved by the Executive Officer.

Update: The Alternative Water Supply Work Plan was submitted by Olin on October 29, 2004. Regional Board staff will be reviewing the report and will provide comments to Olin or approve the report as appropriate.

Recent Actions: Olin representatives submitted a Report of Waste Discharge (ROWD) describing the discharge of pump test water from domestic wells. The Report of Waste Discharge requested that Olin be allowed to discharge pump test water in

accordance with Regional Board Waiver Resolution No. R3-2003-0115. Regional Board staff reviewed the ROWD and subsequently enrolled Olin in Waiver of Waste Discharge Requirements, Resolution No. R3-2002-0115, for the discharge of pumping test water. Olin will be performing pump tests to generate operation curves that will be used in treatment system design.

Southern Plume Area and Gilroy Wells:

During the Second Quarter, Olin tested 42 southern area wells near the City of Gilroy. Of these 42 wells, six were sampled for the first time. Twenty-six wells did not contain perchlorate above the reporting limit of 4 ppb. Sixteen wells had perchlorate concentrations ranging from 4 to 6.6 ppb. According to Olin, these results define the southern most detections of perchlorate above the Department of Health Service's 6 ppb action level. Regional Board staff is evaluating Olin's data and is working with Olin to ensure the plume's southern limit is fully delineated using the best available and reasonable Method Detection Limits.

As of the third Quarter of 2004, the City of Gilroy supply wells have not had detections of perchlorate above 4 ppb. Regional Board staff will continue to monitor the southern plume area and work with Olin to ensure the southern plume area is properly delineated.

Perchlorate Community Advisory Group (PCAG)

Update: Regional Board staff provided an update at the December 10, 2004 PCAG meeting. Regional Board staff discussed the Northeast Groundwater Flow Report response letter, Olin's onsite groundwater treatment system, Olin's waiver enrollment for well pumping tests and received comments from PCAG members and the public. The PCAG meeting scheduled in January 2005 was cancelled. The next PCAG meeting will be held on February 4, 2005.

Other issues

Regional Board engineer, David Athey gave a short presentation to the Santa Clara Valley Water District directors at their December 16, 2004 meeting. Mr. Athey provided an overview of how Regional Board staff approaches cleanup projects, the achievements to date and future work to be completed. The main thrust of the District meeting was to consider and adopt their staff's plans for basin-wide cleanup and get direction to provide those plans to the Regional Board. The District adopted the plan and directed their staff to provide it to the Regional Board. Regional Board staff has not yet received the plan, but will consider it as we review alternatives for off-site cleanup.

*Olin reports and significant correspondence can be accessed on our web site by going to: **http://www.swrcb.ca.gov/rwqcb3/Facilities/Olin%20Perchlorate/Index.htm**.*

McCormick Selph, 3601 Union Road, Hollister, San Benito County

On July 12, 2004, PES submitted the Second Quarter 2004 Groundwater Monitoring Report. The report outlines the Discharger's activities related to ongoing groundwater monitoring and pilot scale hydrogen releasing tests. The site will continue to monitor both the chemically reducing conditions and perchlorate concentrations in nearby wells in order to establish concentration trends. Regional Board staff has not performed an in depth report review at this time. However, a cursory review indicates that reducing conditions favorable to perchlorate removal have been established in the coarser grain aquifer material. This is confirmed by a decline in coarser grain aquifer perchlorate concentrations from 1,200 µg/l to less than the laboratory reporting limit of 4 µg/l. Establishment of reducing conditions in finer grain deposits has still not been observed. McCormick Selph's consultant believes the slower fine grain deposits' groundwater movement is delaying establishment of reducing conditions. Regional Board staff will continue to monitor the status of the Pilot

Scale Injection as quarterly reports are submitted.

Regional Board staff recently reviewed the 3rd Quarter, 2004 groundwater monitoring report, submitted October 14, 2004. Onsite groundwater perchlorate concentrations mirror 2nd quarter results. The coarser grain alluvial aquifer results continue to show a decrease in perchlorate concentrations. This decrease is related to the higher hydraulic conductivities of the coarser grain deposits. Deeper fine grain deposits continue to show no effect from the pilot scale HRC injections. Regional Board staff has issued a comment letter and will continue to monitor the pilot scale HRC injections as the Quarterly reports are submitted. McCormick Selph is required to submit the reports through July 15, 2005 and will submit a final cleanup plan on September 15, 2005.

Update: McCormick Selph submitted the Fourth Quarter 2004, Groundwater Monitoring Report on January 13, 2005. The Fourth Quarter Report details onsite monitoring activities including:

- *Groundwater elevation and dissolved oxygen measurements from 28 monitoring wells and the onsite lake.*
- *Groundwater quality sampling from 15 wells, including two supply wells.*
- *Collection of a surface water sample from the onsite Lake.*

Pilot Study Status: The Source Area Pilot Study is being tracked by two wells within the source treatment injection grid. According to the Discharger's Report, laboratory results of the Source Treatment Pilot Study groundwater indicate that reducing conditions are being established. This is indicated by a reduction of nitrate and perchlorate in the fine and coarse grain deposits.

Results from the Downgradient Pilot Study Area suggest that reducing conditions are being established across the upper finer grain and lower coarse grain alluvial deposits. The establishment of reducing conditions is confirmed by decreases in perchlorate concentrations and corresponding increases and decreases in appropriately tracked parameters.

The discharger will be performing the First Quarter 2005 sampling event on February 21, 2005.

Whittaker Ordnance Facility, 2751 San Juan Road, Hollister, San Benito County

On August 13 2004, Regional Board staff visited the Whittaker Ordnance facility to discuss site activities and observe site cleanup areas. Remediation efforts continue in the Waste Storage Pad Area, Ex Situ Soil Bioremediation test pad, and Former Building 22A. Whittaker is still collecting data in these areas and will be submitting the following reports shortly (some reports have been received):

- ***First Semi-Annual 2004 Groundwater Monitoring Report*** – This report covers monitoring activities from January 1, 2004 to June 30, 2004. This Report was received on August 30, 2004 and is currently being reviewed by Regional Board staff.
- ***Groundwater Monitoring Well Installation Report*** – This report outlines Whittaker's recent well installation activities related to additional onsite and offsite groundwater characterization.
- ***Deep Aquifer Analysis Report*** – This report will discuss the best options for offsite groundwater containment. Currently, three offsite wells have been impacted. This Report was received on September 17, 2004, and is currently being reviewed by Regional Board staff.
- ***Final Waste Storage Pad Demonstration Report*** – This report will outline in situ soil testing results and provide final soil remediation recommendations.
- ***Former Building 22A Ethanol Infiltration Pilot-Test Status Report Addendum*** – This report will present additional testing information collected by Whittaker. This Report was received on September 13, 2004, and is currently being reviewed by Regional Board staff.
- ***Ex Situ Bioremediation Pilot-Test Status Report*** – This report will present the

current test status and recommendations for additional work. This report was received on September 15, 2004, and is currently being reviewed by Regional Board staff.

- ***Sampling and Analysis Plan*** - This report will be submitted in response to Regional Board staff's request for a comprehensive review of on and off site groundwater monitoring. Regional Board staff anticipates updating Whittaker's Monitoring and Reporting Program once the report is reviewed and approved.
- **Monitoring Well Installation Report and Revised Hydrostratigraphic Interpretation Report –** This Report was received on September 20, 2004. The report details well installation activities performed to better define groundwater conditions downgradient. Regional Board staff is currently reviewing this report.

Update: Whittaker is currently evaluating site wide cleanup options now that cleanup pilot tests have been completed or are near completion. Regional Board staff anticipates receiving Whittaker's, site wide cleanup proposal in January 2005.

Upcoming Reports: Whittaker will be submitting a site wide Sampling and Analysis Plan for soil and groundwater. Regional Board staff anticipates receiving the Sampling and Analysis plan in January 2005. Regional Board staff also anticipates receiving Whittaker's Second Semiannual groundwater monitoring report on January 31, 2005. This report will summarize soil and groundwater monitoring activities during the second half of 2004.

United Defense, 900 John Smith Road, Hollister, San Benito County

Site Investigation Update:

As reported at the July 9, 2004 Regional Board meeting, United Defense is proceeding with additional site investigations. Regional Board staff approved the additional investigation work items in a July 30, 2004 letter. The recommendations set forth within the Report include:

- Continued research and analysis of local hydrogeology and geology to determine the fate and transport of site contaminants.
- Ranch well groundwater sampling.
- Surface water sampling in the Santa Ana Creek up and down stream of the pond and up and down stream of Arena 2.
- Further evaluation of the lateral and vertical extent of perchlorate and nitrate including the implementation of additional monitoring wells, cone penetration test borings, and soil borings at Arena 1 and Building 6.
- Attainment of United Defenses' non-drinking water well's construction log.

United Defense submitted the Phase III Environmental Investigation Report (Report) on September 30, 2004. The Report provides supplemental information to the Initial Site Assessment and Phase II Reports. The Phase III investigation was conducted to more fully assess the extent of perchlorate, nitrate and nitrite, energetics (explosive compounds, i.e. TNT), and aluminum contamination in site soil, groundwater, and surface water. The following areas were investigated:

- Arena 1: Previous sampling during the Phase II investigation found perchlorate at a maximum of 2,900 milligrams per kilogram (mg/kg) in soil and 2,600 micrograms per liter (µg/l) in groundwater. Soil results from the Phase III investigation ranged from ND to 3.4 mg/kg. As stated in the Report, Phase II and Phase III perchlorate soil samples are generally highest within two feet below ground surface. Perchlorate detections in groundwater for the Phase III analysis ranged from ND to 8.5 µg/l. These results are from groundwater samples taken from recently installed groundwater wells. Previous groundwater perchlorate results were collected from temporary soil borings.
- Arena 2: One soil boring at 0.5 ft had a perchlorate detection of 3.7 mg/kg.
- Three Nearby Groundwater Wells: Perchlorate was detected in the Rancher's well at 15 µg/L and the Windmill well at 34 µg/L. Nitrate + nitrite (as N) was

detected in the Windmill well and WW-1 at 45 µg/L and 4.2 µg/L respectively.

- Ranch Pond Dredge Area: Perchlorate was detected at 1.1 mg/kg in one of the two soil boring samples taken. Nitrate + nitrite (as N) was detected at 8.2 mg/kg and 27 mg/kg in the two borings. Aluminum was also detected at 13,000 mg/kg and 17,000 mg/kg, but results were below the background sample results of approximately 25,000 mg/kg.
- Building No 6 Area: Additional energetic sampling was conducted near Building No. 6 to further assess the extent of HMX, RDX, and TNB (energetics) contamination. The Report states that generally concentrations increase with depth. HMX, RDX, and TNB were found at 2,400 µg/kg, 1,200 µg/kg, and 240 µg/k, respectively, 20 feet below ground surface.
- Building No 1 Area: All groundwater and surface water results tested non detect for energetics and perchlorate.
- Santa Ana Creek: All surface water samples of perchlorate, nitrates and nitrites, and energetics were non-detect. Dissolved aluminum was detected in four samples ranging from 0.14 mg/L to 0.25 mg/L. Sediment samples exhibited similar results; perchlorate, nitrates/nitrites and energetics samples were all non-detect. However, aluminum concentrations ranged from 6,300 mg/kg to 13,000 mg/kg.

On November 30, 2004, United Defense submitted their Phase III Environmental Investigation Report Addendum. The Addendum provided additional monitoring results to fill data gaps; findings from the Addendum are included below.

- Arena 1: Additional soil borings were advanced to assess the extent of perchlorate contamination. One of 33 soil samples detected perchlorate at 1.1 mg/kg at a depth of 1.5 to 2 feet below ground surface (bgs).
- Cattle Guard: Soil samples where Arena 1 drainage meets the Santa Ana Creek were non detect for perchlorate.
- Water Well WW-2: Groundwater was collected from WW-2 and analyzed for perchlorate, nitrate + nitrite, and nitroaeromatics/nitroamines (energetics). Perchlorate and energetics were not detected, however, nitrate + nitrite as N was detected at 3.5 mg/L.

Update: Regional Board staff has completed review of both the Phase III Report and Report Addendum. Regional Board staff provided comments to United Defense on December 22, 2004 (See Attachment 3). Regional Board staff directed United Defense to proceed with the onsite environmental investigation and provide a Phase IV Report by April 1, 2005. The following highlights information United Defense is required to submit as part of the Phase IV Report:

- *Resample the Windmill well. If perchlorate is confirmed, propose an investigation to identify the source and extent of perchlorate contamination.*
- *Continue to monitor for perchlorate and nitrate + nitrite in the Ranch Pond Dredge area.*
- *Determine vertical and lateral extent of energetic contamination at Building 6.*
- *Begin quarterly sampling of the Rancher's well and Windmill well and installed monitoring wells for nitroaromatics/ nitroamines (energetics), perchlorate and nitrate + nitrite.*
- *Develop a site-specific monitoring plan for monitoring of constituents of concern (COCs).*
- *Propose cleanup standards for perchlorate and energetics by July 1, 2005.*

Regional Board staff anticipates issuing a monitoring and reporting program for the United Defense, Hollister Test Facility following submittal of site-specific monitoring plan in the Phase IV Report. Once perchlorate and energetic cleanup standards are determined and monitoring data is collected to delineate vertical and lateral extent of COC contamination, Regional Board staff will require United Defense to submit a cleanup plan.

ATTACHMENTS

1. Letter to Curt Richards, Dated December 8, 2004.
2. Letter to Rick McClure, Dated January 4, 2005.
3. Letter To United Defense, Dated December 22, 2004.

S:\SLIC\Regulated Sites\Santa Clara Co\Olin\OLIN-425 TENNANT AVENUE\EO REPORTS\2005 STATUS REPORTS\EO REPORT FOR Feb 10 2005 [3] DMA 1-20-05.doc