



California Regional Water Quality Control Board

Central Coast Region



Linda S. Adams
Agency Secretary

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Arnold Schwarzenegger
Governor

July 19, 2006

Mr. Russell Pratt
The Pratt Company
456 Montgomery Street, Suite 1000
San Francisco, CA 94104

Mr. Il Lae and Ms. Eun Ok Cho
916 Redwood Ave.
Sunnyvale, CA 94807

S & A Ito Family Partnership
116 Royal St. George's
Williamsburg, VA 23188

Mr. Sei Wook and Ms. Soon Hee Yum
6570 Dartmoor Way
San Jose, CA 95129-3816

Mr. Yung Ae and Ms. Jun Il Ku
272 Mt. Hermon Road
Scotts Valley, CA 95067

Dear Responsible Parties:

SLIC: SCOTTS VALLEY DRY CLEANERS, 272-A MOUNT HERMON ROAD, SCOTTS VALLEY, SANTA CRUZ COUNTY - RESPONSE TO WORK PLANS

Water Board staff has reviewed SECOR International Incorporated's May 8, 2006 *Work Plan for Continued Off-site Assessment* (Off-Site Work Plan), May 8, 2006 *Conceptual Work Plan for On-site Remediation Pilot Study* (Pilot Study Work Plan), and June 13, 2006 *Work Plan Addendum* (Work Plan Addendum).

Water Board Response to Off-Site Work Plan

In the Off-Site Work Plan, Secor proposes to install one deep sentry monitoring well between MW-13B and the Scotts Valley Water District's Municipal Well No. 10. Secor proposes using a sonic drilling rig to drill the well borehole down to a maximum depth of 300 feet below ground surface (bgs) in conjunction with continuous coring. Secor also proposes to obtain down-hole geophysical logs in the open borehole to better understand the geology in that location.

We concur with the Off-Site Work Plan to install a deep sentry monitoring well located between MW-13B and Well 10. In conjunction with sampling the new deep sentry monitoring well, you are also required to sample the Valley Gardens Golf Course well for halogenated volatile organic compounds. A report of well construction completion and sampling results is due to this office and the SCCEHS along with your quarterly groundwater monitoring report by **October 30, 2006**. We have included these requirements in Revised Monitoring and Reporting Program (MRP) No. R3-2005-0082 (see Attachment 1), which requires that you include the deep sentry well in the monthly groundwater sampling schedule.

We continue to suggest that you propose a multi-level well to maximize the use of the deep borehole instead of the proposed single-screened aquifer interval. Based on the monitoring results from the new deep sentry monitoring well, further off-site investigation may be warranted. Additional wells may be needed to obtain a groundwater flow gradient in the deeper zones and define chlorinated solvent contamination in deeper zones.

Water Board Response to Pilot Study Work Plan

In the Pilot Study Work Plan, Secor proposes a small injection event using potassium permanganate to determine if chemical oxidation is an appropriate technology for site-wide corrective action. Secor requests the Water Board to consider allowing them to perform the Pilot Study Work Plan in lieu of the Off-Site Work Plan. The Pratt Company has stated in letters dated May 10, 2006, and May 18, 2006, that they would rather not use their resources to complete the Off-Site Work Plan.

As explained above, we are requiring implementation of the Off-site Work Plan. In addition, Water Board staff generally concurs with the proposal to perform a potassium permanganate injection pilot study. Before conducting the potassium permanganate pilot test, you are required to do the following items:

1. Obtain background groundwater chemical data. Unless these data currently exist for this site, you should analyze groundwater for natural organic matter, chemical oxygen demand, pH, oxidation reduction potential, dissolved oxygen, conductivity/resistivity, and soluble manganese. You should also determine the hydraulic conductivity of the subsurface soils and aquifer materials.
2. Submit a detailed work plan which includes the background chemical groundwater data and a more detailed pilot test work plan including the proposed injection wells and observation wells, proposed volume of chemical injection per well, percent of chemical solution and a schedule for conducting the pilot test. The schedule must allow adequate time to meet the Corrective Action Plan due date (December 1, 2006) set forth below.

Furthermore, we suggest you perform a laboratory bench test using site-derived media before your proposed field injection event. A laboratory bench test helps in determining the appropriate injection spacing, volume of injection solution, and concentration of potassium permanganate solution.

You may submit items 1 and 2 listed above by **August 21, 2006**, in lieu of the Corrective Action Plan due on August 1, 2006 per Cleanup or Abatement Order (CAO) No. R3-2005-0081 and our March 28, 2006 letter. The schedule for these items is part of the schedule for submitting a revised Corrective Action Plan under order number 4 of the CAO No. R3-2005-0081.

You must complete the source-zone assessment (as mentioned above) before you implement a site-wide corrective action at this site.

As long as you submit items 1 and 2 by August 21, 2006, the due date for the

Corrective Action Plan (CAP) is hereby extended from August 1, 2006, to December 15, 2006, pursuant to order number 4 of CAO No. R3-2005-0081. If you decide not to conduct the potassium permanganate pilot test, the Corrective Action Plan due date remains August 1, 2006.

If in-situ chemical oxidation (e.g. injection of potassium permanganate) is the cleanup method chosen for the site-wide CAP, you are required to submit an application to obtain Waste Discharge Requirements to allow injections of potassium permanganate into the subsurface along with the CAP due December 15, 2006. Along with the application, a one-time application filing fee of \$872, based on a threat to water quality rating 3 and complexity rating C, is also required (see <http://www.swrcb.ca.gov/fees/docs/adoptedfeeschedule.html> for more details). A copy of the application requirements (Form 200) is located at <http://www.waterboards.ca.gov/centralcoast/Applications/Form200/Form200.pdf>. Upon Water Board review, we may recommend a Waiver of Waste Discharge Requirements to be approved by our Board.

Water Board Response to Work Plan Addendum

In the Work Plan Addendum, Secor proposes to install a cluster well with screened intervals from 45-50 feet bgs, 65-70 feet bgs, and 85-90 feet bgs. The cluster well is actually three individual wells located close to each other in order to obtain a vertical characterization in a specific area. Secor proposes to use a hollow stem auger drilling method and continuously core the 90-foot-deep boring. The Work Plan Addendum does not propose using a conductor casing or doing geophysical analyses in the borehole. Secor explains that conductor casing would not be useful in the sandstone subsurface, and that they do not want to leave the borehole open long enough to do the geophysical analyses.

We have no objection to the proposed work as outlined in the Work Plan Addendum, provided you take shallow grab groundwater samples. Shallow groundwater is known to occur at approximately 10 feet bgs in the area of the proposed cluster wells. Three grab groundwater samples were taken from boring CC-1 in 1997. The sample results were 1,400 parts per billion (ppb) tetrachloroethene (PCE) at 10 feet bgs, 11,000 ppb PCE at 30 feet bgs, and 3,800 ppb PCE at 45 feet bgs. Therefore, you are required to take grab groundwater samples at 10 feet bgs, 20 feet bgs, and 30 feet bgs in one of the proposed borings to further characterize potential groundwater contamination in the shallow zone because the shallowest monitoring well screen interval is proposed to be from 45 feet bgs to 50 feet bgs. In general, as proposed, monitoring well screen intervals shall be consistent with field observations. Furthermore, since you do not propose to perform geophysical analysis in the proposed boreholes, you must evaluate the continuous cores from the proposed 90 feet deep well to determine aquifer characteristics. You are required to submit a report of cluster well completion to this office and the SCCEHS by October 30, 2006. We have included these requirements in MRP No. R3-2005-0082, and the new cluster well shall be included in the quarterly groundwater sampling schedule. We do not consider this proposed work to be a complete source area characterization as required by order number 3 of CAO No. R3-

2005-0081. Based on the soil and groundwater results, our agency may require further soil and/or groundwater investigation work.

Missing/Damaged Wells

In the Work Plan Addendum, Secor also proposes to replace the missing/damaged wells MW-6 and MW-8 at the same time as drilling the cluster well.

You are required to repair and sample MW-6 and/or MW-8 if you find the wells to be repairable. In the event the wells are beyond repair, you are required to properly destroy by over drilling and install a new monitoring well(s) in a similar location(s). Proper well destruction requires compliance with California Department of Water Resources Bulletin No.74-81 and Supplement No. 74-90, Porter Cologne Water Quality Control Act Sections 13710 through 13755, and any local requirements. For well destruction, you must use a C57 licensed well driller under the supervision of a professional geologist and conform to all local agency requirements, including well destruction permits. If necessary, you are required to obtain the proper well installation permits from the County of Santa Cruz and the Scotts Valley Water District. The new well(s) must be sampled after well development. As a reminder, according to MRP No. R3-2005-0082 (revised March 28, 2006) you are required to sample MW-6 and MW-8 quarterly. Repairs or replacement of the damaged/missing wells shall ensure that you can meet the requirements set forth in MRP No. R3-2005-0082. You are required to submit a Well Repair or Destruction Report by **October 30, 2006**, including whether MW-8 and MW-6 were located, repairable, or needed proper destruction and reinstallation. We have included these requirements in MRP No. R3-2005-0082

Site Conceptual Model

By **October 30, 2006**, you are required to submit an updated site conceptual model. At a minimum, the site conceptual model shall include cross-sections containing monitoring wells with screen lengths and borings, geology profiles, and contaminant distribution in both the soil and groundwater. This information will be necessary to develop and evaluate a site-wide corrective action plan. We have included this requirement in MRP No. R3-2005-0082

Legal Provisions

A revised MRP No. R3-2005-0082 is attached. CAO No. R3-2005-0081, order number 5, requires compliance with MRP No. R3-2005-0082, including any revisions approved by the Executive Officer.

Your compliance with MRP No. R3-2005-0082 is required pursuant to Section 13267 of the California Water Code (CWC) and CAO No. R3-2005-0081. Pursuant to Section 13268 of the CWC, a violation of a CWC Section 13267 requirement may subject you to administrative civil liability of up to \$1,000 per day for each day in which the violation occurs. Violation of a cleanup and abatement order may subject you to administrative civil liability of up to \$5,000 per day for each day in which the violation occurs, pursuant to Section 13350 of the CWC.

The Central Coast Water Board needs the required information in order to evaluate the extent of contaminants in groundwater beneath and migrating from the site and ensure proper corrective action. The discharger is required to submit this information because soil and groundwater contamination has been detected at this facility, and based on the available data you are responsible for the discharge as stated in CAO No. R3-2005-0081. More detailed information is available in the Central Coast Water Board's public file on this matter.

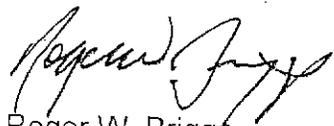
Any person affected by this action of the Central Coast Water Board may petition the State Water Resources Control Board to review the action in accordance with Section 13320 of the CWC and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Board, Office of Chief Counsel, P.O. Box 100, Sacramento CA 95812 within 30 days of the date of this order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

Financial Constraints

We have considered the Pratt Company's and Secor's letter requests to postpone implementing the Off-Site Work Plan and just complete the Pilot Test Work Plan and the Work Plan Addendum, citing financial restraints. However, we have not received any evidence of financial constraints. We continue to assert all of this work is important at this time. In our March 28, 2006 letter, we required both on-site and off-site investigation work plans. We have consistently desired both additional on- and off-site assessment, and have been willing to allow you to implement the work in a phased approach. We left the decision of how to phase the work up to you and your consultant. Secor submitted an approximate timeline (Attachment 2) on April 7, 2006, to the Water Board upon our request. The timeline indicated both on- and off-site assessment would take place. To clarify, after not receiving a work plan for on-site assessment by May 9, 2006, we contacted Secor reminding them of our requirement for both an on-site and off-site work plan. The Work Plan Addendum (proposing on-site assessment) was finally submitted on June 14, 2006, which is 35 days after the revised due date (May 9, 2006) imposed via the March 28, 2006 letter (pursuant to CWC 13267) and CAO No. R3-2005-0081. The Central Coast Water Board staff is considering pursuing enforcement actions including administrative civil liability for the late report.

If you have any questions, please contact Karyn Steckling at (805) 542-4642 or Sheila Soderberg at (805) 549-3592.

Sincerely,



Roger W. Briggs
Executive Officer

Attachments: 1. MRP No. R3-2005-0082 (Revised July 19, 2006)
2. Approximate Timeline of Assessment Tasks

cc:

Mr. Chris Prevost, SECOR International Incorporated
Mr. Scott Carson, Santa Cruz County Environmental Health Services
Mr. Charles McNiesh, Scotts Valley Water District
Mr. Jim Mueller, San Lorenzo Water District
Ms. Sandy Woodruff, Valley Gardens Golf Course
Ramsey Taufek H. Trust

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

MONITORING AND REPORTING PROGRAM NO. R3-2005-0082
(Revised July 19, 2006)

CONCERNING

SCOTTS VALLEY DRY CLEANERS
272 MOUNT HERMON ROAD
SCOTTS VALLEY
SANTA CRUZ COUNTY

GROUNDWATER MONITORING

The Discharger shall collect groundwater samples from wells with sufficient groundwater according to the following schedule:

Minimum Frequency of Analysis	Wells
Monthly	MW-13A, MW 13-B, and any additional sentry ¹ monitoring wells installed
Quarterly	MW-1, MW-2, MW-4, MW-6, MW-7, MW-8, MW-9, MW-14, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and any additional wells installed
Semiannually	MW-3, MW-5, MW-11, MW-12, MW-19, and Wescosa Well
Annually	Valley Gardens Golf Course Well

¹Sentry well is any well installed between the site and Scotts Valley Water District's Well No. 10

The Discharger shall measure the depth to groundwater (to 0.01 feet accuracy) in each monitoring well before purging and sampling. The Discharger is not required to obtain the depth to groundwater in extraction wells unless the groundwater extraction system is turned off for a significant duration of time and a stable groundwater level can be measured. Before sampling, each well shall be properly purged until measurements of the following parameters have stabilized; temperature, pH, specific conductance, turbidity, and dissolved oxygen. The Discharger may use another sampling method approved by the Executive Officer instead of traditional purge sampling. After purging, groundwater samples shall be collected and analyzed for all halogenated volatile organic compounds (HVOCs) listed in EPA Test Method 8260B including the following analytes:

- tetrachloroethene (PCE)
- trichloroethene (TCE)
- cis-1,2-dichloroethene (cis-1,2 DCE)
- trans-1,2-dichloroethene (trans-1,2 DCE)
- 1,1,1-trichloroethane (TCA)
- vinyl chloride
- trichlorotrifluoroethene

The detection limit for individual HVOCs shall not exceed 0.5 micrograms per liter ($\mu\text{g/L}$).

All analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services or at laboratories approved by the Executive Officer. Unless otherwise noted, all sampling, sample preservation, and analyses shall be performed in accordance with the latest edition of *Test Methods for Evaluating Solid Waste*, SW-846, United States Environmental Protection Agency, and analyzed as specified herein by the above analytical methods and detection limits indicated.

The Discharger is required to notify the Central Coast Water Board, the Santa Cruz County Environmental Health Services, and the Scotts Valley Water District at least 72 hours prior to commencing field work to allow for staff oversight, if necessary. Field work includes groundwater monitoring, well installations, well destructions, well repairs, soil borings, etc.

A Damaged or missing monitoring well shall be repaired or properly destroyed and replaced with a new monitoring well (similar well construction details and location as the destroyed well). The Discharger shall monitor the repaired or replaced well according to the monitoring schedule below.

REPORTING

Monthly data will be presented formally in quarterly reports and informally via facsimile or email on a monthly basis. Monthly reports are due by the 30th day of the month following the month in which sampling occurred. Quarterly reports are due by the 30th day of the month following the end of the quarter (in January, April, July, and October). Semiannual reports are due by the 30th day of the month following the end of the 1st and 3rd quarters (April and October). Annual reports are due by the 30th day of the month following the end of the 3rd quarter (October).

Monthly monitoring reports shall include the following:

1. Tables showing all current and previous monitoring information, including analytical results and groundwater elevations.
2. Scaled maps showing locations of all monitoring wells.
3. A table showing well-completion information, including total depth and screened intervals.
4. Copies of certified laboratory analytical reports, chain of custody records, and applicable field logs for the current monitoring data.

Quarterly, semiannual, and annual monitoring reports shall include the following:

1. Tables showing all current and previous monitoring information, including analytical results, and groundwater elevations.

2. Scaled maps showing locations of all monitoring wells, groundwater contours and direction of groundwater flow.
3. An evaluation and interpretation of all available data; including plume contours for HVOCs.
4. An updated site conceptual model as new data becomes available. An update of the site conceptual model may include updated geologic cross-sections, soil and groundwater contaminant distribution, cross-section figures showing well completion details, etc.
5. A table showing well-completion information, including total depth and screened intervals.
6. Copies of certified laboratory analytical reports, chain of custody records, and applicable field logs for the current monitoring data.
7. A signature of a registered professional attesting, under penalty of perjury, that the report is true and accurate.

GROUNDWATER MONITORING WELL REPORTS

Installation or Replacement of a Groundwater Monitoring Well

The Discharger must provide documentation of any new groundwater monitoring wells (i.e. cluster well, sentry well, etc.) that are installed. The report of well completion must be submitted by the 30th day of the month following the end of the calendar quarter in which the well was installed or replaced (in January, April, July, and October), coinciding with quarterly monitoring reports as described above. The report of well completion must include:

1. Applicable well installation permits (Water District, County, etc.)
2. Scaled maps showing locations of all monitoring wells
3. Boring logs with geologic interpretations
4. Geophysical data, if applicable
5. Well completion information
6. Soil and groundwater analytical results, if applicable
7. Certified laboratory analytical reports and chain of custody records, if applicable
8. Boring logs or well completion logs must be signed by a professional geologist.

Repair or Destruction of a Groundwater Monitoring Well

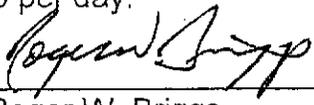
In the event, the Discharger repairs or destroys any damaged groundwater monitoring well (e.g.; MW-6, MW-8, etc.), the Discharger is required to submit a report by the 30th day of the month following the end of the calendar quarter in which the repair or destruction took place (in January, April, July, and October), coinciding with quarterly monitoring reports as described above. The well repair or destruction report must include the following:

1. Copies of applicable permits (destruction)
2. Description of repair (new casing, new well head, etc.) and/or description of destruction
3. The method implemented to prevent future damage to the monitoring well
4. A signature of a registered professional attesting, under penalty of perjury, that the report is true and accurate

The Executive Officer may revise or rescind this MRP at any time.

These requests are made pursuant to the provisions of Section 13267 of the California Water Code. Pursuant to Section 13268 of the Water Code, a violation of a request made pursuant to Water Code Section 13267 may subject the Discharger to civil liability of up to \$1,000 per day.

Ordered By: _____


Roger W. Briggs
Executive Officer

7-19-06
Date

TABLE 1
Approximate Timeline of Assessment Tasks
Scotts Valley Dry Cleaners

Task	Weeks as of Monday, April 10, 2006																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Work Plan/Client Proposal & Approval	Shaded	Shaded	Shaded	Shaded															
Off-Site Well Planning, Permitting, Scheduling*				Shaded	Shaded														
Off-Site Well Installation (including pre-drilling activities)							Shaded	Shaded											
Laboratory Analysis & Report Preparation										Shaded	Shaded	Shaded	Shaded						
Source Assessment Planning, Permitting, Scheduling										Shaded	Shaded	Shaded	Shaded						
Source Assessment/Well Installation														Shaded	Shaded				
Source Assessment Laboratory Analysis and Report Preparation																Shaded	Shaded	Shaded	Shaded

Notes: *Assumes immediate approval of Work Plan by Water Board. Additional time may be required for Work Plan approval which will delay all following tasks