

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

STAFF REPORT FOR REGULAR MEETING MAY 14, 2004

Revised on April 22, 2004

ITEM NUMBER: 18

SUBJECT: MTBE Priority Sites

DISCUSSION:

New information is shown in italics

This is a continuing report (every other Regional Board meeting) on the status of MTBE sites in our region. Staff is working on numerous petroleum underground storage tank (UST) cleanup cases involving MTBE. Some of the more high profile sites or "worst case" problems are discussed below. Also attached to this report is a list of sites with MTBE in groundwater that gives an overall perspective of the regionwide problem. Staff provides the Regional Board with MTBE priority site updates. Staff also will use this report to answer questions from previous Regional Board meetings, *and to provide the Regional Board with new information pertaining to the UST program.*

On March 17, 2004, Regional Board staff attended a meeting to discuss transition of the Local Oversight Program (LOP) from the Santa Clara Valley Water District (District) to the Santa Clara County Department of Environmental Health (DEH). Since 1988, the District and DEH have been co-signatories on the LOP contract with the State Water Resources Control Board. The LOP contract allows local implementing agencies to receive funding to implement a program to oversee the investigation and cleanup of petroleum releases from UST systems. The District has been involved with the program due to its strong technical expertise and mission to protect the groundwater resources in Santa Clara Valley. The DEH has been regulating UST permitting, leak prevention, monitoring, and removal activities (in portions of the county) and its role will now be expanded to include the LOP program on July 1, 2004.

The District believes that the upcoming July 1st contract date is the appropriate time to effect this transition. After over fifteen years as the LOP and closing nearly 80 percent of the leaking UST cases reported, the District believes that most of the remaining cases pose a relatively lower threat to water quality, and therefore, wishes to reallocate staff resources to higher risk threats and/or water resources management priorities.

The DEH has indicated its desire to take on this new role and that they are gearing up to take oversight lead. The District has indicated that they are committed to maintaining an active supporting role in this transition, working with DEH well into fiscal year 2004-05, as the DEH comes up to speed. The State Water Resources Control Board, San Francisco Bay Regional Water Quality Control Board, and staff from the Central Coast Region will also be assisting in this transition. To put the transition into perspective for this region, there are currently 35 leaking UST cases being regulated by the LOP in the Central Coast Region, portion of Santa Clara County, and 21 involve groundwater.

The District and DEH currently anticipate attending the May 14, 2004 Regional Board meeting in San Luis Obispo, to provide a progress report on the transition. The Regional Board wishes to acknowledge the District's outstanding contribution to water quality protection and restoration during its 15+ years of local oversight program involvement.

Attached is an updated Regionwide MTBE Listing and High Priority Sites table. The list shows site names and addresses as well as the priority listing (Rank A, B, or C) based on State Board MTBE guidelines. Staff has required accelerated cleanup at some higher priority Rank A sites. Interim cleanup action is required as soon as technically feasible until full-scale cleanup activity can begin.

Cleanup levels are typically set at the secondary maximum contaminant level (MCL) for drinking water of 5 parts per billion (ppb), which is a taste and odor threshold. The primary MCL, based on threat to public health, is 13 ppb.

The Regionwide MTBE Listing and High Priority Sites list, included as Attachment 1, contains the latest information provided by Santa Barbara County as of April 6, 2004. Beginning in late March 2002, Santa Barbara County obtained the ability to update information in the MTBE report by way of the Statewide GeoTracker database system.

HIGH PRIORITY SITES STATUS:

Chevron Service Station, 2194 Main Street, Cambria San Luis Obispo County [John Mijares 805/549-3696]

Chevron Cambria service station, located on the corner of Main Street and Burton Drive in Cambria, has been a Regional Board-lead groundwater investigation and cleanup case since December 1993.

Background:

In 1995 the underground storage tank (UST) system was removed and service station ownership/operation was transferred from Chevron Products Company (Chevron) to an independent owner/operator who installed a new UST system.

Chevron is cleaning up a discharge from the first UST system of petroleum hydrocarbon constituents, including the fuel additive methyl tertiary-butyl ether (MTBE) in soil and groundwater beneath, and migrating from the site. The discharge threatens groundwater in two Cambria Community Service District

(CCSD) Wells, Nos. 1 and 3, which provide supplemental water to the Community of Cambria.

As part of interim corrective action beginning in May 2000, Chevron continuously pumped MTBE contaminated water from four onsite wells. Beginning in November 2000, Chevron began full operation of a groundwater extraction and high vacuum dual phase extraction system (high vac system). Throughout 2001 and 2003, both systems operated continuously, except for periodic system upgrade and system maintenance activities.

Extracted, treated groundwater is stored in an onsite 15,000-gallon tank until trucked offsite for disposal.

In February 2002, the Executive Officer enrolled Chevron under Waste Discharge Requirements Order No. 01-134, National Pollutant Discharge Elimination System (NPDES) No. CAG993002, General Permit for Discharges of Highly Treated Groundwater to Surface Waters (General Permit). In March 2002, the CCSD and the Cambria Legal Defense Fund filed an appeal with the State Water Resources Control Board (State Board) against Chevron's enrollment under the General Permit. Also, in March 2002, CCSD filed a lawsuit against the Regional Board and Chevron's enrollment under the General Permit. Chevron agreed to put their permitting efforts for the discharge to Santa Rosa Creek on hold while Chevron and CCSD meet to discuss these issues. In response, CCSD and Cambria Legal Defense Fund are holding their petitions to the State Board in abeyance.

Alternative Water Supply Issues:

During the November 2001 technical work group meeting (with Regional Board staff, CCSD representatives, and Chevron representatives), the CCSD indicated the new temporary high school well was connected to the municipal drinking water supply. The CCSD's high school well is needed as an alternative water supply and the wellhead treatment system CCSD installed on their Santa Rosa Creek wells will enable their use in the event of an emergency. Chevron continues

to submit monthly Status Reports in compliance with Order No. 00-28 to secure an alternative water supply. Chevron's most recent status report is included as Attachment 2.

Since the Last Staff Report:

During the February 2004 reporting period, pumps from three of the nine extraction wells were found defective and replaced. The high vac system was shut down during most of the reporting period for repairs and upgrades. Approximately 33,300 gallons of groundwater were extracted, treated, and transported offsite during this period. Since November 2000, approximately 6.8 million gallons of water have been extracted and hauled away.

In compliance with the Monitoring and Reporting Program No. 97-79, groundwater samples were collected and analyzed from groundwater extraction wells and selected groundwater monitoring wells. During the February 2004 groundwater-sampling event, the highest MTBE concentration in groundwater was detected in MW-47 at 6,300 ppb. MTBE was not detected (<0.5 ppb) in groundwater monitoring well MW-37A, located near Santa Rosa Creek.

On December 2, 2003, Regional Board, Chevron, and CCSD staff met to discuss implementation of the enhanced high vac and groundwater extraction system. Chevron noted that they are negotiating for site access with a private property owner. If needed, Regional Board staff agreed to work with the private property owner to expedite permission to install the enhanced system.

On March 15, 2004, SECOR, Chevron's consultant, reported the complete installation of all proposed wells for enhanced source zone remediation. The following wells were installed:

- Four additional high vac dual phase onsite extraction wells.
- Six additional groundwater extraction wells immediately offsite along the downgradient property line.
- Five additional piezometers to facilitate evaluation of hydraulic capture and

containment provided by the groundwater extraction wells.

On March 3, 2004, Regional Board and CCSD staff met to discuss the status of the alternative water supply that is required by Cleanup or Abatement Order 00-28 (Attachment 3). The specific language of CAO 00-28 is:

"By September 1, 2000, provide the Community of Cambria with a supply equal in quantity to water pumped from CCSD Well Nos. 1 and 3. Chevron shall provide the Community of Cambria this alternative water supply during Chevron's investigation and cleanup of petroleum hydrocarbon contamination in the subsurface environment."

District staff provided copies of the Settlement Agreement between Chevron and the District. Chevron settled the MTBE lawsuit with the District for \$9.1 million, including:

- Attorney Fees - \$1,979,000
- Department of Health Services loan for SR4 well construction - \$1,520,710
- Reimbursement to the District for direct expenses related to MTBE contamination - \$1,231,319
- General District Fund - \$3,668,971
- Cross Town trail - \$700,000

This breakdown is from information that CCSD provided. The settlement agreement provides for a payment of \$8,400,000, most for unspecified purposes (as indicated above), and \$700,000, which may be used for construction of a cross-town bicycling and walking trail. In addition, Chevron had previously agreed to pay the District for emergency water supplies for fire suppression. The settlement agreement did not nullify the Fire Tender Agreement.

In light of the settlement, Chevron has requested the Executive Officer to rescind Order No. 00-28. Chevron contends that the approximately \$3.7 million it paid to the General Fund is more than adequate to provide the replacement water the Order requires. CCSD contends that the \$3.7 million is not allocated to any specific purpose, so

that Chevron has not complied with the Order. CCSD therefore has requested the Executive Officer to leave the Order in place. Several lot owners believe that if the Order is rescinded then CCSD will have no basis to continue its current building moratorium, which is based on inadequate water supplies.

Chevron has already paid the District for the construction of SR4, the high school well. The settlement explicitly resolves all of CCSD's claims against Chevron, including claims for replacement water. In addition to the construction cost of SR4, CCSD incurs a cost of \$26,000/year to lease the property where the well is located. The settlement is adequate to pay that cost for many years, assuming the property owner does not exercise its right to terminate the lease. CCSD is currently seeking funding for a desalination plant that will allow it to meet all water demands. The \$3.7 million could be applied toward the desalination plant, but that plant is necessary due to chronic water shortages. While the MTBE plume exacerbated the shortages, Chevron is only responsible for its contribution, not for existing shortages. Finally, although CCSD is not legally required to use the \$3.7 million for replacement water, and the Regional Board is not bound by the CCSD-Chevron settlement agreement, the Regional Board has discretion in deciding whether to require a discharger to provide replacement water. Exercising this discretion to require Chevron to continue providing water after CCSD already released all of its claims does not appear necessary to protect the water user's uninterrupted water supply, since CCSD now has the financial ability to do so. The Executive Officer therefore intends to rescind the Order. Further orders can be issued in the future if circumstances warrant. It should be noted that CAO 01-122 and Monitoring and Reporting Program No. 97-79 (last revised 12/10/01) will remain in full force and effect.

On March 5, 2004, CCSD served the Regional Board and Chevron with a dismissal without prejudice of the lawsuit regarding enrollment in the NPDES permit. It should be noted that CCSD filed a petition with the State Board on similar issues (File No. SWRCB/OCC A-1462)

in March 2002. That petition is still pending, although it is currently in abeyance at CCSD's request.

California Water Service Company Supply Wells, Pajaro Street and Bridge Street, Salinas, Monterey County [John Goni 805/542-4628]

In February of 2002 Regional Board staff was notified by California Water Service Company (CWSC) of a supply well (Well Station 1-04) in the Salinas area showing a detection of the fuel oxygenate MTBE at 3.9 parts per billion (ppb). A review of the well construction log indicated a proper sanitary seal was installed at the time of construction (6/16/1948) to a depth of approximately 250 feet. The well draws water from depths of 250 feet to 438 feet in three perforated sections. A review of known leaking underground tank cases in close proximity to the well showed no active cases with high concentrations of MTBE to indicate a suspected source. The investigation was expanded to include permitted operating underground tanks (without reported leaks) and identified a gasoline distributor (with 100,000 gallons of fuel products storage) close to the wells. A previous investigation by the distributor revealed no evidence of leaks or spills at the site. The distributor was directed and completed another site investigation last fall, and no evidence of a fuel release was found in underlying groundwater.

CWSC notified Board staff in November 2002 another supply well (Well Station 13-02, approximately ¼ mile from Well Station 1-04) showed a detection of MBTE at 3.5 ppb. Staff continued the investigation and has directed three other permitted underground tank facilities (service stations further from both wells) to perform groundwater investigations. Staff is also coordinating with the State Water Resources Control Board's implementation of enhanced leak detection testing for all underground tank facilities within 1000 feet of water supply wells. Facilities failing the enhanced leak detection tests will be considered for additional groundwater investigation as an MTBE source.

Staff met with representatives of the CWSC and the Monterey County Environmental Health Department (MCEHD) on June 10, 2003, to discuss the status of the investigation and the next appropriate steps. At this meeting, the CWSC reported Well Station 1-04 had increases in MTBE, to a maximum concentration of 120 parts per billion of MTBE in January 2003. The well was placed out of service and properly abandoned to prevent possible trans-aquifer migration of contaminants. Well Station 13-02 has also had an increase in MTBE, with data from April 2003 indicating 39.9 ppb. The CWSC is using wellhead treatment to allow continued use of this well. The MCEHD has committed to inspecting all nearby permitted underground and aboveground tank facilities to ensure compliance.

Staff also participated (via conference call) in a meeting with the California Water Service Company and the California Department of Health Services (DHS) on October 7, 2003, to discuss the Water Company's request for Grant funds from DHS to relocate water supply wells. Staff provided an update on the on-going investigation to identify the source of MTBE detected in the supply wells.

The California Water Service Company has confirmed gasoline has not been stored at their water supply well locations. Well Station No. 1-04 has not had any fuel stored at its location, and Well Station No 13-02 has only had diesel fuel stored in an aboveground vault. No leak has been observed at the vault. The standby power fuel storage is not considered a likely source of the MTBE (diesel should not contain MTBE). Staff has visited the well heads and no obvious sources of MTBE are apparent. The Monterey County Health Department has been inspecting permitted fuel storage site facilities in the vicinity of the supply wells and no operational violations have been found.

Staff has been in contact with the three active service stations and a car wash near the affected supply wells and directed them to investigate possible fuel leaks at their facilities, (Shell, Beacon, Amerigas, and ACME Carwash). Work plans from the facilities have been approved with Shell being

the first to report results. Shell has reported elevated concentrations of MTBE, at 7,700 ug/l in groundwater and 1,100 mg/kg in soil. Shell is performing vertical and lateral delineation investigative work to determine the extent of the release and to determine if this is a source of the contaminant in the supply wells.

Samples from the Beacon station revealed no significant release of MTBE, all concentrations in groundwater samples were less than the Maximum Contaminant Level, with a maximum of 3.0 parts per billion detected at the 57 foot depth. A work plan for investigation of other gasoline constituents found at the site has been approved by Regional Board staff, and the investigation is proceeding. *Preliminary data from development of four on-site monitoring wells shows MTBE in shallow groundwater at 100 ppb. While the MTBE is greater than the secondary MCL of 5 ppb, the total mass appears insufficient to have caused the degradation associated with water supply wells. Further investigative work will define the extent of the Beacon MTBE contribution. Beacon and Shell are coordinating investigations to better define the shallow groundwater configuration (depth, gradient, and contaminant concentrations) under and between the two service stations.*

Shell has completed two additional investigations at and near its facility. The first investigation was completed the week of February 2 and consisted of borings on and adjacent to the site. The second investigation was performed the week of March 8 and consisted of borings further away (northerly) from the site and on-site. Information from the first investigation shows the presence of MTBE at depth, (3.0 ug/l at 140 feet below ground surface), but is inconclusive in terms of finding the source affecting the water supply zone. Information from the second investigation is still pending and may provide more definitive information. Shell continues to extract contaminated groundwater from the site as an interim remedial action, with 18,300 gallons extracted as of March 25, 2004. The MTBE concentration in on-site shallow groundwater has been reduced from 7,700

ug/l on September 8, 2003, to 1,200 ug/l on March 25, 2004. The extracted groundwater is hauled and disposed at a Shell refinery in Martinez

The ACME Carwash investigation is complete and revealed a MTBE (and other gasoline constituents) release has not occurred at this site. ACME Carwash is no longer considered a source of MTBE.

The investigation at the Amerigas Station is proceeding. Results of groundwater samples were not available at the time of agenda preparation.

Staff has directed two additional responsible nearby parties of leaking underground tank cases with MTBE releases to perform vertical delineations into the water supply aquifers. The leak cases are an ARCO station at 145 Kern Street, and Rossi's Tire & Auto Service at 81 North Sanborn Road.

Staff met with the representatives of the California Water Service Company (Cal Water) on April 21, 2004, in Salinas to discuss case status and possible investigative measures. As a result of the meeting, Cal Water is forwarding recently completed well assessment information to Regional Board staff (to help staff evaluate potential up-gradient contaminant sources), and is evaluating performing depth discrete sampling of their affected supply well(s) to pinpoint the aquifer(s) most affected by MTBE.

Camp Evers Combined Site (Four Gasoline Service Stations) Mount Hermon Road at Scotts Valley Drive , Scotts Valley, Santa Cruz County [Wei Liu 805/ 542-4648]

Petroleum hydrocarbon and gasoline additives including BTEX, 1,2-DCA and MTBE have been detected in ground water beneath and downgradient from four gasoline service stations located at the intersection of Mount Hermon Road and Scotts Valley Drive. The site, consisting of four service stations, has been a Regional Board lead groundwater investigation and cleanup case since 1989. Since staff has written status reports to the

Regional Board for this site since October 2001.

CORRECTIVE ACTIONS

The following corrective actions are being performed at the site:

- Tosco: Expanded soil vapor extraction and air-sparging; due to very low vapor concentrations, soil vapor extraction has been operated on an intermittent basis. Air sparging is ongoing.
- Equiva: Soil vapor extraction is ongoing; ground water extraction system operation began in September 2000. Because the extraction well has been frequently dry, the system was converted to dual phase (vapor/groundwater) extraction in early 2001. The groundwater extraction system ended in the middle of 2002.
- BP: Two of the existing wells were included in the interim groundwater-pumping program. Since hydrocarbon removal rate became low due to reduced contaminant concentrations, pumping at the former BP site has been discontinued.

In addition, the supply water pumped from the Manana Woods well has been treated with the existing air-striper and (a larger) carbon unit. A new wellhead treatment facility with larger capacity to treat MTBE and benzene contamination is being designed to replace the existing system and is planned to be installed this year.

In a joint effort, Tosco, Equiva, and BP Oil (Responsible Parties or RP's) also submitted a workplan in October 2001 to completely delineate the MTBE plume extent in the downgradient area of the service stations and the Manana Woods well, and select and implement another more effective, permanent remedial alternative to control and cleanup the downgradient plume. Staff concurred with the proposed downgradient plume delineation and the RP's are implementing it.

In addition to the above, groundwater monitoring wells associated with the Camp Evers site and the treatment systems at Tosco and Equiva sites are monitored on a quarterly basis, and the wellhead treatment system is monitored on a weekly basis. MTBE concentrations have generally decreased in the source area (e.g., from the maximum of 86,000 to 200 ppb in Equiva well, MW-4) as of the fourth quarter of 2002. However, in the downgradient plume area around CEMW-6 and newly installed well nest (CEMW-13 through CEMW-16) MTBE concentrations decreased first in mid-2000, and had increased (e.g., from 5,630 to 13,000 ppb in cooperative well CEMW-6 as of the fourth quarter of 2002) before the downgradient plume remediation system began operation. However, MTBE concentrations in the downgradient plume area decreased significantly since the downgradient plume remediation system operation began (see below).

DOWNGRADIENT PLUME DELINEATION AND CLEANUP

The RP's implemented the approved workplan for delineation and remediation of the downgradient plume, which includes installation of seven groundwater monitoring well nests, a groundwater extraction well and a treatment system compound. Fieldwork for well installation started in late April 2002 and was completed in October 2002. Initial sampling results showed most new wells containing non-detectable MTBE and benzene concentrations, with one sample from well CEMW-19 detected MTBE at 8.8 ppb and three samples from wells CEMW-17 and CEMW-21 contained benzene at concentrations ranging from 1.3 to 3.0 ppb.

All new wells have been sampled since the first quarter 2003 monitoring event. MTBE was not detected in any of the new downgradient monitoring wells except the deep wells CEMW-19B and CEMW-17B. MTBE concentrations in CEMW-19B showed an increase from the initial 8.8 ppb in September 2002, to 220 ppb in March 2003, and then decreased to 110 ppb and 120 ppb in May and August 2003, respectively, and to 64

ppb in October 2003. MTBE was detected at 2 ppb in CEMW-17B, which is the second time MTBE was detected in this well. Other oxygenates were not detected in any of the new well clusters sampled during the fourth quarter 2003 monitoring event, except TBA was detected at 8.4 ppb in well CEMW-19B, which decreased from the previous two quarters (13 ppb). Low levels of benzene (from 0.7 ppb to 11 ppb) were detected in five wells, which are located upgradient (CEMW-17A, CEMW-17B, CEMW-18B, and CEMW-20A) or cross-gradient (CEMW-21B) from the Manana Woods Well. Based on the above results, it appears that the downgradient extent of petroleum hydrocarbon impacted groundwater is defined by non-detection or relatively low concentrations of chemicals of concern in the newly installed, downgradient well clusters, CEMW-17 through CEMW 23.

In addition, in October 2002 the Responsible Parties applied for coverage under Order No. 01-134, General NPDES Permit for discharge of highly treated groundwater from the downgradient plume remediation system to surface waters. Staff discussed the proposed enrollment of the RP's under the General Permit at the Regional Board's November 1, 2002 meeting. The Executive Officer enrolled the RP's under the General Permit on November 7, 2002 on condition that the initial batch of water generated from the system is trucked off-site. The RP's started operation of their downgradient plume remediation treatment system in November 2002 and the RP's initiated continuous operation of the treatment system on December 12, 2002. Weekly monitoring of the discharge is now being performed.

From November 26, 2002 to December 29, 2003, the downgradient remediation system has removed approximately 8,145,212 gallons of water, 233.3 pounds (lbs) of TPH, 4.5 lbs of benzene, 51.2 lbs MTBE, and 8.4 lbs of TBA from the impacted downgradient area. MTBE concentrations in the downgradient plume area have shown relatively significant decreases. For example, MTBE concentrations in wells CEMW-6 and CEMW16 were reduced from 13,000 ppb to 7,000 ppb and from 3,500 ppb to 250 ppb during October 2002 and

December 2003, respectively. These results suggest that the downgradient remediation system continues to be effectively removing petroleum hydrocarbons from the downgradient plume area.

Quik Stop Market No. 78, 5505 Soquel Drive, Soquel, Santa Cruz County [Tom Sayles 805-542-4640]

Quik Stop Market No. 78 (Quik Stop) is an operating gasoline service station located on the corner of Soquel Drive and Hardin Way in Soquel. The site has been a Regional Board lead groundwater investigation and cleanup case since June 1999.

The approved corrective action plan consisting of a permanent dual-phase (soil vapor and groundwater) treatment system has been operating since July 5, 2002. The treated groundwater is discharged to the sanitary sewer under a County of Santa Cruz Permit (No. 00002829) and the Catalytic Oxidizer treatment system operates under a Monterey Bay Unified Pollution Control District air permit (No. 11054).

Three additional vapor extraction wells were installed in December 2003, in the vicinity of MW-3, to enhance cleanup system effectiveness. In addition, MW-3 was overdrilled and converted into a 4-inch diameter well to enhance groundwater extraction efficiency.

First Quarter 2004 groundwater samples were collected on March 8, 2004. A maximum MTBE concentration of 11,000 micrograms per liter ($\mu\text{g}/\text{l}$) was detected in onsite monitoring well RW-2. The TPH-G, benzene, and MTBE concentration contour maps show the highest concentrations to be near the fuel tank complex, consistent with past quarters, although the concentrations appear to be declining. Quik Stop continues to sample Nobel Creek on a monthly basis at four downgradient locations. Low levels of MTBE were detected in the four creek samples collected during the March monitoring event, with a maximum concentration of 13 $\mu\text{g}/\text{l}$ in Sample A located near the storm culvert outfall. TPG-G and BTEX were not detected

in any of the creek samples collected in March 2004.

Groundwater extraction pumps continue to operate in RW-2 and RW-3. As of March 9, 2004, approximately 296,000 gallons of water had been extracted from the site; the daily extraction rate has increased to approximately 300 gallons per day since the overdrilling and new pumps have been installed. Mass removals from the groundwater and vapor extraction wells will be calculated and included with the upcoming First Quarter Monitoring Report, due April 20, 2004.

Staff continues to work with Quik Stop and local agencies on this cleanup project to protect and restore the groundwater quality of the Soquel/Aptos area.

Los Osos Valley Garage, Former Bear Valley Chevron Service Station, 1099 Los Osos Valley Road, Los Osos, San Luis Obispo County, [Corey Walsh 805/542-4781]

This UST release site, which is located on the corner of Los Osos Valley Road and Sunset Drive in Los Osos, was originally reported in June 1990. In August 2000, MTBE was discovered in nearby municipal water well (Los Olivos #3). Staff issued a cleanup or abatement order requiring investigation and cleanup on an expedited schedule. The facility ceased distribution of fuel in May 2001, and the UST system was later removed.

In separate law suites both Southern California Water Company (Water Company) and Los Osos Community Services District (District) have sued ChevronTexaco Corporation for product liability associated with the petroleum hydrocarbon/MTBE release at the site. The Water Company has settled for an undisclosed dollar amount, while the District is currently negotiating a settlement that may include water system remediation/wellhead treatment.

Regional Board staff directed the Los Osos Valley Garage to implement the proposed expansion of the off-site cleanup system. The existing cleanup system was temporarily shut

down on February 12, 2004, as part of the system expansion work. It will remain off during system expansion and groundwater monitoring event scheduled for March. Expansion of the off-site system began January 5, 2004 with drilling of new cleanup wells, trenching, pipe lay-down, and backfilling. On January 26 - February 20, pumps were installed, power and signal wire pulled through conduits, water flow meters installed, air delivery and return manifolds constructed. Expansion of the system was completed on March 12, with installation of new air compressor, heat exchanger, and instrumentation. System checks and start-up was conducted March 15 - 26. System Expansion Report was submitted March 29, 2004.

In an agreement between the District and ChevronTexaco Corporation a complete round of groundwater sampling was conducted (March 1, 2004) on all Multi-Level monitoring wells. The groundwater data will be submitted to the Regional Board in-place of the first 2004 semi-annual groundwater monitoring event. All multi-level and monitoring wells associated with the site were gauged for depth to water.

Activities scheduled during the first semi-annual monitoring period of 2004 include: revising Monitoring and Reporting Program (MRP) No. 95-87; submitting first 2004 semi-annual groundwater monitoring report, due July 20; evaluate proposal to remove on-site remediation system; and completing installation and startup of off-site remediation system expansion and provide report due March 29.

The municipal water wells owned by Water Company (Los Olivos #3 well) and District (10th Street well) located near the site continue to be sampled monthly for MTBE. Water production from Los Olivos #3 has been approximately 50% capacity. Production from the 10th Street well has been reduced to approximately 20% of capacity. Sample results for the 10th Street well, last collected March 1, 2004, continue to remain below detection limits (<0.5 µg/L) for MTBE and (<5.0 µg/L) for TBA. Monitoring results for

Los Olivos #3 well continue to be <0.5 µg/L (non-detect) for MTBE (since June 2003) and last sampled on March 8, 2004. The secondary maximum contaminant level (MCL) for MTBE is 5 µg/L, and the DHS Drinking Water Action Level for TBA is 12 µg/L.

Tank Farm Road MTBE Plume, San Luis Obispo, San Luis Obispo County, [Corey Walsh 805/542-4781]

MTBE has been added to gasoline sold in California since 1979 as an octane booster. Since the late 1980's, MTBE has been added as an oxygenate to California's reformulated gasoline; comprising up to 14%. MTBE has been detected in groundwater in up to 80% of leaking underground fuel tank sites and in municipal water supply wells in Los Osos, San Jose, Santa Monica, and Lake Tahoe.

In addition, MTBE has been detected during periodic sampling required by the San Luis Obispo County Division of Environmental Health (DEH) in three small public water system wells since 1997 (small public water systems serve more than 25 people for more than 60 days per year). The affected wells are located near the southeast border of the San Luis Obispo City limit along Tank Farm and Suburban Roads. The water wells are identified as Holdgrafer and Associates Well No. 1, located at 225 Tank Farm Road; Whitson Well No. 1 at 281 Tank Farm Road and Copeland Distribution Center Well No. 1 at 181 Suburban Road. Concentrations of MTBE have ranged in these wells from a high of 19 micrograms per liter (µg/L) in the Holdgrafer well (February 2000) to 0.66 µg/L in the Copeland well (October 2002).

Relative to other fuel hydrocarbons, MTBE has a high solubility in water. The compound has low retardation in groundwater aquifers, and is slow to biodegrade. These properties, combined with past high MTBE percentages in gasoline, caused the potential for high source area concentrations, long plumes in groundwater, and long residence times in the subsurface.

Since the physical properties and taste and odor characteristics of MTBE impair water

supplies at very low concentrations, the Regional Board staff requested eleven privately owned water well owners in the Tank Farm Road and Suburban Road area to collect water samples from their wells (see Attachment 4, Air-photo for well locations). Samples were collected to determine if petroleum products, including fuel oxygenates, breakdown products and other gasoline constituents had impacted underlying groundwater. Results from the 2002 sampling event verified MTBE detections in the three wells identified above at 8.6 µg/L, 5.1 µg/L, and 0.66 µg/L, respectively. No MTBE was detected in any of the other supply wells sampled. The most recent MTBE sample results for the three wells of concern (Holdgrafer, Whitson, Copeland Distribution Center) are 8.8 µg/L, 2.3 µg/L, and 0.66 µg/L, respectively. The maximum contaminant level (MCL) or primary drinking water standard for MTBE is 13 µg/L. The secondary drinking water standard (taste and odor threshold) is 5 µg/L.

Regional Board staff investigated or directed investigations at the following sites:

Unocal Tank Farm Facility;

Whitson Industrial Park;

San Luis Trucking/Union Properties;

Pacific Bell/SBC; and

Cook Business Park.

None of these facilities appear to be the source of the MTBE release, although groundwater verification monitoring is currently required at the San Luis Trucking site, and the Pacific Bell site has been recommended for case closure (See Item 17, above, in this Agenda). The cause of the MTBE detections in these wells has not been determined, however staff will continue to investigate other possible sources for the release to groundwater in this area.

ATTACHMENTS:

1. Regionwide MTBE Listing and High Priority Sites
2. Chevron's March 30, 2004 Progress Report
3. Chevron Products Company, CAO No. 00-28
4. Air-photo, Small Water Systems in Vicinity of Tank Farm and Suburban Roads

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