

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

STAFF REPORT FOR REGULAR MEETING OF JULY 7- 8, 2005

Prepared on June 13, 2005

ITEM NUMBER: 3

SUBJECT: Status Report - Military Facilities Update

SUMMARY

Staff periodically provides summaries of various Regional Water Board programs. This report provides general information pertaining to the Region's oversight of Department of Defense facilities. Overviews and progress reports covering the past six months are included for facilities with active cleanup programs.

Note: As this is a regular status report, new information is provided in italics to differentiate from background and reference information that has been provided previously.

DISCUSSION

The Federal Department of Defense (DoD) is actively performing investigation, cleanup, and closure of numerous active and former military facilities across the State. The Regional Water Boards and Department of Toxic Substances Control provide the majority of cleanup oversight at these federal facilities.

In May 1990, the State signed the DoD/State Memorandum of Agreement (Agreement). The Agreement provides structure for this unique federal to state responsible party/regulatory relationship. It outlines cleanup and investigation protocol, oversight structure, funding, dispute resolution, and calls for a "cooperative" approach. Additionally, the Agreement limits the State's ability to take enforcement action against the Military.

Budget:

As of May 1, 2005 (most recent data available), with 83% of the fiscal year complete, program expenditure is 79% of allotment (\$285,000/360,000). Staff expects its Department of Defense oversight program will remain fully funded in the foreseeable future.

Program Overview:

Currently, the Region's DoD budget is expended almost entirely on six facilities: Vandenberg Air Force Base, Fort Ord Army Base, Lompoc Federal Penitentiary (a former Army Base), Fort Hunter Liggett Army Base, Camp Roberts National Guard Base, and Monterey Peninsula Airport (a former Naval Air Base).

There are numerous other military facilities in the Region; most are what we call Formerly Used Defense Site (FUDS). The FUDS program, established in 1984, covers all facilities that the federal military vacated prior to the interagency agreement.

VANDENBERG AIR FORCE BASE

Lead Staff: Carol Kolb

Location/Installation Restoration Program:

Vandenberg Air Force Base is located on the south-central coast of California. The Base is the third-largest U.S. Air Force installation, occupying more than 98,000 acres along approximately 35 miles of the northern coast of Santa Barbara County. Basewide cleanup is being implemented through the DoD's Installation Restoration Program. Program implementation follows the provisions of a Federal Facility Site Remediation Agreement, entered into by the Air Force, Regional Water Board, and Department of Toxic Substances Control on August 22, 1991.

Sites/Chemicals of Concern:

Installation Restoration Program sites at Vandenberg include: closed landfills, space launch complexes, missile silos, fuel and chemical spill areas, and underground storage tank areas. Identified chemicals of concern include: jet fuels, rocket fuels, petroleum hydrocarbons, solvents, polychlorinated biphenyls,

pesticides, perchlorate, metals, and unexploded ordnance.

Emergent Chemicals/Perchlorate:

The Basewide Preliminary Assessment/Site Investigation for the six emergent chemicals of concern (perchlorate, n-nitrosodimethylamine, polybrominated diphenyl ether, 1,4-dioxane, 1,2,3-trichloropropane, and total/hexavalent chromium) began in January 2004. The total number of sites to be evaluated is 133, including a total of 58 Installation Restoration Program sites and 75 Areas of Concern. The project is anticipated to be complete by July 2005.

Progress/Success Stories:

At Site 21 (Fire Training Area), during November 2004 through February 2005, approximately 20,000 cubic yards of petroleum, polychlorinated biphenyls, volatile organic compounds, and dioxin-contaminated soil were excavated and hauled off-site for disposal. Additional soil excavation activities are proposed for Summer 2005.

At Site 9 (Space Launch Complex-4 West), operation of the dual-phase (groundwater and soil vapor) Interim Remedial Action system for removal of TCE/perchlorate began in early November 2003. System performance data through February 2005 indicate that approximately 1.35 million gallons of groundwater was processed from source area wells. Through February 2005, 594 pounds of volatile organic compounds were removed from soil vapor and 11.23 pounds were removed from groundwater. In addition, 1.46 pounds of perchlorate were removed from groundwater.

The latest Performance Monitoring Report for the Site 20 Underground Storage Tank Source Reduction System shows that, since becoming operational in August 1998, the system has removed an estimated 11,597 pounds of hydrocarbons from the vapor phase and 95 pounds of hydrocarbons from the groundwater phase.

Site 60 (GSA Service Station) monitoring results from the Permeable Reactive Barrier System installed in the Summer of 2002, perpendicular to a methyl tert-butyl ether (MTBE) groundwater plume, continue to show declines in the levels of MTBE contamination. An Oxygen Release Compound System and associated monitoring wells were installed in late August 2003 at the leading edge of the MTBE plume. Long-term

monitoring of the system began in September 2003, and monitoring shows a MTBE concentration reduction trend at the plume core path.

In the Basewide Underground Storage Tank and Areas of Concern programs: a total of 763 underground storage tank sites have been closed, and approximately 154 of the original 166 areas of concern have been closed (since 2003, approximately 47 new areas of concern have been converted from areas of interest). *Also, 36 additional areas of interest are proposed for conversion to areas of concern.* In these Basewide programs, removal actions have resulted in the excavation/removal and proper disposal of 11,036 cubic yards of petroleum, polychlorinated biphenyls, and metals-contaminated soil.

FORMER FORT ORD ARMY BASE

Lead Staff: Grant Himebaugh

Location/Base Realignment and Closure Program:

The former Fort Ord encompasses 28,000 acres between the cities of Seaside and Marina near Monterey Bay. The USEPA declared the Army base a federal superfund site in February 1990. This action was based on groundwater contaminant plumes, which impacted the City of Marina's municipal water supply. The base officially closed in September 1994, and the majority of the site became available for conversion from military to civilian use.

Sites/Chemicals of Concern:

Since closure, the Army's base closure team has identified over 40 environmental sites. The primary water quality concerns involve a landfill gas removal system, one carbon tetrachloride groundwater plume with soil gas removal, and three trichloroethene (TCE) groundwater plumes.

Progress/Success Stories:

On this federal superfund site, Regional Water Board staff work with USEPA and DTSC to oversee cleanup activities. Several large-scale groundwater plumes are undergoing active remediation efforts. *During the July through December 2004 time period, over thirty-seven pounds of contaminants were removed from the three active remediation systems. Viewed at an annual rate, this is a significant improvement over previous years' performances, and is due largely to enhanced contaminant extraction at the Sites 2/12 system.*

The source area for the carbon tetrachloride groundwater plume has been identified. Recent soil gas sampling results confirmed earlier suspicions that

that the source area is a formerly unmapped training facility located at what is now "Lexington Court" (a City of Marina residential area.) A health risk assessment was conducted for local residents, and according to USEPA standards, the Army believes the public is not at risk from carbon tetrachloride soil vapor. Despite this risk assessment, the Army began operating a soil vapor extraction system in March 2004. Currently, this system has already lowered monitored soil gas levels by over 90% of the originally detected levels.

Both Army and Regional Water Board staffs have completed their response to the State's Emergent Chemicals Report request. Most notable of these potential contaminants are perchlorate and polybrominated diphenyl ethers (PBDEs). Local municipal supply well monitoring and empirical evidence gathered at other defense sites indicate that the risk of undetected perchlorate contamination at Fort Ord is very limited. Regional Water Board staff has found that PBDE analysis methods have yet to reach an accepted standard. Based on this and the contaminants relative lack of mobility in groundwater, staff has delayed site-specific groundwater sampling until generally accepted analytical standards are achieved. All other emergent chemicals have been determined to not be a threat based on either monitoring or facility use histories.

Challenges:

Fixed price contracts have created a challenge in having adequate staffing to support the speed and flexibility desired by contractors, while remaining within the regulatory framework which staff is obligated to enforce. At this time, efforts to resolve competing interests appear to have been successful.

TCE groundwater contaminants associated with Operable Unit 1 (a former fire-fighting training area) were detected at the former northwest installation boundary shared with the Armstrong Ranch. Measured concentrations at the former boundary lead staff to believe the contaminant plume is likely beneath part of the Armstrongs' private property. The community has been informed of this situation through press releases and at several meetings. The Army is moving quickly to determine the extent of the contamination and prevent further migration. One of the biggest challenges will be the construction of a cleanup system prior to next winter's rains. Regional Water Board staff has agreed to a fast-track review of cleanup system documents.

TCE contaminants from the landfill plume continue to create intermittent appearances in Fort Ord Well No. 29, a public supply well now owned and operated by the Marina Coast Water District. Although all detections have been below one part per billion (ppb) (Maximum Contaminant Level is five ppb), the detections have prompted corrective actions by the Army in the form of a planned treatment system modification.

MONTEREY PENINSULA AIRPORT

Lead Staff: Grant Himebaugh

Location/Formerly Used Defense Sites Program:

Monterey Peninsula Airport is a formerly used defense site comprising 455 acres, approximately three miles southeast from downtown Monterey. Leased by the Department of Navy from the Monterey Peninsula Airport District (Airport District) in 1942, today the Airport serves the local area with commercial and private air service.

Sites/Chemicals of Concern:

Known cleanup sites include two 50,000-gallon concrete underground storage tanks (UST) with an associated petroleum groundwater plume and a trichloroethene (TCE) groundwater plume. A former fire fighting training facility and several other potentially contaminated sites have been ruled out as contaminant sources.

Progress/Success Stories:

In May 2003, operational testing of a TCE treatability study groundwater cleanup system began at the Casanova Oak Knoll's Neighborhood Park. Another cleanup system at the Airport's TCE contaminant source area began operation in Fall 2003. Community feedback for both of these facilities has been positive.

In addition, Army Corps and Regional Water Board staff has developed an accepted response for the State's Emergent Chemicals requests.

As the Airport's cleanup systems progress, the Army Corps of Engineers has made plans to transition into site assessments at four other Formerly Used Defense Sites. These former sites include the Salinas Army Airfield, Hollister Airport, Watsonville Airport and the former Camp McQuade. The Corps' willingness to begin work at four new sites at a time when it's shifting limited project funds out of the State is a direct result of past Region 3 successes.

Challenges:

Due to operational testing and some equipment and power failures, acceptably consistent and measurable cleanup system performance has not yet been obtained; however, the Army Corps is committed to correcting these problems prior to the next public meeting in 2005.

FORT HUNTER LIGGETT

Lead Staff: Linda Stone

Location/Installation Restoration Program:

Fort Hunter Liggett is a U.S. Army training facility consisting of approximately 165,000 acres in southern Monterey County. Current and historic uses of this facility include field exercises and weapons and equipment testing. Most of the land is undeveloped and is used for field training. Portions of Fort Hunter Liggett are leased for cattle grazing. The Main Garrison includes offices, barracks, motor pools, and instrument fabrication/testing facilities. Department of Toxic Substances Control is the lead agency for cleanup activities; however, the Regional Water Board is primarily responsible for most of the sites that require further action.

Sites/Chemicals of Concern:

Installation Restoration Program sites include a closed landfill, former underground storage tanks, spill areas, unexploded ordnance areas, hazardous waste accumulation sites, and former fire fighting training areas. The primary chemicals of concern include: chlorinated solvents, petroleum, oils, lubricants, heavy metals, chlorinated pesticides, and PCBs.

Progress:

The base-wide restoration program is ahead of schedule. To date, action is complete at thirty-two of the thirty-four sites at Fort Hunter Liggett. The two remaining sites consist of the facility landfill and a groundwater plume associated with two former petroleum tanks. Both of these sites are being successfully remediated.

The Army has responded to the Regional Water Board's letter on emergent chemicals, in a letter stating that, based on site history, the emergent chemicals are not constituents of concern. Additionally, the results of an analysis of the facility's water supply well found no detectable concentrations of perchlorate.

LOMPOC BRANCH U.S. DISCIPLINARY BARRACKS

Lead Staff: Kristina Seley

Location/Base Realignment and Closure Program:

The Lompoc Branch U.S. Disciplinary Barracks Federal Correction Facility is located approximately two miles northwest of the City of Lompoc, Santa Barbara County. The property was purchased by the War Department in 1941, and operated as part of Camp Cooke until 1946, when it was converted to a military detention center. In 1959, the Bureau of Prisons took over management of the facility, which is currently operated as high, medium, and low security prisons. The property consists of approximately 2,900 acres and includes a sign factory, electron cable manufacturing plant, furniture factory, print shop, cattle ranch, dairy, butchering plant, sewage treatment plant, and farm.

This facility was selected for closure as part of the 1995 Department of Defense's Base Realignment and Closure (BRAC) and ownership will be transferred to the current operator, Bureau of Prisons. An Environmental Baseline Survey Report, which delineated potential or known areas of concern, was completed in June 1997. The Regional Water Board is the lead agency for this BRAC site. The USEPA is providing technical support for this effort and the County of Santa Barbara is overseeing environmental issues at a landfill and closure of former underground storage sites.

Sites/Chemicals of Concern:

Sites being addressed as BRAC cleanups include Wood Dump/Landfill, Wash/Grease Racks Site, Former Farm Fuel Site, Underground Storage Tank Site, and a former quarry site. Constituents of concern at these sites include: chlorinated solvents, petroleum, oils, lubricants, metals, and pesticides/herbicides.

Progress:

The Army's consultant implemented a site mitigation plan to improve conditions at the Wood Dump Landfill in August 2004. Regional Water Board staff is working with the Army and its consultants to develop an appropriate long term monitoring and reporting program. Recent winter storms have caused substantial erosion of the recently completed Wood Dump final cover. The Army and its consultants are working diligently to improve drainage and address erosion problems.

The consultant also expanded the Wash/Grease Rack site bioremediation system. *With approval from the Regional Water Board, the consultant increased the site's bioremediation injection frequency. Degradation byproducts have been detected within the injection area of influence. Staff have requested a review of the system design by July 2005 if complete degradation is not exhibited.*

CAMP ROBERTS

Lead Staff: Kristina Seley

Location/Installation Restoration Program:

Camp Roberts is a California Army National Guard installation located approximately 10 miles north of Paso Robles. The 42,000-acre facility spans northern San Luis Obispo County and southern Monterey County. The installation was built in 1941, and used as a staging/training area for the U.S. Army until 1971, when it was transferred to the California Army National Guard. The National Guard and U.S. Army currently use Camp Roberts for training. The installation contains two developed areas, the Main and East Garrisons. The remaining lands are used for training and firing ranges. Most areas of potential or known contamination are associated with industrial-related activities conducted during World War II and the Korean War and are located in the Main Garrison. Because of limited funding from the Army National Guard, the installation restoration process is still in the investigative phase. The Regional Water Board is the sole regulatory lead at this installation.

Sites/Chemicals of Concern:

Fifty-eight sites were investigated during the Site Inspection phase, which was completed in 2003. The potential chemicals of concerns consist mainly of petroleum hydrocarbons and some solvents. The contents of the landfills are largely uncharacterized but include burn ash and ordnance.

Progress:

Regional Water Board staff requested that the Army National Guard perform an evaluation to determine whether any of the emergent chemicals are constituents of concern at Camp Roberts.

Based on site history, perchlorate is not a constituent of concern. The results of an analysis of the facility's water supply well found no detectable concentrations of perchlorate. Additional evaluation of emergent chemicals will be conducted the upcoming remedial investigation which the Army National Guard is in the process of awarding a "paid for performance" contract. An investigation contract will be awarded by early summer 2005.

CONCLUSION

The Regional Water Board's Department of Defense oversight program remains very active and effective. Cooperative relationships with military personnel, consultants, various agency staff, and the public have been maintained and substantial remediation continues.

The next program Status Report is planned for the February 2006 meeting.