

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

STAFF REPORT FOR REGULAR MEETING OF FEBRUARY 6, 2004

Prepared on January 5, 2004

ITEM NUMBER: 30

SUBJECT: Status Report - Military Facilities Update

SUMMARY

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

Note: As this is a regular status report, new information is provided in italics to differentiate from background/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 Boards and Department of Toxic Substances Control provide the majority of clean up oversight at these federal facilities.

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

Budget:

As of November 2003 (most recent data available), with 42% of the fiscal year complete, Program expenditure is 43% of allotment (\$142,400/\$332,500). Expenditures are expected to be within budget by years end.

Additionally, staff expects our Department of Defense oversight program to remain fully funded through the foreseeable future.

Program Overview:

Currently, the Region's DoD budget is spent 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, Monterey Peninsula Airport (a former Naval Air Base).

There are numerous other military facilities in the Region, most of which fall under the Formally Used Defense Site (FUDS) program. The FUDS program, established in 1984, covers all facilities that the federal military vacated prior to the DSMOA agreement.

Four FUDS facilities are scheduled for site assessment in 2004. These include the Salinas Army Airfield, Hollister Airport, Watsonville Airport, and the former Camp McQuaide.

VANDENBERG AIR FORCE BASE

Lead Staff: Bill Meece, 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 Board, and Department of Toxic Substances Control on August 22, 1991.

Sites/Chemicals of Concern:

Installation Restoration Program sites include: 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:

In the Winter 2003 sampling round, perchlorate was detected in monitoring wells at two launch complexes (Site 8-maximum of 517 ppb, and Site 9-maximum of 370 ppb). *Detection of perchlorate at Site 9 lead to the Air Force adding an ion exchange system, for perchlorate removal, to the groundwater treatment system at the site. In addition, during the Winter 2003 sampling event, the Air Force sampled groundwater in the area of the Site 6 launch complex. Perchlorate was not detected at the Site 6 complex.* In response to Regional Board staff's request to sample perchlorate Basewide, the Air Force will first conduct a focused Basewide assessment to identify sites where releases of perchlorate may have occurred. *The Basewide assessment is to begin in January 2004. In September 2003, at Regional Board staff's request, the Air Force added a separate section to the Basewide Sampling and Analysis Plan to address the six emergent chemicals with analytical methods and low reporting limits consistent with guidance from State Board. Emergent chemical sampling has been conducted at a number of sites for 1,4-dioxane, total/hexavalent chromium, n-nitrosodimethylamine, and 1,2,3-trichloropropane. No widespread problems have been detected, to date. Screening for emergent chemicals will be conducted for Areas of Concern during the next field event (Spring 2004).*

At staff's request, perchlorate sampling was conducted in the Summer 2003 at Site 19 (NASA Building 836), which is the only site that could potentially impact an existing downgradient water supply – in this case agricultural wells. Perchlorate was non-detect at Site 19. There are no existing domestic or municipal water supply wells downgradient of any site (in fact, Vandenberg is supplied by State Water and its existing wells in the San Antonio Creek Basin are supplemental water supply). Regardless, groundwater emergent chemicals/perchlorate concentrations represent a data

gap in the Basewide Remedial Investigations, which will need to be filled so Feasibility Studies can evaluate appropriate remediation systems to protect potential groundwater beneficial uses (domestic, agricultural, and industrial supplies) throughout the Base.

Progress/Success Stories:

Of special note: The Vandenberg Air Force Base Installation Restoration Program team recently won the Thomas D. White Award for Best Restoration Team in Space Command. Vandenberg Air Force Base will now "compete" for Air Force wide recognition. Bea Kephart, Chief, Installation Restoration Program, thanked everyone's hard work (including Regional Board staff), which contributed to the Base winning this award.

The latest Performance Monitoring Report for the Site 20 Underground Storage Tank Source Reduction System shows, since becoming operational in August 1998, the system has removed an estimated 8,434 pounds of hydrocarbons from the vapor phase and 70 pounds of hydrocarbons from the groundwater phase. A focused feasibility study to optimize the source reduction system is scheduled for submittal in February 2004. The Site 20 Erosion Mitigation Project at the old landfill/drum disposal site/ordnance disposal area was completed prior to the 2002 rainy season. During the erosion control project construction, over 1,600 pieces of ordnance were removed and properly disposed, and over 375,000 pounds of metal debris were removed and recycled. During Site 20 maintenance activities in August 2003, approximately 15,000 pounds of debris and 70 pieces of ordnance related items were removed from the adjacent ravine as erosion control measures were rehabilitated and enhanced.

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 significant declines in the levels of MTBE contamination. Based on up and down gradient groundwater data, MTBE concentrations in groundwater have been generally reduced more than 99 percent (i.e., average upgradient MTBE concentration of 190 ppb and average downgradient concentration of 1 ppb). An oxygen release compound system and its 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.

In the basewide Areas of Concern and Underground Storage Tank programs: Seven underground storage tank sites have been closed, two areas of concern have been closed, and removal actions were completed at six areas of concern. Removal actions resulted in the excavation/removal of 1,016 cubic yards of petroleum-contaminated soil and 70 cubic yards of lead 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 of land between the cities of Seaside and Marina near Monterey Bay. The U.S. EPA 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 forty environmental sites. The primary water quality concerns involve a landfill with gas removal system, one carbon tetrachloride with pending gas removal, and three trichloroethene (TCE) groundwater plumes.

Progress/Success Stories:

On this Federal Super Fund site, Regional Board staff work with US EPA and DTSC to oversee cleanup activities. Several large-scale groundwater plumes are undergoing active remediation efforts. *During 2002, 136.29 pounds of targeted groundwater contaminants were removed from three actively remediated plumes. Mass removal rates have increased during 2003, however cumulative totals will not be available until June 2004 and will be included in the July 2004 status report.*

The source area for the Carbon Tetrachloride groundwater plume has been identified. Recent soil gas sampling results confirmed earlier suspicions that the source area is an unmapped training facility located at what is now Lexington Court. 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 is notifying local residents and plans to have a soil vapor extraction system in operation by March 2004. This system will remove the threat of continuing groundwater degradation as well as any threat to nearby residents.

An Explanation of Significant Differences (ESD) for placement of contaminated soil in the Operable Unit 2 landfill was signed by the Regional Board's Executive Officer on November 18, 2003. This ESD was initiated, in part, because of public concerns regarding the creation of lead containing dust. In past operations, such dust was associated with the removal of lead from contaminated soils for eventual metals recycling and cost recovery efforts. Subsequent to these past operations, lead recycling is no longer economic. This change in economics, coupled with air quality concerns, warranted the change from treatment to direct disposal of the lead rich soil.

A fixed price remediation contract was recently signed with a private firm for cleanup of Operable Unit 1's trichloroethene plume. This is part of a shift in cleanup management philosophy by the Department of Defense. A final plume cleanup strategy will be presented to Regional Board staff in early 2004.

Challenges:

2003 was the first year in which TCE contaminants were consistently detected in Fort Ord Well No. 29; a public supply well 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) these detections are high enough to warrant reporting in the Marina Coast Water District's Consumer Confidence Report. In response to these detections, the use of Well No. 29 has been significantly reduced. Water from Well No. 29 is blended with water from other supply sources prior to distribution. This reduction and blending results in non-detectable TCE levels for all water in the supply system.

Army and Regional Board staffs have been working to develop an acceptable response for the State's Emergent Chemicals requests. Most notable of these potential contaminants are perchlorate and polybrominated diphenyl ethers (PBDEs). While final responses are being made regarding these two potential contaminants, all other emergent chemicals

have been determined to not be a threat based on past either monitoring or facility use histories.

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 Substance Control is the lead agency for cleanup activities; however, the Regional 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-one of the thirty-four sites at Fort Hunter Liggett. The three remaining sites consist of the facility landfill, a groundwater plume associated with two former petroleum tanks, and a pesticide storage/mixing area.

A solvent-related plume associated with one of the landfill cells is nearly eliminated through enhanced natural degradation. Based on the success of an enhanced natural attenuation pilot study at a former tank site, the Army installed additional injection wells at the end of 2002. The Army has also initiated the final stages of the remedial phase at the pesticide storage/mixing area.

The Army has responded to the Regional 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: Linda Stone

Location/Base Realignment and Closure Program:

The 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 under 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 Board is the lead agency for this BRAC site. The U.S. Environmental Protection Agency 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 under this BRAC cleanup include Wood Dump/Landfill, Wash/Grease Racks Site, Former Farm Fuel Site, and 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:

In December 2002, the Army's consultant implemented enhanced natural attenuation systems to remediate chlorinated solvent plumes at the Wash/Grease Rack and Former Farm Fuel sites. To date, the results indicate the current remedial system may not be effective in successfully remediating the plumes in a timely fashion. Regional Board staff is working with the BRAC cleanup team to evaluate ways to modify the systems to achieve better results.

The landfill consists of six acres of miscellaneous waste and demolition debris, which spans the width of a drainage to the Santa Ynez River. In November 2003, the consultant installed an in-place liner in the culvert that conveys runoff through the landfill. This liner will more effectively prevent infiltration of runoff water into the landfill. Regional Board staff is currently reviewing proposed closure and monitoring plans. Closure construction is scheduled for Spring 2004.

The consultant is in the process of finalizing a Closure Report for the Former Quarry Site. The Former underground storage tanks sites were closed by Santa Barbara County, with Regional Board staff concurrence, in Fall 2003.

Regional Board staff has requested that the Army perform an evaluation to determine whether any of the emergent chemicals are constituents of concern at the facility. To date, the Army has not committed to performing this evaluation.

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 leased by the Department of Navy from the Monterey Peninsula Airport District (Airport District) in 1942. The Airport is located approximately three miles southeast from downtown Monterey.

The Naval Auxiliary Air Station Monterey was commissioned from the mid-1940s until March 1972. In 1946, the airport was no longer required for full military purposes. Consequently, the Airport District was granted joint and equal use of the landing facilities. On November 22, 1989, the Airport District released the Navy from its lease. 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, a trichloroethene (TCE) groundwater plume. A 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 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. In addition, the Airport District and Federal Government, co-defendants in a private party civil suit, recently announced an out of court settlement. Had the case gone to court, the cleanup could have been halted to prevent a change in material evidence (the contaminant plume). Community feedback at a May 16 2003 community meeting was very positive. The next public meeting is scheduled for Spring 2004, when the first system performance results will be available. In addition, Army and Regional Board staffs have been working to develop an acceptable response for the State's Emergent Chemicals requests.

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

CAMP ROBERTS

Lead Staff: Linda Stone

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 Board is the sole regulatory lead at this installation.

Sites/Chemicals of Concern:

The Preliminary Assessment completed in 1995 identified 14 sites as known or potential sources of contaminant releases.

Progress:

The Army National Guard is in the process of finalizing the Basewide Site Inspection for this facility. Regional Board staff has requested that the Army National Guard perform an evaluation to determine whether any of the emergent chemicals are constituents of concern at the facility. To date, the Army National Guard has not committed to performing this evaluation.

CONCLUSION

Our Regional 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 July 2004 meeting.