

MINUTES
McClellan Restoration Advisory Board Meeting
Rio Linda Community Center, Rio Linda
May 21, 2002, 6:30 p.m.

RAB Members in Attendance:

Gary Collier, Community Member
Kevin Depies, California Department of Toxic Substances Control (DTSC)
Bill Gibson, Community Member
Joe Healy, U.S. Environmental Protection Agency (USEPA)
Alan Hersh, McClellan Park
Katy Jacobson, Sacramento County Local Redevelopment Agency (LRA)
Ameen Khan, Alternate from Congress Member Matsui's Office
Rick Solander, Air Force Base Conversion Agency (AFBCA)
Kevin Spesert, Congress Member Ose's Office
James Taylor, California Regional Water Quality Control Board (RWQCB)
Lola Warrick, Community Member

Welcome and Meeting Guidelines

Marie Rainwater, the meeting facilitator, welcomed all attendees to the McClellan Restoration Advisory Board (RAB) meeting. Ms. Rainwater reviewed the RAB meeting guidelines.

RAB Member and Other Introductions

The RAB members introduced themselves to the public. Roxanne Yonn, URS Public Affairs Specialist, introduced guest speakers and staff.

Agenda, Comments on Minutes and Operating Instructions

Ms. Rainwater reviewed the agenda and handouts (Attachment 1).

The minutes from the February 26, 2002, RAB meeting were approved and finalized with no changes.

Cleanup Update

Rick Solander recognized Lola Warrick for being instrumental in organizing a briefing with the North Highland's Vision Task Force. Paul Brunner, McClellan Base Realignment and Closure Environmental Coordinator, was afforded the opportunity to discuss the contamination at Freedom Park and groundwater issues at the task force meeting. Mr. Solander encouraged the RAB members to continue to perform outreach services. He said McClellan staff is available to make presentations for interest groups.

Mr. Solander also encouraged the RAB members to attend the education seminars McClellan offers.

Mr. Solander gave an update on the cleanup activities at McClellan (Attachment 2).

- Confirmed Site (CS) 10 — Excavation continues. Over 700 bins of soil and debris have been filled with over 500 shipped off site by rail for proper disposal. To date, 222 drums have been excavated from the disposal site, in addition to the 110 drums initially uncovered.

- Potential Release Location (PRL) 32 — Excavation is complete, and all the soil has been shipped off site. This site was a radiological material waste storage area. The primary contaminant at this site was radium 226. McClellan is now developing a field sampling plan for confirmation sampling to confirm all contaminants have been removed. This project is scheduled to be completed in early 2004.
- Groundwater Treatment Plant — A leak in the aboveground groundwater conveyance piping was discovered. The plant was immediately shut down and all Air Force representatives were notified. Samples of the standing water and saturated soil were analyzed for volatile organic compounds. The leak was repaired and the plant was restarted. The confirmation sampling results indicated that the contaminants were not at levels that required an action.
- Soil Vapor Extraction (SVE) Systems — Dave Green, McClellan AFBCA Program Manager, reported that McClellan monitored for radiation at the SVE units and detected radon in the carbon filters of six out of the fifteen SVE units. The USEPA has guidance on safe exposure level for radon within residential areas but not for industrial areas. McClellan will continue to monitor for radon and will take all necessary actions to ensure that the public remains safe. A fact sheet on the topic will also be distributed.
- Radiation Sampling in Groundwater — During the February RAB meeting, a question was asked if McClellan sampled for radiation at the effluent of the groundwater treatment plant. It was reported incorrectly at the meeting that McClellan did not sample at that point. The correct information provided at tonight's meeting, is as follows. McClellan has an ongoing field sampling plan, which includes sampling groundwater monitoring wells and discharge at the groundwater treatment plant. One sampling event for radiation has been conducted at the plant discharge and at monitoring wells thus far; no radiation levels were detected that required action. There will be another sampling event in six months. The results will be reviewed by the regulators to determine if additional sampling is required.
- Production Well Sampling — Kevin Depies reported that production wells near McClellan are sampled for gross alpha particles, which is an indicator of a wide range of radionuclides such as plutonium, radium, uranium. However, because of concern that radionuclides are present in soil at McClellan, the City of Sacramento, at the request of the California Department of Health Service (DHS), recently sampled a key downgradient production well (City Well 131) for additional radionuclides including gross-beta particles, gross-alpha particles, strontium, and tritium. This well was sampled on April 15, 2002, and all analytical results were consistent with background levels, which indicate no radionuclide contamination. Representatives of DHS were at the meeting for public members who wished to discuss the results.

This field sampling plan also calls for perchlorate sampling at PRL 60 (holding pond) and Building 628. Concentrations above action levels have not been detected.

- Mowing in Vernal Pools — U.S. Fish and Wildlife Service (FWS) recently halted an authorization to mow in vernal pools until the Basewide Biological Opinion is completed. In April 2002, a McClellan Park contractor mistakenly mowed in a vernal pool area. The

Air Force is working with FWS on the mowing incident to determine if there will be an adverse action as a result of this mishap. The RAB will be kept updated.

At Gary Collier's request, Mr. Solander said that he would get the date of the mowing incident.

Mr. Collier asked if the vernal pool areas will be transferred to the City of Sacramento or the County. Mr. Solander stated none of the areas on McClellan that contain sensitive habitat have been turned over to the County of Sacramento for reuse. FWS is very protective about the future use of these sensitive habitats. FWS will render a biological opinion that will describe what the restrictions are for the future landowner. Currently, it is not planned for the FWS to be the conservator for these sites. McClellan will turn these sites over to the County as part of the economic development conveyance; the County will have to comply with the restrictions cited in the biological opinion.

Within the biological opinion, there will be a conservation easement, which is an area of property that is locked down in perpetuity for no development. Areas such as this will have to be maintained and preserved as a natural habitat.

Alan Hersh commented that the vernal pool that was mowed was located near the airfield.

Lola Warrick asked about the redwing blackbirds located in Otter Creek in the middle of the vernal pool area. Mr. Solander stated that he would get back with her on this creek because he is not familiar with Otter Creek.

Protecting the Health and Safety of Tenants and the Environment

Mr. Solander gave a presentation regarding information that will help the RAB and community understand how the Air Force, LRA, McClellan Park, and regulators are working to protect the health and safety of McClellan tenants and ensuring the tenants do not further contaminate McClellan. This presentation is in response to questions arising from the February RAB meeting (see Attachment 3).

Mr. Depies stated that one process that the regulatory agencies take to ensure public protection at contaminated sites is the implementation of institutional controls. Institutional controls are applied to protect the public when the remedy includes leaving some level of contamination in place. Institutional controls serve as administrative and/or legal controls to ensure short- and long-term protection of human health and the environment (see Attachment 4).

James Taylor stated that the RWQCB regulates and enforces state requirements to protect beneficial uses of surface water and groundwater throughout the state. The RWQCB has several regulatory programs that regulate stormwater discharges and discharges to surface water under the National Pollution Discharge Elimination System. The RWQCB also regulates waste discharges to land.

Mr. Taylor said since McClellan AFB's closure in July 2001, the stormwater collection system has been transferred to Sacramento County. The stormwater system is now included as part of the Sacramento County General Municipal Stormwater Permit. The County and McClellan Park are now operating the airfield, which is regulated under its own separate stormwater permit. All tenants at McClellan have been notified that they must comply with State requirements and apply for the appropriate permits if they have discharges.

Mr. Taylor said since base closure, there have been several incidents of illegal discharges to surface water. When incidents of this nature take place, the RWQCB issues a notice of violation to those responsible, requiring corrective action, along with training of the violator's staff, contractors, and tenants on how to comply with the requirements. Mr. Taylor stated that enforcement can also be a positive action rather than a punitive action. The RWQCB conducts periodic inspections and requires tenants to take corrective action for deficiencies and promote good housekeeping practices.

Mr. Taylor stated that the Air Force and its contractors also deserve credit for being very vigilant and responding rapidly to contain and clean up spills.

Joe Healy stated that USEPA is pleased with the Air Force's enforcement program.

Mr. Healy said USEPA is focusing on the operations of the cleanup being conducted under CERCLA. Occasionally, USEPA will send technical experts into the field to collect additional samples to verify the results.

Mr. Healy said USEPA is paying very close attention to the lease restrictions and institutional controls since it is an evolving area of how government agencies and local governments regulate the future use of property. USEPA will work with the Air Force and the regulators to develop a good working system for the future institutional controls.

Mr. Hersh stated the McClellan Park works closely with the Air Force and the regulators, and abides by all of the conditions. Although there were incidents, they have been minor in nature, and there have not been any health impacts. He said McClellan Park has assisted in making a better system to ensure that human health and the environment are protected.

Mr. Collier asked in terms of the permitting process, can information on contaminated areas be encoded in a geographical information system (GIS) inform the tenants that the area needs to have a permit from the Air Force. Mr. Hersh stated that Sacramento Area Council of Governments (SACOG) maintains a GIS database, which McClellan Parks has in their office. SACOG would eventually replicate the information that is contained in McClellan's Administrative Record.

Mr. Collier stated that until an area is cleaned, it should appear on the GIS, and the only way this could happen is if the Air Force provides this information to the County. Mr. Collier asked if this information could be added to SACOG's system. Mr. Solander stated that the Air Force has not shared this information with SACOG; however, the Air Force does have a GIS database that is used to screen the encroachment permits. The Air Force is willing to determine if it would be feasible to send the database to SACOG. The Air Force is also a subscriber to the Underground Service Alert System, to check if the tenant has a dig permit on file before digging.

Katy Jacobson commented that the governing authority for construction activities would be the County.

Mr. Depies commented that all the buildings that are occupied have gone through visual inspections conducted by DTSC prior to the tenants moving in to ensure there were no environmental hazards.

Ms. Warrick asked what happened to the asbestos problem at Capehart Housing. Mr. Solander stated that those buildings do contain asbestos. The buildings were turned over to McClellan Park because the asbestos was in good condition. When McClellan Park turns this

property over to a company, there should be language in the lease that mimics the Air Force's language, which discloses that there is asbestos and if disturbed, appropriate procedures are to be followed.

Mr. Bill Gibson asked if there is a general emergency plan for fires. Mr. Solander stated yes and it incorporates the 911 system.

Hexavalent Chromium Discharges from the McClellan Groundwater Treatment Plant

Mr. Brunner presented information to foster understanding of the hexavalent chromium and groundwater issues at McClellan and ongoing corrective actions (see Attachment 5).

Ms. Jacobson asked why another record of decision is required for the hexavalent chromium issue. Mr. Brunner stated that the current groundwater record of decision is based on volatile organic compounds. Mr. Depies commented that this new record of decision would also be required if it is determined that McClellan is the source of the hexavalent chromium.

Mr. Gibson commented that if all but one well is affected, then hexavalent chromium is naturally occurring. Mr. Brunner stated that it must be determined if in fact it is naturally occurring.

Mr. Collier asked if the U.S. Geological Survey team looked at this issue. Mr. Brunner stated that the extraction well data were obtained within the last four months. Mr. Collier stated that the reason he asked about the U.S. Geological Survey team is that an earthquake occurred a few months ago, and perhaps this could be the source. Mr. Brunner stated that it is something McClellan could look at. Mr. Brunner went on to say when dealing with levels at this concentration, even laboratory analysis becomes an important factor. McClellan officials have verified that the current laboratory being used is delivering good results. Mr. Collier asked if they changed the test apparatus. Mr. Brunner stated that McClellan did not change the test apparatus, but did change the laboratories.

The question was asked how will McClellan treat the water to remove the hexavalent chromium. Mr. Brunner stated that McClellan is proposing to use a selected ion exchange.

Mr. Hersh asked what volume the modifications of the treatment plant will be able to handle. Mr. Brunner stated that the current thought is that the treatment system for hexavalent chromium will be able to handle just a portion of the flow to the plant.

Mr. Collier asked if McClellan has coordinated with the local water companies to get their well results. Mr. Brunner and Mr. Taylor stated that they are unable to answer that at this time. Mr. Taylor stated that the RWQCB has found that hexavalent chromium is much more prevalent than originally thought. The Office of Environmental Human Health Assessment is working on developing a public health bill for hexavalent chromium, which will eventually lead to an established action level.

Mr. Collier asked if hexavalent chromium has been linked to any health issues in fetal growth. Mr. Taylor stated that he would not be able to answer this question.

Mr. Collier stated that it was indicated that the groundwater plume under his neighborhood was low priority and/or not a serious issue. It is his understanding that the contaminants have the potential to actually rise because they are volatile. The plume may have already moved further southwest. He said there are several members in the audience who are concerned about this issue. They have asked him about the ingestion of food products that may have been impacted

by the contaminated groundwater. *The public is wondering if they have any need for concern that there has not been any testing of off-site groundwater and vegetation for radionuclides.*

Mr. Brunner stated that so far McClellan has not tested for radionuclides in that particular location. Mr. Brunner suggested that the next time the RAB meets in Mr. Collier's neighborhood, McClellan officials can make a presentation as to what is being done to address that issue.

Public Comment

Members of the public were given the opportunity to make comments. Following is a summary of these comments.

Doug Nelson asked about one of the wells in the Rio Linda Water District located at Marysville Boulevard and Second Street. The well was randomly tested in 2002 and hexavalent chromium was detected at 14 parts per billion. The local utility is considering installing a new well for fire protection towards the North Highlands area. He said if the hexavalent chromium contamination is off site, the public needs to find out how far it is migrating, if it is coming from the base, or if it is naturally occurring. Mr. Nelson stated that he is surprised that there has not been any off-site testing by the Air Force.

Mr. Brunner stated that historically McClellan did test off site at the monitoring wells for hexavalent chromium and it was not detected. Hexavalent chromium has been detected in McClellan's extraction wells. McClellan will be resampling the monitoring wells for hexavalent chromium. It is unknown where the source(s) is.

RAB Members' Advice, Comments, and Announcements

Mr. Collier stated that it is premature to deal with the hexavalent chromium as an Agency for Toxic Substances Disease Registry (ATSDR) issue. However, the radionuclides and other issues have come up that were not dealt with in the original ATSDR surveys conducted in the 1990s. He would like to see some interaction with ATSDR to look in depth at the issue of birth defects that were brought up in the 1996 ATSDR report. It was very interesting that the areas north of Magpie Creek had no birth defects noted, whereas south, there were five. He said this was a very limited study, which should not bring cause for panic; however, it is his opinion that there should be a larger study. Unfortunately, the funding was cut from a previous program, which did research on birth defects. These are issues that he believes need to be resolved, by finding a monitoring system to detect whether there is a serious problem or not.

Mr. Solander stated that McClellan will host another seminar for the RAB members in July.

Ms. Rainwater announced McClellan's open house on June 20, 2002, from 5:30 to 7:30 p.m. at Madison Elementary School.

Next RAB Meeting

The next RAB meeting will be held on August 20, 2002, at North Avenue Elementary School.

**McClellan Air Force Base Conversion Agency
Responses to Public Comments
From the February 26, 2002, Restoration Advisory Board Meeting**

Several questions and comments were made during the public comment period at the Restoration Advisory Board (RAB) Meeting on February 26, 2002. The Air Force is providing their responses below in order to answer these concerns and to provide information back to the public on McClellan's restoration program.

Public Comment (summarized)	Response
<p>Gary Sawyer expressed that McClellan's community interview process is flawed. It is his contention that the Air Force, who will benefit the most by no new discoveries or disclosures, controls and makes all the rules for the entire interview process. The effectiveness of the past interviews, mailers, letters, handouts, and news releases over the last 20 years has one major flaw: none of the above forewarned the Air Force about plutonium being buried on base. It is obvious that the Air Force has not heard from those people and those are the people that the Air Force needs to hear. Mr. Sawyer stated that from his ex-laboratory experience, there are thousands former members who have not been contacted. The Air Force has not given clearance to reveal all details or suspicions, despite what has been said by headquarters. The interview process is not getting the word out. He stated that he did not hear the "widely distributed" call for information.</p>	<p>The interview and investigation process was presented at the Feb. 26, 2002 RAB meeting. The extensive community relations work completed so far has produced significant results. A total of 318 sites have been identified as a result of the interviews and subsequent investigate work. Additionally, more than 1,000 data base entries from over 700 employee interviews and extensive records searches have been completed. A mass media campaign at this time would not have the results or impact as the thorough and focused interviewing that is currently underway. The BRAC Cleanup Team, which includes representatives from the Air Force, U.S. EPA, Calif. Department of Toxic Substances Control, and the Calif. Regional Water Quality Control Board, concurs with the current investigative process.</p>
<p>Burl Taylor asked what is being done to keep the new tenants from further contaminating the area and how is it being controlled. Mr. Taylor asked for this information to be placed in writing.</p>	<p>Mr. Hersh stated that McClellan Park is working closely with the Air Force to create an accurate baseline snapshot of the condition of any property prior to a tenant moving in. McClellan Park then shares the documents with any prospective tenant or lessee as to the condition of the property. An environmental questionnaire is developed to be completed by the tenant and to analyze what type of business is coming in. Further analysis is conducted if needed. This process has been refined over the year. A presentation on this subject will be made to the RAB at the May 21, 2002 session.</p>

Restoration Advisory Board Meeting Cleanup Update - May 21, 2002

1. Update on Current Cleanup and Field Activities:

- a) **Confirmed Site (CS) 10.** Excavation continues (began Jan 7, 2002). Over 700 bins have been excavated, with over 500 shipped offsite by rail for proper disposal. In addition to the 110 drums initially uncovered and segregated, 222 drums have been excavated (69 segregated). Finding lots of glassware in drums.
- b) **Potential Release Location (PRL) 32.** Excavation complete. Radiological material waste storage area. Primary contaminant of concern was Radium 226. Developing Field Sampling Plan for confirmation sampling to determine if all contaminants have been removed. Expect project completion in early 2004.
- c) **Ground Water Treatment Plant (GWTP) and Investigative Cluster (IC) 29 GW Treatment System (GWTS).** The GWTP is operating well at 800 gpm. The IC29 system is currently off due to radon issues. Selected wells (14 total) were shut down due to higher Cr6 levels and Sewer capacity constraints. Four of six OU D wells are operational. The initial April effluent sampling reported for Hexavalent Chromium was above the 10ppb monthly average allowable so weekly discharge sampling was performed as required by O&M procedures. The Hexavalent Chromium monthly average for April was 10.6ug/L, this exceeded the monthly average, so effluent discharge was diverted to the sewer on April 18 at 8:40am.

A leak in the aboveground groundwater conveyance piping was discovered on 7 May, the GWTP was immediately shut down and all AFBCA and AFCEE representatives were notified. The standing water and saturated soil were sampled and analyzed for VOCs. The leak was repaired and the GWTP was restarted on 9 May.

Sample Date	Effluent
4/2/02	10.8 ug/L
4/9/02	10.6 ug/L
4/16/02	10.5 ug/L

GWTP effluent sample results for Hexavalent Chromium since discharging to the sewer.

4/18/02	9.9 ug/L
4/24/02	11.1 ug/L
5/1/02	10.6 ug/L

There were no temperature or pH excursions during the month of April.

Second Quarter 02 GroundWater Monitoring Program (GWMP) began on May 6 with groundwater level measurements. Sampling of approximately 100 groundwater monitoring and extraction wells began on May 13 and will be completed on or before June 14.

d) **Soil Vapor Extraction (SVE) Systems (6 of 15 operating)**

As a precautionary measure, all granular activated carbon systems except for IC 35 have been shutdown because of potential radon accumulation in the carbon units. All sites are being evaluated for radon (radiation).

- 1) IC 1 Vapor Granular Activated Carbon (VGAC) shut down for radiation levels.
- 2) IC 7 VGAC is shut down for radiation levels.
- 3) IC 23 VGAC is shut down for radiation levels.
- 4) IC 27 VGAC was shut down on 1/02/02 for rebound study.
- 5) IC 29 VGAC DPE is not operating.

- 6) IC 31 Catalytic Oxidation (Cat Ox) is not operating, shutdown unit on 5/13/02 for planned rust removal and painting. Expect to return to service on 5/16/02.
- 7) IC 35 Flameless Thermal Oxidation (FTO) is operating.
- 8) IC 35 VGAC is operating. Radiation levels at or below 6 uR/h net at fence line.
- 9) IC 43 FTO is operating.
- 10) IC 43 VGAC is shut down for radiation levels.
- 11) PRL S-13 FTO is operating.
- 12) PRL T 44 VGAC is shut down for radiation levels.
- 13) OU C1 Cat Ox is operating. Rust removal and painting 95% completed.
- 14) OUD Site S Cat Ox is operating. Rust removal and painting 95% completed.
- 15) SSA-2 Thermal Ox turned over to URS 3/7/02. System is to remain shut down until air emission issues are resolved.

SVE/SVM Well Installation at: IC-19 (4), IC-31 (2), IC-29 (1), IC-32 (1) & OUC-1 (4). URS has completed the well construction, vault and conveyance piping installation at IC 19 and OU C1.

- e) **Radiation Sampling in Groundwater.** Field Sampling Plan (FSP) prepared. Includes sampling groundwater monitoring wells and discharge at GWTP. One sampling event has been conducted at the Groundwater Treatment Plant discharge and at monitoring wells thus far, no radiation levels requiring action. FSP also calls for perchlorate sampling at specific sites (PRL 60 and at building 628). Nothing above action levels has been found.
- f) **Mowing in Vernal Pools.** Mowing in vernal pools (under dry conditions) was authorized until recently. Fish and Wildlife Service (FWS) recently put a halt to mowing in vernal pools until Basewide Biological Opinion completed. Last month, McClellan Park contractor mistakenly mowed in vernal pools. Air Force is working with FWS on mowing incident.
- g) **Petroleum, Oils and Lubricants (POL) activities included:**
 - 1) Bldg. 26 Bioventing unit is operational.
 - 2) Bldg. 739 (MAT K) - Bioventing unit operational.
 - 3) TankFarm 2 - Bioventing unit operational.
 - 4) Tank Farm 7 - Biovent unit is operational.
 - 5) Tank Farm 10 - Parsons directed to complete Biovent Workplan.
 - 6) Capehart Gas Sta. - Bioventing unit is shut down during investigative work, which began Apr29, to investigate groundwater impact at the site.
 - 7) Davis - Bioventing unit operational.
 - 8) All IRP POL/FUEL Sites (includes UST, AST, pipe, surface spills, etc.) planned for CERCLA FSP. URS has been directed to create the FSP. Project Manager for AFBCA is Doug Self under proposed DSR #770.
- h) **Radiation Program.**
 - 1) CS 10: Discussed in item a) on page 1.
 - 2) Airfield Surveys: Cabrera has completed gamma drive over scan. Sample results have been received and data reduction continues. Working draft comment resolution meeting held on 3/29 with AFIERA. Draft report was sent by AFBCA for regulatory review on April 16th.
 - 3) Low Lying Area: Scanning and in-situ gamma spectroscopy measurements in low-lying areas within 250 feet of runway and taxiway began last fall. Some ISOCS were taken in December in low lying areas but not in the vernal pools due to seasonal rainfall and still awaiting permission from Fish and Wildlife Service. Survey will continue in spring 2002. Approximately 30% of total ISOCS measurements were completed prior to December 31 2001. Estimated resumption of ISOCS measurements May 17, 2002. Estimated field work completion time frame 4 to 6 weeks.
 - 4) Landfill Surveys: Baseline of previous RI works completed, and landfills needing additional work identified. Radiation Conceptual Site Model final due on 30 May 02. Project validated, SOW

being prepared. Strategy is to use scan surveys, solid sampling, in-situ gamma spectroscopy measurements.

- 5) Building Surveys: Surveys continue to be performed (15 buildings to survey). Twenty-Two buildings have been released for unrestricted use; 7 buildings are currently in regulator review, expected to be completed by June 2002.
 - 6) Radiation Conceptual Site Model: Preparing final document.
 - 7) Radiation Survey of Sewer: Preparation of Field Sampling Plan for effort started. Draft Field Sampling Plan scheduled for late July 2002.
- i) **Site Security** is performed on a daily basis at all environmental retained properties and sites. Sacramento County Sheriff's office is contracted directly via AFCEE as of March 23rd. Sheriff operation will be relocated to Bldg.702 after the facility is repaired, painted and cleaned.
 - j) **OU B-1 Cap 1st Qtr.** inspection was conducted 7 Mar 02, asphalt depression repairs were made and surface samples obtained.
OU D Cap 1st Qtr. inspection was conducted 7 Mar 02. First seasonal mowing has been completed. Service pathway repair was completed as was repairs to well protection bollards.
 - k) **OU B-1 Drainage ditch** remediation began Oct 15th. Approximately 2500 cy of sediment/soils were excavated and shipped offsite for disposal at Forward Landfill. Analytical results from the confirmation samples indicate some contamination remains in some of the drainage feature. Discussions were held with the RPMs during March and it was concluded that 6 inches of additional soil will be removed from the unlined portion of the drainage ditch. It was also determined that the gunite-lined portion of the ditch has minimal contamination beneath the liner and that the liner will be left in-place. Institutional controls will be utilized to ensure that the liner remains in-place and that soils are properly managed to prevent them from coming in contact with eco-sensitive areas. Planning has begun to resume excavation work in the drainage ditch now that the wet season is drawing to a close.
 - l) **PRL S-033** Site restoration near Bldg. 786A was completed in Oct 01. Soil was shipped offsite for disposal at Forward Landfill. The Site Close Out Report has been finalized as of 19 April.02.
 - m) **Soil Staging Pile Facility.** Project phase 2 construction of the facility commenced in early November. . The installation of impermeable asphaltic MATCON pad commenced on May 13. Installation of the material should be completed by May 15, 2002.
 - n) **Technology Demos:** No Soil treatment technology or scaled operational demonstrations are going on at this time. The soil washing equipment still remains on site, liability release with URS/Brice.
 - o) **Soils Management Plan,** The Draft received significant internal comments and was revised. The document awaits review by the BEC. Document should be ready for distribution to the BCT in June.
 - p) **Drainage Channel** Maintenance & Cleaning is ongoing, performed by Sacramento County.
 - q) **Creeks conceptual site model** agency review draft final was completed on May 7, 2002. The final document is due out on June 7, 2002.
 - r) **Vernal pool restoration plan** draft document completed. Plan was submitted to US Fish and Wildlife Service (USFWS) in January 2001 with request for Section 7 consultation. At a meeting with the USFWS on 7 Feb. 2002, it was determined that no restoration would be required since the damaged vernal pool appears to have restored itself naturally. Additional preservation will be required in the West Nature Area in lieu of restoration. The vernal pool restoration plan will be discontinued and removed from the DSR. The settlement agreement, consisting of 6.3 acres of vernal pool preservation, will be documented in the Biological Opinion for base disposal.
2. **Deliverable Status Report (DSR):** See attached for documents scheduled for completion or review in next 45 days.

All DSR's By ROD - Next 45 Days

Current as of Monday, May 20, 2002 4:34:02 PM EST

ROD	Project Manager	DSR Number	Doc Title	Doc Type	OU Code	Deadline Date	Extension Date	Completion Date
0	Brian Hovander	771-3	FOST: Parcels A1, A2, A3, A7, L1 & L3	Draft Final	BW	5/31/2002	6/14/2002	
0	Buddy Walser	571-5	Rad BW CSM	Final	BW	4/4/2002	5/30/2002	
0	Dawn Young	746-2	Community Relations Plan 2002	Agency Rev D	BW	6/14/2002		
0	Don Gronstal	290-1	Catalyzed Ozonation Tech Memo	Draft	GW	4/30/1999	6/4/2002	
0	Doug Fortun	784-1	Capehart Gas Station Investigation Report	Draft	N/A	7/2/2002		
0	Paul Bernheisel	572-2	Soils Management Manual	Draft	BW	2/15/2002	5/30/2002	
0	Paul Bernheisel	572-3	Soils Management Manual	Agency Rev D	BW	6/30/2002		
0	Rick Solander	497-1	Reuse EIR	Draft	BW	6/29/2001	6/28/2002	
0	Scott Dickinson	384-7	Rad FSSR - Bldgs 722, Bay 8 and 1080	Final	BWR	6/14/2002		
0	Scott Dickinson	392-4	Rad FSSR - Bldg 640	Agency Rev DF	A	6/21/2002		
0	Scott Dickinson	493-1	Rad FSSR - Bldg 1106	Draft	G	10/17/2000	5/23/2002	
0	Scott Dickinson	498-1	Rad FSSR - Bldg 458	Draft	A	3/22/2002	6/3/2002	
0	Scott Dickinson	499-5	Rad FSSR - Bldg 655	Final	B	6/12/2002		
0	Scott Dickinson	500-1	Rad FSSR - Bldg 624	Draft	B	12/11/2000	6/21/2002	
0	Scott Dickinson	501-3	Rad FSSR - Bldg 362	Draft Final	A	9/21/2001	5/24/2002	
0	Scott Dickinson	501-4	Rad FSSR - Bldg 362	Agency Rev DF	A	6/25/2002		
0	Scott Dickinson	502-1	Rad FSSR - Bldg 658	Draft	B	1/3/2001	5/24/2002	
0	Scott Dickinson	529-1	Rad FSSR - Bldg 98	Draft	H	8/28/2001	6/28/2002	
0	Scott Dickinson	549-2	Rad FSSR - Bldg 351	Agency Rev. D	A	1/25/2002	5/29/2002	
0	Scott Dickinson	549-3	Rad FSSR - Bldg 351	Draft Final	A	6/28/2002		
0	Scott Dickinson	551-1	Rad FSSR - Bldg 250M	Draft	A	4/20/2001	6/7/2002	
0	Scott Dickinson	652-1	Rad FSSR - Bldg 339	Draft	A	6/28/2002		
0	Scott Dickinson	653-1	Rad FSSR - Bldg 626 (Exterior)	Draft	B	6/28/2002		
0	Scott Dickinson	655-2	Rad FSSR - Bldg 783, Bays A-I, & L-P	Agency Rev D	C	5/29/2002		
0	Scott Dickinson	655-3	Rad FSSR - Bldg 783, Bays A-I, & L-P	Draft Final	C	6/21/2002		
0	Scott Dickinson	775-1	Rad FSSR - Bldg 368	Draft	A	6/21/2002		
1	Buddy Walser	253-5	OU C RICS	Draft 3	C	6/1/2001	5/22/2002	
1	Buddy Walser	396-3	OU B Data Gap RICS Addendum	Draft Final	B	10/22/2001	7/2/2002	
1	Buddy Walser	554-5	OU A RICS Addendum	Final	A	6/17/2002		
1	Buddy Walser	768-3	Indoor Air Risk Tech Memo	Draft 2	GW	4/12/2002	6/28/2002	
1	Diane Kiyota	336-3	Well Abandonment Summary Report	Final	GW	6/30/1999	5/29/2002	
1	Diane Kiyota	355-1	RD-III Sampling & Analysis Plan	Draft	GW	8/15/2000	6/11/2002	
			GMP Quarterly (CY01-4th)					

1	Diane Kiyota	475-1	Report	Final	GW	4/14/2002	5/20/2002	
1	Diane Kiyota	475-2	GMP Quarterly (CY01-4th) Report	Agency Rev F	GW	5/29/2002	6/20/2002	
1	Diane Kiyota	753-4	RD-III Data Gap FSP	Agency Rev F	GW	5/29/2002		
1	Diane Kiyota	758-3	FSP for Ultraclean Sampling at GWTP	Draft Final	GW	5/20/2002		4/18/2002
1	Diane Kiyota	758-4	FSP for Ultraclean Sampling at GWTP	Agency Rev DF	GW	5/20/2002		5/9/2002
1	Diane Kiyota	758-5	FSP for Ultraclean Sampling at GWTP	Final	GW	6/10/2002		
1	Diane Kiyota	779-1	FSP to determine background levels of Cr (VI)	Draft	GW	6/7/2002		
1	Diane Kiyota	780-1	Work Plan to exclude GWTP components as Cr(VI) source	Draft	GW	6/8/2002		
1	Don Gronstal	386-1	Aggressive Remediation Tech Memo	Draft	GW	1/19/2001	5/28/2002	
1	Don Gronstal	386-2	Aggressive Remediation Tech Memo	Agency Rev D	GW	6/28/2002		
1	Don Gronstal	567-3	SVE Monitoring Optimization Work Plan	Draft Final	BWV	4/23/2002	5/31/2002	
1	Don Gronstal	567-4	SVE Monitoring Optimization Work Plan	Agency Rev DF	BWV	7/1/2002		
1	Don Gronstal	610-1	Remedial Process Opt Tech Memo	Draft	BWV	6/27/2002	3/24/2003	
1	Doug Self	607-2	VZ Quarterly [CY02-1st] Monitoring Rpt	Agency Rev F	BW	7/1/2002		
1	Doug Self	765-1	Shallow Soil Gas (SSG)/Fuels FSP	Draft	BW	4/17/2002	5/20/2002	
1	Doug Self	765-2	Shallow Soil Gas (SSG)/Fuels FSP	Agency Rev D	BW	6/19/2002		
1	Doug Self	774-2	SVE START Sites (2002) FSP	Agency Rev D	BW	7/1/2002		
1	Molly Enloe	506-5	Creeks Conceptual Site Model	Final	C	6/6/2002		
1	Paul Brunner	790-5	TCRA Memo for GWTP CR+6 Discharges	Final	GW	5/24/2002		
2	Buddy Walser	253-5	OU C RICS	Draft 3	C	6/1/2001	5/22/2002	
2	Buddy Walser	396-3	OU B Data Gap RICS Addendum	Draft Final	B	10/22/2001	7/2/2002	
2	Buddy Walser	554-5	OU A RICS Addendum	Final	A	6/17/2002		
2	Clifford Howe	667-3	UST Closure Report - Bldg 7C	Final	H	5/28/2002		4/8/2002
2	Clifford Howe	667-4	UST Closure Report - Bldg 7C	Agency Rev F	H	6/28/2002		
2	Clifford Howe	668-1	UST Closure Report - Bldg 7D	Draft	H	6/28/2002		5/10/2002
2	Clifford Howe	717-1	UST Work Plan - Bldg 640	Draft	A	6/30/2002		
2	Molly Enloe	506-5	Creeks Conceptual Site Model	Final	C	6/6/2002		
2	Steve Mayer	776-3	Data Gap FSP Addendum for Initial Parcel FS	Final	IP	5/10/2002	5/20/2002	
2	Steve Mayer	791-1	Initial Parcel Ecological Scoping Assessment/Tier 1 Risk Assessment	Draft	IP	5/31/2002		
2	Steve Mayer	791-2	Initial Parcel Ecological Scoping Assessment/Tier 1 Risk Assessment	Agency Rev D	IP	7/1/2002		
3	Buddy Walser	253-5	OU C RICS	Draft 3	C	6/1/2001	5/22/2002	
3	Buddy Walser	396-3	OU B Data Gap RICS Addendum	Draft Final	B	10/22/2001	7/2/2002	
3	Buddy Walser	554-5	OU A RICS Addendum	Final	A	6/17/2002		
3	Clifford Howe	695-1	UST Closure Report - Bldg 332	Draft	A	5/31/2002		1/14/2002
3	Dave Green	650-2	Rad Unincorporated Area-FSSR	Agency Rev D	B	6/14/2002	6/17/2002	
3	Don Gronstal	541-5	Thermal Desorption Tech Memo	Final	BWN	5/29/2002		
3	Don Gronstal	564-2	Wet Oxidation Bench Scale	AF Review	BWN	5/23/2002		
3	Molly Enloe	506-5	Creeks Conceptual Site Model	Final	C	6/6/2002		
3	Scott Dickinson	773-1	Rad FSSR - Bldg 248	Draft	H	8/28/2001	6/21/2002	
4	Buddy Walser	253-5	OU C RICS	Draft 3	C	6/1/2001	5/22/2002	

Protecting the Health and Safety of Tenants and the Environment



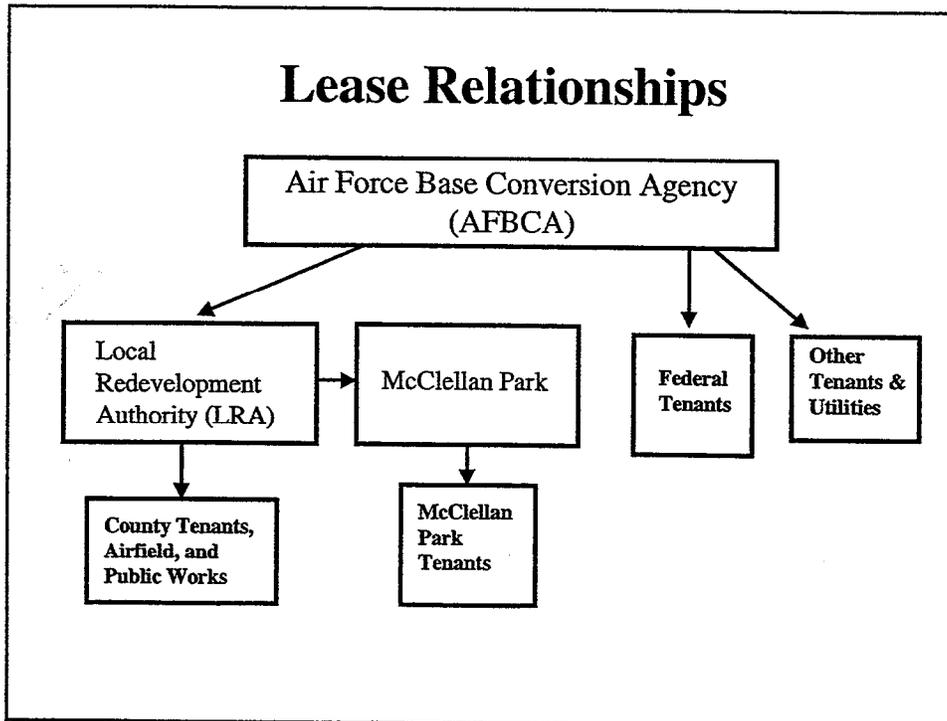
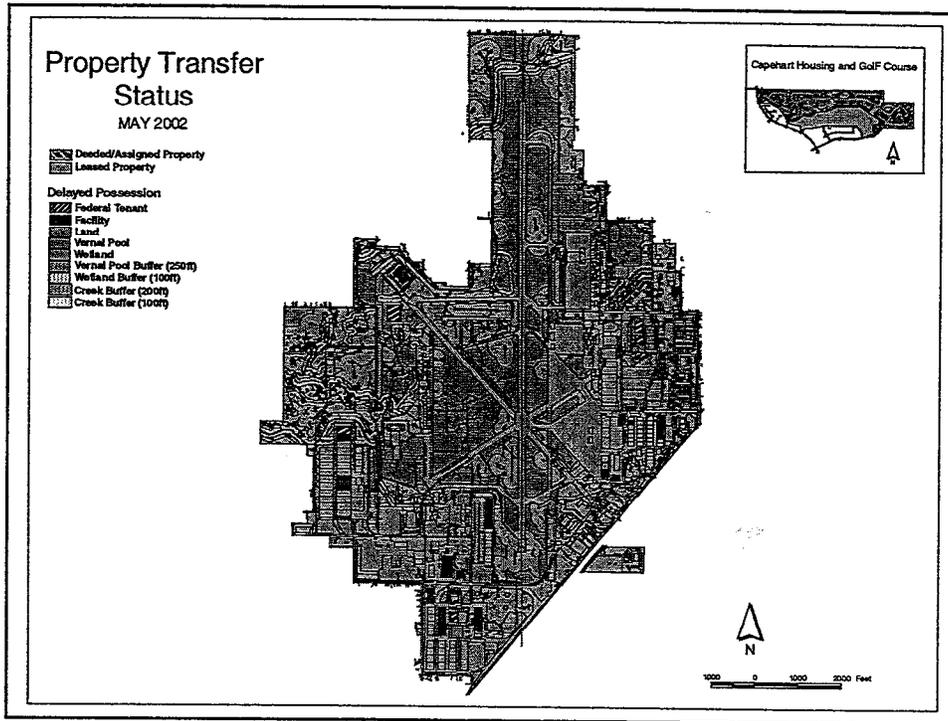
Presentation for: Restoration Advisory Board

By: Rick Solander

May 21, 2002

Background

- **Air Force has leased much of McClellan**
 - Air Force maintains oversight responsibility
 - County, McClellan Park, federal tenants, utility companies, and Air Force contractors reuse/operate at McClellan
- **Active cleanup program continues**
 - Areas of surface and subsurface contamination exists
 - Environmental conditions described in environmental baseline surveys and other supporting documents
 - Some systems in place to clean up contamination
- **Developed control mechanisms to help prevent exposure to tenants and new releases to environment**



Air Force Control Mechanisms

- Lease Restrictions/Conditions
- Encroachment Permits
- Site Controls
- Inspections and Monitoring
- Tenant Communication

Lease Restrictions/Conditions

- Tenants and sub-lessees must comply with all lease restrictions, including:

- Intrusive activities (digging, trenching) → Written Permission
- Handle/store hazardous materials → Hazardous Materials Management Plan
- Any waste, wastewater, or air discharges → Regulatory Permits
- Asbestos removal → Asbestos Removal Plan

- Even with the lease restrictions, incidents still do occur at times:

- discharges to creeks
- mowing in vernal pools
- improper drum/container storage
- digging without permit

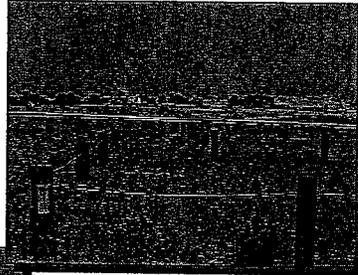
Encroachment Permits

- **Required for any soil disturbing activities or work in area of natural resources**
- **Air Force reviews and approves/disapproves**
 - Air Force will deny digging in highly contaminated areas or within natural resources buffer zone
- **Health and Safety Plan and/or Work Plan required for digging in contaminated areas**
 - Air Force may perform digging in some cases
- **Incidents of digging without a permit**

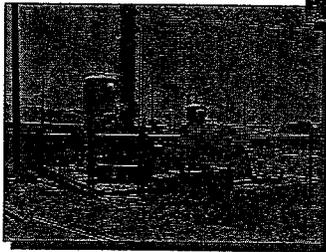
Site Controls

- **Physical mechanisms to contain or reduce exposure to contamination or limit access to property**
- **Examples:**
 - Fences
 - Post and cable
 - Security
 - Temporary cover
 - Regulated caps
 - Signs

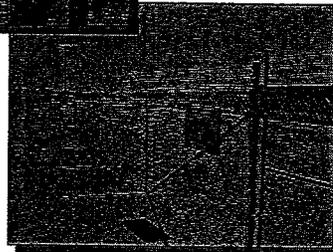
Site Controls



Post & Cable at
OU-D Cap

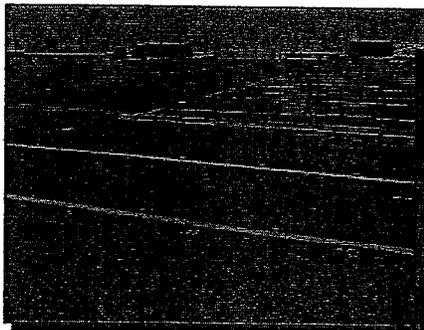


Fencing & Signs at PRL S-13 FTO Unit

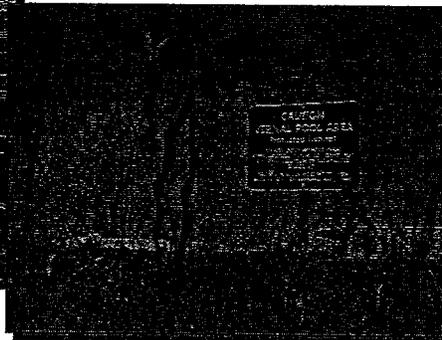


Fencing & Temporary Cover at CS-24

Site Controls



Regulated Cap OU-B1



Vernal Pool Sign

Inspections and Monitoring

- **Air Force has right to inspect tenants for environmental compliance**
- **Air Force conducts environmental protection reviews with tenants, look for:**
 - Proper hazardous material management and storage, permits, evidence of spills, unauthorized discharges
 - Most common discrepancies: marking/labeling containers
- **Air Force Field Team conducts daily checks of environmental systems to ensure integrity**
 - Weekly checks of above ground piping

Tenant Communication

- **Air Force Tenant Communication Plan/ Emergency Notification Plan**
 - Describes procedures for reporting and responding to spills
 - Describes mechanisms to convey information on environmental issues: e.g., newsletters, fact sheets
- **LRA and McClellan Park participate in BRAC Cleanup Team meetings**
 - Fosters teamwork
 - Obtain information to pass on to current and future tenants
- **LRA, McClellan Park, and Tenant Rep part of Restoration Advisory Board**

Corrective Actions

- **Air Force issues corrective action letters**
- **Regulatory enforcement**
- **Increased education and training**
- **Learn from mistakes and improve control mechanism**

Institutional Controls (ICs)

- **Administrative and/or legal controls to ensure short- and long-term protection of human health and the environment**
- **Applied when remedy for cleanup includes leaving some contamination in place**
- **Attached to property deeds**
- **Types of ICs**
 - Governmental
 - Proprietary
 - Enforcement Tools
 - Informational

Hexavalent Chromium Discharges from the McClellan Groundwater Treatment Plant



Presentation for: Restoration Advisory Board

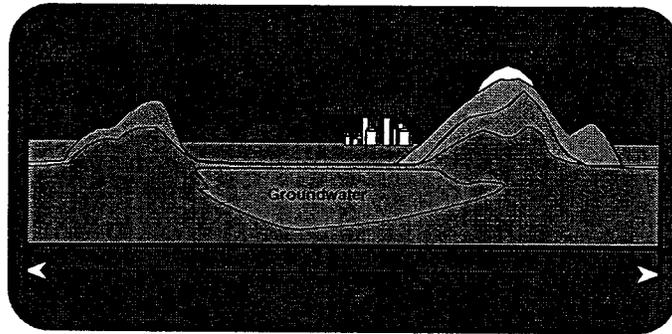
**By: Paul Brunner; McClellan BRAC
Environmental Coordinator (BEC)**

May 21, 2002

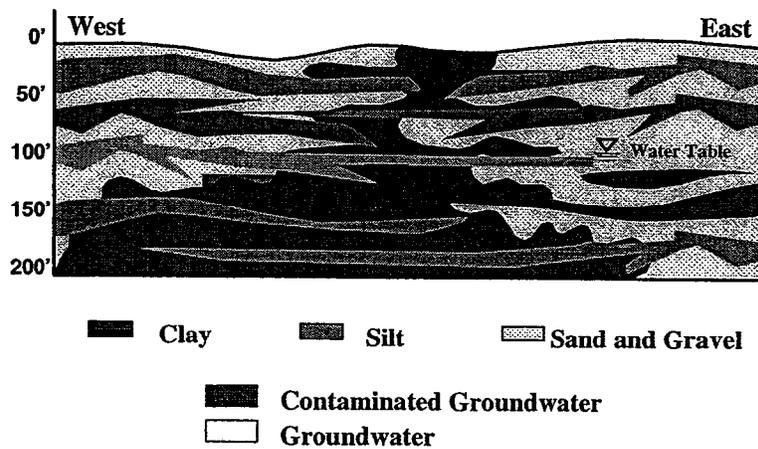
Background

- Groundwater (GW) is encountered today at 90 to 100 feet below ground surface and extends several thousand feet
- The Air Force has routinely sampled the GW since the early 1980s
 - Regulatory Agencies have been involved
 - Currently, the Air Force regularly samples over 400 monitoring wells
- There are plumes of contamination in the GW underneath McClellan
 - Contaminants of concern have been historically Volatile Organic Compounds (VOCs)
 - Primary VOC of concern is Trichloroethene (TCE)
 - Metal contamination in the GW, such as Hexavalent Chromium, has not been a concern until now
 - In 1999, metal analysis from the monitoring wells was suspended with regulatory concurrence as a cost saving measure

Regional Geological Setting of McClellan



Soil Cross Section of McClellan AFB Sediments



Background (continued)

- The Air Force operates a GW treatment system, which collects and destroys VOC contamination
 - 57 extraction wells
 - 5 miles of pipeline
 - Piped to a central GW Treatment Plant (GWTP)
 - Currently treats approximately 1,200 gallons per minute
 - Will expand to over 2,000 gallons per minute in a few years
 - Currently, the GWTP only treats VOCs
 - The GWTP normally discharges treated groundwater to Magpie Creek
 - GWTP discharges are monitored for contaminants, such as VOCs & Metals (e.g. Hexavalent Chromium)

McClellan Groundwater Actions To Date (CY 02)

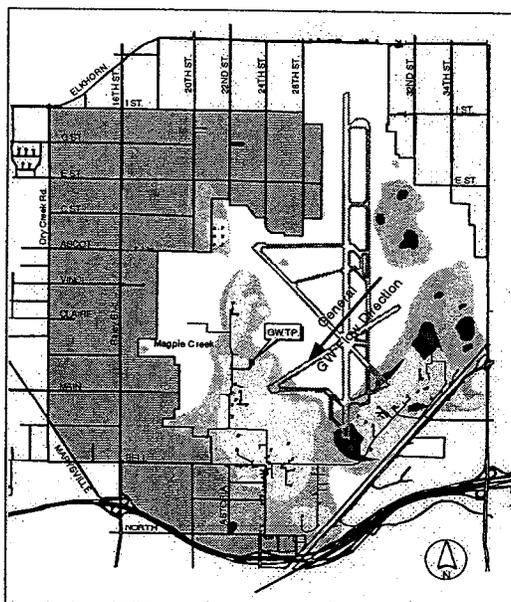
LEGEND:
GROUNDWATER CONDITION
 □ NO ACTION REQUIRED
 ▨ CONTAMINATION BELOW MCL PROJECTED TO NOT REQUIRE ACTION
 ▩ CONTAMINATION ABOVE MCL* THAT IS CONTAINED
 ■ CONTAMINATION ABOVE MCL THAT MAY REQUIRE AN ACTION
 ▤ AREA OF THE OFFBASE RESIDENTIAL WATER HOOKUPS (Completed in 1980's)

• 57 EXTRACTION WELLS
 ∟ GROUNDWATER PIPELINE

APPROXIMATELY 400 ACTIVE MONITORING WELLS (NOT SHOWN)

* MCL= Maximum Contaminant Limit- Federal Drinking Water Standard.

GWTP = Groundwater Treatment Plant



What is Hexavalent Chromium?

- Hexavalent Chromium is a naturally occurring widely distributed metallic element; found in water, soil, rocks, and food
- McClellan AFB used Hexavalent Chromium in industrial applications; such as chrome plating, steel hardening and painting
 - Investigations show Hexavalent Chromium is present at some McClellan surface sites
- Hexavalent Chromium is a public health and ecological concern

Hexavalent Chromium Limits

- Public Health Limits
 - There is no federal or state Hexavalent Chromium limit for the protection of human health in drinking water
 - 21 ppb is the EPA health advisory number for Hexavalent Chromium in drinking water
- Ecological Limits
 - 11 ppb is the state Hexavalent Chromium limit for fresh water aquatic protection
- The GWTP Operations and Maintenance Manual more conservatively limits Hexavalent Chromium discharge to 10 ppb

Problem

- Since 1999, we have experienced intermittent discharges of Hexavalent Chromium that were slightly above the specified limit for the GWTP
- In early 2002, the GWTP trend continued to increase above Hexavalent Chromium limit
- Discharges are above the aquatic limit, but below the established limits for protection of human health
- BRAC Cleanup team (BCT) immediately checked Extraction Wells for Hexavalent Chromium (see map)
 - No specific sources were found
- Air Force immediately took corrective actions

Immediate Actions Taken

- Rerouted GWTP discharge into the County Sanitary Sewer
 - Sewer capacity issues required turning off 14 interior extraction wells
 - Wells were selected to:
 - maintain off-base plume capture and continue to provide protection to the public
 - reduce Chromium concentrations
 - reduce volume discharged to the sewer
- Incorporated metal analysis back into the GW Monitoring Well sampling program
 - Results due in July
- Notified Regulators, RAB & Public
 - Direct contact, newsletters, & press release
- Initiated a plan to find the source and address the problem

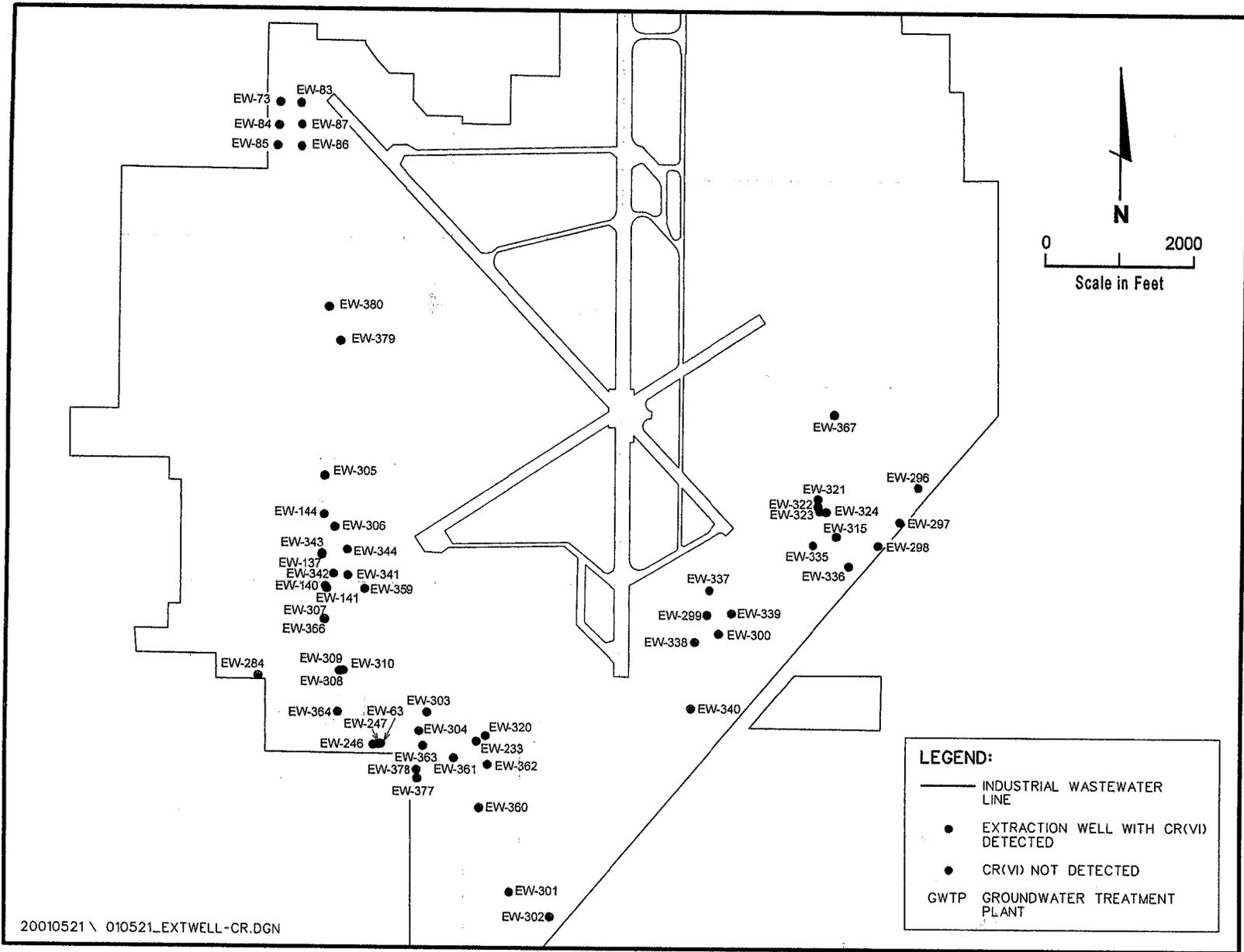
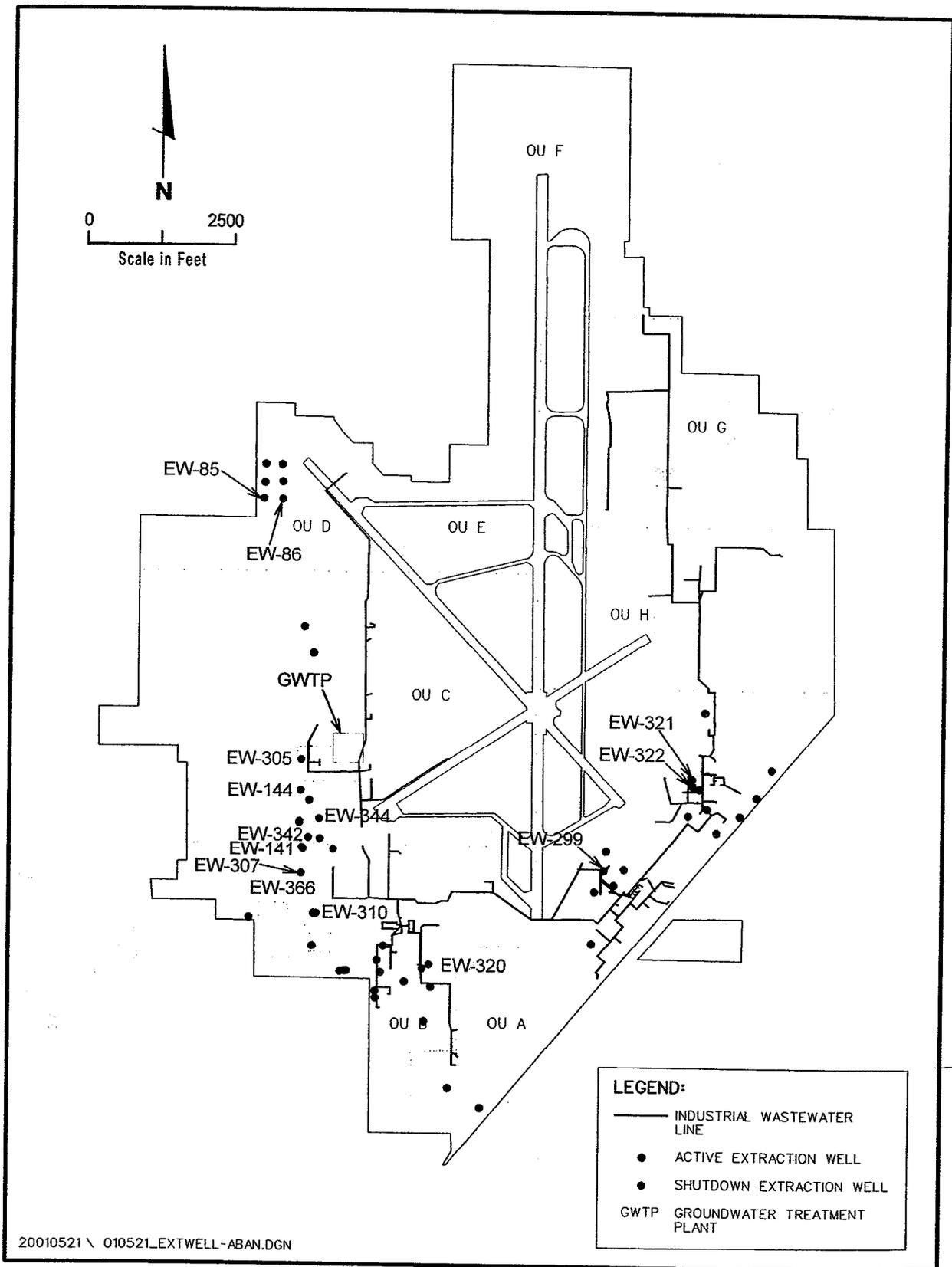


Figure 1. Extraction Wells with Cr(VI) Detected



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Figure 2. Shutdown Extraction Wells

Impacts of Continued Sewer Discharge

- **Interim Remedy Compliance**
 - Reduced on-base plume containment
 - Limits future expansion of GWTP extraction well system
- **Sewer Capacity**
 - Currently operating at 85% of maximum sewer capacity with 14 wells turned off
 - Limits future development of the McClellan property by the LRA and MBP
- **Impacts Natural Resources**
 - Seasonal impacts to creek habitat by reduction of water flow

Hexavalent Chromium Action Plan

- **Phase One:**
 - Install a Hexavalent Chromium Treatment System at the GWTP
 - Estimated completion mid calendar year 2003
- **Phase Two:**
 - Determine Hexavalent Chromium background levels
 - Investigate GW plume and restoration sites to find source(s)
 - One to two year effort
- **Phase Three:**
 - Modify Hexavalent Chromium Treatment System based on findings in phase two and proposed increase extraction flows from previously planned GW system expansion
 - Needed in calendar year 2005
- Anticipate a future basewide GW Metals Record of Decision will need to be added

What is Next

- The AF will continue to discharge to the County Sewer until the Hexavalent Chromium levels from the GWTP are below required limits and effluent can be safely discharged to Magpie Creek
- The Air Force will proceed to install the Hexavalent Chromium Treatment System to address the immediate problems associated with Hexavalent Chromium
 - Public Meeting and Comment Period will occur
 - Fact Sheet will be produced
- The Air Force & BRAC Cleanup Team will continue to search for the Hexavalent Chromium source(s)

RAB Feedback