

Marine Corps Air Station Tustin Environmental Cleanup—Fact Sheet



September 2001

Tustin, California

► STATUS UPDATE

MCAS Tustin Installation Restoration Program

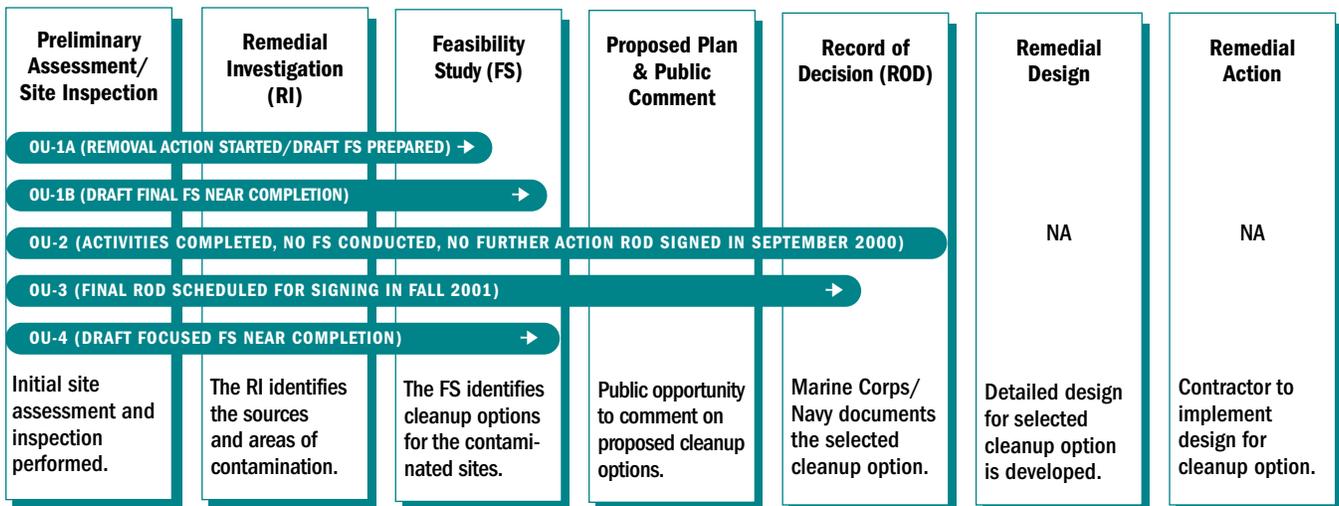
The purpose of this fact sheet is to provide a brief update of the current environmental cleanup activities and past achievements at Marine Corps Air Station (MCAS) Tustin. Since 1980, through the Navy's Installation Restoration Program (IRP), the Marine Corps has been investigating and cleaning up various sites at MCAS Tustin. The intent of the Marine Corps is to eventually transfer the property to the community for beneficial reuse. The goals of the IRP include identifying, investigating, and cleaning up contamination resulting from past operations. Contaminants targeted for cleanup include solvents, paint strippers, battery acid, fuel, oil, and metals resulting from past waste management and disposal operations. In 1986, the IRP was modified to reflect the U.S. Environmental Protection Agency's (EPA's) cleanup process as defined by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

The cleanup effort at MCAS Tustin includes 16 IRP sites. The Marine Corps and regulators have concurred that no further action is necessary at four of

these sites, and 12 sites require further investigation, or have a remedial action currently underway. To effectively manage the overall cleanup effort, the Marine Corps has grouped together sites that share common characteristics into Operable Units or OUs. IRP sites and Areas of Concern (AOCs) within each OU undergo detailed investigation and evaluation to determine if cleanup is required. The map on page 2 shows all the OUs and the specific sites. Presented below is a description of each OU, their respective sites, and a status update of environmental investigations, cleanup activities, and accomplishments at MCAS Tustin.

Each step of the IRP is carefully coordinated with regulatory agencies, working in cooperation as the Base Realignment and Closure Cleanup Team (BCT), to ensure compliance with environmental laws and regulations. The BCT is made up of representatives from the Marine Corps/Navy, U.S. EPA, California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC), and the California Regional Water Quality Control Board (RWQCB).

Installation Restoration Program Process—MCAS Tustin

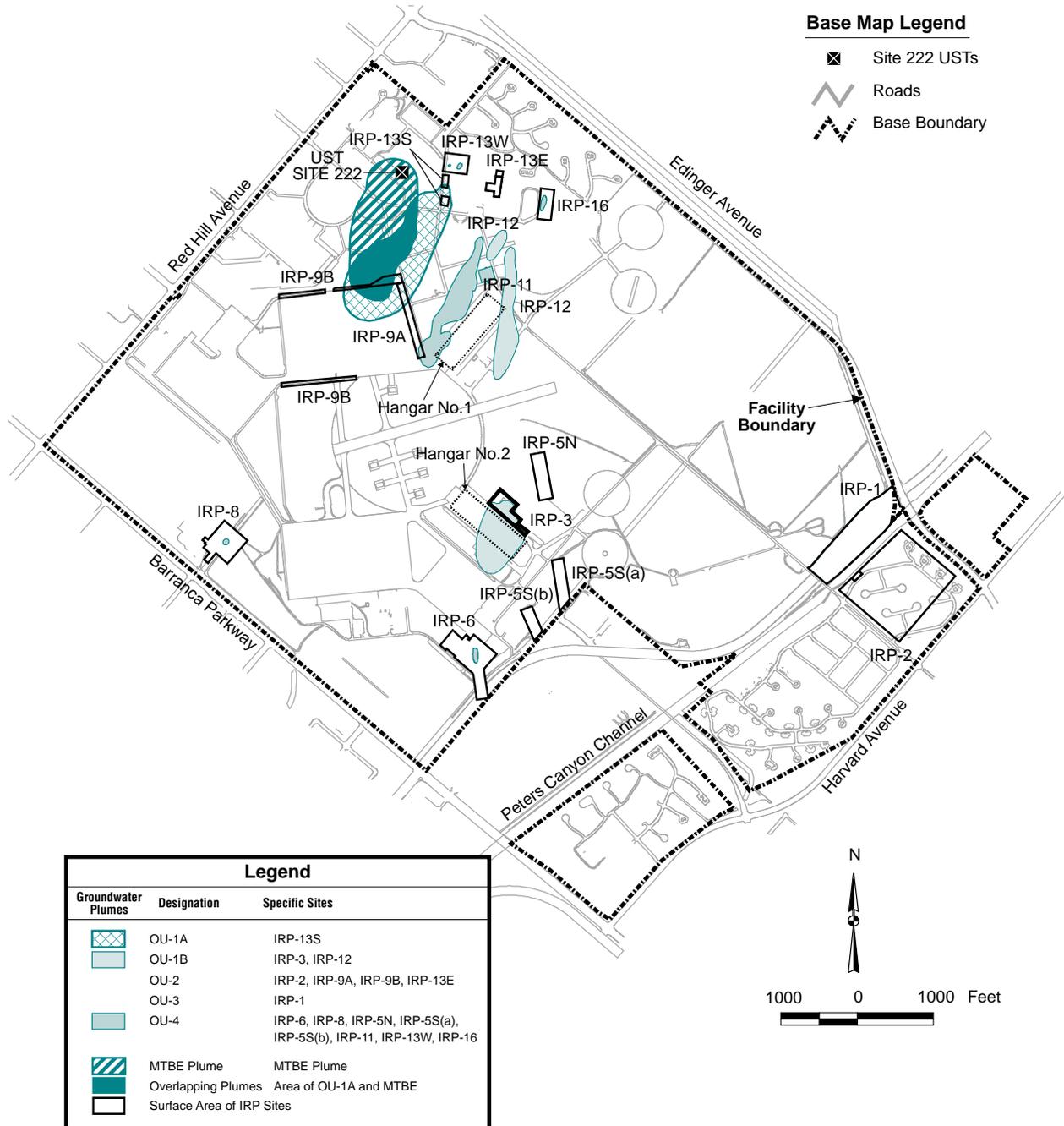


OU-1A (IRP-13 SOUTH AND ASSOCIATED AREAS OF CONCERN)

Description: IRP Site 13 South, also referred to as IRP-13S, was used by the Marines as a vehicle maintenance and equipment washing area. Investigations conducted at IRP-13S determined that volatile organic compounds (VOCs), primarily the industrial solvent 1,2,3-trichloropropane (TCP), have migrated from the surface to shallow groundwater. Two inactive wash areas were identified as being primary source areas

for VOC contamination in groundwater. The VOC groundwater contamination covers an approximate subsurface area of 23 acres. In addition, the TCP groundwater plume at IRP-13S overlaps a portion of a methyl tert-butyl ether (MTBE) groundwater plume located to the west and originating from an underground storage tank (UST) at Site 222. The MTBE cleanup at UST Site 222, a former adjacent gasoline station, is being managed under the Petroleum Corrective Action Program. Quarterly groundwater sampling is used to monitor the movement of these two plumes.

MCAS Tustin – Locations of Operable Units and IRP Sites



In 1996 and 1997, during the Remedial Investigation for IRP-13S, risks to human health were calculated. Even though risk calculations concluded that direct human contact with VOC-affected soils did not present a significant health risk, when concrete pads were removed at the two inactive wash sites, soil sampling indicated that TCE concentrations in the remaining soil were above the cleanup levels established for this contaminant. In 1999 and 2000, soil was excavated from the two areas to remove the TCE contamination. Therefore, the cleanup conducted surpasses the levels considered necessary to be protective of human health and the environment. Residual impacted soil will be addressed in the final remedial action for IRP-13S.

Status: The Navy recently began conducting a Time-Critical Removal Action at IRP-13S to address TCP groundwater contamination. The objective of the removal action is to contain the contaminated groundwater until the final groundwater remedy is implemented or the plume is stabilized. The ultimate goal of the removal action is to reduce potential risks to human health by preventing migration of contamination to the regional aquifer (a source of the drinking water supply). This removal action is triggered by the pumping activities associated with the MTBE response action at UST Site 222. Due to the overlapping of the two plumes, the two cleanup actions will be closely coordinated.

The removal action at Site 13S consists of groundwater extraction from a series of seven wells to prevent further migration and reduce concentrations. Extracted groundwater will undergo treatment using a granular activated carbon absorption system to remove TCP and other chlorinated compounds. Any low concentrations of MTBE present in the extracted groundwater due to the overlapping of the two plumes can also be effectively treated with the carbon treatment system. Treated (clean) groundwater will be discharged to Peters Canyon Channel via a storm drain.

Fieldwork for the removal action began in August 2001 in conjunction with Phase 2 of the MTBE corrective action plan (see UST Site 222 discussion below). Treatment system startup is anticipated for November 2001. After the system is running smoothly, routine operation and maintenance and performance monitoring will begin.

The removal action for IRP-13S is an interim measure. Final cleanup alternatives to address soil and groundwater contamination at IRP-13S will be evaluated in a Feasibility Study, and a preferred remedy identified in a Proposed Plan that will be presented for public comment. A Record of Decision will document the selected final remedy.

COORDINATED EFFORTS AT UST SITE 222 FOR THE TCRA AT IRP-13 SOUTH

Note: Although UST Site 222 is not part of the Installation Restoration Program at MCAS Tustin, a brief description of the site is provided due to the overlapping of the MTBE and TCP plumes.

Description: UST 222 is at the site of a former gasoline station, and is located adjacent to IRP-13S and approximately 200 yards to the west. A plume of MTBE originates at the former gasoline station and has overlapped with portions of the TCP plume.

Status: The MTBE groundwater cleanup action is being managed under the Petroleum Corrective Action Program with cleanup efforts being implemented in two phases:

- Phase 1—MTBE Hot Spot (Source Area) Extraction: Several extraction wells are being installed near UST Site 222. These wells will target removal of MTBE contamination near the source area.
- Phase 2—MTBE/TCP Overlapping Plumes Area Extraction: Several extraction wells will be installed nearby and within the overlapping plumes area to remove MTBE and TCP contamination.

The MTBE groundwater treatment system uses equalization, pre-filtration, chemical oxidation, and a bio-reactor to treat the groundwater. It can also effectively treat low levels of TCP contamination that are anticipated to be present in Phase 2 of this cleanup action.

Fieldwork to install extraction wells and the treatment system began in May 2001 for Phase 1, and in September 2001 for Phase 2.

OU-1B (IRP-3 AND IRP-12 AND ASSOCIATED AREAS OF CONCERN)

Description: These two sites contain buildings used for chemical storage, painting and paint stripping; oil water separators; and areas for waste disposal. It was also reported that solvents, paint strippers and battery acids were poured directly on the ground outside the buildings.

VOC plumes have been identified in groundwater beneath IRP Sites 3 and 12. The VOC contamination consists primarily of trichloroethene (TCE), an industrial solvent. TCE concentrations in soil at two oil-water separators may be acting as contributing sources of groundwater contamination at IRP-3. A remedial investigation for OU-1B was performed

which included conducting a human health risk assessment to evaluate potential risks from contaminated soil and groundwater. The remedial investigation also evaluated the extent of further migration of the VOC contamination. The remedial investigation recommended soil removal to remove potential sources of groundwater contamination. Remedial alternatives to address VOC groundwater contamination and protect public health were developed in a Feasibility Study.

Status: The Navy is scheduled to submit the Draft Final OU-1B Feasibility Study to the BCT for review in fall 2001. This Feasibility Study presents a detailed evaluation of seven potential remedial alternatives. A Proposed Plan will be prepared that will identify the preferred remedy for groundwater. The Proposed Plan is expected to be issued to the public, and a 30-day public comment period and a public meeting will be scheduled for early 2002.

OU-2 (IRP-2, 9A/9B, 13E; AND ASSOCIATED AREAS OF CONCERN)

Description/Status: IRP sites and AOCs at OU-2 were formerly used for hazardous materials storage, hazardous waste disposal, and equipment washing. Investigation and environmental cleanup at OU-2 is complete. In January 2000, the Navy issued a Proposed Plan that recommended no further action for the three sites and nine AOCs included in OU-2 and held a public meeting. The Record of Decision/ Remedial Action Plan was signed and finalized by the BCT in September 2000, documenting the decision for no further action at these sites and AOCs. The Remedial Action Plan is the State of California's equivalent to the Record of Decision.

OU-3 (IRP-1)

Description: OU-3 consists of IRP-1, the Moffett Trenches and Crash Crew Burn Pits. This area consisted of shallow, unlined landfill trenches, and burn pits used for waste materials disposal and for conducting fire-fighting training. Based on Remedial Investigation findings, petroleum hydrocarbons (primarily JP-5 aviation fuel), VOCs, semivolatile organic compounds (SVOCs), and to a lesser extent metals were the principal contaminants at IRP-1.

In 1983, jet fuel was found seeping into Peters Canyon Channel from the burn pits area. To prevent further seepage, approximately 10,000 cubic yards of soil were excavated from the burn pits and hauled to an approved disposal facility. In May 1985, the Santa Ana Regional Water Quality Control Board (RWQCB)

issued a Cleanup and Abatement Order for IRP-1 to prevent further discharges of contaminated groundwater to the channel. To comply with the order, a concrete containment wall was constructed along the west bank of Peters Canyon Channel, and a synthetic liner and french drain system were installed at the site. The Santa Ana RWQCB rescinded the Cleanup and Abatement Order in May 1996, after Remedial Investigation results indicated that the containment wall was preventing further seepage to the channel.

Status: In 1997-98, as a result of Jamboree Road improvement construction activities, most of the site was covered with a plastic liner and an additional soil cover and ongoing quarterly groundwater monitoring was started. A Proposed Plan for OU-3 was issued for public comment in October 1996. However, issues related to land use controls have delayed completion of the Record of Decision, which is now scheduled for submittal for BCT concurrence and signature in fall 2001. The major components of the final remedy at OU-3 are land use controls and monitoring. An Operation and Maintenance Plan will be implemented after the Record of Decision is signed. Periodic reviews will be conducted every 5 years to verify that this action remains protective of human health and the environment.

Information Repository

Documents relating to the environmental restoration efforts at MCAS Tustin are available for public review at the Information Repository.

University of California, Irvine
Main Library
Government Publications Department
Contact: Yvonne Wilson, (949) 824-7362
or (949) 824-6836 for library hours

Interested community members may also contact Marine Corps/Navy representatives at (949) 726-5398 or (949) 857-6352 to arrange a review of these documents.

Internet Connection

For more information on the closure of MCAS Tustin and the Installation Restoration Program, check out the Southwest Division Naval Facilities Engineering Command Website at:

www.efdswn.navy.mil/environmental/envhome.htm

OU-4 (IRP-5, 6, 8, 11, 13W AND 16; AND ASSOCIATED AREAS OF CONCERN)

Description: OU-4 is comprised of six IRP sites and six AOCs. OU-4 IRP sites and AOCs include former drainage, disposal, hazardous materials storage, drum storage areas, and former sanitary sewer lines. These sites have been recommended for no further action for soil based on results from human health risk assessments conducted for the remedial investigation. However, these sites are being evaluated in an OU-4 Focused Feasibility Study to address VOCs that are present in groundwater at concentrations slightly above regulatory standards for drinking water.

Past remedial actions at OU-4 include soil excavation performed at two OU-4 sites due to the presence of VOCs (IRP-13W) and petroleum hydrocarbons

(IRP-16). In 1996, IRP-16 underwent soil excavation with approximately 6,210 tons of soil removed. In 1997, IRP-13W underwent soil excavation as part of a non-time-critical removal action.

Status: The Draft OU-4 Focused Feasibility Study has been developed and is currently being reviewed by the BCT. The Focused Feasibility Study evaluates five remedial alternatives to identify the preferred remedy for groundwater at these sites. Activities performed in support of the study include installing and sampling four new groundwater monitoring wells at IRP-6 and performing a human health risk assessment for IRP-5. The Draft Final Focused Feasibility Study is scheduled to be issued in fall 2001. A Proposed Plan/Draft Remedial Action Plan (RAP) will be developed and issued for public review and comment later in 2001. A subsequent Draft Record of Decision/Remedial Action Plan is scheduled for submittal to the BCT in 2002.

MCAS Tustin Restoration Advisory Board

The MCAS Tustin Restoration Advisory Board (RAB) serves as the key focal point for the exchange of information about environmental restoration activities between the Marine Corps/Navy, regulatory agencies, and the local community. Since 1994, the RAB has been active in bringing together a cross section of community members to discuss cleanup issues. The RAB has consistently provided opportunities for direct communication and two-way flow of technical information and community concerns. The RAB is a major component of MCAS Tustin's community relations efforts regarding the environmental program.

Currently, the RAB is composed of 25 registered members that meet every other month. RAB members review technical reports and plans pertaining to the MCAS Tustin cleanup and provide input to the Marine Corps/Navy and the regulatory agencies. RAB members serve as volunteers and act as a liaison to the specific organizations and communities they represent.

All RAB meetings are open to the public and anyone interested may attend. The RAB will be holding its 50th meeting on October 25, 2001 from 7:00 to 9:00 p.m. at the Tustin Senior Center. For more information about the RAB, please contact any of the project representatives (listed to the right) or fill out the mailing list coupon on page 6.

For Additional Information

The Marine Corps/Navy encourages community involvement in the cleanup decision-making process, an integral part of the environmental restoration program at MCAS Tustin. If you have any questions about environmental activities at the station, or would like to be added to the mailing list, please feel free to contact any of the following project representatives:

Mr. Keith Forman

BRAC Environmental Coordinator
Base Realignment and Closure
MCAS Tustin
1230 Columbia Street, Suite 870
San Diego, CA 92101-8577
(949) 726-5398
(619) 532-0786

Ms. Viola Cooper

Community Involvement Coordinator
Superfund Division, U.S. EPA
Office of Hazardous Waste
75 Hawthorne St. (SFD-3)
San Francisco, CA 94105

Ms. Kim Foreman

Public Participation Specialist
Cal-EPA, Dept. of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630
(714) 484-5324

MAILING LIST COUPON

If you would like to be on the mailing list to receive information about environmental restoration activities at MCAS Tustin, please complete this coupon and mail to: Commanding Officer, Base Realignment and Closure, Attn: Keith Forman, BRAC Environmental Coordinator, MCAS Tustin, 1230 Columbia Street, Suite 870, San Diego, CA 92101-8517.

- Add me to the MCAS Tustin Installation Restoration Program mailing list.
- Send me information on Restoration Advisory Board membership.

Name _____

Street _____

City _____ State _____ Zip Code _____

Affiliation (optional) _____ Telephone _____

Commanding Officer
Base Realignment and Closure
Attn: Keith Forman
BRAC Environmental Coordinator
MCAS Tustin
1230 Columbia Street, Suite 870
San Diego, CA 92101-8517

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