

Nov 1990

INSTALLATION RESTORATION PROGRAM STATUS REPORT

MARINE CORPS AIR STATION EL TORO

SITE HISTORY

In July 1942, construction of a Marine Corps pilots' fleet operational training facility began on 2,319 acres in Orange County, California. On 17 March 1943, that facility was commissioned as the MCAS El Toro. In 1950, MCAS El Toro was selected for development as a master jet air station and permanent center for Marine aviation on the West Coast to support the operations and combat readiness of Fleet Marine Forces, Pacific. Between 1944 and 1977, 2,379 additional acres of land were acquired to bring MCAS El Toro to its present size of 4,698 acres.

In March 1985, an Initial Assessment Study (IAS) was initiated at MCAS El Toro to identify the areas of potential contamination. The IAS, completed in May 1986, recommended that nine out of 17 sites be studied further in a Site Inspection (SI) to verify the existence of contamination. In response to regulatory agency comments during September 1986, four sites were added to the Site Inspection (SI). An SI work plan for further study was developed, reviewed by the Technical Review Committee, and finalized in August 1988. Due to funding restrictions, the SI was never implemented.

In June 1985, the Orange County Water District (OCWD) discovered trichloroethylene (TCE) in two off-station wells. The California Regional Water Quality Control Board (RWQCB) issued a Cleanup and Abatement Order in July of 1987 requiring the base to submit a Plan of Action to address off-station groundwater contamination. A Perimeter Investigation was conducted by the base to determine if contaminated groundwater was crossing the base boundary. Results from the Perimeter Investigation documented TCE contamination up to 90 parts per billion in shallow groundwater at the base boundary, and indicated limited migration of contamination off station.

CURRENT STATUS

MCAS El Toro was listed final on the NPL in February 1990. Development of an RI/FS work plan began in December 1989 and includes the original 17 sites and 2 additional sites. The Environmental Protection Agency further requested 4 additional sites also be incorporated into the RI/FS. The RI/FS currently in the scoping phase, will include on and off-base testing in an effort to determine the extent of and responsibility for TCE contamination. A total of 22 sites are included in the RI/FS work plan currently being prepared. An additional RI/FS work plan will be generated late in 1991 to incorporate 1 known site and all sites identified for the RI/FS process through the RCRA Facility Assessment (RFA). The known sites are as follows:

- Site 1 - Explosive Ordnance Disposal (EOD) - Possible soil contamination from an unknown number of pits used for ordnance disposal, some pits may contain low-level radioactive wastes and FS smoke.
- Site 2 - Magazine Road Landfill - Landfill used for disposal of unburned wastes. Possible contamination of soil and/or groundwater sources includes polychlorinated biphenyls (PCBs), petroleum hydrocarbons, organic solvents, and heavy metals.
- Site 3 - Original Landfill - Landfill along Aqua Chinon Wash containing burned wastes. Possible contamination of soil and/or groundwater sources includes PCBs, petroleum hydrocarbons, organic solvents, and heavy metals.
- Site 4 - Ferrocene Spill Area - Drainage ditch adjacent to North 9th Street, near building 658, with possible soil and/or groundwater contamination from ferrocene and hydrocarbon carrier spill that occurred in 1983.
- Site 5 - Perimeter Road Landfill - Landfill north of station golf course containing burned wastes. Possible contamination from organic solvents, paint residue and oily wastes.
- Site 6 - Drop Tank Drainage Area No. 1 - Possible contamination from disposal of JP-5 fuel and lubricating oil.
- Site 7 - Drop Tank Drainage Area No. 2 - Possible contamination from JP-5 and waste lubricating oil disposed of on area soil as a dust suppressant from 1969 to 1983.
- Site 8 - DRMO Storage Area - Possible contamination from a spill of several gallons of transformer fluid containing PCB's. The 1984 spill occurred adjacent to ramp 633. Approximately 10,000 lbs. of material was removed to about 1 foot in depth in the spill area.
- Site 9 - Crash Crew Pit No. 1 - Possible groundwater contamination from waste liquids percolating into the surrounding soils during crash crew training.
- Site 10 - Petroleum Disposal Area - Possible contamination from petroleum wastes used as a dust suppressant from 1952 to mid 1960.
- Site 11 - Transformer Storage Area - Possible contamination from PCB spillage onto soil during 1968 to 1983 timeframe.
- Site 12 - Sludge Drying Beds - A secondary treatment plant dewatered sludge in drying beds west of building 493.. Reportedly, 880 cubic yards of sludge was plowed under at this location.
- Site 13 - Oil Change Area - Possible soil contamination from land disposal of heavy equipment waste crankcase oil.

- Site 14 - Battery Acid Disposal Area - Possible heavy metal, organic compound, and petroleum hydrocarbon contamination from battery acids, oil wastes and paint wastes disposed of on soil.
- Site 15 - Suspended Fuel Tanks - Diesel fuel spill of more than 500 gallons from elevated fuel tanks between 1979 and 1984. Site 15 is located northeast of building 31. These tanks have been removed.
- Site 16 - Crash Crew Pit No. 2 - Possible soil and/or groundwater contamination from crash crew training.
- Site 17 - Communication Station Landfill - Landfill adjacent to buildings 394 and 573 containing an unknown quantity of liquid wastes.
- Site 18 - Regional VOC Investigation - Area of study to cover the entire base and surrounding area down gradient of the facility. TCE plumes have been identified by station and OCWD testing as far as 4 miles off-station.
- Site 19 - Assess, Critique, Evaluate and Review (ACER) Site - Area situated near buildings 404 and 414 with possible soil and/or groundwater contamination from JP-5 fuel spills and a fuel bladder rupture that occurred in early 1986.
- Site 20 - Hobby Shop (Building 626) - Possible soil contamination from used oil and solvents. A 600 gallon waste oil tank is located west of building 626 along with three 50 gallon storage drums for solvents inside the building.
- Site 21 - Material Management Group (Building 320) - Drums containing chemicals are stored outside building 320. Possible soil contamination from leaking drums.
- Site 22 - Tactical Air Fuel Dispensing System (TAFDS) Operations Area - Located east of building 369 and consisting of four 10,000 gallon rubberized fabric tanks used for aircraft fueling. Possible soil and groundwater contamination from leaking tanks, fittings and hoses. These tanks have been removed.
- Site 23 - Waste Water Treatment Plant and Sewer Lines - Possible leakage from abandoned sewer lines connected to the old waste water treatment plant.

In April, 1989, OCWD completed an off-station groundwater investigation and documented the existence of a large plume of TCE in deep groundwater to a distance over three miles from the base. Their results have generated substantial controversy regarding the base responsibility for the contamination. As an initial remedial measure, existing base perimeter monitoring wells were retrofitted with pumps and a small activated carbon treatment plant was constructed. The plant began operation in June 1989, and is currently treating contaminated groundwater to below detection limits.

## FEDERAL FACILITY AGREEMENT

A Federal Facility Agreement (FFA) between MCAS El Toro, the EPA, and the State of California completed negotiations late in 1990 and was signed 24 October 1990.

The FFA, now in place, has set lead and support agency roles and established general scopes, schedules, and regulatory review turn-around times for key project milestones.

## RCRA FACILITY ASSESSMENT

In June 1989 the California Regional Water Quality Control Board (RWQCB) requested that thirty additional sites be investigated. To handle this request and comply with the RCRA requirements MCAS El Toro is conducting an RCRA Facility Assessment (RFA). The RFA will supplement requirements needed for RCRA permitting and will be expanded to explore and evaluate other sites for possible inclusion into the RI/FS program.

## ANTICIPATED SCHEDULE

	start	finish
Final NPL Listing	Feb 90	
Federal Facility Agreement	Oct 90	
RFA and additional site evaluation	Dec 91	

The following are submittal dates as specified in the Federal Facility Agreement:

	OU 1	OU 2,3	UO 4
Draft RI/FS Work Plan	Sep 90	Sep 90	Dec 91
Draft RI Report	Jun 92	Oct 92	Sep 93
Draft FS Report	Aug 92	Feb 93	Jan 94
Draft Proposed Plan	Nov 92	May 93	Apr 94
Draft Record of Decision	Apr 93	Oct 93	Sep 94
Draft Remedial Design (approx. start)	Sep 94	Mar 95	Feb 96
Remedial Action (approx. start)	Jan 95	Jun 95	May 96

(Operable Unit = OU)

BUDGET

The actual and projected costs for the completion of the IR program at MCAS El Toro are as follows:

Cost of pollution measures in thousands of dollars.

FY	PA/SI		REMOVAL planned	RI/FS		RD		CONST.	
	actual	planned		actual	planned	actual	planned	actual	planned
85	50	0		0	0	0	0	0	0
87	846	0		0	0	0	0	0	0
88	547	0		0	0	0	0	0	0
89	555	0		21	0	0	0	0	0
90	100	0		362	0	0	0	0	0
91	0	500	350	0	3,500	0	0	0	0
92	0	0	1,800	0	2,750	0	0	0	0
93	0	0	700	0	2,220	0	500	0	0
94	0	0	200	0	50	0	1,000	0	25,000
95	0	0		0	0	0	0	0	54,000
96	0	0		0	0	0	0	0	40,000
97	0	0		0	0	0	0	0	20,000
98	0	0		0	0	0	0	0	11,000
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	2,980	500	3,050	383	8,470	0	1,500	0	150,000

At this time the total projected cost for the IR program at MCAS El is estimated at 166 million dollars. This is only an estimate and because there is little or no data for many sites this cost may change.

POINTS OF CONTACT

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