ROD for no further action was signed on 30 September 1997. Site 22 has been assigned an ECP Area Type of Category 3. No further action is required.

4.1.3.20 SITE 24 – VOLATILE ORGANIC COMPOUND SOURCE AREA

IRP Site 24 comprises two media: soil (vadose zone) and groundwater (SGU plume) and is situated in the southwest portion of former MCAS El Toro (Navy Sale Parcel III). Site 24-Vadose Zone encompasses approximately 200 acres and includes within its footprint primarily two aircraft hangars (Buildings 296 and 297). Other smaller buildings are situated within the site boundaries. Primary sources of contamination include degreaser tanks, storm drains and industrial waste sewers, and wash racks related to aircraft maintenance activities. The VOCs may have originated from solvents containing TCE or PCE that were used until approximately 1975 and contaminated the vadose zone. This contamination migrated to the SGU, which eventually migrated to the principal aquifer (Site 18-Regional Groundwater Plume). The SGU plume encompasses approximately 300 acres and merges off site to the west of the station boundary, with the principal aquifer.

Evidence of the vadose zone impacts at Site 24 was identified during the Phase I RI. Activities conducted for the Phase I RI included soil gas sampling to depths up to 30 feet bgs. A subsequent Phase II RI performed additional soil and soil gas sampling from a depth of 30 feet to the water table. Several groundwater monitoring wells were also installed to evaluate groundwater quality at the site. An FS identified SVE as the most appropriate remedial technology for the vadose zone. Pilot testing was conducted during the period from approximately 1996 through 1998 prior to designing and installing a full scale SVE system. The design of a treatment system to eliminate contamination in both the shallow groundwater aquifer (Site 24) and the regional groundwater aquifer (Site 18) is ongoing.

The interim ROD (vadose zone) for Site 24 was signed in September 1997, and implementation of the final remedy for the soil contamination (SVE treatment) occurred in 1999. The SVE system was operated until early 2000, at which time confirmation sampling indicated that soil vapor concentrations were below the predetermined clean-up goals. The draft final closure report was completed in June 2002 and NFA status for the Site 24-Vadose Zone was obtained from the regulatory agencies. Accordingly, the vadose zone portion of Site 24 has been designated ECP Area Type 4. It should be noted, however, that the SGU plume underlies a significant portion of Site 24-Vadose Zone.

The Final Proposed Plan for groundwater at Sites 18 and 24 was released for public comment in November 2001. The ROD for OU-2A and OU-1, which finalizes the remedial decision for groundwater, was completed in June 2002. The selected remedy for the SGU a downgradient pump-and-treat system with an appropriate system that will remediate both VOC impacts and concentrations of nitrate and TDSs. Remediation of the shallow groundwater plume associated with Site 24 has not been implemented (a pre-design investigation is currently underway); therefore, the approximately 300-acre on-station area encompassed by this plume is considered ECP Area Type 5. Further action is required.

4.1.3.21 SITE 25 - MAJOR DRAINAGES

IRP Site 25 encompasses approximately 22 acres and comprises the four major washes that flow through former MCAS El Toro. These are Agua Chinon Wash, Bee Canyon Wash, Borrego Canyon Wash, and Marshburn Channel. Three of these drainages (Agua Chinon Wash, Bee Canyon Wash, and Borrego Canyon Wash) are continuations of natural washes that originate in the Santa Ana Mountains. Surface drainage from the hills and upgradient irrigated farmland combines with runoff generated from extensive paved surfaces at former MCAS El Toro. The on-station storm sewer system discharges to the drainage channels, which then flow into San Diego Creek. San Diego Creek discharges into upper Newport Bay, about 7 miles downstream from its intersection with Marshburn Channel.

Site 25 was included as part of OU-2A because discharges to the drainages have the potential to contaminate regional groundwater. The site was formed before the source of the regional VOC groundwater contamination had been identified at Site 24. The site was identified for a Phase II RI, but the drainages were investigated as part of the Phase I RI for Sites 18 and 24 to evaluate the source of the off-site VOC groundwater plume. Potential contamination within the major drainages and San Diego Creek was assessed by analyzing surface water, sediment, soil and soil gas samples. Except for the Borrego Canyon Wash, metals and pesticides were detected above former MCAS El Toro background concentrations in all drainages. Significant petroleum hydrocarbon contamination is present at 15-20 feet bgs at the southern end of Agua Chinon Wash near the former MCAS El Toro boundary. In the Agua Chinon Wash, TPH was detected at concentrations up to 723 micrograms per liter (μ g/l) at depths up to 57 feet bgs. The remedial investigation of the site indicated that the site-related contamination is limited to sediment and surface water. The human health and ecological risk assessments showed that the contaminants present in these media do not present an unacceptable risk to human health or the environment. Therefore, no remedial action is required. The Draft Final RI Report was completed in 1997, and the Final ROD for no further action was signed on 30 September 1997. Site 25 has been assigned an ECP Area Type of Category 3. No further action is required.

4.1.4 Storage Tanks and Pipelines Systems

4.1.4.1 ABOVEGROUND STORAGE TANK LOCATIONS OF CONCERN

ASTs are federally regulated under the Clean Water Act (CWA) (33 U.S.C. Sections 1251-1578) oil pollution provisions (40 CFR 112). The operation and construction of ASTs are also subject to National Fire Protection Association fire code guidelines (Chapters 30, 58, and 329) and Article 79 of the Uniform Fire Code. In addition, ASTs are regulated by the local Air Quality Management District (AQMD) and the California Aboveground Petroleum Storage Act (Division 20 of the Health and Safety Code, Chapter 6.67, Section 25270-25270.13).

Based on a review of records and VSIs conducted in April and May 2002, 39 ASTs have been identified at former MCAS El Toro. Of these 39 ASTs, 3 are active, 5 are inactive, and 31 have been removed. Of the 39 tanks, 27 contain or contained petroleum products (i.e., fuel oil, diesel, hydraulic fluid, JP-5, unleaded fuel), and 12 contain or contained other substances such as propane, ferrocene, pesticides, asphalt, and waste oil. Table 4-6 lists the 39 ASTs identified at former MCAS El Toro and provides a summary of the tank status, tank contents, tank capacity, study area the tank is situated within, ECP Area Type category, and pertinent comments or notes regarding the tanks. Figure 4-6 depicts the locations of the ASTs.

The ESA prepared by Geosyntec identified 12 additional AST sites (ASTs G-900 through G-911). These sites were evaluated by the DON and were also evaluated in support of this EBS. Based on evaluation of these sites by the DON and in support of this EBS, all 12 AST sites identified by Geosyntec were determined to require no further action and are not considered to be LOCs. In addition, these ASTs are situated on the agricultural lease property, and the tanks are operated and maintained by the lessee and are the responsibility of the lessee.

One additional ASTs was identified at Building 380 during the preparation of this EBS. This AST is not considered to be an LOC and is, therefore, not discussed within this section or listed in Table 4-6. As it is a new site identified during the preparation of this EBS, it is considered a PRL and is discussed in Section 4.1.1.1 and listed in Table 4-1.





A summary of the ECP categories for the AST LOCs identified within former MCAS El Toro is presented below:

- A total of 10 ASTs have been assigned an ECP Area Type of Category 1 because no release, disposal, and/or migration of hazardous substances or petroleum products have been identified.
- Seventeen ASTs have been assigned an ECP Area Type of Category 2a because releases of
 petroleum products below action levels have been identified, no actions were required, and
 regulatory agency concurrence with a no further action recommendation and site closure has
 been obtained.
- Seven ASTs (at Building 374) have been assigned an ECP Area Type of Category 2b because releases of petroleum products requiring an action have been identified, all required actions have been completed, and regulatory agency concurrence with a no further action recommendation and site closure has been obtained.
- Two ASTs (ASTs 386A and 386B at Building 368) have been assigned an ECP Area Type of Category 2c because releases of petroleum products requiring an action have been identified and required actions are underway; however, all required actions have not been completed and/or regulatory agency concurrence with a no further action recommendation and site closure has not been obtained.
- Two ASTs (ASTs 658 and 753) have been assigned an ECP Area Type of Category 3 because releases of below action levels have been documented, no actions were required, and regulatory concurrence with a no further action recommendation has been obtained.
- One AST (north of Building 314) has been assigned an ECP Area Type of Category 5 because removal actions have taken place; however, all required actions have not yet been completed.

4.1.4.2 UNDERGROUND STORAGE TANK LOCATIONS OF CONCERN

USTs are subject to federal regulations within RCRA, 42 U.S.C. Section 6991 et seq., and EPA implementing regulations, 40 CFR 112 and 280. These regulations were mandated by the Hazardous and Solid Waste Amendments (HSWA) of 1984.

California regulates USTs under California Code of Regulations (CCR) Title 23, Section 2610 et seq. and Health and Safety Code Sections 25280 through 25299.7 of Division 20, Chapter 6.7, which are more stringent than the federal regulations. California's regulations are enforced by the RWQCB and are intended to protect waters of the state from discharges of hazardous substances from USTs by establishing standards for construction, monitoring, release reporting, repair, upgrade, and closure of USTs.

Based on a review of records and VSIs, 401 USTs have been identified at former MCAS El Toro (USTs 9001 and 9002 were removed from locations that are in the parcel transferred to FAA and are therefore not included in this EBS). Of these 401 USTs, 386 have been removed, 5 are inactive, and 10 have been abandoned in place. Table 4-7 lists the 401 USTs identified at former MCAS El Toro and provides a summary of the tank capacity, tank contents, study area the tank is situated within, ECP Area Type category, and pertinent comments and notes regarding the tanks. Figures 4-7a, 4-7b, 4-7c, and 4-7d depict the locations of the USTs.

Of the 401 USTs identified at former MCAS El Toro, 355 have received regulatory agency concurrence on the findings of no further action and site closure (from either the RWQCB or Orange County Health Care Agency [OCHCA]). A summary of the ECP categories for the USTs identified is presented below:

- A total of 12 USTs have been assigned an ECP Area Type of Category 1 because no releases and no actions were required by regulatory agencies.
- One UST has been assigned an ECP Area Type of Category 2a because releases of petroleum products below action levels have been identified, no actions were required, and regulatory agency concurrence with no further action recommendation and site closure has been obtained.
- A total of 319 USTs have been assigned an ECP Area Type of Category 2b because releases
 of petroleum products requiring an action have been identified, all required actions have been
 completed, and regulatory agency concurrence with a no further action recommendation and
 site closure has been received.
- A total of 39 USTs have been assigned an ECP Area Type of Category 2c because releases of
 petroleum products requiring an action have been identified and required actions are
 underway; however, all required actions have not been completed and/or regulatory agency
 concurrence with a no further action recommendation and site closure has not been obtained.
- A total of 24 USTs have been assigned an ECP Area Type of Category 4 because releases requiring an action have been identified, all required actions have been completed, and regulatory agency concurrence with a no further action recommendation and site closure has been obtained.
- A total of 5 USTs have been assigned an ECP Area Type of Category 5 because releases requiring an action have been identified and required actions are underway; however, all required actions have not been completed and/or regulatory agency concurrence with a no further action recommendation and site closure has not yet been completed.
- One UST has been assigned an ECP Area Type of Category 6 because releases requiring an action have been documented and required actions have not yet been implemented.

4.1.4.3 FUEL PIPELINE SYSTEMS

Fuel supply facilities at former MCAS El Toro were the responsibility of the Station Supply Department. JP-5 was supplied via an 8-inch diameter pipeline from Norwalk, California, and was distributed at the station through a series of underground pipelines. The pipeline entered the station from the northwest and supplied JP-5 to five 567,000-gallon USTs (547, 548, 549, 550, and 551) in Tank Farm 555 situated in the northeast portion of the station near the Wherry Housing Area. The supply pipeline from off station was not an asset of former MCAS El Toro (USMC 1999). The pipeline was closed in June 1999. The entire length of the pipeline was pigged, water-washed, and pigged again to remove any remaining solids and moisture. The pipeline was filled with nitrogen gas and sealed. Regular inspection and maintenance of the pipeline continues to ensure the integrity of the pipe. The pipeline supervisor for the California State Fire Marshal has indicated that the pipeline is in compliance and the only known releases from the pipeline occurred off station (Groundwater Technology, Inc. 2003). The layout of the fuel supply pipelines is shown in Figure 4-8.

Tank Farm 555 supplied JP-5 through two steel pipelines (12- and 8-inch diameter pipe) directly to USTs 902A and 902B. These two 50,000-gallon tanks supplied eight direct refueling points (Buildings 903, 904, 905, 906, 907, 908, 909, and 910) (USMC 1999).





A 6-inch diameter carbon steel fuel pipeline was tied into one of the pipelines that extended from Tank Farm 555 to the Aircraft Expeditionary Refueling area. This 6-inch pipeline supplied JP-5 to two 30,000-gallon USTs (891A and 891B) situated in the southeast portion of the station. From these USTs, the fuel was pumped to two high-speed refueling lanes situated in the same area (USMC 1999).

Residual fuel from all pipeline systems has been removed. Abandonment procedures for the primary pipelines have been completed. Pneumatic and hydrostatic integrity testing of the secondary pipeline system have recently been completed. All secondary pipeline segments passed the integrity tests. Abandonment procedures have been completed for the primary pipeline system and the secondary pipeline system has recently passed integrity testing; however, final closure of the pipeline system has not yet been completed; therefore, the fuel pipeline system is considered Category 2c.

4.1.5 Wastewater Treatment and Related Systems

Federal regulations consider wastewater treatment systems as exempt from hazardous waste permitting requirements if they already fall under a National Pollutant Discharge Elimination System (NPDES) permit or they discharge to a publicly owned treatment system. Therefore, the sanitary sewer system, OWSs, and SRUs at MCAS El Toro would qualify for exemption. However, in accordance with state regulations, wastewater treatment systems with specified hazardous waste streams are subject to Permits by Rule regulations under 22 CCR 4.5, section 66270.60. These regulations required MCAS El Toro to notify DTSC of the treatment units on the installation, including contingency plan and unit closure plans, and certifications that a release of a hazardous waste has not occurred. Upon meeting these requirements, all OWSs at MCAS El Toro were permitted as "conditionally exempt" effective 29 March 1996.

4.1.5.1 OIL/WATER SEPARATOR LOCATIONS OF CONCERN

Based on a review of records and VSIs, 55 OWS locations have been identified at former MCAS El Toro (OWS 806 was abandoned in place with regulatory concurrence for NFA and is situated in the parcel transferred to the FAA; therefore, it is not part of this EBS). Of the 55 OWSs identified within former MCAS El Toro, 29 have been removed, 21 have been closed in place and are considered inactive, and 5 are still in place and are considered active. A total of 44 OWSs have been closed with regulatory agency (RWQCB or OCHCA) concurrence, and 11 OWSs require further action and/or regulatory agency concurrence for site closure. Four OWSs (OWS 674B/SWMU 189, OWS 674C, OWS 675B/SWMU 292, and OWS 675C) are used to skim oil from Agua Chinon and Bee Canyon washes. These OWSs are active facilities. These areas were investigated during the RFA and low concentrations of VOCs were detected below levels requiring further action. Accordingly, these OWS have been assigned an ECP Area Type 3.

The ESA prepared by Geosyntec identified one additional OWS site (OWS-G 859). This site was evaluated by the DON and was also evaluated in support of this EBS. Based on evaluation of this site by the DON and in support of this EBS, the OWS identified by Geosyntec does not exist and is not considered to be an LOC. Based on a review of the RV dump site alteration drawings and the VSI conducted in April/May 2002, it was determined that an OWS was not installed.

Table 4-8 provides a list of the OWSs and provides information including their contents, capacity, status, study area the OWS is situated within, and the ECP Area Type for each OWS. Figure 4-9 depicts the OWS locations.

A summary of the ECP categories for the 55 OWSs identified in this EBS is presented below:

- Two OWSs have been assigned an ECP Area Type of Category 1 because no release, disposal, and/or migration of hazardous substances or petroleum products have been identified.
- Four OWSs have been assigned an ECP Area Type of Category 2a because releases of
 petroleum products below action levels have been identified, no actions were required, and
 regulatory agency concurrence with a no further action recommendation and site closure has
 been obtained.
- One OWS has been assigned an ECP Area Type of Category 2b because releases of
 petroleum products requiring an action have been identified, all required actions have been
 completed, and regulatory agency concurrence with a no further action recommendation and
 site closure has been obtained.
- A total of 37 OWSs have been assigned an ECP Area Type of Category 3 because releases below action levels have been documented, no actions were required, and regulatory agency concurrence with a no further action recommendation and site closure has been obtained.
- Two OWSs have been assigned an ECP Area Type of Category 5 because releases requiring an action have been documented and required actions are underway; however, all required actions have not been completed, and/or regulatory agency concurrence with a no further action recommendation has not yet been obtained.
- Nine OWSs have been assigned an ECP Area Type of Category 6 because releases requiring an action have been documented and required actions have not yet been implemented.

4.1.5.2 DRAINAGE SYSTEMS

Sanitary Sewers. According to the most recent set of sanitary sewer drawings (Public Works Department 1988) the sewer system consists of more than 235,000 linear feet of sewer mains ranging in size from 3 inches in diameter up to 18 inches in diameter. Figure 4-10 shows the distribution of the larger trunk lines (greater than or equal to 6 inches in diameter) of the sanitary sewer system at former MCAS El Toro. Sewer lift stations are situated at Building 818, and at each of two weirs on the southern station boundary, one of which is situated on the Bee Canyon Wash near the former WWTP and the other on Agua Chinon Wash near Building 802. Currently, there is only one connection where the on-station sanitary sewer system connects into the IRWD sewer system. This tie-in is situated approximately 800 feet east of the Bee Canyon Wash intersection with the station boundary.

The on-station WWTP was situated in the southwest portion of the installation. The original sanitary sewer system and WWTP facilities were constructed in 1943. The WWTP was expanded in the 1960s and eventually closed in place in 1972. At the time of closure of the WWTP, the outfall from the treatment plant was directed to the IRWD sanitary sewer system. The former station WWTP consisted of primary clarification/digestion units, trickling filtration units, secondary clarification units, and a chlorine contact tank used for disinfecting. A portion of the chlorinated effluent was pumped to a storage tank in the golf course area where it was used for irrigation. Sludge from the digester units was dried in the sludge drying beds situated west of the treatment plant between Plant Road and the Bee Canyon Wash. The sludge drying beds associated with the former WWTP are being investigated as IRP Site 12. This site has been assigned an ECP Area Type of Category 6 and is discussed in more detail in Section 4.1.2. The remaining outfall was discharged into San Diego Creek adjacent to the installation's southwest boundary. No evidence of the WWTP or the sludge drying beds surveys.







Outfall from the on-station sanitary sewer is currently regulated by the County Sanitation Districts of Orange County. The County Sanitation Districts issued former MCAS El Toro an Industrial Wastewater Discharge Permit (No. 14-1-135) on 1 May 1997. The permit identifies an effluent limit, as well as monitoring and reporting requirements. The permit expired on 30 April 1999.

The stationwide sanitary sewer system has been concluded to require no further action for releases of hazardous substances. However, specific building locations where discharges of potentially hazardous substances were noted to have occurred were observed during the 2002 VSIs. These release locations are being evaluated as part of the PRL investigations planned for these specific buildings and associated operations (see Section 4.1.1 and Table 4-1.) The investigations will address the lateral sanitary sewer lines from the buildings to the main sanitary sewer line where the highest potential for release of potentially hazardous substances would exist from discharge to the line (discussed in Section 4.1.1).

Storm Water Drainage. The general drainage pattern in the vicinity of former MCAS El Toro is from the higher elevations in the northeast toward the lower elevations in the southwest (see Figure 3-1). The northwestern boundary of the station is coincident with a drainage channel, and the southeastern boundary is adjacent to Borrego Canyon Wash. There are two main drainage channels (Bee Canyon Wash and Agua Chinon Wash) traversing the station and running more or less parallel to these boundaries. Providing drainage for the station, and feeding runoff water into these channels, are numerous storm drains and culverts.

According to the most recent set of storm drain drawings (1997) for former MCAS El Toro there are more than 10,000 linear feet of underground pipes and culverts installed to provide drainage for surface water runoff. These range in size from 6-inch diameter drain lines to three-cell box culverts with opening widths of 20 feet (Bee Canyon Wash outlet near the southwestern station boundary). Figure 4-11 shows the major storm drainage courses on the station, both open channel and underground.

Two categories of storm water discharge permits are issued under the NPDES storm water program for industrial activities. The first is the general permit, which provides coverage to a large number of facilities. The second type of permit is the individual permit, which is developed to fit the specific requirements of a specific facility. While the station was an active installation, former MCAS El Toro operated under the State Water Resources Control Board (SWRCB) General Storm Water Permit for Industrial Activities (General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction* Activities) and the RWQCB Order No. 93-16, NPDES permit (Permit No. CA 0106593).

The SWRCB was authorized by the EPA to issue a statewide General Permit to regulate the discharge of industrial storm water. To obtain coverage under the General Permit for storm water discharges associated with industrial activity, a Notice of Intent to comply with the General Permit must be submitted to the SWRCB. The General Permit requires that storm water discharges meet narrative effluent limitations, which prohibit most discharges of non-storm water and include implementing best management practices (BMPs). The General Permit requires that a site-specific plan be developed and implemented to control and eliminate the sources of pollutants in storm water. The plans must incorporate BMPs, which may include control of storm water discharges along with source reduction of pollutants.

The NPDES permit prohibits the discharge of non-storm water to the storm drainage system. The permit also regulates the quality of storm water runoff by setting limits on the concentrations on priority pollutants. The permit requires that storm water runoff be regularly sampled and reported and that a storm water pollution prevention program be implemented. The RWQCB adopted Order

No. 93-16, NPDES Permit No. CA 0106593 for former MCAS El Toro on 5 March 1993 (*Waste Discharge Requirements for the United States Marine Corps Air Station, El Toro, Storm Water Runoff, El Toro, California*). The individual permit incorporated the requirements of the General Permit, including a Storm Water Pollution Prevention Plan (SWPPP) and Monitoring and Reporting Program Plan (MRPP), and set specific effluent limitations on the concentration of certain pollutants discharged. The discharge of non-storm water runoff was also prohibited.

Based on the requirements of the General Permit and the NPDES permit, former MCAS El Toro developed an SWPPP. The SWPPP is intended to identify potential sources of storm water pollutants and specify BMPs used to control these sources. The two major objectives of the SWPPP identified in the General Permit were to help identify the sources of pollution that affect the quality of industrial storm water discharges and to describe and ensure the implementation of practices to reduce pollutants in industrial storm water discharges.

The station no longer operates under an NPDES permit. Currently, on-station tenants manage storm water discharge in accordance with the General Permit.

The major storm drainages that flow through former MCAS El Toro were investigated as IRP Site 25. The Final ROD for no further action at Site 25 was signed on 30 September 1997 (see Section 4.1.3.21). The storm drainages have been assigned an ECP Area Type of Category 3 based on the IRP Site 25 investigations.

4.1.5.3 SEPTIC TANKS

A total of nine septic tank systems associated with current and former facilities have been identified on former MCAS El Toro property. Of these nine septic tank systems, two systems (at Buildings 394 and 817) are situated on property that has been transferred. This property and these septic tank systems have not been evaluated in this EBS and are not discussed further in this section or included in the figure and table for septic tanks.

Six inactive septic tank systems and one active septic tank system have been identified within portions of former MCAS El Toro that are evaluated within this EBS. Two inactive septic tank systems are associated with former facilities; one of these was positively identified during a 2002 VSI of the area conducted in support of this EBS. The first inactive septic system associated with a former facility was identified through the records search in the former recreational vehicle parking area in the northwest portion of the installation. The former recreational vehicle parking area is currently a picnic area, and two existing public toilets, also connected to septic systems, have since been installed there. The second inactive system was identified as a cesspool associated with former Building 55. This cesspool was identified on an underground utility drawing (circa 1954). Based on the findings of the 2002 VSI of this area, this septic system appears to still be in place near the northeast corner of the intersection of Trabuco Road and "G" Street; a concrete manhole partially covered by dirt was observed in an open field where the building was formerly situated.

The remaining five septic tank systems are associated with existing facilities. Two of these systems are associated with small office buildings (Building 752, Fuel Farm Office and Building 840, Explosives Safety Office). These facilities include restrooms; however, the buildings are not connected to the sanitary sewer system. The other three facilities are stand-alone public toilets that are also not connected to the sewer system. One of the public toilets (Building 607) is situated in the golf course area, between the greens for the first hole and the tee for the eighth hole; the building is actively used. The remaining two public toilets (Buildings 601 and 687) are both situated in the picnic area in the northwest portion of former MCAS El Toro. These are inactive restroom facilities with modern plumbing; the buildings are not connected to the sanitary sewer system.





All septic systems discussed in this section are or were used to support buildings/areas associated with recreational or administrative (nonindustrial) uses. Because these facilities did not support industrial uses, the potential for storage and/or use of hazardous materials or the generation of hazardous waste is low and, therefore, the potential for release and/or disposal to these septic systems is unlikely. In addition, no evidence of release or disposal of hazardous substances to these systems was identified during the records search or VSIs conducted in support of this EBS. These septic tank systems are considered to be Category 1 and are not considered to be LOCs or PRLs.

4.1.5.4 WASH RACK LOCATIONS OF CONCERN

A total of 29 wash racks/grease racks have been identified throughout former MCAS El Toro. These facilities were used to clean aircraft, vehicles, and other equipment. Typically, the sites consist of a concrete or asphalt pad that is constructed to collect and contain rinse water used within the rack area. Rinse water is generally discharged to the sanitary sewer, often after passing through an associated OWS, which is intended to remove any waste hazardous substances prior to discharging the rinse water to the drainage system. Table 4-9 lists and describes the wash racks identified at former MCAS El Toro, as well as summarizes the status of sites, provides the study area the sites are situated within, and identifies the ECP Area Type category for each site. Figure 4-12 depicts the locations of the wash racks.

Of the 29 wash racks situated on the installations, one has been removed (Building 96 [RFA 243]) and the remaining 28 are inactive. A total of 17 of the wash racks were associated with OWSs (all of which have been removed or closed in place). Twenty-six wash racks have received regulatory agency NFA concurrence.

Four additional wash racks were identified for further evaluation during the preparation of this EBS. These wash racks are not considered to be LOCs and are, therefore, not discussed within this section or listed in Table 4-9. As they are new sites identified during the preparation of this EBS, these sites are considered PRLs (PRLs 118, 369, 435, and 1585) and are discussed in Section 4.1.1.1 and listed in Table 4-1.

A summary of the ECP categories for the wash racks identified at former MCAS El Toro is presented below:

- A total of 15 wash racks have been assigned an ECP Area Type of Category 1 because no release, disposal, and/or migration of hazardous substances or petroleum products have been identified.
- One wash rack has been assigned an ECP Area Type of Category 2a because releases of
 petroleum products below action levels have been identified, no actions were required, and
 regulatory agency concurrence with a no further action recommendation and site closure has
 been obtained.
- One wash rack has been assigned an ECP Area Type of Category 2b because releases of
 petroleum products requiring an action have been identified, all required actions have been
 completed, and regulatory agency concurrence with a no further action recommendation and
 site closure has been received.
- Eight wash racks have been assigned an ECP Area Type of Category 3 because releases below action levels have been identified, no actions were required, and regulatory agency concurrence with a no further action recommendation has been obtained.

- One wash rack has been assigned an ECP Area Type of Category 4 because releases requiring an action have been identified, all required actions have been completed, and regulatory agency concurrence with a no further action recommendation has been obtained.
- One wash rack has been assigned an ECP Area Type of Category 5 because releases requiring an action have been documented and required actions are underway; however, all required actions have not been completed, and/or regulatory agency concurrence with a no further action recommendation has not yet been obtained.
- Two wash racks have been assigned an ECP Area Type of Category 6 because releases requiring an action have been documented and required actions have not yet been implemented.

4.1.5.5 SILVER RECOVERY UNIT LOCATIONS OF CONCERN

No active SRUs have been identified within former MCAS El Toro. However, eight former SRU locations or suspected SRU locations have been identified at former MCAS El Toro. Table 4-10 lists and describes the SRUs identified at former MCAS El Toro, as well as summarizes the status of sites, provides the study area the sites are situated within, and identifies the ECP Area Type category for each site. Figure 4-13 depicts the location of SRUs. The following facilities are referenced in the building history to have conducted photograph and/or x-ray processing and were believed to have been equipped with SRUs in the past:

- Building 46 Reproduction Office (SRU 03A)
- Building 133 Office/Training Facility (SRU 03B)
- Building 312 Station Photographic Laboratory (SRU 03)
- Building 439 Hospital/Dental Clinic (SRU 01)
- Building 443 Station Photographic Laboratory (SRU 02)
- Building 457 Dental Clinic (SRU 03C)
- Building 634 Maintenance Hangar (SRU in X-ray processing and control room) (PRL 634)
- Building 636 Cryogenics Office (Photo Lab/X-ray room) (PRL 636)

Following the removal of silver from the development solutions via electrolysis, the remaining photograph development solution was discharged into the sanitary sewer. Additionally, records indicate that photographic solutions not containing silver were disposed to the sanitary sewer system. Reports also indicated that during the 1970s and early 1980s, waste fixer solutions generated to develop x-rays at the medical and dental clinics were collected in 5-gallon plastic containers and transported to Marine Corps Base (MCB) Camp Pendleton and/or the NRMC Long Beach for disposal (Brown and Caldwell 1986). Photograph development activities also occurred in the station photographic laboratory (Buildings 46 and 133). However, these activities occurred prior to the advent of SRUs at the installation.

It cannot be verified that waste generated within these buildings prior to the installation of the SRUs was disposed appropriately, using methods that would have prevented an inappropriate discharge or potential release to the environment. In addition, it is possible that discharges of hazardous substances occurred based on operator error or failure of the SRU.

Two additional potential SRU sites were identified during the preparation of this EBS. These SRU sites are not considered to be LOCs and are not listed in Table 4-10. As they are new sites identified





during the preparation of this EBS, these sites are considered PRLs (PRLs 634 and 636) and are addressed in Section 4.1.1.1 and Table 4-1. Further background research and evaluation that was conducted for PRL 636 did not reveal the presence of an SRU at this building. However, other industrial activities with a potential to have caused releases were identified and required investigation.

Further investigation was conducted at all SRU sites during 2003 as part of Phase I PRL investigation (except Buildings 312 and 457 which would be conducted during Phase II of PRL investigation for what was designated as non-transferable area PRLs) based on the potential for discharges of hazardous substances to drainage systems at these buildings. Based on these findings, one of the SRU sites, PRL 636, has been assigned an ECP Area Type of Category 3 and needs no further action. The remaining seven SRU sites discussed in this section have been assigned an ECP Area Type of Category 7 and require further investigation.

4.1.6 Polychlorinated Biphenyl Locations of Concern

Commercial PCBs are industrial compounds produced by chlorination of biphenyls. PCBs are used in electrical equipment, primarily in capacitors and transformers, because they are electrically nonconductive and are stable at high temperatures. PCBs that have been released persist in the environment, accumulate in organisms, and concentrate in the food chain.

The disposal of these compounds is regulated under the Toxic Substances Control Act (TSCA), 15 U.S.C. Sections 2601 et seq., as implemented by 40 CFR Part 761, which banned the manufacture and distribution of PCBs, with the exception of PCBs used in enclosed systems. By federal definition, PCB equipment contains 500 parts per million (ppm) PCBs or more, whereas PCB-contaminated equipment contains PCB concentrations of 50 ppm or greater, but less than 500 ppm. Non-PCB equipment contains 0 to 49 ppm PCBs. The TSCA regulates and the EPA enforce the removal and disposal of PCB sources containing 50 ppm or more; the regulations are more stringent for PCB equipment than for PCB-contaminated equipment.

California regulates PCBs under CCR Title 22, Chapter 30 and California Health and Safety Code Chapter 6.5. These regulations are more stringent than TSCA and EPA implementation regulations regarding the disposal of PCBs. Within California, fluids containing 5 to 49 ppm PCBs are defined as PCB items and are regulated as a hazardous waste.

PCB-Containing Transformers. The presence of PCB transformers does not preclude the transfer of station property; however, property transfer could be affected if a release has been documented. PCB transformer surveys performed at former MCAS El Toro have identified over 500 transformer locations. Sampling for PCBs has been conducted for all transformers where records containing PCB status were missing or nonexistent. All PCB-containing transformers (containing PCBs greater than 50 ppm) have been removed or replaced with non-PCB transformers. Based on these surveys and VSIs conducted in April-May 2002 in support of this EBS, a total of 130 remaining PCB transformer locations have been identified. Table 4-11 lists each PCB transformer, summarizes pertinent information regarding each transformer, and provides the ECP category ranking for each transformer. In addition, Table 4-11 lists the areas where storage of transformers occurred and PCB releases were identified. Figure 4-14 shows the locations of the PCB transformers and PCB release areas.

Two transformer locations have been investigated and response actions implemented based on past PCB releases that have occurred. Response actions at these locations are summarized below:

- A minor release of transformer oil containing PCBs was previously noted on the concrete pad of a pad-mounted transformer situated inside Building 371 (Transformer ID/LOC PCB T056). The transformer was replaced, and the concrete pad was removed (JEG 1995b). This transformer location has been assigned an ECP Area Type of Category 4 with regard to PCBs because all required response actions have been completed and no further action is required.
- An investigation of a transformer situated at Building 457 (Transformer ID/LOC PCB T074) (site also identified as SWMU/RFA 244) determined that a response action was required for releases of transformer oil containing PCBs. PCBs were identified in one of the seven shallow soil samples that were collected in the affected area. The transformer was replaced and impacted soils were removed. The response action was completed, and the site was closed on 17 December 1998 (USMC 1999). This transformer location has been assigned an ECP Area Type of Category 4 with regard to PCBs because all required response actions have been completed and no further action is required.

Based on the records search performed and VSIs conducted in April-May 2002 in support of this EBS, no evidence or documentation of a release was identified for the remaining transformers. These transformer locations have been assigned an ECP Area Type of Category 1 with regard to PCBs.

PCB Transformer and Equipment Storage Areas. Inactive PCB-containing transformers and equipment have been stored at four locations on former MCAS El Toro and releases or potential releases of PCBs have been identified. These sites are listed in Table 4-11. Figure 4-14 depicts these locations.

- A former transformer storage area consisting of an unpaved, fenced, 2-acre site was situated southwest of South Marine Way, east of the Bee Canyon Wash (tracked as LOC RFA 7). This site was established in 1990 or 1991 and used as temporary storage for transformers until they could be disposed off station. No transformers are currently stored in this area. This area was investigated as SWMU/AOC 7 in the RFA completed between 1991 and 1993 and in the addendum to the RFA completed in 1996 (USMC 1999). Sampling results indicated localized surface soil contamination. Impacted soils were removed in 1997 (USMC 1999). This area has been assigned an ECP Area Type of Category 4 with regard to PCBs because all response actions have been completed and no further action is required.
- A PCB equipment storage area was identified at the equipment and drum storage area on the north side of Building 324 (tracked as Transformer ID/LOC PCB A2). Several pieces of miscellaneous electronic equipment (e.g., switches, capacitors) were stored in the vicinity of a less-than-90-day hazardous materials accumulation area. The items were labeled with hazardous waste stickers indicating the contents as PCB containing. These items have been removed and disposed off station. Sampling activities conducted in 2001 did not identify PCB concentrations above laboratory detection limits (USMC 2001). This area has been assigned an ECP Area Type of Category 3 with regard to PCBs because all required response actions have been completed and no further action is required.

• A former transformer storage area was situated on the north side of Building 369 (tracked as LOC IRP 11). The site is being investigated as IRP Site 11 and comprises a 30-square-foot concrete pad, the unpaved areas surrounding the pad and to the north of the pad, and a lined drainage ditch south of the pad along the north side of Building 369. Approximately 50 to 75 transformers were stored in this area from 1968 to 1983, and leaks from the transformers have been documented. Remedial actions at this site have not yet been implemented;

therefore, this area has been assigned an ECP Area Type of Category 6 with regard to PCBs. Further action is required at the site.

 A transformer storage area was situated adjacent to Tank 175 (water reservoir) (tracked as Transformer ID/LOC PCB A1). The site consists of a concrete pad with concrete berms that was used primarily to store non-PCB transformers; however, a PCB-containing transformer was noted to have been stored there in the early 1990s (JEG 1995). This area requires additional characterization for releases of hazardous substances. Field data will be collected and compiled in a summary report. Therefore, this area has been assigned an ECP Area Type of Category 6 with regard to PCBs.

In addition to these four PCB equipment storage locations, a PCB release site has been identified within the DRMO storage yard north of Building 360 (tracked as LOC IRP 8). PCB-contaminated soil has been removed from the site; however, all required actions have not yet been completed; therefore, this area has been assigned an ECP Area Type of Category 6. Also, PCBs were detected in soil samples taken at the former sludge drying beds (tracked as LOC IRP 12). This area has been assigned an ECP Area Type of Category 6 because releases of hazardous substances have been identified and response actions are required, but response actions have not yet been implemented.

It must be noted that the following sites were originally identified as different category LOCs and are additionally listed in this PCB Transformer and Equipment Storage Area category with their original LOC ID: SWMU/AOC 7, IRP Site 8, IRP Site 11, and IRP Site 12. For cumulative count purposes, these LOCs will only be associated with their original LOC category.

Non-Transformer PCB equipment. A survey of former MCAS El Toro for items and equipment other than transformers and fluorescent light fixtures that possibly contained PCBs has been conducted. The survey identified 54 items suspected of containing PCB insulation or fluid. Of these items, 29 contained dielectric fluid; the fluids were sampled and analyzed for PCB concentration. Table 4-12 lists the 29 items, and the analytical results and Figure 4-15 depicts their locations; these items are not categorized as LOCs. Because these items contain PCBs below 50 ppm, they are classified by TSCA as non-PCB items and are not required to be removed from service (USMC 1999). With the exception of PCB equipment at Building 360, non-transformer PCB equipment at former MCAS El Toro has been assigned an ECP ranking of Category 1 because no documentation or evidence of a release has been identified.

A release of fluid from switch equipment within Building 360 was observed during the VSIs conducted in April-May 2002 in support of this EBS. Based on the inventory of non-transformer PCB items it was determined that these switches contain small concentrations (less than 0.005 to 2.8 milligrams per liter [mg/l]) of PCBs. The release is confined to the concrete floor within the building; no exterior surfaces or soil are affected. No investigation or remedial action has occurred at this site; therefore, this area has been assigned an ECP ranking of Category 7 with regard to PCBs and has been designated as PRL 360 and listed in Table 4-1. Further evaluation is required to determine whether releases of PCBs at concentrations requiring a response action are required.

PCB Light Fixtures. Fluorescent light fixtures were not included in PCB item and equipment surveys at MCAS El Toro. Because some of buildings at former MCAS El Toro were built prior to 1979, some light ballasts in the buildings may contain PCBs. Fluorescent light ballasts manufactured before 1979 often contain PCBs in small capacitors that may be disposed as municipal solid waste. No remedial action is required at the buildings unless large quantities of PCB-containing fluorescent light ballasts are removed. According to the DON guidance on disposal of fluorescent light ballasts containing PCBs (DON 1989), large quantities of PCB small capacitors generated from fluorescent light ballasts, such as when the fixtures in a large office or an entire building are replaced, should be

disposed by the transferee as regulated PCB equipment. It should be noted that many buildings that were constructed prior to 1979 have had interior renovations and new light fixtures installed that do not contain PCBs.

Fluorescent light ballasts that contain PCBs have approximately 1.0 to 1.5 ounces of PCB fluid in each capacitor. There are approximately 3.1 to 4.7 pounds of PCB fluid for every 50 PCB small capacitors in fluorescent light ballasts. If the transferee plans to dispose fluorescent light ballasts or any other equipment containing more than 3 pounds of PCB fluids, they should be processed by the transferee as regulated items.

4.1.7 Medical/Biohazardous Waste

Current federal regulations do not provide for the regulation of medical waste. The state of California regulates medical waste under the Medical Waste Management Act, California Health and Safety Code Sections 25015-25099.3. The Act provides for treatment of such waste, prior to disposal, by all generators of medical waste regardless of the amount generated.

Medical/biohazardous waste generated at medical and dental clinics at former MCAS El Toro were handled and transported off station for incineration by a commercial waste disposal contractor. Prior to using the commercial waste disposal contractor, medical/biohazardous wastes were transported to the former Naval Station Long Beach, California, for disposal (USMC 1999). Based on the real property record for former MCAS El Toro, Buildings 105, 439, 457, and 876 have been identified as previous medical and/or dental clinics. Because no documentation or evidence of a release of medical/biohazardous waste was identified, the facilities generating this waste have been assigned an ECP ranking of Category 1 with regard to medical/biohazardous waste.

4.1.8 Ordnance

Federal regulations, specifically the Military Munitions Rule (40 CFR 266, Subpart M), identify when chemical and conventional military munitions become a hazardous waste under the RCRA. The Military Munitions Rule also provides for the safe storage and transport of such waste, as well as emergency response and RCRA manifest requirements for military munitions. The state has not yet adopted the Military Munitions Rules and regulates military ordnance under the CCR Title 22 Division 4.5 -Environmental Health Standards for the Management of Hazardous Waste.

In July 1997, the USACE, St. Louis District was contracted by Headquarters, U.S. Marine Corps, to prepare an ASR (USACE 2001b) and a Range Identification and Preliminary Assessment Report (USACE 2001a) as part of a comprehensive range inventory on Marine Corps installations. The purpose of these documents was to document the facilities/features relating to ordnance and explosives, chemical warfare materials (CWMs), and any other warfare materials (i.e., radiological). Both documents were submitted as final in 2001.

As a result, the USACE ASR identified 55 buildings at former MCAS El Toro that had an ordnance storage or handling function at one time (including small arms or CWM). The ASR also identified seven ranges that were previously utilized at former MCAS El Toro. However, 29 of these facilities and ranges have been transferred to other federal agencies and are not addressed within this EBS.

The Navy conducted a closeout inspection visit for ordnance-related sites at MCAS El Toro on 24 February 1999. The purpose of the visit was to inspect those potential sites that stored explosives and that were scheduled to close as a result of BRAC actions. The closeout inspection was conducted to ensure that the buildings are clear of all explosive and/or hazardous waste and materials The inspection was scheduled in two phases, the first for those facilities that were no longer operational



at the time of inspection and the second for those facilities that were still operational pending base closure in July 1999. Phase I visual inspection included the station's magazine area and explosive ordnance disposal (EOD) range, and associated facilities. No visible signs of any explosives, ammunition, or explosive residue were identified during the Phase I inspection. A Phase II inspection was scheduled to occur after the remaining aircraft squadron had permanently detached from the station. Facilities to be included in the Phase II inspection include the following: flightline ready service lockers (used for temporary storage of explosive items used on the flightline during flight operations), aircraft egress/aviation life-support shops (maintenance area for all pilot life support equipment/and egress systems to include ejection systems that require the maintenance of explosive systems in the aircraft), armory (used in the storage of small arms ammunition and riot control agents), and the provost marshal office (office space) (DON 1999b). Phase II inspections have not been completed. However, the 2002 EBS VSIs included these facilities and noted them to be in good condition and clear of explosives and/or hazardous waste or material.

Ordnance was stored at former MCAS El Toro beginning in the 1940s. At that time, 14 ordnance storage facilities were situated in the southeast portion of the installation. In the 1950s, ten ordnance storage facilities were constructed in the northeast portion of the installation; however, these facilities have been transferred to the FAA and are not considered as part of this study. Additionally, an EOD training and munitions detonation area, constructed in 1952, is situated in the northeast portion of the installation. This facility is in the process of being transferred to the FBI and is not part of this EBS.

The maintenance and inspection of munitions storage magazines are regulated under the DoD Ammunition and Explosives Safety Standards, DoD 6055.9 STD. These regulations require inspections to be conducted by the DoD Explosive Safety Board (DDESB) approximately every 18 months. The use, maintenance, and security of munitions storage facilities are also addressed in these regulations. No chemicals, other than explosives, are allowed into an active/occupied storage magazine, housekeeping standards for explosive storage facilities are stringent, since dust may be considered an explosive hazard, and personnel and vehicles are required to be equipped with protective equipment when working in an explosive storage facility.

Due to the fastidious requirements necessary to operate explosive storage facilities, the construction of the facilities, and the design of the munitions themselves, the chances of a release of explosives to the environment are highly unlikely. Encased munitions, explosives packed into a closed metal casing will not release explosive residues unless broken open. These types of munitions would be stored in a "dry" storage facility. Liquid propellants associated with missiles would be stored in a "wet" storage facility, which is constructed with floor sumps to capture and contain any liquids and avoid a release to the environment.

Therefore, based on the strict storage requirements set forth by the DoD and since no evidence of a release was identified during the VSI conducted in support of this EBS, the following munitions storage facilities, Buildings 136, 141, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 291, 296, 307, 419, 440, 441, 442, 611, 631, 744, 787, 794, 826, and 841 have been provided an ECP Category 1 rating for ordnance.

4.1.9 Pesticides

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. Sections 136-136y, regulates the registration and use of pesticides. Pesticide management activities are subject to federal regulations contained in 40 CFR Parts 162, 165, 166, 170, and 171. California implements federal regulations regarding pesticide use under CCR Title 3, Chapter 4.

Currently, a commercial pest management service provides pest control for the buildings and exterior grounds throughout the station as well as for the golf course. Pesticides approved for use within buildings and exterior grounds include Fumitoxin[®], ZP Rodent Bait[®], Gopher Getter[®], PCQ[®], Round-Up[®], Talstar[®], and Final[®] (TAIT Environmental Management, Inc. 2002).

Current pesticide application for agricultural lease areas is accomplished by the lessee. The lessee is responsible for complying with applicable federal, state, and county standards for the prevention, control, and abatement of environmental pollution. Pesticide applications are accomplished in accordance with DoD requirements for safety, effectiveness, and environmental protection. The lessee is responsible for obtaining any state or county permits for application of pesticides. Information concerning the lessee's proposed pesticide application program is furnished annually to the Navy prior to any pesticides being applied. Only those pesticides reported to and approved by the Navy can be utilized (County of Orange 2001a, 2001b, 2001c). No documentation regarding inappropriate handling or application of pesticides in the agricultural lease areas was identified or observed; therefore, these areas have been assigned an ECP Area Type of Category 1 with regard to pesticides.

During the time when former MCAS El Toro was an active installation, pesticides and herbicides were used to control rodents and weeds. A certified pest control contractor was utilized to control roaches, spiders, ants, and other pests. A 6-month to 1-year supply of pesticides and herbicides was maintained in Building 753 for use on the station. Pesticides were also stored within Building 493; Building 493 was demolished in 1987 (USMC 1999).

Pesticides and herbicides used at the golf course were stored within Building 1687. Prior to 1959, pesticides were stored in the area currently occupied by Building 464 (Golf Course Clubhouse). Building 1687 was demolished in 1987 (USMC 1999). Based on an interview with the current grounds keeper for the golf course, a 6-month to 1-year supply of pesticides and herbicides was once maintained in Building 782 for use on the golf course. Storage within this facility ceased in 1998. The golf course currently stores pesticides and herbicides within Building 817. Pesticides and herbicides are ordered on an as-needed basis to keep the quantity of pesticides stored to a minimum (Earth Tech 2002). No evidence of improper storage or release of pesticides was observed. Types of pesticides and fungicides identified within Building 817 during the 2002 VSI conducted in support of this EBS include:

- Roundup® (one 1-gallon container)
- Ferrous Sulfate (15 40-pound bags)
- Fungicide (20 0.5-gallon containers)
- Delta Guard Insecticide® (20 0.5-gallon containers)
- Trimec Weed Control® (three 1-gallon containers)
- Scotts Fungicide X® (two 40-pound bags)
- Scotts Insecticide III® (one 40-pound bag) (Earth Tech 2002)

Buildings 464 and 1687 have been identified as Sites LOC MSC P1 and LOC MSC P2, respectively, and have been assigned an ECP Area Type of Category 5. Further investigation is ongoing at these sites. These sites have been categorized in Section 4.1.10 and are listed in Table 4-14.



Four RFA sites (RFA Sites 95, 125, 131, and 244) and 40 TAA sites (TAA Sites 31A, 51, 77, 115, 155B, 155C, 240, 289, 297, 306, 307, 314, 359B, 371A, 371B, 388A, 389A, 389B, 390B, 392A, 392B, 441, 461, 529, 605, 606, 636, 651, 658, 671, 673, 765, 769, 770, 771, 772, 778, 779, 800, and 856) included pesticides in the sampling analysis of these sites. Based on the analytical results of sampling conducted, no evidence of pesticide releases was identified. Because sites that previously stored pesticides and herbicides have been investigated and no documentation or evidence of a release was identified for areas formerly or currently storing pesticides and herbicides, these areas have been assigned an ECP Area Type of Category 1 with regard to pesticides. A removed UST associated with Building 753 has been investigated; contaminant concentrations identified were below action levels. Therefore, this former UST location at Building 753 has been assigned an ECP Area Type of Category 3 with regard to pesticides.

In accordance with EPA Region IX requirements (EPA 1994), a confirmatory sampling program was conducted at former MCAS El Toro in December 1994 at agricultural use and other areas that were identified as areas where pesticides and herbicides may have been routinely applied.

The 12 parcels included ongoing agricultural (e.g., row crops, citrus groves) and recreational (e.g., golf course, sports fields, horse stables/riding areas) land uses, and past agricultural land use (subsequently changed to housing and recreational uses). Soil samples were collected at 43 locations at multiple depths. A total of 96 samples from the 12 parcels were analyzed for pesticides/herbicides (JEG 1995).

The 1995 EBS reported that numerous discussions of the sampling results took place in March 1995 among the BCT members. The BCT agreed, based on these discussions, that the levels of pesticides/herbicides observed in the borings at the 12 parcels did not warrant further investigation. Additionally, it was also agreed that none of the boring locations required exclusion from CERFA eligibility. However, it was noted in the 1995 EBS report that two of the boring locations were eliminated from CERFA eligibility because pesticides/herbicides had been stored in those areas (JEG 1995b).

Since the confirmation sampling program in 1994, 9 of the 12 parcels have continued to be used for agricultural/recreational purposes involving the application of pesticides/herbicides. Therefore, to assess the impact at these areas by the lessees, a baseline verification sampling was conducted in 2002. Samples were collected at the same approximate 1994 locations and depths. Sampling was not conducted at three of the parcels where agricultural use had ceased. Thirty-two locations in 9 of the 12 parcels were sampled in accordance with the 1994 sampling protocol.

Based on the limited sampling performed, exceedences of residential PRGs for pesticides 4,4'-DDD, 4,4'-DDT, heptachlor, and the organophosporus compound merphos was evident in the pesticide storage and mixing area at the parcel occupied by Bordier's nursery. This was the only area identified with elevated levels of pesticides; elevated levels of pesticides were not identified on the remainder of the Bordier's nursery parcel or the other agricultural parcels. Based on this risk screening, the cumulative cancer risk ratio and noncancer risk ratios indicate that the levels represent a risk to human health above the value that corresponds to unrestricted reuse. Appendix D contains results of sampling conducted at the agricultural parcels.

In February 2003, additional sampling was conducted within the pesticide mixing area at Bordier's Nursery to evaluate the elevated concentrations that were identified during sampling conducted in 2002. Eight samples were collected from four locations in the pesticide mixing area. None of the samples exceeded residential PRGs, although several samples exceeded MCAS El Toro background concentrations.

In response to a request by DTSC, additional sampling was conducted in July 2003 in order to help delineate the distribution and extent of pesticides within the area. Twenty-three samples (plus three duplicates) were collected from eight locations. None of the samples exceeded residential PRGs, although one sample exceeded MCAS El Toro background concentrations. The deepest sample collected at each location was reported with non-detectible concentrations, with the exception of one sample, which had an extremely low (estimated) concentration of 4,4-DDT. The results of this assessment are presented in Appendix E.

Based on the 1994 and 2002/2003 sampling results, the elevated pesticide concentrations may be a result of ongoing actions by the organization that has been leasing the property for agricultural purposes. The pesticide mixing area consists of a gravel-covered area approximately 20 feet by 15 feet situated immediately in front of the pesticide storage shed. Based on the sampling results, this area on Bordier's Nursery has been assigned an ECP Area Type Category 3 with regard to pesticides. Based on the 2002 sample results, the remainder of the Bordier's Nursery parcel and the other 8 agricultural areas have been assigned an ECP Area Category 1 with regard to pesticides.

4.1.10 Radioactive Materials

Previous radiological work at former MCAS El Toro has been controlled to preclude the spread of contamination and the unnecessary exposure of personnel to radioactive materials. The EPA, the Nuclear Regulatory Commission (NRC), and the Department of Energy (DOE) have overlapping authority on the disposal of radioactive materials. Based on the missions of former MCAS El Toro, past radiological work has involved general radioactive materials, which is the responsibility of the DON Radiological Affairs Support Program (RASP). General radioactive materials include, but are not limited to, NRC licensed radioactive material, naturally occurring radioactive material, radiographic and instrument calibration sources, various radioactive instrumentation, and radioluminescent products (Weston 2000).

During its history, former MCAS El Toro has not maintained any licenses or permits for the handling of radioactive materials. Handling of instruments with radium dials did not require a license. The types and quantities of radiological materials handled at former MCAS El Toro were licensed by the supplier or permitted by the Naval logistics system and did not require permitting by the user. Examples of supplier permits for the types of radiological materials utilized at former MCAS El Toro are discussed below.

- In-Flight Blade Inspection System (IBIS) indicators were received and used under the manufacturer's (General Nucleonics) general license issued by the state of California in the 1960s to 1999. IBIS indicators utilized Strontium-90 with a maximum of 500 microcuries (µCi) per indicator. Precautions and controls are specified in the general license and Technical Manual.
- Ice Detector Units were received and used under the manufacturer's (Sundstrand Data Control) general license issued by the state of Washington in the 1960s to 1999. Ice Detector Units utilized Strontium-90 with a maximum of 50 µCi per detector. Precautions and controls are specified in the general license and Technical Manual.
- Refueling Paradrogue Isolites were received and used under Navy Radioactive Materials Permit (NRMP) No. 37-00023-T2NP issued to Commander Naval Supply Systems Command in the 1960s to 1999. Refueling Paradrogue Isolates utilized Krypton-85 with a maximum of 25 millicuries (mCi) per isolate. Precautions and controls are specified in the NRMP and Technical Manual (Weston 2000).





The May 2000 Historical Radiological Assessment (HRA) conducted for former MCAS El Toro determined that there is a low potential for radiologically contaminated areas on the station (Weston 2000). The following areas were classified as potentially impacted and further radiological investigation was recommended:

- EOD Range (IRP Site 1) (site is situated on property that is pending transfer)
- Magazine Road Landfill (IRP Site 2) (site is situated on property that has been transferred)
- Original Landfill (IRP Site 3)
- Perimeter Road Landfill (IRP Site 5), including the impoundment identified as APHO-46
- Communication Station Landfill (IRP Site 17), including the impoundment identified as APHO-44 (site is situated on property that has been transferred)
- DRMO Yard 1 (IRP Site 8) and DRMO Yard 3 (RFA 264)
- Buildings 319 and 360 (DRMO Buildings)
- Buildings 295, 296, and 297 (Aircraft Hangars)
- Buildings 242, 243, and 244 (Command Air Museum buildings)
- Former location of the IWTP and Drying Beds (IRP Site 12) and a portion of the Bee Canyon Wash (IRP Site 25) from southwest corner of IRP Site 12 to the south station boundary
- Anomaly Area 3 (APHOs 59, 62, 63, 64, and 65), situated near Wherry Family Housing bounded by Pusan Way, Connor Avenue, and Agua Chinon Wash
- Site of the suspected former Radium Plaque Adaptometer Building ("C" Street approximately 2 blocks north of the Trabuco Road Station Gate)
- Buildings 787, 1789, and 1803 (nuclear, biological, and chemical [NBC] buildings) and adjacent impoundments (APHO-38) (Weston 2000)

A radiological survey to investigate these sites is underway. An investigation has been conducted; however, the draft radiological release report has not been released. Categorization of sites presented in this section will be revised based on the findings of the report. Figure 4-16 depicts the radiological materials investigation locations.

The EOD Range (IRP Site 1), the Magazine Road Landfill (IRP Site 2), and the Communication Station Landfill (IRP Site 17), including the impoundment identified as APHO-44, are on property that has been transferred or will be transferred to other federal agencies. This property and these sites are not addressed within this EBS.

A listing of radiological materials investigation locations is presented in Table 4-13. With the exception of the IRP sites, these locations, which include Buildings 242, 243, 244, 295, 296, 297, 319, 360, and 860; the NBC Area (Buildings 787, 1789, and 183 and surface impoundment); and the suspected former Radium Plaque Adaptometer Building, have not previously been identified as LOCs. IRP sites are discussed below in the context of radiological materials; the original designation and background is discussed in Section 4.1.3/Table 4-5. The previously designated ECP type in Table 4-5 has been retained for the IRP sites in the context of the radiological materials investigation. These sites are listed and categorized in Table 4-5.

The Original Landfill and the Perimeter Road Landfill are being addressed under the IRP as IRP Sites 3 and 5, respectively. Based on the status of investigations at these IRP sites, the Original Landfill and the Perimeter Road Landfill have been assigned an ECP Area Type of Category 6 with regard to hazardous substances. These sites require response actions; however, response actions have not been implemented to date at these sites. The DRMO Yard 1 is being addressed under the IRP as IRP Site 8. Based on the status of the investigation at this site, the DRMO Yard 1 has also been assigned an ECP Area Type of Category 6 with regard to hazardous substances. The site requires response actions; however, response actions have not yet been implemented.

The former IWTP and Sludge Drying Beds (IRP Site 12) were situated downstream of Building 296 (former location of the radium room), and processed effluent from the station buildings that were connected to the industrial waste sewer system. The plant operated between 1943 and 1972 and discharged effluent into the Bee Canyon Wash. Based on this information, IRP Site 12 and the portion of Bee Canyon Wash from the southwest corner of IRP Site 12 to the outfall at the south station boundary were considered by the 2000 HRA to be potentially impacted by radiological substances. The survey recommended further radiological investigation prior to final disposition. Investigation of the site is being conducted as part of the IRP as IRP Site 12, and the site has been assigned an ECP Area Type of Category 6. All required response actions have not been completed, and further action is required.

The DRMO Yard 3 was investigated as part of the RFA as RFA 264. Based on investigations that occurred at this site, no releases of hazardous substances were identified and no further action was recommended. Concurrence from DTSC has been obtained for the site in a letter dated 23 July 1996. However, the 2000 HRA has recommended this area for further radiological investigation; therefore, DRMO Yard 3 has been assigned an ECP Area Type of Category 7 with regard to radioactive materials.

Buildings 319 and 360 were used to store government property. A drawing of Building 360 depicted a small area that was designated for storage of radioactive material; no evidence was found confirming that the area was ever used for this purpose. No information was identified for Building 319 that indicated the building was used for storage of radioactive material. The radiological survey of both these buildings did not identify any evidence of radiological contamination (New World Technology 2001). However, the 2000 HRA has recommended these buildings for further radiological investigation; therefore, Buildings 319 and 360 have both been assigned an ECP Area Type of Category 7 with regard to radioactive materials.

Public Works Center drawings identified the existence of a radium room and supporting rooms in the north mezzanine of Building 296. Refinishing of luminous dials was authorized in Building 296 from 1949 to 1950. Other areas within Buildings 296 and 297 were used for storage and use of aircraft equipment containing radioactive strontium and krypton until closure in 1999 (Weston 2002). Within the former radium room, paint room, and ventilation ducting over the north mezzanine of Building 296, slightly elevated radioactive levels were identified. The rooms were remediated (including the concrete floor) to below action levels and ducting was removed; materials removed (wallboard, tile, and ducting) were packaged and disposed of off station (Weston 2002). The former dark room, inspection room, women's rest room, women's wash room, instrument shop, instrument parts storage rooms, piping below the north mezzanine, interior stairs and elevator within Building 296, and concrete floors of Buildings 296 and 297 did not reveal radioactive findings above action levels (Weston 2002). Building 297 has been assigned an ECP Area Type of Category 7 with regard to radioactive materials because the 2001 HRA has recommended these buildings for further radiological investigation.







Buildings 242, 243, 244, 295, 787, 1789, and 1803, as well as the site of the former Radium Plaque Adaptometer Building and Anomaly Area 3 (APHOs 59, 60, 61, 62, 63, 64, and 65) and Building 722 have been assigned an ECP Area Type of Category 7 with regard to radioactive materials based on the recommendations of the 2001 Final HRA. Further evaluation is recommended for these facilities. A radiological study is currently underway; however, the results of this survey were not available for incorporation into this EBS.

In addition, during the 2002 VSIs conducted in support of this EBS, two buildings (Buildings 299 and 860) were noted with materials of radioactive/radiological concern. During the VSI conducted in Building 299, the facility escort identified a room in the northeast corner of the building as storing a small quantity (i.e., a bucket) of radiological materials that were generated during the 2001 radiological survey. The room was locked and was not inspected during the VSI. The materials are pending appropriate disposal. In Building 860, a sticker reading "Radioactive Material" was noted on one of the cabinets in the building. Although an inventory listing of hazardous substances stored within the cabinet was identified and did not list any radioactive material storage, it could not be confirmed that radioactive materials were not stored within the cabinet. Therefore, further investigation is recommended to determine whether residual radioactive substances are present. Building 860 has been assigned an ECP Area Type of Category 7 with regard to investigation of radioactive materials. Building 299 is not considered to require further investigation and is only pending appropriate disposal of the investigation-derived waste from the 2001 radiological survey. Accordingly, no ECP type has been designated.

In 2001, radionuclides detected in groundwater at former MCAS El Toro were evaluated and determined to be naturally occurring (Earth Tech 2001).

4.1.11 Miscellaneous Locations of Concern

"Miscellaneous LOCs" are sites that do not fall under a general LOC type. Several miscellaneous LOCs have been identified as a result of previous investigations. Previously identified sites consist of potential release of hazardous substances at two former elevated water reservoirs, two past pesticide storage areas, six SRUs, two inactive burn pits, two potential refuse areas, a DRMO storage yard, a former ammunition supply point, JP-5 fuel lines, a former JP-5 fuel storage area, five former petroleum storage areas, the railroad spur in the southwest portion of the installation, and the runways.

The ESA prepared by Geosyntec identified three additional miscellaneous sites (Groundwater-G, Railroad-G, and Runways-G). These sites were evaluated by the DON and were also evaluated in support of this EBS. Based on evaluation of these sites by the DON and in support of this EBS, the site identified as Groundwater-G (basewide groundwater) has been recommended for no further action. This site is not considered to be an LOC and is not discussed further in this EBS. The other two sites, Railroad-G and Runways-G, were determined to require additional evaluation and are identified as PRL Railroad and PRL Runways in Section 4.1.1 and Table 4-1.

The previously identified SRU LOCs are addressed in Section 4.1.5.5/Table 4-11.

Table 4-14 lists and describes the miscellaneous LOC sites, as well as summarizes the status of the sites, provides the study area that the site is situated within, and identified the ECP Area Type category for each site. Figure 4-17 depicts the locations of the miscellaneous LOC sites. A summary of the ECP categories for the miscellaneous LOCs identified at Former MCAS El Toro is presented below:

- Three miscellaneous LOCs have been assigned an ECP Area Type of Category 1 because no release, disposal, and/or migration of hazardous substances or petroleum products have been identified.
- Three miscellaneous LOCs have been assigned an ECP area Type of Category 2a because releases of petroleum products below action levels have been identified, no actions were required, and regulatory agency concurrence with a no further action recommendation and site closure has been obtained.
- Four miscellaneous LOCs have been assigned an ECP area Type of Category 2b because releases of petroleum products requiring an action have been identified, all required actions have been completed, and regulatory agency concurrence with a no further action recommendation and site closure has been obtained.
- Four miscellaneous LOCs have been assigned an ECP area Type of Category 2c because releases of petroleum products requiring an action have been identified and required actions are underway; however, all required actions have not been completed and/or regulatory agency concurrence with a no further action recommendation and site closure has not been obtained.
- One miscellaneous LOC has been assigned an ECP Area Type of Category 4 because a release requiring an action have been documented, all required actions have been completed, and regulatory agency concurrence with a no further action recommendation has been obtained.
- Two miscellaneous LOCs have been assigned an ECP Area Type of Category 5 because releases requiring a response action have been identified and required actions are underway; however, all required actions have not been completed and/or regulatory agency concurrence with a no further action recommendation has not been obtained.
- One miscellaneous LOC has been assigned an ECP Area Type of Category 7 because further evaluation is required to determine whether release, disposal, and/or migration have occurred.

4.2 DISCLOSURE FACTORS

4.2.1 Facility Disclosure Factors

Facility disclosure factors include asbestos, LBP, radon, drinking water quality, and air quality. Disclosure factors are not regulated under CERCLA and do not affect property categorization unless a release to the environment or an issue is identified for a particular factor. If present in a properly managed condition (i.e., no release into the environment), these factors were not used in property categorization.

4.2.1.1 ASBESTOS-CONTAINING MATERIAL

ACM is regulated by the EPA and the Occupational Safety and Health Administration (OSHA). Asbestos fiber emissions released into the ambient air are regulated in accordance with Section 112 of the Clean Air Act (CAA), which established the National Emissions Standards for Hazardous Air Pollutants (NESHAP). The NESHAP regulations (40 CFR Part 61 Subpart M) address the demolition and renovation of buildings with ACM. OSHA regulations cover worker protection for employees who work around or remediate ACM.





Renovation or demolition of buildings containing ACM has a potential for releasing asbestos fibers into the air. Asbestos fibers could be released due to disturbance or damage to various building materials such as pipe and boiler insulation, acoustical ceilings, sprayed-on fireproofing, and other materials used for soundproofing or insulation.

The state of California has regulations regarding ACM and ACM abatement and enforces the pertinent regulations through DTSC. In California, the Air Resources Board (ARB), through the California Health and Safety Code section 39658(b)(1) enforces the asbestos NESHAP regulations. In some cases, this responsibility is delegated to various air pollution control districts, including the South Coast Air Quality Management District (SCAQMD). Asbestos NESHAP regulations were made part of the Rules and Regulations of the SCAQMD. SCAQMD Rule 1403 specifies the work practice requirements to limit asbestos emissions from building demolition and renovation activities, including removal and disturbance of ACM. The requirements for such activities include surveying, notification, removal procedures and schedules, handling, storage, disposal, and record keeping. Additionally, regulations for occupational exposure to asbestos are included in CCR Title 8 and enforced by the State of California Occupational Safety and Health Administration (Cal OSHA). In accordance with the CCR Title 22, asbestos waste in a friable, powdered, or finely divided state with a total concentration of 1 percent or more asbestos is classified as hazardous waste and is subject to the associated requirements. The Navy policy on asbestos management is to conduct abatement or maintenance as necessary to protect human health and the environment, and to comply with applicable federal, state, and local laws and regulations governing ACM.

DoD policy regarding asbestos at BRAC installations is that if a determination is made that the ACM does not pose a threat to human health at the time of transfer, all property containing ACM will be conveyed, leased, or otherwise disposed as is through the BRAC process. This determination must be made by a Certified Asbestos Consultant. If ACM in a building does pose a threat to human health or the environment, occupation of the building will be prohibited until the ACM is abated or the building is demolished by a transferee. Remediation of ACM is not required in buildings that are scheduled for demolition by the transferee (DoD 1997).

ACM surveys were conducted at former MCAS El Toro in 1988, 1991, 1995, 1999, 2000, 2001, and 2003. ACM was identified in 209 structures in the main station area (excluding the area that has been transferred to other agencies), as well as in a representative sampling of units in family housing areas (i.e., NAMAR, Saddleback Terrace, San Joaquin Housing, and Wherry housing areas). ACM was identified in stucco, mastic, floor tile, pipe insulation, window putty, drywall joint compound, pipe elbows, and spray-on acoustical ceiling material. The ACM identified in the family housing developments was not considered a threat to human health, and no evidence of damage was observed during the VSIs (USMC 1999, Earth Tech 2002). During the 2000/2001 ACM survey no ACM was identified in 131 of the buildings surveyed for asbestos; however, because the surveys were conducted for friable and damaged ACM only (i.e., visual survey for suspect ACM prior to sampling), this total includes 15 buildings where no friable and damaged ACM was observed, but where the presence of nonfriable ACM is unknown (i.e., samples were not collected for non-suspect materials and undamaged ACM). DON completed an ACM survey in July/August 2003 for 168 Wherry Housing units as well as Buildings 322, 834, and part of the stables area, which are all projected for potential reuse. This survey updated the previous ACM survey for Wherry Housing that was documented in the 27 November 1995 report prepared by PWC (PWC 1995). The previous report identified two types of linoleum and black roofing tar/mastic as ACM. Roofing mastic had been found at all housing units; however, the previous report did not indicate in which specific housing structures the ACM linoleum was located, the report only described (by the pattern on the flooring) the types of linoleum flooring that were identified as ACM. Accordingly, during the recent inspection, any linoleum flooring containing friable, accessible, and damaged ACM was identified

by its pattern and/or color in accordance with the pattern descriptions provided in the 1995 PWC report.

For the 2003 survey, ACM linoleum was assumed to be friable and accessible and roofing mastic was assumed to be non-friable and accessible only, based on the 1995 survey results. The 2003 survey was, therefore, conducted by examining each of the Wherry Housing units for damaged ACM linoleum flooring and roofing mastic, and documenting the location, damaged quantity, and total quantity of material identified. Building 322 was surveyed to update 1988 survey results where ACM was noted in the 4-inch pipe insulation (FAD ACM), transite panel (non-FAD ACM), and floor tile (non-FAD ACM). For Building 834 and the stables area, the survey noted damage to any material suspected to contain asbestos, such as stucco, floor tile, etc., since these facilities were not previously surveyed. The 2003 survey focused on identifying damage to known or suspected ACM (since ACM that is not damaged cannot be FAD); therefore, the 2003 survey did not include sampling. Damaged ACM linoleum (FAD ACM) was found in only one Wherry housing unit (Building 8641-North). No damaged roofing mastic was identified at Wherry housing. Building 322 had damaged transite panel and piping insulation, and both materials are assumed to be FAD ACM (friability was not verified). Any damaged material identified for Building 834 and the stables area that was suspected to contain ACM is assumed to be FAD ACM (friability was not verified). Table 4-16 contains the results of the ACM survey.

4.2.1.2 LEAD-BASED PAINT

Human exposure to lead has been determined to be an adverse health risk by agencies such as OSHA and the EPA. Sources of exposure to lead include contact with dust, soil, and paint. In 1973, the Consumer Product Safety Commission (CPSC) established a maximum lead content in paint of 0.5 percent by weight in a dry film of newly applied paint. In 1978, under the Consumer Product Safety Act (P.L. 101-608, as implemented by 16 CFR Part 1303), the CSPC lowered the allowable lead level in paint to 0.06 percent. The act also restricted the use of LBP in nonindustrial facilities.

In order to address the risk of adverse health effects to children from LBP exposure, legislation and national policy regarding LBP has focused on residential areas and child-occupied facilities where children may be present. Non-residential buildings (e.g., warehouses and office buildings) are typically occupied by adults with minimal exposure to children. The DON will not conduct sampling at non-residential buildings prior to transfer. Evaluation and abatement of LBP at non-residential buildings will be the responsibility of the transferee. Demolition of LBP-containing buildings must be performed in accordance with applicable local, state, and federal requirements. Non-residential buildings scheduled for demolition will require post-demolition soil sampling and abatement of soil-lead hazards prior to occupation of any new buildings. Information pertaining to LBP at non-residential buildings, if any, will be provided to the transferee with the transfer documents. Notification of potential LBP at non-residential buildings where surveys were not conducted will be based solely on the age of construction (i.e., constructed prior to 1978).

To ensure that any threat to human health and the environment from LBP has been identified, the Residential Lead-Based Paint Hazard Reduction Act (Title X), effective 1 January 1995, establishes schedules for inspections, identification, notification, and remediation of LBP hazards in housing constructed prior to 1978. The provisions (Title 42 U.S.C. 4822 and 4851 through 4856, and 15 U.S.C. 2688) are applicable to housing constructed prior to 1978, with limited exceptions for housing for the elderly or people with disabilities, or any zero-bedroom dwelling. With regard to federally owned housing, this act states that housing constructed before 1960 must be inspected and abated for LBP hazards. It also states that housing constructed between 1960 and 1978 must be inspected for LBP and LBP hazards, and the results are to be made available to prospective purchasers. The U.S. Department of Housing and Urban Development (HUD) and EPA currently





define LBP (or other surface coatings that contain lead) as having lead concentrations equal to or greater than 1 milligram per square centimeter (mg/cm²).

According to station records, a total of 450 nonresidential buildings on former MCAS El Toro were constructed prior to 1980. Based upon Navy guidance, these structures are assumed to contain LBP. During the VSIs conducted in April-May 2002, the exterior painted surfaces (primarily building trim, doors, and windows) of many of the buildings on former MCAS El Toro was noted to be peeling. The exterior painted surfaces of family housing units were noted to be in good condition with limited peeling paint on some building trims. The painted surfaces within buildings were generally in good condition.

In December 1999, the EPA/DoD issued the joint interim final Lead-Based Paint Guidelines for Disposal of Department of Defense Residential Real Property – A Field Guide (EPA/DoD 1999). Residential real property built before 1978, including both target housing and child-occupied facilities, is subject to the 1999 guidelines. This field guide was included as an attachment to the January 2000 LBP policy memorandum entitle Lead-Based Paint Policy for Disposal of Residential Real Property, which was signed by the Deputy Under Secretary of Defense (Environmental Security) (DoD 2000). Based on this memorandum, the DoD policy in regard to LBP is to:

- Abate soil-lead surrounding housing constructed between 1960 and 1978 (Title X requires abatement of lead-based paint hazards in housing constructed prior to 1960). The transfer agreement may require the purchaser to perform the abatement activities.
- Evaluate the need for interim controls, abatement, or no action for bare soil lead concentrations between 400 and 1,200 ppm (excluding children's play areas) based on the findings of the lead-based paint inspection, risk assessment, and criteria contained in the Field Guide.
- Evaluate and abate lead-based paint hazards in structures reused as child-occupied facilities located on residential real property. Child-occupied facilities are day care centers, preschools, and kindergarten classrooms visited regularly by children under six years of age.
- Evaluate and abate soil-lead hazards for target housing demolished and redeveloped for
 residential use following transfer. Under Title X, residential dwellings that are demolished or
 not intended for occupancy after transfer do not require an inspection and risk assessment or
 lead-based paint control and hazard abatement. However, DoD requires that the terms of
 property transfer include a requirement for the transferee to evaluate and abate any soil-lead
 hazards prior to occupancy of any newly constructed dwelling units.

This lead-based paint policy superseded the 31 October 1994 DoD lead-based paint policy attached to the Principal Assistant Deputy Under Secretary of Defense (Environmental Security) memorandum, *Asbestos, Lead Paint, and Radon Policies at BRAC Properties.* The effective date implementing these policy requirements was 30 March 2000.

The Navy PWC completed an LBP survey in family housing and related facilities at former MCAS El Toro in 1994. Four housing areas at MCAS El Toro (NAMAR, San Joaquin, Wherry, and Saddleback Terrace/Vista Terrace) were surveyed for LBP (PWC 1995a, b, c, d, 1996). The results of the surveys indicated that LBP was identified at high levels (Hazard Risk Assessment levels are identified as high, medium, and low) in two of these housing communities. Housing areas where LBP at high levels was identified include Wherry (built in 1954) and Saddleback Terrace/Vista Terrace (built in 1947). Under current DoD LBP guidance, these two housing areas required LBP abatement. Lead concentrations in all soil and dust samples were either not detected or were below threshold limits.

In addition, an evaluation of the potential LBP hazards in soil for housing areas at former MCAS El Toro has been conducted (SWDIV 2002). The evaluation included sampling for LBP at seven former housing areas constructed prior to 1978. The intent of the sampling was to determine whether further evaluation of LBP in soil was necessary at the former housing areas prior to transferring the property for reuse. The seven housing areas included in the evaluation included: Saddleback Terrace senior officers quarters, Saddleback Terrace, Saddleback Terrace II senior officers quarters, Vista Terrace, NAMAR, Wherry, and San Joaquin. A total of 94 representative housing units were selected for sampling during the survey of the housing areas. The LBP soil evaluation field work included collection of a composite soil sample comprised of four surface soil subsamples from the drip line of the 94 representative housing units; collection of four discrete soil samples along the drip line of the samples; collection of a composite soil sample comprised of seven, surface soil subsamples from a bare soil area in the back yard of each of the 94 housing units; analysis of composite samples and quality control samples for lead; and comparison of the average lead concentration of the drip line and bare soil area composites to the EPA action level (400 mg/kg).

Results of the surveys indicated that lead concentrations in all of the composite soil samples and yard-wide averages for all housing units were below the regulatory criteria of 400 mg/kg. The highest reported concentration of lead in soil identified was 215 mg/kg. Lead in soil concentrations from the 94 housing units sampled are considered to be representative of lead-in-soil within the housing areas. Based on information contained within the survey report, a DTSC evaluation was conducted for the highest average housing area lead-in-soil concentration (57.3 mg/kg) and the highest lead-in-soil concentration (worst case scenario) reported throughout all housing areas (215 mg/kg). The results of the evaluation for both the highest housing area average and the worst-case scenario indicate that none of the concentrations in the housing areas exceed soil action levels represented by the 95th percentile and 99th percentile PRGs for potential child and adult residential receptors. Lead in soil concentrations of up to an average lead concentration of approximately 317 mg/kg (for residential child exposure) and 1,295 mg/kg (for residential adult exposure) are considered acceptable levels that will not pose a significant risk of exposure under current conditions. Based on current regulations and guidance, and the results of the survey/evaluation, no further evaluation is warranted for lead in soil prior to transfer of the housing areas.

Abatement of LBP was conducted in 1997 for the housing units within the Wherry and Saddleback Terrace/Vista housing areas. Abatement mainly consisted of encapsulating wood members containing LBP with vinyl siding to prevent any exposure to LBP. This abatement was done in accordance with OSHA safety standards (USMC 1999). Target housing structures (where LBP has previously been identified) for which the DON does not update LBP evaluations within the 12-month period preceding transfer have been designated as requiring demolition after transfer in accordance with all applicable federal, state, and local LBP laws and regulations as a condition of transfer. However, a potential exception is a portion of Wherry housing area containing 168 housing units designated for potential future use by local homeless providers in Orange County. A risk assessment was conducted in June 2003 for this area to identify LBP hazards in anticipation of this potential future use. The assessment identified LBP hazards on concrete foundations and in vents, garages, and interior dust (CDM 2003). With the completion of this risk assessment, all LBP actions for residential structures required for transfer have been taken. However, if the Wherry housing area structures are to be used after transfer, any necessary abatement will be conducted prior to any such use. If the Wherry housing area structures are not transferred for use, DON will require demolition of these structures along with other target housing (except San Joaquin housing) in accordance with all applicable federal, state, and local LBP laws and regulations. Any necessary abatement must be conducted no later than 12 months after completion of the risk assessment and all known LBP hazards must be disclosed to the transferee at the time of transfer (EPA/DoD 1999).



California EPA/DTSC has not adopted the joint DoD/EPA guidelines and its criteria for evaluating LBP hazards. DTSC considers the presence of exterior LBP that has been released to the soil, to pose a potential CERCLA release to the environment. Therefore, DTSC recommends evaluation of the potential release of LBP to the soil for all structures based upon date of construction, regardless of whether the property is residential or non-residential. DON will not conduct sampling at non-residential buildings prior to transfer. Information pertaining to LBP at non-residential buildings, if any, will be provided to the transferee with the transfer documents. Notification of potential LBP at non-residential buildings where surveys were not conducted will be based solely on the age of construction (i.e., constructed before 1978).

4.2.1.3 RADON

Radon is a naturally occurring, colorless, and odorless radioactive gas that is produced by radioactive decay of naturally occurring uranium. Uranium decays to radium, of which radon gas is a by-product. Radon is found in high concentration in rocks containing uranium such as granite, shale, phosphate, and pitchblende. Atmospheric radon is diluted to insignificant concentrations. Radon that is present in the soil, however, can enter a building through small spaces and openings, accumulating in enclosed areas such as basements. The cancer risk caused by exposure through the inhalation of radon is a topic of concern.

DoD policy is to disclose available and relevant radon assessment data pertaining to BRAC property being leased or transferred for inclusion in property lease/transfer documents. However, there is currently no federal requirement to perform follow-on radon assessment or mitigation in federal buildings, including those to be transferred to the public or private sector.

A radon survey was conducted at former MCAS El Toro in 1991. Radon screening results were based upon a representative sampling of structures. The structures surveyed included the station hospital (Building 431), the childcare center (Building 656), and approximately 185 locations in the family housing areas. The results indicated that none of the facilities or housing units exceeded the radon threshold value of 4 picocuries per liter (pCi/L). Therefore, no mitigative action or further testing was recommended (JEG 1995b). Based on these sampling results, it is anticipated that radon levels in other buildings at former MCAS El Toro should not be significantly different from those surveyed (levels should not exceed 4 pCi/l) (USMC 1999).

4.2.1.4 DRINKING WATER QUALITY

A review of 2000 to 2002 drinking water quality reports associated with occupied buildings at former MCAS El Toro indicate that there are no drinking water quality concerns. Table 4-17 provides a list of buildings that were sampled regularly. Water is tested for potability including residual chlorine and Coliform bacteria. Sampling results indicate that residual chlorine is within drinking water standards and that Coliform bacteria are absent from the water. On two occasions, Coliform bacteria were identified at Building 298 (grounds maintenance); however, *E. coli* was absent (Truesdail Laboratories, Inc. 2000; 2001; 2002).

4.2.1.5 AIR QUALITY

Prior to closure in 1999, mission activities at former MCAS El Toro required operation permits under the SCAQMD for emission sources. Permits obtained by former MCAS El Toro were required for the installation and operation of 17 source categories of toxic air emissions including: abrasive blast units; burn pits; degreasers; fuel dispensing; fuel loading operations; fuel storage tanks; internal combustion engines; jet engine test cells and other engine testing; laboratories; natural gas-fired equipment; OWSs; ozone depleting substance sources; paint spray booths; paint spray operationsuncontrolled; pipeline fugitive components; turbines; and welding (Radian Corporation 1996). Table 4-18 provides a list of buildings at former MCAS El Toro and their associated emission sources that were permitted. This list represents active emission sources in 1994.

Currently, the DON does not maintain any permits to operate for air emission sources at former MCAS El Toro. Air pollutant-emitting sources associated with former MCAS El Toro have been eliminated. Mission activities associated with former MCAS El Toro have been relocated to other installations. No military activities with air pollutant-emitting sources have been implemented since the station was closed in 1999.

With regard to indoor air quality, many of the buildings have been closed/unoccupied since closure in 1999. Minimal maintenance of the buildings has occurred since that time, as a result, numerous animals (primarily birds and rodents) have accessed the buildings. During the April-May 2002 VSIs, it was noted that animals are living and have died within the buildings resulting in droppings/feces and decaying animals. In addition, molds could be encountered. Surveys to assess the indoor air quality of the buildings have not been conducted.

4.2.2 Conservation Disclosure Factors

The conservation disclosure factors of natural and cultural resources are addressed in the following sections. Property in the northeast portion of the station north of Irvine Boulevard has been transferred to the FAA and FBI; this parcel of land and associated facilities are not addressed in detail in this EBS.

4.2.2.1 NATURAL RESOURCES

Wildlife. Approximately 75 percent of former MCAS El Toro has been developed for agriculture, housing, and station operations (USMC 1999). Natural and ruderal habitats situated at former MCAS El Toro are inhabited by many wildlife species. The station is heavily used by numerous year-round resident, as well as, wintering avian species, including neotropical birds and birds of prey. In addition to bird species, reptiles and mammals are also present in natural and rural areas, as well as a smaller number of amphibian species (Dames and Moore 1996, USMC 1999).

Small mammals that are commonly found include the deer mouse (*Peromyscus maniculatus*), dusky footed wood rat (*N. fuscipes*), and Pacific kangaroo rat (*Dipodomys agilis*). Medium-size mammals include the Audubon cottontail (*Sylvilagus bachmani*), California ground squirrel (*Supermophilus beecheyi*), and brush rabbit (*Sylvilagus bachmani*). Large predators include the opossum (*Dipelphis virginiana*), raccoon (*Procyon lotor*), and coyote (*Canis latrans*). Common bird species include the northern mockingbird (*Mimus polyglottis*), scrub jay (*Aphelocoma coerulescens*), southern California rufous-crowned sparrow (*Aimophila ruficeps*), barn owl (*Tyto alba*), great horned owl (*Bubo virginianus*), turkey vulture (*Cathartes aura*), and American crow (*Corvus brachyrhynchos*) (Dames and Moore 1996).

Threatened and Endangered Species. Two species found at former MCAS El Toro, the California gnatcatcher (*Polioptila californica californica*) and the Riverside fairy shrimp, are listed as threatened under the Federal Endangered Species Act. These species, however, are only present on property that has been transferred and are not addressed in this EBS. No species listed under the California Endangered Species Act are present within former MCAS El Toro (Dames and Moore 1996).

Wetlands. Wetlands are areas where soils are inundated or saturated by surface or ground water at a frequency or duration sufficient to support vegetation adapted to such conditions. Wetlands and waters of the U.S. are protected under Section 404 of the CWA. Former MCAS El Toro is situated at the outlets of four large canyons that produce storm flows during periods of heavy rainfall. Storm

runoff from these canyons is channeled into Marshburn Channel, Bee Canyon Wash, Agua Chinon Wash, and Borrego Canyon Wash (USMC 1999). These drainage channels flow southwesterly and are tributaries of San Diego Creek situated southwest of the station. On-station storm drain facilities consist of ditches and subsurface pipes that direct runoff to the drainage channels (MCAS El Toro 1991). The drainages present at former MCAS El Toro are considered to be subject to both USACE and California Department of Fish and Game jurisdiction and have obvious geomorphological features of intermittent streams (MCAS El Toro 1996).

4.2.2.2 CULTURAL RESOURCES

Archaeological Resources. In 1987, the USACE conducted an Archaeological Resources Assessment to identify possible archaeological sites at former MCAS El Toro (USACE 1987). The area surveyed was confined to the approximate 900-acre area of undisturbed native soils situated in the northeast portion of the station. Ten minor archaeological sites and eight isolated artifact findings contained entirely or partially within the station boundaries were identified (USMC 1999).

A study conducted in 1996 addressed approximately 1,100 acres within and to the south of the 900-acre parcel that had been surveyed in 1987 (KEA Environmental 1996). The 1996 study, which was conducted as part of the closure process for former MCAS El Toro, included an intensive survey of the undeveloped portions of the station. Undeveloped areas included fields, agricultural fields, and areas between and surrounding the runways, as well as small open areas around some buildings and along roadways. Eight of ten locations identified in the 1987 report were visited, and one additional location was identified on the central portion of the station near Building 772 and the golf course. Two sites from the 1987 study could not be located. The 1996 study recommended that no further action be taken at the eight sites that could be located because this area would be maintained as a wildlife preserve after the station closes. The remaining site near the golf course (CA-ORA62) was recommended for further evaluation of its archaeological significance (USMC 1999). Results of archaeological testing at CA-ORA62 indicated that archaeological materials associated with this site have been redeposited at this location, as demonstrated by plastic sheeting and other modern materials underlying the cultural materials. Based on these findings and National Register of Historic Places (National Register) criteria, CA-ORA62 was recommended as ineligible for listing in the National Register. The recommendation is currently under review by the California State Historic Preservation Officer (SHPO).

Historic Structures. An inventory and evaluation of all existing buildings at former MCAS El Toro was conducted in 1998 to determine whether any met the criteria for listing in the National Register (JRP Historical Consulting Services 1997). Analysis and evaluation of these structures focused on five functional building types: hangars and airfield-related buildings; storage buildings; residential and subsistence buildings; support buildings; and recreational and training buildings. The study found that the existing structures at former MCAS El Toro were all built since 1942. Field examination revealed that many World War II-era buildings are still present within the station; however, they generally lack historic or architectural integrity. The post-World War II-era buildings are almost all less than 50 years old and lack qualities that would make them exceptionally significant to meet the National Register requirement for buildings less than 50 years old. The DON has determined that none of the buildings or structures at former MCAS El Toro are eligible for listing in the National Register. In addition, the entire station was considered for its potential as a National Register district. However, the DON determined that since most structures falling within the period of significance lack integrity, the former station does not qualify for listing as a district in the National Register. It is the determination of the DON that no buildings or structures on former MCAS El Toro are listed on or eligible for listing on the National Register. The California SHPO concurred with this finding in a letter dated 15 September 1998.

Paleontological Resources. A paleontological resources survey has not been performed at the station. The area surrounding former MCAS El Toro is known for its rich paleontological resources. Due to the impacts of construction on the main portion of the station, it is unlikely that any valuable paleontological resources still remain in this area (USMC 1999).



ECP	65.890			
Navy Sale Parcel		N	N	
Notes	Floor drains were identified within the facility during the 2002 VSI conducted in support of this EBS. Etched concrete foundation identified near the floor drain in the northern corner of the building during the 2002 VSI could indicate possible plating shop activities were conducted in the past with the floor drains discharging to the sanitary sewer. The presence of the damaged flooring and floor drains discharging to the sanitary sewer. The presence of the damaged flooring and floor drains in an industrial potential for a release of this waste to the environment through cracks in the building foundation and/or by way of leaks in the sanitary sewer lines. Further evaluation of the area immediately adjacent to the facility's sanitary sewer outfall line and possible industrial use areas of the facility is recommended to assess whether releases of waste to the environment have occurred as a result of past operations at this facility.	Site identified as a former SRU at a photography laboratory (SRU 03A). Site is recommended for further evaluation for potential discharges of contaminants to the building drainage system. Discharges of contaminants could have occurred prior to installation of the SRU. Discharges could have also occurred during the operation of the SRU based on operator error or failure in the integrity of the system. Soil sampling investigation was conducted during April 2000. Based on these results, DTSC required based on these results.	oncrete floor sump was identified at this building during the 2002 VSI conducted in port of this EBS and found to contain an oil/water mixture (approximately 12 to 15 orport of this EBS and found to contain an oil/water mixture (approximately 12 to 15 orports). Petroleum hydrocarbons, barium, chromium, copper, lead, and other lyftes were detected at or above reporting limits in liquid samples taken in July 2 from the sump. Additionally, a wash rack is situated at the southeast corner of facility and may discharge directly into the storm drain system. Both areas esent potential release locations of wastes to the environment because of an nitual discharge of untreated washwater into unlined drainages or due to an opper disposal or release of the oil/water mixture. Further evaluation is mmended to assess whether a release(s) of wastes has occurred to the ronment as a result of past industrial operations at this facility and to determine outfall of the washrack and the condition of the floor sump so that they may either euse. Evaluation is also recommended for the site of a former paint spray booth take inside the structure.	
Closure Report Title/Date NFA Letter Agency/Date				
Status	Inactive	Inactive	Inactive	
Past Building Use Electronics and Communications Shop		Reproduction Office	Paint and Dope Shop/Paint Booth	
Building Number/ Location 22		46	47	
PRL ID PRL 22		PRL 46°	PRL 47	

Table 4-1: Potential Release Locations^a



Navy ECP Sale Category	2	4	1	>	
Notes	Based on the industrial use of the facility, waste may have been released to the sanitary sewer system through an industrial sink situated at the west end of the facility. Other areas of possible releases include a former aircraft wash rack, assorted sumps and grease traps, and a former paint booth. Further evaluation is recommended to assess whether releases of waste have occurred to the environment as a result of past operations at this facility by way of leaks in the sanitary sewer lines.	Facility is a former dental/medical clinic. X-ray/photographic development may have occurred at this facility. As a result, photographic development chemicals may have been released to the sanitary sewer system. Further evaluation is recommended to assess whether releases of photographic wastes to the environment occurred as a result of past operations at this facility and leaks in the sanitary sewer line system.	Aircraft wash area associated with maintenance hangar. Further evaluation is recommended.	Wash area outside of building was identified during 2002 VSI conducted in support of this EBS. Wash rack has not been evaluated for potential releases. The outfall of the wash area is unknown, and cracks and vegetation were noted in the wash area. Based on the industrial use of the building, releases of waste may have occurred during past operations. Further evaluation is recommended to assess whether releases of waste have occurred to the environment as a result of past operations at this facility.	Building 127 was a former propeller shop with floor drains and trench drains in the facility. A wash rack (RFA 41) was associated with the operations. Oily stains around the drain in the mechanical room of the building that were identified during the 2002 VSI conducted in support of this EBS indicate that petroleum products or other waste way have been released to the sanitary sewer. Further evaluation is recommended to assess whether releases of waste have occurred to the environment as a result of
Closure Report Title/Date NFA Letter Agency/Date					
Status	Inactive	Inactive	Inactive	Inactive	Inactive
Past Building Use	Automobile Organization Shop	Dental Clinic/Flight Line Aid Station	Maintenance Handar	Maintenance Hangar	Tire Storage Plant
Building Number/	51	105	114	118	127
Ē	PRL 51	PRL 105	PRL 114	PRL 118	PRL 127

4-1: Potential Release Locations^a





	ast Building Use	Status	Closure Report Title/Date NFA Letter Agency/Date	Notes	Navy Sale Parcel	ECP Category
iation Paint Area		Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	The facility is identified as a former dope and spray shop, an auto vehicle maintenance shop, and an aviation paint area. During the VSI conducted in support of this EBS an indoor paint area associated with a water wall paint spray booth was identified. Any overflows from the water wall paint spray booth operation are directed towards a sump, and any overflows from the sump are directed towards the sanitary sewer. In addition, an outdoor paint area was identified, and was reported to have used approximately 7 gallons of paint per day. Potential exists for wastes related to the paint activities to have been released to the environment via cracks in the concrete. Sampling investigation of the facility and the industrial use areas was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003.	=	m
ifice/Training actility	1	Inactive		Site identified as a former SRU at a photography laboratory (SRU 03B). Site is recommended for further evaluation for potential discharges of contarninants to the building drainage system. Discharges of contaminants could have occurred prior to installation of the SRU Discharges could have also occurred during the operation of the SRU based on operator error or failure in the integrity of the system. Sampling investigation was conducted in 2003 to assess whether releases of waste have occurred to the environment as a result of past operations at this facility. Based on the results, further evaluation is required.	=	>
ell/Pumphouse		Inactive		Facility has been demolished. A 280-gallon UST containing diesel fuel was identified on a drawing for Building 154 during research conducted in support of this EBS. No records of tank removal and site closure were available. Further evaluation is recommended to assess whether the tank is present and if releases of tank contents have occurred.	Ξ	2e
azardous aterial/ ammable Material orage/Aviation upport		Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	A trench drain surrounding the interior of this facility, which potentially drained outside the building, was identified during the 2002 VSI conducted in support of this EBS. The building is associated with a former magazine and hazardous/flammable storage. Paint staining was observed within and outside of the facility. Further evaluation of this facility was conducted in 2003. TPH was detected at concentrations below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003 and 4/24/2003.	=	m
ormer Bore ghting ange/Pistol ange		Inactive		This facility is a former bore sighting range/pistol range. Facility has been removed. No evidence of ordnance-related activities was identified during the 2002 VSI conducted in support of this EBS. However, an evaluation has not been conducted for the potential presence of lead or other metals in the soil from historic use of the range. Further evaluation is recommended to assess whether releases to the environment have occurred.	=	٨

e 4-1: Potential Release Loca

ECP Category 7		2	7	2	۲	
Navy Sale Parcel	=	Ξ	=	E	=	
Notes	Site is a former skeet range, utilized between 1943 and 1948, that was situated in the current location of the golf course. No evidence of ordnance was identified during the 2002 VSI conducted in support of this EBS. However, an evaluation has not been conducted for the potential presence of lead or other metals in the soil from historic use of the range. Further evaluation is recommended to assess whether releases have occurred.	The building was listed as Squadron Storehouse (1948 through 1950), Storehouse (1954), Squadron Electronics and Camera Shop (1958), Storage (Marine Corps) in 1973, and Storage Air/Ground in 1997. Based on past activities, releases may have occurred at the DRMO yard (RAD), former salvage yard, and former railroad spur near Building 246. Further evaluation has been recommended.	Aircraft touch-up painting identified in MCAS EI Toro survey report dated 10 May 1978. Evidence of debris disposal near IRP Site 7, NE of Building 295, near former well site AW-1, observed during inspections of 2001 and 2002. Further evaluation has been recommended.	Release(s) of waste may have occurred due to industrial activities conducted in this facility in the past, which may include electroplating processes, an abrasive blast unit, parts cleaning tank, vacublast portable recycling units, battery room, and assorted metal working furmaces. A historic drawing depicts several outfalls on the south portion of this facility to the now abandoned industrial waste system. This portion of the facility also contains two possible floor sumps. Further evaluation is recommended to assess whether a release of waste occurred at this facility as a result of industrial processes that occurred at this building.	telease(s) of waste may have occurred due to industrial activities, including lectroplating, conducted in this facility in the past. Historic drawing depicts several utfalls on the south portion of this facility to the now abandoned industrial waste ystem. Historic documents show degreasing and processing pits, sumps, and parts leaning tanks situated in the building. Electroplating usually involves a series rocessing including the use of solvents/degreasers to clean metal surfaces followed y a series of rinsing procedures. Seams in the concrete flooring at the south end of the building may have been pits associated with an electroplating process. Also, a mall shed on the outside of Building 297 contains a soil-filled pit with the remnants of plumbing system (that emerges from the facility). Further evaluation is south of industrial processes that occurred at this building. In March 1992, a mercury are nersonnal: no furthin the building, the spill was contained and cleaned up by as enversonnal: no further action was required at the soill area.	
Closure Report Title/Date NFA Letter Agency/Date						
Status	Inactive	Inactive	Inactive	Inactive	Inactive	
Past Building Use	Former Skeet Range	DRMO Yard	Maintenance Hangar	Aircraft Maintenance Hangar/Armory	Aircraft Maintenance Hangar	
Building Number/ Location	236	245/246	295	296	297	
PRL ID	PRL 236	PRL 245	PRL 295	PRL 296	PRL 297	

Table 4-1: Potential Release Locations^a

Table 4-1: Potential Release Locations^a

ECP							
Navy Sale Parcel (1	-	2	2	2	
Ploor drain outfall and corroded concrete around the floor drain in the former battery Floor drain outfall and corroded concrete around the floor drain in the former battery shop (northwest corner of the facility) were identified during the 2002 VSI conducted in support of this EBS. Additionally, it was noted that the hydraulic lifts within this facility may be leaking fluids and the facility contained a washrack. Further evaluation is recommended to assess whether releases of waste occurred to the environment a a result of past operations at this facility.		This facility contains a wash rack east of the building, sumps and hydraulic hoists, and a paint booth. Further evaluation of these areas was recommended.	Makeshift drain situated approximately 100 feet south of facility was identified during the 2002 VSIs conducted in support of this EBS. Drain was identified as a 5-foot by 5- foot by 3-foot pit lined with marsdon matting with bare soil on the bottom. A drainpipe releases to the pit from Building 310. Additionally, a metal pipe (situated west of Building 310) appears to drain a low/depressed area that drains the concrete apron. The outfall of this pipe is not known. A paint booth that contained floor drains is also located in this facility. Further evaluation is recommended.	Site identified as a former SRU at a photography laboratory (SRU 03). Site is recommended for further evaluation for potential discharges of contaminants to the building drainage system. Installation floor drains discharge into the samitary sewer and the abandoned Industrial Sewer System. Discharges sould have occurred prior to installation of the SRU. Discharges could have abserted prior to installation of the SRU. Discharges could have abserted prior to installation of the structured during the operation of the SRU. Discharges could have also occurred during the operation of the SRU based on operator error or failure in the integrity of the system. Records do not indicate that evaluation of this site has occurred. Site is recommended for further evaluation.	Ime hood and floor drain are situated in the southeast corner of the facility. The istrial process that would utilize the hood and associated floor drain is not known; efore, it is possible that waste was released to the sanitary sewer system. istrial processes suspected to have occurred at this facility include equipment ting, abrasive blast paint removal, chrome plating, and welding. Further uation is recommended.	valve situated in the mechanical room of this building appeared to be leaking draulic fluid during the 2002 VSI conducted in support of this EBS. This may be an flication that the hydraulic testing system (situated in the northwest portion of the sility) may still contain fluid. Activities known to have occurred at this facility include rome plating, degreasing, equipment cleaning activities, and a machine shop. sorted pits, sumps and an industrial sink associated with these activities are tential release locations. The floor drain release location for the shop (situated at southwest corner of facility) is unknown. Further evaluation is recommended	
Closure Report Title/Date NFA Letter Agency/Date							
Status	Inactive	Inactive	Inactive	Inactive	Inactive	Inactive	
Past Building Use	Ground Maintenance Equipment	GME	Vehicle Maintenance Facility	Vacant Photography Building	Maintenance Shop	CO2 Instruction/ Storage/Engine Test Cell	
Building Number/ Location	298	299	310	312	315	324	
PRL ID	PRL 298	PRL 299	PRL 310	PRL 312	PRL 315	PRL 324	
	Building Number/	Past Building Use	Status	Closure Report Title/Date NFA Letter Agency/Date	Notes	Navy Sale Parcel	ECP Category
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PRL 326	326	Hazardous Materials/Transfer Facility	Inactive		Facility may have contained an engine test cell. A former paint booth and sumps may have been located in this facility. Pits in center of each bay were identified as potential hydraulic lifts during the 2002 VSI conducted in support of this EBS (pits were not able to be accessed). Additionally, severely damaged asbestos pipe insulation is present in the center of the facility; abatement recommended prior to allowing access to facility. Further evaluation of the hydraulic pits recommended.	=	2
PRL 347 ^b	347	Exchange Food Service Warehouse	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11/03	Facility possibly contained hydraulic lifts. Sumps and trench drain were noted in the former auto hobby area during the VSI. Facility included a fuel dispensing area, exchange gas station, and garage facility (service bays). Sampling investigation was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is required per DTSC and EPA letters dated <i>4</i> /11/2003.	_	ñ
PRL 350 ^b	350	Unknown, Demolished	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Previous surveys identified former aboveground sewage effluent tanks and a transformer with staining. Potential releases from the ASTs may have impacted soils surrounding former ASTs associated pump house and associated pump house. This facility has been demolished. Further evaluation was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003.	=	m
PRL 359	359	MTIS Building	Inactive		Served as an engine preservation facility from the late 1940's through the early 1960's. Engine preservation activities were moved to another facility in the 1960's, and the building was used for storage of supplies from that time until base closure. As part of engine preservation of the building. Metal conduit lines, housed within four concrete trenches recessed into the flooring of the building. Sonnected the degreaser tanks to a UST located just outside the west wall of the building. Since the closure of the degreaser tanks to a degreaser tanks, the conduit lines have been removed. The facility contains degreaser tanks to a degreaser tanks, the conduit lines have been removed. The facility contains degreaser. Further evaluation has been recommended.	=	~
PRL 360	360	Storage Marine Air/Ground Organic Unit	Inactive		Building 360 was used to store government property. A release of fluid from switch equipment within Building 360 was observed during the VSIs conducted in April-May 2002. Based on the inventory of non-transformer PCB items it was determined that these switches contain small concentrations (less than 0.005 to 2.8 milligrams per liter [mg/l]) of PCBs. The release is confined to the concrete floor within the building; no exterior surfaces or soil are affected. Further evaluation has been recommended due possible PCB contamination.	E	2
PRL 368	368	Installations/ Environmental	Inactive		PRL 368 is a sewer dump station and is located adjacent to Building 368, on the site of a former wash rack (SWMU 110). Further evaluation has been recommended.	Ē	7

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Table 4-1: Potential Release Locations^a

L N B	uilding umber/ cation	Past Building Use	Status	Closure Report Title/Date NFA Letter Agency/Date	Notes	Navy Sale	ECP
369		Servmart	Inactive		Area was identified during the 2002 VSI conducted in support of this EBS. Wash area identified as an area where current maintenance crews empty and wash out street sweeping unit; rinse water flows directly into storm drain located near the southeast corner of the facility. Wash area has not been evaluated for potential releases. Further evaluation is recommended to assess whether releases have occurred.		Category 7
370		Public Works/Allied Trades/Metal Shops	Active		Flooring of machine and sheet metal shop is made of wood blocks. The flooring was noted to be saturated with cutting oil during the 2002 VSI conducted in support of this EBS. Although likely, it is not known if a concrete foundation is below the wooden blocks. Further evaluation is recommended to assess whether releases of waste have occurred to the environment through the flooring. A sump pump for the paint booth water curtain and the paint booth have been identified for this facility and will require further evaluation.	=	~
372		Airfield Operations/Control Tower	Active		A 1,000-gallon UST containing fuel oil was identified on an as-built drawing for Building 372 during research conducted in support of this EBS. No records of tank removal and site closure were available. Further evaluation is recommended to assess whether the tank is present and if releases of tank contents have occurred	_	Ze
374		Heating Plant and Conversion	Inactive		Stained concrete surrounding the floor drain and drainage pits was noted during the 2002 VSI conducted in support of this EBS. Staining could indicate that a release of wastes may have occurred to the sanitary sewer system. Further evaluation is recommended.	4	2
376		Fire Station Dispatch	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Release of fluid from generator observed during 2002 VSI. Release appeared to have impacted surface soils. Sampling investigation was conducted in 2003 to assess whether releases have occurred to the environment. TPH was detected at concentrations below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003.		2a
380		Standby Generator Building	Inactive		AST was identified as a 150-gallon tank containing diesel. The tank is associated with a generator. A release of petroleum products within the generator pit was observed during the 2002 VSI conducted in support of this EBS. Further evaluation is recommended to assess whether releases of petroleum products have occurred from the tank.		2e

	Building Number/		Cthree	Closure Report Title/Date NFA Letter	Notes	Navy Sale Parcel	ECP Category
11 10	386	Past building use Construction Equipment Maintenance Shop	Inactive		Outside hydraulic hoist contains a substantial amount of oil in the bottom of the pit. Hydraulic oil tank remains inside service bay. Petroleum hydrocarbons, nonchlorinated solvents and metals were detected above reporting limits in samples of the fluid. Floor drains and hydraulic hoists situated in east end of facility. Fume hood and floor drain situated in the west end of the facility, use of the fume hood nuknown, release of waste via the floor drains to the sanitary sewer possible. Further evaluation is recommended to assess whether releases of waste have occurred to the provincement as a result of past operations at this facility.	=	2
RL 388	888	Field Maintenance Shop	Inactive		No containment system was identified in the battery shop. A battery neutralizing pit is No containment system was identified in the battery shop. A battery neutralizing pit is located at the shop. Shop activities may have released acids to the sanitary sewer located at the shop. Shop activities may have released acids to the sanitary sewer system. Based on observations made during the 2002 VSIs, some sort of equipment testing may have been conducted at the west end of facility. Floor drains are situated the hoist area. A parts cleaning tank and an automotive paint spray booth were situated at this facility. A former medical dispensary was near Building 388 (demolished Building 333) that may be a concern for medical waste. Further evaluation is recommended to assess whether releases of waste have occurred to the provinciment as a result of past operations at this facility.	=	2
300 Str	390	Golf Cart Shop	Active		Floor was noted to be in poor condition in battery shop and the battery acid reutralizing pit during the 2002 VSIs conducted in support of this EBS. A paint spray booth, vehicle service bays, a hoist area floor drains, and sumps are also situated at this facility. Further evaluation is recommended to assess whether releases of waste have occurred to the environment as a result of past operations at this facility.	=	2
RL 392 ^b	392	Aircraft Ground Support Equipment Shop	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Battery shop and floor drain were observed within the building during the 2002 VSI Battery shop and floor drain were observed within the building during the 2002 VSI conducted in support of this EBS. Staining was noted around floor drain in the vehicle lift area (lift is an air lift system, not hydraulic, and should not be stained). Additional lift area (lift is an air lift system, not hydraulic, and should not be stained). Additional staining was noted in battery neutralizing pit. A parts dip tank is also situated in this facility. Sampling investigation was conducted in 2003 to assess whether releases of waste have occurred to the environment as a result of past operations at this facility. Contaminant concentrations identified was below action levels. No further action was recommended and concurred with by EPA per letter dated April 11, 2003 and by DTSC per letter dated April 24, 2003	=	m
RL 400	400	TACAN Building	Inactive		A 192-gallon UST containing gasoline was identified on an as-built drawing of an an inknown building. Based on the location, Building 400 is the only structure on the unknown building. No records of airfield that could possibly be the structure featured on the drawing. No records of tank removal and site closure were available. Further evaluation is recommended to assess whether the tank is present and if releases of tank contents have occurred.	-	2e



Table 4-1: Potential Release Locations^a

ECP	1	~	2	8	
Navy Sale Parcel	=	-	=		
Notes	VOCs identified in soil during water line excavation at the southeast corner of facility. Further action is required.	Site identified as a former SRU, which was operational until 1999 at the hospital/dental clinic (SRU 01). Possible release of hazardous wastes identified. Floor drains were identified throughout this facility and were succeptible to incidental releases of mercury. Medical equipment such as thermometers and dental procedures would have been the source of these releases. In addition, floor drains were situated in the facility darkrooms, as well as a sink with a biohazardous waste trap. The facility also contained several x-ray rooms and an analytical laboratory. Sampling investigation was conducted in 2003 to assess whether releases of waste have occurred to the environment as a result of past operations at this facility. Analytical results of the drain sample collected was compared with RCRA and California despinated hazardous waste designation. Copper, lead, and zinc exceeded California hazardous waste designations. Based on the results, further evaluation is required.	Drains at the bottom of pits release directly to soil outside the facility. Based on the industrial use of the facility, this indicates a potential for release of waste to the environment. Drains are situated in an area designated as an "Open Work Area." Further evaluation is recommended to assess whether releases of waste have occurred to the environment as a result of past operations at this facility.	Site identified as a former SRU at a photography laboratory (SRU 02). SRU was in operation until 1999. Site is recommended for further evaluation for potential discharges of contaminants to the building drainage system. Discharges of contaminants could have occurred prior to installation of the SRU based on operator error or failure have also occurred during the operation of the SRU based on operator error or failure in the integrity of the system. Sampling investigation was conducted in 2003. Contaminant concentrations fated 4/11/2003 and 4/24/2003.	A 1957 site drawing shows that Building 445 included two underground storage tanks and an oil/water separator, with associated piping. Test cell facility was replaced in 1973 with the construction of the facility at Building 447. Subsequent to 1973, Building 445 was used for hazardous and flammable material storage. Potential release locations include floor drains and sumps in former engine test cell. Further evaluation has been recommended.
Closure Report Title/Date NFA Letter Agency/Date				Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	
Status	Inactive	Inactive	Inactive	Inactive	nactive
Past Building Use	Aircraft and Fire Rescue Station	Medical and Dental Facility	Aviation Armament/Missile Maintenance Equipment Shop	Photography Lab/Academic Instruction/LTV Center	Vacant Test Cell/Hazardous and Flammable Storage
Building Number/ Location	435	439	442	443	445
PRL ID	PRL 435	PRL 439 b	PRL 442	PRL 443 ^b	PRL 445

ing Der/		Ctatue	Closure Report Title/Date NFA Letter Anenry/Date	Notes	Navy Sale Parcel	ECP Category
	Engine Test Cell	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Floor drains in former jet engine test cell. Sampling investigation of this facility was conducted in 2003. TPH was detected at concentrations below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003.	_	2a
	Dental Clinic	Inactive		Site identified as a former SRU at a photography laboratory in a dental clinic (SRU 03C). Site is recommended for further evaluation for potential discharges of contaminants to the building drainage system. Discharges of contaminants could have occurred prior to installation of the SRU. Discharges could have also occurred during the operation of the SRU Discharges could have also occurred during the operation of the SRU Discharges could have also occurred during the operation of the SRU based on operator error or failure in the integrity of the system. Records do not indicate that evaluation of this site has occurred. Site is recommended for further evaluation.	_	2
	Hazardous and Flammable Material Storage	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Sump is present in the building and staining was noted around floor drain during the VSI. Sampling investigation of this facility was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003.	=	e
	Engine Maintenance Shop	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Leaking equipment on the exterior of facility (possible air distribution/moving equipment) was noted during the 2002 VSI conducted in support of this EBS. A catch basin was noted at the southeast end of the building. Sampling investigation of this facility was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003.	=	m
	Storage Building Disbursing	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	A wash rack with drain to OWS was identified during the 2002 VSI conducted in support of this EBS. In addition, the concrete/asphalt area identified as a wash area adjacent to the facility was cracked. Sampling investigation of this facility was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is required per DTSC and EPA letters dated 4/11/2003.	_	m
	Maintenance Hangar	Inactive		Past operations may have included touch up painting of aircraft and aircraft washing. Stained asphalt and sumps are situated on the exterior asphalt situated outside the facility. Storm drains associated with aircraft parking area are situated adjacent to hazardous materials and hazardous waste storage areas. Any release of waste may have been discharged to the storm sewer system. Sampling investigation of this facility was conducted in 2003. Based on the results, further evaluation is required.	>	4
	Maintenance Hangar	Inactive		Facility was utilized for aircraft touch-up, painting, and cleaning. A drainage ditch and sump at the facility could have possibly received discharges from activities at the facility. Sampling investigation of this facility was conducted in 2003. Based on the results, further evaluation is required.	>	٢



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PRL ID	Building Number/ Location	Past Building Use	Status	Closure Report Title/Date NFA Letter Agencv/Date		Navy	
PRL 617/618	617/618	Aircraft Sound	Inactiva		Notes	Parcel	Category
		Abatement Facilities			Possible former wash rack identified during 2002 VSI conducted in support of this EBS; outfall from this facility is not known. Further evaluation is recommended to assess whether releases of waste have occurred to the environment as a result of past operations of this count.	=	2
PRL 626 ^b	626	Hobby Shop, Automotive	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	During the VSI, hydraulic lifts, parts dip tanks, service bays (one floor drain evaluated during RFA at SWMU 157), trench drain and drainage ditch, and a catch basin near vehicle wash area were observed. Sampling investigation of this facility was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is required per DTSC letter dated 4/11/2003, and EPA letters dated	_	R
PRL 632 ^b	632	Classified Materials Incinerator	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Possible release of contaminants to soils immediately adjacent to the facility. Waste Possible release of contaminants to soils immediately adjacent to the facility. Waste may have been released to the sanitary sewer via an on-site drain, which releases to sanitary sewer. Sampling investigation of this facility was conducted in 2003. Contaminant concentrations identified were below action levels. No further action is	_	e
PRL 634 ^b	634	Avionics Shop	Inactive		The original floor plans for this facility outline the areas for shops such as Cleaning and Preservation, Decanning, Machine, Metal, Engine, Cleaning, Sand Blasting, X-ray Room, Plating Shop, etc. A major renovation took place in the 1980s; however, the main activities continued. Floor drains and service sink drains were identified throughout the facility, as well as floor drains in the Cleaning and Plating Shop, and an SRU in the X-Ray Processing and Control Room. Sampling investination of this	=	4
PRL 636 ^b	836	Cryogenics Office	Closed	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Floor drains, service sinks, a photo lab/x-ray room, lead shop, and drainage trench, Floor drains, service sinks, a photo lab/x-ray room, lead shop, and drainage trench, were identified within the facility during the 2002 VSI conducted in support of this EBS. Specifically, the floor drains were associated with the Rubber Survival Gear Shop, Wash Rack, Work Room, and Loft. Service sink drains were located in the stains on the floor in the northeast corner near a floor drain. Additional investigations for this facility identified a former Lead Shop, which sat to the west of this facility, and conducted in 2003. Contaminant concentrations identified were blow and conducted in 2003. Contaminant concentrations identified were blow and conducted in 2003. Contaminant concentrations identified were blow and the floor in the contaminant concentrations identified were blow and conducted in 2003.	-	r.
'RL 643	643	Fixed Aircraft Start System	Inactive		No further action is required per DTSC and EPA letters dated 4/11/2003. Facility contained an engine test cell, sumps, and compressors.		

Report Title/Date NFA Letter
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Table 4-1: Potential Release Locations^a

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ECP ECP	Category	5	7	1	2			
Navy Sale	Parcel	=	=	=	_			_
	Notes	Sign in greenbelt area adjacent to the building indicates 'Contaminated Speedy Dry' is present.	Stained areas were noted within concrete berm and at certain locations surrounding concrete bermed area during 2002 VSI. Possible releases of fuel may have occurred due to fuel sampling activities conducted in the past. Further evaluation is as a result of past or previound the releases of waste have occurred to the environment	Oil was noted to be collecting in the bottom of the hydraulic hoist pits. Concrete corrosion within acid neutralizing pits was identified in former battery shop; acids may have been released to the sanitary sewer system. Further evaluation is recommended to assess whether releases of waste have occurred to the environment as a result of bast operations at this facility.	These facilities are situated in the southeast portion of the installation adjacent to the Agua Chinon Wash and north of Building 371. Facilities are similar to those identified by RFA sites 15, 16, 257, and 258 (northeast flight line), but have not yet been evaluated to assess if JP-5 has been released to the soil. No evidence of staining on concrete fueling pad or in the surrounding soils was noted during the VSI. Further	This building was utilized as a drop tank rinse facility.	Former wash rack area identified during 2002 VSI conducted in support of this EBS. The concrete pad was found to be in poor condition. Outfall from collection sump is unknown and no visible signs of an OWS were noted during the VSI. Wash rack has	not been evaluated for potential releases. Further evaluation is recommended. Drums of used absorbent material improperly labeled. Labels painted over, labeled empty, "labeled "unused," or not labeled at all. Drums are stored in an open/bermed area north of Quonset huts. In addition, Building 1601 utilized paint stripping machines. Further evaluation is recommended to determine the location of the equipment and if any release to the environment occurred
Closure Report Title/Date NFA Letter Agencv/Date	and former.							
Status		inactive	Inactive	Inactive	Inactive	nactive	nactive	lotive
Past Building Use	Warehouse	Depoint	Contract Refueler Facility	Vehicle Maintenance Facility	Aircraft Fueling Stations	Drop Tank Rinse Facility	Wash Rack	Public Works Storage
Building Number/ Location	745		747	800	886/887	923	1585	1601
PRL ID	PRL 745		PKL /4/	PRL 800	PRL 886/887	PRL 923	PRL 1585	² RL 1601

	Building Number/			Closure Report Title/Date NFA Letter	Notes	Navy Sale Parcel	ECP Category
	Location	Past Building Use	Status	Agency/Uate	a confirmatory sampling program was	-	3
PRL Pesticide Nc Mixing Area – Qu Bordier's Nursery ^b	orthwest uadrant	The land has been leased from the government since 1976, and is currently leased to Bordier's Nursery. Present and past activities of concern include pesticide/ herbicide mixing and minor maintenance of and current	Closed		To evaluate baseline pesticide concentrations ampling in 2002. Sample conducted in 1994 followed by a baseline verification sampling in 2002. Sample conducted in 1994 followed by a baseline variant concentrations below action levels, results from 1994 and 2002 indicated contaminant concentrations below actional with the exception of one sample (2002) at the pesticide mixing area. Additional sampling was conducted during 2003 to delineate the extent in this area. Based on these results, no further action is required in the pesticide mixing area of Bordier's Nursery.		
		equipment.			in the potential for a release of	III	7
PRL Railroads 0	Southwest Quadrant	Railroads Spurs at the South end of the Station	Inactive		The railroad spurs have been identified as an incoord of the railroad hazardous substances during loading and unloading operations. Additionally, railroad hazardous substances during loading and herbicides are applied along railroad ties are typically treated with creosote and herbicides are applied along railroad grades for weed control; therefore, these substances may be present in the soils.		
					Future interconductor may have heen applied as dust control agents	-	3/7
PRL Runway Infield Area	Northwest Quadrant	Station's Runways	Inactive	Draft EBS 2/7/03 DTSC/EPA 4/11&24/03	Because waste petroleum products may nave use uptrover, and taxiways, this LOC was along the unpaved shoulders of the installations runways and taxiways, this LOC was recommended for further evaluation. Based on the review of available documentation, including similar activities of other DoD installations, and in concurrence with the including similar activities of other DoD installations, and in concurrence with the recommended for further evaluation. Based on the review of available documentation, including similar activities of other DoD installations, and in concurrence with the regulatory agencies, sampling along the edges of concrete runways was conducted regulatory agencies, sampling along the edges of concrete runways where runway evaluated. Samilarly, impacts under the existing concrete runways where also evaluated. Sample results identified contaminant concentrations below action levels with the exception of one sample at the northern end of the runway. Further investigation is required in this area and is denoted as ECP Category 7. The remaining portion of the runway is denoted as ECP Category 3.		•
		IDD Cite 7 I Init 1	Inactive		There is a possible disposal area near Building 435 and Taxiway 4 with surface debris		
IRP Site 7 Unit 1 North Pavement	Southwest Quadrant	North Pavement Edge			and unknown buried debris.		

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Table 4-1: Potential Release Locations^a

PRL ID	Building Number/ Location	Past Buildinn Llse	States	Closure Report Title/Date NFA Letter	Motor	Navy Sale	ECP
2	FOODIN	Den Rimminn ten	colatos	Ageirginate	INDIES	Farcer	Caledo

+3, and 45/, which were designated as 5KU LUCS and 0, 133, 312, 438, 44 required further evaluation as a PRL.

^b Appendix E presents the Sampling and Analysis Results/Risk Screening for PRLs where sampling investigation was conducted during 2003.

= asbestos-containing material ACM

- area of concern 11 п AOC
- aboveground storage tank Defense Reutilization and Marketing Office n DRMO
- Department of Toxic Substances Control R DTSC
 - environmental baseline survey п
 - Environmental Condition of Property 11
 - installation restoration program jet propulsion fuel 11 ECP IRP
 - 11 11 JP
- lead-based paint LOC
- location of concern 11
- Marine Corps Air Station 11 MCAS
- milligrams per kilogram 11
- nuclear, biological, and chemical 11 mg/kg NBC
- no further action n.
- Orange County Health Care Agency 11 NFA OCHCA OWS
 - oil/water separator ш PCB
 - polychlorinated biphenyl ш
 - parts per million 11 bpm
- potential release location U PRL
- **RCRA Facility Assessment** ii RFA
- Regional Water Quality Control Board 11 RWQCB
 - silver recovery unit 11 SRU
 - 11 SWMU
 - solid waste management unit Tactical Air Navigation 11 TACAN
- total residual petroleum hydrocarbons 11
 - underground storage tank 11
 - n VOC VSI Y&D
- volatile organic compounds visual site inspection yards and docks n
 - 11



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Table 4-2: RCRA Facility Assessment Sites^{a,b}

ECP Category	-	-	e	ĸ	2a	ø	-	-
Notes	No evidence of the Former Scrap Metal Yard was identified during the visual inspection of the area conducted in support of this EBS. Additionally, site visits conducted as part of the RFA and the 1995 EBS found no evidence of this facility. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained.	No evidence of this former solid waste disposal area was identified during a visual inspection of this area conducted May 2002 in support of this EBS, and only storage of wastes were identified during a 1991 site visit conducted as part of the RFA. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	No analytes were detected above action levels during RFA sampling visit. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Soils were excavated and removed in 1997. Regulatory agency concurrence with NFA recommendation has been obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	To be addressed in the compliance program. Site lies within the boundaries of IRP Site 3. Response actions required; however, response actions have not yet been implemented.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.
Navy Sale Parcel	=	=	≡	≡	≡	=		=
Closure Report Title/Date NFA Letter Agency/Date	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	DTSC 11/24/1998	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996		Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996
Status	NFA	NFA	NFA	NFA	NFA	FA	NFA	NFA
Facility Description	Former Scrap Metal Yard	Vegetation Piles	Landfarming Site	Transformer Storage Area	Fuel Bladder	Abandoned well 24- 4274	Active Sanitary Sewer Lines	Drop Tank Storage Area
Building No./ Location	Near golf course	Near golf course	Northwest Bee Canyon Wash	East of Bee Canyon Wash	East of Agua Chinon Wash	385	Stationwide	114 and 115
RFA ID	RFA 1	RFA 2	RFA 6	RFA 7	RFA 9	RFA 10	RFA 12	RFA 13

RFA 41 127	RFA 41 127	Ē	RFA 40 197				RFA 15 576	RFA ID Building N Location
Drum Storage Area		Urum Storage Area	< 90-Day Accumulation	Fuel Spill Site	Wash Water Runoff Site associated with Aircraft Fueling Station	vvasn vvater Kunoff Site associated with Aircraft Fueling Station	Area	Io./ Facility Description
FA	NFA	NFA	NFA	NFA	NFA	NFA	NFA	Status
	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	RWQCB 3/31/2000	Closure Report Title/Date NFA Letter Agency/Date
<	=	=	≡	-	=		<	Navy Sale Parcel
Open drums and stained soil were identified during additional evaluation following RFA conducted in 2002. Based on an April 11, 2003 DTSC review of photocraphe	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Not located during RFA; no releases identified. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Regulatory agency concurrence with NFA recommendation has been obtained. No further action required.	Notes
7	3	-	1	2a	ω	ω	2a	ECP Category

ECP Category	-	e	÷	e	9	-	Q	ø
Notes	Not located during RFA: no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	TRPH was identified during RFA sampling visit. Regulatory agency concurrence with NFA recommendation has been obtained. No further action required.	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Site is situated within the investigation boundary of IRP Site 7, Unit 1 (North Pavement Edge). Regulatory agency concurrence with NFA recommendation has been obtained. No further action required.	To be addressed in the compliance program. Site lies within the boundaries of IRP Site 7, Unit 3 (new East Pavement Edge), but will not be addressed under the IRP. Further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. To be evaluated with TAA 297 based on DTSC comments dated 11/5/2002.	Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. To be evaluated with TAA 297 based on DTSC comments dated 11/5/2002.
Navy Sale Parcel	=	-	-	=	=	E	E	=
Closure Report Title/Date NFA Letter Agency/Date		DTSC 8/10/1999		DTSC 1/27/2000		Final RCRA Facility Assessment (RFA) Report 7/1993 DTSC 7/23/96		
Status	NFA	NFA	NFA	NFA	FA	NFA	FA	FA
Facility Description	Drum Storage Area	Vehicle Maintenance and Parking/DRMO	Drum Storage Area	< 90-Day Accumulation Area	90-Day Accumulation Area	Aircraft Wash Area	Drum Storage Area	Drum Storage Area
Building No./ Location	143	163	262	295	296	297	297	297
RFA ID	RFA 44	RFA 46	RFA 69	RFA 71	RFA 72	RFA 74	RFA 78	RFA 79

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	ECP Category	Q	ω	ю	4	2	3	3	÷
	Notes	Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. To be evaluated with TAA 297 based on DTSC comments dated 11/5/2002.	Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. To be evaluated with TAA 297 based on DTSC comments dated 11/5/2002.	Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. To be evaluated with TAA 297 based on DTSC comments dated 11/5/2002.	Contaminated soils were excavated and removed from the storage area.	Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. Stained drums and product dispensing from a horizontal tank was identified during additional evaluation following RFA conducted in 2002. Based on DTSC review, further evaluation is required.	Site is situated within the investigation boundary of IRP Site 21.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.
	Navy Sale Parcel	3	=	=	=	=	=	Ξ	=
Closure Report	Title/Date NFA Letter Agency/Date				DTSC 4/23/2002		DTSC 10/07/1999	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	DTSC 11/05/2002
	Status	FA	FA	FA	NFA	FA	NFA	NFA	NFA
	Facility Description	Drum Storage Area	Drum Storage Area	Drum Storage Area	PCB Storage Area	Drum Storage Area	< 90-Day Accumulation Point	Engine Test Cell	Former hazardous/ flammable materials (oxygen) storage area (Building 343 was demolished in 1986)
	Building No./ Location	297	297	297	306	306	320	324	343
	RFA ID	RFA 80	RFA 81	RFA 82	RFA 88	RFA 89	RFA 94	RFA 95	RFA 96



Sites ^{a,b}
Assessment
Facility
I-2: RCRA
Table 4

ECP Category	-	e	-	ũ	2	£	9	e	m
Notes	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Regulatory agency concurrence with NFA recommendation for RFA site. However, NFA concurrence pending radiological survey per DTSC letter dated 25 August 1999.	Regulatory agency concurrence with NFA recommendation. However, NFA concurrence pending radiological survey per DTSC letter dated 25 August 1999.	Regulatory agency concurrence with NFA recommendation. However, NFA concurrence pending radiological survey per DTSC letter dated 25 August 1999.	Further action required per DTSC. RWQCB concurred with NFA on 6 November 2000.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. Wash rack was demolished and moved during the removal of the adjacent tanks, UST 762B and OWS 762A, that were closed by OCHCA. No further action required.	No analytes were detected above action levels during RFA sampling visit. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.
Navy Sale Parcel	=	=	=	=	≡	=	E	=	=
Closure Report Title/Date NFA Letter Agency/Date	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	DTSC 8/25/1999	DTSC 8/25/1999	DTSC 8/25/1999		Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996 OCHCA 7/2/97	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96
Status	NFA	NFA	NFA	FA	FA	FA	FA	NFA	NFA
Eacility Description	Vehicle Wash Rack	TCE Degreaser	Drum Storage Area	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	Vehicle Wash Rack	Vehicle Wash Rack	< 90-Day Accumulation Point
Building No./	359	359	359	360	360	360	386	390	415
	RFA 98	RFA 100	RFA 103	RFA 104	RFA 105	RFA 106	RFA 110	RFA 120	RFA 125

ECP	1	4	-	-	-	-	-	-	2a
Notes	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Near surface soils were removed in 1997. All required response actions have been completed. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Not located during RFA; no releases identified. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Site is situated within investigation area for IRP Site 20. Field work completed in 1998 and regulatory agency concurrence obtained. No further action required.
Navy Sale Parcel	Ξ	=	=	=	=	=	>	>	-
Closure Report Title/Date NFA Letter Agency/Date	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	DTSC 7/19/1999	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	RWQCB 3/31/2000
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA
Facility Description	Storage Area	Engine Test Cell	< 90-Day Accumulation Point	Aircraft Wash Area	Aircraft Wash Area	Drum Storage Area	Aircraft Wash Area	Aircraft Wash Area	Vehicle Wash Rack
Building No./ Location	445	447	454	461 (on tarmac)	463/845	463	605 (on tarmac)	606 (on tarmac)	626
RFA ID	RFA 128	RFA 131	RFA 134	RFA 136	RFA 141	RFA 142	RFA 150	RFA 152	RFA 157

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ECP Category	ε - F		v				÷	2
Notes	NFA status identified in Final RFA Report (JEG 1993) an regulatory concurrence obtained. No further action required. Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Not located during RFA; no releases identified. Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Photograph of drum storage areas were taken during a site visit by the DHS on October 29, 1980. Stained drums identified during additional evaluation following RFA conducted in 2002. Based on DTSC review, further evaluation is recommended.
Navy Sale Parcel	-	Ξ	=	=	=	=	=	=
Closure Report Title/Date NFA Letter Agency/Date	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA	FA
Facility Description	Vehicle Wash Rack Drum Storage Area Vehicle Wash Rack		Vehicle Wash Rack	Landfarming Area	Drum Storage Area	Drum Storage Area	Drum Storage Area	Drum Storage Area
Building No./ Location	651	655	673	673	673	673	673	673
RFAID	RFA 164	RFA 170	RFA 178	RFA 181	RFA 182	RFA 183	RFA 184	RFA 185

ECP Category	-	a	3	ω	-	4	-	F
Notes	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Inactive washrack. Final RFA Report recommended repair of cracks in wash rack surface based on sampling visit (JEG 1993). No analytes were detected above action levels. Repairs were completed in 1998. Awaiting DTSC concurrence.	Final RFA Report recommended repair of cracks in wash rack surface based on sampling visit (JEG 1993). Repairs were completed in 1998. No further action required.	Inactive washrack. Final RFA Report recommended repair of cracks in wash rack surface based on sampling visit (JEG 1993). Soil samples were collected at the wash rack and adjacent tank sites, UST 761B and OWS 761A, in 2002. Further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Final RFA Report recommended repair of cracks in wash rack surface based on sampling visit (JEG 1993). Additional soil samples were collected in 2002. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.
Navy Sale Parcel	Ξ	=		=	=	=		-
Closure Report Title/Date NFA Letter Agency/Date	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	RWQCB 10/5/2000	RWQCB 1/17/2001 DTSC 8/22/2000		Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	DTSC 3/03/2003	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93DTSC 7/23/96
Status	NFA	FA	NFA	FA	NFA	NFA	NFA	NFA
Facility Description	Vehicle Wash Rack	Vehicle Wash Rack	Vehicle Wash Rack	Vehicle Wash Rack	Vehicle Wash Rack	Vehicle Wash Rack	Vehicle Wash Rack	Vehicle Wash Rack
Building No./ Location	758	759	760	761	763	764	765	766
RFA ID	RFA 195	RFA 198	RFA 201	RFA 204	RFA 210	RFA 213	RFA 216	RFA 219

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ECP Category	-	-	e	4	-	-	-	÷
Notes	Not located during RFA; no releases identified. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required. Not located during RFA; no releases identified. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required. NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.		Removal of impacted soils was completed in 1997. All required response actions have been completed. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	required response actions have been completed. required response actions have been completed. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required. NFA status identified in Final RFA Report (JEG 1993) an regulatory concurrence obtained. No further action required.		NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. Site closed with RWQCB concurrence of NFA status for confirmation sampling. No further action required.	
Navy Sale Parcel	=	=	=	=	=	_	=	=
Closure Report Title/Date NFA Letter Agency/Date	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 RWQCB 7/22/99 DTSC 7/23/1996	DTSC 12/17/1998	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 RWQCB 9/28/2000 DTSC 7/23/1996
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA
Facility Description	< 90-Day Accumulation Point	< 90-Day Accumulation Point	Wash Rack	PCB Spill Area Near Building 457	Golf Course	Golf Course Irrigation Pipeline	Irrigation Pipeline	Wash Rack
Building No./ Location	1700	1727	96	457	464	459	Southwest and Southeast portions of installation	317
RFAID	RFA 237	RFA 238	RFA 243	RFA 244	RFA 245	RFA 246	RFA 247	RFA 253

ECP Category	÷	÷	2a	-	-	2a	æ	2b	+
Notes	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Sampling conducted during removal of adjacent UST 240B and OWS 240C. Site closed and regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.
Navy Sale Parcel	=	=	=	=	=	>	=	=	=
Closure Report Title/Date NFA Letter Agency/Date	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	RWQCB 2/04/1999	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/1996	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA
Facility Description	Wash Water Runoff Site associated with Aircraft Fueling Station	Wash Water Runoff Site associated with Aircraft Fueling Station	Former Aboveground Storage Tank near Building 673	Fuel Storage Area	DRMO Storage Yard No. 3	Drop Tank Fuel Storage Area	Vehicle Wash Rack	Wash Rack	Stockpiled Soil
Building No./ Location	575	577	389	390	DRMO Lot No. 3	605	240	817	31
RFA ID	RFA 257	RFA 258	RFA 260	RFA 262	RFA 264	RFA 267	RFA 268	RFA 270	RFA 274



Sites ^{a,b}
Assessment
Facility
2: RCRA
Table 4-

ECP Category	ю	÷	7	F	F	F	÷	F	F
Notes	Also known as OWS 96; closed in place and regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.	Site is inactive NFA status identified in Final RFA Report (JEG 1993) and regulatory concurrence obtained. No further action required.
Navy Sale Parcel	E	=	=	Ξ	=	=	=	-	-
Closure Report Title/Date NFA Letter Agency/Date	RWQCB 7/22/1999 DTSC 7/23/96	Final RCRA Facility Assessment (RFA) Report 7/93 DTSC 7/23/96							
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA
Facility Description	Oil/Water Separator	Cleaning Tank	Former Asphalt Pavement Plant	Wash Rack	Mark Arrest System	Mark Arrest system	Trenches Inside Building 359	Septic Tank	Septic Tank
Building No./ Location	96	130	Northeast of golf course	800	East side of Runway 34R	West side of Runway 34R	359	601	687
RFA ID	RFA 291	RFA 293	RFA 297	RFA 299	RFA 301	RFA 302	RFA 304	RFA 305	RFA 306

Sites ^{a,b}	
Assessment	
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4-2:	
Table	

 Building No./ Location
Building No./ Location

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The RFA initially identified 305 SWMU/AOCs, of which 3 were located at MCAS Tustin, 15 were duplicates, and 4 were phantom sites. Of the remaining 283, 8 were addressed in the IRP; 1 addressed as PCB LOC; 76 addressed as UST LOCs; 30 addressed as OWS LOCs; 66 addressed as TAA LOCs, and; 102 addressed as RFA LOCs (of these 102, 9 were deleted as phantom or non-existent during 2002, with a remaining total of 93 RFA LOCs).

- less than н v
- 11 BCT DHS DTSC DTSC EEBS ECP FA IRP NFA PCB
- BRAC Cleanup Team Department of Health Services n.
- Defense Reutilization and Marketing Office п
 - Department of Toxic Substances Control environmental baseline survey Environmental Condition of Property 11
 - 11
- 11
 - further action ш
- Installation Restoration Program 11
 - 11
 - no further action polychlorinated biphenyl
 - u
- parts per million
- 11
- preliminary remediation goal RCRA Facility Assessment Regional Water Quality Control Board 11 ppm PRG RFA RWQCB TPH
 - 11
 - total petroleum hydrocarbon н



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Accumulation	
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ECP Category	ω	R	Ω.	Ω	Э	3	5	7	Ŋ
Notes	No evidence of a release was observed during the 2002 VSI conducted in support of this EBS. A site inspection conducted as part of the RFA Addendum found the parking apron in excellent condition, and found no visible staining. This resulted in an NFA recommendation. Awaiting regulatory agency concurrence.	SWMU/AOC 25. No visible signs of a release were noted during the 2002 VSI conducted in support of this EBS. Visual inspections were also conducted as part of the RFA and RFA Addendum and found no evidence of a release and the surrounding concrete pad in excellent condition.	SWMU/AOC 26. Stained soils was identified at this site during a site visit conducted in support of the RFA. Subsequent soil sampling identified TPH in the soils at levels below residential PRGs. As a result, the removal of contaminated soils has been recommended but not yet implemented. Further action required.	Sampling results exceed residential PRGs. No visible signs of release noted during 2002 VSI conducted in support of this EBS. DTSC recommended further evaluation in letter dated 11 March 2003.	No visible signs of release noted during 2002 VSI conducted in support of this EBS. DTSC concurred with NFA recommendation.	SWMU/AOC 27. Sampling results exceed residential PRGs. No visible signs of release noted during 2002 VSI conducted in support of this EBS. No further action required.	No evidence of a release during numerous site visits by Navy and contract personnel. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 272. Sampling results below residential PRGs. No visible signs of release noted during 2002 VSI conducted in support of this EBS. Awaiting regulatory agency concurrence.	Sampling results below residential PRGs. No visible signs of release noted during 2002 VSI conducted in support of this EBS. Additional sampling conducted.
Navy Sale Parcel	_	_	_	_	-	-	-	Ξ	=
Closure Report Title/Date NFA Letter Agency/Date		Summary Report, TAA 5A 7/17/2002 DTSC 3/04/2003			Summary Report, TAA 7B 7/17/2002 DTSC 3/04/2003	Closure Report, TAA 10 11/07/2002 DTSC 3/04/2003			
Status	FA	NFA	FA	FA	NFA	NFA	FA	FA	FA
Facility Description	< 90-Day Accumulation Point/Hazardous Materials Storage	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point
Building No./ Location	2	υ	n	2	7	10	22	31	31
TAA ID	TAA 2	TAA SA	TAA 5B	TAA 7	TAA 7B	TAA 10	TAA 22	TAA 31A	TAA 31B



ECP Category	of 6	e	ى م	9	9	site 6	ed.	o N	σ	9
Notes	SWMU/AOC 33. Stained soils and sampling show presence TPH. Soil removal recommended. Site is under investigation. Further action required.	Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SVMU/AOC 39. Sampling results below residential PRGs. N visible signs of release noted during 2002 VSI conducted in support of this EBS. NFA recommended based on RFA sampling results and the 2002 VSI.	SWMU/AOC 294. No evidence of a release during numerous site visits, by Navy and contract personnel. Soil sampling to t conducted.	SWMU/AOC 295. No evidence of a release during numerous site visits, by Navy and contract personnel. Soil sampling to t conducted.	SWMU/AOC 42. No evidence of a release during numerous s visits, by Navy and contract personnel. Soil sampling to be conducted.	SWMU/AOC 240. No evidence of a release during numerous site visits, by Navy and contract personnel. NFA recommend-	SWMU/AOC 241. Sampling results below residential PRGs. I visible signs of release noted during 2002 VSI conducted in support of this EBS. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 45. Sampling results below residential PRGs. N visible signs of release noted during 2002 VSI conducted in support of this EBS. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 64. Closure report prepared 12 November 1999 recommending NFA; awaiting regulatory concurrence.
Navy Sale Parcel	-	-	=	=	=	=		=	=	=
Closure Report Title/Date NFA Letter Agency/Date		Closure Report, TAA 77 12/23/1998 DTSC 03/09/1999								
Status	FA	NFA	FA	FA	FA	FA	FA	FA	FA	FA
Facility Description	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point
Building No./ Location	51	11	115/914	130	130	130	155	155	155	240
TAA ID	TAA 51	TAA 77	TAA 115	TAA 130A	TAA 130B	TAA 130C	TAA 155A	TAA 155B	TAA 155C	TAA 240



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ECP Category	ø	g	e	3	e	e	7	9	9	9	9
Notes	SWMU/AOC 70. Sampling results indicate concentrations of contaminants between residential and industrial PRGs, additional human health risk analysis recommended based on future land use. Site is under investigation. Further action required.	SWMU/AOC 73. Sampling results identified contaminants in soil up to 5 feet below ground surface; soil removal recommended. Site closure report submitted in March 2002. Site has been expanded.	SWMU/AOC 88. Possible PCB-contaminated soils, site remediation recommended.	Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SWMU/AOC 269. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SWMU/AOC 99. Sampling results below residential PRGs. No further action required.	No evidence of a release during numerous site visits. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 107. Sampling results below residential PRGs. Further sampling recommended.	SWMU/AOC 242. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 116. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 251. No evidence of a release during numerous site visits, by Navy and contract personnel. NFA recommended. Awaiting regulatory agency concurrence.
Navy Sale Parcel	_	=	=	=	=	=	=	=	=	=	=
Closure Report Title/Date NFA Letter Agency/Date			Closure Report, Solid Waste Management Unit (SWMU) 88 5/21/2001 DTSC 04/23/2002	Closure Report, TAA 307 3/29/2001 DTSC 07/17/2001	Closure Report, TAA 314 12/23/1998 DTSC 03/16/1999	Closure Report, TAA 359B 2/21/2000 DTSC 10/30/2002					
Status	FA	FA	NFA	NFA	NFA	NFA	FA	FA	FA	FA	FA
Facility Description	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	Fuel Storage Locker	< 90-Day Accumulation Point	< 90-Day Accumulation Point (Hazardous Material Storage)	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point
Building No./ Location	289	297	306	307	314	359	370	371	371/915	388	388
TAA ID	TAA 289	TAA 297	TAA 306	TAA 307	TAA 314	TAA 359B	TAA 370	TAA 371A	TAA 371B	TAA 388A	TAA 388B

ECP Category	£	£	ß	3	3	e	Q	9	9	8	9	9
Notes	SWMU/AOC 119. Site closure and regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SWMU/AOC 259. Site closure and regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SWMU/AOC 122. Site closure and regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SWMU/AOC 261. Site closure and regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SWMU/AOC 124. Sampling results detected contaminants in soils below action levels. No further action required.	SWMU/AOC 271. Sampling results detected contaminants in soils below action levels. No further action required.	SWMU/AOC 256. Sampling results indicated concentrations of contaminants between residential and industrial PRGs. Soil removal recommended. Site is under investigation. Further action required.	SWMU/AOC 138. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 140. No evidence of a release during numerous site visits. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 144. Closure report prepared 17 March 2000 recommended NFA and regulatory concurrence obtained.	SWMU/AOC 149. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 255. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.
Navy Sale Parcel	=	=	=	-	=	=	-	=	=	=	>	>
Closure Report Title/Date NFA Letter Agency/Date	Final Closure Report, TAA 389A and 389B 9/17/1999 DTSC 11/24/1999	Final Closure Report, TAA 389A and 389B 9/17/1999 DTSC 11/24/1999	Closure Report, TAA 390A and 390B 4/30/1999 DTSC 06/10/1999	Closure Report, TAA 390A and 390B 4/30/1999 DTSC 06/10/1999	Closure Report, TAA 392A and 392B 2/27/2001 DTSC 03/10/2003	Closure Report, TAA 392A and 392B 2/27/2001 DTSC 03/10/2003				Final Closure Report, TAA 529 3/17/2002 DTSC 10/17/2002		
Status	NFA	NFA	NFA	NFA	NFA	NFA	FA	FA	FA	NFA	FA	FA
Facility Description	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point
Building No./ Location	389	389	390	390	392	392	441	461/916	462/917	529	605/912	606/913
TAA ID	TAA 389A	TAA 389B	TAA 390A	TAA 390B	TAA 392A	TAA 392B	TAA 441	TAA 461	TAA 462	TAA 529	TAA 605	TAA 606



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ECP Category	e	7	9	9	9	2	9	9	9	7	2	3
Notes	SWMU/AOC 158. Summary report prepared 15 August 2001 recommended NFA and regulatory concurrence obtained.	NA	SWMU/AOC 160. Sampling results below residential PRGs; however, additional site characterization was recommended. Further investigation required.	SWMU/AOC 155. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	Former accumulation area on asphalt-paved area adjacent to Building 651.	SWMU/AOC 171. Soil sampling identified contaminants in shallow soils above residential PRGs. Soil management recommended. Site is under investigation. Further action required.	SWMU/AOC 172. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 177. No evidence of a release during numerous site visits. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 186. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	Concrete pad is in excellent condition, and no stains or evidence of a release were visible during the 2002 VSI conducted in support of this EBS. Further sampling conducted in 2003.	Concrete pad is in excellent condition, and no stains or evidence of a release were visible during the 2002 VSI conducted in support of this EBS. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 236. Investigated in association with IRP Site 6. No further action required.
Navy Sale Parcel	-	=	=	_	-	=	=	=	-	=	_	=
Closure Report Title/Date NFA Letter Agency/Date	Summary Report, TAA 626 8/15/2001 DTSC 08/20/2001											Summary Report, Former TAA 761, SWMU 236 9/20/2002 DTSC 03/10/2003
Status	NFA	FA	FA	FA	FA	FA	FA	FA	FA	FA	FA	NFA
Facility Description	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point
Building No./ Location	626	634	636	651	651	658	671	672	673	698	744	761
TAA ID	TAA 626	TAA 634	TAA 636	TAA 651A	TAA 651B	TAA 658	TAA 671	TAA 672	TAA 673	TAA 698	TAA 744	TAA 761

ECP Category	3	9	9	9	ω	3	9	9	9	2
Notes	SWMU/AOC 266. Site closure and regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	SWMU/AOC 222. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 223. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 224. Closure report prepared 10 December 1999 recommending NFA. Awaiting regulatory agency concurrence.	SWMU/AOC 225. Soil sampling identified contaminants between residential and industrial PRGs. Soil management recommended. Site is under investigation. Further action required.	SWMU/AOC 226. Regulatory agency concurrence of NFA recommendation has been received. No further action required.	SWMU/AOC 227. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 229. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	SWMU/AOC 234. Sampling results below residential PRGs. NFA recommended. Awaiting regulatory agency concurrence.	Site not identified as part of RFA or RFA addendum. Activities at this facility are largely unknown. Closure report submitted to DTSC in January 2003.
Navy Sale Parcel	Ξ	=	Ξ	H	=	=	-	=	=	=
Closure Report Title/Date NFA Letter Agency/Date	Closure Report, TAA 765 10/15/1998 DTSC 11/17/1998					Closure Report, TAA 778 3/21/2001 DTSC 10/17/2002				
Status	NFA	FA	FA	FA	FA	NFA	FA	FA	FA	FA
Facility Description	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point	< 90-Day Accumulation Point
Building No./ Location	765	769	027	171	772	778	627	800	856	006
TAA ID	TAA 765	TAA 769	TAA 770	TAA 771	TAA 772	TAA 778	TAA 779	TAA 800	TAA 856	TAA 900



TAA ID	Building	g No./ Facility Description	Status	Closure Report Title/Date NFA Letter Agency/Date	Navy Sale Parcel	Notes	ECP Category
Note: ^a All 6	64 TAA si	ites listed in Table 4-3 are previously ide	intified TAA L	OCs. Sites noted with a SWMU	AOC designation were or	riginally identified during the RFA and were subs	sequently
cate	egorized a	as a TAA LOC.					
v	= les	ss than					
AOC	= Are	ea of Concern					
DON	= De	spartment of the Navy					
DTSC	= De	spartment of Toxic Substances Control					
EBS	= env	vironmental baseline survey					
ECP	= En	ivironmental Condition of Property					
FA	= furt	ther action					
LOC	= Loc	cation of Concern					
NFA	= 00	further action					
PCB	= pol	lychlorinated biphenyl					
PRG	= pre	eliminary remediation goal					
RFA	= RO	CRA Facility Assessment					
SWMU	= So	id Waste Management Unit					
TAA	= Ter	mporary Accumulation Area					
HdT	= tot	al petroleum hydrocarbons					
NSI	= visi	ual site inspection					



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Type of Anomaly	Stains and Wet Soil
Building No./Location	ink Farm No. 3

ECP Category	m	-	-	÷	-	ю
Notes	The review of historical documents and maps and site inspections, including the VSI conducted as part of this EBS, were conducted as part of this site evaluation. Soil sampling results obtained during the removal of Tank Farm 3 were also analyzed, and sampling results for TPH were found to be below residential PRGs. As a result, regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	The area formerly used as an open drum storage area is now a concrete parking lot. No evidence of a release of wastes was identified during 2002 VSI conducted in support of this EBS. A visual inspection of the site conducted by the Navy in 1999 found no evidence of a release and resulted in an NFA recommendation Regulatory agency concurrence of NFA recommendation has been obtained through a site closure letter. No further action required.	No evidence of a release identified during 2002 VSI conducted in support of this EBS. A visual inspection of the site conducted by the Navy in 1999 found no evidence of a release. Based on the site visit and a review of historical documents, the Navy recommended this site for NFA. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Military family housing area. No evidence of a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Site identified within boundaries of IRP Site 24. No evidence of a release identified during 2002 VSI conducted in support of this EBS.
Navy Sale Parcel	_	>	>	>	-	Ξ
Closure Report Title/Date NFA Letter Agency/Date	Summary Report, APHO 1 1/27/2000 DTSC 07/06/2000	Summary Report, APHO 2 8/3/1999 DTSC 08/19/1999 EPA 10/06/1999	Summary Report, APHO 3 8/7/1999 DTSC 08/30/1999 EPA 10/06/1999	Summary Report, APHO 4 7/28/1999 RWQCB 10/06/1999 DTSC 08/16/1999 EPA 10/06/1999	Summary Report, APHO 5 6/21/1999 DTSC 07/21/1999 EPA 10/06/1999	Summary Report, APHO 6 3/19/2002 DTSC 11/12/2002
Status	NFA	NFA	NFA	NFA	NFA	NFA
Type of Anomaly	Stains and Wet Soil	Open Storage Area	Open Storage Area	Stains and Wet Soil	Open Storage Area	Liquid Flow or Impoundment
Building No./Location	Tank Farm No. 3	136	120	Tank Farm No. 4	50	306
APHO ID	APHO 1	APHO 2	АРНО 3	APHO 4	APHO 5	APHO 6

ECP Category	-	F	-	÷	9	ε	F	-	-
Notes	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Former sludge drying bed area; white, chalky powder in soils. Additional site investigation will be conducted to better characterize the site. Further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Limited detection of constituents of concern at surrounding LOCs. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.
Navy Sale Parcel	=	=	=	-	=	=	=	=	-
Closure Report Title/Date NFA Letter Agency/Date	Summary Report, APHO 7 7/14/1999 DTSC 08/20/1999 EPA 10/06/1999	Summary Report, APHO 30 & APHO 8 9/22/1999 DTSC 10/13/1999 EPA 11/04/1999	Summary Report, APHO 9 8/31/1999 DTSC 10/06/1999 RWQCB 10/06/1999 EPA 11/04/1999	Summary Report, APHO 10 8/31/1999 DTSC 10/06/1999 EPA 11/04/1999		Summary Report, APHO 12 11/15/1999 DTSC 02/01/2000	Summary Report, Stable Area APHOs 6/14/1999 DTSC 08/10/1999 RWQCB 10/06/1999 EPA 10/06/1999	Summary Report, Stable Area APHOs 6/14/1999 DTSC 08/10/1999 RWQCB 10/06/1999 EPA 10/06/1999	Summary Report, APHO 15 2/8/00 DTSC 05/04/2000
Status	NFA	NFA	NFA	NFA	FA	NFA	NFA	NFA	NFA
Type of Anomaly	Stains and Wet Soil	Open Storage Area	Stains and Wet Soil	Open Storage Area	Disturbed Ground and Excavation	Stains and Wet Soil	Open Storage Area	Stains and Wet Soil	Stains and Wet Soil
Building No./Location	369 and 386	Golf Course - Hole 12	Agua Chinon Wash	286	307	DRMO Yard No. 2	415	Horse Stables	Tank Farm No. 3
APHO ID	APHO 7	APHO 8	APHO 9	APHO 10	APHO 11	APHO 12	APHO 13	APHO 14	APHO 15

Table 4-4: Aerial Photograph Anomaly Sites^a

Table 4-4: Aerial Photograph Anomaly Sites^a

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ECP Category	-	-	-	1	+	÷	+	2a
Notes	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Records review and site visits, including 2002 VSI, identified no evidence of a release. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Vo evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Sampling results pelow residential PRGs. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.
Navy Sale Parcel	-	=	=	E	=	=	_	_
Closure Report Title/Date NFA Letter Agency/Date	Summary Report, APHO 16 & APHO 34 10/22/1999 DTSC 12/20/1999	Summary Report, APHO 17 7/9/1999 DTSC 08/20/1999 RWQCB 10/06/1999 EPA 10/06/1999	Summary Reports, APHO 18 6/24/1999 DTSC 07/26/1999 RWQCB 10/06/1999 EPA 10/06/1999	Summary Reports, APHO 19 7/23/1999 DTSC 08/19/1999 RWQCB 10/06/1999 EPA 10/06/1999	Summary Report, APHO 20 & APHO 21 11/30/1999 DTSC 03/03/2000	Summary Report, APHO 20 & APHO 21 11/30/1999 DTSC 03/03/2000	Summary Report, APHO 22 5/30/2000 DTSC 06/14/2000	Summary Reports, APHOS 23, 27, 58 (Area 2) 3/7/2000 RWQCB 10/18/2000
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA	NFA
Type of Anomaly	Stains and Wet Soil	Stains and Wet Soil	Stains and Wet Soil	Stains and Wet Soil	Disturbed Ground and Excavation	Open Storage Area	Drums and Stains	Drums and Stains
Building No./Location	Tank Farm No. 3	357	324	309	DRMO Yard No. 3	DRMO Yard No. 3	ō	14
APHO ID	APHO 16	APHO 17	APHO 18	APHO 19	APHO 20	APHO 21	APHO 22	APHO 23

ECP Category	d ط ۲	nity 1	nity 1 this ce of ted e of	2002 2a Its Pr er	1 ned.	2002 1 ancy ned.	ation 1
Notes	Geophysical survey did not identify the presence of no native/fill materials. Additionally, no evidence of groun disturbance identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Records review, comparison of other LOCs in the vicit of the site, and the 2002 VSI conducted in support of 1 EBS did not identify evidence of a release. Regulatory agency concurrence of NFA recommendation has bee obtained. No further action required.	Records review, comparison of other LOCs in the vicit of the site, and the 2002 VSI conducted in support of EBS did not identify evidence of a release. No evidem ground disturbance identified during 2002 VSI conduc in support of this EBS. Regulatory agency concurrenc NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during. VSI conducted in support of this EBS. Sampling resul below residential PRGs. Regulatory agency concurrer of NFA recommendation has been obtained. No furth action required.	No evidence of staining or a release identified during records review and site visits, including the 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtain No further action required.	No evidence of staining or a release identified during VSI conducted in support of this EBS. Regulatory age concurrence of NFA recommendation has been obtai No further action required.	Regulatory agency concurrence of NFA recommenda has been obtained. No further action required.
Navy Sale Parcel	=	=	-	=	>	-	-
Closure Report Title/Date NFA Letter Agency/Date	Summary Report, APHO 24 6/14/2000 DTSC 07/14/2000	Summary Report, APHO 25 8/10/1999 DTSC 08/31/1999 EPA 10/06/1999	Summary Report, APHO 26 10/30/1999 DTSC 01/04/2000	Summary Reports, APHOs 23, 27, 58 (Area 2) 3/7/2000 RWQCB 10/18/2000	Summary Report, APHO 28 8/24/1999 DTSC 09/10/1999 RWQCB 10/06/1999 EPA 11/04/1999	Summary Report, APHO 29 & APHO 52 7/2/1999 DTSC 08/24/1999 EPA 10/06/1999	Summary Report, APHO 30 & APHO 8 9/9/1999 DTSC
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA
T.me of Anomalv	Disturbed Ground and Excavation	Disturbed Ground and Excavation	Disturbed Ground and Excavation	Stains and Wet Soil	Stains and Wet Soil	Stains and Wet Soil	Drums and Stains
Building	Runways 34L and 34R	Agua Chinon Wash	Crash Crew Pit No. 2	DRMO Yard No. 3	138	10	Bordiers Nursery
	APHO 24	APHO 25	APHO 26	APHO 27	APHO 28	APHO 29	APHO 30

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omaly Sites ^a	Type of And
erial Photograph An	Building No./Location
Table 4-4: A	APHO ID

ECP Category		-	-	-	T	-	-
Notes	No evidence of ground disturbance identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrency of NFA recommendation has been received. Site evaluated as Anomaly Area 5. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during records review and site visits, including the 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during records review and site visits, including the 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Records reviews, site visits, and comparison of LOCs in the vicinity of the site identified no evidence of releases. No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Records reviews, site visits, and comparison of LOCs in the vicinity of the site identified no evidence of releases. No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.
Navy Sale Parcel	=	_	-	_	>	=	=
Closure Report Title/Date NFA Letter Agency/Date	Summary Report, APHO Area 5 (APHOs 31, 43, 66, 67, & 68) 11/1/2000 and Addendum to Summary Report, APHO Area 5 5/9/2001 RWQCB 01/17/2001 DTSC 02/11/2003	Summary Report, APHO 32 3/3/2000 DTSC 06/14/2000	Summary Report, APHO 33 7/28/99 DTSC 08/16/1999 RWQCB 10/06/1999 EPA 10/06/1999	Summary Report, APHO 16 & APHO 34 10/22/1999 DTSC 12/20/1999	Summary Report, APHO 35 8/31/2000 DTSC 10/06/1999 RWQCB 10/06/1999 EPA 11/04/1999	Summary Report, APHO 36 10/5/1999 DTSC 12/31/1999	Summary Report, APHO 36 8/20/1999 DTSC 09/09/1999 EPA 11/04/1999
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA
Type of Anomaly	Disturbed Ground and Excavation	Stains and Wet Soil	Open Storage Area	Stains and Wet Soil	Open Storage Area	Stains and Wet Soil	Stains and Wet Soil
Building No./Location	Golf Course – Hole No. 5	DRMO Yard No. 3	256	DRMO Yard No. 3	137	291	115
APHO ID	APHO 31	APHO 32	APHO 33	APHO 34	APHO 35	APHO 36	APHO 37


ECP Category	ø	-	-	-	-	-	2
Notes	No evidence of ground disturbance identified during 2002 VSI conducted in support of this EBS. However, additional site investigation is required. Sampling plan for site characterization has been submitted by the Navy to the regulatory agencies.	Records reviews, site visits, and comparison of LOCs in the vicinity of the site identified no evidence of releases. No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Records reviews, site visits, and comparison of LOCs in the vicinity of the site identified no evidence of releases. No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Records reviews, site visits, and comparison of LOCs in the vicinity of the site identified no evidence of releases. No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of ground disturbance identified during 2002 VSI conducted in support of this EBS; site under concrete aircraft parking apron. Regulatory agency concurrence of NFA recommendation has been received. Site evaluated at Anomaly Area 5. No further action required.	Response actions are to be conducted under IRP Site 17. Additional site investigation is required.
Navy Sale Parcel	=	-	-	-	=	=	=
Closure Report Title/Date NFA Letter Agency/Date		Summary Report, APHO 39 & APHO 49 10/18/1999 DTSC 12/16/1999	Summary Report and Response to Comments, APHO 40 10/15/1999 DTSC 01/27/1999	Summary Report, APHO 41 9/22/1999 DTSC 10/18/1999 EPA 11/04/1999	Summary Report, APHO 42 12/15/1999 DTSC 03/27/2000	Summary Report, APHO Area 5 (APHOs 31, 43, 66, 67, & 68) 11/1/2000 and Addendum to Summary Report, APHO Area 5 5/9/2001 RWQCB 01/17/2001 DTSC 02/11/2003	Summary Report, APHO 44 11/3/2000 RWQCB 01/16/2001
Status	FA	NFA	NFA	NFA	NFA	NFA	FA
Type of Anomaly	Disturbed Ground and Excavation	Stains and Wet Soil	Open Storage Area	Stains and Wet Soil	Stains and Wet Soil	Disturbed Ground and Excavation	Disturbed Ground and Excavation
Building No./Location	1789	381	279	624	457	Golf Course – Hole No. 5	Quarry Road
APHO ID	APHO 38	APHO 39	APHO 40	APHO 41	APHO 42	APHO 43	APHO 44

Table 4-4: Aerial Photograph Anomaly Sites^a





Table 4-4: Aerial Photograph Anomaly Sites^a

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ECP Category	-	-	ñ	R	ñ	R	ß
Notes	No evidence of staining or a release identified during 2002 VSI conducted in support of this EBS. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of ground disturbance identified during 2002 VSI conducted in support of this EBS. Sampling results below residential PRGs. Site evaluated as Anomaly Area 1. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of ground disturbance identified during 2002 VSI conducted in support of this EBS. Sampling results below residential PRGs. Site evaluated as Anomaly Area 1. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of ground disturbance identified during 2002 VSI conducted in support of this EBS. Sampling results below residential PRGs. Site evaluated as Anomaly Area 1. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	No evidence of ground disturbance identified during 2002 VSI conducted in support of this EBS. Sampling results below residential PRGs. Site evaluated as Anomaly Area 1. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.	Sampling results below residential PRGs. Site evaluated as Anomaly Area 2. Regulatory agency concurrence of NFA recommendation has been obtained. No further action required.
Navy Sale Parcel	=	-	=	=	Ξ	=	-
Closure Report Title/Date NFA Letter Agency/Date	Summary Report, APHO 29 & APHO 52 7/2/1999 DTSC 08/24/1999 EPA 10/06/1999	Summary Report, APHO 53 10/4/1999 DTSC 12/13/1999	Summary Report, APHO54, 55, 56, & 57 (Area 1) 11/19/1999 RWQCB 10/18/2000	Summary Report, APHO54, 55, 56, & 57 (Area 1) 11/19/1999 RWQCB 10/18/2000	Summary Report, APHO54, 55, 56, & 57 (Area 1) 11/19/1999 RWQCB 10/18/2000	Summary Report, APHO54, 55, 56, & 57 (Area 1) 11/19/1999 RWQCB 10/18/2000	Summary Reports, APHOs 23, 27, 58 (Area 2) 3/7/2000 RWQCB 10/18/2000
Status	NFA	NFA	NFA	NFA	NFA	NFA	NFA
Type of Anomaly	Stains and Wet Soil	Drums and Stains	Disturbed Ground and Excavation	Disturbed Ground and Excavation	Disturbed Ground and Excavation	Disturbed Ground and Excavation	Open Storage Area
Building No./Location	240	Perimeter Road and Magazine Road	Tank Farm No. 1	Tank Farm No. 3			
APHO ID	APHO 52	APHO 53	APHO 54	APHO 55	APHO 56	APHO 57	APHO 58

1-4: Aerial Photograph Anomaly Sites^a

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Table 4-4: Aerial Photograph Anomaly Sites^a

ECP Category	~	٢
Notes	Based on the review of APHOs 59 through 65, the encompassed area of approximately 9 acres was designated as miscellaneous refuse (MSCR) 1, a "former refuse disposal area" in the BRAC Business Plan update. MSCR 1 is currently identified as Anomaly Area 3. The site was initially used as a source of borrow material; subsequently, placement of construction debris occurred between 1972 and 1988. To further investigate the site, a removal site investigation (RSE) work plan was submitted in 2002. After approval from regulatory agencies, field activities performed included; installation of groundwater monitoring wells and vadose zone wells, geophysical investigation of the area, and exploratory trenches (during which a radiological screening survey was conducted). Sampling results indicated the presence of petroleum hydrocarbons; lead and benzo(a)pyrene were detected above PRGs. A report is currently in preparation to document the results of the expanded site investigation and to present the results of the human health and ecological risk assessments.	Based on the review of APHOs 59 through 65, the encompassed area of approximately 9 acres was designated as miscellaneous refuse (MSCR) 1, a "former refuse disposal area" in the BRAC Business Plan update. MSCR 1 is currently identified as Anomaly Area 3. The site was initially used as a source of borrow material: subsequently, placement of construction debris occurred between 1972 and 1988. To further investigate the site, a removal site investigation (RSE) work plan was submitted in 2002. After approval from regulatory agencies, field activities performed included; installation of groundwater monitoring wells and vadose zone wells, geophysical investigation of the area, and exploratory trenches (during which a radiological screening survey was conducted). Sampling results indicated the presence of petroleum hydrocarbons; lead and benzo(a)pyrene were detected above PRGs. A report is currently in preparation to document the results of the expanded site investigation and to present the results of the human health and ecological risk assessments at Anomaly Area 3.
Navy Sale Parcel	=	Ē
Closure Report Title/Date NFA Letter Agency/Date		
Status	FA	FA
Type of Anomaly	Disturbed Ground and Excavation	Disturbed Ground and Excavation
Building No./Location	Northwest of Military Family Housing Area	Northwest of Military Family Housing Area
APHO ID	APHO 59	APHO 60

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