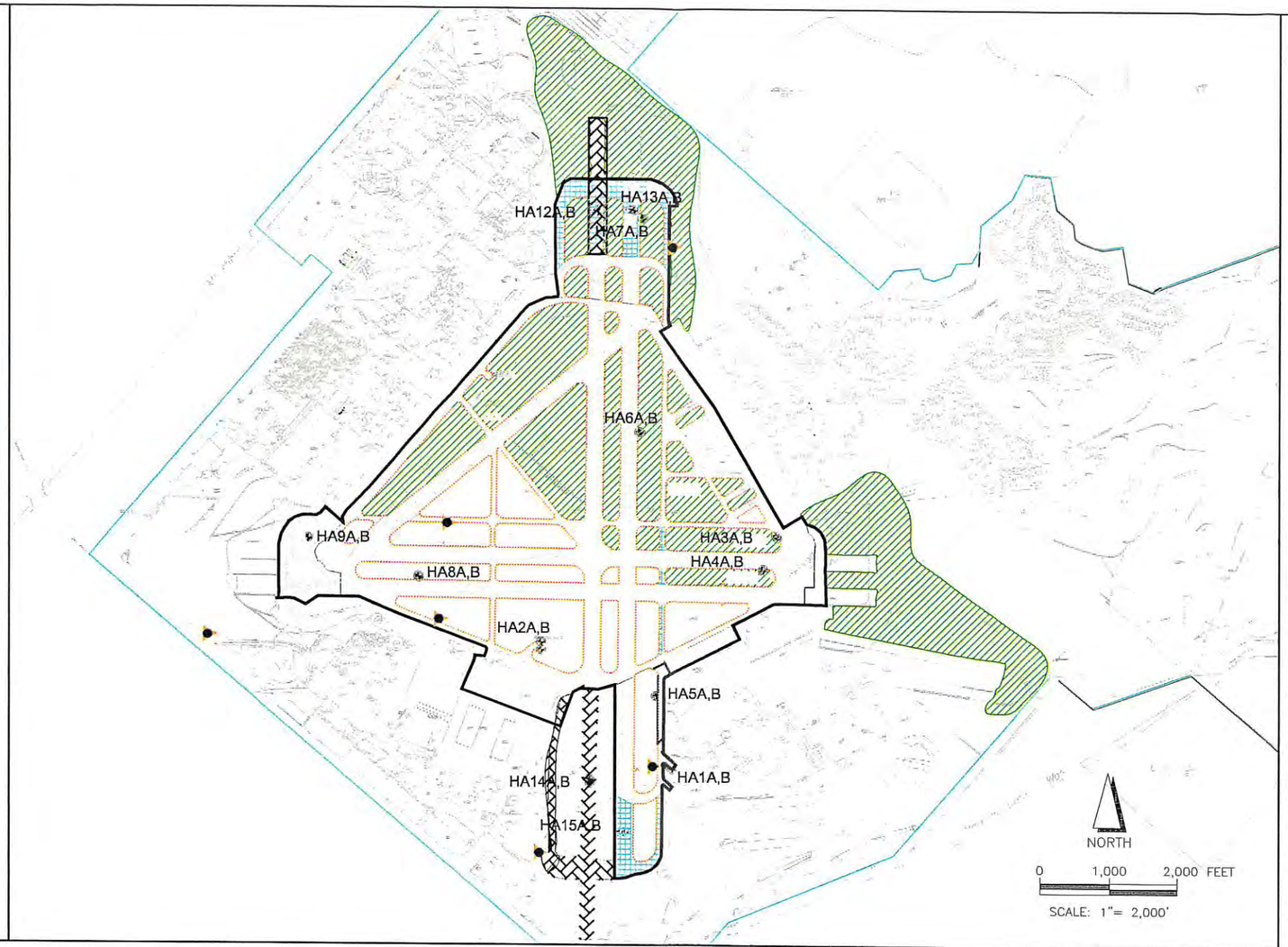
Jet Blast Deflector Areas

Area A

Area B

Area C



Background:
The runways at the former MCAS El Toro were originally constructed between 1942 and 1943 and have undergone several modifications and extensions over the life of the station. Waste petroleum, waste oil, and other liquid wastes (potentially containing PCBs) were applied to unpaved areas along the edge of the runways for dust suppression and control of vegetation. Past releases of fuel and lubricants onto the runways and taxiways may have potentially migrated to bordering unpaved areas and drainage systems through washing and stormwater runoff. Byproducts of combustion from jet engines may also have accumulated in the surrounding soil and structures, especially in areas used for engine testing and run-up (jet blast deflector areas). Based on this, the 1995 EBS (JEG 1995) identified the Airfield Operations Area (comprising runways, taxiways and adjacent areas) as a location of concern (LOC). A station-wide PAH reference-level study was conducted to assess the potential for station-wide contamination (BNI 1996). The study concluded that the reported results of the dioxin and metals analyses were supportive of unrestricted release of the runway parcels and the Federal Facility Agreement signatories concurred with this finding. Subsequently, the portions of the airfield operations area that were considered LOCs were changed from Environmental Condition of Property (ECP) Type 7 to ECP Type 3 (SWDIV 1998). Subsequent to this, the BCT requested further evaluation of the runways area for PCBs and PAHs. The PCB analysis was required because it was not included in previous investigations. The PAH analysis was required because previous investigations did not specifically target locations beneath runway extensions (1958 and 1989) at the northern and southern ends of the runways.

Sampling and Analysis Summary:
Soil samples were collected from a total of 13 areas. At each area, two soil samples were collected from boreholes drilled approximately 20 feet apart (designated A and B; e.g. HA1A and HA1B), and composited for laboratory analysis.
Three soil samples were collected from jet blast areas (boreholes HA1A,B; HA2A,B and HA3A,B) at depths of approximately 6 inches below ground surface (bgs).
Seven soil samples were collected from the edge of the runway (boreholes HA4A,B; HA5A,B; HA6A,B; HA7A,B; HA8A,B; and HA9A,B) at depths of approximately 6 inches bgs.
Four soil samples were collected beneath the 1958 and 1989 runway extensions. Samples were collected at the following depths bgs to reach native soil: HA12A - 6 ft, HA12B - 6 ft, HA13A - 6 ft, HA13B - 6 ft, HA14A - 18 ft, HA14B - 18 ft; HA15A - 18 ft, HA15A - 18 ft (due to increased depth of sample collection, a direct-push rig was used at these locations; locations HA10 and HA11 were initially advanced to 14 feet bgs and resumed/completed as HA14 and HA15).
A total of 13 samples were analyzed for PCBs and PAHs.

Analytical Results:
The only analyte exceeding its residential preliminary remediation goal (PRG) was benzo(a)pyrene (160 µg/kg) detected in the soil sample from borehole HA7. TPH as diesel was detected at HA1 - 6 mg/kg (estimate (est.)), HA2 - 2 mg/kg (est.), HA4 - 9 mg/kg (est.), HA7 - 85 mg/kg, HA8 - 1 mg/kg (est.), and HA9 - 4 mg/kg (est.).
TPH as motor oil was detected at HA1 - 37 mg/kg (est.), HA2 - 11 mg/kg (est.), HA3 - 190 mg/kg, HA4 - 110 mg/kg, HA5 - 15 and 17 mg/kg, HA6 - 6 mg/kg (est.), HA7 - 180 mg/kg, HA8 - 22 mg/kg, and HA9 - 53 mg/kg.

Risk Screening:
The maximum concentration detected for each analyte from all samples collected at the site was used as the exposure point concentration and compared to EPA Region 9 PRGs to calculate the cumulative risk ratio. The results indicated no significant noncancer risk; the cancer risk ratio was calculated to be 3.87 (see table for summary). The cancer risk was contributed primarily by Benzo(a) pyrene. The cumulative cancer risk of 4 x 10-6 was calculated based on site-wide maximum values and is only slightly above the threshold of 1 x 10-6. Based on this risk screening, the evidenced PAH concentrations do not pose a significant risk to human health and the environment.

Conclusion:
Further evaluation is required in the vicinity of location HA7 in accordance with EPA and DTSC comments per letters dated April 11, 2003.

Source:
Aerial Survey, OHM/SWDIV, 1997
Borehole Location Survey, Cal Vada, 2003

Risk Screening Results - Comparison to EPA Region 9 Residential PRGs and MCAS El Toro Reference Level Values

Analyte	Units	MCAS El Toro Anthropogenic Reference Value		Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	Site-Wide Maximum		Risk Ratio	
		Maximum Value	(95% UCL)			Value	Location	Cancer	Noncancer
Polychlorinated Biphenyls (PCBs)									
Aroclor 1260	µg/kg	--	--	2.2E+02	--	6	HA7@0.5'	0.03	
Polynuclear Aromatic Hydrocarbons (PAHs)									
Anthracene	µg/kg	8	--	--	2.2E+07	12	HA7@0.5'	--	<0.01
Benzo(a)anthracene	µg/kg	70	22	6.2E+02	--	79	HA7@0.5'	0.13	--
Benzo(a)pyrene	µg/kg	110	27	6.2E+01	--	**160**	HA7@0.5'	2.58	--
Benzo(b)fluoranthene	µg/kg	95	28	6.2E+02	--	190	HA7@0.5'	0.31	--
Benzo(k)fluoranthene	µg/kg	100	24	3.8E+02	--	120	HA7@0.5'	0.32	--
Chrysene	µg/kg	100	31	3.8E+03	--	120	HA7@0.5'	0.03	--
Dibenz(a,h)anthracene	µg/kg	30	8	6.2E+01	--	23	HA7@0.5'	--	--
Fluoranthene	µg/kg	150	45	--	2.3E+06	140	HA7@0.5'	--	<0.01
Indeno(1,2,3-cd)pyrene	µg/kg	84	21	6.2E+02	--	72	HA7@0.5'	--	--
Pyrene	µg/kg	140	41	--	2.3E+06	150	HA7@0.5'	--	<0.01
					Cumulative Risk Ratio:			3.87	<0.01

Notes: -- indicates the specified criteria does not exist. Bold indicates concentration above MCAS El Toro Anthropogenic Reference value or PRG value, whichever is higher.

LEGEND:

- Runway Extension 1951
- Runway Extension 1958
- Extension of Recovery Runway 1989
- Areas Observed to be Tilled during 2002 VSI
- Original Runway 1942-1943
- Estimated Extent of PRL - Runways/Airfield Operations Area
- 1996 PAH Reference Level Study Sample Locations (6)
- HA7A,B Soil Sample Location
- Identified Waste Oil Application Areas (Approx. 10-20 ft Width)

Technical Memorandum — Final

Sampling and Anaylsis Results/Risk Screening Runways/Airfield Operations Area

Environmental Baseline Survey

Date: 08-03	Former MCAS El Toro	Figure 22
Project No. 54506	EARTH TECH — A tyco INTERNATIONAL LTD. COMPANY	

File: M:\Projects\54506_(CTO-104)\EBS\CAD\Phase1_Investigation\Transferrable_PRLs\Tech Sheets\Final\Runways_F.dwg Time: Aug 18, 2003 - 9:46am

Table 22a. Analytical Results, PRL-RWY

Analyte	Units	MCAS El Toro Anthropogenic Reference Level		Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	PRL-RWY- HA1 0.5' bgs LJ203	PRL-RWY-HA5 0.5' bgs LJ204	PRL-RWY-HA4 0.5' bgs LJ205	PRL-RWY-HA3 0.5' bgs LJ206	PRL-RWY-HA7 0.5' bgs LJ212
		Maximum Value	95% UCL								
Polychlorinated Biphenyls (PCBs)											
Aroclor 1016	µg/kg	--	--	3.9E+03	6.3E+03	3.9E+03	43 U	41 U	40 U	38 U	37 U
Aroclor 1221	µg/kg	--	--	2.2E+02	2.2E+02	--	85 U	82 U	80 U	76 U	75 U
Aroclor 1232	µg/kg	--	--	2.2E+02	2.2E+02	--	43 U	41 U	40 U	38 U	37 U
Aroclor 1242	µg/kg	--	--	2.2E+02	2.2E+02	--	43 U	41 U	40 U	38 U	37 U
Aroclor 1248	µg/kg	--	--	2.2E+02	2.2E+02	--	43 U	41 U	40 U	38 U	37 U
Aroclor 1254	µg/kg	--	--	2.2E+02	2.2E+02	1.1E+03	43 U	41 U	40 U	38 U	37 U
Aroclor 1260	µg/kg	--	--	2.2E+02	2.2E+02	--	9 NJ	41 U	4 J	38 U	4 J
Polynuclear Aromatic Hydrocarbons (PAHs)											
2-Methylnaphthalene	µg/kg	--	--	--	--	--	32 U	31 U	30 U	29 U	28 U
Acenaphthene	µg/kg	4	--	3.7E+06	--	3.7E+06	32 U	31 U	30 U	29 U	28 U
Acenaphthylene	µg/kg	4	--	--	--	--	32 U	31 U	30 U	29 U	48
Anthracene	µg/kg	8	--	2.2E+07	--	2.2E+07	32 U	31 U	30 U	29 U	12 J
Benzo(a)anthracene	µg/kg	70	22	6.2E+02	6.2E+02	--	32 UJ	31 UJ	30 UJ	29 UJ	79 J
Benzo(a)pyrene	µg/kg	110	27	6.2E+01	6.2E+01	--	32 U	31 U	30 U	29 UJ	160
Benzo(b)fluoranthene	µg/kg	95	28	6.2E+02	6.2E+02	--	32 U	31 U	30 U	29 UJ	190
Benzo(g,h,i)perylene	µg/kg	95	29	--	--	--	32 U	31 U	30 U	29 UJ	68
Benzo(k)fluoranthene	µg/kg	100	24	3.8E+02	3.8E+02	--	32 UJ	31 UJ	30 UJ	29 UJ	120 J
Chrysene	µg/kg	100	31	3.8E+03	3.8E+03	--	32 UJ	31 UJ	30 UJ	29 UJ	120 J
Dibenz(a,h)anthracene	µg/kg	30	8	6.2E+01	6.2E+01	--	32 U	31 U	30 U	29 UJ	23 J
Fluoranthene	µg/kg	150	45	2.3E+06	--	2.3E+06	32 U	31 U	30 U	29 U	140
Fluorene	µg/kg	--	--	2.8E+06	--	2.8E+06	32 U	31 U	30 U	29 U	28 U
Indeno(1,2,3-cd)pyrene	µg/kg	84	21	6.2E+02	6.2E+02	--	32 U	31 U	30 U	29 UJ	72
Naphthalene	µg/kg	2	--	5.6E+04	--	5.6E+04	32 U	31 U	30 U	29 U	28 U
Phenanthrene	µg/kg	65	18	--	--	--	32 UJ	31 UJ	30 UJ	29 UJ	50 J
Pyrene	µg/kg	140	41	2.3E+06	--	2.3E+06	32 U	31 U	30 U	29 U	150

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate

NJ = The compound identification and quantity are approximate.

Table 22a. Analytical Results, PRL-RWY

Analyte	Units	MCAS El Toro Anthropogenic Reference Level		Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	PRL-RWY-HA6 0.5' bgs LJ213	PRL-RWY-HA2 0.5' bgs LJ214	PRL-RWY-HA2 (dup) 0.5' bgs LJ215	PRL-RWY-HA8 0.5' bgs LJ216
		Maximum Value	95% UCL							
Polychlorinated Biphenyls (PCBs)										
Aroclor 1016	µg/kg	--	--	3.9E+03	6.3E+03	3.9E+03	37 U	42 U	43 U	36 U
Aroclor 1221	µg/kg	--	--	2.2E+02	2.2E+02	--	75 U	84 U	85 U	73 U
Aroclor 1232	µg/kg	--	--	2.2E+02	2.2E+02	--	37 U	42 U	43 U	36 U
Aroclor 1242	µg/kg	--	--	2.2E+02	2.2E+02	--	37 U	42 U	43 U	36 U
Aroclor 1248	µg/kg	--	--	2.2E+02	2.2E+02	--	37 U	42 U	43 U	36 U
Aroclor 1254	µg/kg	--	--	2.2E+02	2.2E+02	1.1E+03	37 U	42 U	43 U	36 U
Aroclor 1260	µg/kg	--	--	2.2E+02	2.2E+02	--	37 U	6 J	43 U	36 U
Polynuclear Aromatic Hydrocarbons (PAHs)										
2-Methylnaphthalene	µg/kg	--	--	--	--	--	28 U	32 U	32 U	28 U
Acenaphthene	µg/kg	4	--	3.7E+06	--	3.7E+06	28 U	32 U	32 U	28 U
Acenaphthylene	µg/kg	4	--	--	--	--	28 U	32 U	32 U	28 U
Anthracene	µg/kg	8	--	2.2E+07	--	2.2E+07	28 U	32 U	32 U	28 U
Benzo(a)anthracene	µg/kg	70	22	6.2E+02	6.2E+02	--	28 UJ	17 J	16 J	28 UJ
Benzo(a)pyrene	µg/kg	110	27	6.2E+01	6.2E+01	--	28 UJ	35	29 J	28 U
Benzo(b)fluoranthene	µg/kg	95	28	6.2E+02	6.2E+02	--	28 UJ	55	52	28 U
Benzo(g,h,i)perylene	µg/kg	95	29	--	--	--	28 UJ	34	29 J	28 U
Benzo(k)fluoranthene	µg/kg	100	24	3.8E+02	3.8E+02	--	28 UJ	39 J	37 J	28 UJ
Chrysene	µg/kg	100	31	3.8E+03	3.8E+03	--	28 UJ	29 J	30 J	28 UJ
Dibenz(a,h)anthracene	µg/kg	30	8	6.2E+01	6.2E+01	--	28 UJ	32 U	32 U	28 U
Fluoranthene	µg/kg	150	45	2.3E+06	--	2.3E+06	28 U	33	34	28 U
Fluorene	µg/kg	--	--	2.8E+06	--	2.8E+06	28 U	32 U	32 U	28 U
Indeno(1,2,3-cd)pyrene	µg/kg	84	21	6.2E+02	6.2E+02	--	28 UJ	31 J	27 J	28 U
Naphthalene	µg/kg	2	--	5.6E+04	--	5.6E+04	28 U	32 U	32 U	28 U
Phenanthrene	µg/kg	65	18	--	--	--	28 UJ	32 UJ	32 UJ	28 UJ
Pyrene	µg/kg	140	41	2.3E+06	--	2.3E+06	28 U	27 J	27 J	28 U

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate

NJ = The compound identification and quantity are approximate.

Table 22a. Analytical Results, PRL-RWY

Analyte	Units	MCAS El Toro Anthropogenic Reference Level		Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	PRL-RWY-HA9 0.5' bgs LJ217	PRL-RWY-HA12 6' bgs LJ244	PRL-RWY-HA13 6' bgs LJ245	PRL-RW-HA14 18' bgs LJ248
		Maximum Value	95% UCL							
Polychlorinated Biphenyls (PCBs)										
Aroclor 1016	µg/kg	--	--	3.9E+03	6.3E+03	3.9E+03	38 U	36 U	37 U	35 U
Aroclor 1221	µg/kg	--	--	2.2E+02	2.2E+02	--	76 U	73 U	73 U	70 U
Aroclor 1232	µg/kg	--	--	2.2E+02	2.2E+02	--	38 U	36 U	37 U	35 U
Aroclor 1242	µg/kg	--	--	2.2E+02	2.2E+02	--	38 U	36 U	37 U	35 U
Aroclor 1248	µg/kg	--	--	2.2E+02	2.2E+02	--	38 U	36 U	37 U	35 U
Aroclor 1254	µg/kg	--	--	2.2E+02	2.2E+02	1.1E+03	38 U	36 U	37 U	35 U
Aroclor 1260	µg/kg	--	--	2.2E+02	2.2E+02	--	38 U	36 U	37 U	35 U
Polynuclear Aromatic Hydrocarbons (PAHs)										
2-Methylnaphthalene	µg/kg	--	--	--	--	--	29 U	27 U	28 U	27 U
Acenaphthene	µg/kg	4	--	3.7E+06	--	3.7E+06	29 U	27 U	28 U	27 U
Acenaphthylene	µg/kg	4	--	--	--	--	29 U	27 U	28 U	27 U
Anthracene	µg/kg	8	--	2.2E+07	--	2.2E+07	29 U	27 U	28 U	27 U
Benzo(a)anthracene	µg/kg	70	22	6.2E+02	6.2E+02	--	17 UJ	27 UJ	28 UJ	27 UJ
Benzo(a)pyrene	µg/kg	110	27	6.2E+01	6.2E+01	--	21 J	27 U	28 U	27 U
Benzo(b)fluoranthene	µg/kg	95	28	6.2E+02	6.2E+02	--	45 J	27 U	28 U	27 U
Benzo(g,h,i)perylene	µg/kg	95	29	--	--	--	29 UJ	27 U	28 U	27 U
Benzo(k)fluoranthene	µg/kg	100	24	3.8E+02	3.8E+02	--	33 J	27 UJ	28 UJ	27 UJ
Chrysene	µg/kg	100	31	3.8E+03	3.8E+03	--	31 J	27 UJ	28 UJ	27 UJ
Dibenz(a,h)anthracene	µg/kg	30	8	6.2E+01	6.2E+01	--	29 UJ	27 U	28 U	27 U
Fluoranthene	µg/kg	150	45	2.3E+06	--	2.3E+06	47	27 U	28 U	27 U
Fluorene	µg/kg	--	--	2.8E+06	--	2.8E+06	29 U	27 U	28 U	27 U
Indeno(1,2,3-cd)pyrene	µg/kg	84	21	6.2E+02	6.2E+02	--	29 UJ	27 U	28 U	27 U
Naphthalene	µg/kg	2	--	5.6E+04	--	5.6E+04	29 U	27 U	28 U	27 U
Phenanthrene	µg/kg	65	18	--	--	--	16 J	27 UJ	28 UJ	27 UJ
Pyrene	µg/kg	140	41	2.3E+06	--	2.3E+06	47	27 U	28 U	27 U

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate

NJ = The compound identification and quantity are approximate.

Table 22a. Analytical Results, PRL-RWY

Analyte	Units	MCAS El Toro Anthropogenic Reference Level		Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	PRL-RWY-HA15 18' bgs LJ249
		Maximum Value	95% UCL				
Polychlorinated Biphenyls (PCBs)							
Aroclor 1016	µg/kg	--	--	3.9E+03	6.3E+03	3.9E+03	35 U
Aroclor 1221	µg/kg	--	--	2.2E+02	2.2E+02	--	70 U
Aroclor 1232	µg/kg	--	--	2.2E+02	2.2E+02	--	35 U
Aroclor 1242	µg/kg	--	--	2.2E+02	2.2E+02	--	35 U
Aroclor 1248	µg/kg	--	--	2.2E+02	2.2E+02	--	35 U
Aroclor 1254	µg/kg	--	--	2.2E+02	2.2E+02	1.1E+03	35 U
Aroclor 1260	µg/kg	--	--	2.2E+02	2.2E+02	--	35 U
Polynuclear Aromatic Hydrocarbons (PAHs)							
2-Methylnaphthalene	µg/kg	--	--	--	--	--	27 U
Acenaphthene	µg/kg	4	--	3.7E+06	--	3.7E+06	27 U
Acenaphthylene	µg/kg	4	--	--	--	--	27 U
Anthracene	µg/kg	8	--	2.2E+07	--	2.2E+07	27 U
Benzo(a)anthracene	µg/kg	70	22	6.2E+02	6.2E+02	--	27 UJ
Benzo(a)pyrene	µg/kg	110	27	6.2E+01	6.2E+01	--	27 U
Benzo(b)fluoranthene	µg/kg	95	28	6.2E+02	6.2E+02	--	27 U
Benzo(g,h,i)perylene	µg/kg	95	29	--	--	--	27 U
Benzo(k)fluoranthene	µg/kg	100	24	3.8E+02	3.8E+02	--	27 UJ
Chrysene	µg/kg	100	31	3.8E+03	3.8E+03	--	27 UJ
Dibenz(a,h)anthracene	µg/kg	30	8	6.2E+01	6.2E+01	--	27 U
Fluoranthene	µg/kg	150	45	2.3E+06	--	2.3E+06	27 U
Fluorene	µg/kg	--	--	2.8E+06	--	2.8E+06	27 U
Indeno(1,2,3-cd)pyrene	µg/kg	84	21	6.2E+02	6.2E+02	--	27 U
Naphthalene	µg/kg	2	--	5.6E+04	--	5.6E+04	27 U
Phenanthrene	µg/kg	65	18	--	--	--	27 UJ
Pyrene	µg/kg	140	41	2.3E+06	--	2.3E+06	27 U

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate

NJ = The compound identification and quantity are approximate.

Table 22b. Analytical Results, Hydrocarbons, PRL-RWY

Analyte	Units	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	PRL-RWY- HA1 0.5' bgs LJ254	PRL-RWY-HA5 0.5' bgs LJ255	PRL-RWY-HA5 (dup) 0.5' bgs LJ256	PRL-RWY-HA2 0.5' bgs LJ257	PRL-RWY-HA9 0.5' bgs LJ258	PRL-RWY-HA8 6' bgs LJ259
Hydrocarbons										
Motor Oils	mg/kg	--	--	--	37	15	17	11 J	53	22
Total Extractable Petroleum Hydrocarbons	mg/kg	--	--	--	6 J	12 U	11 U	2 J	4 J	1 J
Total Volatile Petroleum Hydrocarbons	mg/kg	--	--	--	12 U	12 U	11 U	13 U	11 U	11 U

Notes:

mg/kg = miligrams per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate

Table 22b. Analytical Results, Hydrocarbons, PRL-RWY

Analyte	Units	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	PRL-RWY-HA3 0.5' bgs LJ260	PRL-RWY-HA4 0.5' bgs LJ261	PRL-RWY-HA7 0.5' bgs LJ262	PRL-RWY-HA6 0.5' bgs LJ263
Hydrocarbons								
Motor Oils	mg/kg	--	--	--	190	110	180	6 J
Total Extractable Petroleum Hydrocarbons	mg/kg	--	--	--	120 U	9 J	85	11 U
Total Volatile Petroleum Hydrocarbons	mg/kg	--	--	--	12 U	10 U	11 U	11 U

Notes:

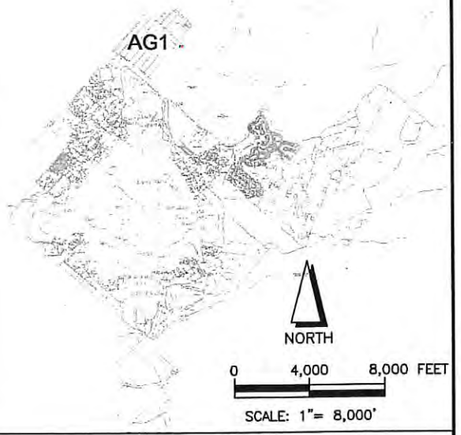
mg/kg = miligrams per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

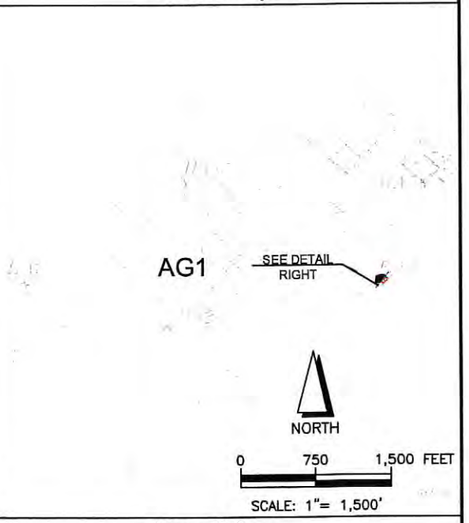
U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate

PRL PESTICIDE MIXING AREA – BORDIER'S NURSERY

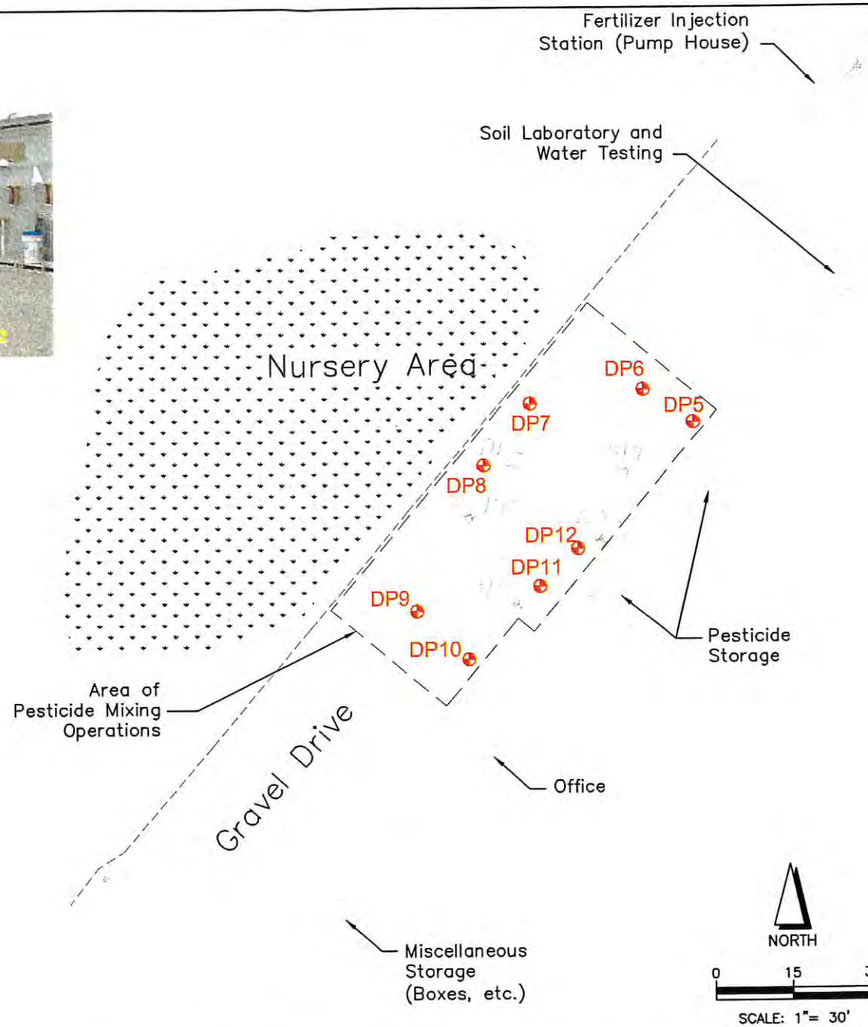


Base Map



Area Map

Pesticides Storage Shed



LEGEND:

DP3 — Direct Push Sampling Location (February 2003)

HA2 — Hand Auger Sampling Location (August 2002)

DP5 — Direct Push Sampling Location (July 2003)

Background:
Parcel AG1 comprises approximately 209 acres of agricultural land situated in the northwest corner of the station. The land has been leased from the government for agricultural use since 1976, and is currently leased to Bordier's Nursery. Present and past activities of concern conducted at the site include pesticide/herbicide mixing and minor maintenance activities of agricultural equipment (e.g. tractors, plows). A confirmatory sampling program conducted in 1994 identified two locations where concentrations of pesticides were above EPA Region 9 residential preliminary remediation goals (PRGs).
A baseline verification sampling program was conducted in July 2002 to assess the current environmental status. The analytical results identified pesticide concentrations exceeding EPA residential PRG values from the sample obtained near the pesticide storage shed (HA2). The cancer risk ratio for location HA2 was 12.65, and the noncancer risk ratio was 0.33. It must be noted that the 1994 sampling at this location did not exceed the EPA residential PRGs.
In February 2003, four boreholes were advanced to depths of 4 feet below ground surface (bgs) surrounding location HA2 by direct-push technology. No analyte exceeded its residential PRG during this investigation.

Issues/Concerns:
In letters dated April 11, 2003, DTSC and EPA requested additional sampling to delineate lateral and vertical extent of contamination in the pesticide mixing area to complete the site characterization.

Sampling and Analysis Summary:
In July 2003, 8 additional boreholes were advanced to total depths of 4 feet bgs (6 locations) and 10 feet bgs (2 locations). Four of the locations (DP5, DP6, DP7, & DP8) were intended to determine the lateral extent of pesticide contamination near locations DP1 and DP2. Two of the locations (DP9 and DP10) were intended to determine the lateral extent of pesticide contamination to the south of location DP4. For all six of these locations, samples were collected at 0.5, 2.0, and 4.0 feet bgs, and analyzed for pesticides and herbicides. In accordance with the BCT-approved sampling plan, the samples collected at 4.0 feet bgs were only analyzed if pesticides or herbicides were detected in the shallower samples.
Two locations (DP11 and DP12) were intended to determine the vertical extent of contamination at locations HA2 and DP4. The samples were collected at depths of 2.0, 4.0, 7.0, and 10.0 feet bgs at DP11 and 2.0, 7.0, and 10.0 feet bgs at DP12, and analyzed for pesticides and herbicides. The deepest samples were only analyzed if pesticides or herbicides were detected in the shallower samples.

Analytical Results:
During the investigation in July 2002, location HA2 had three analytes exceed their respective PRG. 4,4'-DDD was detected at a maximum conc entration of 4,500 µg/kg (residential PRG = 2,440 µg/kg). 4,4'-DDT was detected at a maximum concentration of 9,850 µg/kg (residential PRG = 1,720 µg/kg). Heptachlor was detected at a maximum concentration of 360 µg/kg (residential PRG = 108 µg/kg).
During the July 2003 investigation, as in the February 2003 investigation, no analyte exceeded its residential PRG. In addition, the 4-foot bgs samples (DP5, DP6, DP9, & DP10), and the 10-foot bgs samples (DP11 and DP12) had all non-detectable concentrations, with the exception of one very low (estimated) concentration for 4,4'-DDT at location DP11.

Risk Screening:
The maximum concentration detected for each analyte from all samples collected at the site was used as the exposure point concentration and compared to EPA Region 9 PRGs to calculate the cumulative risk ratio. The results indicated no significant noncancer risk; the cancer risk ratio was calculated to be 13.74 (see table for summary). The cancer risk was contributed primarily by 4,4'-DDT, Heptachlor, 4,4'-DDD, and Dieldrin. The cumulative cancer risk of 1x10-5 was calculated using site-wide maximum values. Based on this, it is very likely that the evidenced pesticide concentrations do not pose a significant risk to human health and the environment.

Conclusion:
Based on the results of the additional sampling and data analysis that was conducted to define the lateral and vertical extent of contamination in accordance with the BCT-approved sampling plan, no further action is proposed.

Risk Screening Results - Comparison to EPA Region 9 Residential PRGs and MCAS El Toro Background Values

Analyte	Units	MCAS El Toro Background Value (95th quantile)	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	Site-Wide Maximum Value	Site-Wide Maximum Location	Risk Ratio Cancer	Risk Ratio Noncancer
Organochlorine Pesticides									
4,4'-DDD	µg/kg	36.1	2.4E+03	2.4E+03	--	**4500**	HA2@0'	1.84	--
4,4'-DDE	µg/kg	145	1.7E+03	1.7E+03	--	1200	HA2@0'	0.70	--
4,4'-DDT	µg/kg	236	1.7E+03	1.7E+03	3.6E+04	**9850**	HA2@0'	5.73	0.27
Alpha-Chlordane	µg/kg	2.24	1.6E+03	1.6E+03	3.5E+04	13	DP4@2.0'	<0.01	<0.01
Dieldrin	µg/kg	19.9	3.0E+01	3.0E+01	3.1E+03	30	DP1@0.5'	0.99	<0.01
Endosulfan I	µg/kg	0.179	3.7E+05	--	3.7E+05	16	DP5@0.5'	--	<0.01
Endrin	µg/kg	2.22	1.8E+04	--	1.8E+04	28	DP5@0.5'	--	<0.01
Enrin Aldehyde	µg/kg	2.22	1.8E+04	--	1.8E+04	3	DP4@2.0'	--	<0.01
Endrin Ketone	µg/kg	--	1.8E+04	--	1.8E+04	3	DP4@2.0'	--	<0.01
Gamma-Chlordane	µg/kg	2.7	1.6E+03	1.6E+03	3.5E+04	1300	HA2@0'	0.80	0.04
Heptachlor	µg/kg	--	1.1E+02	1.1E+02	3.1E+04	**360**	HA2@0'	3.33	0.01
Heptachlor Epoxide	µg/kg	--	5.3E+01	5.3E+01	7.9E+02	18	DP5@0.5'	0.34	0.02
Chlorinated Herbicides									
2,4-DB	µg/kg	--	4.9E+05	--	4.9E+05	430	DP10@0.5'	--	<0.01
2,4,5-TP (Silvex)	µg/kg	--	4.9E+05	--	4.9E+05	2	DP8@2.0'	--	<0.01
					Cumulative Risk Ratio:			13.74	0.36

Notes: -- indicates the specified criteria does not exist. Bold indicates concentration above PRG value.

Technical Memorandum — Final

Sampling and Analysis Results / Risk Screening Pesticide Mixing Area - Bordier's Nursery

Environmental Baseline Survey

Date: 08-03	Former MCAS El Toro	Figure
Project No. 54506	EARTH TECH — A tyco INTERNATIONAL LTD. COMPANY	23

File: M:\Projects\54506_(CTO-104)\EBS\CAD\PhaseII_Investigation\Transferrable_PRLs\Tech Sheets\Final\AGLANDS_F.dwg Time: Aug 18, 2003 - 9:15am

Table 23. Analytical Results, AG-1 Pesticide Mixing Area

Analyte	Units	MCAS El Toro Background Value (95th quantile)	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	AG1-DP4 0.5' bgs LJ221	AG1-DP4 2.0' bgs LJ222	AG1-DP3 0.5' bgs LJ224	AG1-DP3 2.0' bgs LJ225	AG1-DP2 0.5' bgs LJ227	AG1-DP2 2.0' bgs LJ228	AG1-DP1 0.5' bgs LJ230	AG1-DP1 2.0' bgs LJ231	AG1-HA2 0 feet bgs LJ059
Organochlorine Pesticides														
4,4'-DDD	µg/kg	36.1	2.4E+03	2.4E+03	--	3 J	15	3 J	3.3 U	17	3.3 U	49	3.1 U	4500 N
4,4'-DDE	µg/kg	145	1.7E+03	1.7E+03	--	6	3.5 U	13	3.3 U	120	3.3 U	59	3.1 U	1,200
4,4'-DDT	µg/kg	236	1.7E+03	1.7E+03	3.6E+04	1 J	28	0.5 J	3.3 U	47	3.3 U	91	3.1 U	9,850
Aldrin	µg/kg	--	2.9E+01	2.9E+01	1.8E+03	2 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	9.5 U	1.8 U	180 U
Alpha-BHC	µg/kg	--	9.0E+01	9.0E+01	3.5E+04	2 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	9.5 U	1.8 U	180 U
Alpha-Chlordane	µg/kg	2.24	1.6E+03	1.6E+03	3.5E+04	0.5 J	13	1.1 U	1.1 U	1.1 U	1.1 U	5.6 U	1 U	390
Beta-BHC	µg/kg	--	3.2E+02	3.2E+02	1.4E+04	2 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	9.5 U	1.8 U	180 U
Delta-BHC	µg/kg	--	--	--	--	2 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	9.5 U	1.8 U	180 U
Dieldrin	µg/kg	19.9	3.0E+01	3.0E+01	3.1E+03	2 J	3.5 U	0.4 J	3.3 U	3 J	3.3 U	30	3.1 U	320 U
Endosulfan I	µg/kg	0.179	3.7E+05	--	3.7E+05	3.6 U	3.5 U	3.3 U	3.3 U	4	3.3 U	6 J	3.1 U	320 U
Endosulfan II	µg/kg	2.22	3.7E+05	--	3.7E+05	3.6 U	3.5 U	3.3 U	3.3 U	3.3 U	3.3 U	17 U	3.1 U	320 U
Endosulfan Sulfate	µg/kg	3.1	3.7E+05	--	3.7E+05	6 U	5.9 U	5.5 U	5.5 U	5.5 U	5.4 U	28 U	5.2 U	540 U
Endrin	µg/kg	2.22	1.8E+04	--	1.8E+04	3.6 U	3.5 U	3.3 U	3.3 U	3.3 U	3.3 U	17 U	3.1 U	320 U
Enrin Aldehyde	µg/kg	2.22	1.8E+04	--	1.8E+04	3.6 U	3 J	3.3 U	3.3 U	3.3 U	3.3 U	17 U	3.1 U	320 U
Endrin Ketone	µg/kg	--	1.8E+04	--	1.8E+04	3.6 U	3 J	3.3 U	3.3 U	3.3 U	3.3 U	17 U	3.1 U	320 U
Gamma-BHC (Lindane)	µg/kg	--	4.4E+02	4.4E+02	2.1E+04	2 U	2 U	1.9 U	1.9 U	1.9 U	1.8 U	9.5 U	1.8 U	180 U
Gamma-Chlordane	µg/kg	2.7	1.6E+03	1.6E+03	3.5E+04	2	70	1.1 U	1.1 U	1.1 U	1.1 U	5.6 U	1 U	1300
Heptachlor	µg/kg	--	1.1E+02	1.1E+02	3.1E+04	2.1	75	1.9 U	0.3 J	0.3 J	1.8 U	9.5 U	1.8 U	360
Heptachlor Epoxide	µg/kg	--	5.3E+01	5.3E+01	7.9E+02	2 U	5.4	1.9 U	1.9 U	1.9 U	1.8 U	9.5 U	1.8 U	180 U
Methoxychlor	µg/kg	--	3.1E+05	--	3.1E+05	12 U	12 U	11 U	11 U	11 U	11 U	56 U	10 U	1100 U
Toxaphene	µg/kg	--	4.4E+02	4.4E+02	--	120 U	120 U	110 U	110 U	110 U	110 U	560 U	100 U	11000 U
Chlorinated Herbicides														
2,4-DB	µg/kg	--	4.9E+05	--	4.9E+05	60 U	59 U	55 U	55 U	55 U	54 U	56 U	52 U	75
2,4,5-T	µg/kg	--	6.1E+05	--	6.1E+05	12 U	12 U	11 U	11 U	11 U	11 U	11 U	10 U	11 U
2,4,5-TP (Silvex)	µg/kg	--	4.9E+05	--	4.9E+05	12 U	12 U	11 U	11 U	11 U	11 U	11 U	10 U	11 U
2,4-D	µg/kg	--	6.9E+05	--	6.9E+05	60 U	59 U	55 U	55 U	55 U	54 U	56 U	52 U	11 U
Dalapon	µg/kg	--	1.8E+06	--	1.8E+06	24 U	24 U	22 U	22 U	22 U	22 U	22 U	21 U	21 U
Dicamba	µg/kg	--	--	--	--	12 U	12 U	11 U	11 U	11 U	11 U	11 U	10 U	11 U
Dichloroprop	µg/kg	67.2	--	--	--	12 U	12 U	11 U	11 U	11 U	11 U	11 U	10 U	11 U
Dinoseb	µg/kg	--	6.1E+04	--	6.1E+04	24 U	24 U	22 U	22 U	22 U	22 U	22 U	21 U	11 U
MCPA	µg/kg	28500	--	--	--	2400 U	2400 U	2200 U	2200 U	2200 U	2200 U	2200 U	2100 U	2100 U
MCPP	µg/kg	--	6.1E+04	--	6.1E+04	2400 U	2400 U	2200 U	2200 U	2200 U	2200 U	2200 U	2100 U	2100 U

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate.

NA = The analyte was not analyzed.

Table 23. Analytical Results, AG-1 Pesticide Mixing Area

Analyte	Units	MCAS El Toro Background Value (95th quantile)	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	AG1-HA2 0 feet bgs (dup) LJ060	AG1-HA2 2 feet bgs LJ061	AG1-HA2 4 feet bgs LJ062	AG1-DP5 0.5' bgs LJ265	AG1-DP5 2.0' bgs LJ266	AG1-DP5 4.0' bgs LJ267	AG1-DP6 0.5' bgs LJ268	AG1-DP6 2.0' bgs LJ269	AG1-DP6 4.0' bgs LJ270
Organochlorine Pesticides														
4,4'-DDD	µg/kg	36.1	2.4E+03	2.4E+03	--	3,200	5	69 N	44	3.4 U	3.3 U	5	3.3 U	3.1 U
4,4'-DDE	µg/kg	145	1.7E+03	1.7E+03	--	990	2 N	29	101	3.4 U	3.3 U	39	3.3 U	3.1 U
4,4'-DDT	µg/kg	236	1.7E+03	1.7E+03	3.6E+04	7,370	7.1	179	49	3.4 U	3.3 U	15	3.3 U	3.1 U
Aldrin	µg/kg	--	2.9E+01	2.9E+01	1.8E+03	200 U	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U
Alpha-BHC	µg/kg	--	9.0E+01	9.0E+01	3.5E+04	200 U	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U
Alpha-Chlordane	µg/kg	2.24	1.6E+03	1.6E+03	3.5E+04	290	0.8 J	6.3	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U
Beta-BHC	µg/kg	--	3.2E+02	3.2E+02	1.4E+04	200 U	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U
Delta-BHC	µg/kg	--	--	--	--	200 U	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U
Dieldrin	µg/kg	19.9	3.0E+01	3.0E+01	3.1E+03	350 U	3.3 U	3.2 U	15	3.4 U	3.3 U	3.2 U	3.3 U	3.1 U
Endosulfan I	µg/kg	0.179	3.7E+05	--	3.7E+05	350 U	3.3 U	3.2 U	16	3.4 U	3.3 U	1 J	3.3 U	3.1 U
Endosulfan II	µg/kg	2.22	3.7E+05	--	3.7E+05	350 U	3.3 U	3.2 U	3.3 U	3.4 U	3.3 U	3.2 U	3.3 U	3.1 U
Endosulfan Sulfate	µg/kg	3.1	3.7E+05	--	3.7E+05	590 U	5.5 U	5.4 U	5.5 U	5.6 U	5.5 U	5.3 U	5.4 U	5.2 U
Endrin	µg/kg	2.22	1.8E+04	--	1.8E+04	350 U	3.3 U	3.2 U	28	3.4 U	3.3 U	3.2 U	3.3 U	3.1 U
Enrin Aldehyde	µg/kg	2.22	1.8E+04	--	1.8E+04	350 U	3.3 U	3.2 U	3.3 U	3.4 U	3.3 U	3.2 U	3.3 U	3.1 U
Endrin Ketone	µg/kg	--	1.8E+04	--	1.8E+04	350 U	3.3 U	3.2 U	3.3 U	3.4 U	3.3 U	3.2 U	3.3 U	3.1 U
Gamma-BHC (Lindane)	µg/kg	--	4.4E+02	4.4E+02	2.1E+04	200 U	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U
Gamma-Chlordane	µg/kg	2.7	1.6E+03	1.6E+03	3.5E+04	760	2.8	31	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U
Heptachlor	µg/kg	--	1.1E+02	1.1E+02	3.1E+04	250	1.9 U	10	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U
Heptachlor Epoxide	µg/kg	--	5.3E+01	5.3E+01	7.9E+02	200 U	1.9 U	1.8 U	18	1.9 U	1.9 U	1.8 U	1.8 U	1.8 U
Methoxychlor	µg/kg	--	3.1E+05	--	3.1E+05	1200 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	10 U
Toxaphene	µg/kg	--	4.4E+02	4.4E+02	--	12000 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U	100 U
Chlorinated Herbicides														
2,4-DB	µg/kg	--	4.9E+05	--	4.9E+05	130	12 U	12 U	55 U	56 U	NA	53 U	54 U	NA
2,4,5-T	µg/kg	--	6.1E+05	--	6.1E+05	12 U	12 U	12 U	11 U	11 U	NA	11 U	11 U	NA
2,4,5-TP (Silvex)	µg/kg	--	4.9E+05	--	4.9E+05	12 U	12 U	12 U	11 U	11 U	NA	11 U	11 U	NA
2,4-D	µg/kg	--	6.9E+05	--	6.9E+05	12 U	12 U	12 U	55 U	56 U	NA	53 U	54 U	NA
Dalapon	µg/kg	--	1.8E+06	--	1.8E+06	24 U	22 U	22 U	22 U	22 U	NA	21 U	22 U	NA
Dicamba	µg/kg	--	--	--	--	12 U	12 U	12 U	11 U	11 U	NA	11 U	11 U	NA
Dichloroprop	µg/kg	67.2	--	--	--	12 U	12 U	12 U	11 U	11 U	NA	11 U	11 U	NA
Dinoseb	µg/kg	--	6.1E+04	--	6.1E+04	12 U	12 U	12 U	22 U	22 U	NA	21 U	22 U	NA
MCPA	µg/kg	28500	--	--	--	2400 U	2200 U	2200 U	2200 U	2200 U	NA	2100 U	2200 U	NA
MCPP	µg/kg	--	6.1E+04	--	6.1E+04	2400 U	2200 U	2200 U	2200 U	2200 U	NA	2100 U	2200 U	NA

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate.

NA = The analyte was not analyzed.

Table 23. Analytical Results, AG-1 Pesticide Mixing Area

Analyte	Units	MCAS El Toro Background Value (95th quantile)	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	AG1-DP7 0.5' bgs LJ271	AG1-DP7 2.0' bgs LJ272	AG1-DP8 0.5' bgs LJ274	AG1-DP8 0.5' bgs (dup) LJ275	AG1-DP8 2.0' bgs LJ276	AG1-DP9 0.5' bgs LJ278	AG1-DP9 2.0' bgs LJ279	AG1-DP9 4.0' bgs LJ280	AG1-DP10 0.5' bgs LJ281
Organochlorine Pesticides														
4,4'-DDD	µg/kg	36.1	2.4E+03	2.4E+03	--	0.3 J	3.3 U	3.4 U	3.4 U	3.3 U	2 J	3.4 U	3.4 U	140
4,4'-DDE	µg/kg	145	1.7E+03	1.7E+03	--	2 J	3.3 U	3.4 U	3.4 U	3.3 U	35	3.4 U	3.4 U	66
4,4'-DDT	µg/kg	236	1.7E+03	1.7E+03	3.6E+04	0.3 J	3.3 U	3.4 U	3.4 U	3.3 U	4	3.4 U	3.4 U	450
Aldrin	µg/kg	--	2.9E+01	2.9E+01	1.8E+03	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	18 U
Alpha-BHC	µg/kg	--	9.0E+01	9.0E+01	3.5E+04	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	18 U
Alpha-Chlordane	µg/kg	2.24	1.6E+03	1.6E+03	3.5E+04	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	11 U
Beta-BHC	µg/kg	--	3.2E+02	3.2E+02	1.4E+04	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	18 U
Delta-BHC	µg/kg	--	--	--	--	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	18 U
Dieldrin	µg/kg	19.9	3.0E+01	3.0E+01	3.1E+03	0.06 J	3.3 U	3.4 U	3.4 U	3.3 U	0.9 J	3.4 U	3.4 U	32 U
Endosulfan I	µg/kg	0.179	3.7E+05	--	3.7E+05	3.4 U	3.3 U	3.4 U	3.4 U	3.3 U	0.3 J	3.4 U	3.4 U	32 U
Endosulfan II	µg/kg	2.22	3.7E+05	--	3.7E+05	3.4 U	3.3 U	3.4 U	3.4 U	3.3 U	3.2 U	3.4 U	3.4 U	32 U
Endosulfan Sulfate	µg/kg	3.1	3.7E+05	--	3.7E+05	5.7 U	5.4 U	5.6 U	5.6 U	5.6 U	5.4 U	5.7 U	5.6 U	53 U
Endrin	µg/kg	2.22	1.8E+04	--	1.8E+04	3.4 U	3.3 U	3.4 U	3.4 U	3.3 U	3.2 U	3.4 U	3.4 U	32 U
Enrin Aldehyde	µg/kg	2.22	1.8E+04	--	1.8E+04	3.4 U	3.3 U	3.4 U	3.4 U	3.3 U	3.2 U	3.4 U	3.4 U	32 U
Endrin Ketone	µg/kg	--	1.8E+04	--	1.8E+04	3.4 U	3.3 U	3.4 U	3.4 U	3.3 U	3.2 U	3.4 U	3.4 U	32 U
Gamma-BHC (Lindane)	µg/kg	--	4.4E+02	4.4E+02	2.1E+04	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	18 U
Gamma-Chlordane	µg/kg	2.7	1.6E+03	1.6E+03	3.5E+04	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	11 U
Heptachlor	µg/kg	--	1.1E+02	1.1E+02	3.1E+04	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	18 U
Heptachlor Epoxide	µg/kg	--	5.3E+01	5.3E+01	7.9E+02	1.9 U	1.8 U	1.9 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U	18 U
Methoxychlor	µg/kg	--	3.1E+05	--	3.1E+05	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	110 U
Toxaphene	µg/kg	--	4.4E+02	4.4E+02	--	110 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U	1100 U
Chlorinated Herbicides														
2,4-DB	µg/kg	--	4.9E+05	--	4.9E+05	57 U	54 U	31 J	56 U	56 U	54 U	57 U	NA	430
2,4,5-T	µg/kg	--	6.1E+05	--	6.1E+05	11 U	11 U	11 U	11 U	11 U	11 U	11 U	NA	11 U
2,4,5-TP (Silvex)	µg/kg	--	4.9E+05	--	4.9E+05	11 U	11 U	11 U	11 U	2 J	11 U	11 U	NA	11 U
2,4-D	µg/kg	--	6.9E+05	--	6.9E+05	57 U	54 U	56 U	56 U	56 U	54 U	57 U	NA	53 U
Dalapon	µg/kg	--	1.8E+06	--	1.8E+06	23 U	22 U	23 U	23 U	22 U	22 U	23 U	NA	21 U
Dicamba	µg/kg	--	--	--	--	11 U	11 U	11 U	11 U	11 U	11 U	11 U	NA	11 U
Dichloroprop	µg/kg	67.2	--	--	--	11 U	11 U	11 U	11 U	11 U	11 U	11 U	NA	11 U
Dinoseb	µg/kg	--	6.1E+04	--	6.1E+04	23 U	22 U	23 U	23 U	22 U	22 U	23 U	NA	21 U
MCPA	µg/kg	28500	--	--	--	2300 U	2200 U	2300 U	2300 U	2200 U	2200 U	2300 U	NA	2100 U
MCPP	µg/kg	--	6.1E+04	--	6.1E+04	2300 U	2200 U	2300 U	2300 U	2200 U	2200 U	2300 U	NA	2100 U

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate.

NA = The analyte was not analyzed.

Table 23. Analytical Results, AG-1 Pesticide Mixing Area

Analyte	Units	MCAS El Toro Background Value (95th quantile)	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	AG1-DP10 2.0' bgs LJ282	AG1-DP10 4.0' bgs LJ283	AG1-DP11 2.0' bgs LJ284	AG1-DP11 4.0' bgs LJ285	AG1-DP11 7.0' bgs LJ286	AG1-DP11 7.0' bgs (dup) LJ287	AG1-DP11 10.0' bgs LJ288	AG1-DP12 2.0' bgs LJ289
Organochlorine Pesticides													
4,4'-DDD	µg/kg	36.1	2.4E+03	2.4E+03	--	3.3 U	3.3 U	2 J	2 J	3.3 U	3.5 U	3.5 U	3.3 U
4,4'-DDE	µg/kg	145	1.7E+03	1.7E+03	--	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.3 U
4,4'-DDT	µg/kg	236	1.7E+03	1.7E+03	3.6E+04	3.3 U	3.3 U	5	6	3.3 U	3.5 U	0.5 J	3.3 U
Aldrin	µg/kg	--	2.9E+01	2.9E+01	1.8E+03	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	2 U	1.9 U
Alpha-BHC	µg/kg	--	9.0E+01	9.0E+01	3.5E+04	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	2 U	1.9 U
Alpha-Chlordane	µg/kg	2.24	1.6E+03	1.6E+03	3.5E+04	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U
Beta-BHC	µg/kg	--	3.2E+02	3.2E+02	1.4E+04	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	2 U	1.9 U
Delta-BHC	µg/kg	--	--	--	--	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	2 U	1.9 U
Dieldrin	µg/kg	19.9	3.0E+01	3.0E+01	3.1E+03	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.3 U
Endosulfan I	µg/kg	0.179	3.7E+05	--	3.7E+05	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.3 U
Endosulfan II	µg/kg	2.22	3.7E+05	--	3.7E+05	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.3 U
Endosulfan Sulfate	µg/kg	3.1	3.7E+05	--	3.7E+05	5.5 U	5.5 U	5.5 U	5.4 U	5.4 U	5.8 U	5.8 U	5.5 U
Endrin	µg/kg	2.22	1.8E+04	--	1.8E+04	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.3 U
Enrin Aldehyde	µg/kg	2.22	1.8E+04	--	1.8E+04	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.3 U
Endrin Ketone	µg/kg	--	1.8E+04	--	1.8E+04	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.5 U	3.5 U	3.3 U
Gamma-BHC (Lindane)	µg/kg	--	4.4E+02	4.4E+02	2.1E+04	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	2 U	1.9 U
Gamma-Chlordane	µg/kg	2.7	1.6E+03	1.6E+03	3.5E+04	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.1 U
Heptachlor	µg/kg	--	1.1E+02	1.1E+02	3.1E+04	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	2 U	1.9 U
Heptachlor Epoxide	µg/kg	--	5.3E+01	5.3E+01	7.9E+02	1.9 U	1.9 U	1.9 U	1.8 U	1.8 U	2 U	2 U	1.9 U
Methoxychlor	µg/kg	--	3.1E+05	--	3.1E+05	11 U	11 U	11 U	11 U	11 U	12 U	12 U	11 U
Toxaphene	µg/kg	--	4.4E+02	4.4E+02	--	110 U	110 U	110 U	110 U	110 U	120 U	120 U	110 U
Chlorinated Herbicides													
2,4-DB	µg/kg	--	4.9E+05	--	4.9E+05	55 U	55 U	55 U	54 U	54 U	58 U	NA	55 U
2,4,5-T	µg/kg	--	6.1E+05	--	6.1E+05	11 U	11 U	11 U	11 U	11 U	12 U	NA	11 U
2,4,5-TP (Silvex)	µg/kg	--	4.9E+05	--	4.9E+05	11 U	11 U	11 U	11 U	11 U	12 U	NA	11 U
2,4-D	µg/kg	--	6.9E+05	--	6.9E+05	55 U	55 U	55 U	54 U	54 U	58 U	NA	55 U
Dalapon	µg/kg	--	1.8E+06	--	1.8E+06	22 U	22 U	22 U	22 U	22 U	23 U	NA	22 U
Dicamba	µg/kg	--	--	--	--	11 U	11 U	11 U	11 U	11 U	12 U	NA	11 U
Dichloroprop	µg/kg	67.2	--	--	--	11 U	11 U	11 U	11 U	11 U	12 U	NA	11 U
Dinoseb	µg/kg	--	6.1E+04	--	6.1E+04	22 U	22 U	22 U	22 U	22 U	23 U	NA	22 U
MCPA	µg/kg	28500	--	--	--	2200 U	2200 U	2200 U	2200 U	2200 U	2300 U	NA	2200 U
MCPP	µg/kg	--	6.1E+04	--	6.1E+04	2200 U	2200 U	2200 U	2200 U	2200 U	2300 U	NA	2200 U

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate.

NA = The analyte was not analyzed.

Table 23. Analytical Results, AG-1 Pesticide Mixing Area

Analyte	Units	MCAS El Toro Background Value (95th quantile)	Residential Soil PRG	Residential Cancer Risk Screening Value	Residential Noncancer Risk Screening Value	AG1-DP12 7.0' bgs LJ290	AG1-DP12 7.0' bgs (dup) LJ291	AG1-DP12 10.0' bgs LJ292
Organochlorine Pesticides								
4,4'-DDD	µg/kg	36.1	2.4E+03	2.4E+03	--	3.2 U	20	3.5 U
4,4'-DDE	µg/kg	145	1.7E+03	1.7E+03	--	3.2 U	35	3.5 U
4,4'-DDT	µg/kg	236	1.7E+03	1.7E+03	3.6E+04	3.2 U	36	3.5 U
Aldrin	µg/kg	--	2.9E+01	2.9E+01	1.8E+03	1.8 U	1.9 U	2 U
Alpha-BHC	µg/kg	--	9.0E+01	9.0E+01	3.5E+04	1.8 U	1.9 U	2 U
Alpha-Chlordane	µg/kg	2.24	1.6E+03	1.6E+03	3.5E+04	1.1 U	1.1 U	1.2 U
Beta-BHC	µg/kg	--	3.2E+02	3.2E+02	1.4E+04	1.8 U	1.9 U	2 U
Delta-BHC	µg/kg	--	--	--	--	1.8 U	1.9 U	2 U
Dieldrin	µg/kg	19.9	3.0E+01	3.0E+01	3.1E+03	3.2 U	3.3 U	3.5 U
Endosulfan I	µg/kg	0.179	3.7E+05	--	3.7E+05	3.2 U	5	3.5 U
Endosulfan II	µg/kg	2.22	3.7E+05	--	3.7E+05	3.2 U	3.3 U	3.5 U
Endosulfan Sulfate	µg/kg	3.1	3.7E+05	--	3.7E+05	5.3 U	5.4 U	5.8 U
Endrin	µg/kg	2.22	1.8E+04	--	1.8E+04	3.2 U	3.3 U	3.5 U
Enrin Aldehyde	µg/kg	2.22	1.8E+04	--	1.8E+04	3.2 U	3.3 U	3.5 U
Endrin Ketone	µg/kg	--	1.8E+04	--	1.8E+04	3.2 U	3.3 U	3.5 U
Gamma-BHC (Lindane)	µg/kg	--	4.4E+02	4.4E+02	2.1E+04	1.8 U	1.9 U	2 U
Gamma-Chlordane	µg/kg	2.7	1.6E+03	1.6E+03	3.5E+04	1.1 U	1.1 U	1.2 U
Heptachlor	µg/kg	--	1.1E+02	1.1E+02	3.1E+04	1.8 U	1.9 U	2 U
Heptachlor Epoxide	µg/kg	--	5.3E+01	5.3E+01	7.9E+02	1.8 U	1.9 U	2 U
Methoxychlor	µg/kg	--	3.1E+05	--	3.1E+05	11U	11 U	12 U
Toxaphene	µg/kg	--	4.4E+02	4.4E+02	--	110 U	110 U	120 U
Chlorinated Herbicides								
2,4-DB	µg/kg	--	4.9E+05	--	4.9E+05	53 U	54 U	NA
2,4,5-T	µg/kg	--	6.1E+05	--	6.1E+05	11 U	11 U	NA
2,4,5-TP (Silvex)	µg/kg	--	4.9E+05	--	4.9E+05	11 U	11 U	NA
2,4-D	µg/kg	--	6.9E+05	--	6.9E+05	53 U	54 U	NA
Dalapon	µg/kg	--	1.8E+06	--	1.8E+06	21 U	22 U	NA
Dicamba	µg/kg	--	--	--	--	11 U	11 U	NA
Dichloroprop	µg/kg	67.2	--	--	--	11 U	11 U	NA
Dinoseb	µg/kg	--	6.1E+04	--	6.1E+04	21 U	22 U	NA
MCPA	µg/kg	28500	--	--	--	2100 U	2200 U	NA
MCPP	µg/kg	--	6.1E+04	--	6.1E+04	2100 U	2200 U	NA

Notes:

µg/kg = micrograms per kilogram

-- = The regulatory threshold does not exist for the specified analyte.

U = The analyte was not detected above the detection limit shown.

J = The concentration is an estimate.

NA = The analyte was not analyzed.

Appendix F
Response to Regulator Comments

Document Title:

(1) Draft Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California

Reviewer: Rafat Abbasi, P.E., Department of Toxic Substances Control. *Dated:* May 27, 2003

+Comment No.	Section/ Page No.	Comment	Response
GENERAL COMMENTS			
1.		Based on our review of Navy's report titled "*Draft Final Evaluation of Perchlorate in Ground Water, Marine Corps Air Station, El Toro*" it is clear that sampling results indicated detection from 4 ppb to 280 ppb. Most of the concentration detected ranged from non-detect to 13 ppb. One high hit of 280 ppb was reported in monitoring well 01MW201 at Site 1. Our recommendation is that the Navy includes a discussion of the perchlorate issue in the EBS and provides a map that shows sampling conducted to date, including locations and associated analytical results.	The referenced report and its findings will be summarized in the 5th paragraph of Section 4.1.3 (Installation Restoration Program) in the context of elevated concentrations of perchlorate detected at IRP Site 1. This discussion will also include perchlorate sampling evaluation at other stationwide locations. However, since Site 1 (and Sites 2 and 17 which were also included in this evaluation) is not part of this EBS due to the federal agency-to-agency transfer, a figure showing sampling conducted to date and analytical results will not be included.
2.		Include a table and a map that shows the location of all the buildings and identifying housing areas on the station. Is all the information on lead-based paint survey included in section 4.2.1.2? If not, then a table should be provided to include information on lead-based paint (LBP) survey and the associated results. Additionally, an informational summary of each building should be provided. This informational summary should include past uses, year of construction, square footage, parcel number, and disposition (reuse or demolition).	Table A-1 (Appendix A) currently presents this information such as past use, year of construction, square feet, and parcel number (property ID will be updated to reflect the City of Irvine parcels and carve-outs within). Figure 1-2 will be revised to show the locations of all the buildings and identifying housing areas. All available information on LBP survey was included in Section 4.2.1.2.
3.		A map showing proposed reuse of on base property should be included in the EBS. The Navy should use information in the Draft Environmental Impact Report to develop such a map.	The demarcations of Navy sale parcels (City of Irvine parcels I-IV) were superimposed on all relevant drawings in the Draft Final EBS and Draft FOST and FOSL. The City of Irvine's proposed reuses of the property will be overlain on an appropriate drawing in the Draft Final FOST and FOSL, rather than the Final EBS. An additional parcel V proposed for transfer to the California Air National Guard (CANG) will also be illustrated in the Final EBS and Draft Final FOST and FOSL.

Document Title:

(1) Draft Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California

Reviewer: Rafat Abbasi, P.E., Department of Toxic Substances Control. *Dated:* May 27, 2003

+Comment No.	Section/ Page No.	Comment	Response
4.		In section 2.2.1, it is stated that the Navy will further divide the study areas into parcels in the Finding of Suitability to Transfer (FOST). However, the FOST includes quadrant designation based on Environmental Condition of Property (ECP) rather than on land use, or potential reuse scenarios. We require that the Navy present study areas based on potential reuse scenarios in the FOST.	The quadrants referenced in the Draft FOST were presented as an interim designation pending Navy's final decision on the illustration of City of Irvine's proposed reuse. These designations will be removed in the Draft Final FOST and FOSL. The study areas A, B, C, and D that were presented in the Draft and Draft Final EBS were interim geographic (arbitrary) demarcations. The Final EBS will be updated to designate the parcels/ carve-outs (and associated buildings/LOCs within) based on the demarcation of Navy sale parcels (City of Irvine parcels I-IV, and an additional parcel V proposed for transfer to CANG). Accordingly, transferable parcels in the FOST have been designated now as I-A, II-A, III-A, IV-A, and V-A and non-transferable areas have been designated as carve-outs I-B, C...etc., II-B, C, etc. The City of Irvine's proposed reuse scenarios will be overlain on an appropriate drawing in the Draft Final FOST and FOSL.

SPECIFIC COMMENTS

Document Title:

(1) Draft Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California

Reviewer: Rafat Abbasi, P.E., Department of Toxic Substances Control. *Dated:* May 27, 2003

+Comment No.	Section/ Page No.	Comment	Response
1.	Table 4-1: Potential Release Locations	PRL 154. The notes indicate that there is a potential that the release may have occurred and further evaluation is necessary. It is stated that a 280-gallon UST containing diesel fuel was identified on the drawing for Building 154. It is also stated that no records of tank removal and site closure were available. In the absence of these records, please explain how the determination for assigning ECP category 2e was made. PRL 165. We noted a discrepancy between the notes in Table 4-1 and the Appendix E associated with this PRL. In Figure 4 in Appendix E, it is concluded that further evaluation is required in accordance with EPA and DTSC's comment letters dated April 11, 2003. In the notes however, it is stated that no further action is required by EPA and DTSC. Please remove this discrepancy and revise the table and ECP category type. We had stated in our letter that we will not concur with no further action until perchlorate sampling in the designated locations is conducted. The results in the table shown in Appendix E indicate that percholorate was not detected. Therefore, we concur with the no further action. PRL 245. Since a release is suspected, please state in the notes that further evaluation is recommended. PRL 295. See our comment on PRL 245. PRL 347. DTSC agreed with the no further action in our April 11, 2003 letter. However, we noted a discrepancy between the notes in Table 4-1 and the Appendix E associated with this PRL. In Figure 4 in Appendix E, it is concluded that further evaluation is required in accordance with EPA and DTSC's comment letters dated April 11, 2003. Please remove the discrepancy. Additionally, is MTBE a concern at this PRL in the area of Automotive Shop?	PRL 154. The notes state, "Further evaluation is recommended to asses whether the tank is present and if releases of tank contents have occurred". The ECP category 2e was assigned based on the drawing identifying diesel fuel (petroleum product for the Type 2 designation) as the contents of the purported tank and the need for further evaluation (subtype 2e). There was no indication of a potential release of materials other than petroleum products based on records review and visual site inspections. PRL 165. The discrepancy has been removed. PRL 245. Text has been revised as indicated. PRL 295. Text has been revised as indicated. PRL 347. The conclusions in the Appendix E figure has been revised as indicated. All 4 samples, including the one collected at the Automotive Shop area were analyzed for volatile organic compounds (VOCs) of which MTBE was an analyte. The results were presented in Table 5 and MTBE was not detected in any of the samples.

Document Title:

(1) Draft Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California

Reviewer: Rafat Abbasi, P.E., Department of Toxic Substances Control. *Dated:* May 27, 2003

+Comment No.	Section/ Page No.	Comment	Response
1. (cont.)		PRL 359, 360, and 368. Additional information is needed in the notes. Include background information and a statement that further evaluation is recommended. PRL 372. It is stated that a 1,000-gallon UST containing fuel oil was identified on the drawing for Building 372. It is also stated that no records of tank removal and site closure were available. In the absence of these records, please explain how the determination for assigning ECP category 2e was made. PRL 392. We concur with the no further action recommendation based on our review of Appendix E. However, the notes need to be revised to state that DTSC required additional sampling results be submitted for review. We did not concur with the no further action in our letter of April 11, 2003. PRL 439. Appendix E, Analytical Results: It is stated that cadmium, chromium, lead, mercury and silver exceeded RCRA hazardous waste designation. Copper, lead, and zinc exceeded California hazardous waste designations. The summary in the table does not provide the results for these metals. Only cobalt, copper, iron, manganese, and nickel results are provided. Include all the elements that were detected above background in the summary table. PRL 445. Additional information is needed in the notes. Include background information and a statement that further evaluation is recommended.	PRL 359, 360, and 368. Notes has been revised as indicated. PRL 372. The notes state, "Further evaluation is recommended to asses whether the tank is present and if releases of tank contents have occurred". The ECP category 2e was assigned based on the drawing identifying fuel oil (petroleum product for the Type 2 designation) as the contents of the purported tank and the need for further evaluation (subtype 2e). There was no indication of a potential release of materials other than petroleum products based on records review and visual site inspections. PRL 392. The notes in Table 4-1 and the conclusions in the Appendix E figure have been revised to state that NFA was concurred with by DTSC on April 24, 2003. The response to DTSC comments dated April 11 and 24, 2003 were included in Appendix F and reflect DTSC's requests for additional sampling. PRL 439. The summary table has been revised as indicated. PRL 445. Text has been revised as indicated.

Document Title:

(1) Draft Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California

Reviewer: Rafat Abbasi, P.E., Department of Toxic Substances Control. *Dated:* May 27, 2003

+Comment No.	Section/ Page No.	Comment	Response
1. (cont.)		PRL Runways. In Appendix E, only analytical results are provided and no risk screening summary is included. Please revise Appendix E to include a figure and summary of risk screening. In our transmittal dated April 11, 2004 [sic] (page 12, comment 46), DTSC was concerned that the concentration of polynuclear aromatic hydrocarbons (PAHs) exceeded associated reference level of 22 ug/kg. Additionally, benzopyrene was also detected at an elevated level (160 ug/kg) and accounts for most of the cumulative risk. Since the cumulative risk exceeds our point of departure, further assessment will be necessary. The ECP Category type 7 should be assigned to this PRL.	PRL Runways. The figure with the risk-screening summary was inadvertently left out of the copy that was sent to this reviewer. Future copies will include all figures. In the response to DTSC's comment # 45 dated April 11, 2003, the Runways area was proposed to be designated as ECP Type 3 with the exception of the area where sample HA7 was located (based on the analytical results and the risk screening summary); that area was designated as ECP Type 7. DTSC concurred with this designation. These conclusions and DTSC's concurrence were discussed during the May 26, 2003 BCT meeting. DTSC acknowledged their concurrence with the ECP Type designations and requested the Navy to indicate so in this RTC.
2.	Table 4-2: RCRA Facility Assessment Sites	Table 4-2 notes should include reference to the photographs of drum storage areas taken during a site visit by the Department of Health Services on October 29, 1980. It is not sufficient to state that *"Based on DTSC review dated .....further evaluations required."*	The notes have been revised to include references as indicated.
3.	Table 4-3: Temporary Accumulation Areas (TAA)	In the notes in Table 4-3, for sites that the Navy is awaiting no further action from the regulatory agencies, more information should be provided to briefly describe actions taken to date. TAA 115. We are not aware that DTSC approved a no further action for this site. Is the site undergoing removal or remedial action?	More information as appropriate has been added to the notes in Table 4-3. TAA 115 was listed as ECP Type 5 requiring further action. The notes only indicate that NFA was recommended based on RCRA Facility Assessment sampling results and the 2002 EBS visual site inspections.

Document Title:

(1) Draft Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California

Reviewer: Rafat Abbasi, P.E., Department of Toxic Substances Control. *Dated:* May 27, 2003

+Comment No.	Section/ Page No.	Comment	Response
4.	Table 4-4: Aerial Photograph Anomaly Sites (APHOs)	APHOs 59 through 65. It seems that the notes associated with APHOs are identical but ECP category types are different. The notes for all APHOs state that removal site evaluation is underway but ECP category assigned to APHO 59 is 5 and 7 to APHOs 60 through 65. Please explain why the ECP categories are different when the status of the APHOs appear to be the same. APHOs 85 through 124. We require that the Navy change ECP category for APHOs 85 through 124 for which DTSC's concurrence has not been made.	The ECP Type for APHOs 59-65 will be revised to 7. Navy is currently in discussion with DTSC regarding the review of the technical information packages submitted for many of the APHOs between APHO 85 and APHO 124. The Navy requests that this group of APHOs be reviewed prior to completion of the Final EBS. We recommend that APHOs 83, 85, 87, 89, 90, 91, 95, 102, 104, 108, 109, 112, 114, 116, 117, 119, 123 and 124 be reviewed as the first priority and APHOs 92, 96, 100, 106, 110, 111, 113 and 121 be reviewed as a second priority. The Navy is available for conference calls and site visits to assist DTSC in completing their review of these APHOs. APHOs that do not receive a concurrence letter from DTSC for no further action will be listed as Type 7 in the Final EBS.
5.	Installation Restoration Program Sites	IRP 19 Aircraft Expeditionary Refueling (ACER) Site (OU-3). We maintain our position that the information from The Final Action Memorandum, Non-Time Critical Removal Action for Unit 2 of Site 19 should be included in the notes and in the text. The Navy should also provide disclosure of the site controls through a notification in the Finding of Suitability to Transfer and subsequent deed.	The notes will be revised to include information from the referenced document and appropriate notifications will be provided in the FOST.
6.	Table 4-11 PCB Transformers and PCB Storage Areas	The notes state that all response actions have been completed. Did the Navy obtain regulatory concurrence?	For PCB transformers and PCB transformer/equipment storage areas where a response action was conducted, any regulatory concurrence obtained is noted in the notes section of Table 4-11 (some letters were for related LOCs under which the response action was taken). Transformers were typically removed/replaced by facilities management of MCAS El Toro.

Document Title:

(1) Draft Final Environmental Baseline Survey, Former Marine Corps Air Station, El Toro, California

Reviewers: Nicole Moutoux, Project Manager, USEPA, Region IX *Dated:* May 20, 2003

Comment No.	Section/ Page No.	Comment	Response
GENERAL COMMENTS			
1.		The discussion on page 4-6 regarding Anomaly Area 3 should include information about the Removal Site Evaluation as well as include the ECP area type for Anomaly Area 3 within the text. Currently the text refers the reader to Table 4-4 for a discussion of the APHO sites. The table then states that a "removal site evaluation (RSE) is underway at Anomaly Area 3" and provides the area type for each APHO. Because documents have been issued referring specifically to Anomaly Area 3 and not to APHOs 59-65, more information regarding the RSE should be in the text on page 4-6 and the text should indicate the area type for the entire Anomaly Area 3.	The referenced text (page 4-6) and tables have been revised to include information regarding the RSE and the area type for entire Anomaly Area 3.
SPECIFIC COMMENTS			
1.	Figure 6-1a	There is a discrepancy between the area types shown for APHOs 59-65 on Figure6-1a and what is in Table 4-4. Table 4-4 shows the APHOs as area type 7 while the figures shows then as type 5. The figure should be revised to show these APHOs as area type 7.	The figure has been revised to show area type 7 for APHOs 59-65.
2.	Appendix E, PRL 46	No figure is provided for this PRL.	The figure was inadvertently left out in the copy that was sent to this reviewer. Future copies will include all figures.
3.	Appendix E, PRL 130	No figure is provided for this PRL.	The figure was inadvertently left out in the copy that was sent to this reviewer. Future copies will include all figures.
4.	Appendix 2, Pesticide Mixing Area	No figure is provided for this PRL.	The figure was inadvertently left out in the copy that was sent to this reviewer. Future copies will include all figures.