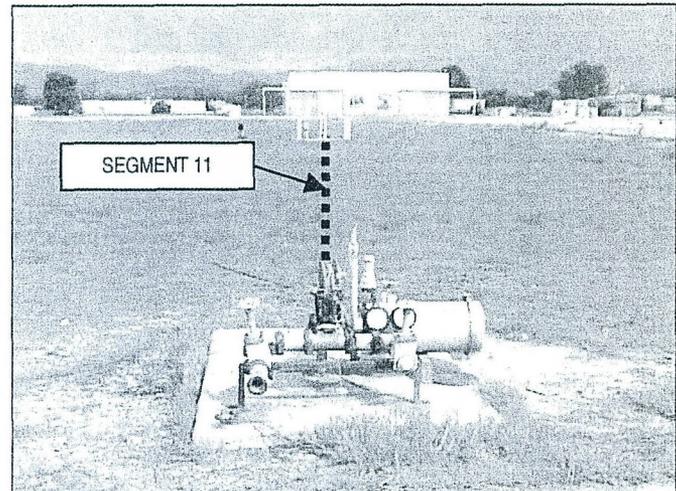




Information Package

Historical Documentation Pertaining to MSC JP5, Unit 4, Segment 11
Former Marine Corps Air Station, El Toro



4 March 2004

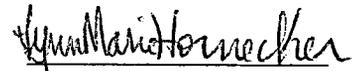
Prepared by:
Naval Facilities Engineering Command
Southwest Division
San Diego, California

Information Package

Historical Documentation Pertaining to MSC JP5, Unit 4, Segment 11
Former Marine Corps Air Station, El Toro

4 March 2004

Prepared by:


Lynn Marie Hornecker
Project Manager

Naval Facilities Engineering Command
Southwest Division
San Diego, California

Contents

Overview of Historical Field Sampling Activities near Segment 11

**Excerpts from RFA Report (JEG 1993) for Solid Waste Management Unit
(SWMU 257)**

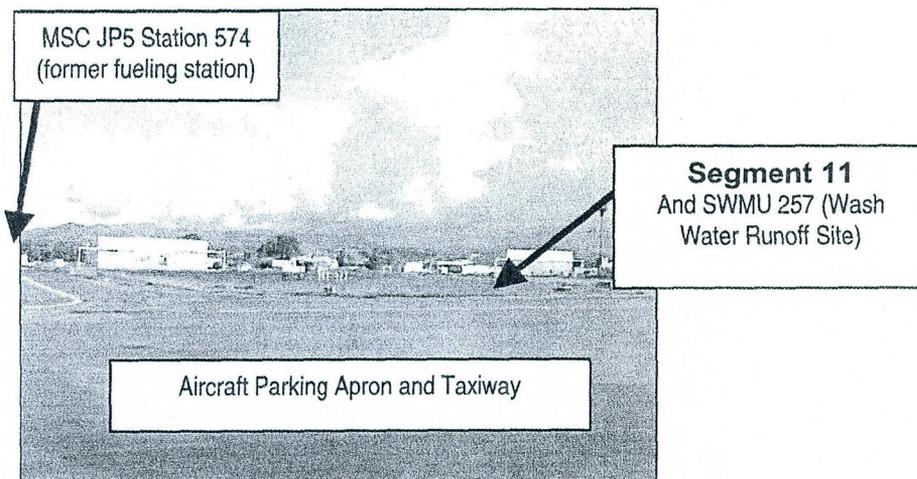
Excerpts from USEPA Region 9 Preliminary Remediation Goals dated 2002

Excerpt from Station 574 Transmittal dated 23 January 2004

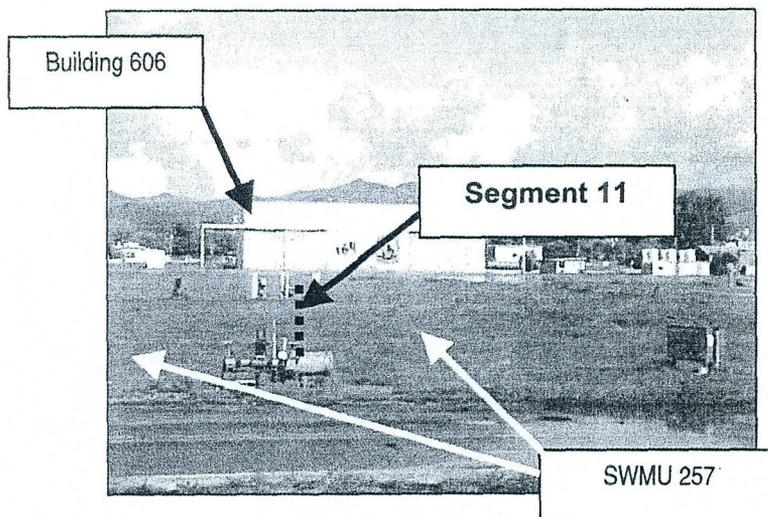
Overview of Historical Field Sampling Activities near Segment 11

The area adjacent to the JP5 pipeline segment known as MSC JP5, Unit 4, Segment 11 (Segment 11) was visually inspected and investigated as Solid Waste Management Unit (SWMU) 257 – Wash Water Runoff Site - during the Resource Conservation and Recovery Act Facility Assessment (RFA). SWMU 257 encompasses the unpaved basin area between two refueling stations on the aircraft parking apron northwest of Building 372 in the northeastern section of the former Marine Corps Air Station, El Toro. Segment 11 is approximately 260 feet long and the pipe diameter is 3 inches. SWMU 257 encompasses an area of approximately one-half acre and Segment 11 is located parallel to the southeastern edge of the basin. The following photographs show the Segment 11 vicinity.

Photograph 1. Segment 11, SWMU 257, and Nearby Fueling Station 574.
Date of Photograph: 2 March 2004.



Photograph 2. Segment 11, SWMU 257, and Nearby Building 606.
Date of Photograph: 2 March 2004.



The RFA visual inspection of SWMU 257 was conducted on 13 May 1991. The inspection report states that stains were observed on paved and unpaved areas. Sampling was conducted within the unpaved basin area during 1992 to determine whether or not spilled jet fuel from the nearby taxiways and fueling stations was transported with surface runoff into the basin. Six (6) soil samples were collected from three (3) shallow borings during the RFA sampling visit. Samples were collected at 2 feet below ground surface (bgs) and 5 feet bgs. Two of the borings were located approximately 15 feet northwest of Segment 11 (257H2 and 257H3) and one boring was located approximately 30 feet southeast of Segment 11 (257H1). The samples collected at a depth of 5 feet bgs represent the depth near the base of the pipeline Segment 11. The inspection and sampling data records are attached.

Toluene and 2-butanone (also known as methyl ethyl ketone (MEK)) were detected in soil samples collected from boring 257H2. The maximum toluene concentration was 1 microgram per kilogram (ug/kg) "J" in the 5-foot sample. The maximum 2-butanone concentration was 7 ug/kg "J" in the 2-foot sample. The toluene and 2-butanone laboratory results were qualified with the "J" qualifier to indicate that the results are estimated. Since toluene was detected in a sample at a depth of 5 feet, and Segment 11 is buried at a depth of 4 to 5 feet, the toluene may have originated from the pipeline. Alternatively, the toluene could have been present in surface runoff that accumulated in the basin of SWMU 257. Hazard Index (HI) levels were calculated using the United States Environmental Protection Agency (USEPA) Preliminary Remediation Goals (PRGs) for residential soil dated 2002.

Screening Risk Evaluation for Segment 11 Based Upon SWMU 257 Data.

Chemical	Maximum Concentration and USEPA Region 9 Preliminary Remediation Goals (PRGs) date 2002	Screening Risk Calculation Based upon Residential Soil
Toluene	1 ug/kg (from Boring 257H2, 5-foot sample, northwest of Segment 11) PRG Toluene _{RES} = 520,000 ug/kg	Hazard Index (HI) _{Toluene} = 1/520,000 = 0.0000019 HI < 1
2-Butanone	7 ug/kg (from Boring 257H2, 2-foot sample, northwest of Segment 11) PRG 2-Butanone _{RES} = 7,300,000 ug/kg	HI _{2-Butanone} = 7/7,300,000 = 0.0000009 HI < 1

Residual fuel was removed and pressure testing activities were conducted for pipeline Segment 11 in December 2003, and the results are published in the "Closure Report, Components of Location of Concern MSC JP-5, Unit 4, Segment 11, Secondary JP-5 Fuel Pipeline Closure and Abandonment, Former Marine Corps Air Station, El Toro, California" (Shaw 27 February 2004). The testing activities included the excavation and removal of topsoil over part of Segment 11. The excavation of topsoil allowed the contractor to visually inspect the caps at the ends of Segment 11. The excavation was approximately 3-1/2 feet deep. Navy representatives observed the excavation and excavated soils during December 2003, and no petroleum odors were noticed.

On 2 March 2004, Navy representatives inspected the vicinity of Segment 11 and SWMU 257. Photographs were taken and are presented in this information package. No stains were observed on the paved or unpaved areas.

Based upon the results of the testing activities of December 2003, the RFA sampling visit data, and the observations from the recent visual inspection, no further action status is recommended. Due to the presence of toluene and 2-butanone in samples from boring 257H2 located northwest of the pipeline, Environmental Condition of Property (ECP) category 3 is recommended.

References and/or Sources of Information

Jacobs Engineering Group. 1993. Marine Corps Air Station, El Toro, El Toro, California, Installation Restoration Program, Final Resource Conservation and Recovery Act Facility Assessment Report. July. [Navy Contract N68711-89-D-9296, CTO 193]

Shaw Environmental, Inc. 2004. Closure Report, Components of Location of Concern MSC JP-5, Unit 4, Segment 11, Secondary JP-5 Fuel Pipeline Closure and Abandonment, Former Marine Corps Air Station, El Toro, California. 27 February. [Navy Contract N62474-98-D-2076, CTO 24]

Southwest Division, Naval Facilities Engineering Command. 2004. Proposed Strategy, Evaluation of Former Jet Fuel Pump Station, MSC JP5 Station 574, Former Marine Corps Air Station, El Toro. January.

SOUTHWESTNAVFACENGCOM
Code 06CC.LMH
Telephone: (619) 532-0783/Fax (619) 532-0780

File: etswtr4March2004JP5Unit4Seg11

**Excerpts from RFA Report (JEG 1993) for Solid Waste Management Unit
(SWMU 257)**

MARINE CORPS AIR STATION EL TORO
EL TORO, CALIFORNIA
INSTALLATION RESTORATION PROGRAM
FINAL RESOURCE CONSERVATION
AND RECOVERY ACT (RCRA)
FACILITY ASSESSMENT REPORT

EXCERPTS
RFA DOCUMENTATION PERTAINING
TO SWMU 257
NOTE: ANNOTATIONS WERE MADE BY THE
WRITER OF THE INFORMATION PACKAGE.

PREPARED BY:
Southwest Division, Naval Facilities
Engineering Command
1220 Pacific Highway
San Diego, California 92132-5190

THROUGH:
CONTRACT #N65711-89-D-9296
CTO #193
DOCUMENT CONTROL NO:
CLE-C01-01F193-S2-0001

WITH:
Jacobs Engineering Group, Inc.
3655 Nobel Drive, Suite 200
San Diego, California 92122

In association with:
International Technology Corporation
CH2M HILL

M. W. Arends
Mike Arends, P.E.
CLEAN Project Manager
CH2M HILL, Inc.
7/16/93
Date

Raoul Portillo
Raoul Portillo
CLEAN Technical Reviewer
Jacobs Engineering Group Inc.
15 July 1993
Date

Table 6-15
 Recommendations for SWMUs/AOCs
 MCAS EI Toro RFA

SWMU No.	SWMU/AOC Type	Recommendation (F/NFA)	Description of Further Action	Rationale for Further Action
224	Hazardous Waste Storage Area	NFA	--	--
225	Hazardous Waste Storage Area	NFA	--	--
226	Hazardous Waste Storage Area	NFA	--	--
227	Hazardous Waste Storage Area	NFA	--	--
229	Hazardous Waste Storage Area	NFA	--	--
231	Underground Storage Tank	NFA	--	--
232	Oil/Water Separator	NFA	--	--
233	Oil/Water Separator	NFA	--	--
234	Hazardous Waste Storage Area	NFA	--	--
241	Drum Storage Area	NFA	--	--
242	Hazardous Waste Storage Area	NFA	--	--
243	Wash Rack	NFA	--	--
244	PCB Spill Area	NFA	--	--
248	Oil/Water Separator	NFA	--	--
249	Underground Storage Tank	NFA	--	--
250	Underground Storage Tank	NFA	--	--
252	Hazardous Waste Storage Area	NFA	--	--
253	Vehicle Wash Rack	NFA	--	--
255	Hazardous Waste Storage Area	NFA	--	--
256	Hazardous Waste Storage Area	NFA	--	--
257	Wash Water Runoff Site	NFA	--	--
258	Wash Water Runoff Site	NFA	--	--
260	Aboveground Storage Tank	NFA	Repair cracks in pavement	Prevent future migration of petroleum hydrocarbons
261	Drum Storage Area	NFA	--	--
262	Fuel Storage Area	NFA	--	--
263	Underground Storage Tank	NFA	--	--
264	Equipment Storage Area	NFA	--	--
265	Metal Plating Sewer Lines	NFA	--	--
269	Fuel Storage Locker	NFA	--	--
270	Wash Rack	NFA	--	--

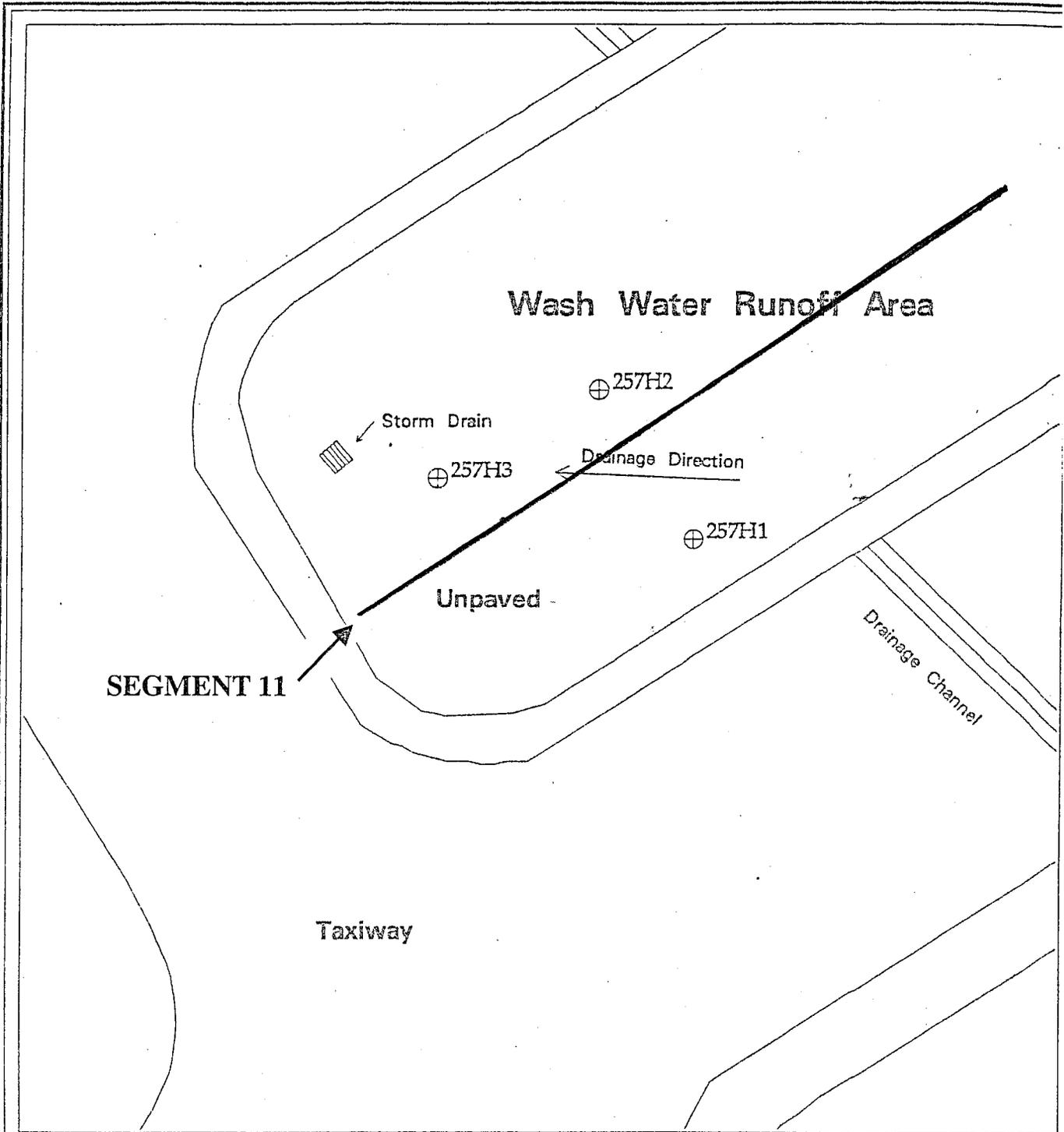


Figure 77 Sample Location Map

SWMU/AOC Number and Type:

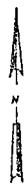
257 - Wash Water Runoff Site

Boring Location and Number:

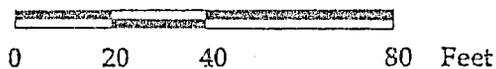
Features:

- ⊕ 123H4 5' Deep Boring
- ⊕ 123B4 25' Deep Boring
- ▲ 123A4 60' Long, Angle Boring

-  Building
-  Concrete
-  Fence
-  Railroad



Scale



MCAS El Toro
RCRA Facility Assessment

MCAS EL TORO RCRA FACILITY ASSESSMENT -- SAMPLING VISIT RESULTS

SWMU/AOC NUMBER	SWMU/AOC TYPE (FIGURE)	BORING NUMBER	SAMPLE DEPTH (FEET)	ANALYTICAL TEST RESULTS							RECOMMENDATIONS	
				TPH (mg/kg)	TFH (mg/kg)		VOCs (ug/kg)	SVOCs (ug/kg)	PESTICIDES/PCBs (ug/kg)	METALS (mg/kg)	Action	Rationale
					Gasoline	Diesel						
257	Wash Water Runoff (77)	H1	2	NA	ND	ND	ND	NA	NA	NA	NFA CRDL - Contract Required Detection Limit	
			5	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-8 BJ * 2-Butanone-3 J	NA	NA	NA		
		H2	2	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-13 BJ * 2-Butanone-7 J	NA	NA	NA		
			5	NA	ND	ND	Methylene Chloride-4 BJ * Acetone-7 BJ * Toluene-1 J	NA	NA	NA		
		H3	2	NA	ND	ND	Methylene Chloride-4 BJ *	NA	NA	NA		
			5	NA	ND	ND	Methylene Chloride-4 BJ * Acetone-12 B * 2-Butanone-2 J	NA	NA	NA		

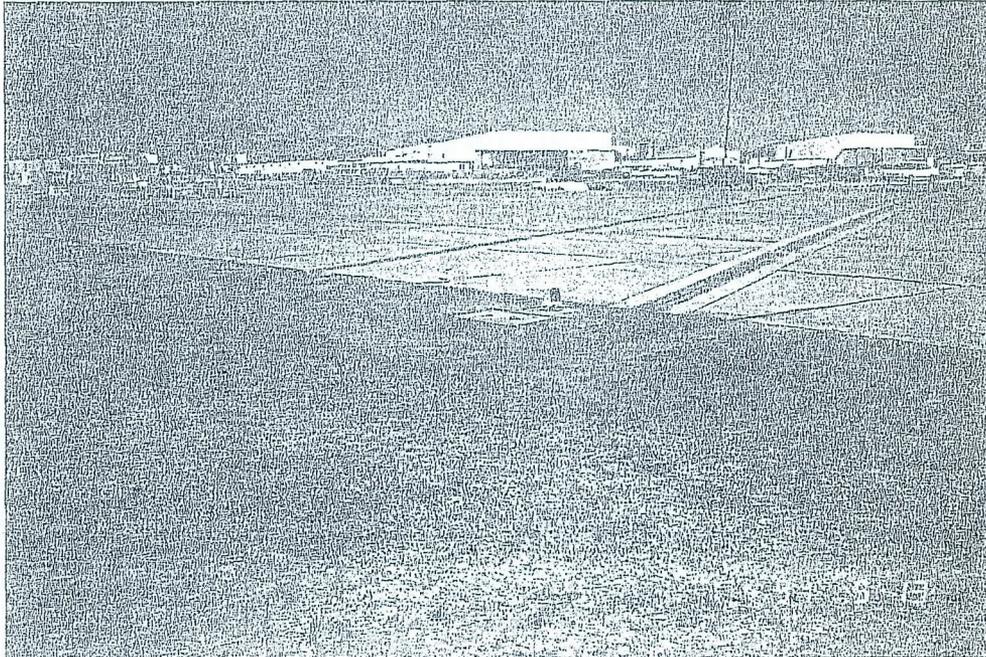
Evaluation Form
SWMU/Area of Concern
Number 257

Name: Wash Water Runoff Site

Location: Fuel Station 575

Size: Approximately 1/2 acre

Date of Site Visit: 13 May 1991



Period of Operation

Currently active

**Evaluation Form
SWMU/Area of Concern
Number 257**

Unit Characteristics

Based on an interview with an employee at MCAS El Toro, the Direct Fueling Stations were frequently washed and the runoff was allowed to flow to unpaved areas. Fuel stations 574 and 575 are located on the northeast side of the Aircraft Control Tower. For a description of the area at fuel station 574, see Evaluation Form for SWMU/AOC Number 16.

Aircraft at fuel station 575 are refueled on concrete fuel pads. The fuel pads are sloped so that runoff flows in a southwest direction. Near the southwest end of the fuel pads are two parallel diversion gutters. The gutters bisect the fuel pad to direct runoff toward an unpaved area located on the north side of each of the fuel stations.

The fuel station has stains on both paved and unpaved areas. A drainage path has been eroded in the unpaved soil area north of the fuel pads. The drainage path leads from the gutters' exit point to a storm drain located in the center of the unpaved areas.

A drain outlet is located near the northeast end of the unpaved area north of fuel station 574. The opening appears to come from storm drains located near Bldgs 605 and 606. The outlet opens to an unlined ditch which runs the length of the unpaved area and empties into the storm drain located at the west end of the area.

Waste Characteristics

Waste JP-5

Possible Migration Pathways

Surface soil
Storm drain

Evidence of Release

Stains were observed at paved and unpaved areas. A drainage path cutting through the unpaved area indicates the potential for runoff to carry spilled JP-5 to the unpaved area and possibly down the storm drain.

**Evaluation Form
SWMU/Area of Concern
Number 257**

Exposure Potential

Authorized on-Station personnel

Recommendations

A sampling visit is recommended for this area.

SOUTHWESTNAVFACENGCOM
Code 06CC.LMH
Telephone: (619) 532-0783/Fax (619) 532-0780

File: etswtr4March2004JP5Unit4Seg11

**Excerpt from USEPA Region 9 Preliminary Remediation Goals
Dated 2002**

Key: SFo, I=Cancer Slope Factor oral, Inhalation RfDo, I=Reference Dose oral, inhalation I=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca)
 ***=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION					CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS									
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFI 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.	Contaminant	Residential Soil (mg/kg)	"Direct Contact Exposure Pathways"			"Migration to Ground Water"								
									Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)							
	1.0E+00	h	1.0E+00	r	1	79-20-9	Methyl acetate	2.2E+04	nc	9.2E+04	nc	3.7E+03	nc	6.1E+03	nc					
	3.0E-02	h	3.0E-02	r	1	98-33-3	Methyl acrylate	7.0E+01	nc	2.3E+02	nc	1.1E+02	nc	1.8E+02	nc					
2.4E-01	h	2.4E-01	r	0	0.10	95-53-4	2-Methylaniline (o-toluidine)	2.0E+00	ca	7.2E+00	ca	2.8E-02	ca	2.8E-01	ca					
1.8E-01	h	1.8E-01	r	0	0.10	638-21-5	2-Methylaniline hydrochloride	2.7E+00	ca	9.6E+00	ca	3.7E-02	ca	3.7E-01	ca					
	5.0E-04	i	5.0E-04	r	0	0.10	94-74-6	2-Methyl-4-chlorophenoxyacetic acid	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc				
	1.0E-02	i	1.0E-02	r	0	0.10	94-81-5	4-(2-Methyl-4-chlorophenoxy) butyric acid	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
	1.0E-03	i	1.0E-03	r	0	0.10	93-65-2	2-(2-Methyl-4-chlorophenoxy) propionic acid	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc				
	1.0E-03	i	1.0E-03	r	0	0.10	16484-77-8	2-(2-Methyl-1,4-chlorophenoxy) propionic acid	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc				
	8.6E-01	r	8.6E-01	h	1	108-87-2	Methylcyclohexane	2.6E+03	nc	8.7E+03	nc	3.1E+03	nc	5.2E+03	nc					
2.5E-01	h	2.5E-01	r	0	0.10	101-77-9	4,4'-Methylenebisbenzeneamine	1.9E+00	ca	6.9E+00	ca	2.7E-02	ca	2.7E-01	ca					
1.3E-01	h	7.0E-04	h	1.3E-01	h	7.0E-04	r	0	0.10	101-14-4	4,4'-Methylene bis(2-chloroaniline)	3.7E+00	ca*	1.3E+01	ca*	5.2E-02	ca*	5.2E-01	ca*	
4.6E-02	i	4.6E-02	r	0	0.10	101-61-1	4,4'-Methylene bis(N,N-dimethylaniline)	1.1E+01	ca	3.7E+01	ca	1.5E-01	ca	1.5E+00	ca					
	1.0E-02	h	1.0E-02	r	1	74-95-3	Methylene bromide	6.7E+01	nc	2.3E+02	nc	3.7E+01	nc	6.1E+01	nc					
7.5E-03	i	8.0E-02	i	1.8E-03	i	8.6E-01	h	1	75-09-2	Methylene chloride	9.1E+00	ca	2.1E+01	ca	4.1E+00	ca	4.3E+00	ca	2.0E-02	1.0E-03
	1.7E-04	r	1.7E-04	i	0	0.10	101-68-8	4,4'-Methylene diphenyl diisocyanate	1.0E+01	nc	1.0E+02	nc	6.2E-01	nc	6.2E+00	nc				
	8.0E-01	i	2.9E-01	i	1	78-93-3	Methyl ethyl ketone	7.3E+03	nc	2.7E+04	nc	1.0E+03	nc	1.9E+03	nc					
	8.0E-02	h	2.3E-02	h	1	108-10-1	Methyl isobutyl ketone	7.9E+02	nc	2.8E+03	nc	8.3E+01	nc	1.6E+02	nc					
	5.7E-04	r	5.7E-04	n	0	0.10	74-93-1	Methyl Mercaptan	3.5E+01	nc	3.5E+02	nc	2.1E+00	nc	2.1E+01	nc				
	1.4E+00	i	2.0E-01	i	1	80-62-6	Methyl methacrylate	2.2E+03	nc	2.7E+03	sat	7.3E+02	nc	1.4E+03	nc					
3.3E-02	h	3.3E-02	r	0	0.10	99-55-8	2-Methyl-5-nitroaniline	1.5E+01	ca	5.2E+01	ca	2.0E-01	ca	2.0E+00	ca					
	2.5E-04	i	2.5E-04	r	0	0.10	298-00-0	Methyl parathion	1.5E+01	nc	1.5E+02	nc	9.1E-01	nc	9.1E+00	nc				
	5.0E-02	i	5.0E-02	r	0	0.10	95-48-7	2-Methylphenol	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc	1.5E+01	8.0E-01		
	5.0E-02	i	5.0E-02	r	0	0.10	108-39-4	3-Methylphenol	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc				
	5.0E-03	h	5.0E-03	r	0	0.10	106-44-5	4-Methylphenol	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc				
	2.0E-02	n	2.0E-02	r	0	0.10	993-13-5	Methyl phosphonic acid	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc				
	6.0E-03	h	1.1E-02	h	1	25013-15-4	Methyl styrene (mixture)	1.3E+02	nc	5.4E+02	nc	4.2E+01	nc	6.0E+01	nc					
	7.0E-02	h	7.0E-02	r	1	98-83-9	Methyl styrene (alpha)	6.8E+02	sat	6.8E+02	sat	2.6E+02	nc	4.3E+02	nc					
3.3E-03	n	8.6E-01	r	3.5E-04	n	8.6E-01	i	1	1634-04-4	Methyl tertbutyl ether (MTBE)	6.2E+01	ca*	1.6E+02	ca	1.9E+01	ca	1.3E+01	ca		
1.8E-03		1.8E-03			1															
	1.5E-01	i	1.5E-01	r	0	0.10	51218-45-2	Metolaclor (Dual)	9.2E+03	nc	9.2E+04	nc	5.5E+02	nc	5.5E+03	nc				
	2.5E-02	i	2.5E-02	r	0	0.10	21087-84-9	Metribuzin	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc				
1.8E+00	x	2.0E-04	i	1.8E+00	r	0	0.10	2385-85-5	Mirex	2.7E-01	ca*	9.6E-01	ca	3.7E-03	ca	3.7E-02	ca			
	2.0E-03	i	2.0E-03	r	0	0.10	2212-67-1	Molinate	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc				
	5.0E-03	i			0	7439-98-7	Molybdenum	3.9E+02	nc	5.1E+03	nc			1.8E+02	nc					
	1.0E-01	i	1.0E-01	r	0	0.10	10599-90-3	Monochloramine	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc				
	2.0E-03	i	2.0E-03	r	0	0.10	300-78-5	Naled	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc				

Key: SFO_o=Cancer Slope Factor oral, Inhalation RfDo_o=Reference Dose oral, Inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca), ca** (where: nc < 10X ca)

***=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

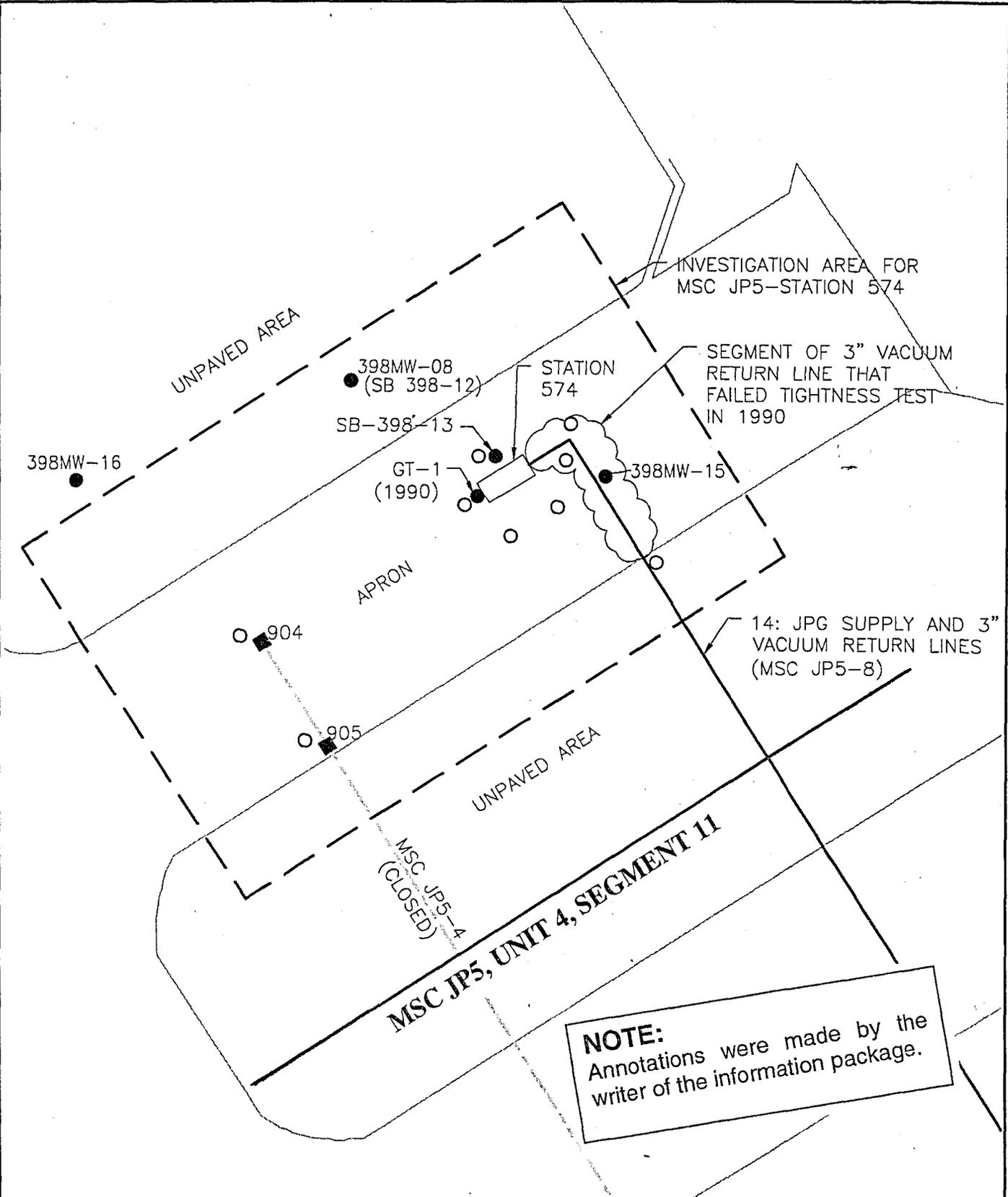
TOXICITY INFORMATION					CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS										
SFO 1/(mg/kg-d)	RfDo (mg/kg-d)	SFI 1/(mg/kg-d)	RfDi (mg/kg-d)	V O abs. C soils	skin abs. soils	CAS No.	Contaminant	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)								
							Direct Contact Exposure Pathways				**Migration to Ground Water**										
2.0E+01	h	2.0E+01	r	0	0.10	5216-25-1	p,a,a-Tetrachlorotoluene	2.4E-02	ca	8.6E-02	ca	3.4E-04	ca	3.4E-03	ca						
2.4E-02	h	3.0E-02	i	2.4E-02	r	0	0.10	961-11-5		ca*	7.2E+01	ca	2.8E-01	ca	2.8E+00	ca					
		5.0E-04	i	5.0E-04	r	0	0.10	3689-24-5		nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc					
7.6E-03	n	2.1E-01	n	6.8E-03	n	1	109-99-9	Tetrahydrofuran	9.4E+00	ca	2.1E+01	ca	9.9E-01	ca	1.6E+00	ca					
		8.6E-05	i		0	7440-28-0	Thallium and compounds+++	5.2E+00	nc	6.7E+01	nc		nc	2.4E+00	nc						
		1.0E-02	i	1.0E-02	r	0	0.10	28249-77-6	Thiobencarb	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
		5.0E-02	n	5.0E-02	r	0	0.10	N/A	Thiocyanate	3.1E+03	nc	1.0E+05	max	1.8E+02	nc	1.8E+03	nc				
		3.0E-04	h	3.0E-04	r	0	0.10	39196-18-4	Thiofanox	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc				
		8.0E-02	i	8.0E-02	r	0	0.10	23564-05-8	Thiophanate-methyl	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc				
		5.0E-03	i	5.0E-03	r	0	0.10	137-26-8	Thiram	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc				
		6.0E-01	h		0				Tin (inorganic, see tributyltin oxide for organic tin)	4.7E+04	nc	1.0E+05	max		nc	2.2E+04	nc				
		2.0E-01	i	1.1E-01	i	1	108-88-3	Toluene ←	5.2E+02	sat	5.2E+02	sat	4.0E+02	nc	7.2E+02	nc	1.2E+01	6.0E-01			
3.2E+00	h	3.2E+00	r		0	0.10	95-80-7	Toluene-2,4-diamine	1.5E-01	ca	5.4E-01	ca	2.1E-03	ca	2.1E-02	ca					
		6.0E-01	h	6.0E-01	r	0	0.10	95-70-5	Toluene-2,5-diamine	3.7E+04	nc	1.0E+05	max	2.2E+03	nc	2.2E+04	nc				
		2.0E-01	h	2.0E-01	r	0	0.10	823-40-5	Toluene-2,6-diamine	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc				
2E-01	i	2E-01	r		0	0.10	106-49-0	p-Toluidine	2.6E+00	ca	9.1E+00	ca	3.5E-02	ca	3.5E-01	ca					
1.1E+00	i	1.1E+00	i		0	0.10	8001-35-2	Toxaphene	4.4E-01	ca	1.6E+00	ca	6.0E-03	ca	6.1E-02	ca	3.1E+01	2.0E+00			
		7.5E-03	i	7.5E-03	r	0	0.10	66841-25-6	Tralometrin	4.6E+02	nc	4.6E+03	nc	2.7E+01	nc	2.7E+02	nc				
		1.3E-02	i	1.3E-02	r	0	0.10	2303-17-5	Triallate	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc				
		1.0E-02	i	1.0E-02	r	0	0.10	82097-50-5	Triasulfuron	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
		5.0E-03	i	5.0E-03	r	0	0.10	615-54-3	1,2,4-Tribromobenzene	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc				
		3.0E-04	i		0	0.10	56-35-9	Tributyltin oxide (TBTO)	1.8E+01	nc	1.8E+02	nc		nc	1.1E+01	nc					
3.4E-02	h	3.4E-02	r		0	0.10	634-93-5	2,4,6-Trichloroaniline	1.4E+01	ca	5.1E+01	ca	2.0E-01	ca	2.0E+00	ca					
2.9E-02	h	2.9E-02	r		0	0.10	33863-50-2	2,4,6-Trichloroaniline hydrochloride	1.7E+01	ca	5.9E+01	ca	2.3E-01	ca	2.3E+00	ca					
		1.0E-02	i	5.7E-02	h	1	120-82-1	1,2,4-Trichlorobenzene	6.5E+02	nc	3.0E+03	sat	2.1E+02	nc	1.9E+02	nc	5.0E+00	3.0E-01			
		2.8E-01	n	6.3E-01	n	1	71-55-6	1,1,1-Trichloroethane	1.2E+03	sat	1.2E+03	sat	2.3E+03	nc	3.2E+03	nc	2.0E+00	1.0E-01			
5.7E-02	i	4.0E-03	i	5.6E-02	i	4.0E-03	r	1	79-00-5	1,1,2-Trichloroethane	7.3E-01	ca*	1.6E+00	ca*	1.2E-01	ca	2.0E-01	ca	2.0E-02	9.0E-04	
4.00E-01	n	3.00E-04	n	4.00E-01	n	1	79-01-6	Trichloroethylene (TCE)	5.3E-02	ca	1.1E-01	ca	1.7E-02	ca	2.8E-02	ca	6.0E-02	3.0E-03			
		3.0E-01	i	2.0E-01	h	1	75-69-4	Trichlorofluoromethane	3.9E+02	nc	2.0E+03	sat	7.3E+02	nc	1.3E+03	nc					
		1.0E-01	i	1.0E-01	r	0	0.10	95-95-4	2,4,5-Trichlorophenol	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc	2.7E+02	1.4E+01		
1.1E-02	i	1.0E-04	n	1.1E-02	i	1.0E-04	r	0	0.10	88-06-2	2,4,6-Trichlorophenol	6.1E+00	nc**	6.2E+01	nc**	3.7E-01	nc**	3.6E+00	nc**	2.0E-01	8.0E-03
7.0E-02		7.0E-02			0.10	88-06-2	"CAL-Modified PRG"	6.9E+00	ca	2.5E+01	ca	9.6E-02	ca	9.6E-01	ca						
		1.0E-02	i	1.0E-02	r	0	0.10	93-76-5	2,4,5-Trichlorophenoxyacetic Acid	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
		8.0E-03	i	8.0E-03	r	0	0.10	93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid	4.9E+02	nc	4.9E+03	nc	2.9E+01	nc	2.9E+02	nc				
		5.0E-03	i	5.0E-03	r	1	598-77-6	1,1,2-Trichloropropane	1.5E+01	nc	5.1E+01	nc	1.8E+01	nc	3.0E+01	nc					
2.0E+00	n	6.0E-03	i	2.0E+00	r	1.4E-03	n	1	96-18-4	1,2,3-Trichloropropane	5.0E-03	ca	1.1E-02	ca	3.4E-03	ca	5.6E-03	ca			

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**Excerpt from Navy Transmittal dated 23 January 2004
For MSC JP5 Station 574**

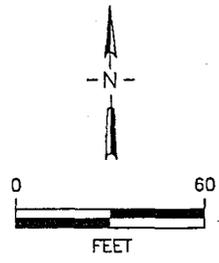
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NOTE:
 Annotations were made by the writer of the information package.

LEGEND

- PROPOSED BORING LOCATION
- PREVIOUS SAMPLE LOCATION (ESTIMATED LOCATION)



SOUTHWEST DIVISION NAVAL FACILITIES ENGINEERING COMMAND		
FORMER MCAS EL TORO, CA		
MSC JP5 Station 574 Proposed Sampling Locations		
FILE NO.	Exhibit 2	DATE
ET_MCAS-103		1/17/04