LETTER OF TRANSMITTAL

PARSONS ENGINEERING SCIENCE, INC.
1301 Marina Village Parkway
Suite 200
Alameda, CA 94501
Phone: (510) 769-0100
Fax: (510) 769-9244

DATE: 7 July 1995

PARSONS ES PROJECT: 726104

TO:
Alameda County Health Care Services Agency
Division of Hazardous Materials
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

ATTN: Ms. Madhulla Logan

RE: Redwood Regional Park Site Investigation, Oakland, California

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WE ARE SENDING YOU:

ATTACHED XXX UNDER SEPARATE COVER ____.

DOCUMENTS XXX OTHER:_____.

VIA MAIL XXX EXPRESS MAIL ___ FED EX ___ OTHER: _____.

QUANTITY	DATE	ITEM
1	6/23/95	Quarterly Progress Report 3 (April - June 1995)

REMARKS:

SIGNED: Bruce M. Rucker
Bruce M. Rucker, Project Manager

AC-tran.doc

PARSONS ENGINEERING SCIENCE, INC.

1301 Marina Village Parkway, Suite 200 • Alameda, California 94501 • (510) 769-0100 • Fax: (510) 769-9244

23 June 1995
Ref: 726104.06000

Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Attention: Ms. Madhulla Logan

Subject: Quarterly Progress Report 3 (April - June 1995)
Redwood Regional Park Service Yard, Oakland, California

Dear Ms. Logan:

INTRODUCTION

This report presents the results of the May 1995 groundwater monitoring event conducted by Parsons Engineering Science, Inc. (Parsons ES) (formerly Engineering-Science, Inc. [ES]) at the East Bay Regional Park District (EBRPD) Redwood Regional Park Service Yard in Oakland, California. This report presents the results of the third consecutive quarterly groundwater monitoring event for the site Groundwater Characterization Program, which is designed to evaluate the extent and magnitude of groundwater contamination associated with two former leaking underground fuel storage tanks (UFSTs). A summary of previous site characterization and remedial activities associated with the former UFSTs is presented in the first quarterly progress report (Parsons ES 1994). An annual summary assessment report will be presented following the fourth quarterly monitoring event of 1995 (scheduled for August 1995). That summary report will summarize the year of quarterly groundwater monitoring activities, analyze hydrochemical trends, and evaluate regulatory agency criteria governing detected groundwater contaminants.

Site Description

The project site is located at 7867 Redwood Road in Oakland, Alameda County, California. Figure 1 shows the location of the project site. The project site is a service yard for Redwood Regional Park that utilized two UFSTs (one 2,000-gallon diesel fuel and one 5,000-gallon unleaded gasoline) from the mid-1960's until their removal in 1993. Figure 2 is a site plan which shows the limits of the former UFST remedial excavation and the groundwater monitoring wells which were installed in October 1994 to monitor groundwater impacts associated with the former UFSTs.

Site Stratigraphy and Hydrogeology

Shallow soil stratigraphy beneath the project site consists of a surficial 3 to 10 foot thick clayey silt unit underlain by a 5 to 15 foot thick silty clay unit. In all monitoring

well borings, a 5- to 10-foot thick clayey coarse-grained sand and clayey gravel unit was encountered that laterally grades to a clay or silty clay. This unit overlies a weathered siltstone at the base of the observed soil profile. Soils in the vicinity of MW-1 are inferred to be landslide debris.

Groundwater at the site occurs under unconfined and confined conditions, as evidenced by the equilibration of static water levels relative to the first occurrence of groundwater encountered during drilling for the 1993 site characterization and November 1994 well installation program. Figure 2 shows groundwater elevations and inferred direction of groundwater flow during the May 1995 monitoring event. The May 1995 data indicate that the direction of local groundwater flow beneath the project site is approximately from northeast to southwest. This groundwater flow direction is consistent with previously recorded measurements made in site wells since November 1994 (Parsons ES 1995).

PROCEDURES AND CURRENT ACTIVITIES

The current groundwater monitoring program is in accordance with the Workplan for Groundwater Characterization Program (ES 1994b). Creek surface water sampling procedures are in accordance with the 29 March 1994 Parsons ES letter to Alameda County Health Care Services Agency (ACHCSA) (ES 1994a).

Laboratory Analyses

All laboratory analyses were conducted by a laboratory certified by the California Environmental Protection Agency (Cal/EPA) Environmental Laboratory Accreditation Program (ELAP) for each required analytical method. All groundwater samples were analyzed for the following constituents:

- Total petroleum hydrocarbons - gasoline, diesel and kerosene ranges (TPH-G, -D, and -K) by the State of California Department of Toxic Substances Control (DTSC) Leaking Underground Fuel Tank (LUFT) Manual Method (equivalent to modified EPA Method 8015)

- Aromatic hydrocarbons (including benzene, toluene, ethylbenzene, and total xylenes [BTEX]) by EPA Method 8020

Surface water samples were analyzed for TPH-G and BTEX.

Groundwater Monitoring and Sampling

Parsons ES personnel measured static water levels (Table 1 and Attachment A) in all six site wells on 16 May 1995. Water level measurements were made using an electric water level indicator. Initial water level measurements were collected immediately upon removal of the well casing caps. Water levels were then remeasured after a period no less than one-half hour to allow dissipation of potential air pressure and equilibration of static water levels. No differences in static water levels were noted.

Groundwater sampling was conducted on 16 May 1995 in accordance with Cal/EPA guidelines (Cal/EPA 1994). Prior to collection of groundwater samples, a pre-cleaned

Teflon™ bailer or submersible pump was used to purge a minimum of three casing volumes from each well. Electrical conductivity, pH, and temperature of purge water were measured during well purging, to document the presence of stabilized formation-water in the wells. Attachment A includes water level data and groundwater monitoring field notes from the groundwater monitoring event.

Sample containers were filled with sample water from the pre-cleaned bailer. To prevent cross-contamination, groundwater sampling equipment was decontaminated prior to use and between each monitoring well with an Alconox™ wash followed by three deionized water rinses. Following sample collection, sample containers were labeled, placed in a cooler packed with "blue ice," and transported under chain-of-custody the same day to a Cal/EPA ELAP certified laboratory. Chain-of-custody records for the groundwater samples are included in Attachment B.

Creek Surface Water Sampling

Surface water samples were collected from Redwood Creek (Figure 2) by immersing the sample containers just under the water surface, and immediately capping the containers, which were then labeled, chilled and transported under chain-of-custody the same day to the analytical laboratory. No sheen or odor was noted in any of the surface water samples.

Analytical Results

Groundwater

Analytical results of the May 1995 monitoring event are presented in Table 2. Fuel hydrocarbons were detected in monitoring wells MW-2 and MW-4 during the present quarterly sampling event. Maximum concentrations of contamination detected includes 7,200 µg/L TPH-G, 440 µg/L TPH-D/K and 1,033 µg/L total BTEX (all in MW-4). Detected concentrations reported for the present quarter are approximately within the same order of magnitude compared to concentrations reported for the previous quarter.

Two types of field quality control (QC) samples were used to assess whether field or laboratory procedures affected analytical results of the current groundwater sampling event. One equipment rinsate blank (MW-0B) was collected following sampling and decontamination activities at well MW-4 to monitor potential cross-contamination in the field due to inadequate decontamination of sampling equipment and/or sample contamination during transport. That sample was analyzed for TPH-G and BTEX. Only toluene was detected (0.7 µg/L) at a concentration very near the method reporting limit (0.5 µg/L). Based on the results of laboratory method blank samples (see below), the toluene detection is inferred to result from inadequate decontamination or generator exhaust.

One field duplicate sample (MW-0A) was collected from well MW-2 and analyzed for TPH-G and BTEX to assess whether field procedures produced reproducible results (Table 2). Values of relative percent difference (RPD) (aka variance from the mean) for detected contaminants include 13.6% (benzene) 6.5% (ethylbenzene) and 8.3% (total xylenes).

Creek Surface Water

Surface water samples collected from Redwood Creek (SW-1, -2 and -3 locations on Figure 2) were analyzed for TPH-G, TPH-D/K and BTEX. None of these constituents were detected in any of the surface water samples.

Laboratory QC samples (e.g., method blanks, matrix spikes, surrogate spikes, etc.) were analyzed by the laboratory in accordance with the requirements of each analytical method. All laboratory QC sample results and sample holding times were within the acceptance limits of the methods (Attachment B).

Management of Investigation-Derived Waste

Approximately 600 cubic yards of gasoline-contaminated soil from the June 1993 UFST closures (ES 1993) have been relocated from its initial location adjacent to the project site to an EBRPD property in Contra Costa County, California for additional active aeration. Initial stockpile soil sampling was conducted on 12 July 1993. Maximum stockpile soil contamination detected included 2,200 mg/Kg TPH-G and 434 mg/Kg BTEX. Active aeration of the stockpile was begun on 23 August 1993. Following an EBRPD request to Contra Costa County Health Services Department (CCCHSD)(EBRPD 1994), and subsequent CCCHSD approval, the soil was relocated to Sibley Regional Preserve between 24 and 30 May 1995. The soil will continue to be actively aerated, and EBRPD proposes to conduct confirmation sampling and analysis at the conclusion of the aeration process (EBRPD 1995).

A total of approximately 200 gallons of wastewater (including monitoring well purge water and equipment decontamination rinsate) from this quarter's groundwater sampling event was containerized on site in a plastic storage tank.

We trust that this submittal meets the needs of your agency. Please call us at our Alameda office (510-769-0100) if you have any questions or require clarification.

Very truly yours,

PARSONS ENGINEERING SCIENCE, INC.

Bruce M. Rucker

Bruce M. Rucker
Project Manager

Frederick T. Stanin, C.E.G.
Principal Geologist

REFERENCES

Contra Costa County Health Services Department (CCCHSD) 1994, letter approving contaminated soil relocation. 6 December

East Bay Regional Park District (EBRPD) 1994, letter from Mr. Warren Gee to Mr. Paul Andrews of CCCHSD. 3 November

EBRPD 1995, letter from Mr. Warren Gee to ACHCSA. 1 June

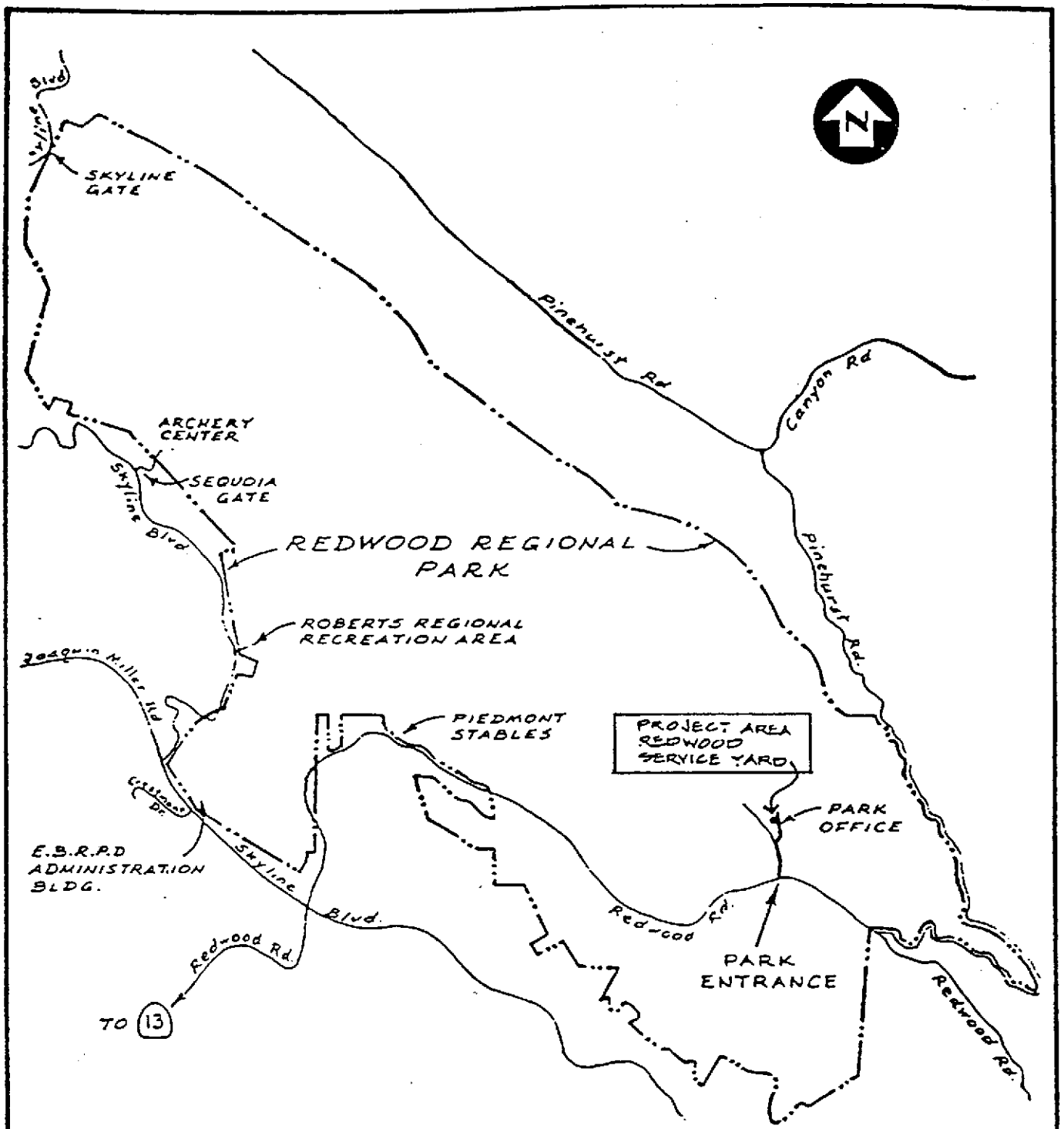
Engineering-Science, Inc. (ES) 1993, Closure of Underground Storage Tanks and Initial Site Characterization, Redwood Regional Park Service Yard, Oakland, California. 16 December

ES 1994a, letter to Alameda County Health Care Services Agency (ACHCSA) summarizing proposed sampling activities at Redwood Creek, Redwood Regional Park Service Yard, Oakland, California. 27 January

ES 1994b, Workplan for Groundwater Characterization Program at Redwood Regional Park Service Yard, Oakland, California. 17 August

Parsons ES 1995, Quarterly Progress Report 2 (January - March 1995), Redwood Regional Park Service Yard, Oakland, California. 8 March

FIGURE 1

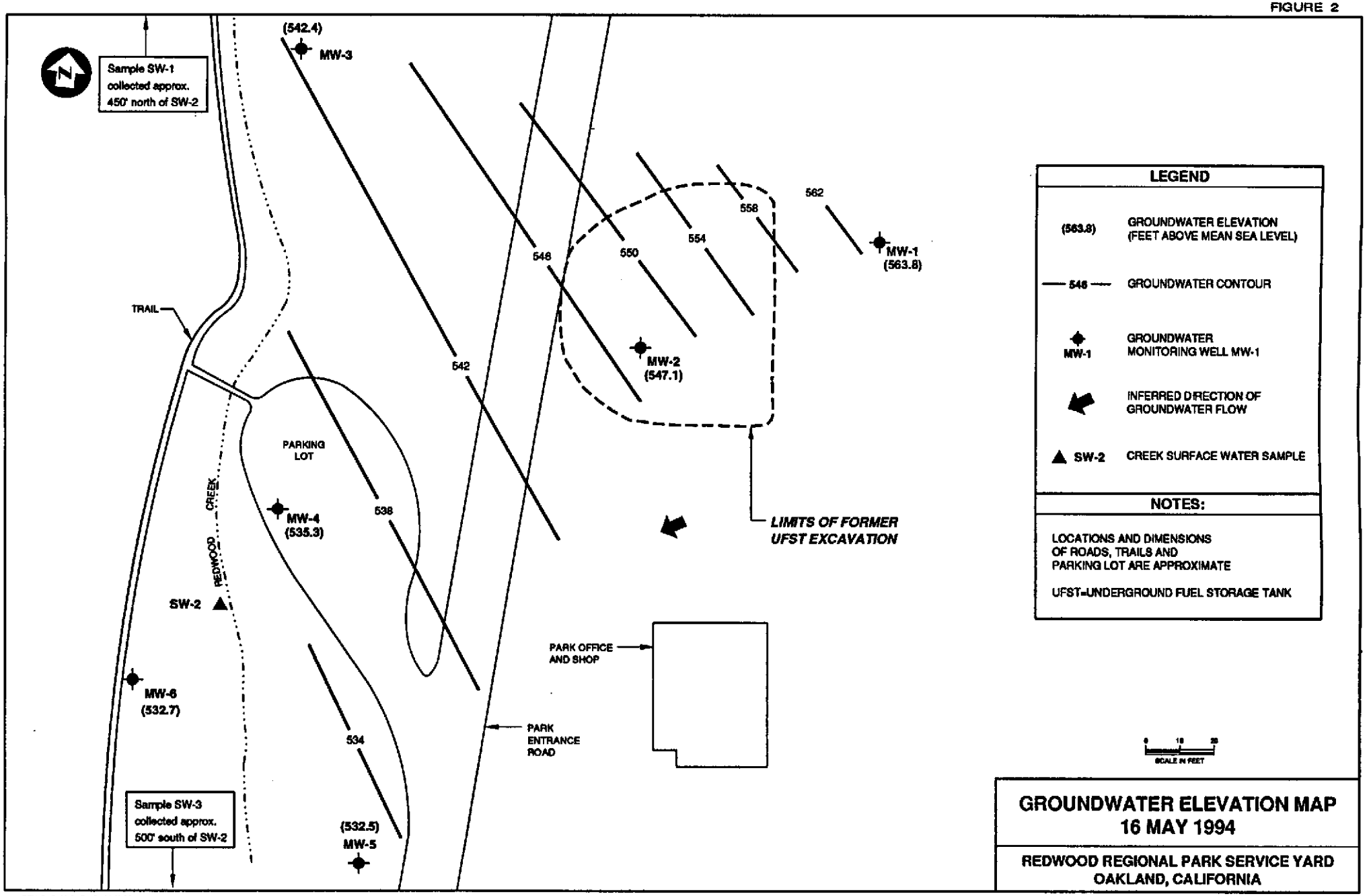


SITE LOCATION MAP

REDWOOD REGIONAL PARK
SERVICE YARD

OAKLAND, CALIFORNIA

FIGURE 2



GROUNDWATER ELEVATION MAP
16 MAY 1994

REDWOOD REGIONAL PARK SERVICE YARD
OAKLAND, CALIFORNIA

REV. 2 R400-04.DWG 08/22/95

PARSONS ENGINEERING SCIENCE, INC.

TABLE 1
WELL ELEVATIONS AND WATER LEVEL MEASUREMENTS
16 May 1995

Well		Well Elevation (TOC)	Water Levels
MW-1	Depth		2.07
	Elevation	565.9	563.8
MW-2	Depth		19.43
	Elevation	566.5	547.1
MW-3	Depth		18.50
	Elevation	560.9	542.4
MW-4	Depth		12.84
	Elevation	548.1	535.3
MW-5	Depth		14.96
	Elevation	547.5	532.5
MW-6	Depth		12.88
	Elevation	545.6	532.7

Remarks:

1) All water level depths are feet below top of well casing (TOC)
2) All elevations are feet above USGS mean sea level (MSL). Elevations were surveyed by EBRPD relative to USGS Survey Benchmark No. JHF-49.
3) Additional water level and well construction data are included in Attachment A

TABLE 2

GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
16 May 1995
Redwood Regional Park Service Yard, Oakland, California

	Concentration (µg/L)					
Compound:	TPH-G	TPH-D/K	Benzene	Toluene	Ethylbenzene	Total Xylenes
Reporting Limit:	50	50	0.5	0.5	0.5	0.5
Monitoring Well Samples						
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	3.9	ND	1.6	2.5
MW-2*	ND	NA	3.4	ND	1.5	2.3
MW-3	ND	ND	ND	ND	ND	ND
MW-4	7,200	440**	300	13	390	330
MW-5	ND	ND	ND	ND	ND	ND
MW-6	ND	ND	ND	ND	ND	ND
Surface Water Samples						
SW-1	ND	ND	ND	ND	ND	ND
SW-2	ND	ND	ND	ND	ND	ND
SW-3	ND	ND	ND	ND	ND	ND

Notes:

* = Quality control field duplicate sample designated MW-0A on the chain-of-custody and analytical laboratory report

TPH-G = Total petroleum hydrocarbons - gasoline range

TPH-D/K = Total petroleum hydrocarbons - diesel/kerosene ranges

NA = Not analyzed

ND = Not detected above method reporting limit

µg/L = Micrograms per liter, equivalent to parts per billion (ppb)

** = Sample chromatogram does not resemble hydrocarbon standard.

ATTACHMENT A
WATER LEVEL DATA AND
GROUNDWATER MONITORING NOTES

WATER LEVEL DATA

PARSONS ENGINEERING SCIENCE

DATE: 05/16/95

PROJECT/LOCATION: Redwood Regional Park Service Yard, Oakland, California

PROJECT NO.: 726104

PERSONNEL: Alan C. Peel

Well No	Water Level from T.O.C.	Well Depth From T.O.C	Depth to T.O.C	Water Level from G.S.	Well Casing Dia.	Gallons/ Casing Vol.	T.O.C. Elev. USGS	Water Level USGS
MW-1	2.07	18.0	-2.3	-0.2	4	10.4	565.9	563.8
MW-2	19.43	36.5	-2.4	17.0	4	11.1	566.5	547.1
MW-3	18.50	45.0	-2.8	15.7	4	17.2	560.9	542.4
MW-4	12.84	26.0	-2.1	10.7	4	8.6	548.1	535.3
MW-5	14.96	26.0	-2.3	12.7	4	7.2	547.5	532.5
MW-6	12.88	27.0	-2.3	10.6	4	9.2	545.6	532.7

NOTES:

T.O.C. = Top of Casing

Gallons/casing volume for 4" inner diameter casing = 0.65 gallons per linear foot

Negative value for "Depth to T.O.C." indicates that T.O.C. is above ground surface

G.S. - Ground Surface

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USGS = U.S. Geological Survey mean sea level (MSL)

All elevations surveyed by East Bay Regional Parks District relative to USGS Survey Benchmark No. JHF-49

GROUNDWATER SAMPLING FIELD NOTES

PARSONS ENGINEERING SCIENCE

PROJECT/LOCATION: REDWOOD REGIONAL PARK SERVICE YARD, OAKLAND, CA **PERSONNEL:** Alan Peel

PROJECT NUMBER: 726104 **DATE:** 16-May-95

Well ID	Sampler Date Time	Water Level Before, Well Diameter and Depth*	Water Level After *	Gallons per Casing Volume	Well Purging Method **	Pump On	Pump Off	Temp. (o C)	Specific Cond (umhos/ cm)	pH	Total Water Purged (gals)	Sample Coll. Method	Analysis & Number/type of Containers	Comments
MW-1	ACP 05/16/95 1220	2.07 4" 18	2.16	10.4	B	NA	NA	14.1 14.4 14.4 14.5	660 690 690 690	7.18 7.20 7.26 7.20	0 10.7 21.4 32	B	(a) (b) & (c)	Clear sample
MW-2	ACP 05/16/95 1255	19.43 4" 36.5	29.3	11.1	G	1125	1250	16.8 16.9 16.9 17.9	680 710 710 720	7.01 7.23 7.27 7.32	0 11.3 22.6 34	B	(a) (b) & (c)	Semi-turbid
MW-3	ACP 05/16/95 1445	18.5 4" 45	20.5	17.2	G	1330	1435	17.4 15.7 15.7 15.9	600 510 510 510	7.45 7.54 7.44 7.46	0 18 36 54	B	(a) (b) & (c)	
MW-4	ACP 05/16/95 1825	12.84 4" 26	17.52	8.6	B	NA	NA	13.8 13.3 13.1 13.4	580 580 600 600	6.87 6.84 6.95 6.91	0 8.7 17.4 26	B	(a) (b) & (c)	Fuel odor

C:\ebrpd\May95gw.xls

NOTES

* Measured from top of casing in feet

** G -- Grundfos Pump; B - Bailer

NA Not Applicable

NR Not Recorded

(a) Total Petroleum Hydrocarbons as diesel (TPH-D), unpreserved {1: 1L amber bottles}.

(b) BTEX, EPA Method 8020, HCl preserved {2: 40ml VOAs}.

(c) Total Petroleum Hydrocarbons as gasoline (TPH-G), HCl preserved {2: 40ml VOAs}.

GROUNDWATER SAMPLING FIELD NOTES

PARSONS ENGINEERING SCIENCE

PROJECT/LOCATION: REDWOOD REGIONAL PARK SERVICE YARD, OAKLAND, CA **PERSONNEL:** Alan Peel

PROJECT NUMBER: 726104 **DATE:** 16-May-95

Well ID	Sampler Date Time	Water Level Before, Well Diameter and Depth*	Water Level After *	Gallons per Casing Volume	Well Purging Method **	Pump On	Pump Off	Temp. (o C)	Specific Cond (umhos/cm)	pH	Total Water Purged (gals)	Sample Coll. Method	Analysis & Number/type of Containers	Comments
MW-5	ACP 05/16/95 1720	14.96 4" 26	15.86	7.2	B	NA	NA	14.5 13.6 13.8 13.6	470 460 468 472	7.88 7.57 7.52 7.45	0 8 16 24	B	(a) (b) & (c)	Turbid; fuel odor
MW-6	ACP 05/16/95 1620	12.88 4" 27	22.16	9.2	B	NA	NA	13.3 12.6 13.1 13.9	455 455 460 435	7.5 7.24 7.52 7.44	0 9.3 18.6 28	B	(a) (b) & (c)	Turbid
MW-0A	ACP 05/16/95 1310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	B	(b) & (c)	Field duplicate collected at MW-2
MW-0B	ACP 05/16/95 1900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	(b) & (c)	Equipment rinsate blank, collected after decon. at Well MW-4

NOTES

* Measured from top of casing in feet

** G -- Grundfos Pump; B - Bailer

NA Not Applicable

NR Not Recorded

(a) Total Petroleum Hydrocarbons as diesel (TPH-D), unpreserved {1: 1L amber bottles}.

(b) BTEX, EPA Method 8020, HCl preserved {2: 40ml VOAs}.

(c) Total Petroleum Hydrocarbons as gasoline (TPH-G), HCl preserved {2: 40ml VOAs}.

ATTACHMENT B
CHAIN-OF-CUSTODY RECORDS
AND ANALYTICAL LABORATORY REPORT

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L   R E P O R T

Prepared for:

Parsons Engineering Science, Inc.
1301 Marina Village Parkway
Suite 200
Alameda, CA 94501

Date: 31-MAY-95
Lab Job Number: 121056
Project ID: 726104
Location: EBRPD Redwood Regional

RECEIVED
JUN 2 1995
PARSONS ENGINEERING SCIENCE, INC.
ALAMEDA

Reviewed by: Mary [signature]

Reviewed by: [signature]

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Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 121056
CLIENT: PARSONS ENGINEERING SCIENCE, INC.
PROJECT ID: 726104
LOCATION: EBRPD REDWOOD REGIONAL

DATE SAMPLED: 05/16/95
DATE RECEIVED: 05/17/95
DATE EXTRACTED: 05/26/95
DATE ANALYZED: 05/30/95
DATE REPORTED: 05/31/95
BATCH NO: 20866

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT (ug/L)
121056-001	MW-1	ND	ND	50
121056-002	MW-2	ND	ND	50
121056-003	MW-3	ND	ND	50
121056-004	MW-4	**	440*	50
121056-005	MW-5	ND	ND	50
121056-006	MW-6	ND	ND	50
121056-007	SW-1	ND	ND	50
121056-008	SW-2	ND	ND	50
121056-009	SW-3	ND	ND	50
METHOD BLANK	N/A	ND	ND	50

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

* Sample chromatogram does not resemble hydrocarbon standard.
** Kerosene range not reported due to overlap of hydrocarbon ranges.

QA/QC SUMMARY: BS/BSD

RPD, %	10
RECOVERY, %	94

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 121056
CLIENT: PARSONS ENGINEERING SCIENCE, INC.
PROJECT ID: 726104
LOCATION: EBRPD REDWOOD REGIONAL

DATE SAMPLED: 05/16/95
DATE RECEIVED: 05/17/95
DATE ANALYZED: 05/17,18/95
DATE REPORTED: 05/31/95
BATCH NO.: 20665

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
121056-001	MW-1	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
121056-002	MW-2	ND(50)	3.9	ND(0.5)	1.6	2.5
121056-003	MW-3	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
121056-006	MW-6	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
121056-007	SW-1	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
121056-008	SW-2	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
121056-009	SW-3	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
121056-010	MW-0A	ND(50)	3.4	ND(0.5)	1.5	2.3
121056-011	MW-0B	ND(50)	ND(0.5)	0.7	ND(0.5)	ND(0.5)
METHOD BLANK	N/A	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY: BS/BSD

RPD, %	3
RECOVERY, %	98

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 121056
CLIENT: PARSONS ENGINEERING SCIENCE, INC.
PROJECT ID: 726104
LOCATION: EBRPD REDWOOD REGIONAL

DATE SAMPLED: 05/16/95
DATE RECEIVED: 05/17/95
DATE ANALYZED: 05/19/95
DATE REPORTED: 05/31/95
BATCH NO.: 20715

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
121056-004	MW-4	7,200	300	13	390	330
121056-005	MW-5	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
METHOD BLANK	N/A	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY: BS/BSD

RPD, %	2
RECOVERY, %	95

ES Engineering-Science, Inc.
1301 Marina Village Parkway, Suite 200
Alameda, California 94501
Phone: (510) 769-0100 Fax: (510) 769-9244

P21056

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

LABORATORY:	PROJECT MANAGER:	PROJ. #:
C&T	Bruce Rucker	726104

PROJECT NAME/LOCATION: Redwood Regional Park

SAMPLER(S): (SIGNATURE) (A Reed)

	SAMPLE ID	DATE	TIME	MATRIX	SAMPLE LOCATION	NO. OF CONTAINERS	METHOD PRESERVED	TPHd (8015)	TPHg (8015)	BTXE (8020)						TO BE COMPOSITED BY LAB	TURN AROUND TIME	REMARKS
1	MW-1	5/16/95	1220	H_2O	well 1	3		✓	✓	✓							normal	MANY
2	MW-2		1155		2			✓	✓	✓								TURBID
3	MW-3		1445		3			✓	✓	✓								SAMPLES
4	MW-4		1825		4			✓	✓	✓								
5	MW-5		1920		5			✓	✓	✓								
6	MW-6		1620		6			✓	✓	✓								
7	SW-1		1925		creek loc # 1			✓	✓	✓								
8	SW-2		1955		2			✓	✓	✓								
9	SW-3		1945		3			✓	✓	✓								
10	MW-0A		1310		well 0A	2			✓	✓								
11	MW-0B		1900		0B	2			✓	✓								
																		2 07

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY(SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
A Reed	5/17/95	0855					

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	REMARKS:
			Kevin Hoch	5/17/95	0853	

DISTRIBUTION: WHITE: ACCOMPANIES SHIPMENT & RET'N WITH LAB REPORT, CANARY: LAB COPY, PINK: FIELD COPY

c:\user\odr\cocg.cdr