Harding Lawson Associates

April 20, 1992

2047,157.04

San Francisco Department of Public Health
101 Grove Street, Room 207
San Francisco, California 94102

Attention: Ms. Pamela Hollis

Ladies and Gentlemen:

Results of Fuel Tank Replacement
Sunol Valley Water Treatment Plant
Sunol, California

This letter presents the results of services by Harding Lawson Associates (HLA) during fuel tank replacement at the Sunol Valley Water Treatment Plant at 8653 Calaveras Road in Sunol, California (Plate 1). The fuel tank replacement consisted of the removal of a 1500-gallon diesel underground storage tank (UST) and installation of a 1000-gallon above-ground diesel storage tank manufactured by Convault. The treatment plant is owned and operated by the City and County of San Francisco. Bay Area Tank and Marine (BATM) was subcontracted by HLA to remove the tank, backfill, and compact the excavation, and install a new aboveground Convault tank.

CONVAULT TANK INSTALLATION

On November 7, 1991, an engineer from HLA visited the site to inspect the bearing soil pad prepared for the Convault tank. The bearing pad was in a planter area at the northwest corner of the Operations Building (Plate 2). To prepare the site for installation of the precast concrete pad and Convault tank, several shrubs and one tree were removed.

Convault site preparation specifications for a precast concrete slab called for a level undisturbed earth base with a 1-inch-thick cover of sand or 4 inches of level compacted base run material. The bearing soil pad observed by HLA consisted of a medium stiff to stiff clay, covered with 2 to 4 inches of sand. Compaction of the bearing soil was not required by the Convault specifications, therefore compaction tests were not performed on the bearing soil.

The precast concrete pad and Convault tank were installed by BATM on November 7, 1991. Installation was not observed by HLA.

TANK REMOVAL AND SOIL SAMPLING

The 1500-gallon underground diesel fuel tank was removed on December 18, 1991 by BATM. An engineering technician from HLA and Scott Seery from the Alameda County Department of Environmental Health (ACDEH) were present to observe the tank removal. A visual examination of the tank and excavation showed no indications of a leak or spillage from overfilling. Approximately 25 cubic yards of soil were excavated to remove the tank. The stockpiled soil was screened in the field for hydrocarbon vapors with an HNu photoionization detector. No odors or vapors were detected in the excavated soil.

Two soil samples, Samples No. 1 and 2, were taken at the base of the tank excavation. Sample No. 1 was taken from the north end of the former tank location and Sample No. 2 was taken from the south end. Both samples were a mixture of aggregate baserock and native sandy clay. The samples were collected by directing the backhoe operator to dig a bucket of soil from the sampling location. The soil in the bucket was sampled by driving a clean stainless steel tube into the soil and covering each end with a Teflon sheet and plastic cap. One soil sample was also collected from the 25 cubic yard stockpile and labeled as Sample No. 3. All of the samples were labeled and placed in an iced cooler for delivery to the analytical laboratory under chain-of-custody procedures. Scott Seery of the ACDEH observed all sampling locations and procedures. Eureka Laboratories, Inc. in Sacramento, California analyzed the samples for benzene, toluene, ethyl benzene, and xylenes (BTEX)(EPA Method 8020) and total petroleum hydrocarbons as gasoline, diesel, and motor oil (Modified EPA Method 8015).

CHEMICAL ANALYSIS RESULTS

The soil samples analyzed did not contain detectable amounts of the BTEX compounds or total petroleum hydrocarbons as gasoline, diesel, or motor oil. The chemical analysis results are attached as an appendix to this letter report.

EXCAVATION BACKFILL

The soil excavated to remove the tank was approved for use as backfill material by Scott Seery of the ACDEH, pending chemical analysis results. HLA collected a bulk sample of the stockpiled soil and a bulk sample of Class 2 aggregate baserock for laboratory compaction tests (ASTM D1557-78) to determine the maximum dry density and optimum moisture content for compaction. The excavation was backfilled the following day, December 19, 1991. BATM placed 2 feet of 1-1/2-inch drain rock at the base of the excavation. The drain rock was compacted with a vibratory compactor attachment to the backhoe. The stockpiled soil was placed over the drain rock in 12-inch lifts and also compacted. HLA conducted field density tests on the compacted backfill to verify that the backfill was compacted to 90 percent relative

compaction* up to 1 foot below finish grade and 95 percent to finish grade. Field density tests indicated satisfactory compaction. A summary of field density test data is presented in Table 1.

CONCLUSIONS

On the basis of the field observations during tank removal and the results of chemical analysis, we conclude that the 1500-gallon underground fuel tank has been successfully closed by removal and no further action is required. We understand that the Convault tank was successfully installed and is fully operational at this time.

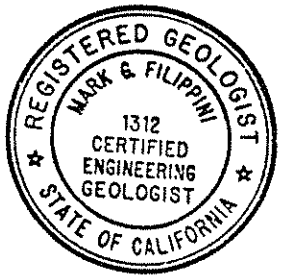
We trust that this letter provides the information that you require. If you have any questions, please contact either of the undersigned.

Yours very truly,

HARDING LAWSON ASSOCIATES

David G. Dixon
Project Geologist

Mark G. Filippini
Engineering Geologist



DGD/MGF/dm/B13948-CT82

Attachments: Table 1 - Summary of Field Density Test Data
Plate 1 - Site Location Map
Plate 2 - Site Plan and Sampling Locations
Appendix A - Chemical Analysis Data Sheets

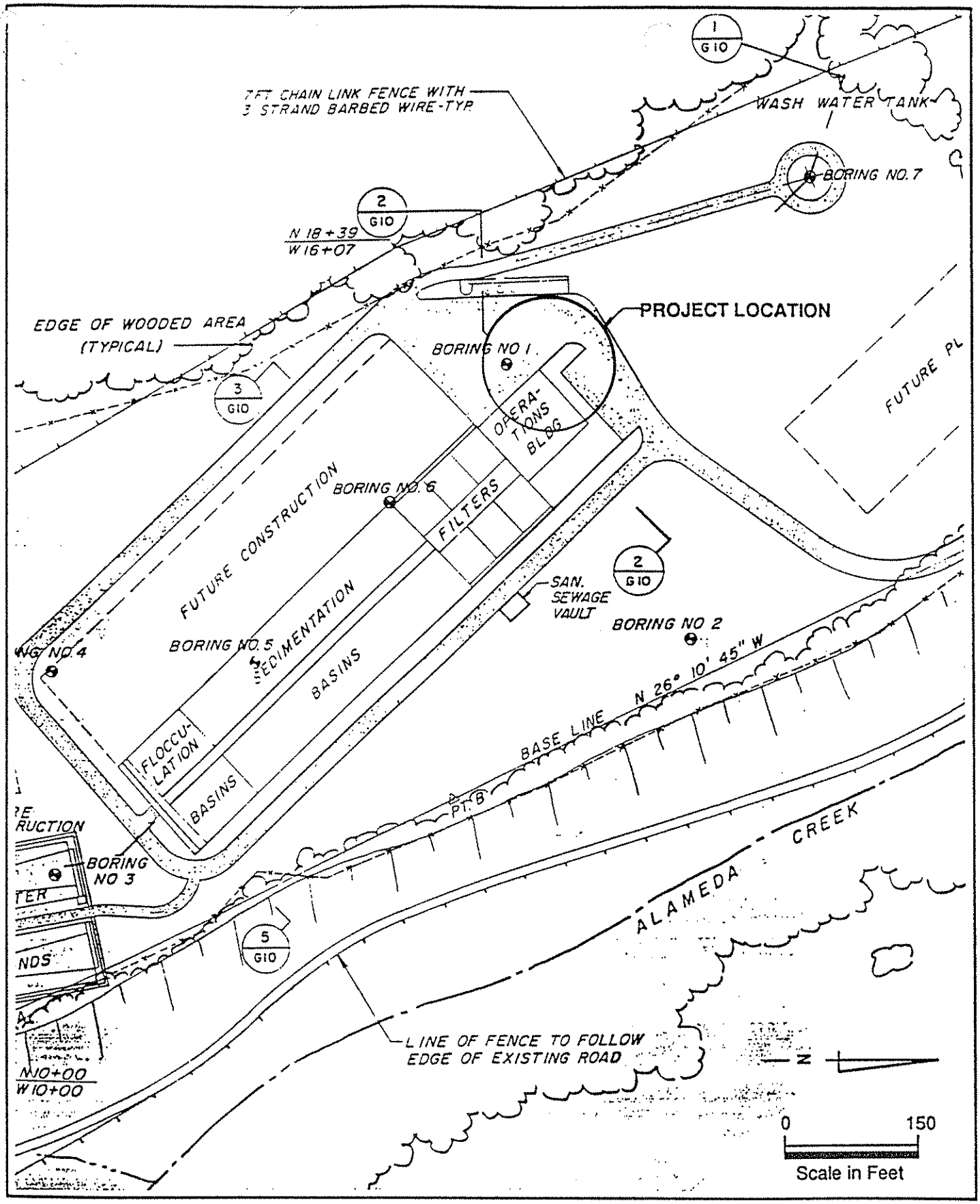
---

* Relative compaction refers to the in-place dry density of soil expressed as a percentage of the maximum dry density of the same material, as determined by the ASTM D1557-78 laboratory compaction procedure.

Table 1. Summary of Field Density Test Data
Sunol Valley Water Treatment Plant
Sunol, California
HLA Job No. 2047,157.04

Test No.	Location	Depth* (feet)	Moisture Content (percent)	Dry Density (pcf)	Maximum Dry Density** (pcf)	Degree Relative Compaction (percent)	Degree Relative Compaction Required (percent)	Remarks
1	Tank Excavation	FG-6.0	10.2	124	136	91		
2	Tank Excavation	FG-6.0	11.4	123	136	91		
3	Tank Excavation	FG-4.5	14.1	123	136	90		
4	Tank Excavation	FG-3.5	12.4	125	136	92		
5	Tank Excavation	FG-2.0	9.8	125	136	92		
6	Tank Excavation	FG-1.0	8.4	130	136	95		
7	Tank Excavation	FG	6.8	134	141	95		
8	Tank Excavation	FG	5.9	135	141	96		

*FG = Finish Grade



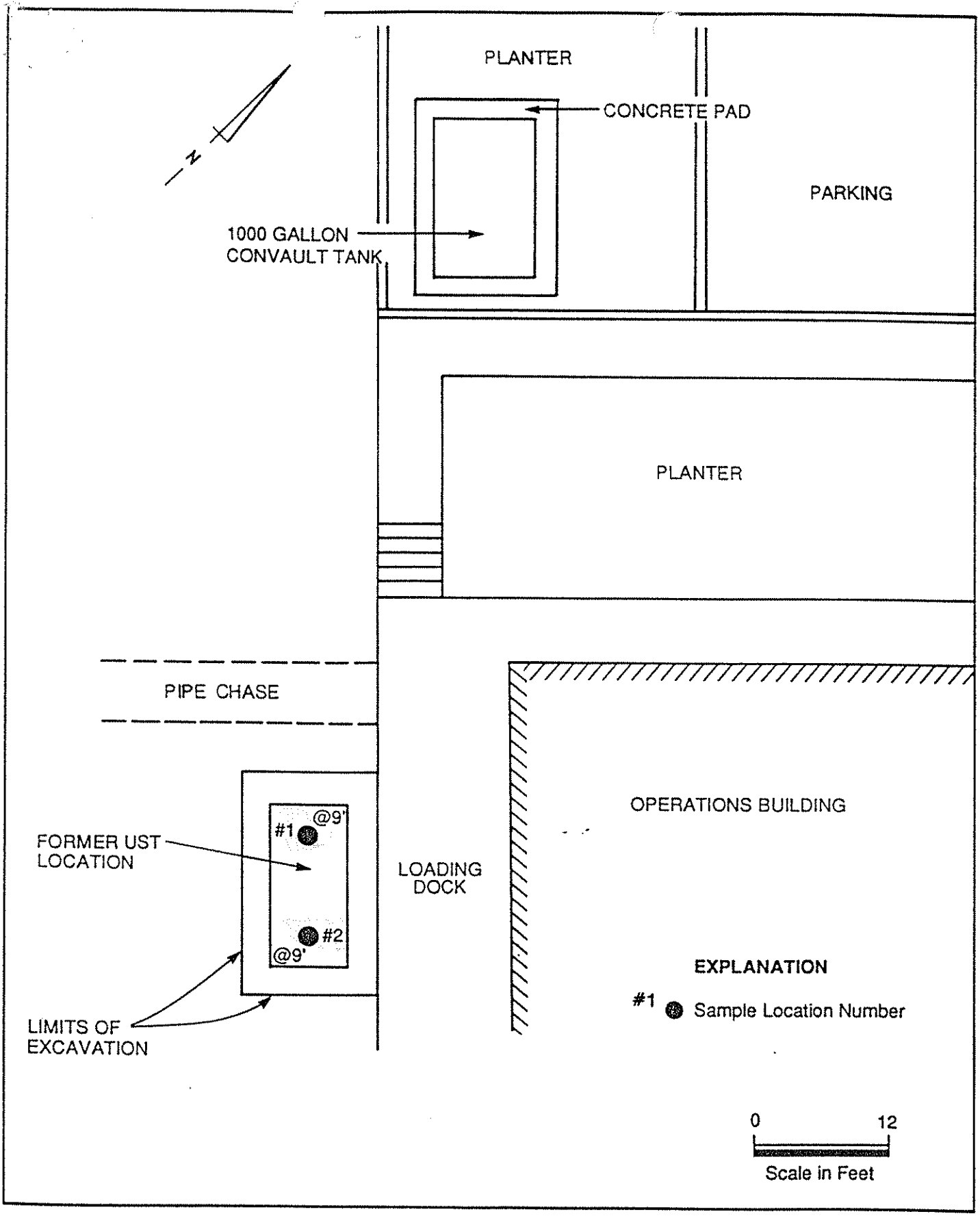
PLATE

Harding Lawson Associates
Engineering and
Environmental Services

Site Location Map
Sunol Valley Water Treatment Plant
Sunol, California

1

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
AM	2047,157.04		4/92	



Harding Lawson Associates
Engineering and Environmental Services

Site Plan and Sampling Locations
Sunol Valley Water Treatment Plant
Sunol, California

PLATE **2**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
AM	2047,157.04		4/92	

EUREKA LABORATORIES, INC

Corporate Office:
5790 FLORIN PERKINS ROAD
SACRAMENTO, CA 95828
TEL: (916) 381-7953
FAX: (916) 381-4013

Branch Office:
17403 N.E. 28th STREET
REDMOND, WA 90852
TEL: (206) 885-0284
FAX: (206) 885-0284

Air Pollution
Chemical Analysis,
Research & Testing
Environmental Studies
Robotics
Toxicology

January 2, 1992

Mr. Dave Dixon
HARDING LAWSON ASSOCIATES
303 2nd Street, Suite 630N
San Francisco, CA 94107

Reference: ELI Order #: 91-12-104
Job #: 2047,157.04
Name/Location: DPH-SUNOL

Dear Mr. Dixon:

Eureka Laboratories, Inc. is pleased to submit a laboratory report for the subject task. This report presents analytical results for three (3) soil samples for the following analyses:

ANALYSIS	METHOD	SAMPLE ID.
Purgeable Aromatics	EPA 8020	1, 2, 3
Total Petroleum Hydrocarbons	EPA 8015 (Modified)	same as above

Sincerely,
EUREKA LABORATORIES, INC.

By: Shao-Pin Yo
Shao-Pin Yo, Ph.D.
Laboratory Director

SPY/pvc

Attachment

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

COPY

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-12-104
Hazardous Waste Testing
Certification: E765

CLIENT: HARDING LAWSON
JOB #: 2047,157.04
NAME/LOCATION: DPH-SUNOL
ELI SAMPLE ID: 9112104-01A
SAMPLE ID: 1

DATE SAMPLED: 12/18/1991
DATE RECEIVED: 12/19/1991
DATE EXTRACTED: 12/20/1991
DATE ANALYZED: 12/23/1991
INSTRUMENT ID: VG-3
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 20g
DILUTION FACTOR: 1

COMP. NO.	COMPOUND	ug/Kg (ppb)	DETECTION LIMIT ug/Kg (ppb)
V1	Benzene	<1	1
V2	Chlorobenzene	<1	1
V3	1,2-Dichlorobenzene	<1	1
V4	1,3-Dichlorobenzene	<1	1
V5	1,4-Dichlorobenzene	<1	1
V6	Ethyl benzene	<1	1
V7	Toluene	<1	1
V8	Xylenes (Dimethyl benzenes)	<1	1

Samir Samaan
Chemist

January 2, 1992
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-12-104
Hazardous Waste Testing
Certification: E765

CLIENT: HARDING LAWSON
JOB #: 2047,157.04
NAME/LOCATION: DPH-SUNOL
ELI SAMPLE ID: 9112104-02A
SAMPLE ID: 2

DATE SAMPLED: 12/18/1991
DATE RECEIVED: 12/19/1991
DATE EXTRACTED: 12/20/1991
DATE ANALYZED: 12/23/1991
INSTRUMENT ID: VG-3
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 20g
DILUTION FACTOR: 1

COMP. NO.	COMPOUND	ug/Kg (ppb)	DETECTION LIMIT ug/Kg (ppb)
V1	Benzene	<1	1
V2	Chlorobenzene	<1	1
V3	1,2-Dichlorobenzene	<1	1
V4	1,3-Dichlorobenzene	<1	1
V5	1,4-Dichlorobenzene	<1	1
V6	Ethyl benzene	<1	1
V7	Toluene	<1	1
V8	Xylenes (Dimethyl benzenes)	<1	1

Samir Samaan
Chemist

January 2, 1992
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-12-104
Hazardous Waste Testing
Certification: E765

CLIENT: HARDING LAWSON
JOB #: 2047,157.04
NAME/LOCATION: DPH-SUNOL
ELI SAMPLE ID: 9112104-03A
SAMPLE ID: 3

DATE SAMPLED: 12/18/1991
DATE RECEIVED: 12/19/1991
DATE EXTRACTED: 12/20/1991
DATE ANALYZED: 12/23/1991
INSTRUMENT ID: VG-3
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 20g
DILUTION FACTOR: 1

COMP. NO.	COMPOUND	ug/Kg (ppb)	DETECTION LIMIT ug/Kg (ppb)
V1	Benzene	<1	1
V2	Chlorobenzene	<1	1
V3	1,2-Dichlorobenzene	<1	1
V4	1,3-Dichlorobenzene	<1	1
V5	1,4-Dichlorobenzene	<1	1
V6	Ethyl benzene	<1	1
V7	Toluene	<1	1
V8	Xylenes (Dimethyl benzenes)	<1	1

Samir Samaan
Chemist

January 2, 1992
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-12-104
Hazardous Waste Testing
Certification: E765

CLIENT: HARDING LAWSON
JOB #: 2047,157.04
NAME/LOCATION: DPH-SUNOL
ELI SAMPLE ID: 9112104-04A
SAMPLE ID: METHOD BLANK

DATE SAMPLED: NA
DATE RECEIVED: 12/19/1991
DATE EXTRACTED: 12/20/1991
DATE ANALYZED: 12/23/1991
INSTRUMENT ID: VG-3
MATRIX: NA
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

COMP. NO.	COMPOUND	ug/Kg (ppb)	DETECTION LIMIT ug/Kg (ppb)
V1	Benzene	<1	1
V2	Chlorobenzene	<1	1
V3	1,2-Dichlorobenzene	<1	1
V4	1,3-Dichlorobenzene	<1	1
V5	1,4-Dichlorobenzene	<1	1
V6	Ethyl benzene	<1	1
V7	Toluene	<1	1
V8	Xylenes (Dimethyl benzenes)	<1	1

Samir Samaan
Chemist

January 2, 1992
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-12-104
Hazardous Waste Testing
Certification: E765

CLIENT: HARDING LAWSON
JOB #: 2047,157.04
NAME/LOCATION: DPH-SUNOL
ELI SAMPLE ID: 9112104-06A
SAMPLE ID: 3 MATRIX SPIKE RECOVERY

DATE SAMPLED: NA
DATE RECEIVED: 12/19/1991
DATE EXTRACTED: 12/20/1991
DATE ANALYZED: 12/23/1991
INSTRUMENT ID: VG-3
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 20g
DILUTION FACTOR: 1

COMP. NO.	COMPOUND	SPIKE RECOVERY
V1	Benzene	95%
V2	Chlorobenzene	96%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	99%
V7	Toluene	99%
V8	Xylenes (Dimethyl benzenes)	104%

Samir Samaan
Chemist

January 2, 1991
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-12-104
Hazardous Waste Testing
Certification: E765

CLIENT: HARDING LAWSON
JOB #: 2047,157.04
NAME/LOCATION: DPH-SUNOL
ELI SAMPLE ID: 9112104-07A
SAMPLE ID: 3 MATRIX SPIKE RECOVERY DUPLICATE

DATE SAMPLED: NA
DATE RECEIVED: 12/19/1991
DATE EXTRACTED: 12/20/1991
DATE ANALYZED: 12/23/1991
INSTRUMENT ID: VG-3
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 20g
DILUTION FACTOR: 1

COMP. NO.	COMPOUND	SPIKE RECOVERY
V1	Benzene	95%
V2	Chlorobenzene	95%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	99%
V7	Toluene	99%
V8	Xylenes (Dimethyl benzenes)	103%

Samir Samaan
Chemist

January 2, 1991
Date

TOTAL PETROLEUM HYDROCARBC
Modified EPA Method 8015(GC-FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-01A
FILE ID: NA
SAMPLE ID: 1

DATE SAMPLED: 12/18/91
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 40G
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	CONCENTRATION ppm (mg/Kg)	DETECTION LIMIT ppm (mg/Kg)
Gasoline Range	<5	5
Diesel Range	<10	10
Motor Oil Range	<25	25
Total Petroleum Hydrocarbons		
CARBON NO. RANGE		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	

Mark Shih, Ph.D.
Chemist

12/23/91
Date

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 8015(GC FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-02A
FILE ID: NA
SAMPLE ID: 2

DATE SAMPLED: 12/18/91
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 40G
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	CONCENTRATION ppm (mg/Kg)	DETECTION LIMIT ppm (mg/Kg)
Gasoline Range	<5	5
Diesel Range	<10	10
Motor Oil Range	<25	25
Total Petroleum Hydrocarbons		
CARBON NO. RANGE		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	

Mark Shih, Ph.D.
Chemist

12/23/91
Date

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 8015(GC/FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-03A
FILE ID: NA
SAMPLE ID: 3

DATE SAMPLED: 12/18/91
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 40G
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	CONCENTRATION ppm (mg/Kg)	DETECTION LIMIT ppm (mg/Kg)
Gasoline Range	<5	5
Diesel Range	<10	10
Motor Oil Range	<25	25
Total Petroleum Hydrocarbons		
CARBON NO. RANGE		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	

Mark Shih, Ph.D. — Chemist

12/23/91 — Date

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 8015(GC-FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-04A
FILE ID: NA
SAMPLE ID: METHOD BLANK

DATE SAMPLED: NA
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: NA
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	CONCENTRATION ppm (mg/Kg)	DETECTION LIMIT ppm (mg/Kg)
Gasoline Range	<5	5
Diesel Range	<10	10
Motor Oil Range	<25	25
Total Petroleum Hydrocarbons		
CARBON NO. RANGE		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	

Mark Shih, Ph.D. — Chemist

12/23/91 — Date

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 8015(GC-FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-06A
FILE ID: NA
SAMPLE ID: SPIKE RECOVERY
SEE NOTE

DATE SAMPLED: NA
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 40G

PETROLEUM HYDROCARBONS	CONCENTRATION %
Gasoline Range	109%
Diesel Range	NA
Motor Oil Range	85%
Total Petroleum Hydrocarbons	
CARBON NO. RANGE	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-
PEAK CARBON NO.	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-

This set of matrix spike is from another sample of the same matrix & of the same analytical batch.

Mark Shih, Ph.D. — Chemist

12/23/91 — Date

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 8015(GC-FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-07A
FILE ID: NA
SAMPLE ID: SPIKE RECOVERY DUPLICATE
SEE NOTE

DATE SAMPLED: NA
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: SOIL
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: 40G

PETROLEUM HYDROCARBONS	CONCENTRATION %
Gasoline Range	112%
Diesel Range	NA
Motor Oil Range	80%
Total Petroleum Hydrocarbons	
CARBON NO. RANGE	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-
PEAK CARBON NO.	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-

This set of matrix spike is from another sample of the same matrix & of the same analytical batch.

Mark Shih, Ph.D. — Chemist

12/23/91 — Date

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 8015(GC-FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-08A
FILE ID: NA
SAMPLE ID: REAGENT SPIKE RECOVERY

DATE SAMPLED: NA
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: NA
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: NA

PETROLEUM HYDROCARBONS	CONCENTRATION %
Gasoline Range	113%
Diesel Range	NA
Motor Oil Range	89%
Total Petroleum Hydrocarbons	
CARBON NO. RANGE	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-
PEAK CARBON NO.	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-

Mark Shih, Ph.D. — Chemist

12/23/91 — Date

TOTAL PETROLEUM HYDROCARBONS
Modified EPA Method 8015(GC-FID)

EUREKA LABORATORIES, INC.
6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Order No.: 91-12-104
Hazardous Waste Testing
Certification No.: E765

CLIENT: HARDING LAWSON ASSOCIATES
CONTRACT #: NA
PROJECT: DPH-SUNOL #2047,157.04
TASK #: NA
P.O.#: NA
SAMPLE LOCATION: NA
ELI SAMPLE ID: 9112104-09A
FILE ID: NA
SAMPLE ID: REAGENT SPIKE RECOVERY DUP

DATE SAMPLED: NA
DATE RECEIVED: 12/19/91
DATE EXTRACTED: 12/20/91
DATE ANALYZED: 12/20/91
INSTRUMENT ID: SVG1
MATRIX: NA
% MOISTURE: NA
REPORT WT: WET
SAMPLE VOL./WT.: NA

PETROLEUM HYDROCARBONS	CONCENTRATION %
Gasoline Range	81%
Diesel Range	NA
Motor Oil Range	65%
Total Petroleum Hydrocarbons	
CARBON NO. RANGE	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-
PEAK CARBON NO.	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-

Mark Shih, Ph.D. — Chemist

12/23/91 — Date

Harding Lawson Associates
Marathon Plaza
303 Second Street, Suite 630 North
San Francisco, CA 94107
(415) 543-8422 • (415) 777-9706 Telecopier

AA42 CHAIN OF CUSTODY FORM

59°F

Lab: Eureka Analytical ~~Hunt~~ Concord Courier 7139

91.12.104

Samplers: Ron Reindl ~~Hunt~~

Job Number: 2047.157.04

Name/Location: DPH-Sunol

Project Manager: Dave Dixon

Recorder: (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	Ice	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	TPH-Diesel BTXE
	1	A		X				X			1	91	12	18	1530	North End of Tank							X
	2	A		X				X			2	91	12	18	1530	South End of Tank							X
	3	A		X				X			3	91	12	18	1545	Stockpile							X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME 10:23 12-19-91
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME 12-19-91 13:03
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 12/19/91 13:10
METHOD OF SHIPMENT		

Laboratory Copy Project Office Copy Field or Office Copy

6533

ENVIRONMENTAL SERVICES
(DIVISION OF H&H SHIP SERVICE CO., INC.)

220 CHINA BASIN, SAN FRANCISCO, CA 94107 • DAY AND NIGHT: (415) 543-4835 FAX (415) 543-8265

CERTIFICATE OF DISPOSAL

DECEMBER 23, 1991

H & H Ship Service Company hereby certifies to BAY AREA TANK AND MARINE that:

1. The storage tank(s), size(s) ONE (1) 1,500 GALS.

   removed from the CITY & COUNTY OF S.F. PUBLIC UTILITIES

   facility at 8653 CALAVERAS ROAD

   SUNOL, CALIFORNIA

   were transported to H & H Ship Service Company, 220 China Basin St., San Francisco, California 94107.

2. The following tank(s), H & H Job Number 9812

   have been steamed cleaned, cut with approximately 2' X 2' holes, rendered harmless and disposed of as scrap metal.

3. Disposal site: SCHNITZER STEEL, OAKLAND, CALIFORNIA.

4. The foregoing method of destruction/disposal is suitable for the materials involved, and fully complies with all applicable regulatory and permit requirements.

5. Should you require further information, please call (415) 543-4835.

Very Truly Yours,

Cleveland Velrey
Operations Coordinator

State of California—Health and Welfare Agency

Please print or type. Form designed for use on elite (12-pitch...typewriter).

See instructions on back of page 6.

Department of Health Services
Toxic Substances Control Program
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
C A L 0 0 0 0 2 7 3 1 0	0 0 0 0 2		

GENERATOR

3. Generator's Name and Mailing Address
CITY & COUNTY OF SAN FRANCISCO, DEPT. OF PUBLIC HEALTH
101 Grove Street, Room 220, San Francisco, CA. 94102
4. Generator's Phone (415) 554-2757

A. State Manifest Document Number: 91511273
B. State Generator ID:

5. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8
C. State Transporter's ID: 200554
D. Transporter's Phone: (415) 543-4835

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address
H & H Ship Service Company
220 China Basin Street
San Francisco, CA 94107
10. US EPA ID Number: C A D 0 0 4 7 7 1 1 6 8
G. State Facility's ID: CAD 047711688
H. Facility's Phone: (415) 543-4835

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. RESIDUE DIESEL TANK NON-RCRA HAZARDOUS WASTE SOLID	0 0 1	T P	0 1 5 0 0	P	State: 512 EPA/Other:
b.					State: EPA/Other:
c.					State: EPA/Other:
d.					State: EPA/Other:

J. Additional Descriptions for Materials Listed Above
EMPTY-1,500-GALLON TANK last containing diesel. Tank inerted with dry ice for transport.
PROFILE #A1466

K. Handling Codes for Wastes Listed Above
a. 01
b.
c.
d.

15. Special Handling Instructions and Additional Information
JOB #9812
24 Hr. Emergency Contact: H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

JOB SITE: S.F. PUBLIC UTILITIES
8653 Calaveras Road
Sunol, California

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Don Smith	Don Smith	1 2	1 8	9 1

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
ROBERT V. PETRUCCI	Robert V. Petrucci	1 2	1 8	9 1

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Crawford Kato		1 2	1 8	9 1

DO NOT WRITE BELOW THIS LINE

IN CASE OF EMERGENCY OR SPILL CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

91511273

DHS 8022A (12/90)
EPA 8700-22

Write: TRANSFERS THIS COPY TO DHS WITHIN 30 DAYS.
To: P.O. Box 3000, Sacramento, CA 95812

State of California—Health and Welfare Agency

See instructions on back of page 6.

Department of Health Services
Toxic Substances Control Program
8346 Sacramento, California

Please print or type. Form designed for use on elite (12-pitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
C A L 0 0 0 0 2 7 3 1 0	0 0 0 0 0 1		

3. Generator's Name and Mailing Address
CITY & COUNTY OF SAN FRANCISCO, DEPT. OF PUBLIC HEALTH
101 Grove Street, Room 220, San Francisco, CA. 94102
4. Generator's Phone 415) 554-2757

4a. State Manifest Document Number 91511271
4b. State Generator's ID
4c. State Transporter's ID 208560
4d. Transporter's Phone (415) 543-4835
4e. State Transporter's ID
4f. Transporter's Phone
4g. State Facility's ID CAD044771155
4h. Facility's Phone (415) 543-4835

5. Transporter 1 Company Name: H & H Ship Service Company
6. US EPA ID Number: C A D 0 0 4 7 7 1 1 5 6 8

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
H & H Ship Service Company
220 China Basin Street
San Francisco, CA 94107
10. US EPA ID Number: C A D 0 0 4 7 7 1 1 5 6 8

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Container No.	12. Container Type	13. Total Quantity	14. Unit Wt/Vol	State
a. OIL AND WATER NON-RCRA HAZARDOUS WASTE LIQUID	0 0 1	T T	00200	G	CA 344 445
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
FUEL, OIL AND WATER
PROFILE #A1467

K. Handling Codes for Wastes Listed Above
a. 01 b. c.

15. Special Handling Instructions and Additional Information
JOB #9809
24 Hr. Emergency Contact: H & H #(415) 543-4835
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

JOB SITE: S.F. PUBLIC UTILITIES
8653 Calaveras Road
Sunol, California

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Don Smith	Don Smith	1 2	1 8	9 1

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
ROBERT S. HANSEN	Robert S. Hansen	1 2	1 8	9 1

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by the manifest except as noted in Item 19

Printed/Typed Name	Signature	Month	Day	Year
Riston Shadlow		1 2	1 8	9 1

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

DHS 8022A (12/90)
EPA 8700—22

SEND A COPY TO DHS WITHIN 30 DAYS
P.O. Box 806, Sacramento, CA 95812