# UNDERGROUND AND ABOVE GROUND STORAGE TANK REMOVAL AND SAMPLING REPORT

**461 McGraw Avenue**
**Livermore, California**

**Prepared For:**

**Call Mac Transportation Company, Inc.**
**461 McGraw Avenue**
**Livermore, CA**

**Prepared By:**

**Remediation Risk Management, Inc.**
P.O. Box 1362
Aptos, California 95001

**17 October 1995**

**APPROVALS:**

Katherine M. Howard
Project Coordinator

17 Oct 95
Date

Christopher J. Peoples
Project Manager

10/17/95
Date

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**17 October 1995**

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## 1.0 INTRODUCTION

Remediation Risk Management, Inc. (RRM) was retained by Call Mac Transportation Company, Inc. to remove one underground storage tank (UST), remove one above ground storage tank and conduct soil, sludge and water sampling at the subject site. The site is the location of an operating transportation company at 461 McGraw Avenue in Livermore, Alameda County, California (Figure 1, Site Location Map). The following report summarizes the tank removal and sampling activities which took place on 25 July 1995.

## 2.0 SITE DESCRIPTION

The subject site is a transportation service facility, Call Mac Transportation, Inc. The nearest cross street to the subject site is South Front Road (Figure 1, Site Location Map). The property is approximately 120,000 square feet in size. Much of the site has trucks and truck trailers parked over the site. Thirty-nine 55-gallon drums containing polyester resin are located in one section of the site. Formerly one pump island was located along the northern portion of the site near the underground storage tank (UST-1). Figure 2 presents the location of the underground storage tank and above ground storage tanks (T-1 through T-5).

## 3.0 WORK OBJECTIVES

1. Notification of USAlert for the location of underground utilities at the subject property.
2. Empty product from tanks (T-1 and UST-1) and dispose of properly.
3. Uncover UST-1, and inert and remove above ground storage tank T-1 and underground storage tank UST-1 for appropriate disposal.
4. Perform soil sampling beneath UST-1 and related piping, and collect soil samples from beneath above ground storage tanks T-2 and T-3 in areas with apparent spillage and have soil samples analyzed for petroleum hydrocarbons at a state-certified laboratory.
5. Sample sludge inside tanks T-2 and T-3 and analyze for PCBs and VOCs.
6. Sample stock-piled soils and backfill with native soils and import fill to grade.

# 4.0 WORKSCOPE

Remediation Risk Management addressed the above mentioned Work Objectives with the following activities: 1) Pre-Field Activities, 2) Tank Removal and Related Soil Sampling Activities, 3) Soil Sampling in areas of spillage below T-2 and T-3, 4) Backfilling Tank Pits and 5) Sample contents of T-2 and T-3.

## 4.1 PRE-FIELD ACTIVITIES

USAlert was notified regarding subsurface excavating on the subject property at least 3 days prior to starting work.

## 4.2 TANK REMOVAL AND SAMPLING ACTIVITIES

### 4.2.1 Underground and Above Ground Storage Tank Removal

One 12,000-gallon diesel underground storage tank (UST-1) and one 5,000-gallon diesel above ground tank (T-1) was removed. Under the supervision of a representative of Remediation Risk Management, Inc. (RRM), John's Excavating (Santa Rosa, CA) performed the excavation, tank removal and soil sampling activities. UST-1 was pumped by North Valley Oil into their truck tank. Prior to removal of each tank, dry ice was introduced to inert the tank. An $O_2$ meter was used to verify oxygen levels inside the tank were less than 10% LEL. Kurt Hayes of the Livermore Fire Prevention Department oversaw the inerting of T-1 and Danielle Stefani oversaw the inerting of the UST-1. H & H Ship Service Company hauled the tanks to their China Basin Facility located at 220 Terry Francois in San Francisco, CA. The Uniform Hazardous Waste Manifest forms for the product and two tanks are included in Appendix A.

The floor of the tank excavation varied from 12 to 14 feet below ground surface. Groundwater was observed in the base of the tank excavation. Soils and fill excavated from around the tank were stockpiled on visqueen near the excavation. Stained soils were noted at around the pipe leading to the dispenser.

#### Tank Conditions

The tanks were examined following excavation. The 12,000-gallon diesel UST-1 measured approximately 8 feet in diameter and 34 feet in length. No penetrating holes were observed in the single-walled steel tank. The tank was installed in approximately 1974. The fill and vent piping was removed along with the tank. The 5,000-gallon diesel tank measured approximately 8 feet in diameter and 15 feet in length. No penetrating holes were observed in the single-walled steel tank.

### 4.2.2 Sampling

Soil sampling locations are indicated on Figure 3.

**UST-1 and Associated Piping**

Three soil samples, designated S-1 through S-3 were collected from beneath the underground storage tank. The general location of the former tank and soil sample locations are presented in the attached Figure 2. Generally the soil samples were collected at a depth of approximately 1 foot below the floor of the tank excavation, one below the fill end, one in the middle, and the other below the non-fill end of the tank. At each sampling location, the backhoe operator was instructed to retrieve a load of soils. The top three inches of soil were scraped away prior to sample collection. A laboratory-supplied pre-cleaned brass sleeve of 2-inch diameter and 3-inch length was driven into each load of soils and then the soil-packed sleeve sample was sealed with aluminum foil and plastic caps. A fourth soil sample, designated S-4, was collected from approximately 2 feet bgs below the former dispenser island (Figure 3).

Approximately 1 foot of groundwater pooled in the base of the excavation. The backhoe operator was instructed to retrieve a load of soils and water. A laboratory supplied sterilized 1-liter glass jar and one 40 ml glass VOA was used to collect the water sample, designated sample UST .

**Above Ground Storage Tanks T-2 and T-3**

There were two areas of surface spillage beneath above ground tanks T-2 and T-3. One soil sample was collected approximately 1.5 feet bgs at each location (designated ST-2 and ST-3). A hand auger was used to advance the shallow borings. The samples were collected in 2-inch diameter and 3-inch long stainless steel sleeves through the use of a slide sampler. In addition, there was a sludge-like petroleum substance in both tanks. Samples, designated T-2 and T-3, from each tank were collected in 40 ml VOAs.

**Stockpile**

Three soil samples, designated SD-1 through SD-3, were collected from the stockpile in 2-inch diameter and 3-inch long stainless steel sleeves.

**Sample Storage and Analytical**

The soil, water and sludge samples were labeled and placed in a cooler with ice for transport to Hull Developmental Labs (San Jose, California). Samples S-1 through S-3 and SD-1 through SD-3 were analyzed for TPHd, MO, and BTEX. Sample S-4, ST-2 and ST-3 were analyzed for TPHd, MO, TPHg and BTEX. The water sample was analyzed for TPHd, TPHg and BTEX. Sludge samples, T-2 and T-3, were analyzed for volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs). Hull Developmental Labs utilized Modified Method 8015 for the analyses of MO, TPHd and TPHg for soil and water. EPA Methods 8020, 8010,

and 8080 were used for the analysis of BTEX, VOCs and PCBs, respectively. A chain of custody record was initiated in the field and accompanied the samples to the laboratory. Results of the laboratory analyses are presented in Table 1. The laboratory analyses report and chain of custody forms are included in Appendix B.

### 4.2.2 Stockpiled Soils

The excavated soils were stockpiled near the excavation. **Three soil samples were collected from the stockpile (SD-1 through SD-3) and submitted for laboratory analyses to be analyzed** for TPHd, Motor Oil and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Results are presented in Table 1. On 25 July 1995, the **tank excavation was backfilled with the native soils and compacted in 3-foot lifts to 4 feet below grade**. Clean import fill was backfilled and compacted to grade.

up to 100 ppm TPH-MO ND for TPHd + BTEX.

## 5.0 TANK REMOVAL & SAMPLING RESULTS AND CONCLUSIONS

Upon removal of the UST and the above ground storage tank, they appeared in good condition with no visible holes. The field observations combined with the analytical results (**S-1 through S-3 were non-detect for all constituents** tested for) indicate the area around the UST was not impacted with petroleum hydrocarbons. The soil sample collected from near the **dispenser piping (S-4) was found to contain 17,000 parts per million (ppm) TPHd**. This sample was collected from an area of obvious over-spillage. Table 1 and Figure 4 presents sampling locations, depths, and concentrations of TPHd. The stockpile soil samples analyses indicated MO concentrations ranging from non-detect to 100 ppm. BTEX and TPHd were not detected in these soil samples. The stockpiled soils were returned to the excavation. The **water sample collected from the base of the excavation did not have detectable concentrations of any of the constituents analyzed**.

Samples **ST-2 and ST-3 collected from stained areas beneath aboveground storage tanks T-2** and T-3 showed **TPHd concentrations of 840 ppm and 210 ppm**, respectively. Table 1 and Figure 4 presents sampling locations, depths, and concentrations of TPHd.

The sludge samples collected from within T-2 and T-3 did not have detectable concentrations of PCBs or VOCs. The sludge has been pumped by North Valley Oil. Results are presented in Table 1.

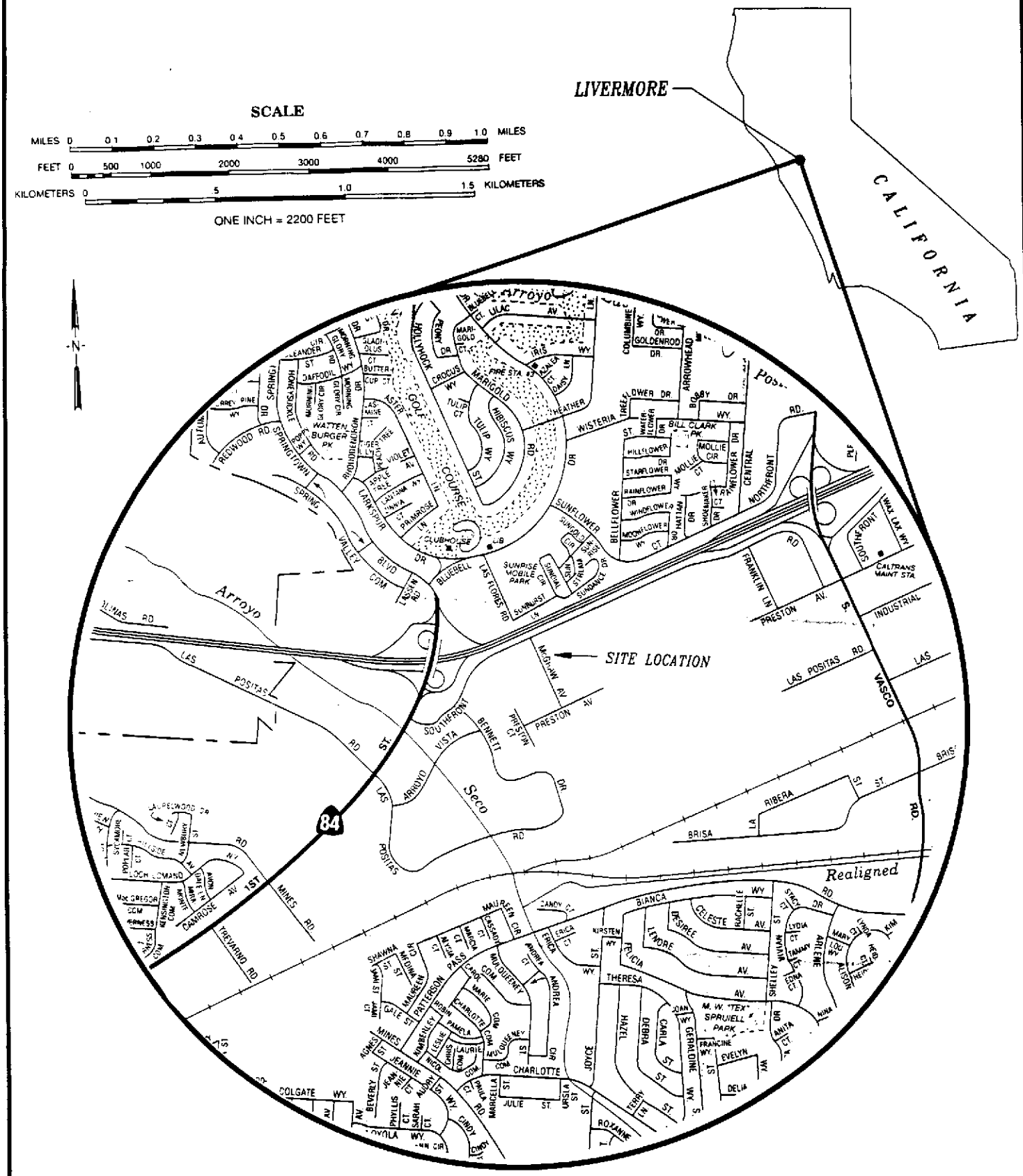
## 6.0 RECOMMENDATIONS

It is recommended that additional site characterization be performed including: 1) characterization of the contents of the 39 55-gallon drums, 2) additional surface sampling in areas suspect of being impacted with petroleum hydrocarbons, and 3) removal of the remaining above ground tanks (tanker truck trailers).

## 7.0 LIMITATIONS FOR SUBSURFACE SAMPLING AND INVESTIGATIONS

Evaluations of the geological conditions at the site for the purpose of this investigation are inherently limited due to the limited number of observation points. There may be variations in subsurface conditions in areas away from the sample points. There are no representations, warranties, or guarantees that the points selected for sampling are representative of the entire site. Data from this report reflects the sample conditions at specific locations at a specific point in time. No other interpretations, representations, warranties, guarantees, express or implied, are included or intended in the report findings. Additional work, including further subsurface investigation, might reduce the inherent uncertainties associated with this type of investigation.

# *FIGURES*

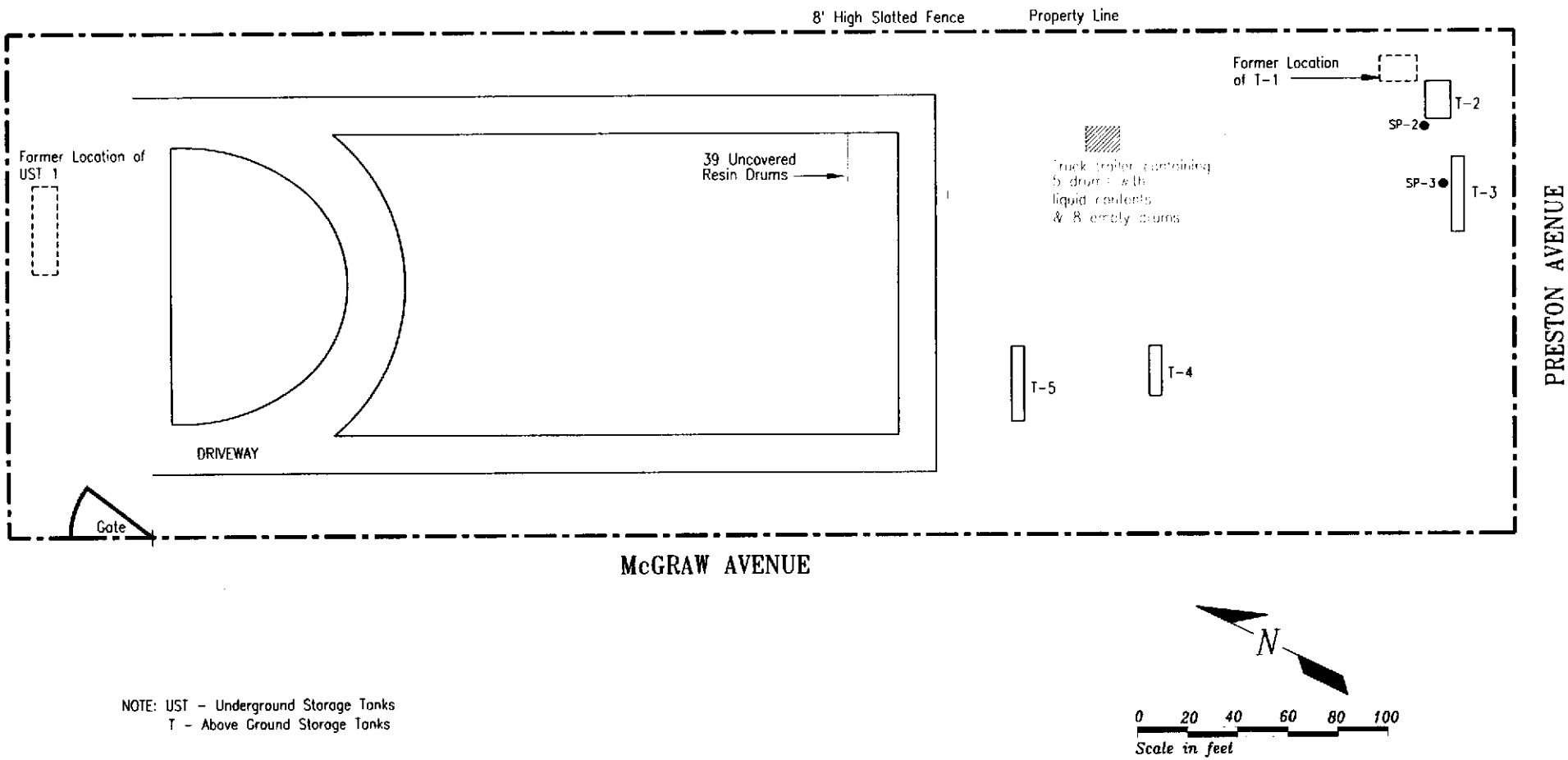



REFERENCE: (AAA) California State Automobile Association Map
LIVERMORE AREA

RRM
Remediation Risk Management, Inc.

# SITE LOCATION MAP
# 461 McGRAW AVENUE
# LIVERMORE, CALIFORNIA

*FIGURE 1*



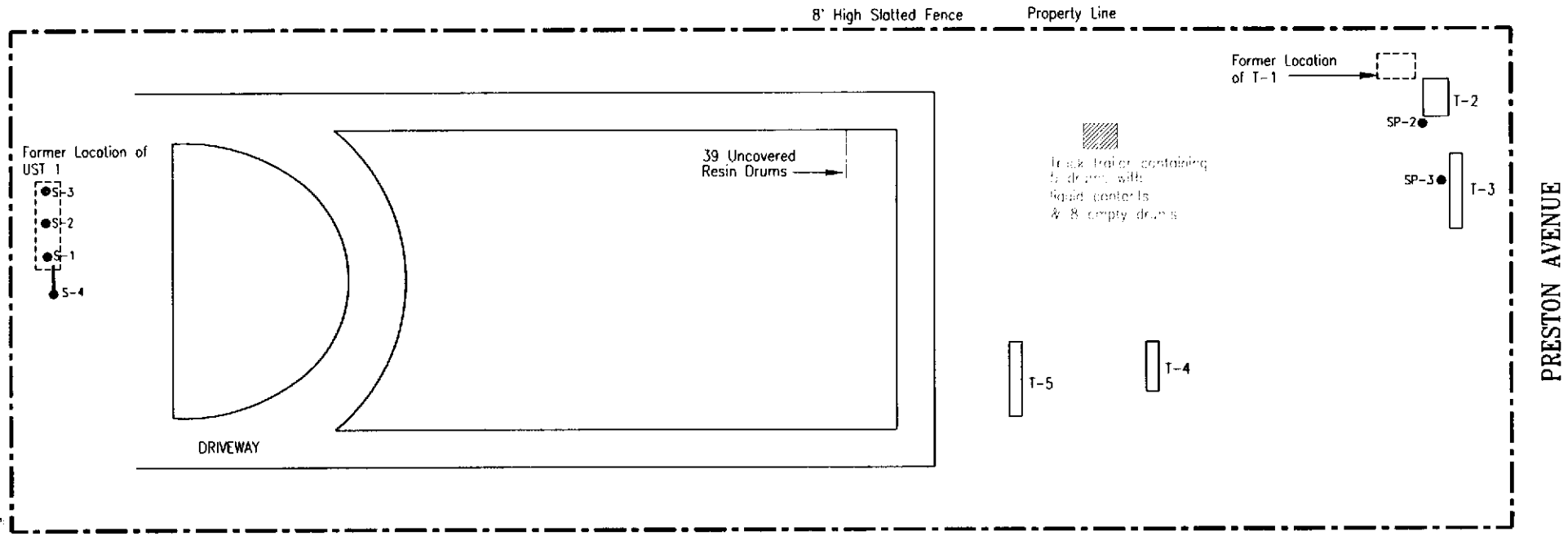

NOTE: UST – Underground Storage Tanks
T – Above Ground Storage Tanks

RRM
Remediation Risk Management, Inc.

# SITE PLAN
## 461 McGraw Avenue
## Livermore, California

*FIGURE 2*

CE82-02/10-17-95




**LEGEND**

- ● SOIL SAMPLES
- — FORMER ASSOCIATED DISPENSER PIPING

NOTE: UST – Underground Storage Tanks
T – Above Ground Storage Tanks

N

0 20 40 60 80 100

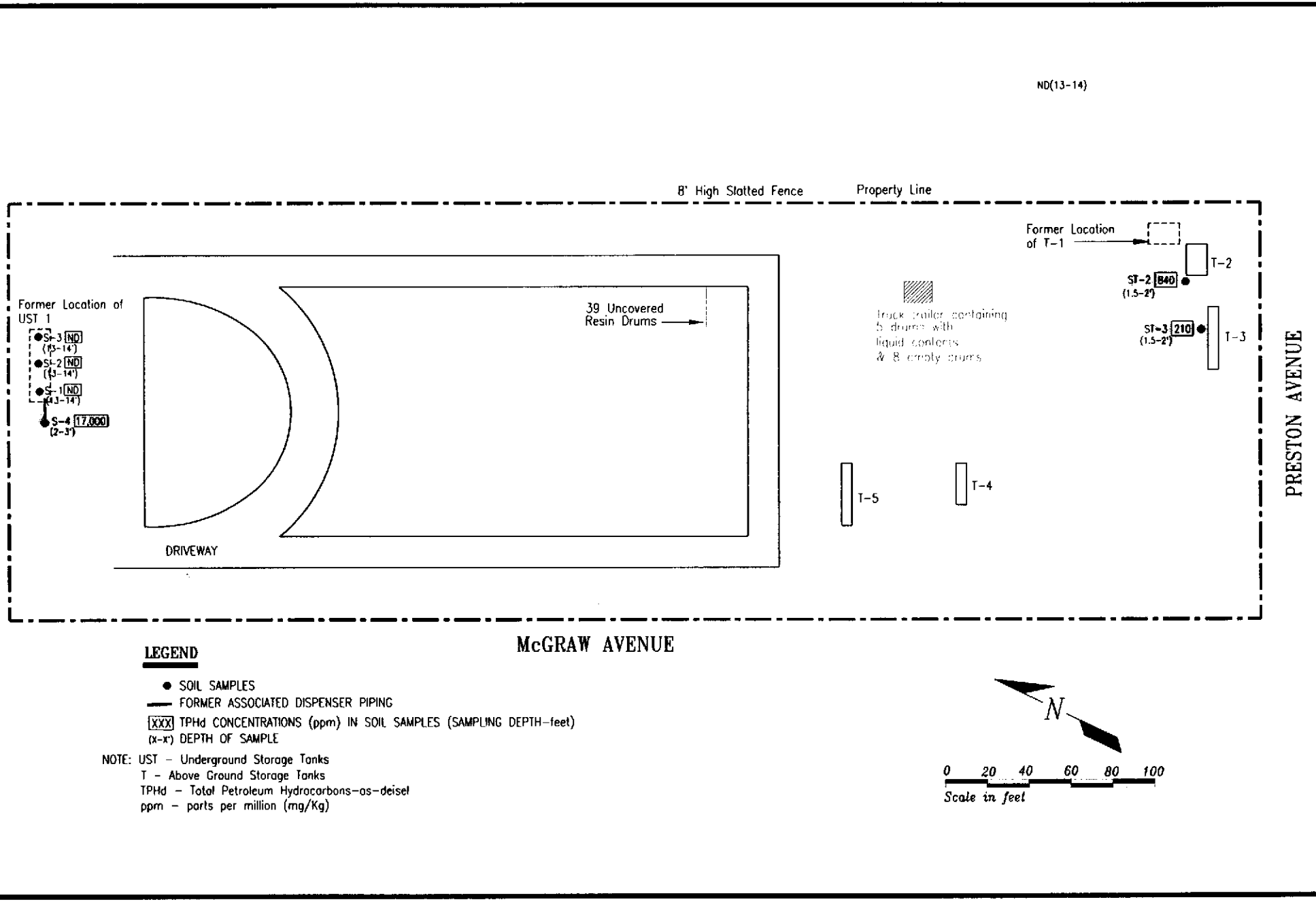
*Scale in feet*

RRM
Remediation Risk Management, Inc.

# SAMPLE LOCATIONS
## 461 McGraw Avenue
## Livermore, California

*FIGURE 3*

CE82-03/10-17-95




**TPHd CONCENTRATION (ppm) IN SOIL SAMPLES - 25 July 1995**
461 McGraw Avenue
Livermore, California

RRM
Remediation Risk Management, Inc.

*FIGURE 4*

CE82-04/10-17-95

# TABLE 1

Remediation Risk Management, Inc.

## SUMMARY OF ANALYSES

461 McGraw Avenue, Livermore, California

| SAMPLING I.D. (Matrix) | SAMPLING DATE | Sampling Depth (feet) | TPHg (ppm) | TPHd (ppm) | Motor Oil (ppm) | VOCs (8010 Compounds) (ppm) | BTEX (ppm) |
|---|---|---|---|---|---|---|---|
| S-1 (soil) | 25 July 95 | 13-14 | NA | <1.0 | <1.0 | NA | <0.005 |
| S-2 (soil) | 25 July 95 | 13-14 | NA | <1.0 | <1.0 | NA | <0.005 |
| S-3 (soil) | 25 July 95 | 13-14 | NA | <1.0 | <1.0 | NA | <0.005 |
| **S-4 (soil)** | 25 July 95 | 2-3 | 8.4* | **17,000** | <1.0 | NA | <0.005 |
| SD-1 (soil) | 25 July 95 | Stockpile | NA | <1.0 | 60 | NA | <0.005 |
| SD-2 (soil) | 25 July 95 | Stockpile | NA | <1.0 | 100 | NA | <0.005 |
| SD-3 (soil) | 25 July 95 | Stockpile | NA | <1.0 | <1.0 | NA | <0.005 |
| ST-2 (soil) | 25 July 95 | 1.5-2 | 13* | **840** | <1.0 | NA | <0.005 |
| ST-3 (soil) | 25 July 95 | 1.5-2 | 14* | **210** | <1.0 | NA | <0.005 |

| SAMPLING I.D. (Matrix) | SAMPLING DATE | TPHg (ppb | TPHd (ppb) | PCBs (ppb) | VOCs (8010 Compounds) (ppb) | BTEX (ppb) |
|---|---|---|---|---|---|---|
| UST (water) | 25 July 95 | <50.0 | <50.0 | NA | NA | <0.5 |
| T-2 (sludge) | 25 July 95 | NA | NA | ND | ND | NA |
| T-3 (sludge) | 25 July 95 | NA | NA | ND | ND | NA |

NOTES: TPHg - Total Petroleum Hydrocarbons-as-gasoline
TPHd - Total Petroleum Hydrocarbons-as-diesel
* - Chromatogram indicates concentration not indicative of gasoline
ppm = parts per million (mg/kg)
ppb = parts per billion (mg/L)
PCBs - Polychlorinated biphenyls
BTEX - benzene, toluene, ethylbenzene and total xylenes
VOCs - Volatile organic compounds
**Bold - Samples with constituents detected above the analytical detection method.**

# *APPENDIX A*

# *MANIFESTS*

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-94)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

**See Instructions on back of page 6.**

Department of Toxic Substances Control
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. |
|---|---|---|---|
| CAC002 [illegible] | [illegible] | | |

93689253

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

**GENERATOR**

3. Generator's Name and Mailing Address
GRANDAL MACKEY — CALL MAC TRANSPORTATION CO., INC.
461 MCGRAW AVE. [illegible]

4. Generator's Phone 510 455-7615 9450

A. State Manifest Document Number: 9368 [illegible]
B. State Generator's ID:
C. State Transporter's ID: 93144
D. Transporter's Phone: (408) 945-[illegible]
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID: CAL[illegible]
H. Facility's Phone: (408) 262-[illegible]

5. Transporter 1 Company Name: NORTH VALLEY OIL
6. US EPA ID Number: CAL000027759

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

9. Designated Facility Name and Site Address
ALVISO INDEPENDENT OIL INC.
5002 Archer Street
Alviso, CA 95002

10. US EPA ID Number: CAD000048571

| 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 |
|---|---|---|---|---|
| a. Used Petroleum Oil Combustible Liquid UN1270 Class 3 NON-RCRA PGIII | 001 | TT | 0220 | G |
| b. | | | | |
| c. | | | | |
| d. | | | | |

[illegible] .01

15. Special Handling Instructions and Additional Information
510 455-7615 MAIL TO: GRANDAL MACKEY PO BOX 452257 HAYWARD, CA 94545
ERG #27 GLOVES
EMERGENCY CONTACT PERSON: Felicitas Gomez

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 |
|---|---|---|---|---|
| Felicitas Gomez | | 07 | 25 | 95 |

**TRANSPORTER**

17. Transporter 1 Acknowledgement of Receipt of Materials

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| LARRY EVANS | | 07 | 25 | 95 |

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 |
|---|---|---|---|---|
| GRANDAL MACKEY | Grandal Mackey | 08 | 09 | 95 |

**DO NOT WRITE BELOW THIS LINE.**

DTSC 8022A (9/93)
EPA 8700—22

Yellow: GENERATOR RETAINS

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-96)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

**See Instructions on back of page 6.**

Department of Toxic Substances Control
Sacramento, California

95208542

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

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CACO00731112 — Manifest Document No. 08542
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

**GENERATOR**

3. Generator's Name and Mailing Address
CALL MAC TRANSPORTATION CO. INC.
P.O. BOX 50067, PALO ALTO, CA 94303

A. State Manifest Document Number: 95208542

4. Generator's Phone (510) 455-1515

B. State Generator's ID:

5. Transporter 1 Company Name: H&H SHIP SERVICE CO.
6. US EPA ID Number: CAD004771168

C. State Transporter's ID: 600933
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 TERRY FRANCOIS/CHINA BASIN
SAN FRANCISCO, CA. 94107
10. US EPA ID Number: CAD004771168

G. State Facility's ID: CAD004771168
H. Facility's Phone: (415) 543-4835

| 11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | I. Waste Number |
|---|---|---|---|---|---|
| a. RESIDUE DIESEL TANK ABOVE GROUND TANK<br>NON-RCRA HAZARDOUS WASTE SOLID | 001 | TP | 05000 | P | State<br>EPA/Other |
| b. | | | | | State<br>EPA/Other |
| c. | | | | | State<br>EPA/Other |
| d. | | | | | State<br>EPA/Other |

J. Additional Descriptions for Materials Listed Above
TWO (2) EMPTY 5,000 GALLON TANKS LAST CONTAINING DIESEL. TANKS WERE INERTED WITH DRY ICE FOR SAFE TRANSPORT.
PROFILE #A4897

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

15. Special Handling Instructions and Additional Information
JOB #16011 JOB SITE: 461 Mc Graw Avenue
24 Hr. Emergency Contact: H & H #(415) 543-4835 Livermore, CA
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

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: Feliciano Gomez — Signature: Feliciano Gomez — Month 07 Day 25 Year 95

**TRANSPORTER**

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JIMMIE H. REESE — Signature: Jimmie Reese — Month 07 Day 25 Year 95

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: CRANDAL MACKEY — Signature: Crandal Mackey — Month 08 Day 09 Year 95

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (9/94)
EPA 8700—22

GENERATOR RETAIN

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-96)
Please print or type. *Form designed for use on elite (12-pitch) typewriter.*

**See Instructions on back of page 6.**

Department of Toxic Substances Control
Sacramento, California

95208541

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

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC000731112 | Manifest Document No. 08541 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
CALL MAC TRANSPORTATION CO. INC.
P.O. BOX 50067, PALO ALTO, CA 94303

4. Generator's Phone ( 610) 455-1515

A. State Manifest Document Number: 95208541

B. State Generator's ID:

5. Transporter 1 Company Name: H&H SHIP SERVICE CO.

6. US EPA ID Number: CAD004771168

C. State Transporter's ID: 600935

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 TERRY FRANCOIS/CHINA BASIN
SAN FRANCISCO, CA. 94107

10. US EPA ID Number: CAD004771168

G. State Facility's ID: CAD004771168

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 |
|---|---|---|---|---|---|
| RESIDUE DIESEL TANK<br>NON-RCRA HAZARDOUS WASTE SOLID | 001 | TP | 12000 | P | State 612<br>EPA/Other |
| b. | | | | | State<br>EPA/Other |
| c. | | | | | State<br>EPA/Other |
| d. | | | | | State<br>EPA/Other |

J. Additional Descriptions for Materials Listed Above
ONE (1) EMPTY [illegible] GALLON TANK LAST CONTAINING DIESEL. TANK WAS INERTED WITH DRY ICE FOR SAFE TRANSPORT.
PROFILE #A4897

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

15. Special Handling Instructions and Additional Information
JOB #16011
JOB SITE: 461 Mc Graw Avenue
24 Hr. Emergency Contact: H & H #(415) 543-4835 Livermore, CA
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR

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.

GENERATOR

Printed/Typed Name: Feliciano Gomez
Signature: Feliciano Gomez
Month 07 Day 25 Year 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: ROBERT V. PETRUCCI
Signature: Robert V. Petrucci
Month 07 Day 25 Year 95

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: CRANDAL MACKEY
Signature: Crandal Mackey
Month 08 Day 09 Year 95

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (9/94)
EPA 8700—22

GENERATOR RETA

# *APPENDIX B*

# *LABORATORY REPORTS*

# Hull Development Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554


## Organic Analysis Worksheet: EPA Method #8010

| | |
|---|---|
| Client: | RRM |
| Sample Matrix: | Waste Oil |
| Lab #: | B7453 |
| Sample ID: | T2 |

| | |
|---|---|
| Date: | 8/21/95 |
| Date Received: | 7/25/95 |
| Date Analyzed | 8/18/95 |

| *Compound* | *Concentration Found* | *MDL* | *Compound* | *Concentration Found* | *MDL* |
|---|---|---|---|---|---|
| **Bromodichloromethane** | **ND** | 1 ppm | **trans-1,2-Dichloroethene** | **ND** | 1 ppm |
| **Bromoform** | **ND** | 1 ppm | **1,2-Dichloropropane** | **ND** | 1 ppm |
| **Bromomethane** | **ND** | 1 ppm | **cis-1,3-Dichloropropene** | **ND** | 1 ppm |
| **Carbon Tetrachloride** | **ND** | 1 ppm | **trans-1,3-Dichloropropene** | **ND** | 1 ppm |
| **Chlorobenzene** | **ND** | 1 ppm | **Methylene Chloride** | **ND** | 1 ppm |
| **Chloroethane** | **ND** | 1 ppm | **1,1,2,2-Tetrachloroethane** | **ND** | 1 ppm |
| **Chloroform** | **ND** | 1 ppm | **Tetrachloroethene** | **ND** | 1 ppm |
| **Chloromethane** | **ND** | 1 ppm | **1,1,1-Trichloroethane** | **ND** | 1 ppm |
| **Dibromochloromethane** | **ND** | 1 ppm | **1,1,2-Trichloroethane** | **ND** | 1 ppm |
| **Dichlorodifluoromethane** | **ND** | 1 ppm | **Trichloroethene** | **ND** | 1 ppm |
| **1,2-Dichlorobenzene** | **ND** | 1 ppm | **Trichlorofluoromethane** | **ND** | 1 ppm |
| **1,3-Dichlorobenzene** | **ND** | 1 ppm | **Vinyl Chloride** | **ND** | 1 ppm |
| **1,4-Dichlorobenzene** | **ND** | 1 ppm | | | |
| **1,1-Dichloroethane** | **ND** | 1 ppm | | | |
| **1,2-Dichloroethane** | **ND** | 1 ppm | | | |
| **1,1-Dichloroethene (cis)** | **ND** | 1 ppm | | | |

| **Surrogate** | **Recovery (%)** |
|---|---|
| 4-Bromofluorobenzene | 60 |

1. PQL= Detection Limit x Dilution Factor
2. Reporting Units: mg/kg
3. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)
4. This worksheet is an integral part of the Certified Analytical Report for Lab #B7453 and should not be reproduced except in full without the written consent of Hull Development Labs, Inc.

Michael N. Golden, Lab Director

DF=Dilution Factor
MDL=Method Detection Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above PQL

# Hull Development Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

## Organic Analysis Worksheet: EPA Method #8010

| | |
|---|---|
| Client: | RRM |
| Sample Matrix: | Waste Oil |
| Lab #: | B7454 |
| Sample ID: | T3 |

| | |
|---|---|
| Date: | 8/21/95 |
| Date Received: | 7/25/95 |
| Date Analyzed | 8/18/95 |

| *Compound* | *Concentration Found* | *MDL* | *Compound* | *Concentration Found* | *MDL* |
|---|---|---|---|---|---|
| **Bromodichloromethane** | **ND** | 1 ppm | **trans-1,2-Dichloroethene** | **ND** | 1 ppm |
| **Bromoform** | **ND** | 1 ppm | **1,2-Dichloropropane** | **ND** | 1 ppm |
| **Bromomethane** | **ND** | 1 ppm | **cis-1,3-Dichloropropene** | **ND** | 1 ppm |
| **Carbon Tetrachloride** | **ND** | 1 ppm | **trans-1,3-Dichloropropene** | **ND** | 1 ppm |
| **Chlorobenzene** | **ND** | 1 ppm | **Methylene Chloride** | **ND** | 1 ppm |
| **Chloroethane** | **ND** | 1 ppm | **1,1,2,2-Tetrachloroethane** | **ND** | 1 ppm |
| **Chloroform** | **ND** | 1 ppm | **Tetrachloroethene** | **ND** | 1 ppm |
| **Chloromethane** | **ND** | 1 ppm | **1,1,1-Trichloroethane** | **ND** | 1 ppm |
| **Dibromochloromethane** | **ND** | 1 ppm | **1,1,2-Trichloroethane** | **ND** | 1 ppm |
| **Dichlorodifluoromethane** | **ND** | 1 ppm | **Trichloroethene** | **ND** | 1 ppm |
| **1,2-Dichlorobenzene** | **ND** | 1 ppm | **Trichlorofluoromethane** | **ND** | 1 ppm |
| **1,3-Dichlorobenzene** | **ND** | 1 ppm | **Vinyl Chloride** | **ND** | 1 ppm |
| **1,4-Dichlorobenzene** | **ND** | 1 ppm | | | |
| **1,1-Dichloroethane** | **ND** | 1 ppm | | | |
| **1,2-Dichloroethane** | **ND** | 1 ppm | | | |
| **1,1-Dichloroethene (cis)** | **ND** | 1 ppm | | | |

| **Surrogate** | **Recovery (%)** |
|---|---|
| 4-Bromofluorobenzene | 60 |

1. PQL= Detection Limit x Dilution Factor
2. Reporting Units: mg/kg
3. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)
4. This worksheet is an integral part of the Certified Analytical Report for Lab #B7453 and should not be reproduced except in full without the written consent of Hull Development Labs, Inc.

Michael N. Golden, Lab Director

DF=Dilution Factor
MDL=Method Detection Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above PQL

# Hull Development Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

**Attn: Chris Peoples**
**Remediation Risk Management**
**P.O. Box 1362**
**Aptos, CA 95001**

| | |
|---|---|
| Date: | 8/21/95 |
| Date Received: | 7/25/95 |
| Date Analyzed: | See Attached |
| Project: | CE 82 |
| Sampled By: | Client |

## Certified Analytical Report

**Waste Oil Analysis:**

| *Test* | *T2* | *T3* | *Units* | *MDL* | *EPA Method #* |
|---|---|---|---|---|---|
| Sample Matrix | Waste Oil | Waste Oil | | | |
| Sample Date | 7/25/95 | 7/25/95 | | | |
| Sample Time | 1005 | 1000 | | | |
| Lab # | B7453 | B7454 | | | |
| **Volatile Organics** | **ND** | **ND** | mg/kg | See Worksheet | 8010 |
| **PCB's** | **ND** | **ND** | mg/kg | See Worksheet | 8080 |

1. PQL=DF x MDL
2. See Organic Analysis Worksheet for individual compounds, detection limits, and analysis date
3. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)

Michael N. Golden, Lab Director

DF=Dilution Factor
MDL=Method Detection Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above PQL

HULL DEVELOPMENT LABS INC.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

## QUALITY CONTROL RESULTS SUMMARY
## FOR DIESEL ANALYSIS

DIESEL
QC sample No.: BLANK SPIKE & DUP

Date analyzed: 08-01-95
Date extracted: 08-01-95
QC batch: DW089501

Matrix: WATER

Units: ug/L

Dilution factor: 1

| COMPOUND | SA ug/L | SR ug/L | MS ug/L | MS PR | MSD ug/L | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) PR |
|---|---|---|---|---|---|---|---|---|---|
| DIESEL | 950 | 0 | 800 | 84 | 835 | 88 | 5 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

HULL DEVELOPMENT LABS INC. 525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

# QUALITY CONTROL RESULTS SUMMARY
## FOR GASOLINE ANALYSIS

GASOLINE
QC sample No.: BLANK SPIKE & DUP Date analyzed: 07-31-95

Matrix: WATER

Units: ug/L Dilution factor: 1

| COMPOUND | SA ug/L | SR ug/L | MS ug/L | MS PR | MSD ug/L | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) PR |
|---|---|---|---|---|---|---|---|---|---|
| GASOLINE | 245 | 0 | 255 | 104 | 246 | 100 | 4 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

HULL DEVELOPMENT LABS INC. 525 Del Rey Avenue suite E
Sunnyvale, CA 94086

# QUALITY CONTROL RESULTS SUMMARY
## BTEX

QC sample No.: BLANK SPIKE & DUP Date analyzed: 07-31-95

Matrix: WATER

Units: ug/L Dilution factor: 1

| COMPOUND | SA ug/L | SR ug/L | MS ug/L | MS PR | MSD ug/L | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) PR |
|---|---|---|---|---|---|---|---|---|---|
| BENZENE | 20 | 0 | 22 | 110 | 22 | 110 | 0 | 25 | 50-150 |
| TOLUENE | 20 | 0 | 22 | 110 | 21 | 105 | 5 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

# Hull Development Labs, Inc.

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

## Subcontract Chain of Custody

| Subcontract Lab: | | Date Sent: | Project Name: | | Due Date: | |
|---|---|---|---|---|---|---|
| Advanced Technology Labs | | 7/31/95 | ~~[illegible]~~ CE 82 | | 8/8/95 | |
| **Sample ID and Source** | **Matrix** | **Required Analysis** | **Date Taken** | **Time Taken** | **Containers** | **Pres?** |
| B7453 | WASTE OIL | 8250 PCB's only | 7/25/95 | | 1 x 40ml VOA | |
| B7454 | WASTE OIL | 8250 PCB's only | 7/25/95 | | 1 x 40ml VOA | |
| | | | | | | |
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| Relinquished By: | Received By: | Date: | Time: |
|---|---|---|---|
| [signature] | Cal Overnight | 7/31/95 | 01:30PM |
| Cal Overnight | Tri Nguyen | 8/1/95 | 11:15 am |
| | | | |

Notes: Cooler Temp > 15 °C

Advanced Technology
Laboratories

August 3, 1995

ELAP No.: 1838

Hull Development Labs
525 Del Rey Ave. Ste. E
Sunnyvale, CA 94086

ATTN: Mr. Mike Golden

Client's Project #: CE 82
Lab No.: 7481-001/002

Gentlemen:

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (310) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Edgar P. Caballero
Laboratory Director
EPC/kk

Enclosures

This cover letter is an integral part of this analytical report.

**Client:** Hull Development
**Attn:** Mr. Mike Golden

**Client's Project:** CE 82
**Date Received:** 08/01/95
**Extraction Method:** 3580
**Matrix:** Oil
**Units:** mg/kg

**EPA Method 8080 (PCB)**

| Lab No.: | Method Blank | | 7481-001 | | 7481-002 | |
|---|---|---|---|---|---|---|
| Client Sample I.D.: | – | | B7453 | | B7454 | |
| Date Sampled: | – | | 07/25/95 | | 07/25/95 | |
| QC Batch #: | 958080O055 | | 958080O055 | | 958080O055 | |
| Date Extracted: | 08/01/95 | | 08/01/95 | | 08/01/95 | |
| Date Analyzed : | 08/02/95 | | 08/02/95 | | 08/02/95 | |
| Analyst Initials: | YZ | | YZ | | YZ | |
| Dilution Factor: | 1 | | 1 | | 1 | |
| ANALYTE | MDL | DLR | | DLR | | DLR | |
| Alpha-BHC | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| Gamma-BHC (Lindane) | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| Beta-BHC | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| Heptachlor | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| Delta-BHC | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| Aldrin | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| Heptachlor Epoxide | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| Endosulfan I | 0.06 | 0.06 | NA | 0.06 | NA | 0.06 | NA |
| 4,4'-DDE | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| Dieldrin | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| Endrin | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| 4,4'-DDD | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| Endosulfan II | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| 4,4'-DDT | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| Endrin Aldehyde | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| Endosulfan Sulfate | 0.12 | 0.12 | NA | 0.12 | NA | 0.12 | NA |
| Methoxychlor | 0.51 | 0.51 | NA | 0.51 | NA | 0.51 | NA |
| Chlordane | 0.51 | 0.51 | NA | 0.51 | NA | 0.51 | NA |
| Toxaphene | 5.1 | 5.1 | NA | 5.1 | NA | 5.1 | NA |
| Aroclor-1016 | 1 | 1 | ND | 1 | ND | 1 | ND |
| Aroclor-1221 | 2 | 2 | ND | 2 | ND | 2 | ND |
| Aroclor-1232 | 1 | 1 | ND | 1 | ND | 1 | ND |
| Aroclor-1242 | 1 | 1 | ND | 1 | ND | 1 | ND |
| Aroclor-1248 | 1 | 1 | ND | 1 | ND | 1 | ND |
| Aroclor-1254 | 1 | 1 | ND | 1 | ND | 1 | ND |
| Aroclor-1260 | 1 | 1 | ND | 1 | ND | 1 | ND |
| Aroclor-1262 | 1 | 1 | ND | 1 | ND | 1 | ND |

**MDL = Method Detection Limit**
**ND = Not Detected (Below DLR).**
**DLR = MDL X Dilution Factor**
**NA = Not Analyzed**

**Reviewed/Approved By:** _____ **Date:** 8/3/95

**Yun Pan**
**Department Supervisor**

The cover letter is an integral part of this analytical report.

# Spike Recovery and RPD Summary Report - OIL (mg/kg)

Method : C:\HPCHEM\5\METHODS\PCB54A.M
Title : 8080/608 Pesticides/PCB's
Last Update : Thu Aug 03 15:50:37 1995
Response via : Initial Calibration

Non-Spiked Sample: PB6612.D

| | Spike Sample | Spike Duplicate Sample |
|---|---|---|
| File ID : | PS6614.D | PS6615.D |
| Sample : | BLK-MS E-8/1/95 | BLK-MSD E-8/1/95 |
| Acq Time: | 02 Aug 95 11:40 AM | 02 Aug 95 12:16 PM |

| Compound | Sample Conc | Spike Added | Spike Res | Dup Res | Spike %Rec | Dup %Rec | RPD | QC Limits RPD | QC Limits % Rec |
|---|---|---|---|---|---|---|---|---|---|
| AROCLOR 1254 | 0.0 | 200 | 183 | 194 | 91 | 97 | 6 | 50 | 50-150 |
| AROCLOR 1254 {1} | 0.0 | 200 | 202 | 201 | 101 | 100 | 0 | 50 | 50-150 |
| AROCLOR 1254 {2} | 0.0 | 200 | 194 | 193 | 97 | 97 | 0 | 50 | 50-150 |
| AROCLOR 1254 {3} | 0.0 | 200 | 169 | 170 | 85 | 85 | 0 | 50 | 50-150 |
| AROCLOR 1254 {4} | 0.0 | 200 | 174 | 175 | 87 | 87 | 0 | 50 | 50-150 |
| AROCLOR 1254 {5} | 0.0 | 200 | 174 | 174 | 87 | 87 | 0 | 50 | 50-150 |

QC Batch #: 9580800055

Reviewed/Approved By: _____ Date: 8/3/95

Yun Pan
Organics Supervisor

HULL DEVELOPMENT LABS INC.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

# QUALITY CONTROL RESULTS SUMMARY
## VOLATILE ORGANICS ANALYSIS

QC sample No.: BLANK SPIKE & DUP  Date analyzed: 08-10-95

Matrix: WATER

Units: ug/L  Dilution factor: 1

| COMPOUND | SA ug/L | SR ug/L | MS ug/L | MS PR | MSD ug/L | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) PR |
|---|---|---|---|---|---|---|---|---|---|
| BENZENE | 20 | 0 | 21 | 105 | 21 | 105 | 0 | 25 | 50-150 |
| CHLOROBENZENE | 20 | 0 | 16 | 80 | 16 | 80 | 0 | 25 | 50-150 |
| 1,1-DCA | 20 | 0 | 20 | 100 | 22 | 110 | 10 | 25 | 50-150 |
| TOLUENE | 20 | 0 | 19 | 95 | 20 | 100 | 5 | 25 | 50-150 |
| TCE | 20 | 0 | 21 | 105 | 22 | 110 | 5 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

# Hull Development Labs

1149 Minnesota Ave., San Jose, CA 95125 Tel: (408) 287-1777 Fax: (408) 287-1786

## Chain of Custody/Analysis Work Order

Client: RRM

Address: 195 RUNNEL RUN RD

APTOS CA 95003

Contact: CHRIS PEARCE

Telephone #: 662-9411

Date Received: 7/25

Turn Around: NORMAL

Project ID: CE 87

Purchase Order #:

Sampler/Company: Telephone #:

Special Instructions/Comments

**LAB USE ONLY**

Samples arrived chilled and intact:

(Yes) No

Notes:

| Sample Information | | | | | | | | Requested Analysis | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab # | Sample ID | Grab/ Composite | Matrix | Date Collected | Time Collected | Pres. | Sample Container | Cam/Lead/Zinc | | | | | | | |
| | S1 | G | SOIL | 7/25 | 1310 | | 2x3" SLEEVE | X | | | | | | B7444 | |
| | S2 | | | | 1315 | | " | X | | | | | | B7445 | |
| | S3 | | | | 1320 | | " | X | | | | | | B7446 | |
| | SD1 | | | | 1325 | | " | X | | | | | | B7447 | |
| | SD2 | | | | 1330 | | " | X | | | | | | B7448 | |
| | SD3 | | | | 1335 | | " | X | | | | | | B7449 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| Relinq By: | Received By: | Date | Time |
|---|---|---|---|
| [signature] | [signature] | 7/25/95 | 6:30PM |
| Relinq By: | Received By: | Date | Time |
| Relinq By: | Received By: | Date | Time |

# Hull Development Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

**Attn: Chris Peoples**
**Remediation Risk Management**
**P.O. Box 1362**
**Aptos, CA 95001**

| | |
|---|---|
| Date: | 8/7/95 |
| Date Received: | 7/25/95 |
| Date Analyzed: | 8/3/95 |
| Project: | CE82 |
| Sampled By: | Client |

## Certified Analytical Report

**Soil Sample Analysis:**

| *Test* | *S1* | *S2* | *S3* | *Units* | *MDL* | *EPA Method #* |
|---|---|---|---|---|---|---|
| Sample Matrix | Soil | Soil | Soil | | | |
| Sample Date | 7/25/95 | 7/25/95 | 7/25/95 | | | |
| Sample Time | 1310 | 1315 | 1320 | | | |
| Lab # | B7444 | B7445 | B7446 | | | |
| DF-Motor Oil | 1 | 1 | 1 | | | |
| **Motor Oil** | **ND** | **ND** | **ND** | mg/kg | 1.0 mg/kg | 8015M |
| DF-Diesel | 1 | 1 | 1 | | | |
| **TPH-Diesel** | **ND** | **ND** | **ND** | mg/kg | 1.0 mg/kg | 8015M |
| DF-BTEX | 1 | 1 | 1 | | | |
| **Benzene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Toluene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Ethyl Benzene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Xylenes** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |

1. PQL=DF x MDL
2. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)

Michael N. Golden, Lab Director

DF=Dilution Factor
MDL=Method Detection Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above PQL

# Hull Development Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

**Attn: Chris Peoples**
**Remediation Risk Management**
**P.O. Box 1362**
**Aptos, CA 95001**

| | |
|---|---|
| Date: | 8/7/95 |
| Date Received: | 7/25/95 |
| Date Analyzed: | 8/3/95 |
| Project: | CE82 |
| Sampled By: | Client |

## Certified Analytical Report

**Soil Sample Analysis:**

| *Test* | *SD1* | *SD2* | *SD3* | *Units* | *MDL* | *EPA Method #* |
|---|---|---|---|---|---|---|
| Sample Matrix | Soil | Soil | Soil | | | |
| Sample Date | 7/25/95 | 7/25/95 | 7/25/95 | | | |
| Sample Time | 1325 | 1330 | 1335 | | | |
| Lab # | B7447 | B7448 | B7449 | | | |
| DF-Motor Oil | 1 | 1 | 1 | | | |
| **Motor Oil** | **60** | **100** | **ND** | mg/kg | 1.0 mg/kg | 8015M |
| DF-Diesel | 1 | 1 | 1 | | | |
| **TPH-Diesel** | **ND** | **ND** | **ND** | mg/kg | 1.0 mg/kg | 8015M |
| DF-BTEX | 1 | 1 | 1 | | | |
| **Benzene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Toluene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Ethyl Benzene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Xylenes** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |

1. PQL=DF x MDL
2. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)

Michael N. Golden, Lab Director

DF=Dilution Factor
MDL=Method Detection Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above PQL

HULL DEVELOPMENT LABS INC.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

# QUALITY CONTROL RESULTS SUMMARY
## FOR DIESEL ANALYSIS

DIESEL
QC sample No.: BLANK SPIKE & DUP

Date analyzed: 07-25-95
Date extracted: 07-24-95
QC batch: DS079508

Matrix: SOIL

Units: mg/Kg

Dilution factor: 1

| COMPOUND | SA mg/Kg | SR mg/Kg | MS mg/Kg | MS PR | MSD mg/Kg | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | PR |
|---|---|---|---|---|---|---|---|---|---|
| DIESEL | 25 | 0 | 20 | 80 | 18 | 72 | 11 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

HULL DEVELOPMENT LABS INC.

525 Del Rey Avenue suite E
Sunnyvale, CA 94086

## QUALITY CONTROL RESULTS SUMMARY
## BTEX

QC sample No.: BLANK SPIKE & DUP  Date analyzed: 07-31-95

Matrix: WATER

Units: ug/L  Dilution factor: 1

| COMPOUND | SA ug/L | SR ug/L | MS ug/L | MS PR | MSD ug/L | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) PR |
|---|---|---|---|---|---|---|---|---|---|
| BENZENE | 20 | 0 | 22 | 110 | 22 | 110 | 0 | 25 | 50-150 |
| TOLUENE | 20 | 0 | 22 | 110 | 21 | 105 | 5 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

# Hull Development Labs

1149 Minnesota Ave., San Jose, CA 95125 Tel: (408) 287-1777 Fax: (408) 287-1786

## Chain of Custody/Analysis Work Order

Client: ARM
Address: 195 QUAIL RUN RD
APTOS CA 95003
Contact: CHRIS PEOPLES
Telephone #: 662.9411
Date Received: 7/25
Turn Around: NORMAL

Project ID: CE82
Purchase Order #:

Sampler/Company: Telephone #:

Special Instructions/Comments
PLEASE VERIFY ST2 AND ST3 ANALYSES W/ CHRIS PEOPLES

**LAB USE ONLY**

Samples arrived chilled and intact:
(Yes) No
Notes:

| Sample Information | | | | | | | | Requested Analysis | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab # | Sample ID | Grab/ Composite | Matrix | Date Collected | Time Collected | Pres. | Sample Container | 8015 Mod. DIESEL/MO & TPH | | | | | | | |
| | ST2 | | SOIL | 7/25 | 1415 | | 2x3" SLEEVE | X | | | | | | | B7450 |
| | ST3 | | | | 1430 | | " | X | | | | | | | B7451 |
| | S4 | | | | 1500 | | " | X | | | | | | | B7452 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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| Relinq By: | Received By: | Date | Time |
|---|---|---|---|
| | | 7/25/95 | 6:50 PM |
| Relinq By: | Received By: | Date | Time |
| Relinq By: | Received By: | Date | Time |

# Hull Development Labs

1149 Minnesota Ave., San Jose, CA 95125 Tel: (408) 287-1777 Fax: (408) 287-1786

## Chain of Custody/Analysis Work Order

Client: RRM
Address: 195 DUNN WAY RD
APTOS CA 95003
Contact: CHRIS PEOPLES
Telephone #: 408 662 9411
Date Received: 7/25
Turn Around: NORMAL

Project ID: CE82
Purchase Order #:

Sampler/Company: Telephone #:

Special Instructions/Comments
O VERIFY ANALYSES WITH CHRIS PEOPLES

**LAB USE ONLY**

Samples arrived chilled and intact:
(Yes) No
Notes:

| Sample Information | | | | | | | | Requested Analysis | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab # | Sample ID | Grab/ Composite | Matrix | Date Collected | Time Collected | Pres. | Sample Container | 8010 | EPA 8015 Mod GRO | 8015/8020 DIESEL BTEX | PNA's | DIESEL/ MOTOR OIL | | | |
| | T2 | | WASTE OIL | 7/25 | 1005 | | VOA | X | X | | | O | | | B7453 |
| | T3 | | " | " | 1000 | | 1 LITER | X | X | | | O | | | B7454 |
| | VST1 | | $H_2O$ | " | 1302 | | 1 LITER/VOA | | | X | * | | | | B7455 |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | |

| Relinq By: | Received By: | Date | Time |
|---|---|---|---|
| [signature] | [signature] | 7/25/95 | 6:30PM |
| Relinq By: | Received By: | Date | Time |
| Relinq By: | Received By: | Date | Time |

* IF DIESEL DETECTED RUN PNA'S

# Hull Development Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

**Attn: Chris Peoples**
**Remediation Risk Management**
**P.O. Box 1362**
**Aptos, CA 95001**

| | |
|---|---|
| Date: | 8/9/95 |
| Date Received: | 7/25/95 |
| Date Analyzed: | 8/7/95 |
| Project: | CE 82 |
| Sampled By: | Client |

## Certified Analytical Report

**Soil Sample Analysis:**

| *Test* | *ST2* | *ST3* | *S4* | *Units* | *MDL* | *EPA Method #* |
|---|---|---|---|---|---|---|
| Sample Matrix | Soil | Soil | Soil | | | |
| Sample Date | 7/25/95 | 7/25/95 | 7/25/95 | | | |
| Sample Time | 1415 | 1430 | 1500 | | | |
| Lab # | B7450 | B7451 | B7452 | | | |
| DF-Diesel | 100 | 1 | 20 | | | |
| **TPH-Diesel** | **840** | **210** | **17,000** | mg/kg | 1.0 mg/kg | 8015M |
| DF-Motor Oil | 100 | 1 | 20 | | | |
| **Motor Oil** | **ND** | **ND** | **ND** | mg/kg | 1.0 mg/kg | 8015M |
| DF-Gas/BTEX | 1 | 1 | 1 | | | |
| **TPH-Gas** | **13*** | **14*** | **8.4*** | mg/kg | 1.0 mg/kg | 8015M |
| **Benzene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Toluene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Ethyl Benzene** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |
| **Xylenes** | **ND** | **ND** | **ND** | mg/kg | 0.005 mg/kg | 8020 |

1. PQL=DF x MDL
2. *TPH-Gas chromatogram for lab #B7450, B7451 & B7452, although within the reporting range, does not match the typical Gas pattern.
3. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)

Michael N. Golden, Lab Director

DF=Dilution Factor
MDL=Method Detection Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above PQL

HULL DEVELOPMENT LABS INC.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

# QUALITY CONTROL RESULTS SUMMARY
# FOR DIESEL ANALYSIS

DIESEL
QC sample No.: BLANK SPIKE & DUP

Date analyzed: 07-25-95
Date extracted: 07-24-95
QC batch: DS079508

Matrix: SOIL

Units: mg/Kg

Dilution factor: 1

| COMPOUND | SA mg/Kg | SR mg/Kg | MS mg/Kg | MS PR | MSD mg/Kg | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | PR |
|---|---|---|---|---|---|---|---|---|---|
| DIESEL | 25 | 0 | 20 | 80 | 18 | 72 | 11 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

HULL DEVELOPMENT LABS INC.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

# QUALITY CONTROL RESULTS SUMMARY
## FOR GASOLINE ANALYSIS

GASOLINE
QC sample No.: BLANK SPIKE & DUP  Date analyzed: 07-31-95

Matrix: WATER

Units: ug/L  Dilution factor: 1

| COMPOUND | SA ug/L | SR ug/L | MS ug/L | MS PR | MSD ug/L | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) PR |
|---|---|---|---|---|---|---|---|---|---|
| GASOLINE | 245 | 0 | 255 | 104 | 246 | 100 | 4 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

HULL DEVELOPMENT LABS INC. 525 Del Rey Avenue suite E
Sunnyvale, CA 94086

# QUALITY CONTROL RESULTS SUMMARY
## BTEX

QC sample No.: BLANK SPIKE & DUP Date analyzed: 07-31-95

Matrix: WATER

Units: ug/L Dilution factor: 1

| COMPOUND | SA ug/L | SR ug/L | MS ug/L | MS PR | MSD ug/L | MSD PR | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) PR |
|---|---|---|---|---|---|---|---|---|---|
| BENZENE | 20 | 0 | 22 | 110 | 22 | 110 | 0 | 25 | 50-150 |
| TOLUENE | 20 | 0 | 22 | 110 | 21 | 105 | 5 | 25 | 50-150 |

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SA = Spike added

NC = Not calculated
** = Out of limits

RPD = 100 x (MS-MSD)/((MS+MSD)/2)

PR = 100 x ((MS or MSD) - SR)/SA

# Hull Development Labs, Inc.

CA ELAP# 1369

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

**Attn: Chris Peoples**
**Remediation Risk Management**
**P.O. Box 1362**
**Aptos, CA 95001**

| | |
|---|---|
| Date: | 8/21/95 |
| Date Received: | 7/25/95 |
| Date Analyzed: | 8/8/95 |
| Project: | CE 82 |
| Sampled By: | Client |

## Certified Analytical Report

**Water Sample Analysis:**

| *Test* | *UST* | *Units* | *MDL* | *EPA Method #* |
|---|---|---|---|---|
| Sample Matrix | Water | | | |
| Sample Date | 7/25/95 | | | |
| Sample Time | 1302 | | | |
| Lab # | B7455 | | | |
| DF-Diesel | 1 | | | |
| **TPH-Diesel** | **ND** | µg/liter | 50.0 µg/l | 8015M |
| DF-Gas/BTEX | 1 | | | |
| **TPH-Gas** | **ND** | µg/liter | 50.0 µg/l | 8015M |
| **Benzene** | **ND** | µg/liter | 0.5 µg/l | 8020 |
| **Toluene** | **ND** | µg/liter | 0.5 µg/l | 8020 |
| **Ethyl Benzene** | **ND** | µg/liter | 0.5 µg/l | 8020 |
| **Xylenes** | **ND** | µg/liter | 0.5 µg/l | 8020 |

1. PQL=DF x MDL
2. Analysis performed by Hull Development Labs, Inc. (CAELAP #1369)

Michael N. Golden, Lab Director

DF=Dilution Factor
MDL=Method Detection Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above PQL

*Environmental Analysis Since 1983*