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INTERIM UNDERGROUND STORAGE TANK INVESTIGATION REPORT

385-387 Orange Street

Oakland, California

DRAFT

Prepared by:

CLEARWATER GROUP

Prepared for:

Ms. Mary Krantz, Executor
of the Estate of David Ulibarri

March 14, 2006

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INTRODUCTION

Clearwater Group, Inc. (Clearwater) has been requested by Ms. Mary Krantz, executor of the estate of David Ulibarri to investigate an underground storage tank (UST) site, located at 385-387 Orange Street, in Oakland, California. This report summarizes the results of site investigations in February and March 2006. This work is being done to comply with City of Oakland Fire Department, Alameda County Department of Environmental Health and State of California Regional Water Quality Control Board regulations.

BACKGROUND INFORMATION

Site Description

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The *subject property* is located at 385-387 Orange Street in Oakland, California, in a residential area (Figure 1). Local topography slopes toward the northwest.

The UST is located under the sidewalk in front of and between the residences at 385 and 387 Orange Street (Figure 2). The UST's location is evidenced by a fill pipe in the sidewalk. The UST was used to supply fuel to a boiler located in the basement of the residence at 387 Orange Street.

Permits

Due to site constraints (the site is closely adjacent to the street), Tank Permit Number T06-0008 to "Abandon/Close in Place" a heating oil tank was granted by the City of Oakland, Fire Prevention Bureau on February 28, 2006. A copy of the permit is attached as Appendix A.

FIELD INVESTIGATION

UST Emptying Activities

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The UST was evacuated of residual liquids on January 30, 2006. A vacuum truck provide by Clearwater Environmental Management (CEM) of Union City suctioned 340 gallons of an oil and water mixture through the fill pipe. CEM (not affiliated with Clearwater Group) transported the oil and water mixture as a non-RCRA Hazardous waste, under a Uniform Hazardous Waste Manifest, to Alviso Independent Oil, in Alviso, California for disposal. A copy of the manifest is provided as Appendix B.

Soil Borings Under UST

Before any soil boring activities commenced, Underground Alert Services (USA) was notified and all utility services were marked on the ground of the perimeter of the *subject property* search area. Soil borings were conducted by FAST-TEK Engineering Support Services (FAST-TEK) of Point Richmond (C-57 license #624461). FAST-TEK used a direct push, Geoprobe® Macro-Core Soil Sampling System to obtain continuous soil cores and to minimize soil cuttings from the borings. The borings and soil sampling was performed according to Clearwater's Field Procedure, attached in Appendix C.

On February 28, 2006 three soil borings were driven in close proximity to the UST. Boring T1 was located near the northeast end of the UST, boring T2 was located at the southwest end of the UST and boring T3 was a boring angled at 60° (measured from horizontal) in order to reach under the UST (Figure 2). The soil boring logs are presented in Appendix D. Three other vertical borings were attempted, which struck (but did not puncture the UST) at a depth of 8 feet bgs. The locations of these attempts and the borings which reached below the bottom of the UST helped define the size, depth and orientation of the UST (Figure 3). It appears that the fill pipe is located at the northeast end of the UST.

A photo-ionization detector (PID) was used to screen the soil samples for petroleum hydrocarbons. The soil samples were collected and preserved within acetate sleeves using Clearwater's standard procedures for direct-push soil sampling (Appendix C). Five soil samples were sent under a Chain of Custody to Kiff Analytical, LLC, a California Department of Health certified laboratory, for analyses of TPH-d (total petroleum hydrocarbons as diesel) and BTEX (benzene, toluene, ethylbenzene and total xylenes). All of the soil borings were grouted with Portland cement from the base to the surface using a tremmie pipe.

Soil Samples Collected Along the Fuel Line

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The fuel line was located by Drain Patrol (Concord, California) on March 2, 2006 using a MetroTech 810 utility locating instrument. The instrument was clipped to the fill pipe of the UST to send an electronic signal along the line, which the instrument detector could pick up. The instrument also provided depths from the fuel line to the ground surface. The location of the line was temporarily marked with flags. The instrument indicated a fuel line depth of approximately 8 feet bgs, which was in general agreement with a cross sectional view of the fuel line prepared by measuring the elevation and horizontal differences between the top of the UST through the fill pipe and the floor level of the boiler room.

Three soil samples were collected from along the fuel line on March 6, 2006. Sample P1 was collected 10 feet from the northwest edge of the sidewalk; sample P2 was collected 26 feet from the sidewalk; and sample P3 was collected 42 feet from the sidewalk, adjacent to the boiler room (Figure 2). The boreholes for samples P2 and P3 were driven using a 4" hand auger, due to access limitations (the truck mounted drill could not pass the fence). All of the samples were collected at a depth of 7.5-8.0 feet bgs. The samples were collected and screened by the same methods as the samples collected from under the UST. The soil boring logs are presented in Appendix D.

SOIL SAMPLE ANALYTICAL RESULTS

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The table below summarizes the analytical results from the soil samples. The results indicate that a high concentration of TPH-d (15,000 mg/kg) was detected in sample T2 13.5-14.0' at a depth of 13.5 to 14.0 feet bgs. Lesser concentrations of TPH-d were detected in five of the other soil samples. Two samples were virtually non-detect. BTEX compounds were detected in samples T2 13.5-14.0' and T3 17-17.7'. All other samples were non-detect for BTEX compounds.

Soil samples P-1 and P-3, from under the fuel line were non-detect for TPH-d, while sample P-2 contained 96 mg/kg of TPH-d. All of the samples from under the fuel line were non-detect for BTEX. The soil sample analytical results are presented in Appendix E.

Table 1. Summary of Analytical Results

| Soil Samples Under UST | | | Analytical Results | | | | |
|------------------------------|---------------|--------------------------------|--------------------|---------------|---------------|---------------------|---------------------|
| Date | Sample Name | Vertical Depth of Sample (ft)* | TPH-d mg/kg | Benzene mg/kg | Toluene mg/kg | Ethyl-benzene mg/kg | Total Xylenes mg/kg |
| 2/28/06 | T1 13.5-14.0' | 13.5-14 | 4.4 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| 2/28/06 | T2 13.5-14.0' | 13.5-14.0 | 15000 | <0.0050 | <0.0050 | 0.034 | 0.12 |
| 2/28/06 | T3 15-15.5' | 13-13.5* | 2.7 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| 2/28/06 | T3 17-17.5 | 14.7-15.2* | 70 | <0.0050 | <0.0050 | <0.0050 | 0.013 |
| 2/28/06 | T3 23.5-24.0' | 20.4-20.9* | 99 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| Soil Samples Along Fuel Line | | | | | | | |
| 3/6/06 | P-1 | 8.0 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| 3/6/06 | P-2 | 8.0 | 96 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| 3/6/06 | P-3 | 8.0 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

* Boring T3 was drilled at a 60° angle (measured from horizontal) in order to reach under the UST (Figure 3). The depth shown as part of the Sample Name was measured along the 60° angle boring. The laboratory provided these comments in their report narrative (for samples from under the UST only). "Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples T1 13.5-14.0' and T3 15-15.5'. These hydrocarbons are higher boiling point than typical diesel fuels. Samples T2 13.5-14.0', T3 17-17.5' and T3 23.5-24.0' were analyzed past hold times for 8260 analytes".

CONCLUSIONS

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The soil samples indicate that a high concentration of petroleum hydrocarbons occurred around the northeast end of the tank (15,000 mg/kg of TPH-d). However, soil under the southwest end of the UST had a very low concentration of petroleum hydrocarbons (4.4 mg/kg of TPH-d). The TPH-d concentrations diminish rapidly under and to the southwest end of the UST (Figure 3).

The petroleum hydrocarbons could either be from a leak in the UST, a leak at the fill pipe/UST juncture, or from spillage at the fill pipe seeping downward along the pipe. The fill pipe appears to be located at the northwest end of the UST, as indicated by the boring attempts, which encountered the UST at 8 feet bgs. The results indicate that leakage or spillage exists around the northeast end of the UST.

Soil sample P-2 from under the fuel line indicates that an isolated leak occurred along the fuel line (Figure 2). P-2 was located between P-1 and P-3, each of which was non-detect for all analytes.

The boring logs indicated that the soil underlying the site is predominantly silty clay. In addition, in none of the soil borings was groundwater encountered. The site is located near the summit of a ridge line trending toward the northwest (Figure 1), therefore it is not anticipated that shallow groundwater occurs beneath the site. The ridgeline plunges toward the northwest. Typically groundwater levels under a ridgeline should be deeper than under flat lying areas.

RECOMMENDATIONS

Due to the isolated and restricted area under the UST with a high concentration of TPH-d and a minor occurrence of TPH-d along the fuel line, Clearwater Group recommends that soil or groundwater remediation is not indicated and that the closure in place of the UST should proceed as planned. Locally the groundwater is not being used. The existing soil

contamination should diminish with time to non-detectable concentrations through natural attenuation.

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CERTIFICATION

This report was prepared under the supervision of a State of California Professional Geologist at Clearwater Group. All statements, conclusions and recommendations are based solely upon field observations by Clearwater Group staff and laboratory analysis performed by a California DHS-certified laboratory related to the work performed by Clearwater Group.

Information and interpretation presented herein are for the sole use of the client and regulatory agency. A third party should not rely upon the information and interpretation contained in this document.

The service performed by Clearwater Group has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

Sincerely,

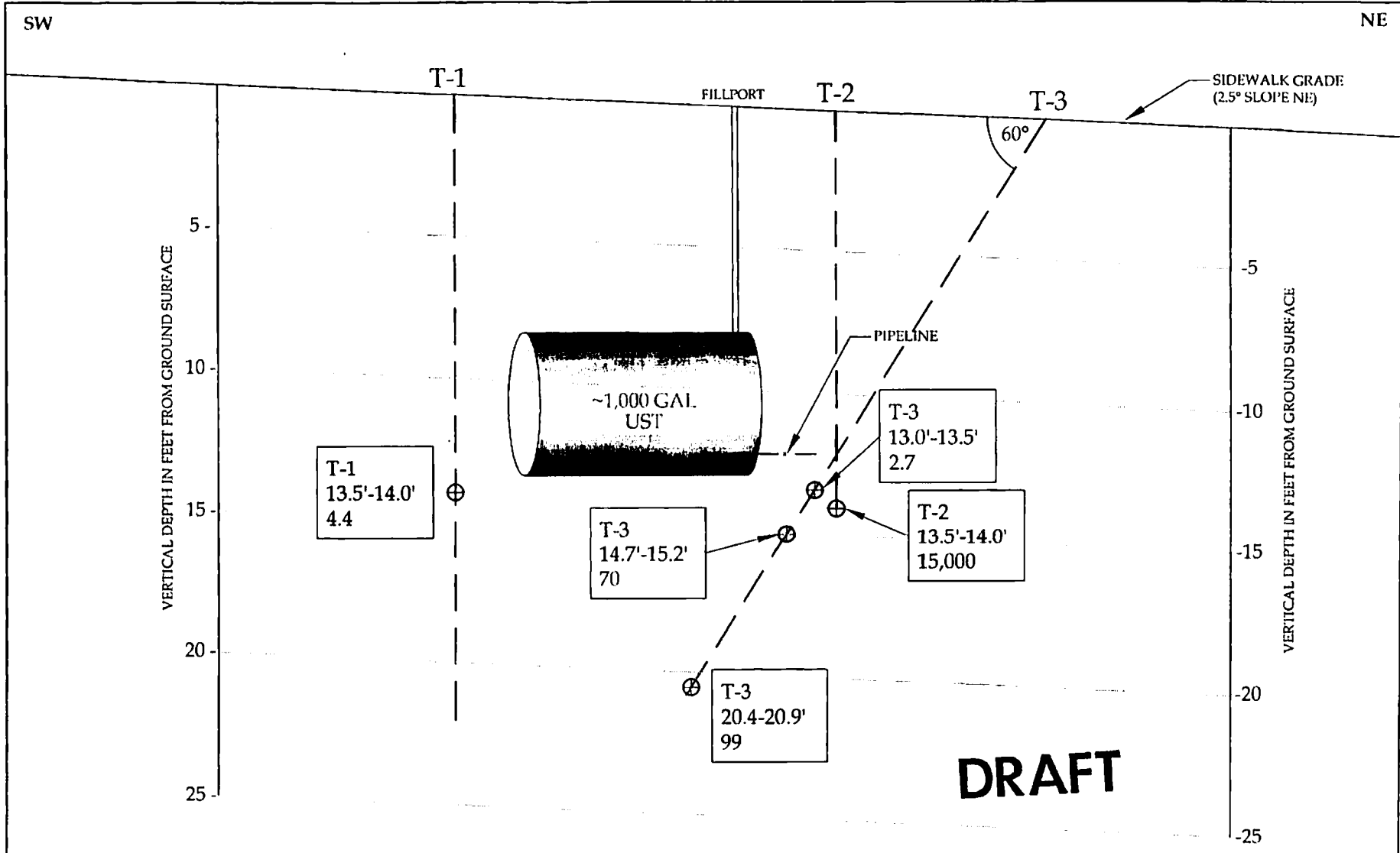
Clearwater Group

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Chief Hydrogeologist

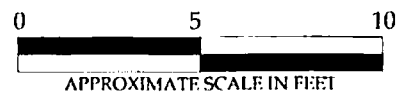


LEGEND

⊕ SAMPLE LOCATION

| | | |
|-------------------------|---|---|
| T-3 20.4-20.9' 99 | = | SOIL SAMPLE # DEPTH BGS ANALYTICAL RESULTS IN MG/KG |
|-------------------------|---|---|

ANALYTICAL RESULTS- TPH (TOTAL PARTS HYDROCARBONS AS DIESEL), CONCENTRATIONS IN MG/KG



CROSS SECTION VIEW SHOWING BORINGS UNDER UST

Estate of D. Ulibarri
385-387 Orange Street
Oakland, California

CLEARWATER GROUP

| | | |
|-----------------------|---------------------|-------------|
| Project No. GB002B | Figure Date 3/06 | Figure 3 |
|-----------------------|---------------------|-------------|

24773752
 CALIFORNIA, CALL 1-800-852-7550
 GENERATOR
 TRANSPORTER
 FACILITY
 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. CA01002R599561737512 | | Manifest Document No. | | 2. Page 1 of 1 | | Information in the shaded areas is not required by Federal law. | | | | | | | |
| 3. Generator's Name and Mailing Address MILY KRANZ EXECUTOR OF THE ESTATE OF DAN OULICHAN 10106 CERNARDI AVE. NORTH EAST ALBUQUERQUE, N.M. 87122 | | | | | | A. State Manifest Document Number 24773752 | | | | | | | | | |
| 4. Generator's Phone (505) 343-7617 | | | | | | B. State Generator's ID | | | | | | | | | |
| 5. Transporter 1 Company Name CLEARWATER ENVIRONMENTAL | | | 6. US EPA ID Number CAE000007013 | | | C. State Transporter's ID [Reserved.] | | | | | | | | | |
| 7. Transporter 2 Company Name | | | | | | D. Transporter's Phone (510) 476-1740 | | | | | | | | | |
| 8. US EPA ID Number | | | | | | E. State Transporter's ID [Reserved.] | | | | | | | | | |
| 9. Designated Facility Name and Site Address ALVISO INDEPENDENT OIL 5002 ARCHER STREET ALVISO CA 95002 | | | | | | F. Transporter's Phone | | | | | | | | | |
| 10. US EPA ID Number CA1000161793 | | | | | | G. State Facility's ID | | | | | | | | | |
| 11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) | | | | | | 12. Containers | | 13. Total Quantity | | 14. Unit Wt/Vol | | 15. Waste Number | | | |
| a. OIL & WATER WASTE, LIQUID (NON RCRA HAZARDOUS) b. c. d. | | | | | | No. | | Type | | | | State | | | |
| | | | | | | 001 | | TT | | 6/3/0 | | G | | EPA/Other NONE | |
| | | | | | | | | | | | | | | State | |
| | | | | | | | | | | | | | | EPA/Other | |
| J. Additional Descriptions for Materials Listed Above 11A. | | | | | | K. Handling Codes for Wastes Listed Above | | | | | | | | | |
| | | | | | | a. | | b. | | c. | | d. | | | |
| 15. Special Handling Instructions and Additional Information WEAR PPE 24 HOUR EMERGENCY KIRK HAYWARD 510-476-1740 | | | | | | ERG #171 STG: 355/387 CANGE ST. CALIFORNIA, CA. INV # 139074 AUGER GROUP | | | | | | | | | |
| 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 | | | | | | | |
| | | | | | | | | 01 30 06 | | | | | | | |
| 17. Transporter 1 Acknowledgement of Receipt of Materials | | | | | | | | | | | | | | | |
| Printed/Typed Name MIKE STONE | | | | Signature <i>Mike Stone</i> | | | | Month Day Year | | | | | | | |
| | | | | | | | | 01 30 06 | | | | | | | |
| 18. Transporter 2 Acknowledgement of Receipt of Materials | | | | | | | | | | | | | | | |
| Printed/Typed Name | | | | Signature | | | | Month Day Year | | | | | | | |
| | | | | | | | | | | | | | | | |
| 19. Discrepancy Indication Space | | | | | | | | | | | | | | | |
| 20. Facility Owner or Operator: Certification of receipt of hazardous material: covered by this manifest except as noted in Item 19. | | | | | | | | | | | | | | | |
| Printed/Typed Name | | | | Signature | | | | Month Day Year | | | | | | | |
| | | | | | | | | | | | | | | | |

DO NOT WRITE BELOW THIS LINE.

City Of Oakland
FIRE PREVENTION BUREAU
250 Frank Ogawa Plaza, Ste. 3341
Oakland California 94612-2032
510-238-3851



*Permit To Excavate And Install, Repair,
Or Remove Inflammable Liquid Tanks*

Oakland, California February 28, 2006

Tank Permit Number: T06-0008

Permission Is Hereby Granted To:

UST Abandon/Close in Place Heating Oil Tank And Excavate Commencing: Feet Inside: Line.

On The:

Site Address: 385-387 Orange St., Oakland, CA 94610

Present Storage:

Owner: Mary Kranz, Executor of Estate

Address: 10106 Coronado Ave. NE, Albuquerque, NM Phone: 505-856-2648

Applicant: Clearwater Group

Address: 229 Tewksbury Ave., Point Richmond, CA Phone: 510-307-9943

Dimensions Of Street (sidewalk) Surface To Be Disturbed : X No. Of Tanks 1 Capacity 880 Gallons, Each

Remarks

This Permit Is Granted In Accordance With Existing City Ordinances. Owner Hereby Agrees To Remove Tanks On Discontinuance Of Use Or When Notified By The City Authorities When Installing, Removing Or Repairing Tanks, No Open Flame To Be On Or Near Premises.

CERTIFICATE OF TANK AND EQUIPMENT INSPECTION

Type Of Inspection:

Inspected And Passed On: _____

Approved:  _____

Fire Marshal

UST/AST Installations/modifications: By: _____

Pressure Test: Inspected By: _____ Date: _____

Primary Piping Test: Inspected By: _____ Date: _____

Inspection Fee Paid: \$ 567.22

Received By: L Griffin, Check # 11619

Secondary Containment & Sump Testing: _____

Inspected By: _____ Date: _____

Final: Inspected By: _____ Date: _____

Before Covering Tanks, Above Certification Must Be Signed When Ready For Inspection Notify Fire Prevention Bureau 238-3851

THIS PERMIT MUST BE LEFT ON THE WORK SITE AS AUTHORITY THEREFORE