

**UST Closure Action Report  
Zip Market & Gas  
Seattle, Washington**

Prepared for:

**Mr. Chong Nam Yi  
10645 16<sup>th</sup> Ave SW  
Seattle, WA 98106**

Prepared by

**KEE, LLC  
PO Box 2532  
Redmond, WA 98073  
(206) 914-4989**

**January 10, 2007**

Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by Key Environment and will serve as the official document of record.

January 10, 2007

Clients: Mr. Chong Nam Yi  
10645 16<sup>th</sup> Ave SW  
Seattle, WA 98106

Subject: UST Closure Action Report  
Zip Market & Gas  
10645 16<sup>th</sup> Ave SW  
Seattle, WA 98106

KEE, LLC (a.k.a. Key Environmental) is pleased to submit a copy of our UST Closure Action Report for Zip Market & Gas property located at 10645 16<sup>th</sup> Ave SW, Seattle, WA 98106.

KEE, LLC, environmental consultant, was retained by Mr. Chong Nam Yi for the removal of 3 USTs, MPD islands, canopy and associated piping. The work was conducted in conformance with the Washington State Department of Ecology (DOE). The work was also conducted in accordance with the King County Department of Development and Environmental Services (KCDDDES) permit which was obtained prior to initiating closure activities at the station. A copy of the KCDDDES permit is provided in Appendix G. Representatives of the Belmar Properties and Plaid Pantries, Inc visited the site to observe activities in addition to DOE staffs and King County inspector.

The tank removal site soil samples taken were submitted to a state certified laboratory for chemical analysis. And based on the information developed in the course of our soil sampling, no contamination was noticed within the previously excavated tank cavity but the Northeast Corner beyond the tank excavation cavity of the station is possibly affected by the previous fueling activities and we recommend further investigation to verify the age and the extent of the contaminations.

We appreciate the opportunity to be of service to you. Please contact us with any comments or questions you have by calling 206-914-4989.

Yours very truly,



Kee-Hoon Pak  
President  
KEE, LLC

**UST Closure Action Report  
Zip Market & Gas  
10645 16<sup>th</sup> Ave SW  
Seattle, WA 98106**

**Prepared for:**

**Mr. Chong Nam Yi  
10645 16<sup>th</sup> Ave SW  
Seattle, WA 98106**

Questions regarding this investigation, the conclusions reached and the recommendations given should be addressed to one of the following undersigned.



---

**Kee Hoon Pak**

President  
Registered Site Assessor  
ICC# 0874768-U7  
KEE, LLC

Reference Job Number: ZM052306-3

January 10, 2007

## TABLE OF CONTENTS

<b>1</b>	<b>Introduction</b>	<b>4</b>
1.1	Background	5
1.2	Scope of Services	5
1.3	Purpose of Investigation	6
<b>2</b>	<b>Site Description</b>	<b>6</b>
2.1	Geologic and Hydrogeologic Description	6
2.2	Current and Historical Property Use	6
2.2.1	Investigation Area	6
2.3	Public/Private Well Logs	6
<b>3</b>	<b>Field investigation</b>	<b>7</b>
3.1	Investigation Locations	7
3.1.1	Geophysical Survey	7
3.2	Drilling procedure	7
3.3	Sample Collection	7
3.3.1	Sample Design	7
3.3.2	Soil samples	9
3.3.3	Groundwater samples	9
3.3.4	Chemical Analysis	9
<b>4</b>	<b>Analytical Results</b>	<b>9</b>
4.1	Groundwater	9
4.2	Soil	9
<b>5</b>	<b>Overexcavation activities</b>	<b>10</b>
<b>6</b>	<b>Site restoration</b>	<b>10</b>
<b>7</b>	<b>WASTE MANAGEMENT</b>	<b>10</b>
7.1	Waste Streams	11
7.2	Waste Disposal/Recycling	11
7.2.1	USTs and Associated Pipings	11
7.2.2	General Demolition Debris	11
7.2.3	Recyclable Concrete	11

7.2.4	Scrap Metal.....	12
8	<b>Conclusions/Recommendation.....</b>	<b>12</b>
9	<b>References.....</b>	<b>13</b>
10	<b>Limitations .....</b>	<b>13</b>

### **List of Figures**

Figure 1	Vicinity Map
Figure 2	Site Plan

### **List of Tables**

Table 1	Summary of Soil Sample Collected
Table 2	Summary of Soil Sample Analysis

### **List of Appendices**

Appendix A	Site Photographs
Appendix B	Laboratory Report
Appendix C	Sample Chain of Custody
Appendix D	Health and Safety Plan
Appendix E	UST Certificate of Destruction
Appendix F	Pump and Rinse Certification
Appendix G	King County DDES Permit
Appendix H	Compaction Test Report by AAR Testing Lab
Appendix I	UST Closure and site assessment notice

## 1 INTRODUCTION

This UST Closure Action Report (Closure Report) has been prepared for the property owner, Belmar Properties, and the business owner, Mr. Chong Nam Yi for the former Texaco Station, Zip Market & Gas, located at 10645 16<sup>th</sup> Ave SW, Seattle, King County, Washington (the station or site). The Closure Report was prepared by KEE, LLC, environmental consultant, retained by Mr. Chong Nam Yi to supervise the closure activities at the site. The work was conducted in conformance with the Washington State Department of Ecology (DOE). The work was also conducted in accordance with the King County Department of Development and Environmental Services (KCDDDES) permit which was obtained prior to initiating closure activities at the station. A copy of the KCDDDES permit is provided in Appendix G. A copy of the site-specific health and safety plan is also provided in Appendix D.

This report summarizes the removal method and soil sampling results associated with the closure of three underground storage tanks (USTs) and the associated multiple product dispenser (MPD) islands, product distribution and canopy. Two of the USTs contained regular unleaded gasoline (one 12,000-gallon UST and one 10,000-gallon UST) and one UST contained super unleaded gasoline fuel (12,000-gallon UST). All of the tanks and product distribution lines were of steel construction.

Figure 1 presents the location of Zip Market & Gas in Seattle, Washington with respect to the surrounding vicinity. Figure 2 is a site plan showing the specific location of the UST activities and soil sampling in the Zip Market Area evaluated during the UST Closure activities.

The station was closed in March 2006. Closure activities initiated May 2006 included:

- Removal of gasoline fuel from the USTs.
- Flushing of the associated piping.
- Removal of the MPDs.
- Removal of the MPD island canopy.
- Removal of the MPD islands.
- Removal of the USTs.
- Removal of the associated piping.

### 1.1 Closure Requirements

Our service was requested by Mr. Chong Nam Yi, as an effort to transact the business and our scope of service is based on the written agreement with the Mr. Yi of Zip Market & Gas. Washington State requires proper closure of regulated underground storage tank (UST) systems based on state UST regulations, chapter 173-360 WAC. This document has been prepared as a final closure report documenting the assessment associated Chapter 173-360 WAC.

### 1.2 Scope of Services

The scope of services for UST Closure Action include evaluating site conditions, closing the tank

Dry clay sandy soils with gravels on Alderwood gravely sandy loam that slopes 6 to 15 percent sand or silt over glaciolacustrine deposits from cataclysmic glacial outburst floods; most have low water-holding capacity.

### **3 DESCRIPTION OF ACTIVITIES**

A description of the canopy demolition and UST closure procedures is presented below. A site plan showing the locations of the features discussed below is presented as Figure 2. Representative photographs are presented in Appendix. Additional details and/or deviations from the general procedures described below are presented, where applicable, in subsequent sections of this report.

#### **3.1 Geophysical Survey**

A geophysical survey was used to attempt to locate underground utilities mark-out including USTs and associated piping. Ground penetrating radar, utility locator equipment and a hand-held magnetometer were used to attempt to locate present underground utilities.

#### **3.2 Tank Closure Activities**

Initial mobilization tasks included the setup of work zones, support zones, material staging areas, soil erosion sediment controls, and traffic flow patterns for the site. Tank excavating contractor was Mark Heath Excavating and Dozing, LLC, in Enumclaw, Washington.

Tank Decommissioning Inspector was Rane S. Tause from Tanks by Dallas, ICC #320532032969.

##### **3.2.1 Product Management**

Two MPDs were removed from the site and the associated MPD piping and product distribution lines were drained, flushed and subsequently capped and secured at the surface. The tank contained less than 2 inch of products and Emerald Services Inc. from Seattle, Washington, pumped the product and triple rinsed. Pump and Rinse Certification is provided in the Appendix F.

##### **3.2.2 USTs and Associated Pippings**

Prior to removal procedure to the tank, temporary fencing was installed around the station. The UST removal procedures are summarized below.

- Saw cut, break-up and remove the overlying concrete surface;
- Conduct FID screening of the sand backfill beneath the concrete surface;
- Label, cut into manageable sections and remove the piping located above the USTs;

- Clean and degas/inert the UST by marine chemist from Sound Testing, Inc. in Seattle, Washington;
- Remove additional soil surrounding the USTs using a hand shovel and excavator;
- Remove the USTs using an excavator and temporarily place it on the ground for inspection;
- Remove the USTs from the site on flatbed trucks;
- Conduct FID screening and soil sampling from the soils at the base and sidewalls of the UST excavation.

Detailed discussions of the field screening and soil sampling activities and results are presented in subsequent sections of this report. The USTs and associated piping were transported to an off-site treatment facility, Marine Vacuum Services Inc. (Mar-Vac) in Seattle, Washington. Certificate of Destruction is attached in Appendix E. Waste management activities are described in more detail in subsequent sections.

### 3.3 Canopy Demolition

All overhead electric utilities were checked and verified by the public utility companies. The MPD piping, product distribution lines, and vent lines removal procedures are summarized below.

- Saw cut, break-up and remove the overlying concrete surface/asphalt paving and concrete island;
- Remove overlying pea gravel and soil using hand shovel to expose the piping;
- Visually inspect and conduct FID screening of the exposed piping and pea gravel;
- Cut into manageable sections and remove piping;
- Conduct FID screening and soil sampling from the soils beneath each MPDs.

Visual observations of the piping did not reveal any evidence of physical damage or holes. The canopy was demolished.

Detailed discussions of the field screening and soil sampling activities and results are presented in subsequent sections of this report. Waste management activities are described in more detail in subsequent sections.

### 3.4 Field Screening and Sampling Methods

#### 3.4.1 Flame Ionization Detector Screening



A Flame Ionization Detector(FID) was employed to screen backfill sand and soil for the presence of total volatile organic compounds (VOCs). This screening was conducted using a PHOTOVAC MicroFID, which was calibrated each day prior to use. The FID uses purified hydrogen gas (99.999% pure) with a total VOC detection range of 0.1 to 50,000 ppm. The PID screening was employed to 1) identify locations which warrant the collection of additional soil samples beyond the samples that are required in Washington State Department of Ecology plan and 2) provide data to assist in fields decision-making with respect to boring exploration and/or remedial excavation activities. While the FID screening results provides real-time data for field decision-making, final decisions regarding the condition of soils at the site were made based on laboratory analytical data.

### 3.4.2 Sample Design

Tank closure sampling was designed to help confirm the presence/absence of environmental contaminants on boring and/or tank excavation site. Sampling locations were selected topographically and hydraulically to identify soil and/or groundwater contamination that may have occurred from past operation on the property (Figure 2).

Collection locations for soil samples from tank excavation site are listed in the following:

Sample ID	Soil sample Location
S1(Tank BT #1)	@bottom 16 feet under Tank #1
S2(Tank BT #2)	@bottom 16 feet under Tank #2
S3(Tank BT #3)	@bottom 16 feet under Tank #3
S4(NW-8)	@8 feet high on the north wall
S5(WW-8)	@8 feet high on the west wall
S6(EW-8)	@8 feet high on the east wall
S7(SW-8)	@8 feet high on the south wall
S8(S Isld)	@4 feet high under south side island
S9(N Isld)	@4 feet high under north side island
S10(Ex #1-4)	@4 feet high on the northeast corner

### 3.4.3 Soil Sampling Procedures

Soil samples for chemical analyses were collected during/after tank excavation activities for the

geotechnical investigation. Soil samples collected from beneath the MPD islands and UST excavation were collected using the excavator bucket,

Procedures for the collection of soil samples using the excavator bucket were as follows;

- Using the excavator bucket, collect soil from the base of the excavation or sidewall directly into the laboratory-supplied containers and plastic bags for FID screening.

Each sample container was labeled by the on-site engineer/site assessor with the sample designation, time and date of collection, and the sampler's initials. All samples collected were identified with a unique designation that appeared on the chain-of-custody form. The sample containers were placed on ice in an insulated cooler and maintained for all samples throughout collection, transport, and delivery. Samples were picked up by a laboratory courier for delivery within 24 hours to the laboratory, Friedman & Bruya, Inc., in Seattle, Washington. The laboratory was instructed to hold all soil samples until noticed by KEE, LLC for further analysis. Copies of the chain-of-custody forms for soil samples are included in the appropriate analytical report provided in Appendix.

One soil sample was collected from beneath each of the two MPDs (sample designations S Isld and N Isld). Three soil samples were collected from the base of UST excavation (sample designations Tank BT1 thru BT3). Four sidewall soil samples were collected from the UST excavation (sample designations NW, WW, EW, and SW). The locations of these soil samples are shown on Figure 2.

Soil samples selected for chemical analysis were analyzed for gasoline-range total petroleum hydrocarbons (NWTPH-gasoline) with BTEX. Ten soil samples submitted for analysis. Analytical reports are presented in Section 4.

#### **3.4.4 Equipment Decontamination Procedures**

The following procedures were followed for field equipment decontamination;

- Wash with a non-phosphate detergent solution;
- Rinse with distilled, analyte-free water;
- Pressure cleaned using heated potable water;
- Air dry; and
- Wrap equipment with aluminum foil until use;

#### **3.4.5 Chemical Analysis**

Analytical approach is intended to provide a basis for comparing the site environment to existing standard offered in the Model Toxics Control Act (MTCA), Chapter 173-340, Washington Administrative Code, and to recommended analyses offered in the April 1994 Underground Storage Tank Site Assessment, Washington State Department of Ecology. Analytical methods used were based on the standard method: NWTPH-Gas WDOE for TPH-Gasoline and including BTEX (benzene, toluene, ethylbenzene, and xylene) constituents.

#### 4 ANALYTICAL RESULTS

##### 4.1 Ground water

No groundwater noticed during the tank excavation activities possibly due to the geological location of the property.

##### 4.2 Soil

The analytical result was summarized in Table 3 and laboratory data was attached in the appendix. As shown in Table 3, there are no measurable amount of contaminations in soil samples (S1 thru S9) took from the tank excavation boundary. But at the northeast corner of the tank excavation where discolored and odorous soil was encountered, showed over Method A cleanup level of Washington State Model Toxics Control Act (MTCA). Therefore, the northeast corner of the tank excavation site area was affected with the contaminations and further characterization is warranted.

Ten of the samplings, identified as S1 thru S10, were completed in investigation area during the Tank Closure Investigation.

A copy of the Analytical Laboratory Report with chain-of-custody is provided in the Appendix.

#### 5 OVEREXCAVATION ACTIVITIES

Based on post-removal soil sampling results described in Section 4.2, the following area required overexcavation to remove soils which exceeded Method A cleanup level of Washington State Model Toxics Control Act (MTCA):

- Northeast Corner of UST Excavation.

KEE, LLC did not perform the overexcavation activities due to the disagreement of the responsible party of the contamination between the present or previous business owner. The property owner will pursue the remedial activities after the completion of Tank Closure Activities.

#### 6 SITE RESTORATION

*Cavity soils re-used?*

After the collection of the post-excavation soil samples, backfilling of the excavation was completed. The USTs cavity was backfilled to original grade using 300 tons of imported materials from the nearby construction site excluding 90 tons of 5/8" crushed rocks for the asphalt pavement. All the material are compacted every two feet (2') layer throughout the backfilling process up to average 95 % compaction ratio to minimize future settlement. All excavated, previously paved areas were resurfaced with asphalt. Compaction test report by AAR Testing Laboratory, Inc, was provided in Appendix H.

## 7 WASTE MANAGEMENT

Presented below is a description of the waste streams generated and waste disposal activities conducted during the site demolition and UST closure activities.

### 7.1 Waste Streams

The various waste streams generated during site demolition and UST closure activities are summarized below.

#### USTs and associated pipings

- Tank contents and rinseate from equipment draining/cleaning
- MPD island canopy;

#### Canopy

- General demolition debris
- Recyclable concrete
- Scrap metal

#### MPD Islands

- Recyclable concrete
- Scrap metal

### 7.2 Waste Disposal/Recycling

Presented below is a description of the waste material generated during the site demolition and UST closure activities and the name and location of the waste disposal/recycling facilities.

#### 7.2.1 USTs and Associated Pipings

The USTs and associated piping were transported to an off-site treatment facility, Marine Vacuum Services Inc. (Mar-Vac) in Seattle, Washington. Certificate of Destruction is attached in Appendix.

#### 7.2.2 General Demolition Debris

All general demolition debris generated during the site demolition and UST closure activities was taken off site to disposal to King County Solid Waster Transfer Station in South Seattle, Washington.

#### 7.2.3 Recyclable Concrete

All recyclable concrete generated during the site demolition and UST closure activities was

taken off site for recycling at Renton Concrete Recycle in Renton, Washington.

#### 7.2.4 Scrap Metal

All scrap metal generated during the site demolition and UST closure activities was taken off site for recycling at Seattle Iron & Metal in Seattle, Washington.

### 8 CONCLUSIONS/RECOMMENDATIONS

KEE, LLC has completed a UST closure activities of the Zip Market & Gas property located at 10645 16<sup>th</sup> Ave SW, Seattle, King County Washington. The subject property consist of convenient store/gasoline service station and Teriyaki restaurant.

The station was closed in February 2006 and canopy demolition and UST closure activities were conducted during May 2006. The following features were removed and/or decommissioned:

- MPD island canopy;
- Support structures;
- USTs;
- MPD islands and associated lines.

Visual and olfactory observations, FID screening, soil analytical results were utilized to investigate site conditions. KEE, LLC collected ten soil samples during May 4 and May 5, 2006. The ten soil samples taken were submitted to a laboratory for chemical analysis.

Relying upon the information developed during the course of this UST closure activities, which included sampling of soil, and laboratory analysis of selected soil samples, it appears that:

- One of the soil samples showed over the Method A cleanup level published in the Model Toxics Control Act (MTCA), Chapter 173-340 WAC.
- Undisturbed(native) soil sample took from at the northeast corner of the tank excavation (refer to Figure 2) where discolored and odorous soil was encountered, showed over Method A cleanup level of Washington State Model Toxics Control Act (MTCA) clean up level. Therefore, the northeast corner of the tank excavation site area was affected with the contaminations and further characterization is warranted to verify the age and the extent of the contaminations. No contaminations found on the backfill materials around the tanks.

KEE, LLC did not perform the overexcavation activities due to the out of the scope of services and disagreement of the responsible party of the contamination between the present or previous business owners. The property owner will pursue the remedial activities after the completion of Tank Closure Activities.

## 9 REFERENCES

Key Engineering, Phase I & II Environmental Site Assessment Report, Prepared for the owner, Seattle, WA on December 15, 1999.

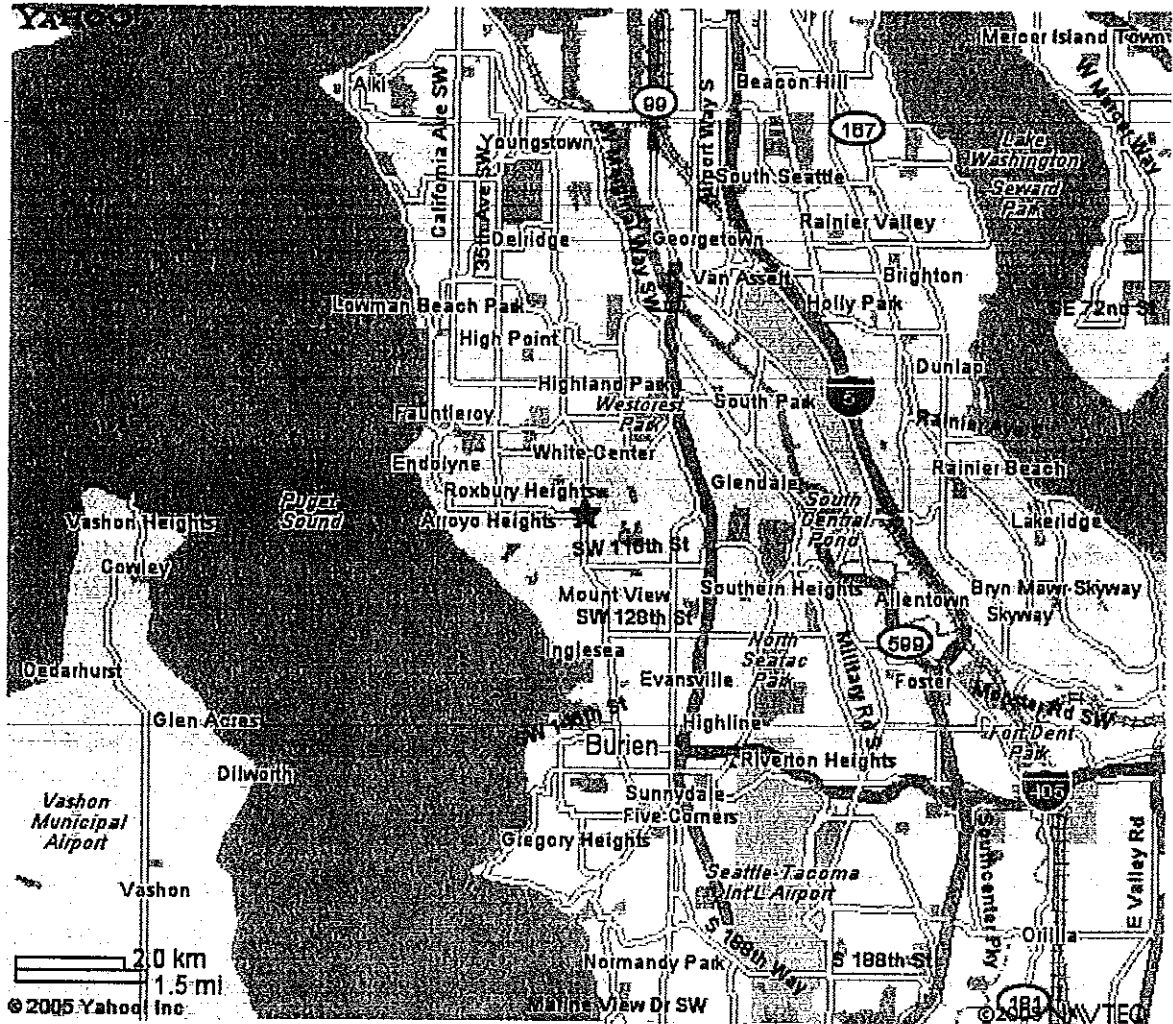
KEE, LLC, Limited Phase II Environmental Site Assessment Report, Prepared for the owner, Seattle, WA on December 23, 2005.

WA soil survey report, Soil Survey of King County Area. Washington, United States Department of Agriculture – Natural Resources Conservation Services.

Department of Ecology Well Logs

## 10 LIMITATIONS

This report has been prepared for the exclusive use of our customer and their representatives for specific application to this site. This report is UST Closure Investigation Report and does not provide a complete site characterization including detailed site geology and hydrology of the site. This Tank Closure Report does not delineate the vertical or horizontal extents of soil or groundwater contamination. The findings and conclusions of this study were based on observations and testing made at separated boring locations on the subject property. Conditions may vary between the excavation site and at other locations on the site. If new information is developed in future site work which may include excavations, borings, studies, etc., KEE, LLC must be retained to reevaluate the conclusions of this report and to provide amendments as required.



**KEY KEE LLC**

Tel: 206-914-4989  
 Fax: 425-836-0463  
[www.key-enviro.com](http://www.key-enviro.com)  
[info@key-enviro.com](mailto:info@key-enviro.com)

PO Box 2532, Redmond, WA 98073

**VICINITY MAP**

Zip Market & Gas

January 10, 2007

Figure 1

## FIG 2 : SITE PLAN



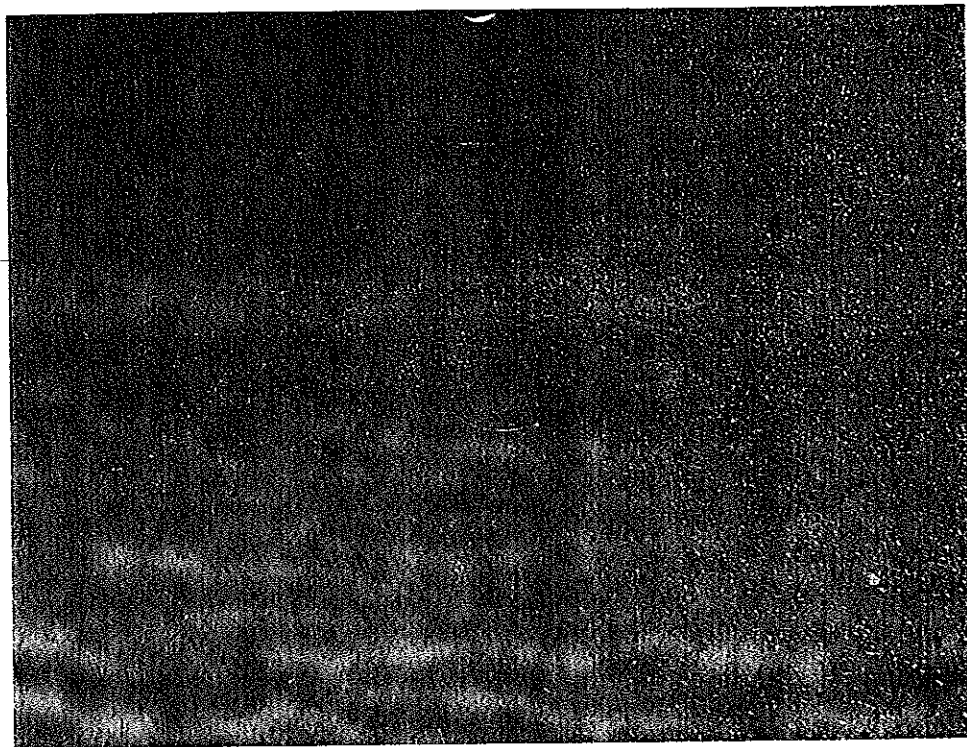
**Table 1 Summary of Soil Samples Collected For Analysis**

Field ID	Sampling Location	Media	Depth (feet)	Compounds of Concern	Analysis Method
Tank BT #1	S1	Soil	16	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
Tank BT #2	S2	Soil	16	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
Tank BT #3	S3	Soil	16	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
NW	S4	Soil	8	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
WW	S5	Soil	8	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
EW	S6	Soil	8	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
SW	S7	Soil	8	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
S Isld	S8	Soil	8	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
N Isld	S9	Soil	8	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B
Ex #1	S10	Soil	4	TPH-Gasoline, BTEX	NWTPH-Gx, 8021B

## APPENDIX A: SITE PHOTOGRAPHS



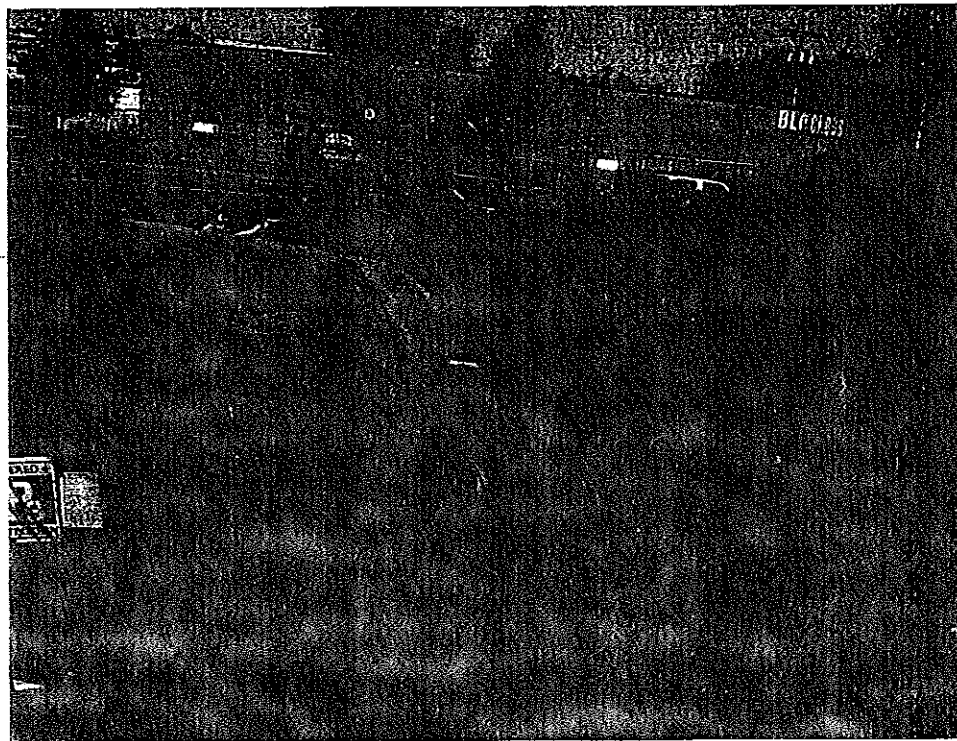
Checking underground utilities including pipe lines with GPR



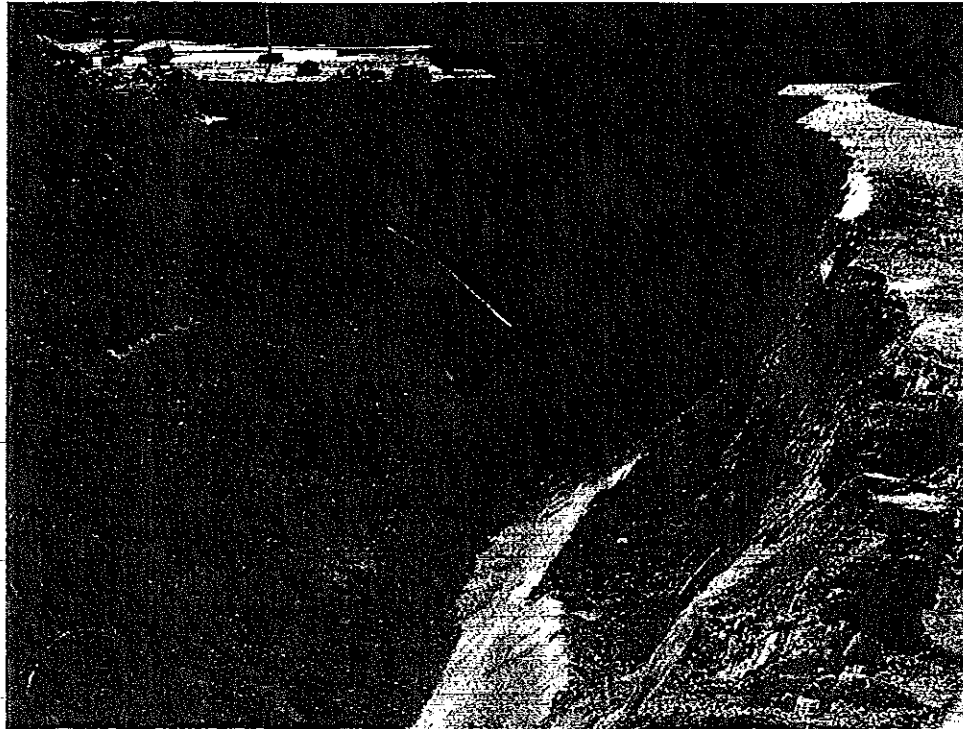
Utility marked after locating



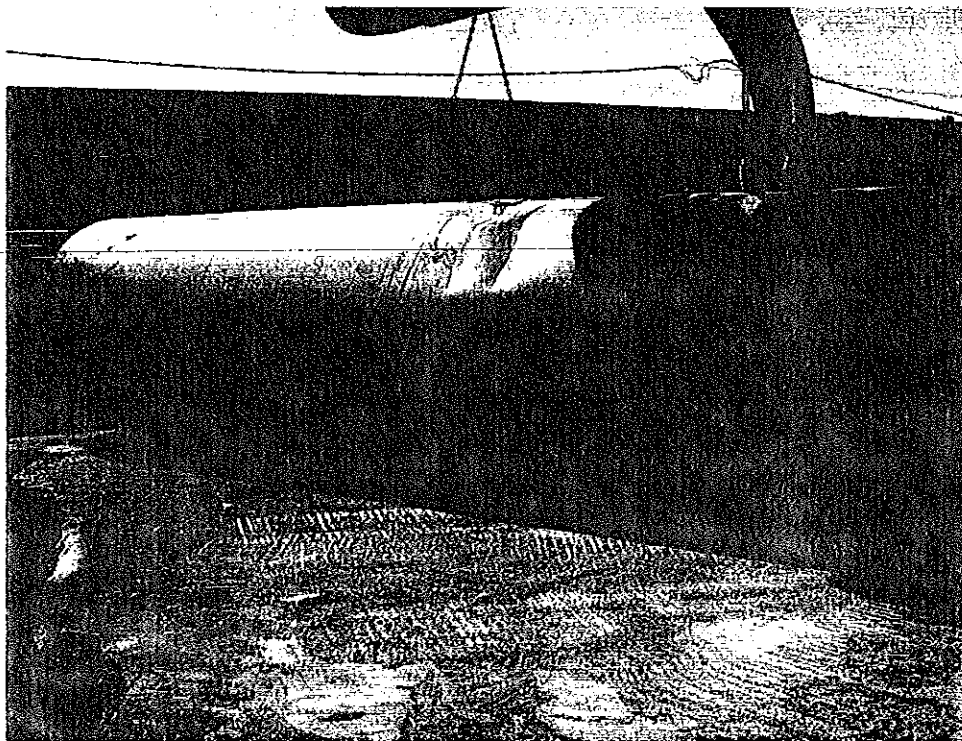
**Excavating the first tank located at north end of the tank site**



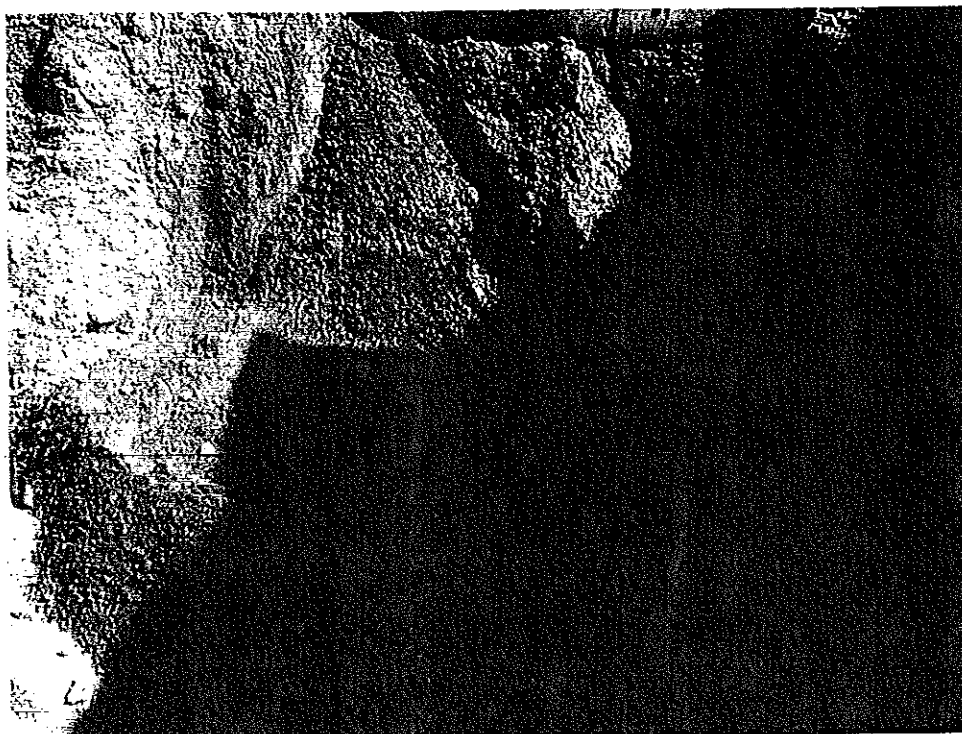
**Starting to pull up the first tank with the excavator**



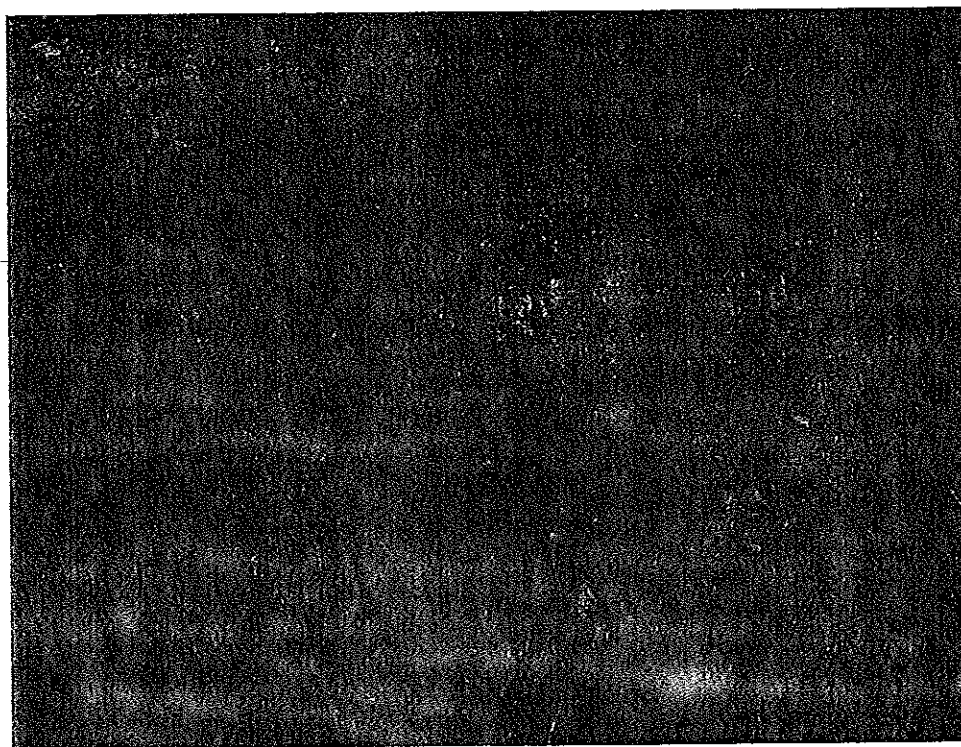
Showing the tank bottom after first tank pull



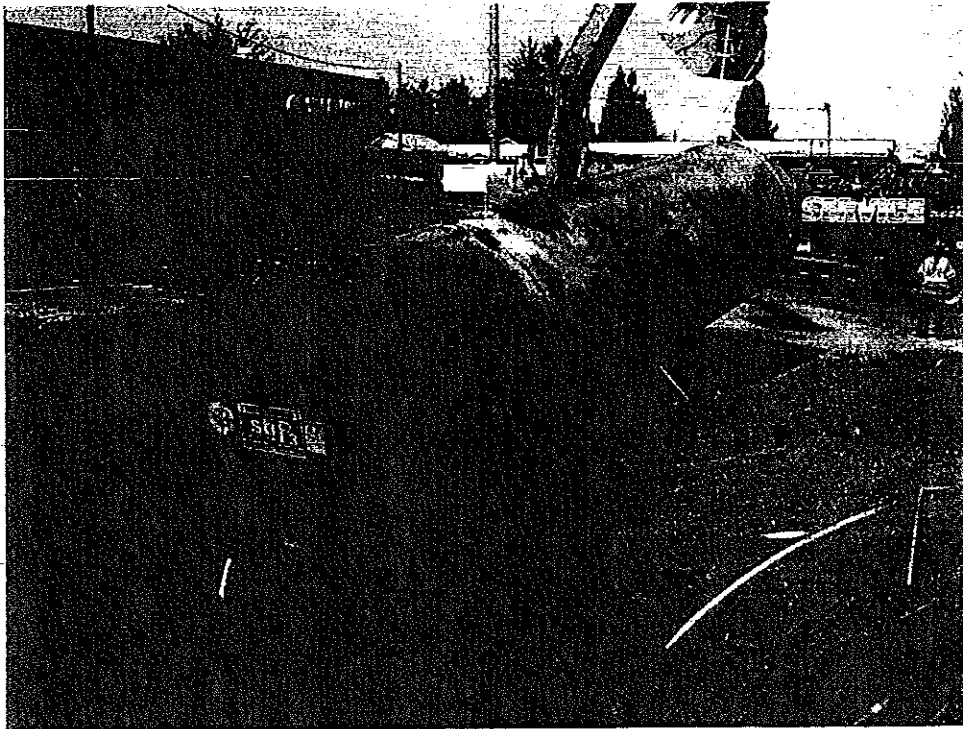
Staging the first tank on the asphalt pavement



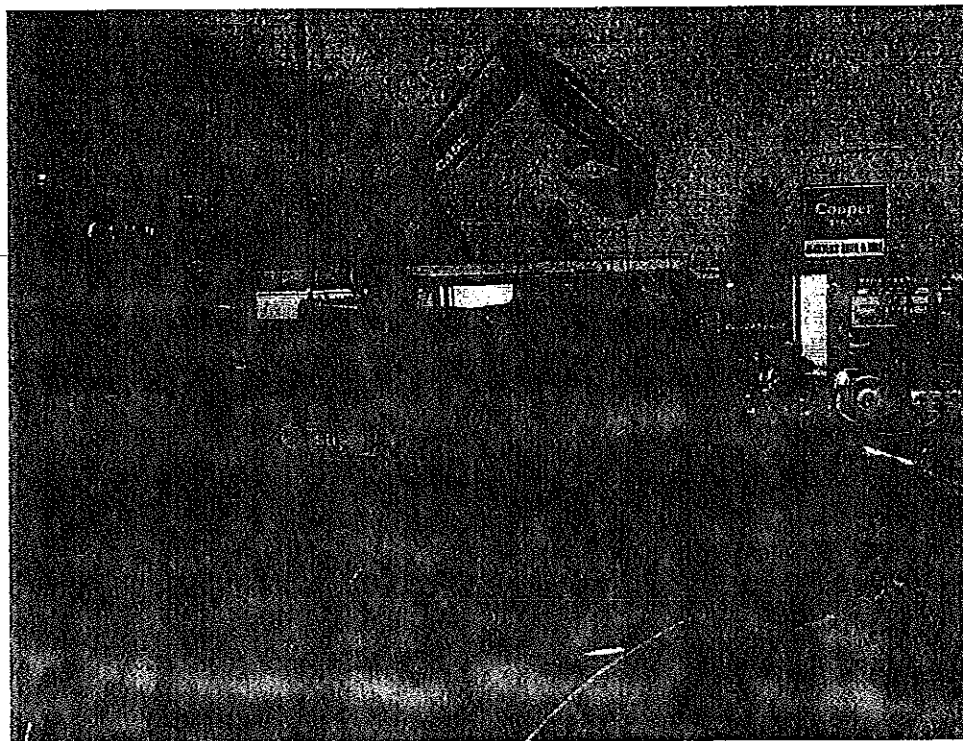
Taking the sample at north side wall of the tank site —



Showing the discolored area at the northeast corner of the tank site (sample S10)

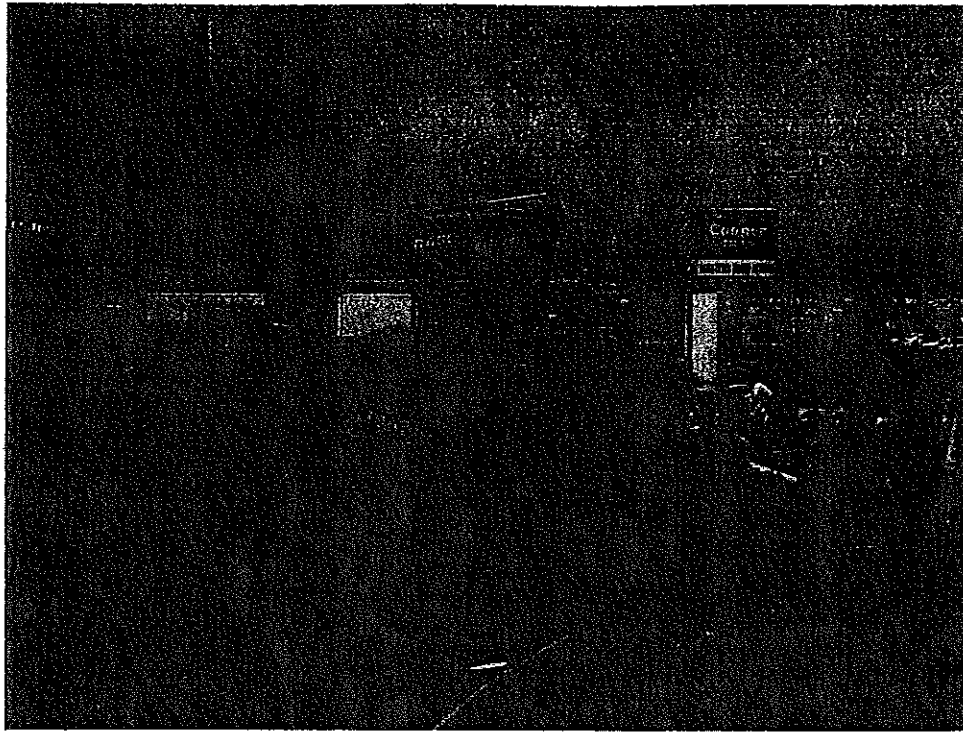


**Pulling another tank from the tank site**

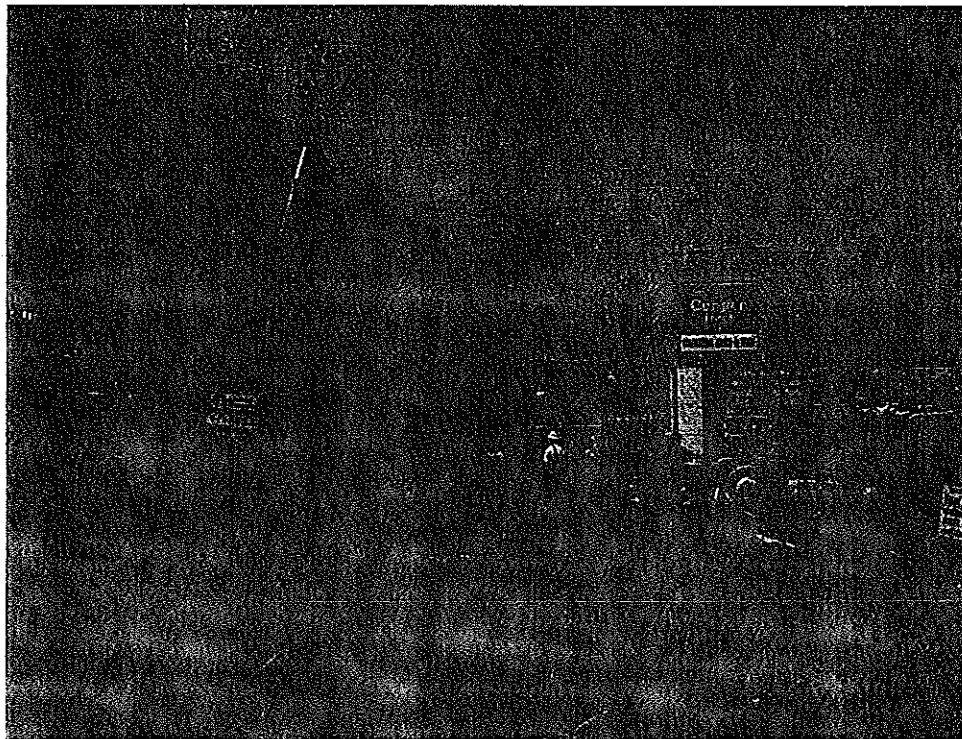


**Pulling another tank from the tank site with the excavator**



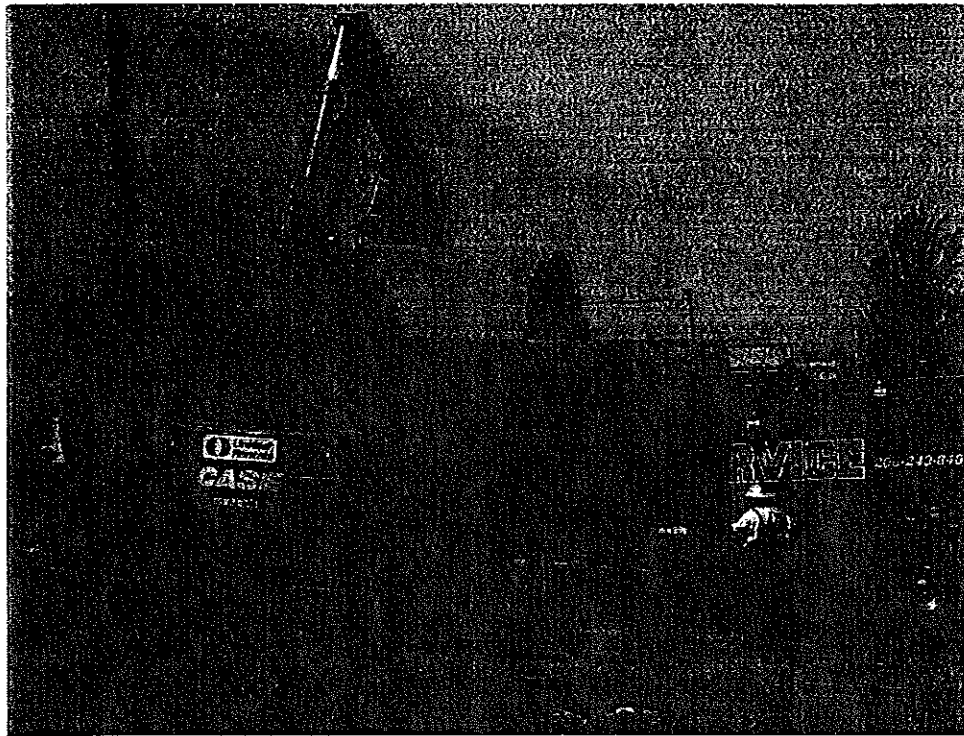


**Staging the tank on the pavement before load to the truck**



**Loading the tank on the truck before heading to tank destruction facility**

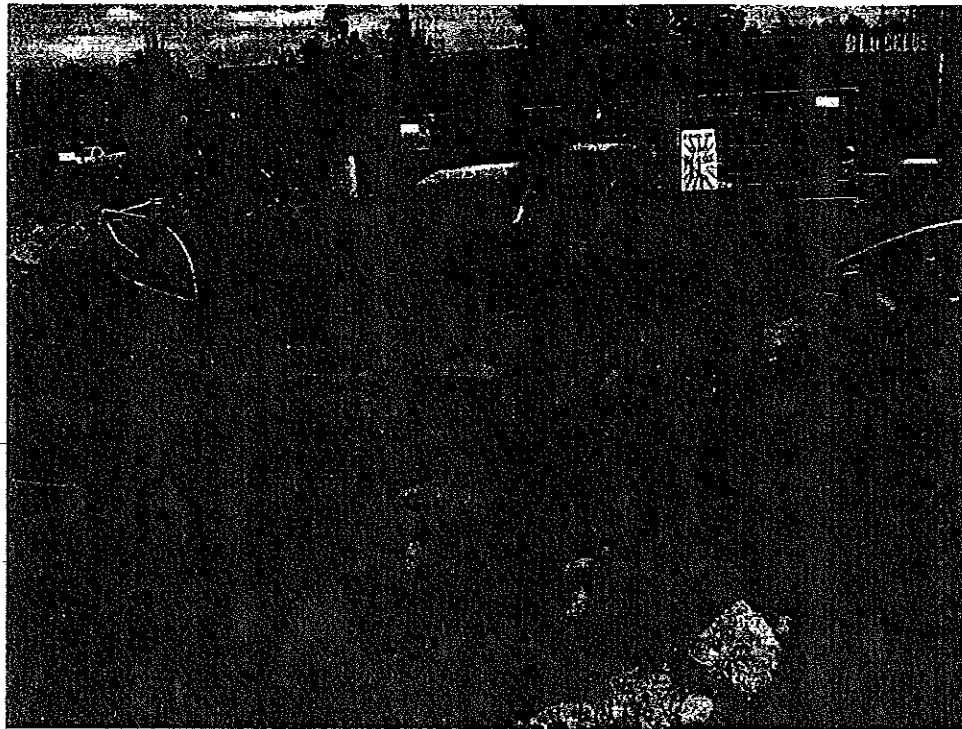




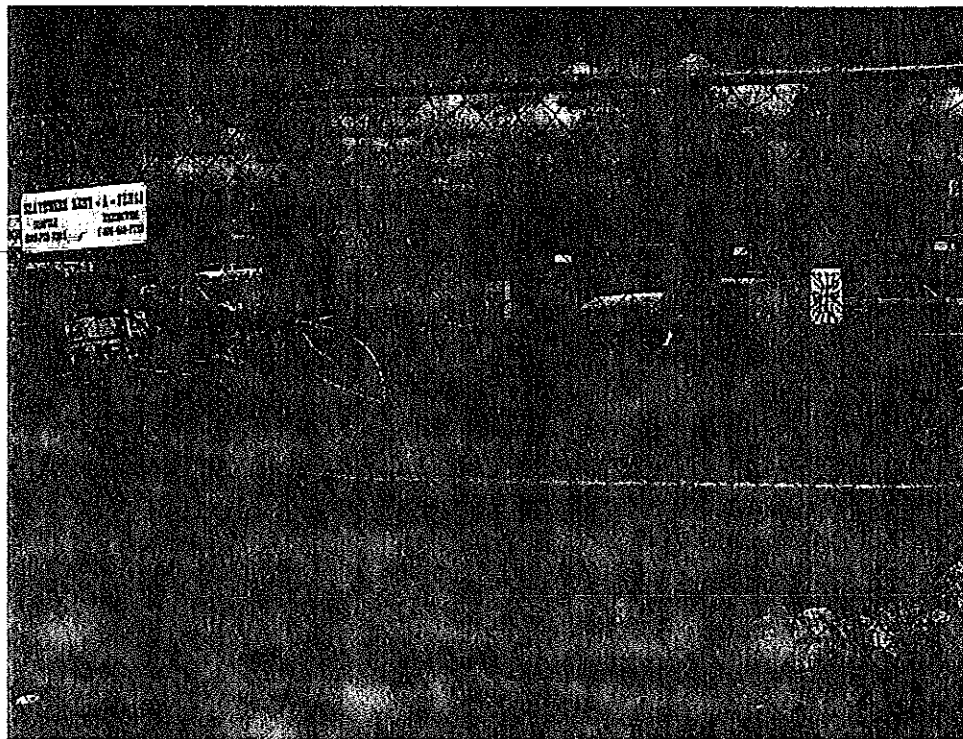
Close view of loading the tank on the truck



Taking another wall sample at the south end wall of the tank cavity



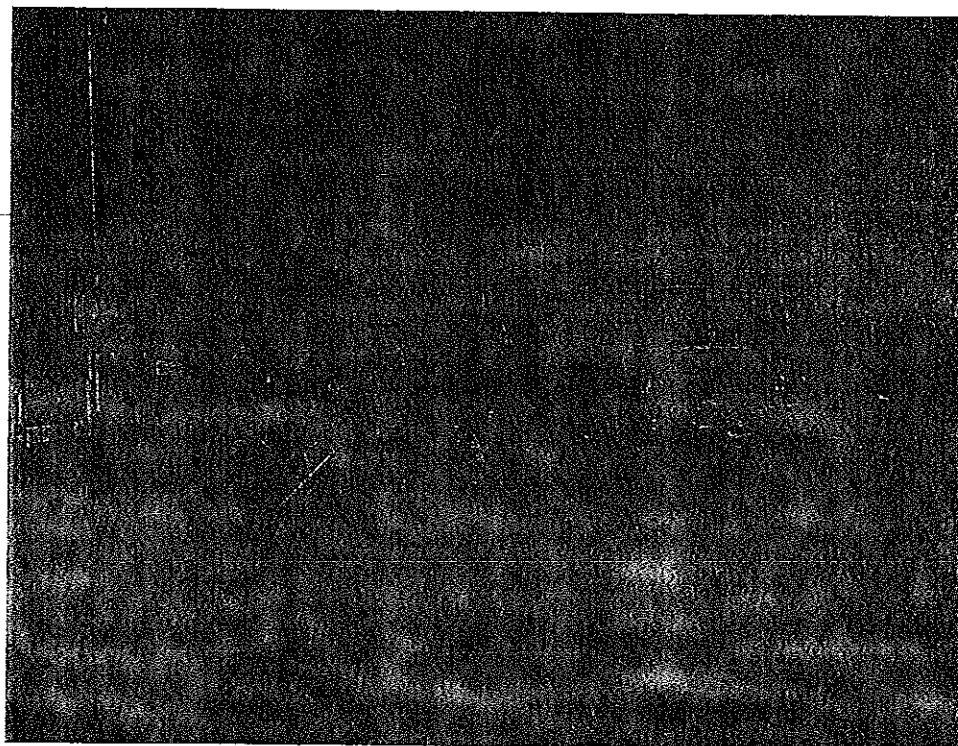
**Backfilling the tank cavity with the imported materials —**



**Another view of the backfilling the tank cavity**



**Tank excavation site after backfilling was completed with 5/8" crush rock**



**Crews getting the surface ready for Asphalt pavement\_\_\_\_\_**

---

## APPENDIX B : LABORATORY REPORT

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Charlene Morrow, M.S.  
Yelena Aravkina, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

May 10, 2006

Kee-Hoon Pak, Project Manager  
Kee, LLC  
PO Box 2532  
Redmond, WA 98073

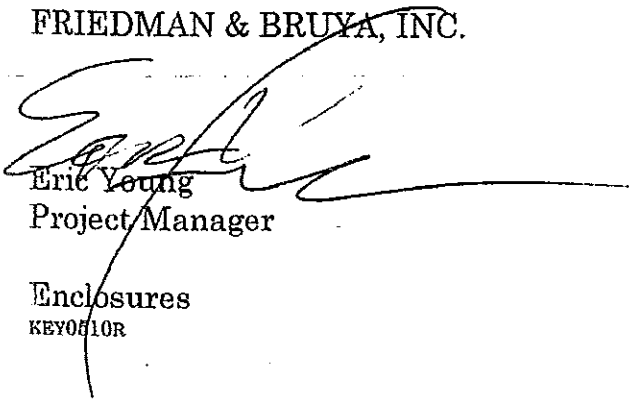
Dear Mr. Pak:

Included are the results from the testing of material submitted on May 5, 2006 from the ZM050506-3, F&BI 605068 project. There are 2 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Eric Young  
Project Manager

Enclosures  
KEY0510R

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/10/06  
 Date Received: 05/05/06  
 Project: ZM050506-3, F&BI 605068  
 Date Extracted: 05/08/06  
 Date Analyzed: 05/08/06

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
 FOR BENZENE, TOLUENE, ETHYLBENZENE,  
 XYLENES AND TPH AS GASOLINE  
 USING EPA METHOD 8021B AND NWTPH-Gx**  
 Results Reported on a Dry Weight Basis  
 Results Reported as µg/g (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 69-150)
TANK BT2 (52) 605068-01	<0.02	<0.02	<0.02	<0.06	<2	105
TANK BT3 (53) 605068-02	<0.02	<0.02	<0.02	<0.06	<2	106
NW-8 (54) 605068-03	<0.02	<0.02	<0.02	<0.06	<2	102
WW-8 (55) 605068-04	<0.02	<0.02	<0.02	<0.06	<2	106
EW-8 (56) 605068-05	<0.02	<0.02	<0.02	<0.06	<2	105
SW-8 (57) 605068-06	<0.02	<0.02	<0.02	<0.06	<2	101
S Isld (58) 605068-07	<0.02	<0.02	<0.02	<0.06	<2	102
N Isld (59) 605068-08	<0.02	<0.02	<0.02	<0.06	<2	104
Method Blank	<0.02	<0.02	<0.02	<0.06	<2	103

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/10/06

Date Received: 05/05/06

Project: ZM050506-3, F&BI 605068

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES AND TPH AS GASOLINE  
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 605068-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/g (ppm)	<0.02	<0.02	nm
Toluene	µg/g (ppm)	<0.02	<0.02	nm
Ethylbenzene	µg/g (ppm)	<0.02	<0.02	nm
Xylenes	µg/g (ppm)	<0.06	<0.06	nm
Gasoline	µg/g (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	µg/g (ppm)	0.5	108	53-123
Toluene	µg/g (ppm)	0.5	114	62-124
Ethylbenzene	µg/g (ppm)	0.5	113	59-124
Xylenes	µg/g (ppm)	1.5	114	58-123
Gasoline	µg/g (ppm)	20	88	58-137

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Charlene Morrow, M.S.  
Yelena Aravkina, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

May 10, 2006

Kee-Hoon Pak, Project Manager  
Kee, LLC  
PO Box 2532  
Redmond, WA 98073

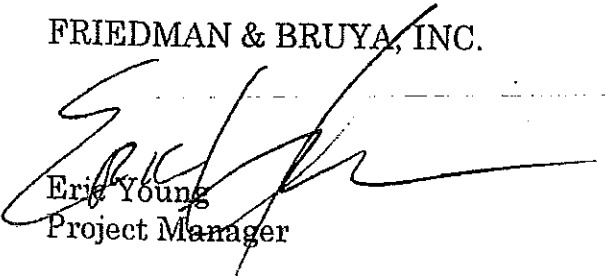
Dear Mr. Pak:

Included are the results from the testing of material submitted on May 4, 2006 from the ZM050306-3, F&BI 605049 project. There are 2 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Eric Young  
Project Manager

Enclosures  
KEY0510R



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/10/06  
 Date Received: 05/04/06  
 Project: ZM050306-3, F&BI 605049  
 Date Extracted: 05/05/06  
 Date Analyzed: 05/05/06 and 05/06/06

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
 FOR BENZENE, TOLUENE, ETHYLBENZENE,  
 XYLENES AND TPH AS GASOLINE  
 USING EPA METHOD 8021B AND NWTPH-Gx**  
 Results Reported on a Dry Weight Basis  
 Results Reported as  $\mu\text{g/g}$  (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 69-150)
EX1-4 d (510) 605049-01	0.23	0.85	2.0	16	310	122
EX2-16 (51) 605049-02 TANK BT#1	<0.02	<0.02	<0.02	<0.06	<2	111
Method Blank	<0.02	<0.02	<0.02	<0.06	<2	103

d - The sample was diluted.

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

Date of Report: 05/10/06

Date Received: 05/04/06

Project: ZM050306-3, F&BI 605049

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 605022-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benzene	µg/g (ppm)	<0.02	<0.02	nm
Toluene	µg/g (ppm)	<0.02	<0.02	nm
Ethylbenzene	µg/g (ppm)	<0.02	<0.02	nm
Xylenes	µg/g (ppm)	<0.06	<0.06	nm
Gasoline	µg/g (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample


Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	µg/g (ppm)	0.5	94	53-123
Toluene	µg/g (ppm)	0.5	96	62-124
Ethylbenzene	µg/g (ppm)	0.5	98	59-124
Xylenes	µg/g (ppm)	1.5	100	58-123
Gasoline	µg/g (ppm)	20	88	58-137

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

## APPENDIX C : SAMPLE CHAIN OF CUSTODY

# SAMPLE CHAIN OF CUSTODY

Send report to Kee-Hoon Pak  
Company KEE LLC  
Address P.O. Box 2532  
City, State, ZIP Redmond, WA 98073  
Phone # 206-914-4989 Fax # 425-836-0463

SAMPLERS (signature)	PROJECT NAME/NO.	PO #
	ZM 050506-3	
REMARKS		

Page # 1 of 1

**TURNAROUND TIME**  
☐ Standard (2 Weeks)  
☒ RUSH

Rush charges authorized by:

## SAMPLE DISPOSAL

☒ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

ANALYSES REQUESTED												
Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
TANK BT2		5/5	12:00	Soil	4	✓	✓	✓				
" 3		5/5	2:30	Soil	4	✓	✓	✓				
NW-8		5/4	3:30	Soil	4	✓	✓	✓				
NW-8		5/5	11:30	Soil	4	✓	✓	✓				
EW-8		5/5	11:40	Soil	4	✓	✓	✓				
SW-8		5/5	2:40	Soil	4	✓	✓	✓				
S Isld		5/5	3:20	Soil	4	✓	✓	✓				
N Isld		5/5	3:30	Soil	4	✓						
												</

**Friedman & Bruya, Inc.**  
3012 16th Avenue West  
Seattle, WA 98119-2029  
Ph. (206) 285-8282  
Fax (206) 283-5044  
FORMS/COC/COC.DOC

FORMS\COC\COC.DOC

## APPENDIX D HEALTH AND SAFETY PLAN

## **ATTACHMENT D - HEALTH AND SAFETY PLAN**

Project Name: Zip Market & Gas  
Project Location: 10645 16<sup>th</sup> Ave SW, Seattle, Washington  
Project Number: ZM050306-2

### **SAFETY PERSONNEL:**

Health and Safety Coordinator:  
Project Manager: Kee-Hoon Pak  
Site Safety Coordinator:

### **EMERGENCY CONTACTS:**

Hospital/Emergency Room: Harborview Medical Center (206) 731-3000

Fire:

Police:

Poison Control Center: (206) 526-2121

Department of Ecology Spill Response: (425) 649-7130

Washington State Patrol: 911

Site Telephone Number: Hi-Tech Cleaners (425) 637-8963

KEE, LLC

Health and Safety Coordinator: (206) 914-4989

Site Safety Coordinator (SSC), Project Manager and Health and Safety Coordinator (HSC) are to be notified immediately if worker exposure, accidents or site conditions not anticipated in this document are encountered. In case of hazard exposure during and/or prior to a medical situation, the hospital and any emergency response personnel are shall be notified that patient's clothing may be contaminated.

### **ACTION LEVELS:**

Upgrade PPE Level to Level C: 10 ppm or greater measured on OVM in breathing zone

Stop all work and exit work area: 100 ppm or greater measured on OVM or;  
20% of LEL in work area or;  
 $O_2 < 19.5\%$ ; or  $O_2 > 23.5\%$

## I. General Information

### A. Project Description

KEE, LLC personnel will document soil sampling.

As part of the soil removal activity, KEE, LLC personnel will collect soil samples from the impacted soils and from adjacent clean soil to determine when cleanup has been achieved.

### B. Site History

KEE, LLC performed Limited Phase II assessment to help the business transaction. The gas station is closing by the business owner.

## II. Site Safety Personnel

Ms. Eun Y. Pak coordinates health and safety planning for projects in the Sammamish office with potential hazardous material exposure. Primarily the duties of the Health and Safety Coordinator entail coordination with project managers and Site Safety Coordinator for preparation of site health and safety plans, assessment of chemical hazards and selection of safety/monitoring equipment necessary for each project.

The project manager has overall responsibility for project operations, and as such is responsible for providing a safe work environment. This involves coordinating preparation of a site health and safety plan with Health and Safety Coordinator and providing necessary conditions for implementation of the site health and safety plan.

The Site Safety Coordinator (SSC) has the responsibility of implementing the site health and safety plan while at the site. The SSC will be involved with the Health and Safety Coordinator and project manager in preparation of the site health and safety plan. If the plan is not being implemented or if unanticipated situations arise, the SSC may stop all proceedings and see that all personnel depart the site. The SSC will have charge of all instruments and see to their proper use and function.

## III. Emergency Procedures

In all emergencies, document action taken and notify Health and Safety Coordinator, project manager, SSC and client officials of occurrence of an emergency and actions taken.

### A. Hazard Exposures



Skin-remove contaminated clothing immediately; wash with soap and water.

Inhalation-remove to fresh air. Where necessary, call emergency medical help (ambulance, hospital, police) and follow medical emergency help procedures.

Eye Contact-flush with eye wash or water at least 15 minutes. Follow emergency medical help procedures, if indicated. Contaminants may be absorbed through the eyes.

Ingestion-obtain medical help if indicated.

Injuries-administer first aid if necessary. Follow emergency medical procedures below, if necessary. Medical emergencies take precedence over decontamination.

B. Emergency Medical Help Procedures

If necessary, call hospital Harborview Medical Center (206) 731-3000

Hospital Address: **325 Ninth Avenue / Seattle, WA**

If the injury is life threatening, follow steps 1 through 8 below. If the injury is not life threatening, perform necessary first aid and consider the need for decontamination prior to transport.

1. Perform first aid necessary to determine victim(s) medical status;
2. Call emergency transport;
3. Give specific directions to location of emergency;
4. Give phone from which you are calling;
5. Tell emergency services what happened. Inform that victim(s) may be wearing contaminated clothing;
6. Inform emergency services how many persons need help;
7. Inform emergency services what is being done for the victim(s);
8. Stay on telephone until told to hang-up;

Transport to hospital, if possible.

C. Fire/Explosion

Use hand extinguisher if appropriate and safety permits. Call fire department, if appropriate. Evacuate to upwind location if fire cannot be controlled with a fire extinguisher.

D. Accidental Spill/Release

1. Pick up, isolate, or contain spill;

2. Evacuate area, if necessary;
3. Contact emergency agencies, if necessary.

E. Unanticipated Conditions

1. Suspend all non-emergency activities;
2. Notify Health and Safety Coordinator and project manager immediately.  
Do not restart planned operations in the area until authorized by the Health and Safety Coordinator and project manager;
3. If the unanticipated condition(s) is the presence of unidentifiable non-hydrocarbon related contaminants, site conditions, required protective equipment level and action levels will have to be reevaluated by the Health and Safety Coordinator, project manager and Site Safety Coordinator prior to restarting planned operations.

IV. Hazard Assessment

KEE, LLC anticipates, based upon the past history of the site and upon the types of activities to be performed, to encounter the following types of hazards:

- Chemical
- Physical
- Construction

Based upon KEE, LLC's preliminary assessment, the proper personal protective equipment (PPE) to be employed at this site was determined to be Level D protection with the capability to upgrade to Level C protection where site conditions warrant. This is based on KEE, LLC personnel performing the following tasks:

- Construction observation of contractor activities; and
- Collection of soil samples following removal of petroleum impacted soils.

Any change in KEE, LLC personnel tasks at the site will require a review of the health risks to personnel at the site. The SSO and HSC will jointly review personnel health risks and modify the health and safety plan as needed.

A. Chemical

Chemical hazards expected to be encountered include Tetrachloroethylene or Perchloroethylene. Chemical hazard information is shown in the attached table.

The OSHA (WISHA) permissible Exposure Limit (PEL) has been established at 0.5 ppm for Benzene. The nature of this project precludes continuous exposure to any potential contaminant. Therefore, the action level has been set at 0.5 ppm to prevent exposure above the 8-hour TWA PEL for Benzene.

#### B. Physical

The physical hazards which are expected to be encountered during the soil removal activities include noise, manual lifting, heavy equipment operation, weather related hazards (rain, snow, wind) and rough terrain. Hearing protection and steel-toed rubber boots will be required for all personnel working in the vicinity of heavy equipment.

These hazards will be mitigated by using safe work practices at all times. The Site Safety Coordinator (SSC) has total responsibility for ensuring that all personnel on-site perform work tasks in a safe and sensible manner. As KEE, LLC personnel are not typically experienced heavy equipment operators, the safe operation of heavy equipment will be the responsibility of the subcontractor and the equipment operator. If at any time the SSC determines that safe work practices are not followed, the tasks will be suspended and corrective actions will be taken.

In addition to the physical hazards associated with heavy equipment, the potential for ignition of concentrations of combustible vapors must be guarded against. This will be accomplished by allowing the combustible gas meter to run on a continuous basis with the alarm level set at 20% of the lower explosive limit (LEL) calibrated to methane gas.

**SMOKING WILL NOT BE ALLOWED ANYWHERE ON THE SITE PROPERTY.**

CHEMICAL	PEL/TLV*	IDLH	EXPOSURE ROUTE	ACUTE HEALTH EFFECTS	CHRONIC HEALTH EFFECTS
Benzene	1 ppm (8-hour TWA) 20 ppm (ceiling) 50 ppm (5-min max peak in any 3 hours)	Niosh 0.1 ppm TWA 1 ppm STEL	Inhalation  Dermal	Intoxication, headaches, irritation to eyes, nose and throat, dizziness, and nausea, skin irritation, liver damage	Eye, skin respiratory system irritation, possible liver, kidneys, central nervous system damage

*\*OSHA Permissible Exposure Limit Threshold Limit Value*

Project Name: Zip Market & Gas  
Date: 5-3-2006

C. Construction

Construction hazards will be mitigated, as all work will be performed in general accordance with WAC 296-155.

VI. Monitoring Plan

**EXPLOSIVE ATMOSPHERE**

<b><u>Monitoring Method</u></b>	<b><u>Reading</u></b>	<b><u>Action</u></b>
Combustible Gas Meter	<10% LEL	Continue Investigation
	10% - 20% LEL	Continue onsite monitoring with extreme caution
	>20% LEL	Explosion hazard. Withdraw from the area. Reenter only after source is identified and controlled -

Readings are sustained over at least a minute during and are taken downwind.  
Background readings obtained 50 feet upwind of site activity.

**OXYGEN**

Oxygen analyzer	<19.5%	Do not enter without SCBA. NOTE: CGI readings are not valid in atmospheres with <19.5% oxygen.
	19.5%-23.5%	Continue investigation. Deviation from normal maybe due to presence of other substances.
	>23.5%	Fire hazard: Discontinue investigation.

**ORGANIC VAPORS**

PID or FID	0-10 ppm	Continue investigation in Modified Level D with continuous monitoring with instrument
------------	----------	---

10 - 100 ppm

Upgrade to Level C wearing an air-purifying respirator with organic vapor cartridges or organic vapor/acid gases cartridges

>100 ppm

Discontinue investigation. Resume operation when concentration returns to acceptable levels.

#### VII. Personal Protection Level

The Site Safety Coordinator (SSC) is responsible for ensuring the health, safety, and efficiency of the project team. The level of personal protection necessary for the health and safety of the project team will be determined by the SSC based upon the above action plan and any overt signs of hazards to life and health.

Any team member can seek to upgrade the level of protection established by the SSC. This will be accomplished through consultation with KEE, LLC's SSC, and an agreement will be reached before the team member enters the work area. **UNDER NO CIRCUMSTANCES** will any team member downgrade the level of personal protection selected by the SSC. The level of protection selected for this site is *Level D* with the capability of upgrading to Level C. Neither of these levels of protection is adequate for confined space entry. **UNDER NO CIRCUMSTANCES** shall any of the team members enter a confined space.

- A. Modified Level D consists of steel-toed, chemical resistant rubber boots, gloves of latex/vinyl or equivalent, hard hat, safety glasses, Tyvek coveralls. **WEARING OF TYVEK WILL BE DISCRETIONARY BASED ON CIRCUMSTANCES AND SSC'S DIRECTION.**
- B. Level C consists of Level D plus a half-face air-purifying respirator equipped with organic vapor and high efficiency particulate cartridges. **UNDER LEVEL C, WEARING OF TYVEK IS MANDATORY.**

#### VIII. Site Control

- A. Work areas will be established as follows:  
A hotline will be established 10 feet from excavation edges and around the perimeter of soil stockpiles. This area should be marked with tape where practicable. The area inside this line will be considered the exclusion zone.

B. Personnel decontamination will take place prior to entering the field office or other field office and will consist of:

1. A wash tub (or equivalent) will be filled with potable water and detergent (TSP). Persons entering the field office will step into the detergent solution and scrub loose soil from boots. Gloves will be discarded between sampling events. Upon completion of scrubbing, personnel will step into a similar tub filled with clean potable water and rinse boots.

**NOTE:** Step 2 will be done only if Tyvek is worn.

2. Personnel will then remove the Tyvek coveralls which will be discarded into a drum located adjacent to the field office

IX. Monitoring Plan

Personal monitoring will be done at the discretion of the SSC. In lieu of personal monitoring, the direct reading instruments listed under the action plan will be used.

All readings obtained with the FID or PID would be recorded in a log book maintained by the SSC.

X. Site Security

Flagging/colored chalk will be used to delineate the exclusion zone from the CRZ.

No unauthorized persons will be allowed in the exclusion zone - unauthorized persons are those without appropriate training, without proof of medical surveillance, and those with no business on the site.

XI. Training

Certificates of successful completion of a 40-hour training course will be maintained at the offices and will be produced for perusal by regulatory authorities upon request. All personnel should carry 40-hour training cards. At least one of the team members present on-site will also have a certificate of completion for 8-hour first aid and CPR training.

XII. Medical Surveillance

Evidence of a current physical examination in the form of a letter from an examining physician will be maintained at the offices and will be available to regulatory personnel upon request.

Project Name: Zip Market & Gas  
Date: 5-3-2006

### XIII. Acknowledgement Form

The content of the plan will be discussed in detail at the start of the project with all site personnel during a safety meeting held at the site. The SSC shall document attendance at this meeting and content of the meeting. All site personnel will be expected to sign an acknowledgement form. If other contractors have a separate safety plan, a copy of that plan must be given to the SSC at this meeting.



---

**APPENDIX E      UST CERTIFICATE OF DESTRUCTION**

**Marine Vacuum Service, Inc.**

A WASHINGTON ENVIRONMENTAL COMPANY

MARINE AND INDUSTRIAL CLEANING

TANK REMOVAL

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

**STORAGE TANK**

**CERTIFICATE OF DESTRUCTION**

DATE: May 03, 2006

ATTN: Kee Hoon Pak  
1845 218<sup>th</sup> PI NE  
Sammamish, WA 98074

TANK OWNER: TEXACO ZIP MARKET


TANK LOCATION: 10645 16<sup>th</sup> Ave SW

TANK DESCRIPTION: (2) 12,000 Gallon UST, (1) 10,000 Gallon UST

LAST CONTENTS HELD IN TANKS: Gas

Marine Vacuum Service, Inc certifies that the tank mentioned above has been pumped of all liquid materials and has been washed, with a high-pressure washer and soap solution and is clean. The tank and contents therein have been disposed of according to all Local, State and Federal Regulations.

Thank you,

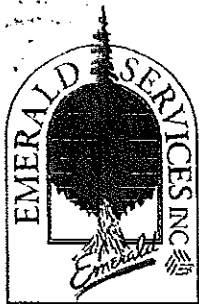
  
Thomas Wofford  
Project Coordinator

---

## APPENDIX F      PUMP AND RINSE CERTIFICATION

---

## APPENDIX G    KING COUNTY DDES PERMIT



www.emeraldsw.com

9010 E. Marginal Way S.  
Suite 200  
Seattle, WA 98108  
(206) 832-3000  
Fax: (206) 832-3030

## PUMP AND RINSE CERTIFICATION

DATE: 4-21-06

TO WHOM IT MAY CONCERN:

This letter is to certify that tank(s), size(s)

(1) 12,000 (2) 10,000 (3) 12,000

have been pumped and rinsed for removal.

Work was performed at:

10645 16<sup>th</sup> ave SW.  
Seattle WA

For:

Kee Environmental

Please note that this letter does not certify that the above tank(s) have been cleaned for disposal or that it (they) should be considered gas-free.

Sincerely,

Emerald Services, Inc.

APPLICANT



**King County**

Department of Development  
and Environmental Services  
900 Oakesdale Avenue Southwest  
Renton, Washington 98055-1219

Application Number: B06F0250

Application Date: 05/09/2006

Applicant: KEE HOON PAK KEE LLC

**Permit Conditions**

The conditions attached to this cover sheet apply to the permit referenced here. All conditions must be complied with by the contractor and verified by a Building Inspector or this permit will become null and void.

Location: FD #11

Permit Type: FIREPERM, TANK

Title: CONTR: MARK HEATH EXCAVATING

Description: install 3 flammable combustible commercial underground tanks

Valuation: \$0.00

Site Address: 10641 16TH AVE SW KC

**Reviewed By:**

Structure: \_\_\_\_\_

Ordinance: \_\_\_\_\_

Fire:  \_\_\_\_\_

Mechanical: \_\_\_\_\_

Other: \_\_\_\_\_

APPROVED  
KING COUNTY  
FIRE ENGINEERING  
5/9/06

## THIS PERMIT IS FOR THE REMOVED OF 3 UNDERGROUND TANKS

The following conditions apply to the above referenced permit:

### AA03 HIGGINS

Any questions regarding the fire review of this plan should be directed to:  
H. Leo Higgins, Fire Engineer  
Telephone: (206) 296-6757.

### AB01 CONDITION INFORMATION

1. **CONDITION SHEETS:** The listing of permit conditions applied to this permit are requirements for or construction installation.
2. **FIELD CHANGES TO APPROVED PLANS:** After plans are issued and approved, only minor changes, modifications or field revisions may be made to these plans.  
**THE FIELD INSPECTOR HAS THE LATITUDE OF ALLOWING MINOR CHANGES, BUT NOT MAJOR CHANGES.**
3. **INSPECTION REQUIRED:** A final *inspection* is required for approval of this permit. To arrange for an inspection call the DDES Voice Inspection Line at: **1-888-546-7728**.  
**The King County Department of Development and Environmental Services [DDES] has installed an Interactive Voice Response System [IVR]. This system allows customers to schedule inspections 24 hours per day, 7 days per week.**

**The DDES Voice Inspection System Line allows customers to:**

- Schedule inspections
- Cancel inspections
- Retrieve inspection results

**Call: 1-888-5-INSPECT [1-888-546-7728] to access the inspection line. The DDES Voice Inspection Line will prompt you each step of the way. You may perform multiple transactions during the call. At the end of the call you will be issued a confirmation number. We recommend you keep a record of your confirmation number[s] and associated transaction[s] for future reference.**

### AB02 CONDITIONAL APPROVAL OF PLANS

The approval of these plans and issuance of a permit is based on a review of the documents submitted by the applicant and those documents being representative of actual *configuration, use*, anticipated construction/existing *construction and/or* installation of equipment and/or devices. Errors or omissions in submitted documents does not constitute approval of any condition relating to those errors or omissions.

**APPROVAL OF PLANS DOES NOT CONDONE OR AUTHORIZE ANY VIOLATION OF ANY KING COUNTY CODE/ORDINANCE/REGULATION.**

### AB03 COPYING OF APPROVED PLANS

If approved plans are copied for use as JOB SITE COPIES, such plans ARE NOT ACCEPTABLE WITHOUT ALL CONDITION SHEETS (PLAN REVIEW REQUIREMENTS) BEING ATTACHED TO THE COPIED PLANS. ATTACHED REQUIREMENTS (CONDITION SHEETS) ARE PART OF THE APPROVED SET OF PLANS.

**TR01 ON SITE INSPECTOR REQUIRED FOR TANK REMOVAL**

**NO TANK(S) SHALL BE REMOVED WITHOUT HAVING A FIRE INSPECTOR FROM THE KING COUNTY FIRE MARSHAL'S OFFICE ON SITE.** Preliminary tank removal operations may be conducted, but no tank shall be removed from the ground without specific approval of the on site fire inspector. To arrange for an inspector, see Condition Item AB01 (3)

**TR05 REMOVAL OF UNDERGROUND TANKS**

The removal of underground tanks shall be in accordance with all requirements listed in the **"REMOVAL OF UNDERGROUND TANKS CODE EXCERPTS SHEET"** attached to approved plans.

NOTE: Vapor concentration testing is required on ALL tanks INCLUDING residential-type oil tanks.





**DDes**

King County  
Department of Development  
and Environmental Services

900 Oakesdale Avenue Southwest  
Renton, WA 98055-1219

## REMOVAL OF COMMERCIAL-TYPE UNDERGROUND TANKS

Ref. 1997 Edition Uniform Fire Code Sec. 7902.1.7.4

The following are excerpts from codes/ordinances relating to the removal of commercial-type underground flammable or combustible liquid tanks.

### A. SAFETY RULES FOR TANK REMOVAL:

1. Barricade off a 20 foot "SAFE ZONE" around the area of the tank.
2. Maintain two 20 BC rated portable fire extinguishers on site.
3. Do not release any flammable/combustible liquids into ground.
4. If flammable/combustible liquids are found in the soil during removal operations, it is the responsibility of the property owner or his/her agent to take such action as necessary to eliminate contamination of the site. (WAC 173-360-325)

### B. REMOVAL OF LIQUID FROM THE TANK: (expose top of tank)

1. Open all valves and product lines to allow liquid to drain back into tank.
2. Disconnect all product lines and vapor recovery lines. Leave the vent line in place or provide a temporary vent if vent was tied to vapor recovery.
3. If tank is equipped with submerged turbine pump and riser, remove same.
4. Leave fill riser and drop tube in place and cap or plug all other tank openings.
5. Remove all liquid from the tank, using a hand pump if necessary, to extract the bottom few inches.

### C. REMOVAL OF VAPORS FROM TANK:

1. Carbon dioxide shall be used to render vapors inert. Use a carbon dioxide cylinder equipped with a pressure regulator.
2. Remove fill riser and drop tube and plug opening. Remove a plug from the OPPOSITE end of the tank from the vent pipe.
3. Introduce CO<sub>2</sub> into the tank through this opening at a rate of 40 psi. The CO<sub>2</sub> hose should extend to the bottom of the tank.
4. Vapor concentrations shall be checked periodically with a combustible gas meter. Readings of 20% less of LEL (Lower Explosive Limit) must be obtained in the tank and at the vent riser before the tank is considered to be gas free.
5. After tank is gas free, distribute 1.5 pounds of dry ice per 100 gallons tank capacity throughout the length of the tank.

**D. REMOVAL OF TANK FROM GROUND:**

1. Plug and cap all tank openings. Use screwed (boiler) plugs to plug any corrosion leak holes.
2. Make sure that one plug in the tank has a ½ inch size vent hole open to atmosphere to prevent pressure buildup.
3. Remove tank from the site as promptly as possible after purging operations have been completed.
4. If tank must remain on site overnight, secure in place and barricade around tank. Vapor may be released from scale and sediment in the tank and vapor testing must be done to insure a gas free vessel. If testing indicates vapors are present repeat vapor removal operations again.
5. When transporting the tank, make sure that the plug having the ½ inch vent hole is positioned at the uppermost part of the tank.

**E. BACKFILLING THE HOLE:**

When a new tank is not being placed into the same hole, fill the tank hole in the following manner:

1. Backfill with clean material free of any organic matter.
2. Fill should be equal to or better than surrounding native soil.
3. Backfill in layers of 6 inches at a time while machine compacting to density of surrounding native soil.

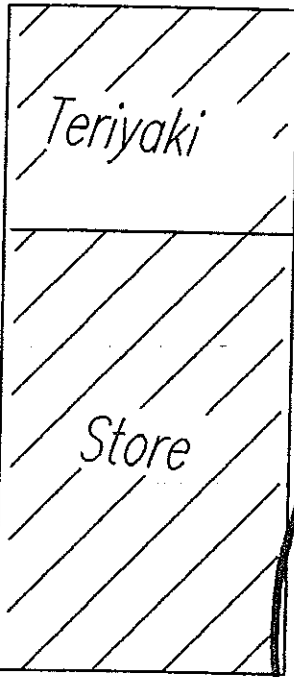
**F. WASHINGTON STATE LICENSED CONTRACTOR:**

A permit for removal of an underground flammable/combustible liquid tank shall only be issued to an individual/firm holding a Washington State contractor's license and who has the knowledge, expertise and equipment for handling commercial-type flammable/combustible liquid tanks.

**\*NOTE: IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR HIS/HER AGENT TO REPORT ANY EVIDENCE OF TANK LEAKAGE AND TO TAKE SUCH STEPS AS REQUIRED TO ELIMINATE ANY CONTAMINATION OF SOIL. (WAC 173-360-325)**

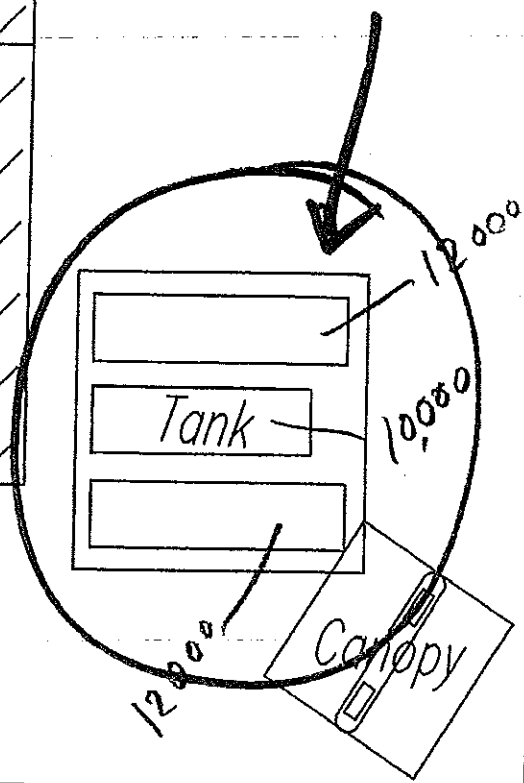


**REMOVAL**



**REMOVAL**

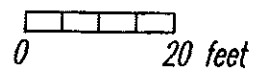
16th Ave SW



SW 107th St

**SEE  
ATTACHED**

Scale:



KEE, LLC  
P.O. Box 2532, Redmond, WA 98073-2532  
(206) 914-4989(P), (425) 836-0463 (F)

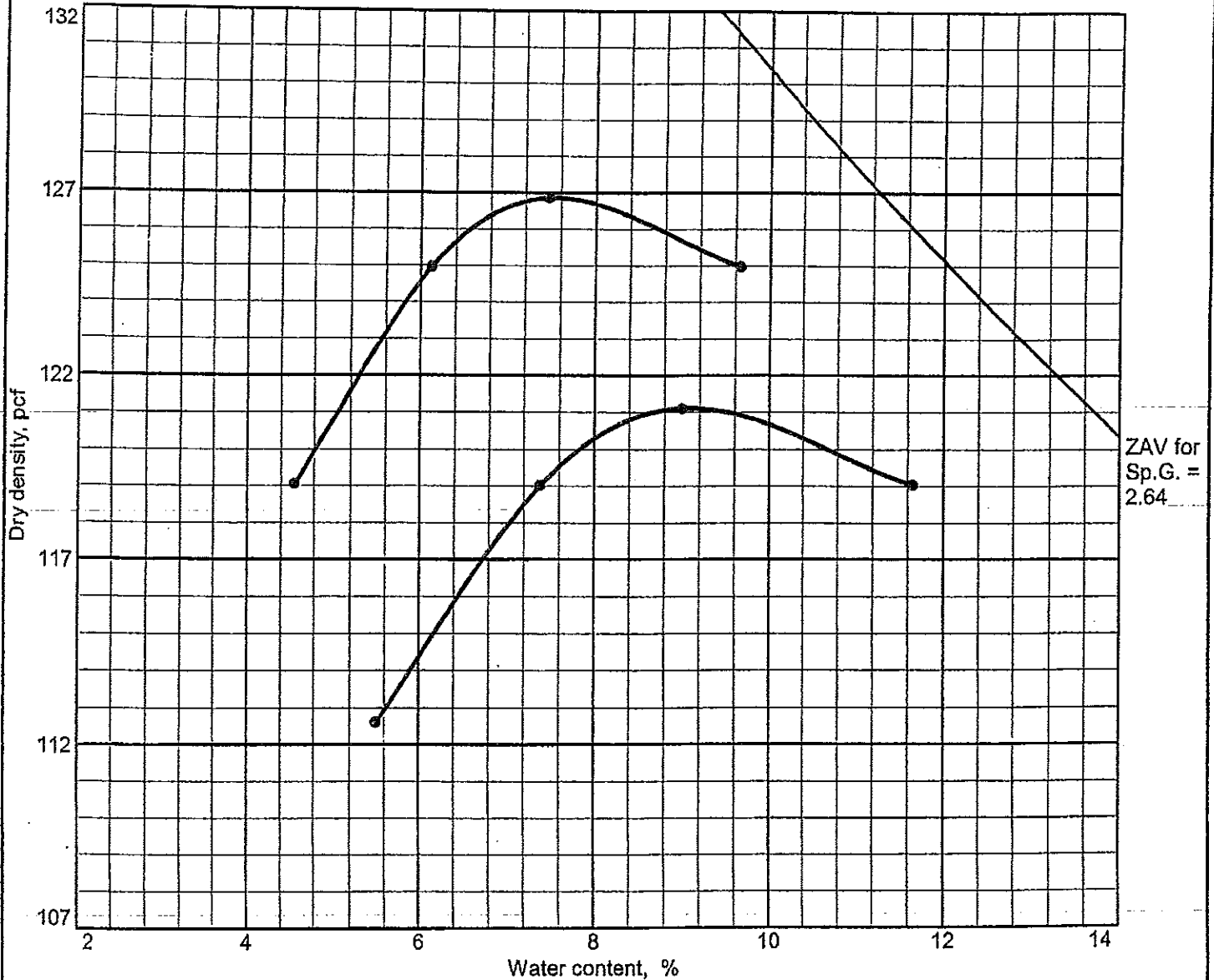
Site Plan  
Zip Market & Gas  
Seattle, WA

File Number:  
ZM122305  
Boring Date:  
May 5, 2006  
Figure 2

---

## APPENDIX H    COMPACTION TEST REPORT BY AAR TESTING LAB

# COMPACTION TEST REPORT



Test specification: ASTM D 1557-91 Procedure B Modified  
 Oversize correction applied to each point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/8 in.	% < No.200
	USCS	AASHTO						
				2.64			17.1	

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 126.9 pcf	121.1 pcf	Native Soil
Optimum moisture = 7.5 %	9.1 %	Lt. Brown, Sl. Gravelly Fine Sand

Project No. 06-183 Client: Kee LLC

Project: Z... IP Market

Location: Backfill Soil

## Remarks:

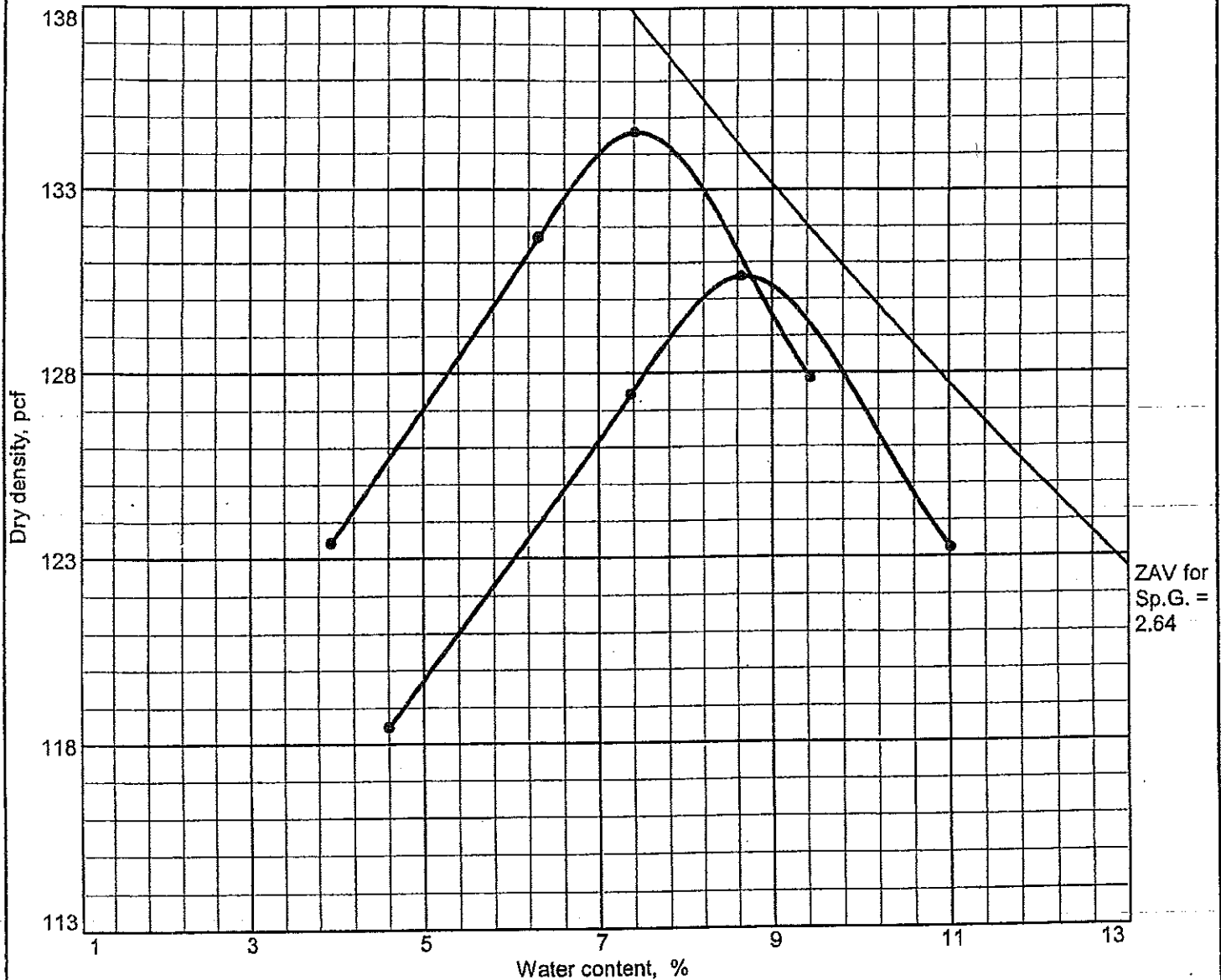
Tested & Calculated by: M. Blackwell  
 Reviewed by: M. Blackwell

May 3, 2006

COMPACTION TEST REPORT

**A.A.R. Testing Laboratory, Inc.**

# COMPACTION TEST REPORT



Test specification: ASTM D 1557-91 Procedure B Modified  
Oversize correction applied to each point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/8 In.	% < No.200
	USCS	AASHTO						
				2.64			14.3	

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 134.6 pcf	130.6 pcf	Import
Optimum moisture = 7.4 %	8.7 %	Tannish Brn, Sl. Gravelly, Very silty, Fine Sand

Project No. 06-183      Client: Kee LLC

Project: Z... IP Market

Location: Native - Import

## Remarks:

Tested & Calculated by: Mike Blackwell  
Reviewed by: Mike Holtz

May 9, 2006

COMPACTION TEST REPORT

# A.A.R. Testing Laboratory, Inc.

Plate 149

# Field Density Report - Nuclear Method

Report Number 6289a

Client: Kee LLC  
Contact: Kee  
Address: P.O. Box 2532  
Redmond, WA. 98073

Project Number 06-183  
Project Name: ZIP Market  
Address: 10645 16th Ave SW  
Permit Number: 190288  
Time: 4:00:00 PM

Date: 5/9/2006

Material Description: Light brown sandy w/g  
Layer Thickness: 1'-2'  
Source: Native  
Compaction Method: Hoe Pack

Nuclear Gauge: Troxler 3430 21240  
Test Methods: Soil ASTM D2922, ASTM D3017  
☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Backfill of tank hole, -8'	129.8	8.3	119.8	126.9	94%
2	↓	127.3	7.1	118.9	126.9	94%

Compaction Requirements: 93 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Geo-tech stated that 93% was an acceptable specification requirement.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

# Field Report

Report Number: 27814

A.A.R. Testing Laboratory, Inc. 7124 130th Ave SE, Suite C, Everett, WA 98202  
Phone: 425-315-2131 Fax: 425-315-2131

Client: Kee LLC

P.O. Box 2532

Redmond, WA. 98073

Project Number: 06-183

Permit #: 190288

Project Name: ZIP Market

Contact: Kee

Address: 10645 16th Ave SW

Date: 5/9/06

Time:

Temperature:

9:00 am - Arrived on site and performed nuclear density testing on backfill of area where gas tanks had been removed. Observed that moisture % was low and compaction % was low. Informed contractor that soil needed to be dampened and re-compacted. I was asked to return at 3:00pm.

3:00 pm - Returned to site. Observed that Geo-Tech had contractor remove backfill and start over. Soil now had a good moisture % from contractor spraying with a hose most of the day. Performed 2 in place density tests on 1st lift and tests were good, refer to nuclear density report #6289.

Was asked to return on 5-10-06 to test every lift.

Distribution:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Distribute Client | <input type="checkbox"/> Distribute Contractor       |
| <input type="checkbox"/> Distribute Engineer          | <input checked="" type="checkbox"/> Distribute Owner |
| <input type="checkbox"/> Distribute Municipality      | <input type="checkbox"/> Distribute Other            |
| <input type="checkbox"/> Distribute Architect         | <input type="checkbox"/> Distribute Other            |

Inspector: Pfaff, Tara ID #SI 01467

Reviewed by: Kim Anderson

All reports are considered confidential and are the property of the client and A.A.R. Testing Laboratory, Inc. Reproduction except in full without the written consent of A.A.R. Testing is strictly forbidden



# Field Density Report - Nuclear Method

Report Number 6290a

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/10/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10645 18th Ave SW

Permit Number: 190288

Time:

Material Description: Light brown sandy w/a

Layer Thickness: 1'-2'

Source: Native

Compaction Method: Hoe Pack

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
21	Backfill of removed tank hole, 1st lift of import material, West section	137.2	6.5	128.9	134.6	96%

Compaction Requirements: 93 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Geo-tech accepts 93% compaction and above, compaction requirement is per Geo-tech.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike

Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

# Field Density Report - Nuclear Method

Report Number 6290a

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/10/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10645 16th Ave SW

Permit Number: 190288

Time:

Material Description: Light brown sandy w/a

Layer Thickness: 1'-2'

Source: Native

Compaction Method: Hoe Pack

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
17	Backfill of removed tank hole, 1st lift of import material, Northeast section	136.5	8.1	126.3	134.6	94%
18	Backfill of removed tank hole, 2nd lift of import material, Northeast section	136.8	7	127.9	134.6	95%
19	Backfill of removed tank hole, 3rd lift of import material, Northeast section	136.5	5.5	129.4	134.6	96%
20	Backfill of removed tank hole, 1st lift of import material, Northwest section	135.4	7.9	125.5	134.6	93%

Compaction Requirements: 93 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Geo-tech accepts 93% compaction and above, compaction requirement is per Geo-tech.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3

- ☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike

Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

All reports are considered confidential and are the property of the client and AAR Testing Laboratory Inc. Reproduction except in full, without the written consent of AAR Testing is strictly forbidden.

# Field Density Report - Nuclear Method

Report Number 6290a

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/10/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10645 16th Ave SW

Permit Number: 190288

Time:

Material Description:

Material Description: Light brown sandy w/a

Layer Thickness: 1'-2'

Source: Native

Compaction Method: Hoe Pack

Nuclear Gauge:

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
13	Backfill of removed tank hole, 1st lift of import material, North section	134.5	6.1	126.8	134.6	94%
14	Backfill of removed tank hole, 2nd lift of import material, North section	138.6	7	129.6	134.6	96%
15	Backfill of removed tank hole, 3rd lift of import material, North section	135.5	6.6	127.1	134.6	94%
16	Backfill of removed tank hole, 4th lift of import material, North section	133.7	7.5	124.3	134.6	92%

Compaction Requirements: 93 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Geo-tech accepts 93% compaction and above, compaction requirement is per Geo-tech.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

# Field Density Report - Nuclear Method

Report Number 6290a

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/10/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10645 16th Ave SW

Permit Number: 190288

Time:

Material Description: Light brown sandy w/a

Layer Thickness: 1'-2'

Source: Native

Compaction Method: Hoe Pack

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
9	Backfill of removed tank hole, -5' West section	130.4	6.5	122.5	126.9	97%
10	Backfill of removed tank hole, -4' South section	133.7	8.4	123.3	126.9	97%
11	Backfill of removed tank hole, -4' East section	135.2	8.3	124.8	126.9	98%
12	Backfill of removed tank hole, -4' West section	132.5	9.3	121.2	126.9	96%

Compaction Requirements: 93 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Geo-tech accepts 93% compaction and above, compaction requirement is per Geo-tech.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

# Field Density Report - Nuclear Method

Report Number 6290a

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/10/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10645 16th Ave SW

Permit Number: 190288

Time:

Material Description: Light brown sandy w/a

Layer Thickness: 1'-2'

Source: Native

Compaction Method: Hoe Pack

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
5	Backfill of removed tank hole, -6' East section	130.9	8	121.2	126.9	96%
6	Backfill of removed tank hole, -6' West section	127.2	4.7	121.5	126.9	96%
7	Backfill of removed tank hole, -5' North section	128.7	7.1	120.2	126.9	95%
8	Backfill of removed tank hole, -5' East section	130.4	6.2	122.8	126.9	97%

Compaction Requirements: 93 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Geo-tech accepts 93% compaction and above, compaction requirement is per Geo-tech.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

All reports are considered confidential and are the property of the client and AAR Testing Laboratory Inc. .Reproduction except in full, without the written consent of AAR Testing is strictly forbidden.

# Field Density Report - Nuclear Method

Report Number 6290a

AAR Testing Laboratory, Inc. 2109 16th Ave SW, P.O. Box 2109, Redmond, WA 98073  
206-881-1111 Fax: 206-881-1112

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/10/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10645 16th Ave SW

Permit Number: 190288

Time:

Material Description

Material Description: Light brown sandy w/a

Layer Thickness: 1'-2'

Source: Native

Compaction Method: Hos Pack

Test Method

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

Test Results

Test Results

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Backfill of removed tank hole, -7' North section	124.6	5.9	117.6	126.9	93%
2	Backfill of removed tank hole, -7' East section	130.7	4.6	124.9	126.9	98%
3	Backfill of removed tank hole, -7' West section	126	7	117.7	126.9	93%
4	Backfill of removed tank hole, -6' South section	126.1	4.8	120.3	126.9	95%

Compaction Requirements: 93 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Geo-tech accepts 93% compaction and above, compaction requirement is per Geo-tech.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

All reports are considered confidential and are the property of the client and AAR Testing Laboratory Inc. Reproduction except in full, without the written consent of AAR Testing is strictly forbidden.

# Field Density Report - Nuclear Method

Report Number 6278

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/11/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10645 16th Ave SW

Permit Number: 190288

Time:

Material Description: Brown Silty sand with

Layer Thickness: 1' to 2'

Source: Import

Compaction Method: Hoe Pack

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
1	Backfill of removed tank hole - 3' South section.	134.4	8	124.5	134.6	92%
2	Backfill of removed tank hole - 3' North section.	136.1	8.6	125.3	134.6	93%
3	Backfill of removed tank hole - 3' East section	135.1	6.6	126.7	134.6	94%
4	Backfill of removed tank hole - 3' West section	134.2	7.2	125.2	134.6	93%

Compaction Requirements: 95 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Crushed rock is to be placed to bring this to grade.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

All reports are considered confidential and are the property of the client and AAR Testing Laboratory Inc. Reproduction except in full, without the written consent of AAR Testing is strictly forbidden.

# Field Density Report - Nuclear Method

Report Number 6278

Client: Kee LLC  
Contact: Kee  
Address: P.O. Box 2532  
Redmond, WA. 98073  
Date: 5/11/2006

Project Number 06-183  
Project Name: ZIP Market  
Address: 10645 16th Ave SW  
Permit Number: 190288  
Time:

Material Description: Brown Silty sand with  
Layer Thickness: 1' to 2'  
Source: Import  
Compaction Method: Hoe Pack

Nuclear Gauge: Troxler 3430 21240  
Test Methods: Soil ASTM D2922, ASTM D3017  
☒ Direct Transmission ☐ Back Scatter

Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
5	Backfill of removed tank hole - 2' South section	135	6.4	126.9	134.6	94%
6	Backfill of removed tank hole - 2' North section	136.2	6.2	128.2	134.6	95%
7	Backfill of removed tank hole - 2' East section	134.9	7.6	125.4	134.6	93%
8	Backfill of removed tank hole - 2' West section	134.8	6.1	127	134.6	94%

Compaction Requirements: 95 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Crushed rock is to be placed to bring this to grade.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tam ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

All reports are considered confidential and are the property of the client and AAR Testing Laboratory Inc. Reproduction except in full, without the written consent of AAR Testing is strictly forbidden.



# Field Density Report - Nuclear Method

Report Number 6278

Client: Kee LLC

Contact: Kee

Address: P.O. Box 2532  
Redmond, WA. 98073

Date: 5/11/2006

Project Number 06-183

Project Name: ZIP Market

Address: 10845 16th Ave SW

Permit Number: 190288

Time:

## Material Data

Material Description: Brown Silty sand with

Layer Thickness: 1' to 2'

Source: Import

Compaction Method: Hoe Pack

## Test Data

Nuclear Gauge: Troxler 3430 21240

Test Methods: Soil ASTM D2922, ASTM D3017

☒ Direct Transmission ☐ Back Scatter

## Modified Proctor ASTM D1557

Density Count: 2109 Moisture Count: 653

Test #	Locations/Elevations	Wet Density	Moisture%	Dry Density	Lab Density	%Compaction
9	Backfill of removed tank hole - 1' South section	135.7	8.5	125.1	134.6	93%
10	Backfill of removed tank hole - 1' North section	134.3	7.9	124.5	134.6	92%
11	Backfill of removed tank hole - 1' East section	135.2	6.5	126.6	134.6	94%
12	Backfill of removed tank hole - 1' West section	135.3	6.6	126.8	134.6	94%

Compaction Requirements: 95 % ☒ Conformance ☐ Non Conformance

## Remarks/Specifications

Crushed rock is to be placed to bring this to grade.

- ☒ Distribute Client ☒ Distribute Other 1  
☐ Distribute Engineer ☐ Distribute Other 2  
☐ Distribute Municipality ☐ Distribute Other 3  
☐ Distribute Contractor  
☐ Distribute Architect

Reviewed By: Blackwell, Mike  
Tested By: Pfaff, Tara ID #SI 0

Test results indicate the density of the material at the above indicated locations, at the time and conditions when the test was conducted.

All reports are considered confidential and are the property of the client and AAR Testing Laboratory Inc. .Reproduction except in full, without the written consent of AAR Testing is strictly forbidden.

---

## APPENDIX I      UST CLOSURE AND SITE ASSESSMENT NOTICE



# UNDERGROUND STORAGE TANK Closure and Site Assessment Notice

See back of form for instructions

FOR OFFICE USE ONLY  
Site ID #: \_\_\_\_\_  
Facility Site ID #: \_\_\_\_\_

Please ✓ the appropriate box(es)

☐ Temporary Tank Closure ☐ Change-In-Service ☒ Permanent Tank Closure ☒ Site Check/Site Assessment

## Site Information

Site ID Number 97464  
(Available from Ecology if the tanks are registered)  
Site/Business Name Zip Market & Gas  
Street  
Site Address 10645 16th Ave SW  
City/State Seattle, WA 98106  
Zip Code 98106 Telephone (425) 443-4608  
Owners Signature [Signature]

## Owner Information

UST Owner/Operator Chong NAM, XI  
Mailing Address 10645 16th Ave SW  
Street  
P.O. Box  
City/State Seattle, WA 98106  
Zip Code 98106 Telephone (425) 443-4608

## Tank Closure/Change-In-Service Company

Service Company KEE, LLC  
Certified Supervisor Kee-Hoon Pak Decommissioning Certification No. ICC 0874768-U7  
Supervisor's Signature [Signature] Date \_\_\_\_\_  
Address P.O. Box 2532  
Street  
City Redmond State WA P.O. Box 98073 Telephone (206) 914-4989  
City State Zip Code

## Site Check/Site Assessor

Certified Site Assessor KEE-HOON PAK  
Address KEE, LLC P.O. Box 2532  
Street  
City Redmond State WA P.O. Box 98073 Telephone (206) 914-4989  
City State Zip Code

## Tank Information

Tank ID	Closure Date	Closure Method	Tank Capacity	Substance Stored
	<u>May 3, 2006</u>	<u>Destruction</u>	<u>12,000</u>	<u>Gasoline</u>
	<u>May 3, 2006</u>	<u>Destruction</u>	<u>12,000</u>	<u>Gasoline</u>
	<u>May 3, 2006</u>	<u>Destruction</u>	<u>10,000</u>	<u>Gasoline</u>

## Contamination Present at the Time of Closure

☒ Yes ☐ No ☐ Unknown  
Check unknown if no obvious  
contamination was observed  
and sample results have not  
yet been received from  
analytical lab.

☒ Yes ☐ No  
If contamination is present,  
has the release been reported  
to the appropriate regional  
office?

To receive this document in an alternative format, contact the Toxics Cleanup Program at 360-407-7170 (voice) or 1-800-833-6388 OR 711 (TTY)