twin city testing corporation

662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-3601

April 27, 1993

Donald Milless
Minnesota Pollution Control Agency
Tanks And Spills Section
520 Lafayette Road
St Paul, MN 55155-3898

Dear Mr. Milless:

Subject: Project Completion Report Re-transmittal
MPCA Leak #4981
International Plaza
TCT Project #4231 92-630

Twin City Testing Corporation (TCT) has not received a response to our request for site closure for the Normandale Plaza project. Our last correspondence indicates that you have not received a copy of the project completion report, even though our records indicate one was sent. I am therefore enclosing a copy of the project completion report for your review. It would be greatly appreciated if you could issue a closure letter for this project at your earliest convenience.

Sincerely,

Kevin Pierson

Kevin Pierson
Senior Project Manager/Hydrogeologist

KBP

Enclosure

twin city testing corporation
662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-3601

March 31, 1992

Charles A. Bohrer
Senior Operations Superintendent
Normandale Properties Incorporated
Suite 678 International Plaza
7900 International Drive
Bloomington, MN 55425

Dear Mr. Bohrer:

Subject: Project Completion Report
MPCA Leak #4981
International Plaza
TCT Project #4231 92-630

1.0 INTRODUCTION

Twin City Testing Corporation (TCT) has prepared this project completion report concerning recovery of hydraulic oil that leaked from an elevator system at the International Plaza site. The oil leaked into an elevator well. The well has a total depth of 50 feet with approximately 3.5 feet of sediment in the bottom. The well is cased with 20 inch diameter steel casing but is open on the bottom. Approximately 30 gallons of hydraulic oil was reportedly released into the well. Given the casing diameter, there should be approximately 2 feet of oil on the water surface.

Two representatives of TCT conducted an initial site assessment on February 3, 1992. A transparent bailer was used to assess the product thickness. There was 0.8 feet of product at the surface and a 1.2 foot zone of an apparent oil/water mix. The fluid level was 5.15 feet below the top of casing.

A MSDS sheet for the oil is attached. The oil is listed as non-hazardous. It is defined as a solvent-dewaxed heavy paraffinic petroleum distillate. The specific gravity is listed as 0.87 so it should all be floating on the water surface. The solubility was not listed.

2.0 WORK SCOPE

TCT completed the following tasks to remove the free product, and assess potential groundwater impacts.

Task 1 - Development of a work plan.

Task 2 - Product removal.

Task 3 - Groundwater Quality assessment.

Task 4 - Groundwater treatment.

Task 5 - Soil treatment and well lining

3.0 RESULTS

Product Removal

A TCT technician was deployed to the International Plaza site on 2/13/92 to supervise the removal of the oil from the elevator well. Determan Welding arrived and pumped the oil off of the surface of the water with a centrifugal pump and into 55 gallon barrels in the back of a truck. Initially 1.5 feet were pumped off leaving approximately 2 inches of product on the surface. Since the pump hose would lose its prime when pumping from the surface, the remaining product was bailed out of the shaft using a 5 gallon bucket, and the liquid pumped from the bucket.

After 15 gallons were removed, the sides of the well were washed off using a brush and liquid soap. This washing was repeated twice more. Next, an additional 50 gallons of the surficial well water was pumped out to make sure that all free product was removed. Determan was responsible for disposal of the product and water and is a licensed waste oil hauler. A total of 100 gallons were removed.

After the product was removed a sheen was still apparent on the surface. This was absorbed using an absorbent pad designed to remove oil from the water surface.

Water Quality Assessment

Once the product was removed, the TCT technician collected a sample of the water in the well to assess its suitability for discharge to the sanitary sewer system. The sample was collected using a laboratory cleaned bailer but the well was not purged prior to sampling. Once the water sample had been collected, it was placed in a cooler for transport to the TCT laboratory for analyses. The sample was logged in and a chain of custody form completed.

The sample was analyzed for total petroleum hydrocarbons as fuel oil (THFO), benzene, toluene, ethylbenzene, and xylenes (BTEX). The results of the analyses are indicated on the attached chemistry report. BTEX compounds were not detected in excess of Minnesota Department of Health Recommended Allowable Limits (RALs).

Water Treatment

TCT received a MWCC permit to discharge the remaining water into the sanitary sewer. A copy of this permit is attached. On January 25, 1992, a TCT technician meet the midwest drilling crew at the site to remove the sediment in the bottom of the well. Prior to sediment removal, the water was pumped out of the well and into the sanitary sewer. The well dewatered down to 2 feet by the end of the day.

The following day the water remaining in the well was again sampled for petroleum hydrocarbons. The water level in the well had risen approximately 20 feet overnight. Ethyl benzene and xylenes were detected in the water sample, but at concentrations below the MDH RALs. THEO was detected at a concentration of 48 ppm. Complete analytical reports for these analyses are also attached.

Soil Removal and Well Lining

Once the water was removed from the well, Midwest Drilling was contracted to remove six feet of soil from the bottom of the well. Midwest Drilling bailed the sediment out of the well and deposited it in 55 gallon barrels. Approximately 80 gallons of soil were removed.

A sample of the soil from the drums was collected for chemical analyses of hydrocarbon parameters. Analytical results of the soil sample did not indicate the presence of hydrocarbon parameters tested in excess of the MPCA action level concentration of 50 ppm. It was therefore determined that no further action would be required concerning any hydrocarbons remaining in the soil in the hole. Since the hydrocarbon concentrations in the drummed soils were below action level concentrations, the soils were land applied on site for disposal.

To prevent the reentry of water and soil into the elevator well, a metal sleeve casing with a plate welded to the bottom was inserted into the well to a depth of 51 1/2 feet. Once inserted, this sleeve was welded in and the space between the former casing and the sleeve filled with grout. The resulting well is now dry and capped at the bottom.

4.0 DISCUSSION AND RECOMMENDATIONS

The analytical results of soil and groundwater samples indicated that the hydraulic oil release did not result in unacceptable impact to the soils or groundwater. TCT therefore recommends no further action concerning this issue.

5.0 STANDARD OF CARE

The recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

TCT has appreciated working with Normandale Properties and looks forward to doing so again in the future. If you have any questions concerning this report or require assistance with any other issues, please contact me at 659-7587.

Sincerely,

Kevin Pierson

Kevin Pierson
Senior Project Manager/Hydrogeologist

KBP

Enclosure

twin city testing corporation
662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-3601

REPORT OF: CHEMICAL ANALYSES

PROJECT: NORMANDALE PROPERTIES, 4231 92-630 DATE: March 16, 1992

REPORTED TO: Twin City Testing Corporation
Attn: Kevin Pierson
662 Cromwell Ave.
St. Paul, MN 55114

LABORATORY NO: 4410 02-1176

INTRODUCTION

This report presents the results of the analyses of two samples received on March 2, 1992, from a representative of Twin City Testing Corporation. The scope of our services was limited to the parameters listed in the attached tables.

METHODOLOGY

Analyses are performed according to Twin City Testing Standard Operating Procedures. The procedures are based on the references stated in the analytical results tables.

RESULTS

The results are listed in the attached tables.

REMARKS

The samples were collected on February 27, 1992 and February 28, 1992, and were consumed in the analyses.

TWIN CITY TESTING CORPORATION

Stephanie A. Kidder
Project Manager

Susan D. Max, Director
Laboratory Operations

SAK\SDM\lml

VOLATILE ORGANIC COMPOUND RESULTS
EPA METHOD 8020

(All values are in µg/Kg which is equal to parts-per-billion)

Client ID:	**SS-1 51' From 2nd Barrel**	
TCT ID:	278104	
Parameter:		**PQL**
Benzene	ND	5
Toluene	ND	5
Ethyl benzene	ND	5
Total xylenes	12	5
Surrogate Recovery:		
α,α,α-Trifluorotoluene	89%	
Total hydrocarbons as gasoline	81	30
Surrogate Recovery:		
α,α,α-Trifluorotoluene	94%	
Date Analyzed:	3/2/92	

PQL = Practical Quantitation Limit

ND = Not Detected

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

LABORATORY NO: 4410 02-1176

VOLATILE ORGANIC COMPOUND RESULTS
EPA METHOD 8020

(All values are in µg/L which is equivalent to parts-per-billion)

Client ID: **Method Blank**

TCT ID: _____

Parameter:		**PQL**
Benzene	ND	5
Toluene	ND	5
Ethyl benzene	ND	5
Total xylenes	ND	5
Surrogate Recovery:		
α,α,α-Trifluorotoluene	91%	
Total hydrocarbons as gasoline	ND	30
Surrogate Recovery:		
α,α,α-Trifluorotoluene	96%	
Date Analyzed:	3/2/92	

PQL = Practical Quantitation Limit

ND = Not Detected

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

LABORATORY NO: 4410 02-1176

VOLATILE ORGANIC COMPOUND RESULTS
EPA METHOD 8020

(All values are in µg/L which is equivalent to parts-per-billion)

Client ID:	W-2 35' Middle of Water Column	Method Blank	
TCT ID:	278103		
Parameter:			PQL
Benzene	ND	ND	5
Toluene	ND	ND	5
Ethyl benzene	11	ND	5
Total xylenes	31	ND	5
Surrogate Recovery:			
α,α,α-Trifluorotoluene	95%	100%	
Total hydrocarbons as gasoline	82	ND	30
Surrogate Recovery:			
α,α,α-Trifluorotoluene	100%	104%	
Date Analyzed:	3/3/92	3/3/92	

PQL = Practical Quantitation Limit

ND = Not Detected

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

LABORATORY NO: 4410 02-1176

FUEL OIL RESULTS
USGS METHOD 82-1004

(All values are in mg/Kg which is equal to parts-per-million)

Sample Identification	TCT ID	Total Hydrocarbons as #2 Fuel Oil	Pentacosane Recovery (%)
SS-1 51' From 2nd Barrel	278104	23*	154**
Blank		ND	130
Post-Extraction Spike		77% Recovery	---
Post-Extraction Spike Duplicate		79% Recovery	---
Method Detection Limit		2.0	
Date Extracted:		3/2/92	
Date Analyzed:		3/3/92	

* Chromatographic profile contains higher boiling hydrocarbons and is not typical of #2 fuel oil.

** Matrix interference has elevated the surrogate recovery.

ND = Not Detected

Reference: Methods for the Determination of Organic Substances in Water and Fluvial Sediments, U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Laboratory Analysis, Chapter A3.

Leaking Underground Fuel Tank (LUFT) Field Manual, California State Water Resources Control Board, Division of Water Quality, December 17, 1987.

LABORATORY NO: 4410 02-1176

FUEL OIL RESULTS
USGS METHOD 82-1004

(All values are in mg/L which is equivalent to parts-per-million)

Sample Identification	TCT ID	Total Hydrocarbons as #2 Fuel Oil	Pentacosane Recovery (%)
W-2 35' Middle of Water Column	278103	48*	1,200**
Blank		ND	114
Method Spike		62% Recovery	127
Method Spike Duplicate		54% Recovery	131
Method Detection Limit		0.2	
Date Extracted:		3/4/92	
Date Analyzed:		3/9-10/92	

---

* Chromatographic profile contains higher boiling hydrocarbons and is not typical of #2 fuel oil.

** Matrix interference has elevated the surrogate recovery.

ND = Not Detected

Reference: Methods for the Determination of Organic Substances in Water and Fluvial Sediments, U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Laboratory Analysis, Chapter A3.

Leaking Underground Fuel Tank (LUFT) Field Manual, California State Water Resources Control Board, Division of Water Quality, December 17, 1987.

LABORATORY NO: 4410 02-1176

twin city testing corporation

737 PELHAM AVENUE
DOCK 4
ST. PAUL, MN 55114
PHONE 612/649-5555

CHAIN-OF-CUSTODY RECORD

TCT NO. 31531

Normandale Properties
CLIENT NAME
Suite 678 int. Plaza
CLIENT ADDRESS
7900 International Drive
CLIENT CONTACT/ADDRESS IF DIFFERENT FROM ABOVE PHONE

Alex Chinn / Alexander Chinn
SAMPLED BY PRINT NAME/SIGNATURE

DATE/TIME SAMPLED

POSSIBLE HAZARD: YES ____ UNKNOWN ____ (COMMENT BELOW)

SAMPLE DISPOSAL: RETURN TO CLIENT ____ DISPOSAL BY LAB ____
(ADDITIONAL CHARGES MAY BE ASSESSED)

Stephanie Kidder
TCT CONTACT
Normandale Properties
PROJECT NAME
4231-92-630
CLIENT P.O. # / PROJECT NO.
BILL TO (CO. NAME, ADDRESS)
Kevin Pierson
REPORT TO

TCT USE ONLY

PROJ. MGR.	Stephanie
PRIORITY	24 Hr RUSH - on soils
INVOICE #	4410 02-1176
JOB NAME	EIH-Normad.2
CUSTODY SEAL INTACT/NUMBER Y/N	NA
TEMPERATURE OF CONTAINER	Damaged
SAMPLE CONDITION	O.K

PREPAY Y/N	NO
CHECK NO.	—
CHECK AMOUNT	

ANALYSES REQUEST

CODE A - NONE
B - HNO_3
C - H_2SO_4
D - NaOH
E - HCl
F - ____

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	NO. OF CONTAINERS	CONTAINER TYPE	FILTERED (YES/NO)	PRESERVED (CODE)	REFRIGERATED (Y/N)	BE TX	T.H. as Gas	T.H. as Fuel oil	REMARKS	TCT NO.
1	W-2, 35' middle of water column	water	4	1-1 liter, 3-P+T	N	NE	Y	X	X	X	022792 1130	27803
2	SS-1, 5' from 2nd barrel	soil	3	1-8oz, 2-4oz	N	NE	Y	X	X	X	022892 1430	27804
3												
4												
5												
6												
7												
8												
9												
10												

Additional Comments

24 hour RUSH on Soil only

-- Normal turn around on Water Sample.

ITEM NO.	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
1+2	Alexander Chinn	Cindy Klein	8/3/92	10:00

twin city testing corporation
662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-3601

REPORT OF: CHEMICAL ANALYSES

PROJECT: NORMANDALE PROPERTIES, 4231 92-630

DATE: March 16, 1992

REPORTED TO: Twin City Testing Corporation
Attn: Kevin Pierson
662 Cromwell Ave.
St. Paul, MN 55114

LABORATORY NO: 4410 02-1176

INTRODUCTION

This report presents the results of the analyses of two samples received on March 2, 1992, from a representative of Twin City Testing Corporation. The scope of our services was limited to the parameters listed in the attached tables.

METHODOLOGY

Analyses are performed according to Twin City Testing Standard Operating Procedures. The procedures are based on the references stated in the analytical results tables.

RESULTS

The results are listed in the attached tables.

REMARKS

The samples were collected on February 27, 1992 and February 28, 1992, and were consumed in the analyses.

TWIN CITY TESTING CORPORATION

Stephanie A. Kidder
Project Manager

Susan D. Max, Director
Laboratory Operations

SAK\SDM\lml

VOLATILE ORGANIC COMPOUND RESULTS
EPA METHOD 8020

(All values are in µg/Kg which is equal to parts-per-billion)

Client ID:	**SS-1 51' From 2nd Barrel**	
TCT ID:	278104	
Parameter:		**PQL**
Benzene	ND	5
Toluene	ND	5
Ethyl benzene	ND	5
Total xylenes	12	5
Surrogate Recovery:		
α,α,α-Trifluorotoluene	89%	
Total hydrocarbons as gasoline	81	30
Surrogate Recovery:		
α,α,α-Trifluorotoluene	94%	
Date Analyzed:	3/2/92	

PQL = Practical Quantitation Limit

ND = Not Detected

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

LABORATORY NO: 4410 02-1176

VOLATILE ORGANIC COMPOUND RESULTS
EPA METHOD 8020

(All values are in µg/L which is equivalent to parts-per-billion)

Client ID: Method Blank

TCT ID:

Parameter:		PQL
Benzene	ND	5
Toluene	ND	5
Ethyl benzene	ND	5
Total xylenes	ND	5
Surrogate Recovery:		
α,α,α-Trifluorotoluene	91%	
Total hydrocarbons as gasoline	ND	30
Surrogate Recovery:		
α,α,α-Trifluorotoluene	96%	
Date Analyzed:	3/2/92	

PQL = Practical Quantitation Limit

ND = Not Detected

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

LABORATORY NO: 4410 02-1176

VOLATILE ORGANIC COMPOUND RESULTS
EPA METHOD 8020

(All values are in µg/L which is equivalent to parts-per-billion)

Client ID:	W-2 35' Middle of Water Column	Method Blank	
TCT ID:	278103		
Parameter:			PQL
Benzene	ND	ND	5
Toluene	ND	ND	5
Ethyl benzene	11	ND	5
Total xylenes	31	ND	5
Surrogate Recovery:			
α,α,α-Trifluorotoluene	95%	100%	
Total hydrocarbons as gasoline	82	ND	30
Surrogate Recovery:			
α,α,α-Trifluorotoluene	100%	104%	
Date Analyzed:	3/3/92	3/3/92	

PQL = Practical Quantitation Limit

ND = Not Detected

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

LABORATORY NO: 4410 02-1176

FUEL OIL RESULTS
USGS METHOD 82-1004

(All values are in mg/Kg which is equal to parts-per-million)

Sample Identification	TCT ID	Total Hydrocarbons as #2 Fuel Oil	Pentacosane Recovery (%)
SS-1 51' From 2nd Barrel	278104	23*	154**
Blank		ND	130
Post-Extraction Spike		77% Recovery	---
Post-Extraction Spike Duplicate		79% Recovery	---
Method Detection Limit		2.0	
Date Extracted:		3/2/92	
Date Analyzed:		3/3/92	

---

* Chromatographic profile contains higher boiling hydrocarbons and is not typical of #2 fuel oil.

** Matrix interference has elevated the surrogate recovery.

ND = Not Detected

Reference: Methods for the Determination of Organic Substances in Water and Fluvial Sediments, U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Laboratory Analysis, Chapter A3.

Leaking Underground Fuel Tank (LUFT) Field Manual, California State Water Resources Control Board, Division of Water Quality, December 17, 1987.

LABORATORY NO: 4410 02-1176

FUEL OIL RESULTS
USGS METHOD 82-1004

(All values are in mg/L which is equivalent to parts-per-million)

Sample Identification	TCT ID	Total Hydrocarbons as #2 Fuel Oil	Pentacosane Recovery (%)
W-2 35' Middle of Water Column	278103	48*	1,200**
Blank		ND	114
Method Spike		62% Recovery	127
Method Spike Duplicate		54% Recovery	131
Method Detection Limit		0.2	
Date Extracted:		3/4/92	
Date Analyzed:		3/9-10/92	

* Chromatographic profile contains higher boiling hydrocarbons and is not typical of #2 fuel oil.

** Matrix interference has elevated the surrogate recovery.

ND = Not Detected

Reference: Methods for the Determination of Organic Substances in Water and Fluvial Sediments, U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Laboratory Analysis, Chapter A3.

Leaking Underground Fuel Tank (LUFT) Field Manual, California State Water Resources Control Board, Division of Water Quality, December 17, 1987.

LABORATORY NO: 4410 02-1176

twin city testing corporation

737 PELHAM AVENUE
DOCK 4
ST. PAUL, MN 55114
PHONE 612/649-5555

CHAIN-OF-CUSTODY RECORD

TCT NO. 31531

Normandale Properties
CLIENT NAME
Suite 678 Int. Plaza
CLIENT ADDRESS
7400 International Drive
CLIENT CONTACT/ADDRESS IF DIFFERENT FROM ABOVE PHONE

Alex Chinn / Alexander Chinn
SAMPLED BY PRINT NAME/SIGNATURE

DATE/TIME SAMPLED

POSSIBLE HAZARD: YES ____ UNKNOWN ____ (COMMENT BELOW)

SAMPLE DISPOSAL: RETURN TO CLIENT ____ DISPOSAL BY LAB ____
(ADDITIONAL CHARGES MAY BE ASSESSED)

Stephanie Kidder
TCT CONTACT
Normandale Properties
PROJECT NAME
4231-92-636
CLIENT P.O. # / PROJECT NO.
BILL TO (CO. NAME, ADDRESS)
Kevin Pierson
REPORT TO

TCT USE ONLY

PROJ. MGR.	Stephanie
PRIORITY	24 Hr RUSH - on soils
INVOICE #	4410 02-1176
JOB NAME	EIH-Normad.2
CUSTODY SEAL INTACT/NUMBER Y/N	NA
TEMPERATURE OF CONTAINER	Darrin
SAMPLE CONDITION	O.K.
PREPAY Y/N	NO
CHECK NO.	—
CHECK AMOUNT	—

ANALYSES REQUESTED

	BTX	T.H. as Gas	T.H. as Fuel Oil										
FILTERED (YES/NO)	N	N	N										
PRESERVED (CODE)	HCl	HCl	HCl										
REFRIGERATED (Y/N)	Y	Y	Y										

CODE A - NONE
B - HNO_3
C - H_2SO_4
D - NaOH
E - HCl
F - ____

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	NO. OF CONTAINERS	CONTAINER TYPE	BTX	T.H. as Gas	T.H. as Fuel Oil	REMARKS	TCT NO.
1	W-2, 35' middle of water column	water	4	1-1 liter, 3-8 oz	X	X	X	022792 1130	27803
2	SS-1, 5' from 2nd barrel	soil	3	1-8 oz, 2-4 oz	X	X	X	022892 1430	27804
3									
4									
5									
6									
7									
8									
9									
10									

Additional Comments

24 hour Rush on Soil only

- Normal turn around on water sample.

ITEM NO.	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
1+2	Alexander Chinn	Cindy Kelso	3/2/92	10:00

CA13 Rev. 6/91

* SEE REVERSE SIDE FOR INSTRUCTIONS

twin city testing corporation
662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-3601

REPORT OF: CHEMICAL ANALYSES

PROJECT: NORMANDALE PROPERTIES, 4231 92-630 **DATE:** February 25, 1992

REPORTED TO: Twin City Testing Corporation
Attn: Kevin Pierson
662 Cromwell Ave.
St. Paul, MN 55114

LABORATORY NO: 4410 02-1056

INTRODUCTION

This report presents the results of the analyses of one sample received on February 13, 1992, from a representative of Twin City Testing Corporation. The scope of our services was limited to the parameters listed in the attached tables.

METHODOLOGY

Analyses are performed according to Twin City Testing Standard Operating Procedures. The procedures are based on the references stated in the analytical results tables.

RESULTS

The results are listed in the attached tables.

REMARKS

The sample was collected on February 13, 1992, and was consumed in the analyses.

TWIN CITY TESTING CORPORATION

Stephanie A. Kidder
Project Manager

Susan D. Max, Director
Laboratory Operations

SAK\SDM\tlv

VOLATILE ORGANIC COMPOUND RESULTS
EPA METHOD 8020

(All values are in μg/L which is equivalent to parts-per-billion)

Client ID:	W-1 3'Above Casing Bottom	Method Blank	
TCT ID:	276769*		
Parameter:			**PQL**
Benzene	ND	ND	5
Toluene	ND	ND	5
Ethyl benzene	6	ND	5
Total xylenes	26	ND	5
Surrogate Recovery:			
α,α,α-Trifluorotoluene	100%	101%	
Date Analyzed:	2/18/92	2/18/92	

* Chromatographic profile also contains higher-boiling hydrocarbons.

PQL = Practical Quantitation Limit

ND = Not Detected

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

LABORATORY NO: 4410 02-1056

FUEL OIL RESULTS
USGS METHOD 82-1004

(All values are in mg/L which is equivalent to parts-per-million)

Sample Identification	TCT ID	Total Hydrocarbons as #2 Fuel Oil	Pentacosane Recovery (%)
W-1 3' Above Casing Bottom	276769	14**	406*
Blank		ND	90
Method Spike		53% Recovery	64
Method Spike Duplicate		74% Recovery	108
Method Detection Limit		0.2	
Date Extracted:		2/17/92	
Date Analyzed:		2/20/92	

---

* Matrix interference has caused high surrogate recovery.

** Chromatographic profile contains higher boiling hydrocarbons and is not typical of #2 fuel oil.

ND = Not Detected

Reference: Methods for the Determination of Organic Substances in Water and Fluvial Sediments, U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Laboratory Analysis, Chapter A3.

Leaking Underground Fuel Tank (LUFT) Field Manual, California State Water Resources Control Board, Division of Water Quality, December 17, 1987.

LABORATORY NO: 4410 02-1056

(V-55)

twin city testing corporation

737 PELHAM AVENUE
DOCK 4
ST. PAUL, MN 55114
PHONE 612/649-5555

CHAIN-OF-CUSTODY RECORD

TCT NO. 31526

Normandale Properties
CLIENT NAME
~~[redacted]~~ Suite 678 Int'l Plaza
CLIENT ADDRESS
7700 International Drive
CLIENT CONTACT/ADDRESS IF DIFFERENT FROM ABOVE PHONE

Alex Chinn / Alexander Chinn
SAMPLED BY PRINT NAME/SIGNATURE
2-13-92
DATE/TIME SAMPLED

POSSIBLE HAZARD: YES [redacted] UNKNOWN X (COMMENT BELOW)

SAMPLE DISPOSAL: RETURN TO CLIENT ____ DISPOSAL BY LAB X
(ADDITIONAL CHARGES MAY BE ASSESSED)

Stephanie Kidder
TCT CONTACT
Normandale Properties
PROJECT NAME
4231-92-[redacted]630
CLIENT P.O. # / PROJECT NO.
Kevin Pierson
BILL TO (CO. NAME, ADDRESS)
REPORT TO

TCT USE ONLY

PROJ. MGR.	Stephanie
PRIORITY	RUSH / one week turn
INVOICE #	4410 02-1056
JOB NAME	EIH-Normdl
CUSTODY SEAL INTACT/NUMBER Y/N	N/A
TEMPERATURE OF CONTAINER	15°C
SAMPLE CONDITION	OK

PREPAY Y/N	N
CHECK NO.	____
CHECK AMOUNT	____

ANALYSES REQUEST	BTEX	I.H. Fuel oil
FILTERED (YES/NO)	N	NO
PRESERVED (CODE)	E	A
REFRIGERATED (Y/N)	Y	Y

CODE A - NONE
B - HNO_3
C - H_2SO_4
D - NaOH
E - HCl
F - ____

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	NO. OF CONTAINERS	CONTAINER TYPE	REMARKS	TCT NO.
1	W-1, 3' above casing bottom	water	4	1-1-litre, 3-PET	0213921400	276769
2						
3						
4						
5						
6						
7						
8						
9						
10						

Additional Comments

- some elevator hydraulic fluid contamination

Rush one week turnaround

ITEM NO.	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
1	Alexander Chinn	Lorry Aldrich	2/13/92	700

SEE REVERSE SIDE FOR INSTRUCTIONS

twin city testing corporation
662 CROMWELL AVENUE
ST. PAUL, MN 55114
PHONE 612/645-3601

March 31, 1992

Charles A. Bohrer
Senior Operations Superintendent
Normandale Properties Incorporated
Suite 678 International Plaza
7900 International Drive
Bloomington, MN 55425

Dear Mr. Bohrer:

Subject: Project Completion Report
MPCA Leak #4981
International Plaza
TCT Project #4231 92-630

1.0 INTRODUCTION

Twin City Testing Corporation (TCT) has prepared this project completion report concerning recovery of hydraulic oil that leaked from an elevator system at the International Plaza site. The oil leaked into an elevator well. The well has a total depth of 50 feet with approximately 3.5 feet of sediment in the bottom. The well is cased with 20 inch diameter steel casing but is open on the bottom. Approximately 30 gallons of hydraulic oil was reportedly released into the well. Given the casing diameter, there should be approximately 2 feet of oil on the water surface.

Two representatives of TCT conducted an initial site assessment on February 3, 1992. A transparent bailer was used to assess the product thickness. There was 0.8 feet of product at the surface and a 1.2 foot zone of an apparent oil/water mix. The fluid level was 5.15 feet below the top of casing.

A MSDS sheet for the oil is attached. The oil is listed as non-hazardous. It is defined as a solvent-dewaxed heavy paraffinic petroleum distillate. The specific gravity is listed as 0.87 so it should all be floating on the water surface. The solubility was not listed.

2.0 WORK SCOPE

TCT completed the following tasks to remove the free product, and assess potential groundwater impacts.

Task 1 - Development of a work plan.

Task 2 - Product removal.

Task 3 - Groundwater Quality assessment.

Task 4 - Groundwater treatment.

Task 5 - Soil treatment and well lining

3.0 RESULTS

Product Removal

A TCT technician was deployed to the International Plaza site on 2/13/92 to supervise the removal of the oil from the elevator well. Determan Welding arrived and pumped the oil off of the surface of the water with a centrifugal pump and into 55 gallon barrels in the back of a truck. Initially 1.5 feet were pumped off leaving approximately 2 inches of product on the surface. Since the pump hose would lose its prime when pumping from the surface, the remaining product was bailed out of the shaft using a 5 gallon bucket, and the liquid pumped from the bucket.

After 15 gallons were removed, the sides of the well were washed off using a brush and liquid soap. This washing was repeated twice more. Next, an additional 50 gallons of the surficial well water was pumped out to make sure that all free product was removed. Determan was responsible for disposal of the product and water and is a licensed waste oil hauler. A total of 100 gallons were removed.

After the product was removed a sheen was still apparent on the surface. This was absorbed using an absorbent pad designed to remove oil from the water surface.

Water Quality Assessment

Once the product was removed, the TCT technician collected a sample of the water in the well to assess its suitability for discharge to the sanitary sewer system. The sample was collected using a laboratory cleaned bailer but the well was not purged prior to sampling. Once the water sample had been collected, it was placed in a cooler for transport to the TCT laboratory for analyses. The sample was logged in and a chain of custody form completed.

The sample was analyzed for total petroleum hydrocarbons as fuel oil (THFO), benzene, toluene, ethylbenzene, and xylenes (BTEX). The results of the analyses are indicated on the attached chemistry report. BTEX compounds were not detected in excess of Minnesota Department of Health Recommended Allowable Limits (RALs).

Water Treatment

TCT received a MWCC permit to discharge the remaining water into the sanitary sewer. A copy of this permit is attached. On January 25, 1992, a TCT technician meet the midwest drilling crew at the site to remove the sediment in the bottom of the well. Prior to sediment removal, the water was pumped out of the well and into the sanitary sewer. The well dewatered down to 2 feet by the end of the day.

The following day the water remaining in the well was again sampled for petroleum hydrocarbons. The water level in the well had risen approximately 20 feet overnight. Ethyl benzene and xylenes were detected in the water sample, but at concentrations below the MDH RALs. THFO was detected at a concentration of 48 ppm. Complete analytical reports for these analyses are also attached.

Soil Removal and Well Lining

Once the water was removed from the well, Midwest Drilling was contracted to remove six feet of soil from the bottom of the well. Midwest Drilling bailed the sediment out of the well and deposited it in 55 gallon barrels. Approximately 80 gallons of soil were removed.

A sample of the soil from the drums was collected for chemical analyses of hydrocarbon parameters. Analytical results of the soil sample did not indicate the presence of hydrocarbon parameters tested in excess of the MPCA action level concentration of 50 ppm. It was therefore determined that no further action would be required concerning any hydrocarbons remaining in the soil in the hole. Since the hydrocarbon concentrations in the drummed soils were below action level concentrations, the soils were land applied on site for disposal.

To prevent the reentry of water and soil into the elevator well, a metal sleeve casing with a plate welded to the bottom was inserted into the well to a depth of 51 1/2 feet. Once inserted, this sleeve was welded in and the space between the former casing and the sleeve filled with grout. The resulting well is now dry and capped at the bottom.

4.0 DISCUSSION AND RECOMMENDATIONS

The analytical results of soil and groundwater samples indicated that the hydraulic oil release did not result in unacceptable impact to the soils or groundwater. TCT therefore recommends no further action concerning this issue.

5.0 STANDARD OF CARE

The recommendations contained in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

TCT has appreciated working with Normandale Properties and looks forward to doing so again in the future. If you have any questions concerning this report or require assistance with any other issues, please contact me at 659-7587.

Sincerely,

Kevin Pierson

Kevin Pierson
Senior Project Manager/Hydrogeologist

KBP

Enclosure

Metropolitan Waste Control Commission
Mears Park Centre, 230 East Fifth Street, St. Paul, Minnesota 55101
612 222-8423

February 24, 1992

Kevin Pierson
Senior Project Manager
Twin City Testing
662 Cromwell Avenue
St. Paul, MN 55114

Re: Response to special discharge request at 7900 International Drive Bloomington, MN

Dear Mr. Pierson:

The Commission has reviewed your request to discharge 800 gallons of groundwater that was in contact with Hydraulic Fluid.

For this case the MWCC has approved this discharge with two conditions. First any remaining Hydraulic Fluid should be skimmed from the surface of the discharge. Secondly, the remaining sludge shall be prevented from being discharged into the sanitary sewer. I also need a non-Faxed copy of your request letter for our records.

If you have any questions regarding this letter, please feel free to contact me at 772-7015.

Sincerely,

Michael V. Flaherty
Staff Engineer
Industrial Waste Division

MVF

CC: L.H. Hermes, MWCC, Enc.

Enclosure

TEXACO INC.

INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION HEREIN. SEE PAGE 7 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

Trade Name and Synonyms 01657 RANDO OIL HD 32	Otis Oil #36
Manufacturer's Name Texaco Inc.	Emergency Telephone No. (914) 831-3400 ext. 204
Address P.O. Box 509 Beacon, NY 12508	
Chemical Name and/or Family or Description Hydraulic Oils	
THIS PRODUCT IS CLASSIFIED AS:	X NOT HAZARDOUS:
_____ HAZARDOUS BY DEFINITION NO.(S) _____	ON ATTACHED EXPLANATION SHEETS

WARNING STATEMENT:
NONE CONSIDERED NECESSARY

OCCUPATIONAL CONTROL PROCEDURES

Protective Equipment (Type)

Eyes:	Chemical type goggles or face shield optional.
Skin:	Exposed employes should exercise reasonable personal cleanliness; this includes cleansing exposed skin areas several times daily with soap and water, and laundering or dry cleaning soiled work clothing at least weekly.
Inhalation:	None required if exposures are within permissible concentrations; see below.
Ventilation:	Adequate to meet permissible concentrations.

Permissible Concentrations:

Air:	5 mg/cubic meter of air for mineral oil mist averaged over an 8 hour daily exposure (ACGIH, 1985-86).

EMERGENCY AND FIRST AID PROCEDURES

First Aid

Eyes:	As with most foreign materials, should eye contact occur, flush eyes with plenty of water.
Skin:	Wash exposed areas with soap and water.
Ingestion:	None considered necessary.
Inhalation:	None considered necessary.
Other Instructions:	None.

N.D. - Not Determined N.A. - Not Applicable
< - Less Than > - Greater Than

PHYSIOLOGICAL EFFECTS:

Code No. 01657

Effects of Exposure

Acute:

Eyes: Causes minimal eye irritation. Transient minor irritation may be noted following initial contact.

Skin: Slightly irritating with possible redness, edema, or drying of the skin.

Respiratory System: Believed to be minimally irritating if not in excess of permissible concentrations; see page 1.

Chronic: N.D.

Other: -

Sensitization Properties:

Skin: Yes ___ No ___ Unknown X Respiratory: Yes ___ No ___ Unknown X

Median Lethal Dose (LD_{50} LC_{50} XSpecies)

Oral: Similar product >22.4g /kg (rat); practically non-toxic

Inhalation: N.D.

Dermal: Similar product >3.0g/kg (rabbit); practically non-toxic

Other: N. D.

Irritation Index, Estimation of Irritation (Species)

Skin: 0.79/8.0 (rabbit); slightly irritating

Eyes: 8/110 (rabbit); no appreciable effect

Symptoms of Exposure: See above.

FIRE PROTECTION INFORMATION

Ignition Temp. °F. N.D. Flash Point °F. (Method) 385 °F (COC)

Flammable Limits (%) Lower N.D. Upper N.D.

Products Evolved When Subjected to Heat or Combustion:

Carbon monoxide, carbon dioxide, and aldehydes and ketones may be formed.

Recommended Fire Extinguishing Agents And Special Procedures:

According to the National Fire Protection Association Guide, use water spray, dry chemical, foam, or carbon dioxide.
Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

Unusual or Explosive Hazards:

None.

N.D. - Not Determined N.A. - Not Applicable
< - Less Than > - Greater Than

ENVIRONMENTAL PROTECTION

Code No. 01657

Waste Disposal Method:
Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixture, processes, etc. may render the resulting material hazardous. (See Remarks for Waste Classification.)

Procedures in Case of Breakage or Leakage: (Transportation Spills Call CHEMTREC (800) 424-9300)
Contain spill if possible. Wipe up or absorb on suitable material and shovel up.

Remarks:
Waste Classification: Product has been evaluated for RCRA characteristics and does not meet criteria of a hazardous waste if discarded in its purchased form.

PRECAUTIONS

NONE CONSIDERED NECESSARY

Requirements for Transportation, Handling and Storage:
Minimum feasible handling temperatures should be maintained. Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

DOT Proper Shipping Name: N.A.
DOT Hazard Class (If applicable): N.A.

CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (°F) N.D. Vapor Pressure N.D. (mmHg)

Specific Gravity 0.8681 (H_2O=1) Vapor Density N.D. (Air=1)

Appearance and Odor pale liquid

pH of undiluted product N.D. Solubility N.D.

Percent Volatile by Volume N.D. Evaporation N.D. ( )=1

Viscosity 31.5 cSt @ 40 °C Other -

Hazardous Polymerizations ____ Occur X Do not occur

The Material Reacts Violently With (If others is checked below, see additional comments on page 6 for futher details)

Air	Water	Heat	Strong Oxidizers	Others	None of These
			X		

N.D. - Not Determined N.A. - Not Applicable
< - Less Than > - Greater Than

COMPOSITION

Code No. 01657

Chemical/Common Name	CAS No.	Exposure Limit	Range in %
Solvent-dewaxed heavy paraffinic petroleum distillates	64742650	5 mg/m3 ACGIH (MIST)	95.00 - 99.99

To the best of our knowledge, none of the above listed components is hazardous according to OSHA (1910.1200) or one or more state Right-To-Know lists.

PRODUCT SHIPPING LABEL

Code No. 01657

01657 RANDO OIL HD 32

NONE CONSIDERED NECESSARY

Chemical/Common Name	CAS No.	Range in %
Solvent-dewaxed heavy paraffinic petroleum distillates	64742650	95.00 - 99.99

To the best of our knowledge, none of the above listed components is hazardous according to OSHA (1910.1200) or one or more state Right-To-Know lists.

HMIS

Health : 1 Reactivity : 0

Flammability: 1 Special : -

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place.

HEALTH EMERGENCY TELEPHONE: (914) 831-3400 (EXT. 204)

Texaco Inc.
2000 Westchester Avenue
White Plains, New York 10650

For Additional Information Concerning:

Fuels/Lubricants/Antifreezes
call (914) 831-3400 (EXT.204)

Chemicals/Additives
call (409) 722-8381

Transportation Spills
call CHEMTREC (800) 424-9300

ADDITIONAL COMMENTS	Code No. 01657

TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT
STATE OF MICHIGAN CRITICAL MATERIALS ACT (REVISED 1986)
0.037% zinc

To determine applicability or effect of any law or regulation with respect to the product, users should consult his legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matters.

By R. T. Richards Title Mgr. Env. Conservation & Toxicology

Date 08-20-86 ☐ New ☒ Revised, Supersedes 04-16-86

N.D. - Not Determined N.A. - Not Applicable
< - Less Than > - Greater Than