



Minnesota Pollution Control Agency

General Excavation Report Worksheet

Guidance Document 3-02

Complete the worksheet below to document excavation and treatment of petroleum contaminated soil removed **prior to** a Site Investigation and/or during tank removals and/or upgrades. If soil is excavated as an MPCA-approved corrective action **after** a Site Investigation is conducted, complete Guidance Document 3-02a *Corrective Action Excavation Report Worksheet*. Conduct excavations in accordance with Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*. Please type or print clearly. Do not revise or delete text or questions from this report form.

The excavation worksheet 3-02 deadline is 10 months from the date of receipt of the MPCA "Petroleum Storage Tank Release Investigation and Corrective Action" letter. MPCA staff may establish a shorter deadline for high priority sites.

PART I: BACKGROUND

A. Site: Minneapolis Fleet Services
MPCA Site ID#: **LEAK00017358**

Street: 1911 26th Street
City, Zip: Minneapolis, MN 55401
County: Hennepin

C. Excavating Contractor: Zahl Petroleum
Maintenance Co.

Contact: Jeff Cooper

Telephone: 612-331-8550

Tank Contractor Certification Number: 0037

B. Tank Owner/Operator: Cam Haugland

Mailing Address: City of Minneapolis
Street/Box: 1200 Currie Avenue North
City, Zip: Minneapolis, MN 55403
Telephone: 612-673-5425

D. Consultant: Thatcher Engineering, Inc.

Contact: Dennis P. McComas, PG

Street/Box: 3055 Old Highway 8, Suite 103

City, Zip: Minneapolis, MN 55418

Telephone: 612-781-2188

E. Others on-site during site work (e.g., fire marshal, local officials, MPCA staff, etc.):

F. Site Location Information: Attach Guidance Document 1-03a *Spatial Data Reporting Form* if it has not already been submitted or will not be submitted as part of Guidance Document 4-06 *Investigation Report Form*.

Note: If person other than tank owner and/or operator is conducting the cleanup, provide name, address, and relationship to site on a separate attached sheet.

PART II: DATES

- A. Date release reported to MPCA: July 9, 2008
- B. Dates site work performed (tanks removed, piping removed, soil excavation, soil borings, etc.):

	Work Performed	Date
USTs pumped dry, inerted and removed		7/9/08
Soil samples collected and analyzed from the bottom ends of both USTs		7/9/08
One temporary well, GP-1, advanced in former location of Tank 1		12/01/08

PART III: SITE AND RELEASE INFORMATION

- A. Describe the land use and pertinent geographic features within 1,000 feet of the site. (i.e. residential property, industrial, wetlands, etc.)

The site is located in a mixed residential, industrial and commercial neighborhood in south Minneapolis, just west of the intersection of Hiawatha Avenue and 26th Street. The Mississippi River is approximately 1.50 miles to the east.

- B. Provide the following information for all tanks removed and any remaining at the site:

Table 1.

Tank #	Tank ** Material	UST or AST	Capacity (gallons)	Contents (product type)	Year installed	Tank Status*	Condition of Tank
001	F	UST	15,000	Gasoline	~1994	Removed (7/9/08)	Good
002	F	UST	15,000	Diesel	~1994	Removed (7/9/08)	Good

*Indicate: removed (date), abandoned in place (date), or currently used, upgraded tank, installation of new tank. ** F for fiberglass or S for Steel
Notes:

Piping Material (check all that apply): Steel, Fiberglass, Flexible Plastic

- C. Describe the location and status of the other components of the tank system(s) (i.e., transfer locations, valves, piping and dispensers) for those tanks listed above.

Both tanks were motor fuel tanks and were piped directly to the pump island between the tanks. The fill pipes were directly over the tanks. All piping and fuel dispensers were removed on July 9, 2008 (see Figure 2).

- E. Were new tanks and/or piping and dispensers installed? (yes/no) If yes, what volume of contaminated soil was excavated to accommodate the installation of the new tanks and piping?
- F. If contaminated soil was removed to accommodate the installation of new tanks and/or piping, show your calculations for the amount of soil removal allowed using Table 3 in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*.
- G. Was ground water encountered or a suspected perched water layer or was there evidence of a seasonally high ground water table (i.e. mottling)? (yes/no) At what depth? 24.82
- H. If ground water was not encountered during the excavation, what is the expected depth of ground water?

Based on the Hennepin County Geologic Atlas, we estimated the soils as terrace deposits consisting of sand, gravelly sand, and loamy sand. The approximate depth to ground water is 40 feet. However, during drilling on December 1, 2008, the soils encountered were brown fine to medium sands with rocks and the ground water was encountered at approximately 25 feet below grade.

- I. Additional investigation to determine the need for a Limited Site Investigation is necessary at sites with sandy or silty sandy soil, a water table within 25 feet of the ground surface, and visual or other evidence of soil remaining contamination. See Table 2 in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*. If a soil boring is necessary, describe the soil screening and analytical results. Attach the boring logs and laboratory results to this report.
- Based on the tank closure sampling analytical result of 18.9 and 6.9 mg/kg of DRO under Tank 2 on July 9, 2008 and the sand soils present, a temporary well was advanced in the former location of Tank 2, to determine the vertical extent of contamination and to determine whether or not ground water contamination was present which had emanated from Tank 2.
- See Figure 2 for the soil boring/temporary well location, the tables in Section V. for the screening and analytical results, Attachment 3 for the soil boring log of GP-1, and Attachment 4 for the laboratory Report and Chain of Custody. As shown on the boring log and field screening table, slight odor was observed to 10 feet and then no odor was observed from 10 feet to 30 feet. No field screening readings were recorded above background from 10 feet to 30 feet.
- The soil analytical results were mainly consistent with the above observations and field screening readings. The soil sample analyzed from 24-26 feet showed no detect for DRO. However, the ground water sample had a result of 750 ug/l of DRO and minor Chloroform and Chloromethane detects.
- J. If no soil boring was performed, explain.

- K. If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? (yes/no) Describe this evidence of contamination, e.g., free product

(specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc. **Note:** If you observe free product, contact MPCA staff immediately, as outlined in Guidance Document 2-02 *Free Product: Evaluation and Recovery*.

See above.

L. Was bedrock encountered in the excavation? (yes/ no) At what depth?

M. Were other unique conditions associated with this site? (yes/ no) If so, explain.

PART V: SAMPLING INFORMATION

A. Briefly describe the field screening methods used to distinguish contaminated from uncontaminated soil:

Soil was placed in a sealed plastic bag and allowed to stand to develop head space, in accordance with methods and procedures specified in MPCA Guidance Document 4-04. An OVM Model 580B was used to measure vapors in all samples.

B. List soil vapor headspace analysis results collected during excavation of tanks, lines and dispensers, valves, and transfer locations. (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), removed soil R-1 (4 feet), R-1 (8 feet), etc.; stockpile samples SP-1, etc; line samples L-1, L2, etc.; transfer locations T-1 (4 feet), T-1 (8 feet), etc.; dispensers D-1 (4 feet), etc. **Be sure the sample codes correspond with the site map in part VI, below.**

Sample Code	Soil Type	Reading ppm	Sample Code	Soil Type	Reading ppm
GP-1 (6-8)	Brown Silty Sand w/rocks	16.4			
GP-1 (8-10)	Brown Silty Sand w/rocks	1.2			
GP-1 (10-12)	Brown Silty Sand w/rocks	0.0			
GP-1 (12-14)	Brown Sandy Silt	0.0			
GP-1 (14-16)	Brown Sand w/rocks	0.0			
GP-1 (16-18)	Brown Sand w/rocks	0.0			
GP-1 (18-20)	Brown Sand w/rocks	0.0			
GP-1 (20-22)	Brown Sand w/rocks	0.0			
GP-1 (22-24)	Brown Sand w/rocks	0.0			
GP-1 (24-26)	Brown Sand w/rocks	0.0			

GP-1 (26-28)	Brown Sandy Silty	0.0			
GP-1 (28-30)	Brown Sandy Silt	0.0			

C. Was the “removed soil” placed back into the excavation basin? (yes/ no)
If no, please complete Part VIII: Soil Treatment Information section. If yes, a Limited Site Investigation is necessary (see Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations*).

D. Briefly describe the soil analytical sampling and handling procedures used:

Latex gloves were used during handling of soils. Approximately 10 grams of soil was placed in a laboratory jar and preserved with Methanol for analysis of BETX and VOC. Approximately 25 grams of soil was placed in a laboratory jar without preservative for analysis of DRO. All jars are placed in a cooler and chilled to 4 degrees celsius for transport to the laboratory.

E. List below all soil sample analytical results from bottom and side wall samples collected after excavation of tanks, lines and dispensers, valves, and transfer locations (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), removed soil R-1 (4 feet), R-1 (8 feet), etc.; stockpile samples SP-1, etc; line samples L-1, L2, etc.; transfer locations T-1 (4 feet), T-1 (8 feet), etc.; dispensers D-1 (4 feet), etc.; **Be sure the sample codes correspond to the site map required in part VI.**

Sample Code	DRO	Benzene	Ethylbenzene	Toluene	Xylene	Cumene	Naphthalene	Trichloro-ethene
1-N-14'	< 5.3 (5'K0)	< 0.052	< 0.052	< 0.052	0.154	-----	< 0.21	< 0.21
1-S-14'	-----	< 0.053	< 0.053	0.057	0.16	-----	-----	-----
2-W-14'	18.9	-----	-----	-----	-----	-----	-----	-----
2-E-14'	6.9	-----	-----	-----	-----	-----	-----	-----
Trip Blank	-----	< 0.050	< 0.050	< 0.050	< 0.15	-----	< 0.20	< 0.20
NPI-5'	< 7.5	-----	-----	-----	-----	-----	-----	-----
SPI-5'	< 5.1	< 0.051	< 0.051	< 0.051	< 0.15	-----	-----	-----
GP-1 (24-26)	< 7.1	< 0.057	< 0.057	< 0.057	< 0.17	-----	-----	-----
Trip Blank	-----	< 0.050	< 0.050	< 0.050	< 0.15	-----	-----	-----
GP-1*	750	< 1.0	< 1.0	< 1.0	< 3.0	-----	< 4.0	< 1.0
Trip Blank*	-----	< 1.0	< 1.0	< 1.0	< 3.0	-----	< 4.0	< 1.0

Note: Attach copies of laboratory reports and chain of custody forms.
All soil results are in mg/kg (ppm) and all water results are in ug/l (ppb).
* Water samples, reported in ug/l (ppb)
----- indicates analyte not analyzed.

PART VI: FIGURES

Attach the following figures to this report:

1. Site location map.
2. Site map(s) drawn to scale illustrating the following:
 - a. Location of all present and former tanks, piping, and dispensers;
 - b. Location of surface soil contamination
 - c. Location of other structures (buildings, canopies, etc.);
 - d. Adjacent city, township, or county roadways;
 - e. Dimensions of excavation(s), including contour lines (maximum 2-foot contour intervals) to represent the depths of the final excavation(s);
 - f. Location of soil screening samples (e.g. R-1), soil analytical samples (e.g., S-1 or B-1), and any soil borings (e.g., SB-1). Also, attach all boring logs.
 - g. North arrow, bar scale and map legend.
 - h. Provide location of any on-site water wells. If on-site water wells exist, please provide well logs and/or construction diagrams.
 - i. Locations of new tanks, piping and dispensers, if installed.

PART VII: CONCLUSIONS AND RECOMMENDATIONS

Recommendation for site:

- site closure
 additional investigation

Justify the recommendations for the site. If no further action is necessary, the MPCA staff will review this report following notification of soil treatment.

We drilled at the location of the highest contamination (2-W-14' DRO of 18.9 mg/kg). The results from this temporary well, GP-1, had no indication of soil contamination below 14 feet, including the soil sample analyzed at the water table from 24-26 feet. There was a DRO detect in the water, less than 1 mg/l, but no other petroleum detects were found above report limits.

Based on the above information, we recommend site file closure.

PART VIII: SOIL TREATMENT INFORMATION

- A. Soil treatment method used (thermal, land application, composting, other). If you choose "other" specify treatment method:
- B. Location of treatment site/facility:
- C. Date MPCA approved soil treatment (if thermal treatment was used, indicate date that the MPCA-permitted thermal treatment facility agreed to accept soil):
- D. Identify the location of stockpiled contaminated soil:

PART IX: CONSULTANT (OR OTHER) PREPARING THIS REPORT

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leak site. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in reduction of reimbursement awards. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leak site that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 (1994) or Minn. 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

MPCA staff are instructed to reject unsigned excavation reports or if the report form has been altered.

Name and Title:	Signature:	Date signed:
Dennis P. McComas, P.G.		1/13/09
Thomas O. Meyer, P.E.		1/13/09

Company and mailing address:

Thatcher Engineering, Inc.
3055 Old Highway 8, Suite 103
Minneapolis, MN 55418
Telephone: (612) 781-2188
Fax: (612) 781-2241

If additional investigation is not necessary, please mail this form and all necessary attachments to the MPCA project manager. If additional investigation is necessary, include this form as an appendix to Guidance Document 4-06 *Investigation Report Form*. **MPCA staff will not review excavation reports indicating a limited site investigation is necessary unless the limited site investigation has been completed.**

Web pages and phone numbers

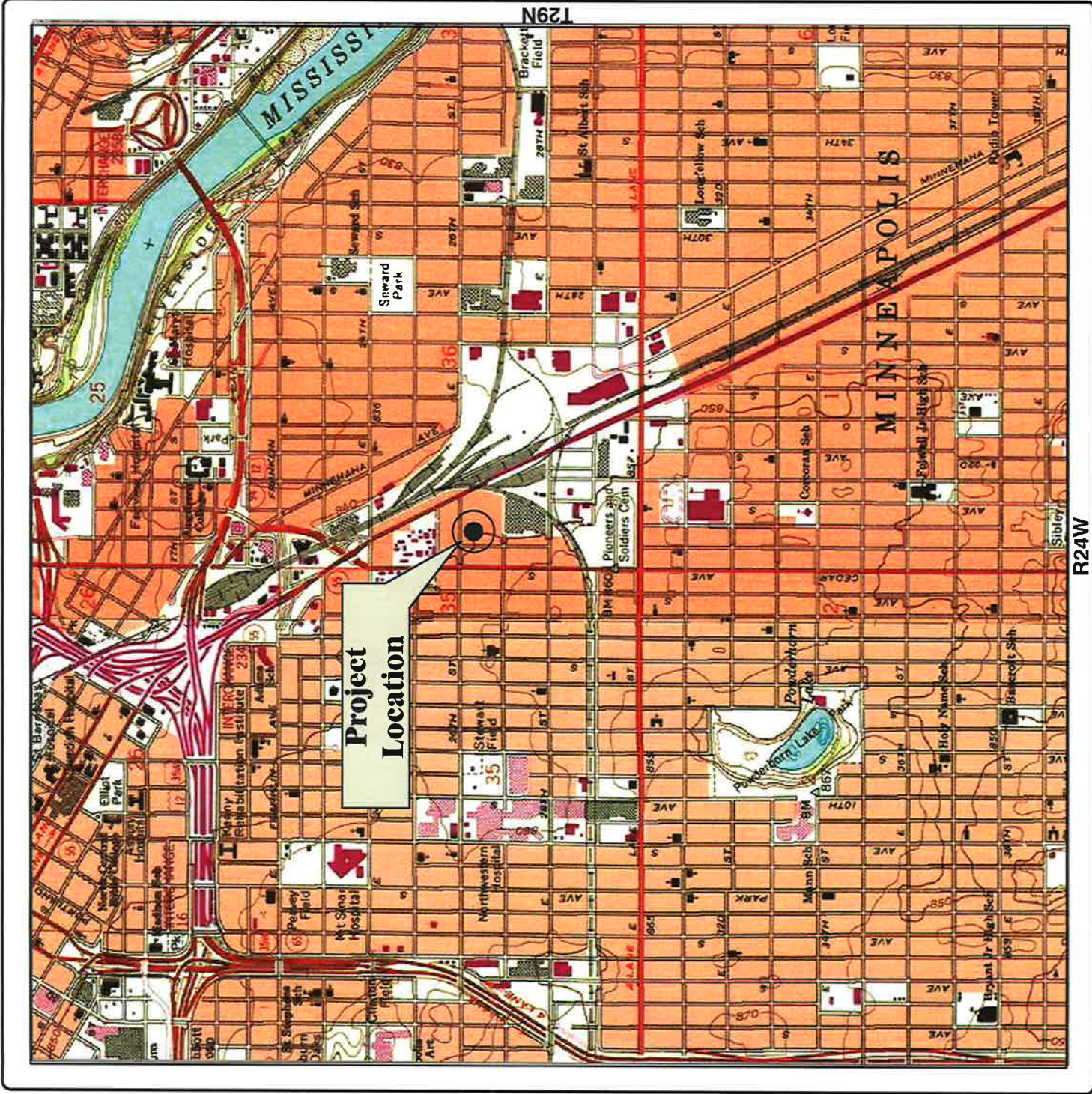
MPCA staff	http://pca.state.mn.us/pca/staff/index.cfm
MPCA toll free	1-800-657-3864
Petroleum Remediation Program web page	http://www.pca.state.mn.us/programs/lust_p.html
MPCA Infor. Request	http://www.pca.state.mn.us/about/inforequest.html
MPCA Petroleum Brownfields Program	http://www.pca.state.mn.us/programs/vpic_p.html
PetroFund Web Page	http://www.state.mn.us/cgi-bin/portal/mm/jsp/content.do?id=536881377&agency=Commerce
PetroFund Phone	651-297-1119, or 1-800-638-0418
State Duty Officer	651-649-5451 or 1-800-422-0798

Upon request, this document can be made available in other formats, including Braille, large print and audio tape. TTY users call 651/282-5332 or 1-800-657-3864 (voice/TTY).

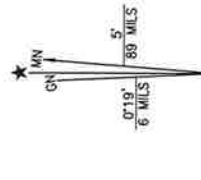
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Figure 1

General Site Location Map



Magnetic North



GRID AND 1980 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

USGS 7.5 Min Quadrangle: Minneapolis South, Minnesota

Site Location: NE¹/₄ of the SE¹/₄ of the NW¹/₄ of Section 26
 SCALE 1:24000



Latitude: 44° 57' 19.09"
 Longitude: 93° 14' 41.10"

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

Quad Location

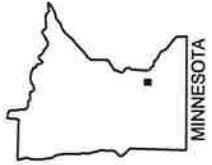


FIGURE:

1

PROJECT TITLE: Mpls. Fleet Services
 DRAWING TITLE: USGS Quad Map
 PROJECT LOCATION: Minneapolis, MN
 PROJECT #: _____
 SCALE: 1"=2000'
 DRAWN BY: EMS

Figure 2

Site Map

26TH STREET EAST

CONCRETE SIDEWALK

MINNEAPOLIS FLEET SERVICES
1911 26TH ST. E.

EXCAVATION BOUNDARY
(45' X 30')

2-W-14'

GP-1

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30.00'

45.00'

45.00'

45.00'

45.00'

45.00'

45.00'

45.00'

45.00'

N. PI

5'

S. PI

5'

CANOPY

FORMER DISPENSERS

BITUMINOUS
PARKING

1-N-14'

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DEADMAN

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EXCAVATION BOUNDARY
(30' X 45')

Legend

Sampling Points

⊗

Former USTs

⊗

Geoprobe Location (12/1/08)

⊗

① = 15,000 Gal Gasoline UST

② = 15,000 Gal Diesel UST

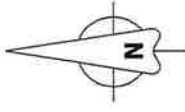


FIGURE:

2

PROJECT TITLE: Minneapolis Fleet Services

DRAWING TITLE: Site Map

PROJECT LOCATION: Minneapolis, MN

LEAK #:

SCALE: 1" = 30'

DRAWN BY: TOM

Attachment 1

Spatial Data Reporting Form



Petroleum Remediation Program

Minnesota Pollution Control Agency

http://www.pca.state.mn.us/programs/lust_p.html

Spatial Data Reporting Form

Guidance Document 1-03a

(For complete instructions, see Guidance Document 1-03.)

Part 1. Background

Has a site location data point been submitted for this site (circle/highlight)? YES or NO
If yes, you do not need to complete Part 2 of this form but should complete Part 3 if there are additional site features to report. This form can be submitted electronically if desired (e.g., as an e-mail attachment to the project manager).

MPCA Site ID: LEAK#: 00017358

Site Name: Mpls Public Works – Fleet Services

Data Collection Date: 7/09/08 & 7/10/08

Name of Person Who Collected Data: Dennis McComas

Organization Name: Thatcher Engineering Inc

Organization Type: Consultant

Part 2. Site Location (use one of the three spatial data reporting formats provided)

Point Description: Tank Basin 1 (Gasoline Tank)

Collection Method: Handheld GPS

Datum (circle/highlight): **WGS84**

1) Longitude (dd mm ss.ss): 93° 14' 39.52"

Latitude (dd mm ss.ss): 44° 57' 18.41"

2) Longitude (dd.dddddd):

Latitude (dd.dddddd):

3) UTM - X (Easting):

UTM - Y (Northing):

UTM Zone:

Point Description: Tank Basin 2 (Diesel Tank)

Collection Method: Handheld GPS

Datum (circle/highlight): **WGS84**

1) Longitude (dd mm ss.ss): 93° 14' 39.62"

2) Longitude (dd.ddddddd):

3) UTM - X (Easting):

UTM Zone:

Latitude (dd mm ss.ss): 44° 57' 19.26"

Latitude (dd.ddddddd):

UTM - Y (Northing):

Point Description:

Collection Method: Handheld GPS

Datum (circle/highlight): **WGS84**

1) Longitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

3) UTM - X (Easting):

UTM Zone:

Latitude (dd mm ss.ss):

Latitude (dd.ddddddd):

UTM - Y (Northing):

Point Description:

Collection Method: Handheld GPS

Datum (circle/highlight): **WGS84**

1) Longitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

3) UTM - X (Easting):

UTM Zone:

Latitude (dd mm ss.ss):

Latitude (dd.ddddddd):

UTM - Y (Northing):

Point Description:

Collection Method: Handheld GPS

Datum (circle/highlight): **WGS84**

1) Longitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

3) UTM - X (Easting):

UTM Zone:

Latitude (dd mm ss.ss):

Latitude (dd.ddddddd):

UTM - Y (Northing):

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss):

2) Longitude (dd.ddddddd):

3) UTM - X (Easting):

UTM Zone:

Latitude (dd mm ss.ss):

Latitude (dd.ddddddd):

UTM - Y (Northing):

Attachment 2

Release Information Worksheet



Minnesota Pollution Control Agency

Release Information Worksheet

Guidance Document 2-05

The Release Information Worksheet is necessary in order to meet the Public Record Provision of the Energy Policy Act of 2005. Complete the worksheet below to document tank and release information **only** for sites that have not submitted this information in other site investigation report forms. Please type or print clearly. Do not revise or delete text or questions from this form.

A. General Information

Site name/city: Mpls Public Works – Fleet Services MPCA Site ID#: LEAK00017358

B. Provide the following information for all tanks removed and any remaining at the site:

Tank #	UST or AST	Capacity (gallons)	Contents (product type)	Year installed	Tank Status*	Condition of Tank
001	UST	15,000	Gasoline	1994	Removed (7/09/08)	Good
002	UST	15,000	Diesel	1994	Removed (7/10/08)	Good

*Indicate: *removed (date), abandoned in place (date), or currently used, upgraded tank, installation of new tank.*

C. Piping Material

Check all that apply:

Steel Fiberglass Flexible Plastic Copper

D. Identify and describe the source(s) or suspected source(s) of the release or contamination encountered, and how the release or contamination was discovered.

Check all that apply:

- Tank Piping Dispenser
 Submersible Turbine Pump Delivery Problem
 Other (specify)

<p>E. Identify the cause of the release (tank and/or piping). Check all that apply:</p> <p> <input type="checkbox"/> Spill <input type="checkbox"/> Overfill <input type="checkbox"/> Corrosion <input type="checkbox"/> Physical or Mechanical Damage <input type="checkbox"/> Install Problem <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Other (specify) </p>	<p>F. Identify the method the release was detected. Check all that apply:</p> <p> <input checked="" type="checkbox"/> Removal <input type="checkbox"/> Line Leak Detection <input type="checkbox"/> Tank Leak Detection <input type="checkbox"/> Visual/Olfactory <input type="checkbox"/> Site Assessment <input type="checkbox"/> Other (specify) Abandoned in Place </p>	<p>G. Has the site ever, at any point had an E-85 tank? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>H. Has the site ever, at any point had a leaded gasoline tank? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		

<i>Web pages and phone numbers</i>	
MPCA staff	http://pca.state.mn.us/pca/staff/index.cfm
MPCA toll free	1-800-657-3864
Petroleum Remediation Program web page	http://www.pca.state.mn.us/programs/just_p.html
MPCA Infor. Request	http://www.pca.state.mn.us/about/inforequest.html
MPCA Petroleum Brownfields Program	http://www.pca.state.mn.us/programs/vpic_p.html
PetroFund Web Page	http://www.state.mn.us/cgi-bin/portal/mn/jsp/content.do?id=536881377&agency=Commerce
PetroFund Phone	651-297-1119, or 1-800-638-0418
State Duty Officer	651-649-5451 or 1-800-422-0798

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Attachment 3

Soil Boring Log/MDH Sealing Record



Soil Boring Log Information

Well Completion -----	Well Usage Temporary Monitoring Well	Scale: 1" = 8'	Page 1 of 1
Facility/Project Name Minneapolis Fleet Services	Project No. City of Minneapolis	Boring No. GP-1	Logged By DPM
Boring Drilled By (Firm name & name of crew chief) Bergerson-Caswell, Inc.			
MN Unique Well No. -----	WT Unique Well No. -----	Date Initiated 12/1/2008	Date Completed 12/1/2008
Boring Location T 29 N R 24 W NE 1/4 of SW 1/4 of Section 36		Final Static Water Level 24.82	Drilling Method Geoprobe
County Hennepin		Common Well Name GP-1	Borehole Dia. 2" Inches
REMARKS Site Address: 1911 26th Street Minneapolis, MN 55401			
City/Township Minneapolis			

Depth (ft)	Soil/Rock Description and Geologic Origin for Each Major Unit	USCS	Graphic Log	Monitoring Well Descriptions & Diagram	Sampling Interval	Water Level	Sample			Organic Vapor	
							#	Type	Depth	OVM ppm	Bkgnd ppm
4	Brown Silty SAND w/Rocks, Slightly Moist, No Odor (Fill)	SP			6-8		1A			16.4	0
8	Dk. Brown Silty SAND w/Rocks, Slightly Moist, Moderate Diesel Odor (Fill)	SP			8-10		1B			1.2	0
12	Dk. Brown Silty SAND w/Rocks, Slightly Moist, No Odor (Fill)	SP			10-12		1C			0.0	0
16	Lt. Brown Class 5 w/Sand, Dry, No Odor (Fill) Brown Sandy SILT, Moist, No Odor (Fill)	SP SM		▼	12-14		1D			0.0	0
20	Brown SAND w/Rocks, Fine to Medium, Slightly Moist, No Odor	SP			14-16		1E			0.0	0
24	Brown SAND w/ 1/2" Rocks, Fine to Medium, Moist, No Odor	SP			16-18		1F			0.0	0
28	Reddish-Brown Sandy SILT, Wet, No Odor	SM			18-20		1G			0.0	0
32	End of Boring = 30 Feet				20-22		1H			0.0	0
36					22-24		1I			0.0	0
40					24-26		1J			0.0	0
44					26-28		1K			0.0	0
					28-30		1L			0.0	0

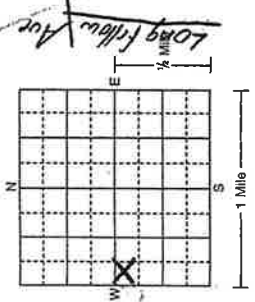
WELL OR BORING LOCATION

County Name **Hennepin**
 Township Name **Minneapolis 29 24**
 Range No. **30**
 Section No. **10**

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING SEALING RECORD
 Minnesota Statutes, Chapter 1037

Minnesota Well and Boring Sealing No. **H 276005**
 Minnesota Unique Well No. or W-series No. (Leave blank if not known)

Latitude _____ degrees _____ minutes _____ seconds
 Longitude _____ degrees _____ minutes _____ seconds
 Numerical Street Address or Fire Number and City of Well or Boring Location
1911 26th St. E, Minneapolis
 Sketch exact location of well or boring in section grid with "X".
26th Street E



Date Sealed **12-1-08**
 Date Well or Boring Constructed **12-1-08**
 Depth Before Sealing **30** ft.
 Original Depth **30** ft.
 STATIC WATER LEVEL
 Measured Estimated Date Measured **12-1-08**
 Water-Supply Well Monit. Well
 Env. Bore Hole Other **Temp**
 CASING TYPE(S)
 Steel Plastic Tile Other

WELL/BOILING
 Single Aquifer Multiaquifer
 Well House At Grade Basement Offset
 Pitless Adapter/Unit Buried Well Pit
 Well Pit Buried Other
 Other

PROPERTY OWNER'S NAME/COMPANY NAME
CITY OF MINNEAPOLIS
 Property owner's mailing address if different than well location address indicated above
**260 Currie Ave. N.
 Minneapolis, MN 55403**
 WELL OWNER'S NAME/COMPANY NAME
Same as above
 Well owner's mailing address if different than property owner's address indicated above
Same as above

CASING(S)
 Diameter _____ in. from _____ to _____ ft.
 Depth _____ in. from _____ to _____ ft.
 Set in oversize hole? Yes No Unknown
 Annular space initially grouted? Yes No Unknown
 SCREEN/OPEN HOLE
 Screen from _____ to _____ ft. Open Hole from _____ to _____ ft.

OBSTRUCTIONS
 Rods/Drop Pipe Check Valve(s) Debris Fill No Obstruction
 Type of Obstructions (Describe)

GEOLOGICAL MATERIAL	COLOR	HARDNESS OR FORMATION	FROM	TO
Gravel	BRU	M	0	1d
Coarse Sand	BRU	M	1d	27
Silly Sand	Red	M	27	30

Obstructions removed? Yes No Describe
 PUMP
 Type Removed Not Present Other
 METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:
 No Annular Space Exists Annular Space Grouted with Tremie Pipe Casing Perforation/Removal
 _____ in. from _____ to _____ ft. Perforated Removed
 _____ in. from _____ to _____ ft. Perforated Removed
 Type of Perforator
 Other
 GROUTING MATERIAL(S) (One bag of cement = 94 lbs., one bag of bentonite = 50 lbs.)
 Grouting Material **Bent Grout** from **0** to **30** ft. **1/2** yards _____ bags
 _____ from _____ to _____ ft. _____ yards _____ bags
 _____ from _____ to _____ ft. _____ yards _____ bags
 OTHER WELLS AND BORINGS
 Other unsealed and unused well or boring on property? Yes No How many? _____
 LICENSED OR REGISTERED CONTRACTOR CERTIFICATION
 This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.
Perasson Construction, Inc.
 Licensee/Business Name
David Hoerth
 Certified Representative Signature
 License or Registration No. **1707**
1205
 Certified Rep. No. **10/15/08**
 Date

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING
B-1
0x E 26177
 IMPORTANT-FILE WITH PROPERTY PAPERS-WELL OWNER COPY
H 276005