Wisconsin
Department of Commerce

ENVIRONMENTAL & REGULATORY SERVICES DIVISION
P. O. Box 530
Park Falls, Wisconsin 54552

Tommy G. Thompson, Governor
William J. McCoshen, Secretary

March 27, 1998

COPY

Ms. Sheryl Corrigan
3M Building 41-01-05
PO Box 33331
St. Paul MN 55133-3331

Subject: **Close-out of Case #54417-9999-00 / BRRTS # 03-37-001086**
3M Greystone Facility
Town of Maine

Dear Ms. Corrigan:

On March 20, 1998 the above site was reviewed for closure by the Site Review staff of the PECFA Bureau. Because the site involved only soil contamination, without a threat to groundwater, all issues relating to this site are administered by the staff within the Department of Commerce's PECFA Bureau. Using the standards established in NR 700, the Department has determined that this site has been remediated to a level protective of the environment and human health. The Department considers this site to meet environmental standards, and no further action is necessary.

This is based upon the information provided to us by your consultant. If, in the future, site conditions indicate that any contamination that might remain poses a threat, the need for further remediation would be determined and required if necessary.

This closure is for the 50,000gallon No 2 fuel oil tank only. The Department of Natural Resources has informed me that there is groundwater contamination present on this site associated with other tanks if different locations and not associated with this tank.

Be sure to include a copy of this letter with your PECFA claim package, if your site is eligible for reimbursement. This letter is to take the place of the Form 4-B.

Thank you for your efforts in the protection of the environment. If you have any additional questions, please call me at 715-762-5557.

Sincerely,

Shanna L. Laube
Hydrogeologist
PECFA Program

cc:

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Scott Humrickhouse, Regional Director

Wausau Office
5301 Rib Mountain Drive
Wausau, WI 54401
TELEPHONE 715-359-4522
FAX 715-355-5253

March 17, 1998

BRRTS#03-37-001086

54417-9999-00

MS SHERYL CORRIGAN
3M BUILDING 41-01-05
PO BOX 33331
ST PAUL MN 55133-3331

SUBJECT: File Transfer
3M - Greystone Facility
Town of Maine, Wisconsin

Dear Ms. Corrigan:

Your file is being transferred to the Department of Commerce(Commerce) based on a file review. This review indicates that only soil contamination has been identified at the site. Cases pertaining to soil contamination are routinely handled by Commerce. I will forward your file to Ms. Shanna Laube in Park Falls. All future correspondence should be sent to Ms. Laube at the following address:

Ms. Shanna Laube
Department of Commerce
P.O. Box 530
214 North Fourth Avenue
Park Falls, WI 54552-0530

If you have any questions regarding your file please contact Shanna at 715/762-5557. If you have any questions regarding this letter, please contact me at 715/359-6514. In addition, I am still looking at information pertaining to your closure request for the Wausau Facility parking lot. Please call me if you have any questions regarding that site.

Sincerely,

Lisa Gutknecht

Lisa A. Gutknecht - Project Reviewer
Remediation and Redevelopment Program

c: Bill Evans, WCR - Eau Claire

Appeg FILE COPY

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

5301 Rib Mountain Drive
Wausau, WI 54401

TELEPHONE 715-359-4522
TELEFAX 715-355-5253

April 20, 1995 NCD UID#: 1086

MR ROBERT SIEGEL
3M ENVIRONMENTAL TECHNOLOGY
AND SERVICES
PO BOX 33331
ST PAUL MN 55133-3331

RE: Closure Assessment
Greystone Plant
Maine, Wisconsin

Dear Mr. Siegel:

The Department of Natural Resources (Department) has reviewed the above-referenced report for closure. Based on our review, this case could be submitted for closure. We need however, the following information before we can submit it to the Closure committee.

The attached closure form must be completed and submitted to the Department. We also need documentation regarding the disposal of the contaminated stockpile. Once this information has been transmitted, I will be able to submit your case for closure. If you have any questions, regarding this letter, please contact me at 715/359-6514.

Sincerely,
NORTH CENTRAL DISTRICT

Lisa A. Hrubesky - Project Manager
Leaking Underground Storage Tank Program

Attachment

#1086

UNDERGROUND STORAGE TANK

CLOSURE ASSESSMENT REPORT

3M INDUSTRIAL MINERAL PRODUCTS DIV

GREYSTONE PLANT

4TH AND DECATUR

MAINE, WISCONSIN

DELTA NO. A094-565

COF

Specify the tank -
other gw contamination
on rest of the site.
What happened to the stockpiled soil?
provide documentation that it was
disposed of and we can close the
site.

Delta
Environmental
Consultants, Inc.

UNDERGROUND STORAGE TANK

CLOSURE ASSESSMENT REPORT

3M INDUSTRIAL MINERAL PRODUCTS DIVISION

GREYSTONE PLANT

4TH AND DECATUR

MAINE, WISCONSIN

DELTA NO. A094-565

Prepared by:

Delta Environmental Consultants, Inc.
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112
(612) 486-8022

February 28, 1995

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3M INDUSTRIAL MINERAL PRODUCTS DIVISION
GREYSTONE PLANT
4TH AND DECATUR
MAINE, WISCONSIN
DELTA NO. A094-565

1.0 INTRODUCTION

1.1 Purpose

The purpose of this report is to present the results of the underground storage tank closure activities completed by Delta Environmental Consultants, Inc. (Delta), at the 3M Industrial Mineral Products Division Greystone Plant in Maine, Wisconsin. Delta was authorized on October 13, 1994, by Robert Siegel of 3M, to perform these activities. On-site activity took place from October 31 through November 4, 1994. Jared Otto (certification No. 05083) of Delta performed the site assessment.

1.2 Scope of Work Performed

The following activities have been performed by Delta or under Delta's supervision:

- Removed and disposed of one underground storage tank (UST), and associated piping.
- Screened excavated soils and soils remaining in the excavations with a photoionization detector (PID) to evaluate the presence of hydrocarbons.
- Collected soil samples from the excavation and excavated soils stockpiled on site for laboratory analysis of petroleum volatile organic compounds (PVOC), diesel range organics (DRO), and polynuclear aromatic hydrocarbons (PAH) to document closure conditions.
- Prepared this tank closure report.
- The DIHLR-certified remover/cleaner for this assessment was :

  SGS, Inc.
  John Geiss (certification no. 00315)
  W4490 Pope Road, 12-7
  Merill, WI 54452
  (800) 261-2803

- The General Contractor was:

  Northwest Petroleum Services, Inc.
  Perry Schuette
  4080 North 20th Avenue
  Wausau, WI 54401
  (715) 355-1386

2.0 SITE BACKGROUND INFORMATION

2.1 Site Description

The 3M Industrial Mineral Products Division Greystone Plant is located at 4th and Decatur Drive, Maine, WI 55401. The legal description of the site is the northeast ¼, of the southwest ¼, of the northwest ¼, of the northeast ¼, of Section 11, Township 29 North, Range 7 East. A topographic map of the regional area is presented as Figure 1 and a site map as Figure 2. No tanks, gas stations or leaking UST sites are known to exist on the adjacent properties.

2.2 Site History

3M has owned this site since 1954. Prior to November 1994, one 50,000-gallon UST containing No. 2 fuel oil, installed in 1978, was located on site. No petroleum storage tanks remain on site.

Tank and line tightness tests are included in Appendix A. These tank tightness tests were performed under 3M's underground tank program prior to the regulatory requirements, and therefore tanks were tested on an "as-available basis." There has been previous geotechnical work performed at this site, but information related to this work was not available at the time of this report.

3.0 PROJECT RESULTS

3.1 Weather

Weather conditions on the days of the site assessment ranged from sunny to mostly cloudy, with no precipitation. Temperatures ranged from 40 to 50 degrees, with light to moderate variable winds.

3.2 Visual Inspection

The tank was covered with sparse vegetation with no visible signs of staining present at the surface. Backfill soils in the tank excavation consisted of a clean, fine-grained sand (SP), and extended to a depth of approximately 18 feet. Soil was moist, and color varied from grey to light-brown, with visible staining evident below the surface near the fill port, located at the south end of the tank. The stained material was dark grey with a slight green hue. Native soil consisted of a clean, fine- to medium-grained sand, which was moist and light-brown in color. The UST was installed on top of a concrete slab with hold-down anchors on each side of the tank. The concrete slab was not removed, due to the depth and thickness of the slab. The tank was 12 feet in diameter and 60 feet in length. The tank and associated piping were in good condition. The tank

was constructed of carbon steel, and no visible holes or pitting was observed on any part of the tank. Piping and fittings were made of coated steel and were also in good condition, with no signs of leaks or loose fittings. Ground water was not encountered during any part of the excavation.

3.3 Excavation

Soils removed from the excavation were screened in the field using a PID equipped with an 11.8 electron volt (eV) bulb using headspace procedures. Soil samples were collected from the backhoe bucket and placed in a clean polyethylene bag and sealed. After the samples had equilibrated to ambient air temperatures, the bag was punctured with the PID probe. This allowed for the measurement of volatile organic vapors which had accumulated in the headspace of the bag. The location of the soil samples collected for field screening are presented on Figure 3. The summary results are presented in Table 1. The PIDs were calibrated prior to use in the field on October 28, 1994.

50,000-gallon No. 2 fuel oil UST

The tank basin for the 50,000-gallon No. 2 fuel oil UST was excavated to a depth of 18 feet below ground surface (bgs). The associated piping was cut and capped at the edge of a building. All of the piping could not be removed, due to the proximity of a steel stairway located next to the plant building. There were no dispensers associated with the fuel oil UST.

Excavation of Impacted Soil

Impacted soils were encountered in a limited area from 3 feet bgs to a depth of approximately 15 feet bgs. The impacted soils were removed from the tank basin during excavation and placed on plastic. The impacted area was located near the fill port area. After removal of the tank, three test trenches were excavated to the west, south, and east. Non-impacted soils were found approximately 5 feet laterally from the original basin. The remaining impacted soils were then removed from the tank basin and added to the stockpile. A total of approximately 200 cubic yards of impacted soil were stockpiled on site. After collection of analytical soil samples, the stockpile was covered with plastic. The stockpile is being stored on site, pending disposal.

3.4 Tank Cleaning and Disposal

The tank was cleaned on site. Sludge and wastewater were generated while cleaning the tanks, and put into clean 55-gallon drums. The drums were labeled and sealed. All sludge generated from the cleaning of this tank was disposed of at the 3M Corporate Incinerator in Cottage Grove, MN. The tank was transported by SGS, Inc. to their yard for further destruction, and salvaged for scrap metal. Tank sludge was not present in the tank at the time of removal from the site.

3.5 Lab Reports

Soil samples were collected and submitted to Huntingdon Engineering & Environmental, Inc. for chemical analyses for DRO, petroleum volatile organic compounds (PVOC), and polynuclear aromatic hydrocarbons (PAH). Analytical soil sample locations are shown on Figure 4. At each location where an analytical soil sample was collected, it was split for a headspace reading. The analytical samples were sealed in the appropriate jars and placed in a cooler containing ice, to keep the samples chilled until reaching the laboratory. Table 1 lists the PID headspace readings for each soil sample location. Tables 2 and 3 list the analytical results. The laboratory report and chain-of-custody forms are contained in Appendix C.

Analytical results from the sidewall and base samples show concentrations below practical quantitation limit or not detected. Stockpile samples show concentrations of 6,600 milligrams per kilogram (mg/kg) and 8,700 mg/kg DRO. Both stockpile samples showed low concentrations of PVOCs and PAHs.

4.0 DISCUSSION

Hydrocarbon-impacted soils were detected only in the area of the fill port. This impact was most likely a result of tank overfills. Soil samples from the excavation were field screened, with select samples sent to a laboratory to document soil conditions upon completion of the excavation. These results indicate that over-excavation activities have removed the impacted soils.

5.0 RECOMMENDATIONS

No further assessment activities are necessary, with respect to the 50,000-gallon fuel oil UST and associated piping. This portion of the project should be closed.

6.0 REMARKS

The recommendations contained in this report represent our professional opinions. The opinions are based on currently-available information and are arrived at in accordance with currently-accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **DELTA ENVIRONMENTAL CONSULTANTS, INC.**

for _____ Date: 2/28/95
Jared A. Otis
Certified Site Assessor/Geologist

_____ Date: 2/28/95
Daniel L. Sanville
Senior Geological Engineer

crs.022895

TABLE 1
SOIL VAPOR READINGS
3M-GREYSTONE SITE
DELTA NO. A094-565

Location	Depth (ft)	Headspace (ppm)	Moisture Content	Odor	Soil Type
SV-1	3	156	moist	strong	SP
SV-2	5	126	moist	strong	SP
SV-3	5	118	moist	strong	SP
SV-4	8	124	moist	strong	SP
SV-5	10	106	moist	strong	SP
SV-6	10	151	moist	strong	SP
SV-7	12	68	moist	mild	SP
SV-8	12	15	moist	mild	SP
SV-9	13	5	moist	none	SP
SV-10	15	2	moist	none	SP
SV-11	9	116	moist	strong	SP
SV-12	10	12	moist	mild	SP
SV-13	10	56	moist	mild	SP
SV-14	13	2	moist	none	SP
SV-15	18	1	moist	none	SP
SV-16	18	0	moist	none	SP
SV-17	18	0	moist	none	SP
SV-18	12	0	moist	none	SP
SV-19	12	0	moist	none	SP
SV-20	12	0	moist	none	SP
SV-21	5	0	moist	none	SP
SV-22	5	0	moist	none	SP
SV-23	12	0	moist	none	SP
SV-24	12	0	moist	none	SP
SV-25	12	0	moist	none	SP
SV-26	5	0	moist	none	SP
SV-27	15	0	moist	none	SP
SV-28	15	0	moist	none	SP
SV-29	15	0	moist	none	SP
SV-30	15	0	moist	none	SP
SV-31	15	0	moist	none	SP
SV-32	18	1	moist	none	SP
SV-33	12	2	moist	none	SP
SV-34	12	0	moist	none	SP
SV-35	13	1	moist	none	SP
SV-36	12	14	moist	mild	SP
SV-37	12	0	moist	none	SP
SV-38	12	10	moist	mild	SP
SV-39	17	0	moist	none	SP
SV-40	12	0	moist	none	SP
SV-41	11	19	moist	mild	SP
SV-42	17	1	moist	none	SP
SV-43	12	0	moist	none	SP
SV-44	12	0	moist	none	SP
SV-45	14	0	moist	none	SP
STOCKPILE-1	--	112	moist	strong	SP
STOCKPILE-2	--	134	moist	strong	SP
BASE SOUTH	18	1	moist	none	SP
BASE CENTER	18	0	moist	none	SP
BASE NORTH	18	0	moist	none	SP
GREY PIPE 1	5	0	moist	none	SP
GREY PIPE 2	5	0	moist	none	SP
GREY PIPE 3	5	0	moist	none	SP
GREY PIPE 4	5	0	moist	none	SP
GREY PIPE 5	5	0	moist	none	SP
BASE SE	17	1	moist	none	SP
BASE SW	17	0	moist	none	SP
SIDEWALL WEST	13	0	moist	none	SP
SIDEWALL SOUTH	13	0	moist	none	SP
SIDEWALL NORTH	13	0	moist	none	SP

TABLE 2
SOIL ANALYTICAL RESULTS
MODIFIED DRO & MODIFIED EPA METHOD 8020
3M-GREYSTONE SITE
DELTA NO. A094-565

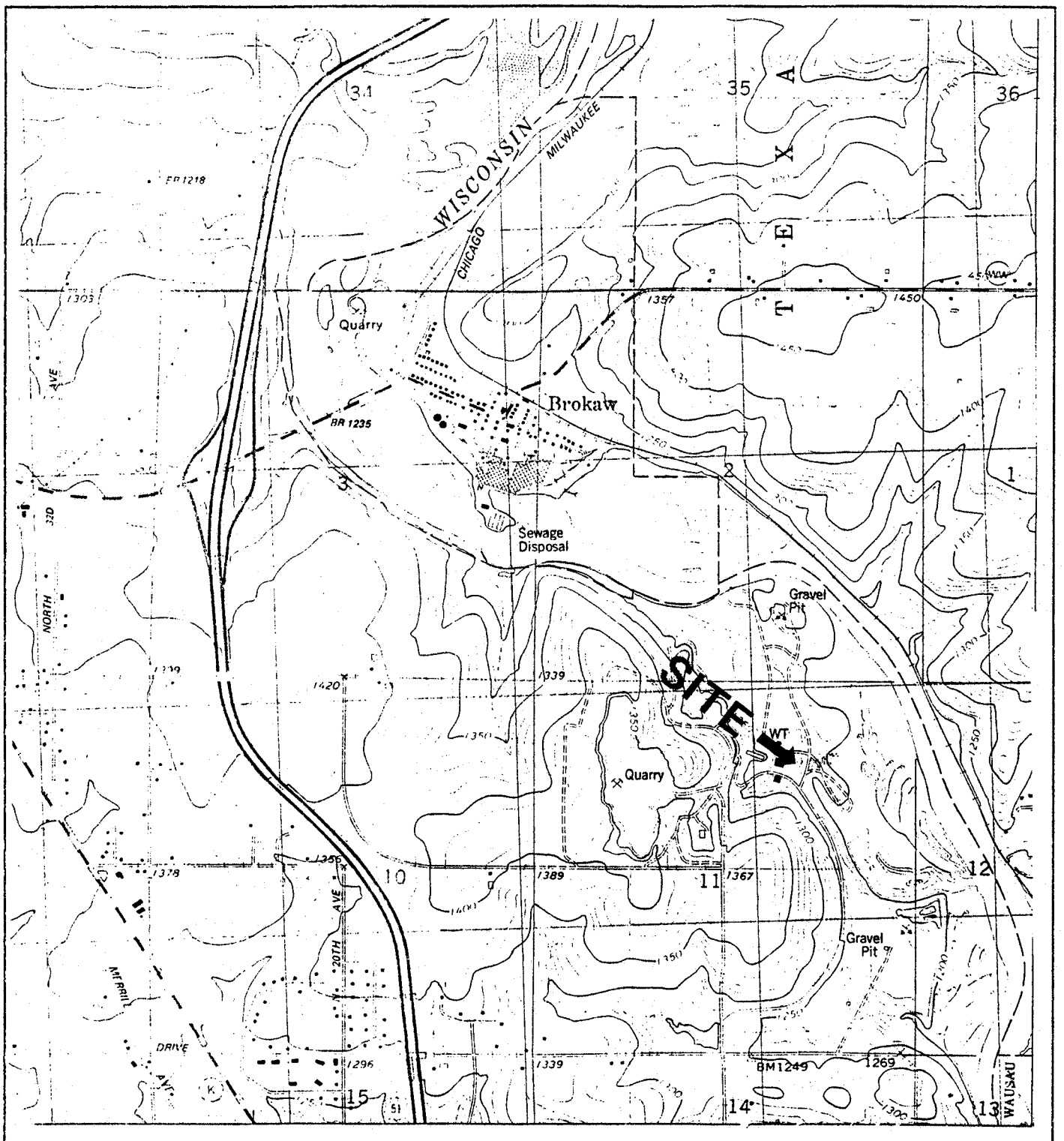
Sample I.D.	Depth (ft)	DRO	MTBE	Benzene	Toluene	Ethyl Benzene	Xylenes	1,3,5-TMB	1,2,4-TMB
STOCKPILE-1	--	6600	ND	ND	0.081	0.23	1.3	1.9	2.7
STOCKPILE-2	--	8700	1.4	ND	ND	BQL	2.4	3.1	4.1
BASE SOUTH	18	ND	NA	NA	NA	NA	NA	NA	NA
BASE CENTER	18	ND	NA	NA	NA	NA	NA	NA	NA
BASE NORTH	18	BQL	NA	NA	NA	NA	NA	NA	NA
GREY PIPE 1	5	ND	NA	NA	NA	NA	NA	NA	NA
GREY PIPE 2	5	BQL	NA	NA	NA	NA	NA	NA	NA
GREY PIPE 3	5	BQL	NA	NA	NA	NA	NA	NA	NA
GREY PIPE 4	5	BQL	NA	NA	NA	NA	NA	NA	NA
GREY PIPE 5	5	ND	NA	NA	NA	NA	NA	NA	NA
BASE SE	17	ND	ND	ND	ND	ND	ND	ND	ND
BASE SW	17	ND	ND	ND	ND	ND	ND	ND	ND
SIDEWALL WEST	13	ND	ND	ND	ND	ND	ND	ND	ND
SIDEWALL SOUTH	13	ND	ND	ND	ND	ND	ND	ND	ND
SIDEWALL EAST	13	ND	ND	ND	ND	ND	ND	ND	ND

ND-Not Detected
NA-Not Analyzed
BQL-Below Quantitation Limit
* All values are in mg/Kg which is equal to parts-per-million

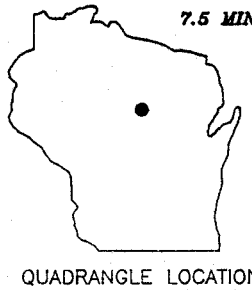
TABLE 3
SOIL ANALYTICAL RESULTS
EPA MODIFIED 8310 (PAH)
3M-GREYSTONE SITE
DELTA NO. A094-565

	BASE SE 17 (ft bgs)	BASE SW 17 (ft bgs)	STOCKPILE 1	STOCKPILE 2
Naphthalene	ND	ND	1200	1700
1-methyl naphthalene	ND	ND	9100	14000
2-methyl naphthalene	ND	ND	7700	14000
Acenaphthylene	ND	ND	2600	3000
Acenaphthene	ND	ND	2100	1900
Fluorene	ND	ND	4400	5300
Phenanthrene	ND	ND	9500	3000
Anthracene	ND	ND	ND	760
Fluoranthene	ND	ND	20000	24000
Pyrene	ND	ND	ND	ND
Benzo (a)-anthracene	ND	ND	1500	1900
Chrysene	ND	ND	ND	170
Benzo (b) fluoranthene	ND	ND	30	22
Benzo (k) fluoranthene	ND	ND	ND	ND
Benzo (a) pyrene	ND	ND	27	ND
Dibenzo (a,h) anthracene	ND	ND	ND	ND
Benzo (ghi) perylene	ND	ND	26	31
Indeno (1,2,3 cd) pyrene	ND	ND	30	34

ND-Not Detected
* All values are in ug/Kg which is equal to parts-per-billion



BROKAW QUADRANGLE
WISCONSIN
7.5 MINUTE SERIES (TOPOGRAPHIC)



QUADRANGLE LOCATION

NORTH

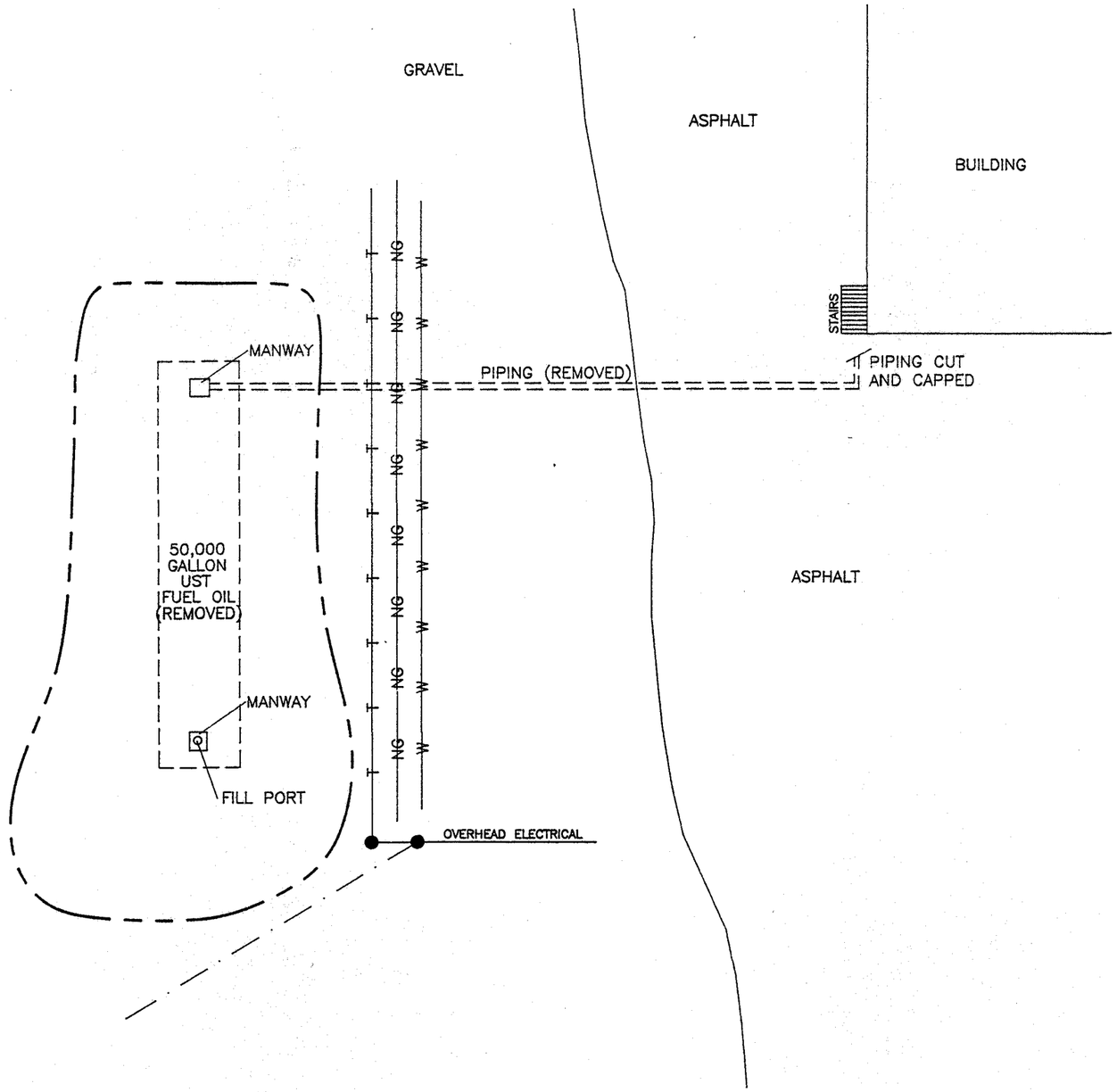
0 2000

SCALE IN FEET

FIGURE 1
SITE LOCATION MAP
3M – GREYSTONE SITE
WAUSAU, WISCONSIN

PROJECT NO.	PREPARED BY	DRAWN BY
A094-565	JAO	KR
DATE	REVIEWED BY	FILE NAME
12/5/94		

Delta Environmental Consultants, Inc.



LEGEND:

- EXCAVATION PERIMETER
- TELEPHONE LINE
- NATURAL GAS LINE
- WATER LINE
- UNDERGROUND ELECTRIC LINE
- ELECTRIC POLE

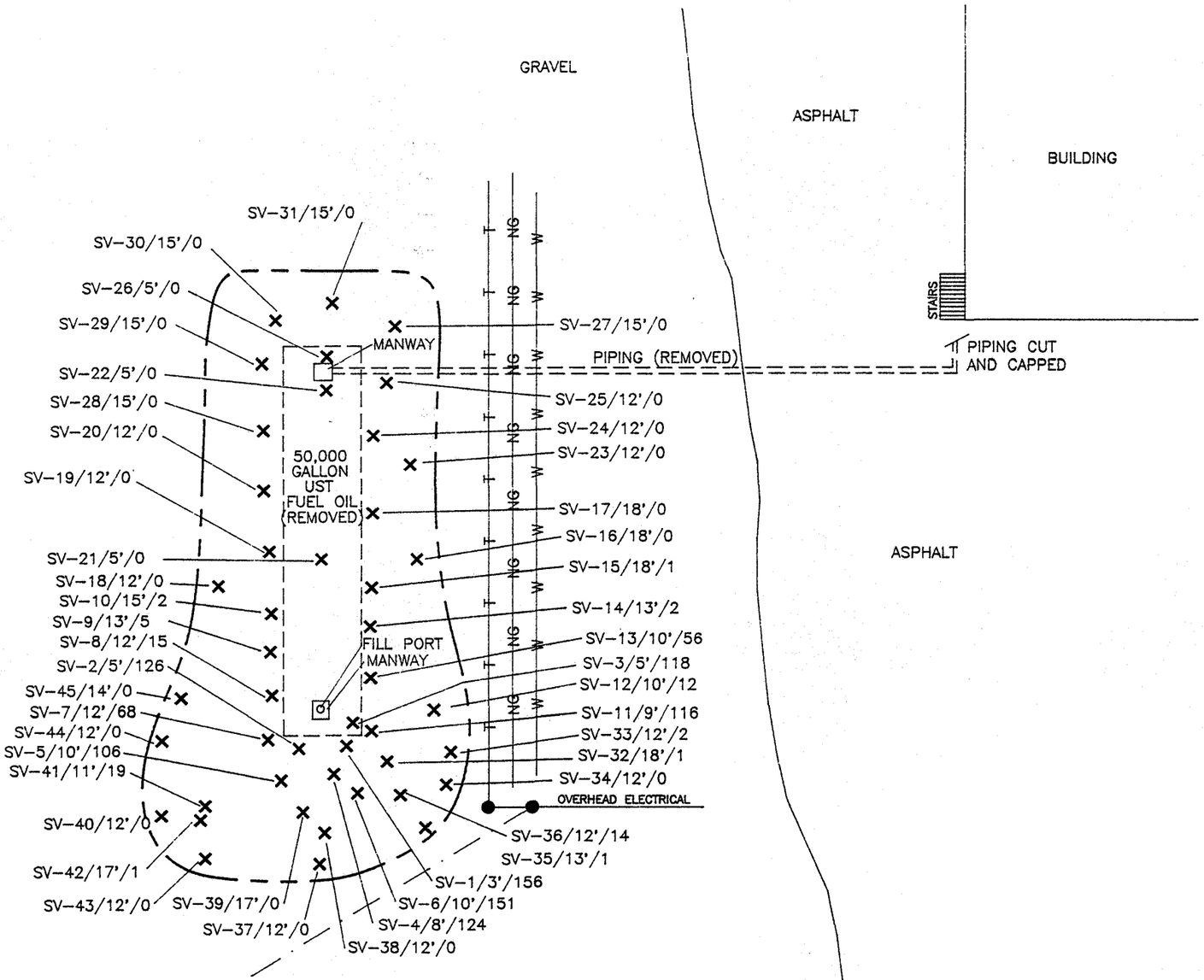
N

0 20

SCALE IN FEET

FIGURE 2
SITE MAP
3M – GREYSTONE SITE
WAUSAU, WI

PROJECT NO.	PREPARED BY	DRAWN BY	
A094-565	JAO	KR	Delta Environmental Consultants, Inc.
DATE	REVIEWED BY	FILE NAME	
11/30/94		94565-2	



LEGEND:

- EXCAVATION PERIMETER
- TELEPHONE LINE
- NATURAL GAS LINE
- WATER LINE
- UNDERGROUND ELECTRIC LINE
- ELECTRIC POLE
- SOIL VAPOR LOCATION
- SOIL VAPOR READINGS

SV-36/12'/14

ppm
DEPTH
I.D.

N

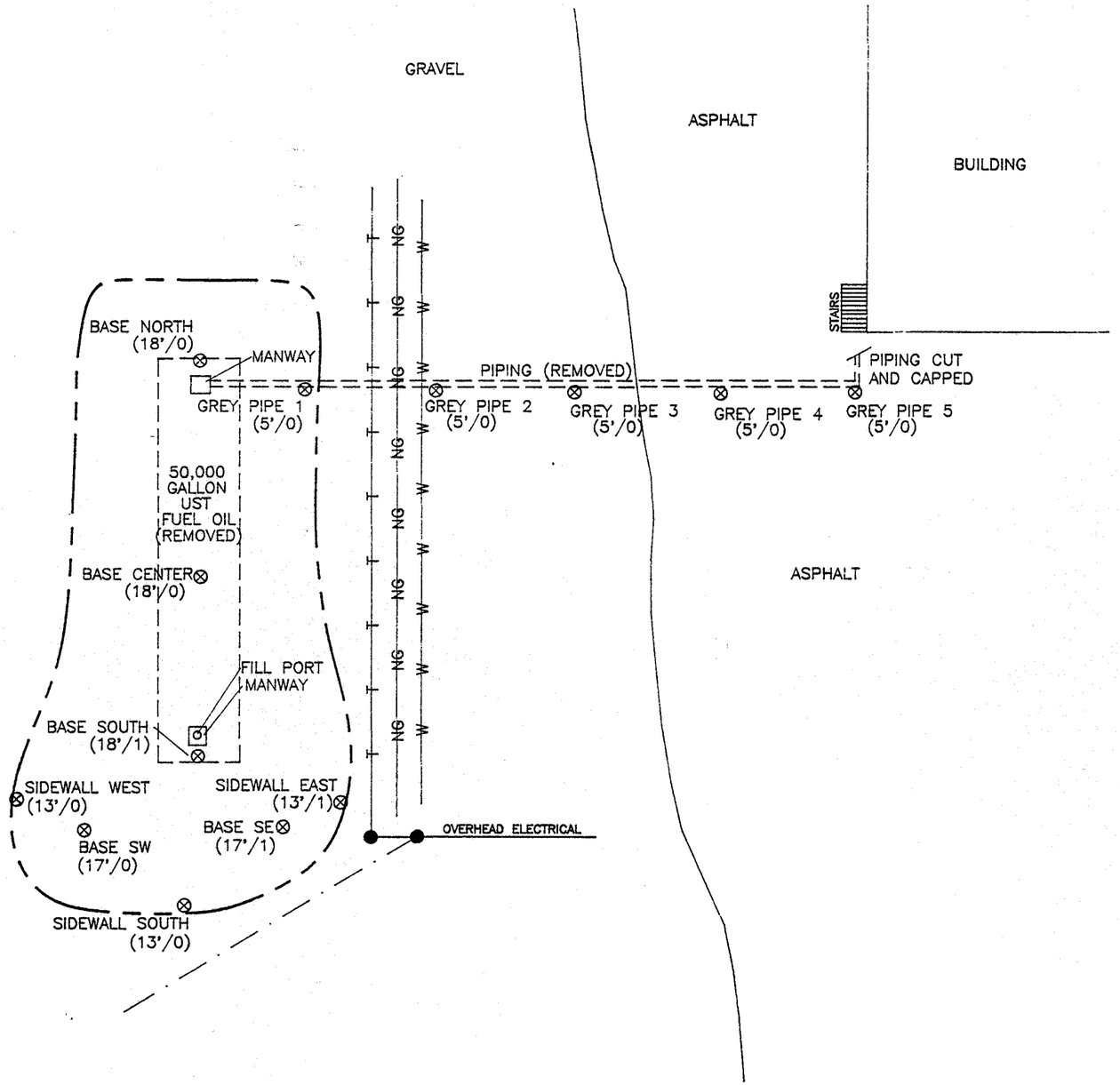
0 20

SCALE IN FEET

FIGURE 3
SOIL VAPOR LOCATIONS
3M – GREYSTONE SITE
WAUSAU, WI

PROJECT NO.	PREPARED BY	DRAWN BY
A094-565	JAO	KR
DATE	REVIEWED BY	FILE NAME
12/4/94		94565-2

Delta Environmental Consultants, Inc.



LEGEND:

- EXCAVATION PERIMETER
- TELEPHONE LINE
- NATURAL GAS LINE
- WATER LINE
- UNDERGROUND ELECTRIC LINE
- ELECTRIC POLE
- ANALYTICAL SOIL SAMPLE LOCATION
- (18'/1) SOIL VAPOR READINGS
  - ppm
  - DEPTH

N

0 20

SCALE IN FEET

FIGURE 4
ANALYTICAL SOIL SAMPLE LOCATION
3M – GREYSTONE SITE
WAUSAU, WI

PROJECT NO.	PREPARED BY	DRAWN BY	
A094–565	JAO	KR	Delta Environmental Consultants, Inc.
DATE	REVIEWED BY	FILE NAME	
12/4/94		94565–2	

SUMMARY OF TEST RESULTS

LOCATION: Graystone Quarry
LL8 Wausau, Wisconsin

DATE: March 24, 1983 CUSTOMER: 3M

COPIES TO: R. Siegel

F I N A L R E P O R T

	TANK SIZE				LEAK LOKATOR RESULTS*			
SYSTEM	GALLONS	DIAMETER INCHES	WATER INCHES	PUMP DISCHARGE PRESSURE TEST	LEVEL INCHES	GPH	CONCLUSION	COMMENTS - RECOMMENDATIONS
#15 Fuel Oil	51,500	144	1	N/A	205	-0.023	Tight	

ADDITIONAL COMMENTS:

OTHER CHARGES: (i.e., pumpovers, overtime, parts, etc.)

LEVEL - INCHES FROM TANK BOTTOM TO TEST LEVEL
GPH - ABSOLUTE LEAK RATE (MEASURED LEAK RATE - TEMPERATURE COMPENSATION) IN GALLONS PER HOUR
CONCLUSION - NFPA 329 STANDARD OF ±0.05 GPH IS USED TO CERTIFY TIGHTNESS.

Leak Lokator

DATE OF TEST: 3-24-83

CONTRACT NUMBER:

T. SUMMARY DATA

STOMER: 3-M CORP.

LOCATION-IDENTIFICATION NUMBER: GREYSTONE QUARRY

NAME:

DRESS: U

CITY: WAUSAU

STATE: WISCONSIN

INSTALLATION AND TANK DATA (SEE LOCATION SCHEMATIC)

O.	SYSTEM PRODUCT	TANK NO.	CAPACITY GALLONS	DIAMETER (INCHES)	MATERIAL	APPROX. AGE (YEARS)	PUMP SYSTEM MAKE	PUMP SYSTEM SUCTION OR REMOTE	PUMP SYSTEM NO. OF NOZZLES	COVER GRADE (INCHES)	COVER TYPE	TANK OPENINGS VAPOR RECOV.	TANK OPENINGS EXT.	TANK OPENINGS FILLS	TANK OPENINGS GAUGES	TANK OPENINGS OTHER
15	Fuel Oil	1	50000	144	Steel	30	—	S	—	207	DIRT	NO	—	1 Rear 3"	1 @ 2"	FIANC ARRESTOR @ 3"

GROUND WATER : DEPTH TO WATER TABLE _____ INCHES

WEATHER	TIME	TEMPERATURE	BAROMETRIC PRESSURE	COMMENTS
BEFORE TEST				
AFTER TEST				

TEST RESULTS SUMMARY — DETAILED TEST CHARTS ATTACHED

O.	SYSTEM PRODUCT	TEST NO.	TEST LEVEL (INCHES)	TIME CLOCK START	TIME DURATION HRS.-MIN.	LEAK RATE CC/DIV	LEAK RATE CC/MIN	TEMPERATURE COMPENSATION TANK NO.	TEMPERATURE COMPENSATION Δ°F	TEMPERATURE COMPENSATION CC/MIN	ABSOLUTE LEAK RATE CC/MIN	ABSOLUTE LEAK RATE GPH	CHECK TEST Y OR N	REMOTE LINE PRESSURE TEST	CONCLUSION
15	Fuel Oil	1	205	1203	31	6.548	-21.280	1	-0.013	-19.825	-1.456	-0.023	Y	N/A	Tight

OTHER INFORMATION

* While tapping off 50 000 gal tank, a severe leak in the union on the suction line was observed by Leak Lokator personnel (See Drawing) Plumber and Team Mgr. rectified problem by tightening down on union. Plumber also informed Walt Lent that he could never get any product from this system while on-line. This was the most probable cause of system failure-Suction Line taking air @ 18#

CERTIFICATION: This is to certify that the above described tank systems were tested using the SUNMARK LEAK LOKATOR. Those indicated as "tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

TEST VAN NO.	TESTS CONDUCTED BY: TANK TESTING SPECIALIST	TANK TESTING SPECIALIST	CERTIFIED BY: SIGNATURE	NAME	TITLE	DATE
L-8	WALTER V. LENT	JOHN F. DONAHUE			TEAM MANAGER	3-24-83

LOKATOR OFFICE USE ONLY

TRAVEL AND TEST TIME

SPECIALIST	LOCAL Y OR N	TO SITE MILES	TO SITE TIME	FROM SITE MILES	FROM SITE TIME	ON SITE TIME	TOTAL TIME	COMMENTS
LENT	Y	5	1/4	5	1/4	6	6 1/2	
DONAHUE	Y	5	1/4	5	1/4	6	6 1/2	

BILLING INFORMATION

TESTING CHARGE BASIC	ADD. SYSTEMS	ADD. TANKS	PUMP OVER	LINE TESTS	TOTAL	SUPPLIED PARTS NO.	ITEM	UNIT PRICE	TOTAL	ADDITIONAL CHARGES EXPLANATION	TOTAL	TOTAL BILLING
												↓

US-138-S-6

Leak Lokator

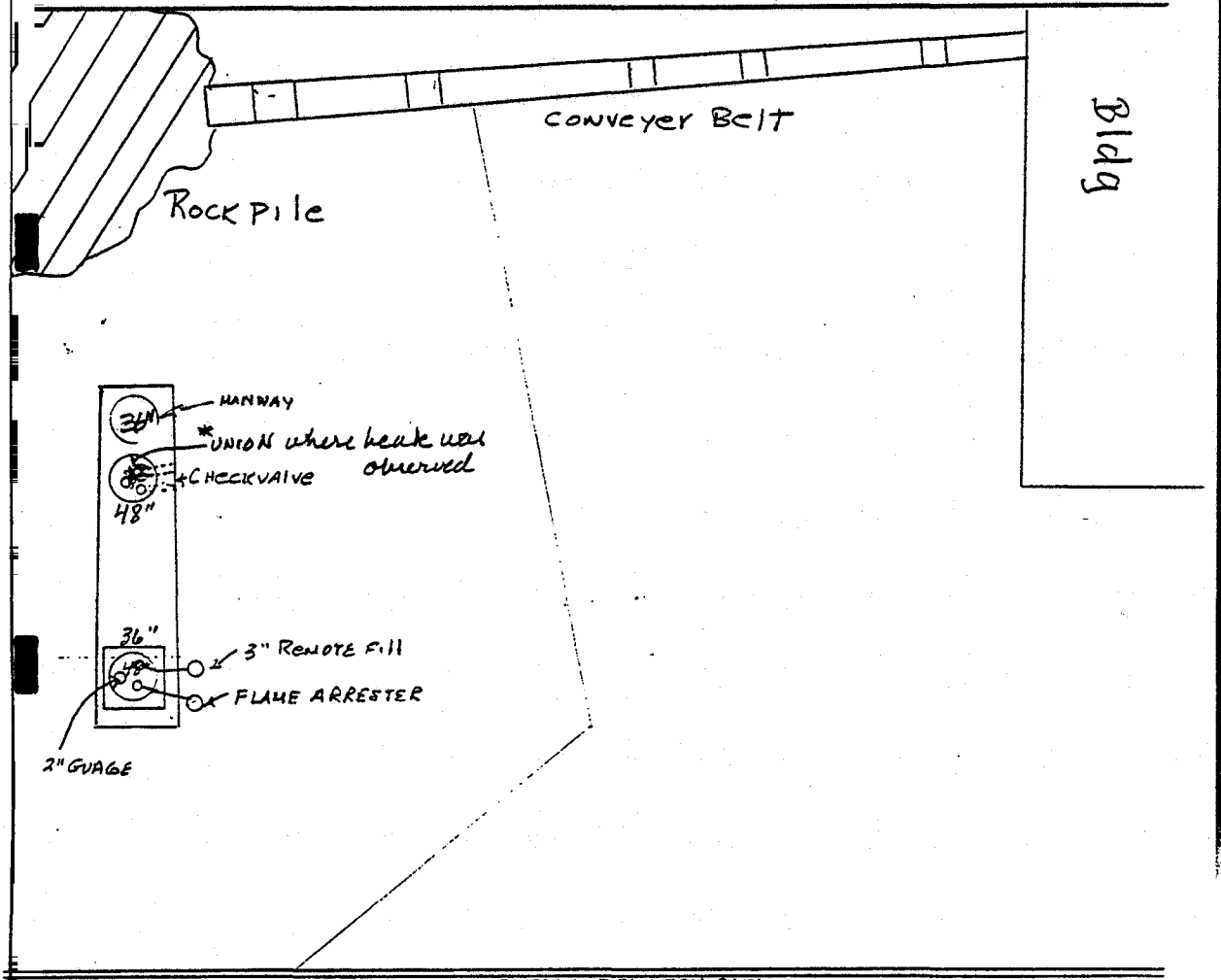
EST LOCATION DATA

DATE 3-24-83

CUSTOMER 3M Corp

LOCATION-ID. Greystone Quarry | CITY Wausau | STATE Wisconsin

SCHEMATIC



BEFORE DELIVERY DATA

SYSTEM NO.	PRODUCT	OPENING	TANK NUMBER 1 GRADE	TOP OF RISER	PRODUCT LEVEL	PRODUCT GALLONS	PRODUCT °F	WATER	DROP TUBE	TANK NUMBER 2 GRADE	TOP OF RISER	PRODUCT LEVEL	PRODUCT GALLONS	PRODUCT °F	WATER	DROP TUBE
	Remote	FILL		238												
1	Fuel oil	GAUGE	204	207	114	43.780		1"	No							
		OTHER														
		FILL														
		GAUGE														
		OTHER														
		FILL														
		GAUGE														
		OTHER														
		FILL														
		GAUGE														
		OTHER														

Leak Locator

TEST DATA SHEET

DATE: 3-24-83

CUSTOMER: 3-M CORP

LOCATION-I.D.: GREYSTONE QUARRY | CITY: WAUSAU | STATE: WISCONSIN

SYSTEM NUMBER: 15 | PRODUCT: FUEL OIL

TEST NUMBER 1

	TIME			NUMBER	LOCATION	DROP TUBE
START	1203	.205	TEMPERATURE PROBE	RED	2" GUAGE	NO
END	1234	204	BALANCE AND SENSOR	#1	2" GUAGE	NO

CALIBRATION

STATION: FLASH ARRESTER RISER | METHOD: 150 cc/ROD

	1	2	3	4	5	6	AVERAGE
CC'S ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{cc}{\text{DIVISION}} = \frac{cc}{\text{MINUTE}} \quad \text{IN } (+) \text{ OR OUT } (-)$$

$$LR = -39/12 \times 150/22.9 = -21.28$$

TEMPERATURE COMPENSATION (TC) CALCULATION

V = 51.500 SYSTEM CAPACITY, GALLONS

Δ°F = -.013 ± TEMPERATURE DIFFERENTIAL, °F

ΔTIME = 60 TIME OF TEMP. DIFFERENTIAL, MINUTES

CE = .0004694 COEFFICIENT OF EXPANSION 1/°F

GRAVITY 35.6 TEMPERATURE, °F 42°

$$TC = \frac{8785 \; G_T \; C_E \; V \; \Delta °F}{\Delta \text{ TIME}} = \frac{cc}{\text{MINUTE}} \quad \text{IN } (+) \text{ OR OUT } (-)$$

TC = -19.824

ABSOLUTE LEAK RATE (ALR) CALCULATION

$$\text{ABSOLUTE LEAK RATE} = \frac{-21.28}{\text{LEAK RATE}} - \frac{-19.824}{\text{TEMP. COMPENSATION}} = \frac{-1.456}{cc/\text{MIN}}$$

$$= \frac{-1.456}{cc/\text{MIN}} \times 0.015852^* = \frac{-0.023}{\text{GAL / HOUR}}$$

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS:

TEST NUMBER 2

Piping and site preparation during this test are the same as TEST NUMBER 1 ☐ yes ☐ no, Explain

	TIME	LEVEL		NUMBER	LOCATION	DROP TUBE
START			TEMPERATURE PROBE			
END			BALANCE AND SENSOR			

CALIBRATION

STATION: | METHOD:

	1	2	3	4	5	6	AVERAGE
CC'S ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{cc}{\text{DIVISION}} = \frac{cc}{\text{MINUTE}} \quad \text{IN } (+) \text{ OR OUT } (-)$$

LR =

TEMPERATURE COMPENSATION (TC) CALCULATION

V = SYSTEM CAPACITY, GALLONS

Δ°F = ± TEMPERATURE DIFFERENTIAL, °F

ΔTIME = TIME OF TEMP. DIFFERENTIAL, MINUTES

CE = COEFFICIENT OF EXPANSION 1/°F

GRAVITY = TEMPERATURE, °F =

$$TC = \frac{8785 \; G_T \; C_E \; V \; \Delta °F}{\Delta \text{ TIME}} = \frac{cc}{\text{MINUTE}} \quad \text{IN } (+) \text{ OR OUT } (-)$$

TC =

ABSOLUTE LEAK RATE (ALR) CALCULATION

$$\text{ABSOLUTE LEAK RATE} = \frac{}{\text{LEAK RATE}} - \frac{}{\text{TEMP. COMPENSATION}} = \frac{}{cc/\text{MIN}}$$

$$= \frac{}{cc/\text{MIN}} \times 0.015852^* = \frac{}{\text{GAL / HOUR}}$$

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS

* 60 MINUTES / HOUR

CUSTOMER 3-M
-8.
ID NO
0.
DATE
830324.

TEST LEVEL
205.
PRODUCT Fuel Oil
-8
TIME START
1203.

ABSOLUTE LEAK RATE

LEAK RATE

CALIBRATIONS
26.3
20.
23.
21.25
24.
22.9
AVG.=
22.908
CC'S +OR-=
150.000
CC'S/DIV.=
6.548
▲DIV=
-39.000
▲CM=
12.000
CM/MIN=
1.000

L.R.=
-21.280

TEMP. COMP.

CE=
0.0004694

GAL.=
51500.
▲TEMP
-0.013
TIME
60.
CONV. FACT=
.85

T.C.=
-19.825

ALR(CC'S/MIN.)=
-1.456

ALR(GPH)=
-0.023

Fuel Oil

CUSTOMER 3-M
-8.
ID NO
0.
DATE
830323.
PRODUCT
0.

COEFF OF EXPANSION

OBS. TEMP.
42.

OBS. API.
35.6

COEFF. =
0.0004694

Leak Lokator

TEM DATA SHEET

DATE 3-24-83

STOMER 3M

LOCATION-ID GREYSTONE QUARRY | CITY WAUSAU | STATE WISCONSIN

STEM NUMBER 15 | PRODUCT Fuel Oil

CROSS SECTIONAL AREA OF RISERS

SIZE	CC/INCH	TANK NUMBER 1 NUMBER	TANK NUMBER 1 CC/INCH	TANK NUMBER 2 NUMBER	TANK NUMBER 2 CC/INCH
4 INCH	208				
3 INCH	120				
2 INCH	54				
1½ INCH	35				
TOTAL		—		—	

TOTAL CC/INCH =

TOTAL GALLONS/INCH =

CAPACITY

GALLONS	TANK NUMBER 1	TANK NUMBER 2
NOMINAL	50000	
CHART	51,500	

4

FROM
- [ ] STATION
- [ ] TANK MANUFACTURER
- [X] COMPANY ENGINEERING DATA
- [ ] LEAK LOKATOR CHARTS
- [ ] OTHER _____

DELIVERY AND TEST LEVEL DATA

LOCATION OF READINGS: NK 1 | TANK 2

TANK TRUCK PRODUCT TEMPERATURE

	TANK NUMBER 1 TIME	LEVEL	GALLONS	NOTES	TANK NUMBER 2 TIME	LEVEL	GALLONS	NOTES
BEFORE DELIVERY		114	43780					
PLUS DELIVERY			7720					
			51,500					

SITE PREPARATION FOR TEST 1 (It is assumed that the conditions described in part 6 are the conditions during test 1)

- [ ] REMOTE/SUBMERSIBLE (DEPTH _____)
- [X] SUCTION (HEIGHT _____)

CHECK VALVE	STRAINER	IMPACT VALVE	CHECK VALVE	STRAINER	SUCTION CONNECTION
[ ] REMOVED	[ ] REMOVED	[ ] CLOSED PLUG-IN	[ ] BURIED	[ ] REMOVED	[ ] UNION
[ ] IN PLACE	[ ] IN PLACE	[ ] CLOSED PLUG-OUT	[ ] EXTRACTABLE	[ ] IN PLACE	[ ] COUPLING
[ ] CLOSED	[ ] REMOVED & REPLACED		[ ] REMOVED	[ ] REMOVED & REPLACED	[ ] OPEN WITH FOIL
[ ] REMOVED & REPLACED	[ ] OTHER _____		[X] IN PLACE	[X] OTHER _____	[ ] IN PLACE
[ ] OTHER _____			[X] OTHER IN LINE ANGLE CHECK	STRAINERS ON DRIER IN Building	[X] OTHER FLANGE

VAPOR RECOVERY

- [X] NO [ ] YES, DESCRIBE (AT RIGHT)
- [ ] STAGE 1 TYPE _____
- [ ] STAGE 2 TYPE _____
- [ ] PLUGS [ ] RISERS [ ] OTHER _____

- [ ] OTHER CONDITIONS (DESCRIBE)

PRESSURE TEST RESULTS (REMOTE/SUBMERSIBLE SYSTEMS ONLY)

TIME OF TEST START	PRESSURE APPLIED	LENGTH OF TIME HELD
	N/A	N/A

RESULTS/COMMENTS

SUN LEAK LOKATOR, 1845 WALNUT STREET, PHILADELPHIA, PA 19107 (215) 972-6111

SUMMARY OF TEST RESULTS

LOCATION: Graystone Quarry — DATE: March 23, 1983 — CUSTOMER: 3M

LL8 Wausau, Wisconsin — COPIES TO: R. Siegel

F I N A L R E P O R T

SYSTEM	TANK SIZE GALLONS	TANK SIZE DIAMETER INCHES	WATER INCHES	PUMP DISCHARGE PRESSURE TEST	LEAK LOKATOR RESULTS* LEVEL INCHES	LEAK LOKATOR RESULTS* GPH	LEAK LOKATOR RESULTS* CONCLUSION	COMMENTS - RECOMMENDATIONS
#11 Gasoline	1000	48	¼	N/A	82	-0.007	Tight	
#12 Kerosene	500	48	2	N/A	82	-0.004	Tight	
#13 Diesel	3500	72	1	N/A	102	-0.042	Tight	
#14 Diesel	3500	72	1	N/A	107	-0.016	Tight	

ADDITIONAL COMMENTS:

OTHER CHARGES: (i.e., pumpovers, overtime, parts, etc.)

*LEVEL - INCHES FROM TANK BOTTOM TO TEST LEVEL
GPH - ABSOLUTE LEAK RATE (MEASURED LEAK RATE - TEMPERATURE COMPENSATION) IN GALLONS PER HOUR
CONCLUSION - NFPA 329 STANDARD OF ±0.05 GPH IS USED TO CERTIFY TIGHTNESS.

eak lokator

DATE TEST: 3-23-83
CONTRACT NUMBER:

TEST SUMMARY DATA

CUSTOMER: 3-M

LOCATION - IDENTIFICATION NUMBER: GREYSTONE QUARRY
NAME:
ADDRESS:
CITY: WAUSAU
STATE: WISCONSIN

INSTALLATION AND TANK DATA (SEE LOCATION SCHEMATIC)

NO.	SYSTEM PRODUCT	TANK NO.	CAPACITY GALLONS	DIAMETER (INCHES)	MATERIAL	APPROX. AGE (YEARS)	PUMP SYSTEM: MAKE	PUMP SYSTEM: SUCTION OR PRESS	PUMP SYSTEM: NO. OF NOZZLES	COVER: GRADE (INCHES)	COVER: TYPE	VAPOR RECOV.	TANK OPENINGS: EXT.	TANK OPENINGS: FILLS	TANK OPENINGS: GAUGES	TANK OPENINGS: OTHER
1	GASOLINE	1	1000	48	Steel	20+	AO SMITH	S	1	81"	Concr. Dirt	NO	—	2"	—	—
12	KEROSENE	1	500	48	"	"	"	"	1	78"	"	"	—	2"	—	—
3	DIESEL	1	3500	72	"	"	"	"	1	110	"	"	—	3"	—	—
14	DIESEL	1	3500	72	"	"	"	"	1	110	"	"	—	3"		3/4 Vent

GROUND WATER: DEPTH TO WATER TABLE _____ INCHES

WEATHER	TIME	TEMPERATURE	BAROMETRIC PRESSURE	COMMENTS
BEFORE TEST				
AFTER TEST				

TEST RESULTS SUMMARY — DETAILED TEST CHARTS ATTACHED

NO.	SYSTEM PRODUCT	TEST NO.	TEST LEVEL (INCHES)	TIME: CLOCK START	TIME: DURATION HRS.-MIN.	LEAK RATE: CC/DIV	LEAK RATE: CC/MIN	TEMPERATURE COMPENSATION: TRANS NO.	TEMPERATURE COMPENSATION: Δ°F	TEMPERATURE COMPENSATION: CC/MIN	ABSOLUTE LEAK RATE: CC/MIN	ABSOLUTE LEAK RATE: GPH	CHECK TEST Y OR N	REMOTE LINE PRESSURE TEST	CONCLUSION
1	GASOLINE	1	82	0935	35	2.381	1.839	1	.037	1.593	1.593	-0.007	Y	N/A	Tight.
12	KEROSENE	1	82	1049	40	0.482	-0.225	1	.003	.048	-0.273	-0.004	Y	N/A	Tight.
13	DIESEL	1	102	0945	45	0.829	2.849	1	.053	5.521	-2.672	-0.042	Y	N/A	Tight.
14	DIESEL	1	107	1312	33	3.077	-5.577	1	-.045	-4.52	-1.001	-0.016	Y	N/A	Tight

OTHER INFORMATION

CONTRACTORS OFFICIALS CUSTOMER REPRESENTATIVES PRESENT

CERTIFICATION: This is to certify that the above described tank systems were tested using the SUNMARK LEAK LOKATOR. Those indicated as "tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.

TESTS CONDUCTED BY: VAN NO.	TANK TESTING SPECIALIST	CERTIFIED BY: SIGNATURE	DATE
LL-8	WALTER V. LENT		3-23-83
	TANK TESTING SPECIALIST: JOHN F. DONAHUE	NAME: W.V. LENT	TITLE: TEAM MANAGER

LEAK LOKATOR OFFICE USE ONLY

TRAVEL AND TEST TIME

SPECIALIST	LOCAL Y OR N	TO SITE: MILES	TO SITE: TIME	FROM SITE: MILES	FROM SITE: TIME	ON SITE TIME	TOTAL TIME	COMMENTS
LENT	Y	5	1/4	5	1/4	7 hrs	7 1/2	
DONAHUE	Y	5	1/4	5	1/4	7 hrs	7 1/2	

BILLING INFORMATION

TESTING CHARGE: BASIC	ADD. SYSTEMS	ADD. TANKS	PUMP OVER	LINE TESTS	TOTAL	SUPPLIED PARTS: NO.	ITEM	UNIT PRICE	TOTAL	ADDITIONAL CHARGES: EXPLANATION	TOTAL	TOTAL BILLING
												↓

US-138-S-6

LN 1383

leak lokator

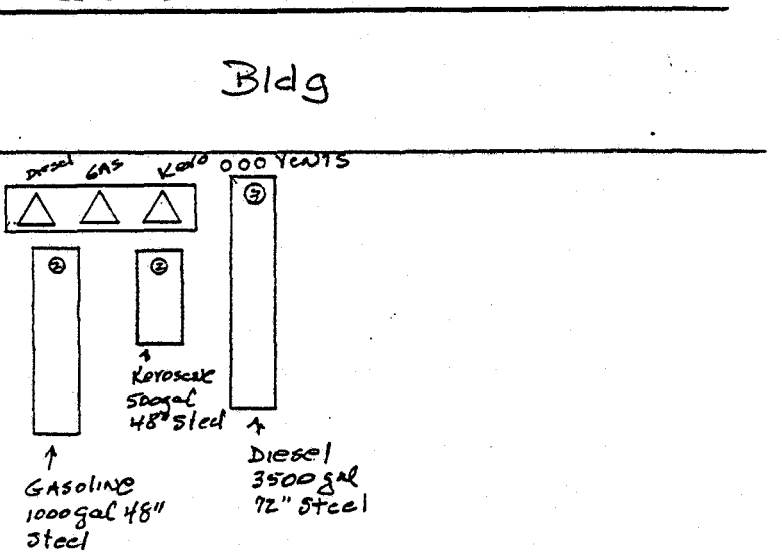
TEST LOCATION DATA

DATE 3-23-83

CUSTOMER 3-M

LOCATION-ID. GREYSTONE QUARRY | CITY WAUSAU | STATE WISCONSIN

SCHEMATIC



BEFORE DELIVERY DATA

SYSTEM NO.	PRODUCT	OPENING	TANK NUMBER 1 GRADE	TOP OF RISER	PRODUCT LEVEL	PRODUCT GALLONS	PRODUCT °F	WATER	DROP TUBE	TANK NUMBER 2 GRADE	TOP OF RISER	PRODUCT LEVEL	PRODUCT GALLONS	PRODUCT °F	WATER	DROP TUBE
1	Gasoline	FILL	81	83	Full	1034		1/4"	0							
		GAUGE	—	—												
		OTHER	—	—												
2	Kerosene	FILL	78	83"	Full	500		2"	0							
		GAUGE	—	—												
		OTHER	—	—												
3	Diesel	FILL	110	114	Full	3500		1"	0							
		GAUGE	—	—												
		OTHER	—	—												
		FILL														
		GAUGE														
		OTHER														

Leak Detector

TEST DATA SHEET

DATE 3-23-83

CUSTOMER 3-M

1 LOCATION-I.D. GREYSTONE QUARRY | CITY WAUSAU | STATE WIS.

SYSTEM NUMBER 11 | PRODUCT GASOLINE

TEST NUMBER 1

	TIME			NUMBER	LOCATION	DROP TUBE
ART	0953	82	TEMPERATURE PROBE	BLACK	FILL	NO
D	1030	82	BALANCE AND SENSOR	#1	FILL	NO

CALIBRATION

CATION FILL | METHOD 25cc ROD

	1	2	3	4	5	6	AVERAGE
CC's ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \quad \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

$LR = \frac{5.5}{15} \times \frac{25}{10.125} = 0.9053$

TEMPERATURE COMPENSATION (TC) CALCULATION

1034 SYSTEM CAPACITY, GALLONS

Δ°F .037 ± TEMPERATURE DIFFERENTIAL, °F

ME 60 TIME OF TEMP. DIFFERENTIAL, MINUTES

.006599 COEFFICIENT OF EXPANSION 1/°F

GRAVITY 53 TEMPERATURE, °F 38°

$TC = \frac{8785 \; G_T \; C_E \; \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

TC = 1.592

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = $\frac{0.9053}{\text{LEAK RATE}} - \frac{1.592}{\text{TEMP. COMPENSATION}} = \frac{-0.6867}{CC/MIN}$

$= \frac{-0.6867}{CC/MIN} \times 0.015852^* = \frac{-0.0108}{GAL/HOUR}$

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS

TEST NUMBER 2

...ions and site preparation during this test are the same as TEST NUMBER 1 ☐ yes ☐ no, Explain

	TIME	LEVEL		NUMBER	LOCATION	DROP TUBE
START			TEMPERATURE PROBE			
S			BALANCE AND SENSOR			

CALIBRATION

LOCATION METHOD

	1	2	3	4	5	6	AVERAGE
C ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \quad \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

LR =

TEMPERATURE COMPENSATION (TC) CALCULATION

S ° SYSTEM CAPACITY, GALLONS

T ± TEMPERATURE DIFFERENTIAL, °F

Δ TIME TIME OF TEMP. DIFFERENTIAL, MINUTES

C COEFFICIENT OF EXPANSION 1/°F

GRAVITY TEMPERATURE, °F

$TC = \frac{8785 \; G_T \; C_E \; \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

TC =

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = $\frac{}{\text{LEAK RATE}} - \frac{}{\text{TEMP. COMPENSATION}} = \frac{}{CC/MIN}$

$= \frac{}{CC/MIN} \times 0.015852^* = \frac{}{GAL/HOUR}$

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS

41944-5

* 60 MINUTES / HOUR ÷ 3785 CC / GALLON = 0.015852

CUSTOMER
0.
ID NO
0.
DATE
830323.

TEST LEVEL
82.
PRODUCT
3.
TIME START
955.

ABSOLUTE LEAK RATE

LEAK RATE

CALIBRATIONS
16.5
9.5
9.
8.
10.
10.
AVG. =
10.500
CC'S +OR-=
25.000
CC'S. DIV. =
2.381
▲DIV=
11.000
▲CM=
23.000
CM/MIN=
1.000

L. R. =
1.139

TEMP. COMP.

CE=
0.0006599

GAL. =
1034.
▲TEMP
0.037
▲TIME
60.
CONV. FACT=
3785.

T. C. =
1.593

ALR(CC'S/MIN.)=
-0.454

ALR(GPH)=
-0.007

Gasoline (Reg)

CUSTOMER 3-M
0
ID NO
0.
DATE
830323.
PRODUCT
3.

COEFF OF EXPANSION

OBS. TEMP.
38.

OBS. API.
53.

COEFF. =
0.0006599

Leak Lokator

SYSTEM DATA SHEET

DATE: 3-23-83

CUSTOMER: 3-M

LOCATION-ID: Greystone Quarry | CITY: Wausau | STATE: Wis.

SYSTEM NUMBER: 11 | PRODUCT: GASOLINE

CROSS SECTIONAL AREA OF RISERS

SIZE	CC/INCH	TANK NUMBER 1 NUMBER	TANK NUMBER 1 CC/INCH	TANK NUMBER 2 NUMBER	TANK NUMBER 2 CC/INCH
4 INCH	208				
3 INCH	120				
2 INCH	54				
1½ INCH	35				
TOTAL		—		—	

TOTAL CC/INCH =

TOTAL GALLONS/INCH =

CAPACITY

GALLONS	TANK NUMBER 1	TANK NUMBER 2
NOMINAL	1000	
CHART	1034	

FROM

- [ ] STATION
- [ ] TANK MANUFACTURER
- [x] COMPANY ENGINEERING DATA
- [ ] LEAK LOKATOR CHARTS
- [ ] OTHER _____

DELIVERY AND TEST LEVEL DATA

LOCATION OF READINGS: TANK 1 | TANK 2

TANK TRUCK PRODUCT TEMPERATURE

	TANK NUMBER 1 TIME	LEVEL	GALLONS	NOTES	TANK NUMBER 2 TIME	LEVEL	GALLONS	NOTES
BEFORE DELIVERY		Full	1034					
PLUS DELIVERY								

SITE PREPARATION FOR TEST 1 (It is assumed that the conditions described in part 6 are the conditions during test.)

- [ ] REMOTE/SUBMERSIBLE (DEPTH _____)
- [x] SUCTION (HEIGHT _____)

REMOTE/SUBMERSIBLE CHECK VALVE	REMOTE/SUBMERSIBLE STRAINER	REMOTE/SUBMERSIBLE IMPACT VALVE	SUCTION CHECK VALVE	SUCTION STRAINER	SUCTION CONNECTION
[ ] REMOVED	[ ] REMOVED	[ ] CLOSED PLUG-IN	[x] BURIED	[ ] REMOVED	[x] UNION
[ ] IN PLACE	[ ] IN PLACE	[ ] CLOSED PLUG-OUT	[ ] EXTRACTABLE	[ ] IN PLACE	[ ] COUPLING
[ ] CLOSED	[ ] REMOVED & REPLACED		[ ] REMOVED	[x] REMOVED & REPLACED	[ ] OPEN WITH FOIL
[ ] REMOVED & REPLACED	[ ] OTHER _____		[ ] IN PLACE	[ ] OTHER _____	[x] IN PLACE
[ ] OTHER _____			[ ] OTHER _____		[ ] OTHER _____

VAPOR RECOVERY

- [ ] NO
- [ ] YES, DESCRIBE (AT RIGHT)
- [ ] STAGE 1 TYPE _____
- [ ] STAGE 2 TYPE _____
- [ ] PLUGS [ ] RISERS [ ] OTHER _____
- [ ] OTHER CONDITIONS (DESCRIBE)

PRESSURE TEST RESULTS (REMOTE/SUBMERSIBLE SYSTEMS ONLY)

TIME OF TEST START | PRESSURE APPLIED: N/A | LENGTH OF TIME HELD: N/A

RESULTS/COMMENTS

Leak Lokator — TEST DATA SHEET

DATE -23-83

CUSTOMER 3-M

LOCATION-I.D. Bveystone Quarry — CITY Wausau — STATE Wis

SYSTEM NUMBER 12 — PRODUCT Kerosene

TEST NUMBER 1

	TIME			NUMBER	LOCATION	DROP TUBE
START	1049	.82	TEMPERATURE PROBE	Red	2" Fill	No
END	1129	82	BALANCE AND SENSOR	#1	2" Fill	No

CALIBRATION

LOCATION 2" Fill — METHOD 25cc Rod

	1	2	3	4	5	6	AVERAGE
CC'S ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

LR = -7/15 × 25/51.875 = -0.225

TEMPERATURE COMPENSATION (TC) CALCULATION

G_T 500 SYSTEM CAPACITY, GALLONS

Δ°F +.003 ± TEMPERATURE DIFFERENTIAL, °F

Δ TIME 60 TIME OF TEMP. DIFFERENTIAL, MINUTES

C_E .0005099 COEFFICIENT OF EXPANSION 1/°F

GRAVITY 42 TEMPERATURE, °F 35

$TC = \frac{3785\ G_T\ C_E\ \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

TC = 0.048

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = -0.225 (LEAK RATE) - 0.048 (TEMP. COMPENSATION) = -2.73 CC/MIN

= -2.73 CC/MIN X 0.015852* = -0.004 GAL/HOUR

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS/ INTERPRETATION/ CONCLUSIONS

TEST NUMBER 2

Conditions and site preparation during this test are the same as TEST NUMBER 1 ☐ yes ☐ no, Explain

	TIME	LEVEL		NUMBER	LOCATION	DROP TUBE
START			TEMPERATURE PROBE			
END			BALANCE AND SENSOR			

CALIBRATION

LOCATION — METHOD

	1	2	3	4	5	6	AVERAGE
CC'S ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

LR =

TEMPERATURE COMPENSATION (TC) CALCULATION

G_T ______ SYSTEM CAPACITY, GALLONS

Δ°F ______ ± TEMPERATURE DIFFERENTIAL, °F

Δ TIME ______ TIME OF TEMP. DIFFERENTIAL, MINUTES

C_E ______ COEFFICIENT OF EXPANSION 1/°F

GRAVITY ______ TEMPERATURE, °F ______

$TC = \frac{3785\ G_T\ C_E\ \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)

TC =

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = ______ LEAK RATE - ______ TEMP. COMPENSATION = ______ CC/MIN

= ______ CC/MIN X 0.015852* = ______ GAL / HOUR

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS/ INTERPRETATION/ CONCLUSIONS

* 60 MINUTES/HOUR ÷ 3785 CC/GALLON

CUSTOMER
0.
ID NO
0.
DATE
830323.

TEST LEVEL
82.
PRODUCT
0.
TIME START
1049.

ABSOLUTE LEAK RATE

LEAK RATE

CALIBRATIONS
51.5
53.75
51.5
51.5
51.
52.
AVG. =
51.875
CC'S +OR-=
25.000
CC'S/DIV. =
0.482
ΔDIV=
-7.000
ΔCM=
15.000
CM/MIN=
1.000

L.R. =
-0.225

TEMP. COMP.

CE=
0.0005099

GAL. =
500.
ΔTEMP
0.003
ΔTIME
60.
CONV. FACT=
3785.

T.C. =
0.048

ALR(CC'S/MIN.)=
-0.273

ALR(GPH)=
-0.004

Kerosene

CUSTOMER 3-M
0.
ID NO
0.
DATE
830323.
PRODUCT
0.

COEFF OF EXPANSION

OBS. TEMP.
35.

OBS. API.
42.

COEFF. =
0.0005099

Leak Lokator

TEM DATA SHEET

DATE 3-23-83

JSTOMER 3-M

LOCATION-ID GREYSTONE QUARRY | CITY WAUSAU | STATE WIS.

YSTEM NUMBER 12 | PRODUCT Kerosene

CROSS SECTIONAL AREA OF RISERS

SIZE	CC/INCH	TANK NUMBER 1 NUMBER	TANK NUMBER 1 CC/INCH	TANK NUMBER 2 NUMBER	TANK NUMBER 2 CC/INCH
INCH	208				
3 INCH	120				
INCH	54				
½ INCH	35				
TOTAL		—		—	

TOTAL CC/INCH =

TOTAL GALLONS/INCH =

CAPACITY

GALLONS	TANK NUMBER 1	TANK NUMBER 2
NOMINAL	500	
CHART	500	

4 FROM

- [ ] STATION
- [ ] TANK MANUFACTURER
- [ ] COMPANY ENGINEERING DATA
- [x] LEAK LOKATOR CHARTS
- [ ] OTHER _____

DELIVERY AND TEST LEVEL DATA

LOCATION OF READINGS: NK 1 | TANK 2

TANK TRUCK PRODUCT TEMPERATURE

	TANK NUMBER 1 TIME	LEVEL	GALLONS	NOTES	TANK NUMBER 2 TIME	LEVEL	GALLONS	NOTES
EFORE DELIVERY		Full	500					
PLUS DELIVERY								

SITE PREPARATION FOR TEST 1 (It is assumed that the conditions described in part 6 are the conditions during test!)

- [ ] REMOTE / SUBMERSIBLE (DEPTH _____)
- [x] SUCTION (HEIGHT _____)

HECK VALVE	STRAINER	IMPACT VALVE	CHECK VALVE	STRAINER	SUCTION CONNECTION
[ ] REMOVED	[ ] REMOVED	[ ] CLOSED PLUG-IN	[x] BURIED	[ ] REMOVED	[x] UNION
[ ] IN PLACE	[ ] IN PLACE	[ ] CLOSED PLUG-OUT	[ ] EXTRACTABLE	[ ] IN PLACE	[ ] COUPLING
[ ] CLOSED	[ ] REMOVED & REPLACED		[ ] REMOVED	[x] REMOVED & REPLACED	[ ] OPEN WITH FOIL
[ ] REMOVED & REPLACED	[ ] OTHER _____		[ ] IN PLACE	[ ] OTHER _____	[x] IN PLACE
[ ] OTHER _____			[ ] OTHER _____		[ ] OTHER _____

VAPOR RECOVERY

- [ ] NO [ ] YES, DESCRIBE (AT RIGHT)
- [ ] STAGE 1 TYPE _____
- [ ] STAGE 2 TYPE _____
- [ ] PLUGS [ ] RISERS [ ] OTHER _____
- [ ] OTHER CONDITIONS (DESCRIBE)

PRESSURE TEST RESULTS (REMOTE / SUBMERSIBLE SYSTEMS ONLY)

E OF TEST START	PRESSURE APPLIED	LENGTH OF TIME HELD
	N/A	N/A

RESULTS / COMMENTS

7

Leak Detector — TEST DATA SHEET

DATE 3-23-83

CUSTOMER 3-M

LOCATION-I.D. GREYSTONE QUARRY | CITY WAUSAU | STATE WIS

SYSTEM NUMBER 13 | PRODUCT Diesel

TEST NUMBER 1

	TIME	LEVEL		NUMBER	LOCATION	DROP TUBE
START	0945	102	TEMPERATURE PROBE	GREEN	3" 711	NO
END	1010	102	BALANCE AND SENSOR	#1	3" 711	NO

CALIBRATION

STATION 3" 711 | METHOD 25cc ROD

	1	2	3	4	5	6	AVERAGE
CC'S ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (−)

$LR = \frac{55}{16} \times \frac{25}{30.166} = +2.848$

TEMPERATURE COMPENSATION (TC) CALCULATION

G_T 3500 SYSTEM CAPACITY, GALLONS

Δ°F .053 ± TEMPERATURE DIFFERENTIAL, °F

ΔE 60 TIME OF TEMP. DIFFERENTIAL, MINUTES

C_E .0004718 COEFFICIENT OF EXPANSION 1/°F

GRAVITY 36 TEMPERATURE, °F 39°

$TC = \frac{.8785\ G_T\ C_E\ \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (−)

TC = 5.52

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = $\frac{2.848}{\text{LEAK RATE}} - \frac{5.52}{\text{TEMP. COMPENSATION}} = \frac{-2.67}{CC/MIN}$

$= \frac{-2.67}{CC/MIN} \times 0.015852^* = \frac{-0.042}{GAL/HOUR}$

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS

TEST NUMBER 2

Conditions and site preparation during this test are the same as TEST NUMBER 1 ☐ yes ☐ no, Explain

	TIME	LEVEL		NUMBER	LOCATION	DROP TUBE
START			TEMPERATURE PROBE			
END			BALANCE AND SENSOR			

CALIBRATION

STATION | METHOD

	1	2	3	4	5	6	AVERAGE
CC'S ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (−)

LR =

TEMPERATURE COMPENSATION (TC) CALCULATION

G_T _____ SYSTEM CAPACITY, GALLONS

Δ°F _____ ± TEMPERATURE DIFFERENTIAL, °F

ΔE _____ TIME OF TEMP. DIFFERENTIAL, MINUTES

C_E _____ COEFFICIENT OF EXPANSION 1/°F

GRAVITY _____ TEMPERATURE, °F _____

$TC = \frac{.8785\ G_T\ C_E\ \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (−)

TC =

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = $\frac{}{\text{LEAK RATE}} - \frac{}{\text{TEMP. COMPENSATION}} = \frac{}{CC/MIN}$

$= \frac{}{CC/MIN} \times 0.015852^* = \frac{}{GAL/HOUR}$

☐ IF ALR > ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS

* 60 MINUTES / HOUR ÷ 231 CC / GALLON

CUSTOMER 3M
0.
ID NO
0.
DATE
830323.

TEST LEVEL
102.
PRODUCT
0.
TIME START
945.

ABSOLUTE LEAK RATE

LEAK RATE

CALIBRATIONS
29.5
32.5
29.5
31.5
28.
30.
AVG. =
30.167
CC'S +OR-=
25.000
CC'S DIV. =
0.829
ΔDIV=
55.000
ΔCM=
16.000
CM/MIN=
1.000

L.R. =
2.849

TEMP. COMP.

CE=
0.0004718

GAL. =
3500.
ΔTEMP
0.053
ΔTIME
60.
CONV.FACT=
3785.

T.C. =
5.521

ALR(CC'S/MIN.)=
-2.672

ALR(GPH)=
-0.042

Diesel

CUSTOMER 3-M
0
ID NO
0.
DATE
830323.
PRODUCT
0.

COEFF OF EXPANSION

OBS. TEMP.
39.

OBS. API.
36.

COEFF. =
0.0004718

Leak Lokator

STEM DATA SHEET

DATE 3-23-83

CUSTOMER 3-M

LOCATION-ID GREYSTONE QUARRY | CITY WAUSAU | STATE WISCONSIN

STEM NUMBER 13 | PRODUCT Diesel

CROSS SECTIONAL AREA OF RISERS

SIZE	CC/INCH	TANK NUMBER 1 NUMBER	TANK NUMBER 1 CC/INCH	TANK NUMBER 2 NUMBER	TANK NUMBER 2 CC/INCH
4 INCH	208				
3 INCH	120				
2 INCH	54				
1½ INCH	35				
TOTAL		—		—	

TOTAL CC/INCH =

TOTAL GALLONS/INCH =

CAPACITY

GALLONS	TANK NUMBER 1	TANK NUMBER 2
NOMINAL	3500	
CHART	3500	

FROM

- [ ] STATION
- [ ] TANK MANUFACTURER
- [x] COMPANY ENGINEERING DATA
- [ ] LEAK LOKATOR CHARTS
- [ ] OTHER _____

DELIVERY AND TEST LEVEL DATA

LOCATION OF READINGS: TANK 1 / TANK 2

TANK TRUCK PRODUCT TEMPERATURE

	TANK NUMBER 1 TIME	LEVEL	GALLONS	NOTES	TANK NUMBER 2 TIME	LEVEL	GALLONS	NOTES
BEFORE DELIVERY		Full	3500					
PLUS DELIVERY								

SITE PREPARATION FOR TEST 1 (It is assumed that the conditions described in part 6 are the conditions during test!)

- [ ] REMOTE / SUBMERSIBLE (DEPTH _____)
- [x] SUCTION (HEIGHT _____)

CHECK VALVE	STRAINER	IMPACT VALVE	CHECK VALVE	STRAINER	SUCTION CONNECTION
[ ] REMOVED	[ ] REMOVED	[ ] CLOSED PLUG-IN	[x] BURIED	[ ] REMOVED	[x] UNION
[ ] IN PLACE	[ ] IN PLACE	[ ] CLOSED PLUG-OUT	[ ] EXTRACTABLE	[ ] IN PLACE	[ ] COUPLING
[ ] CLOSED	[ ] REMOVED & REPLACED		[ ] REMOVED	[x] REMOVED & REPLACED	[ ] OPEN WITH FOIL
[ ] REMOVED & REPLACED	[ ] OTHER _____		[ ] IN PLACE	[ ] OTHER _____	[x] IN PLACE
[ ] OTHER _____			[ ] OTHER _____		[ ] OTHER _____

VAPOR RECOVERY

- [ ] NO [ ] YES, DESCRIBE (AT RIGHT)
- [ ] STAGE 1 TYPE _____
- [ ] STAGE 2 TYPE _____
- [ ] PLUGS [ ] RISERS [ ] OTHER _____
- [ ] OTHER CONDITIONS (DESCRIBE)

PRESSURE TEST RESULTS (REMOTE / SUBMERSIBLE SYSTEMS ONLY)

TIME OF TEST START | PRESSURE APPLIED N/A | LENGTH OF TIME HELD N/A

RESULTS / COMMENTS

leak lokator

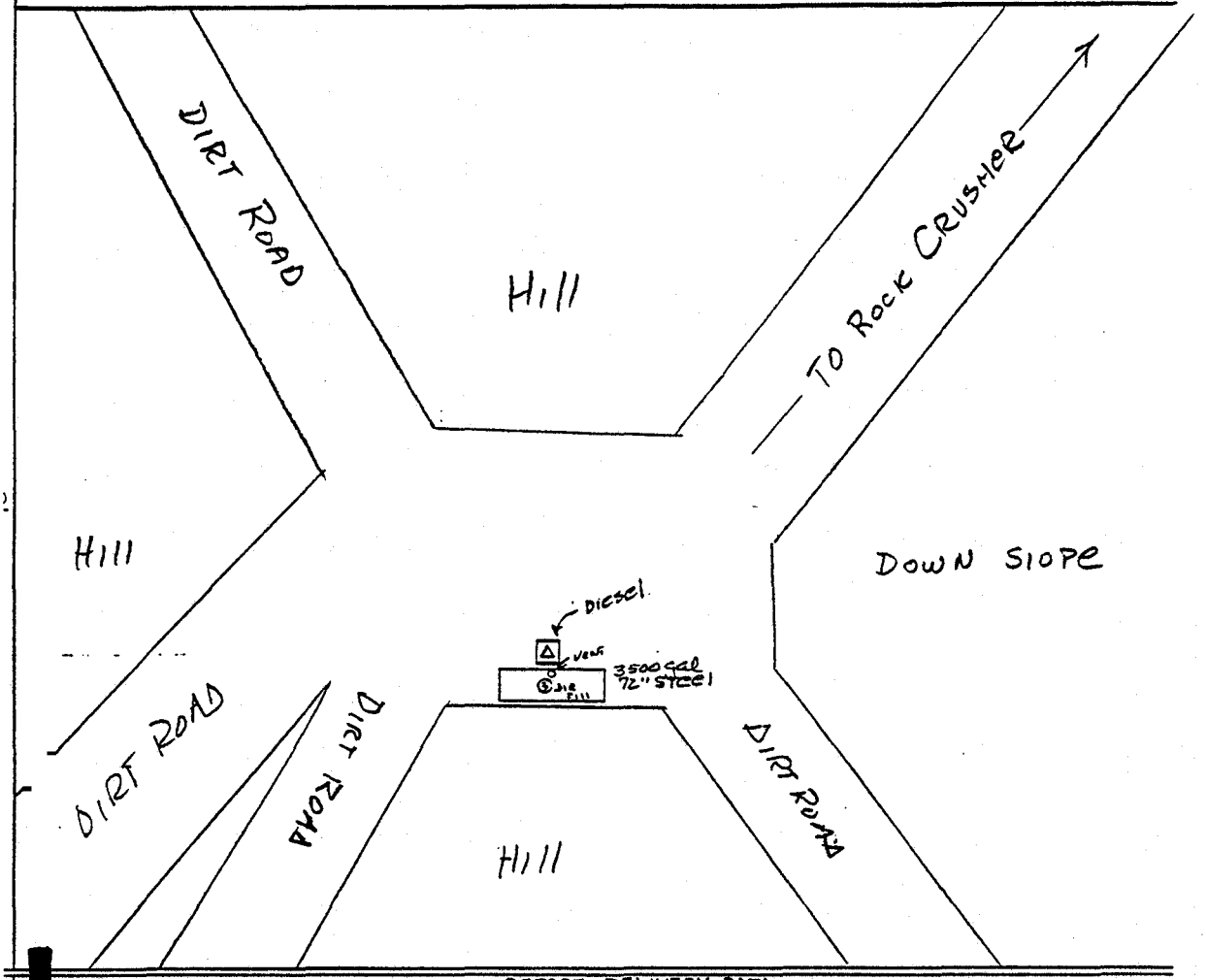
TEST LOCATION DATA

DATE 3-23-83

CUSTOMER 3-M

LOCATION-ID. GREYSTONE QUARRY | CITY WAUSAU | STATE WIS.

SCHEMATIC



BEFORE DELIVERY DATA

SYSTEM NO.	PRODUCT	OPENING	TANK NUMBER 1 GRADE	TOP OF RISER	PRODUCT LEVEL	PRODUCT GALLONS	PRODUCT °F	WATER	DROP TUBE	TANK NUMBER 2 GRADE	TOP OF RISER	PRODUCT LEVEL	PRODUCT GALLONS	PRODUCT °F	WATER	DROP TUBE
14	Diesel	FILL	110	114	107			1"	No							
		GAUGE														
		OTHER														
		FILL														
		GAUGE														
		OTHER														
		FILL														
		GAUGE														
		OTHER														
		FILL														
		GAUGE														
		OTHER														

Leak Lokator

TEST DATA SHEET

DATE 3-23-83

CUSTOMER	3M
LOCATION-I.D.	GREYSTONE QUARRY
CITY	WAUSAU
STATE	WIS.
SYSTEM NUMBER	14
PRODUCT	Diesel

TEST NUMBER 1

	TIME			NUMBER	LOCATION	DROP TUBE
START	1312	107	TEMPERATURE PROBE	RED	3" Fill	No
	1345	106.5	BALANCE AND SENSOR	#1	11	No

CALIBRATION

LOCATION 3/4" VENT METHOD 50cc/ROD

	1	2	3	4	5	6	AVERAGE
ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}} \quad \text{IN } (+) \text{ OR OUT } (-)$$

$$LR = -29/16 \times 50/16.250 = -5.576$$

TEMPERATURE COMPENSATION (TC) CALCULATION

3500 SYSTEM CAPACITY, GALLONS	$TC = \frac{3785\ G_T\ C_E\ \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)
Δ°F -0.045 ± TEMPERATURE DIFFERENTIAL, °F	
Δ TIME 60 TIME OF TEMP. DIFFERENTIAL, MINUTES	
.0006406 COEFFICIENT OF EXPANSION 1/°F	TC = -6.418
GRAVITY 33 TEMPERATURE, °F 39°	

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = $\frac{-5.576}{\text{LEAK RATE}} - \frac{-6.418}{\text{TEMP. COMPENSATION}} = \frac{0.842}{CC/MIN}$

$= \frac{0.842}{CC/MIN} \times 0.015852^{*} = \frac{+0.013}{GAL/HOUR}$

☐ IF ALR ≥ ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS

TEST NUMBER 2

Conditions and site preparation during this test are the same as TEST NUMBER 1 ☐ yes ☐ no, Explain

	TIME	LEVEL		NUMBER	LOCATION	DROP TUBE
START			TEMPERATURE PROBE			
END			BALANCE AND SENSOR			

CALIBRATION

LOCATION METHOD

	1	2	3	4	5	6	AVERAGE
CC ADDED (+) OR REMOVED							
RECORDER READINGS START							
STOP							
Δ DIVISIONS							

AVERAGE CC'S PER DIVISION

LEAK RATE (LR) CALCULATION

$$LR = \frac{\pm \Delta \text{ DIVISIONS}}{\Delta \text{ MINUTE}} \times \text{CALIBRATION}, \frac{CC}{\text{DIVISION}} = \frac{CC}{\text{MINUTE}} \quad \text{IN } (+) \text{ OR OUT } (-)$$

LR =

TEMPERATURE COMPENSATION (TC) CALCULATION

G ______ SYSTEM CAPACITY, GALLONS	$TC = \frac{3785\ G_T\ C_E\ \Delta °F}{\Delta \text{ TIME}} = \frac{CC}{\text{MINUTE}}$ IN (+) OR OUT (-)
Δ ______ ± TEMPERATURE DIFFERENTIAL, °F	
Δ TIME ______ TIME OF TEMP. DIFFERENTIAL, MINUTES	
C ______ COEFFICIENT OF EXPANSION 1/°F	TC =
GRAVITY ______ TEMPERATURE, °F ______	

ABSOLUTE LEAK RATE (ALR) CALCULATION

ABSOLUTE LEAK RATE = $\frac{}{\text{LEAK RATE}} - \frac{}{\text{TEMP. COMPENSATION}} = \frac{}{CC/MIN}$

$= \frac{}{CC/MIN} \times 0.015852^{*} = \frac{}{GAL/HOUR}$

☐ IF ALR ≥ ± 0.05 GPH, A CHECK TEST WAS CONDUCTED WHICH CONFIRMS THE ABOVE RESULTS (CALCULATIONS ON CHART)

☐ SPECIAL CONDITIONS / INTERPRETATION / CONCLUSIONS

* 60 MINUTES / HOUR ÷ [illegible] CC / GALLON = 0.015852

CUSTOMER
0.
ID NO
0.
DATE
830323.

TEST LEVEL
107.
PRODUCT
0.
TIME START
1312.

ABSOLUTE LEAK RATE

LEAK RATE

CALIBRATIONS
18.
17.
17.
16.
15.
14.5
AVG. =
16.250
CC'S +OR-=
50.000
CC'S/DIV. =
3.077
ΔDIV=
-29.000
ΔCM=
16.000
CM/MIN=
1.000

L. R. =
-5.577

TEMP. COMP.

CE=
0.0004606

GAL. =
3500.
ΔTEMP
-0.045
ΔTIME
60.
CONV. FACT=
3785.

T. C. =
-4.576

ALR(CC'S/MIN.)=
-1.001

ALR(GPH)=
-0.016

Diesel

CUSTOMER 3M
0.
ID NO
0.
DATE
830323.
PRODUCT
0.

COEFF OF EXPANSION

OBS. TEMP.
39.

OBS. API.
33.

COEFF. =
0.0004606

Leak Lokator

SYSTEM DATA SHEET

DATE 3-23-83

CUSTOMER 3-M

LOCATION-ID Greystone Quarry CITY Wausau STATE Wis.

SYSTEM NUMBER 14 PRODUCT Diesel

CROSS SECTIONAL AREA OF RISERS

SIZE	CC/INCH	TANK NUMBER 1 NUMBER	TANK NUMBER 1 CC/INCH	TANK NUMBER 2 NUMBER	TANK NUMBER 2 CC/INCH
4 INCH	208				
3 INCH	120				
2 INCH	54				
1½ INCH	35				
TOTAL		—		—	

TOTAL CC/INCH =

TOTAL GALLONS/INCH =

CAPACITY

GALLONS	TANK NUMBER 1	TANK NUMBER 2
NOMINAL	3500	
CHART	3500	

FROM

- ☐ STATION
- ☐ TANK MANUFACTURER
- ☒ COMPANY ENGINEERING DATA
- ☐ LEAK LOKATOR CHARTS
- ☐ OTHER _____

DELIVERY AND TEST LEVEL DATA

LOCATION OF READINGS: TANK 1 / TANK 2

TANK TRUCK PRODUCT TEMPERATURE

	TANK NUMBER 1 TIME	LEVEL	GALLONS	NOTES	TANK NUMBER 2 TIME	LEVEL	GALLONS	NOTES
BEFORE DELIVERY		Full	3500					
PLUS DELIVERY								

SITE PREPARATION FOR TEST 1 (It is assumed that the conditions described in part 6 are the conditions during test 1)

☐ REMOTE / SUBMERSIBLE (DEPTH _____) ☒ SUCTION (HEIGHT _____)

CHECK VALVE	STRAINER	IMPACT VALVE	CHECK VALVE	STRAINER	SUCTION CONNECTION
☐ REMOVED	☐ REMOVED	☐ CLOSED PLUG-IN	☒ BURIED	☐ REMOVED	☒ UNION
☐ IN PLACE	☐ IN PLACE	☐ CLOSED PLUG-OUT	☐ EXTRACTABLE	☐ IN PLACE	☐ COUPLING
☐ CLOSED	☐ REMOVED & REPLACED		☐ REMOVED	☒ REMOVED & REPLACED	☐ OPEN WITH FOIL
☐ REMOVED & REPLACED	☐ OTHER _____		☐ IN PLACE	☐ OTHER _____	☒ IN PLACE
☐ OTHER _____			☐ OTHER _____		☐ OTHER _____

VAPOR RECOVERY

☒ NO ☐ YES, DESCRIBE (AT RIGHT)

☐ STAGE 1 TYPE _____

☐ STAGE 2 TYPE _____

☐ PLUGS ☐ RISERS ☐ OTHER _____

☐ OTHER CONDITIONS (DESCRIBE)

PRESSURE TEST RESULTS (REMOTE / SUBMERSIBLE SYSTEMS ONLY)

TIME OF TEST START	PRESSURE APPLIED	LENGTH OF TIME HELD
	N/A	N/A

RESULTS / COMMENTS

APPENDIX B

Huntingdon

Huntingdon Engineering & Environmental, Inc.
555 South 72nd Avenue (54401)
Post Office Box 1817
Wausau, Wisconsin 54402-1817
(715) 845-4100
Fax: (715) 842-0381

REPORT OF: CHEMICAL ANALYSES

PROJECT: 3M - WAUSAU, GREYSTONE
A094-565
WAUSAU, WISCONSIN

DATE: November 16, 1994

REPORTED TO: Delta Environmental Consultants, Inc.
Attn: Mr. Craig Johnson
3900 Northwoods Drive, Suite 200
St. Paul, MN 55112

PROJECT NO: 8105-95-0019

INTRODUCTION

This report presents the results of the analyses of 15 samples received on November 4, 1994, from Mr. Jared Otto of Delta Environmental Consultants, Inc. The scope of our service was limited to the parameters listed in the attached tables.

METHODOLOGY

Analyses are performed according to Huntingdon Engineering & Environmental, Inc. (Huntingdon) 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 November 1, 2, and 3, 1994. If samples are not consumed in the analysis, they will be held until their designated expiration date, and then disposed, unless written instructions to the contrary are received. PAH samples were forwarded to St. Paul laboratory for analysis. PAH results will be sent under separate cover.

HUNTINGDON ENGINEERING & ENVIRONMENTAL, INC.
Wisconsin Laboratory Certification #737105930

Richard A. Abreu
Chemist

Dennis J. Daigle
Wausau Chemistry Manager

RAA/DJD/tcl

DIESEL RANGE ORGANICS ANALYSIS RESULTS
WISCONSIN MODIFIED DRO
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Base-South	Base-Center	Base-North	
LAB SAMPLE ID:	2643	2644	2645	
Parameter:				Practical Quantitation Limit
Diesel Range Organics (par #78919)	ND	ND	BQL	10
Surrogate Recovery:				
Triacontane:	92%	94%	94%	
Percent Moisture:	9.3%	8.5%	25%	
Date Collected:	11/1/94	11/1/94	11/1/94	
Date Received:	11/4/94	11/4/94	11/4/94	
Date Preserved:	11/4/94	11/4/94	11/4/94	
Date Extracted:	11/7/94	11/7/94	11/7/94	
Date Analyzed:	11/8/94	11/8/94	11/8/94	

ND = Not Detected
N/A = Not Applicable
BQL = Below Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-141, July 1993.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

DIESEL RANGE ORGANICS ANALYSIS RESULTS
WISCONSIN MODIFIED DRO
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Grey-Pipe 1	Grey-Pipe 2	Grey-Pipe 3	
LAB SAMPLE ID:	2646	2647	2648	
Parameter:				Practical Quantitation Limit
Diesel Range Organics (par #78919)	ND	BQL	BQL	10
Surrogate Recovery:				
Triacontane:	89%	81%	93%	
Percent Moisture:	11%	11%	11%	
Date Collected:	11/2/94	11/2/94	11/2/94	
Date Received:	11/4/94	11/4/94	11/4/94	
Date Preserved:	11/4/94	11/4/94	11/4/94	
Date Extracted:	11/7/94	11/7/94	11/7/94	
Date Analyzed:	11/8/94	11/8/94	11/8/94	

ND = Not Detected
N/A = Not Applicable
BQL = Below Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-141, July 1993.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

DIESEL RANGE ORGANICS ANALYSIS RESULTS
WISCONSIN MODIFIED DRO
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Grey-Pipe 4	Grey-Pipe 5	Stockpile 1[1]	
LAB SAMPLE ID:	2649	2650	2651	
Parameter:				Practical Quantitation Limit
Diesel Range Organics (par #78919)	BQL	ND	6600	10 (600)[1]
Surrogate Recovery:				
Triacontane:	96%	91%	N/A[1]	
Percent Moisture:	13%	13%	11%	
Date Collected:	11/2/94	11/3/94	11/3/94	
Date Received:	11/4/94	11/4/94	11/4/94	
Date Preserved:	11/4/94	11/4/94	11/4/94	
Date Extracted:	11/7/94	11/7/94	11/7/94	
Date Analyzed:	11/8/94	11/8/94	11/9/94	

ND = Not Detected
N/A = Not Applicable
BQL = Below Quantitation Limit
[1] Sample "Stockpile 1" was analyzed at a 1:60 dilution. As a result, surrogate data was not available.

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-141, July 1993.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

DIESEL RANGE ORGANICS ANALYSIS RESULTS
WISCONSIN MODIFIED DRO
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Stockpile 2[1]	Base-SE	Base-SW	
LAB SAMPLE ID:	2652	2653	2654	
Parameter:				Practical Quantitation Limit
Diesel Range Organics (par #78919)	8700	ND	ND	10 (750)[1]
Surrogate Recovery:				
Triacontane:	N/A[1]	93%	90%	
Percent Moisture:	11%	6.8%	6.0%	
Date Collected:	11/3/94	11/3/94	11/3/94	
Date Received:	11/4/94	11/4/94	11/4/94	
Date Preserved:	11/4/94	11/4/94	11/4/94	
Date Extracted:	11/7/94	11/7/94	11/7/94	
Date Analyzed:	11/9/94	11/8/94	11/8/94	

ND = Not Detected
N/A = Not Applicable
BQL = Below Quantitation Limit
[1] Sample "Stockpile 2" was analyzed at a 1:75 dilution. As a result, surrogate data was not available.

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-141, July 1993.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

DIESEL RANGE ORGANICS ANALYSIS RESULTS
WISCONSIN MODIFIED DRO
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Sidewall-West	Sidewall-South	Sidewall-East	
LAB SAMPLE ID:	2655	2656	2657	
Parameter:				Practical Quantitation Limit
Diesel Range Organics (par #78919)	ND	ND	ND	10
Surrogate Recovery:				
Triacontane:	94%	94%	88%	
Percent Moisture:	7.3%	5.6%	6.9%	
Date Collected:	11/3/94	11/3/94	11/3/94	
Date Received:	11/4/94	11/4/94	11/4/94	
Date Preserved:	11/4/94	11/4/94	11/4/94	
Date Extracted:	11/7/94	11/7/94	11/7/94	
Date Analyzed:	11/9/94	11/9/94	11/9/94	

ND = Not Detected
N/A = Not Applicable
BQL = Below Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-141, July 1993.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

DIESEL RANGE ORGANICS ANALYSIS RESULTS
WISCONSIN MODIFIED DRO
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	---	
LAB SAMPLE ID:	Method Blank Q94C6325	
Parameter:		Practical Quantitation Limit
Diesel Range Organics (par #78919)	ND	10
Surrogate Recovery:		
Triacontane:	85%	
Percent Moisture:	N/A	
Date Collected:	N/A	
Date Received:	N/A	
Date Preserved:	N/A	
Date Extracted:	11/7/94	
Date Analyzed:	11/8/94	

ND = Not Detected
N/A = Not Applicable
BQL = Below Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-141, July 1993.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

QUALITY CONTROL
DIESEL RANGE ORGANICS ANALYSIS RESULTS
WISCONSIN MODIFIED DRO
(All values are in percent recovery)

LAB SAMPLE ID:	Spike Q94BB422	Replicate Spike Q94BBF66	
Parameter Recovery:			WDNR Acceptance Criteria
Diesel Range Organics (par #78919)	93%	93%	80-120%
Surrogate Recovery:			
Triacontane:	104%	105%	
Date Extracted:	11/6/94	11/6/94	
Date Analyzed:	11/8/94	11/8/94	

N/A = Not Applicable

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

Wisconsin Department of Natural Resources, PUBL-SW-141, July 1993.

Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

PETROLEUM VOLATILE ORGANICS ANALYSIS RESULTS
MODIFIED EPA METHOD 8020
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Stockpile 1[1]	Stockpile 2[1]	
LAB SAMPLE ID:	2651	2652	
Parameter:			Practical Quantitation Limit
Methyl-tert-butyl ether	ND	1.4[1]	0.005 (0.50)[1]
Benzene (par #78124)	ND	ND[1]	0.005 (0.50)[1]
Toluene (par #78131)	0.081	ND[1]	0.005 (0.50)[1]
Ethyl Benzene (par #78113)	0.23	BQL[1]	0.005 (0.50)[1]
Total Xylenes (par #81551)	1.3[1]	2.4[1]	(0.50)[1]
1,3,5-Trimethylbenzene (par #77226)	1.9[1]	3.1[1]	(0.50)[1]
1,2,4-Trimethylbenzene (par #77222)	2.7[1]	4.1[1]	(0.50)[1]
Surrogate Recovery:			
ααα-Trifluorotoluene (PID)	75%, 99%[1]	100%[1]	
Percent Moisture:	11%	11%	
Date Collected:	11/3/94	11/3/94	
Date Received:	11/4/94	11/4/94	
Date Analyzed:	11/7/94, 11/9/94[1]	11/9/94	

N/A = Not Applicable
ND = Not Detected
BQL = Below Quantitation Limit
[1] Chromatograms for samples "Stockpile 1" and "Stockpile 2" indicate the presence of higher boiling hydrocarbons. Noted parameters were analyzed by the high level method at a 1:10 dilution.

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition. Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

PETROLEUM VOLATILE ORGANICS ANALYSIS RESULTS
MODIFIED EPA METHOD 8020
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Base-SE	Base-SW	Sidewall-West	
LAB SAMPLE ID:	2653	2654	2655	
Parameter:				Practical Quantitation Limit
Methyl-tert-butyl ether	ND	ND	ND	0.005
Benzene (par #78124)	ND	ND	ND	0.005
Toluene (par #78131)	ND	ND	ND	0.005
Ethyl Benzene (par #78113)	ND	ND	ND	0.005
Total Xylenes (par #81551)	ND	ND	ND	0.005
1,3,5-Trimethylbenzene (par #77226)	ND	ND	ND	0.005
1,2,4-Trimethylbenzene (par #77222)	ND	ND	ND	0.005
Surrogate Recovery:				
ααα-Trifluorotoluene (PID)	109%	105%	97%	
Percent Moisture:	6.8%	6.0%	7.3%	
Date Collected:	11/3/94	11/3/94	11/3/94	
Date Received:	11/4/94	11/4/94	11/4/94	
Date Analyzed:	11/7/94	11/7/94	11/7/94	

N/A = Not Applicable
ND = Not Detected
BQL = Below Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

PETROLEUM VOLATILE ORGANICS ANALYSIS RESULTS
MODIFIED EPA METHOD 8020
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	Sidewall-West	Sidewall-East	---	
LAB SAMPLE ID:	2656	2657	Blank Q94B2BEF	
Parameter:				Practical Quantitation Limit
Methyl-tert-butyl ether	ND	ND	ND	0.005
Benzene (par #78124)	ND	ND	ND	0.005
Toluene (par #78131)	ND	ND	ND	0.005
Ethyl Benzene (par #78113)	ND	ND	ND	0.005
Total Xylenes (par #81551)	ND	ND	ND	0.005
1,3,5-Trimethylbenzene (par #77226)	ND	ND	ND	0.005
1,2,4-Trimethylbenzene (par #77222)	ND	ND	ND	0.005
Surrogate Recovery:				
ααα-Trifluorotoluene (PID)	105%	103%	104%	
Percent Moisture:	5.6%	6.9%	N/A	
Date Collected:	11/3/94	11/3/94	N/A	
Date Received:	11/4/94	11/4/94	N/A	
Date Analyzed:	11/7/94	11/8/94	11/7/94	

N/A = Not Applicable
ND = Not Detected
BQL = Below Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.
Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

PETROLEUM VOLATILE
ORGANICS ANALYSIS RESULTS
MODIFIED EPA METHOD 8020
(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

Client Sample ID:	---
LAB SAMPLE ID:	Lab MeOH Blank Q94CB483

Parameter:		Practical Quantitation Limit
Methyl-tert-butyl ether	ND	0.050
Benzene (par #78124)	ND	0.050
Toluene (par #78131)	ND	0.050
Ethyl Benzene (par #78113)	ND	0.050
Total Xylenes (par #81551)	ND	0.050
1,3,5-Trimethylbenzene (par #77226)	ND	0.050
1,2,4-Trimethylbenzene (par #77222)	ND	0.050
Surrogate Recovery:		
ααα-Trifluorotoluene (PID)	105 %	
Percent Moisture:	N/A	
Date Collected:	N/A	
Date Received:	N/A	
Date Analyzed:	11/8/94	

N/A = Not Applicable
ND = Not Detected
BQL = Below Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition. Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

QUALITY CONTROL
PETROLEUM VOLATILE
ORGANICS ANALYSIS RESULTS
MODIFIED EPA METHOD 8020
(All values are in percent recovery)

LAB SAMPLE ID:	Spike Q9470FB4	Replicate Spike Q9471E65	
Parameter Recovery:			Acceptance Criteria
Methyl-tert-butyl ether	92%	102%	85-115%
Benzene (par #78124)	92%	99%	85-115%
Toluene (par #78131)	93%	99%	85-115%
Ethyl Benzene (par #78113)	92%	98%	85-115%
Total Xylenes (par #81551)	92%	98%	85-115%
1,3,5-Trimethylbenzene (par #77226)	92%	98%	85-115%
1,2,4-Trimethylbenzene (par #77222)	91%	97%	85-115%
Surrogate Recovery:			
ααα-Trifluorotoluene (PID)	103%	101%	
Date Analyzed:	11/4/94	11/4/94	

N/A = Not Applicable

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

Wisconsin Department of Natural Resources, PUBL-SW-142, April 1992.

Twin City Testing corporation

CHAIN-OF-CUSTODY RECORD

TCT NO. 06390

D.J. Dagel
TCT CONTACT

3M - Wausau, Greystone
PROJECT NAME

A094-5565
CLIENT P.O. # / PROJECT NO.

Delta
BILL TO (CO. NAME, ADDRESS)

Craig Johnson Delta
REPORT TO

Delta Environmental Consultants, Inc.
CLIENT NAME

5900 Northwoods Dr., Suite 200
CLIENT ADDRESS (STREET NUMBER, SUITE, ETC.)

St. Paul, MN 55112
CLIENT ADDRESS (CITY, STATE, ZIP)

Craig Johnson (612) 480-5022
CLIENT CONTACT/ADDRESS IF DIFFERENT FROM ABOVE PHONE

Jared Otto / Jared Otto
SAMPLED BY PRINT NAME/SIGNATURE

POSSIBLE HAZARD: YES ____ UNKNOWN X (COMMENT BELOW)

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

TCT USE ONLY

PROJ. MGR. DJ
PRIORITY Normal
INVOICE # [illegible]
JOB NAME ←
CUSTODY SEAL INTACT/NUMBER Y/N N/A
TEMPERATURE OF CONTAINER Ice
SAMPLE CONDITION Intact

PREPAY Y/N
CHECK NO.
CHECK AMOUNT

ANALYSES REQUEST

FILTERED (YES/NO)
PRESERVED (CODE)
REFRIGERATED (Y/N) X X X

CODE A - NONE
B - HNO3
C - H_2SO_4
D - NaOH
E - HCl
F - ____

Analyses: DRO, PAH (X), PVOC, ~~GRO~~

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED	DRO	PAH	PVOC					NO. OF CONTAINERS	CONTAINER TYPE	TCT NO.
1	Base - SE	Soil	11/3/94	5:15	X	X	X					3	Metal / 4 oz	[illegible]
2	Base - SW		↓	5:00	X	X	X					3	"	[illegible]
3	Sidewall West		↓	5:30	X		X					2	"	[illegible]
4	Sidewall - South		↓	5:40	X		X					2	"	[illegible]
5	Sidewall East		↓	5:50	X		X					2	"	[illegible]
6														
7														
8														
9														
10														

Additional Comments

1. Item No. 1 thru 5 use PVOC for moisture
2. [illegible]

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Jared Otto / Delta	11/4/94	9:45	[signature]	[illegible]	[illegible]
[signature]	11/4/94	10:00			

[redacted] twin city testing corporation

[redacted] CHAIN-OF-CUSTODY RECORD

TCT NO. 06397

D.J. Oagel
TCT CONTACT

SM - Arkansaw , Greystone
PROJECT NAME

A094 - 565
CLIENT P.O. # / PROJECT NO.

Delta
BILL TO (CO. NAME, ADDRESS)

Craig Johnson Delta
REPORT TO

Delta Environmental Consultants, Inc.
CLIENT NAME

5900 Northwoods Dr., Suite 200
CLIENT ADDRESS (STREET NUMBER, SUITE, ETC.)

[illegible]
CLIENT ADDRESS (CITY, STATE, ZIP)

[illegible] Johnson (612) 486-5022
CLIENT CONTACT/ADDRESS IF DIFFERENT FROM ABOVE PHONE

Jared Otto / Jared Otto
SAMPLED BY PRINT NAME/SIGNATURE

POSSIBLE HAZARD: YES ____ UNKNOWN X (COMMENT BELOW)

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

TCT USE ONLY

PROJ. MGR.	DJ
PRIORITY	Norm
INVOICE #	[illegible] 95-19
JOB NAME	
CUSTODY SEAL INTACT/NUMBER Y/N	N/A
TEMPERATURE OF CONTAINER	Ice
SAMPLE CONDITION	Intact

PREPAY Y/N	
CHECK NO.	
CHECK AMOUNT	

ANALYSES REQUEST

FILTERED (YES/NO)
PRESERVED (CODE) — X
REFRIGERATED (Y/N) — X X X X

CODE A - NONE
B - HNO3
C - H_2SO_4
D - NaOH
E - HCl
F ____

Analyses: DRO, PAH, P/VOC, GRO

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED	DRO	PAH	P/VOC	GRO					NO. OF CONTAINERS	CONTAINER TYPE	TCT NO.
1	Base - South	Soil	11/1/94	12:10	X								2	60ml / plastic	2643
2	Base - Center	↓	↓	12:15	X								2	↓	2644
3	Base - North	↓	↓	12:20	X								2	↓	2645
4	Greg Pipe 1	↓	11/2/94	4:30	X								2	↓	2646
5	Greg Pipe 2	↓	↓	4:40	X								2	↓	2647
6	Greg Pipe 3	↓	↓	4:50	X								2	↓	2648
7	Greg Pipe 4	↓	↓	5:00	X								2	↓	2649
8	Greg Pipe 5	↓	11/3/94	10:55	X								2	↓	2650
9	Stockpile 1	↓	↓	3:45	X	X	X						3	60ml / 4 oz.	2651
10	Stockpile 2	↓	↓	3:55	X	X	X						3	↓	2652

Additional Comments

[illegible] Item No. 9 + 10 use PVOC for [illegible] [illegible]

[illegible] All samples to St. Paul [illegible]

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Jared Otto / Delta	11/4/94	9:45	D J Nagle	11/4/94	[illegible]
D J Nagle	11/4/94	16:00			

Huntingdon

Huntingdon Engineering & Environmental, Inc.

737 Pelham Boulevard
St. Paul, Minnesota 55114-1739

(612) 659-7600
FAX (612) 659-7515

REPORT OF: CHEMICAL ANALYSES

PROJECT: 3M-WAUSAU, GREYSTONE, A094-565 **DATE:** November 18, 1994

REPORTED TO: DELTA ENVIRONMENTAL CONSULTANTS INC
Attn: CRAIG JOHNSON
3900 NORTHWOODS DR STE 200
ST PAUL MN 55112

LABORATORY NO: 4411 95-10732
HPN: 10732

INTRODUCTION

This report presents the results of the analyses of four samples received on November 5, 1994, from a representative of Delta Environmental Consultants, Inc. The scope of our services was limited to the parameters listed in the attached tables.

METHODOLOGY

Analyses are performed according to Huntingdon 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 November 3, 1994. If samples are not consumed in the analysis, they are held for two months from the date of sample receipt and then disposed, unless written instructions to the contrary are received.

HUNTINGDON ENGINEERING & ENVIRONMENTAL, INC.

Sharon Cenis
Project Manager

Stephanie Kidder
Laboratory Manager

SC/SK/tb

Huntingdon

POLYNUCLEAR AROMATIC HYDROCARBON RESULTS
EPA METHOD 8310

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

Client ID:	**Method Blank**	**Method Blank**	
TCT ID:			
Parameter:			**PQL**
Naphthalene	ND	ND	500
1-methylnaphthalene	ND	ND	500
2-methylnaphthalene	ND	ND	500
Acenaphthylene	ND	ND	500
Acenaphthene	ND	ND	500
Fluorene	ND	ND	150
Phenanthrene	ND	ND	150
Anthracene	ND	ND	150
Fluoranthene	ND	ND	150
Pyrene	ND	ND	150
Benzo (a) anthracene	ND	ND	10
Chrysene	ND	ND	10
Benzo (b) fluoranthene	ND	ND	10
Benzo (k) fluoranthene	ND	ND	10
Benzo (a) pyrene	ND	ND	10
Dibenzo (a,h) anthracene	ND	ND	10
Benzo (ghi) perylene	ND	ND	10
Indeno (1,2,3 cd) pyrene	ND	ND	10
			QC Limit
% Surrogate Recovery	100%	101%	72-115%
Date Extracted:	11/15/94	11/14/94	
Date Analyzed:	11/15/94	11/15/94	

All results are reported on a dry weight basis.

PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = Terphenyl

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

Huntingdon

POLYNUCLEAR AROMATIC HYDROCARBON RESULTS
EPA METHOD 8310

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

Client ID:	Base-SE	Base-SW	
TCT ID:	44172	44173	
Parameter:			**PQL**
Naphthalene	ND	ND	530
1-methylnaphthalene	ND	ND	530
2-methylnaphthalene	ND	ND	530
Acenaphthylene	ND	ND	530
Acenaphthene	ND	ND	530
Fluorene	ND	ND	160
Phenanthrene	ND	ND	160
Anthracene	ND	ND	160
Fluoranthene	ND	ND	160
Pyrene	ND	ND	160
Benzo (a) anthracene	ND	ND	11
Chrysene	ND	ND	11
Benzo (b) fluoranthene	ND	ND	11
Benzo (k) fluoranthene	ND	ND	11
Benzo (a) pyrene	ND	ND	11
Dibenzo (a,h) anthracene	ND	ND	11
Benzo (ghi) perylene	ND	ND	11
Indeno (1,2,3 cd) pyrene	ND	ND	11
			QC Limit
% Surrogate Recovery	101%	90%	72-115%
Date Extracted:	11/15/94	11/14/94	
Date Analyzed:	11/15/94	11/15/94	

All results are reported on a dry weight basis.

PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = Terphenyl

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

Huntingdon

POLYNUCLEAR AROMATIC HYDROCARBON RESULTS
EPA METHOD 8310

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

Client ID:	**Stockpile 1**[1]	
TCT ID:	44170	
Parameter:		**PQL**
Naphthalene	1,200	560
1-methylnaphthalene	9,100	2,800
2-methylnaphthalene	7,700	2,800
Acenaphthylene	2,600	560
Acenaphthene	2,100	560
Fluorene	4,400	840
Phenanthrene	9,500	4,200
Anthracene	ND	840
Fluoranthene	20,000	4,200
Pyrene	ND	4,200
Benzo (a) anthracene	1,500	280
Chrysene	ND	280
Benzo (b) fluoranthene	30	11
Benzo (k) fluoranthene	ND	11
Benzo (a) pyrene	27	11
Dibenzo (a,h) anthracene	ND	11
Benzo (ghi) perylene	26	11
Indeno (1,2,3 cd) pyrene	30	11
		QC Limit
% Surrogate Recovery	143%[2]	72-115%
Date Extracted:	11/14/94	
Date Analyzed:	11/15-16/94	

All results are reported on a dry weight basis.
PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = Terphenyl

1 The sample chromatogram contained many unresolved peaks. It is likely that in addition to the listed PAHs, other PAHs or similar compounds were also present. Since the quantitative values reported here represent the total contribution from all compounds which gave a positive response at the column retention time of a particular PAH, the actual levels may be lower than the reported values. Under some conditions, the concentration for a compound may be higher than the reported value. Confirmation of the levels of specific PAHs will require an alternative analytical technique which can better isolate and quantify the separate components of the mixture.

2 High surrogate recovery due to matrix interference.

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

Huntingdon

POLYNUCLEAR AROMATIC HYDROCARBON RESULTS
EPA METHOD 8310

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

Client ID:	**Stockpile 2[1]**	
TCT ID:	44171	
Parameter:		**PQL**
Naphthalene	1,700	550
1-methylnaphthalene	14,000	2,800
2-methylnaphthalene	14,000	2,800
Acenaphthylene	3,000	2,800
Acenaphthene	1,900	550
Fluorene	5,300	830
Phenanthrene	3,000	830
Anthracene	760	830
Fluoranthene	24,000	4,100
Pyrene	ND	4,100
Benzo (a) anthracene	1,900	280
Chrysene	170[3]	55
Benzo (b) fluoranthene	22	11
Benzo (k) fluoranthene	ND	11
Benzo (a) pyrene	ND	11
Dibenzo (a,h) anthracene	ND	11
Benzo (ghi) perylene	31	11
Indeno (1,2,3 cd) pyrene	34	11
% Surrogate Recovery	28%[2]	QC Limit 72-115%
Date Extracted:	11/14/94	
Date Analyzed:	11/15-16/94	

All results are reported on a dry weight basis.
PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = Terphenyl

1 The sample chromatogram contained many unresolved peaks. It is likely that in addition to the listed PAHs, other PAHs or similar compounds were also present. Since the quantitative values reported here represent the total contribution from all compounds which gave a positive response at the column retention time of a particular PAH, the actual levels may be lower than the reported values. Under some conditions, the concentration for a compound may be higher than the reported value. Confirmation of the levels of specific PAHs will require an alternative analytical technique which can better isolate and quantify the separate components of the mixture.

2 Low surrogate recovery due to matrix interferences.

3 Peak saturated detector; result is an estimate.

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

LABORATORY NO: 4411 95-10732

166 - 269 212

[redacted] twin city testing corporation

CHAIN [redacted]-CUSTODY [redacted]ECORD

[redacted] TCT [redacted] NO. 00390 99999

TCT CONTACT	D. J. Daigle
PROJECT NAME	3M - Wausau, Graystone
CLIENT P.O. # / PROJECT NO.	4091-565
BILL TO (CO. NAME, ADDRESS)	Delta
REPORT TO	Craig Johnson - Delta

TCT USE ONLY

PROJ. MGR.	DJ · [illegible] 11/7/94
PRIORITY	(RAW) Norm 11/8/94
INVOICE #	8105 95-19
JOB NAME	← HPN 10732
CUSTODY SEAL INTACT/NUMBER Y/N	N/A NA BY
TEMPERATURE OF CONTAINER	Ice [illegible] BY
SAMPLE CONDITION	Intact BDY

PREPAY Y/N	
CHECK NO.	
CHECK AMOUNT	

CLIENT NAME: Delta Environmental Consultants, Inc.

CLIENT ADDRESS (STREET NUMBER, SUITE, ETC.): 3900 Northwoods Dr., Suite 200

CLIENT ADDRESS (CITY, STATE, ZIP): St Paul, MN 55112

CLIENT CONTACT/ADDRESS IF DIFFERENT FROM ABOVE: Craig Johnson PHONE: (612) 486-8022

SAMPLED BY PRINT NAME/SIGNATURE: Jared Otte / Jared Otte

POSSIBLE HAZARD: YES ____ UNKNOWN X (COMMENT BELOW)

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

ANALYSES REQUEST

FILTERED (YES/NO)
PRESERVED (CODE)
REFRIGERATED (Y/N): X X X

CODE A - NONE
B - HNO3
C - H_2SO_4
D - NaOH
E - HCl
F - ____

Analyses: DRO; PAH *8310; PVOC; ~~GRO~~

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED	DRO	PAH	PVOC						NO. OF CONTAINERS	CONTAINER TYPE	TCT NO.
1	Base - SE 44172	Soil	11/3/94	5:15	X	X	X						3	60ml / 4oz	2653
2	Base - SW 44173		↓	5:00	X	X	X						3	"	2654
3	Sidewall - West		↓	5:30	X		X						2	"	2655
4	Sidewall - South		↓	5:40	X		X						2	"	2656
5	Sidewall - East		↓	5:50	X		X						2	"	2657
6															
7															
8															
9															
10															

Additional Comments

[illegible] 1 + 5 use [illegible] for [illegible]

*PAH Samples to St Paul - DJD

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Jared Otte / Delta	11/4/94	9:45	DJ Daigle	11/4/94	09:45
DJ Daigle	11/4/94	16:00	Brian [illegible]	11/5/94	13:15

10.91

* SEE REVERSE SIDE FOR INSTRUCTIONS

[redacted] twin city testing corporation [redacted]

166-264

[redacted] CHAIN-OF-CUSTODY RECORD [redacted]

TCT NO. [redacted] 0039 999999

CLIENT NAME	Delta Environmental Consultants, Inc.
CLIENT ADDRESS (STREET NUMBER, SUITE, ETC.)	3900 Northwoods Dr., Suite 200
CLIENT ADDRESS (CITY, STATE, ZIP)	St. Paul, MN 55112
CLIENT CONTACT/ADDRESS IF DIFFERENT FROM ABOVE / PHONE	Craig Johnson (612) 486-8022
SAMPLED BY PRINT NAME/SIGNATURE	Jared Otto / Jared Otto

TCT CONTACT	D.J. Daigel
PROJECT NAME	3M - Wausau, Greystone
CLIENT P.O. # / PROJECT NO.	A094-565
BILL TO (CO. NAME, ADDRESS)	Delta
REPORT TO	Craig Johnson - Delta

TCT USE ONLY

PROJ. MGR.	DJ · SBC 11/7 km
PRIORITY	Norm 11/8/94
INVOICE #	8105 95-19
JOB NAME	← HPN 10732
CUSTODY SEAL INTACT/NUMBER Y/N	N/A
TEMPERATURE OF CONTAINER	Ice
SAMPLE CONDITION	Intact

PREPAY Y/N	
CHECK NO.	
CHECK AMOUNT	

POSSIBLE HAZARD: YES ____ UNKNOWN X (COMMENT BELOW)

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

ANALYSES REQUEST

FILTERED (YES/NO)
PRESERVED (CODE)
REFRIGERATED (Y/N): X X X X

CODE A - NONE
B - HNO3
C - H_2SO_4
D - NaOH
E - HCl
F - ____

Analyses: DRO | PAH * 8310 | PVOC | GRO

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED	DRO	PAH	PVOC	GRO					NO. OF CONTAINERS	CONTAINER TYPE	TCT NO.
1	Base - South	Soil	11/1/94	12:10	X								2	60 ml / plastic moist.	2643
2	Base - Center	↓	↓	12:15	X								2	↓	2644
3	Base - North	↓	↓	12:20	X								2	↓	2645
4	Greg - Pipe 1	↓	11/2/94	4:30	X								2	↓	2646
5	Greg - Pipe 2	↓	↓	4:40	X								2	↓	2647
6	Greg - Pipe 3	↓	↓	4:50	X								2	↓	2648
7	Greg - Pipe 4	↓	↓	5:00	X								2	↓	2649
8	Greg - Pipe 5 HSN	↓	11/3/94	10:55	X								2	↓	2650
9	BDY Stockpile 1 44170	↓	↓	3:45	X	X	X						3	60 ml / 4 oz.	2651
10	BDY Stockpile 2 44171	↓	↓	3:55	X	X	X						3	↓	2652

Additional Comments

[illegible]

*PAH samples to St. Paul - DJD

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Jared Otto Delta	11/4/94	9:45	DJ Daigle	11/4/94	09:45
DJ Daigle	11/4/94	16:00	Brian [illegible]	11/5/94	[illegible]

SEE REVERSE SIDE FOR INSTRUCTIONS

APPENDIX C

Wisconsin Department of Industry, Labor and Human Relations

Complete one form for each site closure.

CHECKLIST FOR UNDERGROUND TANK CLOSURE

The information you provide may be used by other government agency programs [Privacy Law, s. 15.04 (1) (m)].

RETURN COMPLETED CHECKLIST TO
Safety & Buildings Division
Fire Prevention & Underground Storage Tank Section
P. O. Box 7969, Madison, WI 53707

A. IDENTIFICATION: (Please Print) Indicate whether closure is for: ☒ Tank System ☐ Tank Only ☐ Piping Only

1. Site Name	2. Owner Name
3M Co. - Greystone Plant	3M Corp.
Site Street Address (not P.O. Box)	Owner Street Address
4th & Decatur Dr.	900 Bush Av.
☐ City ☐ Village ☒ Town of:	☒ City ☐ Village ☐ Town of: / State / Zip Code
Maine	St. Paul / MN. / 55144
State / Zip Code / County	County / Telephone No. (include area code)
WI / 54401 / Marathon	( )

3. Closure Company Name (Print)	Closure Company Street Address,
Northwest Pet. Serv.	4080 No 20th Ave
Closure Company Telephone No. (include area code)	Closure Company City, State, Zip Code
(715) 675-2084	Wausau, WI 54401
4. Name of Company Performing Closure Assessment	Assessment Company Street Address, City, State, Zip Code
Delta Environmental Consultants, Inc.	3500 Northwoods Dr., Suite 200, St. Paul, MN 55112
Telephone # (include area code) / Certified Assessor Name (Print) / Assessor Signature	Assessor Certification No.
(612) 486-8022 / Jared A. Otto / Jared Otto	05083

Tank ID #	Closure	Temp. Closure	Closure In Place	Tank Capacity	Contents *	Closure Assessment
1. 37200 0114	☒	☐	☐	50,000	4	☒ Y ☐ N
2.	☐	☐	☐			☐ Y ☐ N
3.	☐	☐	☐			☐ Y ☐ N
4.	☐	☐	☐			☐ Y ☐ N
5.	☐	☐	☐			☐ Y ☐ N
6.	☐	☐	☐			☐ Y ☐ N

* Indicate which product by numeric code: 01-Diesel; 02-Leaded; 03-Unleaded; 04-Fuel Oil; 05-Gasohol; 06-Other; 09-Unknown; 10-Premix; 11-Waste oil; 13-Chemical (indicate the chemical name(s) or numbers(s) _____ _____ _____; 14-Kerosene; 15-Aviation.

Written notification was provided to the local agent 15 days in advance of closure date. ☒ Y ☐ N ☐ NA
All local permits were obtained before beginning closure. ☒ Y ☐ N ☐ NA

Check applicable box at right in response to all statements in Sections B - E.

	Remover Verified	Inspector Verified	NA
B. TEMPORARILY OUT OF SERVICE			
Written inspector approval of temporary closure obtained, which is effective until (provide date) _____	☐ Y ☐ N	☐	☐
1. Product Removed			
a. Product lines drained into tank (or other container) and resulting liquid removed, AND	☐ Y ☐ N	☐	☐
b. All product removed to bottom of suction line, OR	☐ Y ☐ N	☐	☐
c. All product removed to within 1" of bottom.	☐ Y ☐ N	☐	☐
2. Fill pipe, gauge pipe, tank truck vapor recovery fittings, and vapor return lines capped.	☐ Y ☐ N	☐	☐
3. All product lines at the islands or pumps located elsewhere are removed and capped, OR	☐ Y ☐ N	☐	☐
4. Dispensers/pumps left in place but locked and power disconnected.	☐ Y ☐ N	☐	☐
5. Vent lines left open.	☐ Y ☐ N	☐	☐
6. Inventory form filed indicating temporary closure.	☐ Y ☐ N	☐	☐
C. CLOSURE BY REMOVAL			
1. Product from piping drained into tank (or other container).	☒ Y ☐ N	☒	☐
2. Piping disconnected from tank and removed.	☒ Y ☐ N	☒	☐
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☒ Y ☐ N	☒	☐
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☒ Y ☐ N	☒	☐
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. **NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR.**	☒ Y ☐ N	☒	☐
6. Vent lines left connected until tanks purged.	☒ Y ☐ N	☒	☐
7. Tank openings temporarily plugged so vapors exit through vent.	☒ Y ☐ N	☒	☐
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	☒ Y ☐ N	☒	☐
9. Tank removed from excavation after **PURGING/INERTING**; placed on level ground and blocked to prevent movement.	☐ Y ☐ N	☐	☒
10. Tank cleaned before being removed being removed from site.	☒ Y ☐ N	☒	☐

SBD-8951 (R. 06/94)

- CONTINUE ON NEXT PAGE -

C. CLOSURE BY REMOVAL (continued)

	Remover Verified	Inspector Verified	NA
11. Tank labeled in 2" high letters after removal but before being moved from site.	☐ Y ☐ N	☐	☒
NOTE: COMPLETE TANK LABELING SHOULD INCLUDE WARNING AGAINST REUSE; FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE.			
12. Tank vent hole (1/8 th " in uppermost part of tank) installed prior to moving the tank from site.	☐ Y ☐ N	☐	☒
13. Inventory form filed by owner with Safety and Buildings Division indicating closure by removal.	☒ Y ☐ N	☒	☐
14. Site security is provided while the excavation is open.	☒ Y ☐ N	☒	☐

D. CLOSURE IN PLACE

NOTE: CLOSURES IN PLACE ARE ONLY ALLOWED WITH THE PRIOR WRITTEN APPROVAL OF THE DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS OR LOCAL AGENT.

1. Product from piping drained into tank (or other container).			
2. Piping disconnected from tank and removed.	☐ Y ☐ N	☐	☐
3. All liquid and residue removed from tank using explosion proof pumps or hand pumps.	☐ Y ☐ N	☐	☐
4. All pump motors and suction hoses bonded to tank or otherwise grounded.	☐ Y ☐ N	☐	☐
5. Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed.	☐ Y ☐ N	☐	☐
NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH THE USE OF AN EDUCTOR - EDUCTOR OUTPUT 12 FT ABOVE GRADE.			
6. Vent lines left connected until tanks purged.	☐ Y ☐ N	☐	☐
7. Tank openings temporarily plugged so vapors exit through vent.	☐ Y ☐ N	☐	☐
8. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.	☐ Y ☐ N	☐	☐
9. Tank properly cleaned to remove all sludge and residue.	☐ Y ☐ N	☐	☐
10. Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled.	☐ Y ☐ N	☐	☐
11. Vent line disconnected or removed.	☐ Y ☐ N	☐	☐
12. Inventory form filed by owner with Safety and Buildings Division indicating closure in place.	☐ Y ☐ N	☐	☐

E. CLOSURE ASSESSMENTS

NOTE: DETERMINE IF A CLOSURE ASSESSMENT IS REQUIRED BY REFERRING TO ILHR 10.

1. Individual conducting the assessment has a closure assessment plan (written) which is used as the basis for their work on the site.	☒ Y ☐ N	☐	☐
2. Do points of obvious contamination exist?	☒ Y ☐ N	☐	☐
3. Are there strong odors in the soils?	☒ Y ☐ N	☐	☐
4. Was a field screening instrument used to pre-screen soil sample locations?	☒ Y ☐ N	☐	☐
5. Was a closure assessment omitted because of obvious contamination?	☐ Y ☐ N	☐	☐
6. Was the DNR notified of suspected or obvious contamination?	☒ Y ☐ N	☐	☐

Agency, office and person contacted: _____

7. Contamination suspected because of: ☒ Odor ☐ Soil Staining ☐ Free Product ☐ Sheen On Groundwater ☒ Field Instrument Test

F. METHOD OF ACHIEVING 10% LEVEL DESCRIPTION

☐ Educator Or Diffused Air Blower

Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum of 12 feet above ground. Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.

☐ Dry Ice

Dry ice introduced at 1.5 pounds per 100 gallons of tank capacity. Dry ice crushed and distributed over the greatest possible tank area. Dry ice evaporated before proceeding.

☐ Inert Gas (CO/2 or N/2) **NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHERE. THE TANK MAY NOT BE ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT**

Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank opposite the vent. Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing device grounded.

☒ Tank atmosphere monitored for flammable or combustible vapor levels.

Calibrate combustible gas indicator. Drop tube removed prior to checking atmosphere. Tank space monitored at bottom, middle and upper portion of tank. Readings of 10% or less of the lower flammable range (LEL) obtained before removing tank from ground.

G. NOTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW

Contamination source appears to be from overfilling by fill port.

H. REMOVER/CLEANER INFORMATION

Remover Name (print)	Remover Signature	Remover Certification No.	Date Signed
PERRY SCHUETTE	Perry Schuette	00087	10/31/94

I. INSPECTOR INFORMATION

Inspector Name (print)	Inspector Signature	Inspector Certification No.
BRUCE GETTEN	Bruce Getten	28

FDID # For Location Where Inspection Performed	Inspector Telephone Number	Date Signed
3720	715-833-7671	OCT 31, 1994

Wisconsin Department of Industry, Labor and Human Relations

For Office Use Only:
Tank ID # 372000114

UNDERGROUND PETROLEUM PRODUCT TANK INVENTORY

Information Required By Sec. 102.142, Wis. Stats.

Send Completed Form To:
Safety & Buildings Division
P.O. Box 7969
Madison, WI 53707
Telephone: (608) 267-5280

Underground tanks in Wisconsin that have stored or currently store petroleum or regulated substances must be registered. Please see the reverse side for additional information on this program. An underground storage tank is defined as any tank with at least 10 percent of its total volume (included piping) located below ground level. **A separate form is needed for each tank. Send each completed form to the agency designated in the top right corner.** Have you previously registered this tank by submitting a form? ☒ YES ☐ NO If yes, are you correcting/updating information only? ☐ Yes ☐ No

The information you provide may be used by other government agency programs [Privacy Law, s. 15.04 (1) (m)].

This registration applies to a tank that is (check one):
1A. ☐ In Use or 1B. ☐ Newly Installed
2. ☐ Abandoned With Product
3. ☐ Abandoned No Product (empty) or With Water
4. ☒ Closed - Tank Removed
6. ☐ Closed - Filled With Inert Material
7. ☐ Out of Service - Provide Date: _____
8. ☐ Changed Ownership (Indicate new owner below)

Fire Department Providing Fire Coverage Where Tank Located:
MAINE TWP. F.D.
3720

A. IDENTIFICATION: (Please Print)

1. Tank Site Name: 3M Co GreyStone Plant
Site Address: 4th & Decatur
Site Telephone No.: ( )
☐ City ☐ Village ☒ Town of: MAINE
State: WI
Zip Code: 54401
County: MARATHON

2. Owner Name (mail sent here unless indicated otherwise in #3 below): 3M Corp.
Owner Mailing Address (mail sent here unless indicated otherwise in #3): 900 Bush Av.
☒ City St Paul ☐ Village ☐ Town of:
State: MN
Zip Code: 55144
County:

3. Alternate Mailing Name If Different Than #2:
Alternate Mailing Street Address If Different From #2:
☐ City ☐ Village ☐ Town of:
State:
Zip Code:
County:

4. Tank Age (date installed, if known: or years old): 1-1-78
5. Tank Capacity (gallons): 50,000
6. Tank Manufacturer's Name (if known):

B. TYPE OF USER (check one):
1. ☐ Gas Station 2. ☐ Bulk Storage 3. ☐ Utility 4. ☐ Mercantile
5. ☒ Industrial 6. ☐ Government 7. ☐ School 8. ☐ Residential
9. ☐ Agricultural 10. ☐ Other (specify): _____

C. TANK CONSTRUCTION:
1. ☐ Bare Steel 2. ☐ Cathodically Protected and Coated Steel (A. ☐ Sacrificial Anodes or B. ☐ Impressed Current)
3. ☒ Coated Steel 4. ☐ Fiberglass 5. ☐ Other (specify): _____
6. ☐ Relined - Date _____ 7. ☐ Steel - Fiberglass Reinforced Plastic Composite 9. ☐ Unknown

Approval: 1. ☐ Nat'l Std. 2. ☐ UL 3. ☐ Other:
Is Tank Double Walled? ☐ Yes ☒ No
Overfill Protection Provided? ☐ Yes ☐ No If yes, identify type:
Spill Containment? ☐ Yes ☒ No

Tank leak detection method: 1. ☐ Automatic tank gauging 2. ☐ Vapor monitoring 3. ☐ Groundwater monitoring 4. ☐ Inventory control and tightness testing 5. ☐ Interstitial monitoring 6. ☐ Not required at present 7. ☐ Manual Tank Gauging (only for tanks of 1,000 gallons or less)

D. PIPING CONSTRUCTION
1. ☐ Bare Steel 2. ☐ Cathodically Protected and Coated or Wrapped Steel (A. ☐ Sacrificial Anodes or B. ☐ Impressed Current) 3. ☒ Coated Steel
4. ☐ Fiberglass 5. ☐ Other (specify): _____ 9. ☐ Unknown

Piping System Type: 1. ☐ Pressurized piping with: A. ☐ auto shutoff; B. ☐ alarm; or C. ☐ flow restrictor 2. ☐ Suction piping with check valve at tank
3. ☐ Suction piping with check valve at pump and inspectable

Piping leak detection method: used if pressurized or check valve at tank: 1. ☐ Vapor monitoring 2. ☐ Interstitial monitoring
3. ☐ Groundwater monitoring 4. ☐ Tightness testing 5. ☐ Line Leak Detector 6. ☐ Not Required

Approval: 1. ☐ Nat'l Std 2. ☐ UL 3. ☐ Other:
Double Walled: ☐ Yes ☒ No

E. TANK CONTENTS
1. ☐ Diesel 2. ☐ Leaded 3. ☐ Unleaded 4. ☒ Fuel Oil
5. ☐ Gasohol 6. ☐ Other 7. ☐ Empty 8. ☐ Sand/Gravel/Slurry
9. ☐ Unknown 10. ☐ Premix 11. ☐ Waste Oil 12. ☐ Propane
13. ☐ Chemical * _____ _____ _____ 14. ☐ Kerosene 15. ☐ Aviation

* If # 13 is checked, indicate the chemical name(s) or number(s) of the chemical or waste.

If Tank Closed, Give Date (mo/day/yr): OCT 31 1994
Has a site assessment been completed? (see reverse side for details) ☒ Yes ☐ No

If installation of a new tank is being reported, indicate who performed the installation inspection:
1. ☐ Fire Department 2. ☐ DILHR 3. ☐ Other (identify) _____

Name of Owner or Operator (please print): Michael J. Dillon
Indicate Whether: ☐ Owner or ☒ Operator

Signature of Owner or Operator: Michael J. Dillon
Date Signed: OCT 31 1994

SBD-7437 (R. 05/94)

IMPORTANT: Complete as many items on this form as possible. Failure to provide sufficient information may cause you to fall under additional regulations.

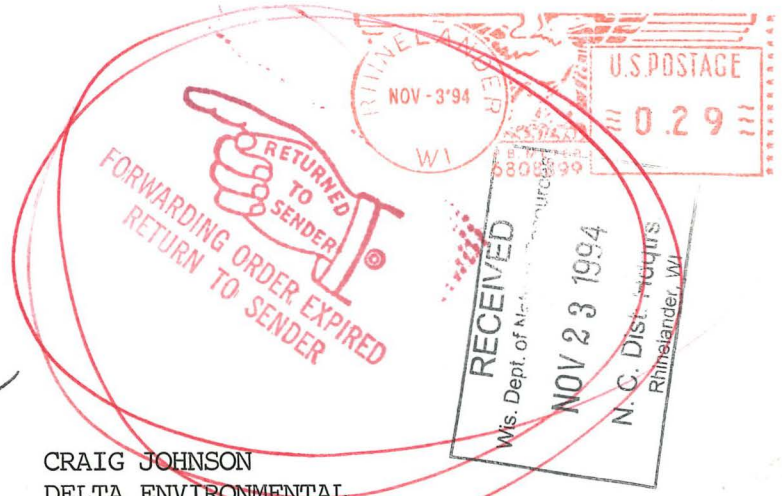
State of Wisconsin

RHINELANDER
54501

DEPARTMENT OF NATURAL RESOURCES
NORTH CENTRAL DISTRICT HEADQUARTERS
BOX 818

#1182

Attempted Not Known
Vacant
No Such Number
Moved Order Expired
Insufficient Address
Refused
Other 43



CRAIG JOHNSON
DELTA ENVIRONMENTAL
1801 HIGHWAY 8 ~~SUITE 114~~
ST PAUL MN 55112

55112-1892 43

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

North Central District Headquarters
Box 818
Rhinelander, Wisconsin 54501
TELEPHONE 715-369-8900
TELEFAX 715-369-8932

November 2, 1994 NCD UID #1186

Mr. Bob Siegel
3M Products
PO Box 33331, Bld-21-2W05
St. Paul, MN 55133

SUBJECT: Reported Contamination at 3M Rock Quarry, 4th Avenue & Decatur Street, Town of Maine, Wisconsin

Dear Mr. Siegel:

On October 31, 1994, the Department of Natural Resources - Leaking Underground Storage Tank Program was notified by you that petroleum contamination was discovered during tank removal activities at the above referenced site.

Based on the information we have received, the Department believes that you are responsible for restoring the environment at this site under Section 144.76, Wisconsin Stats. (hazardous substances spills law). This includes first investigating the extent of the contamination, then selecting and implementing the most appropriate remedial action. Enclosed is information to help you understand what you need to do to ensure your compliance with the spills law.

The purpose of this letter is threefold: 1) to describe your legal responsibilities, 2) to explain what you need to do to investigate and clean up the contamination, and 3) to provide you with information about cleanups, environmental consultants, and working cooperatively with the Department of Natural Resources.

Legal Responsibilities:
Your legal responsibilities are defined both in statute and in administrative rules. The hazardous substances spill law, Section 144.76 (3) Wisconsin Statutes, states:

* RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Codes NR 700 through NR 728 establish requirements for interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Wisconsin Administrative Code NR 140 establishes groundwater standards.

Steps to Take:
The longer contamination is left in the environment the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and to neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and rules, you should hire a professional environmental consultant who understands what needs to be done. The following are the first four steps to take:

1. By December 15, 1994, please submit written verification (such as a letter from the consultant) that you have hired an environmental consultant. You will need to work quickly to meet this timeline.

2. By January 15, 1994, your consultant must submit a workplan and a schedule for conducting the investigation. The consultant must follow the Department's administrative rules and our technical guidance documents. Please include with your workplan a copy of any previous information that has been completed for your site (such as an underground tank removal report, or a preliminary soil excavation report).

3. Please keep us informed of what is being done at your site. You or your consultant must provide us with a brief report at least every 90 days, starting after your workplan is submitted. These quarterly reports should summarize the work completed since the last report. Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. However, please note that should conditions at your site warrant, you may receive a letter requiring more frequent contacts with the Department. You will also receive one annual site status report form in February.

4. When the site investigation is complete, your consultant must submit a full report on the extent and degree of soil and groundwater contamination and a proposal for cleaning up the contamination.

Due to the number of contaminated sites and our staffing levels we will be unable to respond to each report. To maintain your compliance with the spills law and chs. NR 700 through NR 728, do not delay the investigation and cleanup by waiting for DNR responses. We have provided detailed technical guidance to environmental consultants. Your consultant is expected to be familiar with our technical procedures and administrative rules and should be able to answer your questions on meeting Wisconsin's cleanup requirements.

Your correspondence and reports regarding this site should be sent to the Department at the following address: Connie Antonuk, Unit Leader, Emergency & Remedial Response, P.O. Box 818, Rhinelander, WI 54501. Unless otherwise requested, please send only one copy of all plans and reports.

Information for Site Owners:
Enclosed is a list of environmental consultants and some important tips on selecting a consultant. If you are eligible for Wisconsin's PECFA program (see end of letter) you will need to compare at least three consultants' proposals before hiring a consultant. Consultants and laboratories working in the PECFA program are required to carry errors and omissions insurance to help protect you against unsuitable work. Also enclosed are materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method. This information has been prepared to help you understand your responsibilities and what your environmental consultant needs to do. Please read this information carefully.

If you are interested in obtaining the protection of limited liability under s. 144.765, Stats., please contact Mark Giesfeldt at (608) 267-7562 or Darsi Foss at (608) 267-6713, in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 144.765. Stats., is available to persons who meet the definition of "purchaser" in section 144.765(1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

Financial Information:
Reimbursement from the Petroleum Environmental Cleanup Fund (PECFA) is available for the costs of cleaning up contamination from eligible petroleum storage tanks. The fund is administered by the Department of Industry, Labor, and Human Relations (DILHR). Please contact DILHR at (608) 266-2424 for more information on eligibility and regulations for this program.

If you have any questions about this letter or your responsibilities, please call me at (715) 369-8986.

Thank you for your cooperation.

Sincerely,
NORTH CENTRAL DISTRICT

Connie J. Antonuk
Unit Leader
Leaking Underground Storage Tank Program

Enclosures

c: DILHR, Madison
File
Craig Johnson, Delta Environmental, 1801 Hwy 8, Suite 114, St. Paul, MN 55112

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

North Central District Headquarters
Box 818
Rhinelander, Wisconsin 54501
TELEPHONE 715-369-8900
TELEFAX 715-369-8932

November 2, 1994 NCD UID #1186

Mr. Bob Siegel
3M Products
PO Box 33331, Bld-21-2W05
St. Paul, MN 55133

SUBJECT: Reported Contamination at 3M Rock Quarry, 4th Avenue & Decatur Street, Town of Maine, Wisconsin

Dear Mr. Siegel:

On October 31, 1994, the Department of Natural Resources - Leaking Underground Storage Tank Program was notified by you that petroleum contamination was discovered during tank removal activities at the above referenced site.

Based on the information we have received, the Department believes that you are responsible for restoring the environment at this site under Section 144.76, Wisconsin Stats. (hazardous substances spills law). This includes first investigating the extent of the contamination, then selecting and implementing the most appropriate remedial action. Enclosed is information to help you understand what you need to do to ensure your compliance with the spills law.

The purpose of this letter is threefold: 1) to describe your legal responsibilities, 2) to explain what you need to do to investigate and clean up the contamination, and 3) to provide you with information about cleanups, environmental consultants, and working cooperatively with the Department of Natural Resources.

Legal Responsibilities:
Your legal responsibilities are defined both in statute and in administrative rules. The hazardous substances spill law, Section 144.76 (3) Wisconsin Statutes, states:

* RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Codes NR 700 through NR 728 establish requirements for interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Wisconsin Administrative Code NR 140 establishes groundwater standards.

Steps to Take:
The longer contamination is left in the environment the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and to neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and rules, you should hire a professional environmental consultant who understands what needs to be done. The following are the first four steps to take:

1. By December 15, 1994, please submit written verification (such as a letter from the consultant) that you have hired an environmental consultant. You will need to work quickly to meet this timeline.

2. By January 15, 1994, your consultant must submit a workplan and a schedule for conducting the investigation. The consultant must follow the Department's administrative rules and our technical guidance documents. Please include with your workplan a copy of any previous information that has been completed for your site (such as an underground tank removal report, or a preliminary soil excavation report).

3. Please keep us informed of what is being done at your site. You or your consultant must provide us with a brief report at least every 90 days, starting after your workplan is submitted. These quarterly reports should summarize the work completed since the last report. Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. However, please note that should conditions at your site warrant, you may receive a letter requiring more frequent contacts with the Department. You will also receive one annual site status report form in February.

4. When the site investigation is complete, your consultant must submit a full report on the extent and degree of soil and groundwater contamination and a proposal for cleaning up the contamination.

Due to the number of contaminated sites and our staffing levels we will be unable to respond to each report. To maintain your compliance with the spills law and chs. NR 700 through NR 728, do not delay the investigation and cleanup by waiting for DNR responses. We have provided detailed technical guidance to environmental consultants. Your consultant is expected to be familiar with our technical procedures and administrative rules and should be able to answer your questions on meeting Wisconsin's cleanup requirements.

Your correspondence and reports regarding this site should be sent to the Department at the following address: Connie Antonuk, Unit Leader, Emergency & Remedial Response, P.O. Box 818, Rhinelander, WI 54501. Unless otherwise requested, please send only one copy of all plans and reports.

Information for Site Owners:
Enclosed is a list of environmental consultants and some important tips on selecting a consultant. If you are eligible for Wisconsin's PECFA program (see end of letter) you will need to compare at least three consultants' proposals before hiring a consultant. Consultants and laboratories working in the PECFA program are required to carry errors and omissions insurance to help protect you against unsuitable work. Also enclosed are materials on controlling costs, understanding the cleanup process, and choosing a site cleanup method. This information has been prepared to help you understand your responsibilities and what your environmental consultant needs to do. Please read this information carefully.

If you are interested in obtaining the protection of limited liability under s. 144.765, Stats., please contact Mark Giesfeldt at (608) 267-7562 or Darsi Foss at (608) 267-6713, in the Department of Natural Resources' Madison office for more information. The liability exemption under s. 144.765. Stats., is available to persons who meet the definition of "purchaser" in section 144.765(1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

Financial Information:
Reimbursement from the Petroleum Environmental Cleanup Fund (PECFA) is available for the costs of cleaning up contamination from eligible petroleum storage tanks. The fund is administered by the Department of Industry, Labor, and Human Relations (DILHR). Please contact DILHR at (608) 266-2424 for more information on eligibility and regulations for this program.

If you have any questions about this letter or your responsibilities, please call me at (715) 369-8986.

Thank you for your cooperation.

Sincerely,
NORTH CENTRAL DISTRICT

Connie J. Antonuk

Connie J. Antonuk
Unit Leader
Leaking Underground Storage Tank Program

Enclosures

c: DILHR, Madison
File
Craig Johnson, Delta Environmental, 1801 Hwy 8, Suite 114, St. Paul, MN 55112

State of Wisconsin
Department of Natural Resources

TO: NCO L.U.S.T.,

TOXIC AND HAZARDOUS SPILL REPORT

Form 4400-91 Rev. 6-86

State Div. Emergency Gov't. (608) 266-3232
U.S. Nat'l. Response Center (800) 424-8802
Chemtrec/Pesticides/Chlorine (800) 424-9300

Spill ID Number
Y Y M M D D 0-99

03-37-000413

Date of Incident	Day of Week	Time of Incident	Reported By (Name)	Telephone Number
10-31-94	MON	☐ A.M. ☐ P.M.	Bob Siegel	(612) 778-6130
Date Reported	**Day of Week**	**Time Reported**	**Agency or Firm Reporting**	**Reported thru Div. Emergen. Gov't.**
10-31-94	MON	1425 ☐ A.M. ☒ P.M.	SAME	☐ Yes ☐ No

Substance Involved	Quantity	Units	Person or Firm Responsible
Fuel Oil	?		3-M Co.
Substance Involved	**Quantity**	**Units**	**Contact Name / Telephone Number**
			( )

Physical Characteristics
☐ Solid ☒ Liquid Color ____
☐ Semisolid ☐ Gas Odor ____

Address — Street or Route
P.O. BOX 33331

City, State, Zip Code
St. Paul MN 55133

Cause of Incident
L.U.S.T.

Exact Location Description (intersection, mileage, etc.)
4th Ave: Decatur St., Maine, WI

County Location	¼¼, ¼, Section, Town, Range
Marathon	___, ___, ___, T___ N, R___

DNR Dist	DNR Area	Groundwaters Affected
NCO	Antigo	☐ Yes ☐ No ☒ Potential

Surface Waters Affected	Name of Surface Water
☐ Yes ☒ No ☐ Potential	

Date District Notified	Day of Week	Time District Notified
10-31-94	MON	1430 ☐ A.M. ☒ P.M.

District Person Notified	Telephone Number
FAXED	( )

Date Investigated	Day of Week	Time Investigated
		☐ A.M. ☐ P.M.

Person Investigating	Telephone Number
	( )

Action Taken By DNR
☐ No Action Taken ☐ Investigation ☐ Supervise/Conduct Cleanup
☐ Spiller Required To Take Action; Type ____
☐ Contractor Hired By DNR; Name ____
☐ Amount Recovered ____
☐ 29.29 Enforcement

Other Agencies on Scene
Local ____
State ____
Federal ____

Action Taken By Spiller
☒ No Action Taken ☐ No Notification ☐ Investigate
☐ Containment; Type ____
☐ Cleanup; Method ____
☐ Amount Recovered ____
☐ Monitor ____
☐ Contractor Hired; Name ____
☐ Other Action ____

Spill Location
☐ Industrial Facility/Paper Mill/Chem. Co.
☐ Gas/Service Station/Garage, Auto Dealer, Repair Shop
☐ Ag Coop/Facility/Cheese Factory/Creamery
☐ Other Small Business (bank, grocery, insurance co., etc.)
☐ Public Property (city, county, state, church, school, etc.)
☐ Utility Co., Power Generating/Transfer Facility
☐ Private Property (home/farm)
☐ Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler
☐ Transportation Accident, Fuel Supply Tank Spill
☐ Transportation Accident, Load Spill
☐ Construction, Excavation, Wrecking, Quarry, Mine
☒ Other Rock Quarry

Spilled Substance Destination
☐ Air
☒ Soil
☐ Groundwater
☐ Surface Water
☐ Storm Sewer
☐ Sanitary Sewer
☐ Contained/Recovered
☐ Other

RECEIVED
NOV 14 1994
EMERG & REMEDIAL RESPONSE SECTION
BUR OF SOLID & HAZRD WASTE

Person Filing This Report (print name)
Cathy Howard 608-266-2141

Signature Cathy Howard **Date Signed** 10-31-94

Additional Comments:
St. 11 excavating.

DISTRICT

State of Wisconsin
Department of Natural Resources

TO: NCD L.U.S.T.

State Div. Emergency Gov't. (608) 266-3232
U.S. Nat'l. Response Center (800) 424-8802
Chemtrec/Pesticides/Chlorine (800) 424-9300

TOXIC AND HAZARDOUS SPILL REPORT

Form 4400-91 Rev. 6-86

Spill ID Number
_ _ _ _ _ _ _ _ _ _
Y Y M M D D 0-99

Date of Incident: 10-31-94	Day of Week: MON	Time of Incident: ☐ A.M. ☐ P.M.	Reported By (Name): Bob Siegel	Telephone Number: (612) 778-6130	
Date Reported: 10-31-94	Day of Week: MON	Time Reported: 1425 ☐ A.M. ☒ P.M.	Agency or Firm Reporting: SAME	Reported thru Div. Emergen. Gov't. ☐ Yes ☐ No	
Substance Involved: fuel oil	Quantity: ?	Units:	Person or Firm Responsible: 3-M Co.		
Substance Involved:	Quantity:	Units:	Contact Name:	Telephone Number: ( )	

#1186

Physical Characteristics
☐ Solid ☒ Liquid Color
☐ Semisolid ☐ Gas Odor

Address — Street or Route: P.O. BOX 33331

City, State, Zip Code: St Paul MN 55133

Cause of Incident: L.U.S.T.

Exact Location Description (intersection, mileage, etc.): 4th Ave: Decatur St, Maine,

County Location: Marathon

¼¼, ¼, Section, Town, Range: WI
___, ___, ___, T___N, R___

DNR Dist: NCD DNR Area: Antigo

Groundwaters Affected ☐ Yes ☐ No ☒ Potential

Surface Waters Affected ☐ Yes ☒ No ☐ Potential

Name of Surface Water:

Date District Notified: 10-31-94 Day of Week: MON Time District Notified: 1430 ☐ A.M. ☒ P.M.

District Person Notified: FAXED Telephone Number: ( )

Date Investigated: Day of Week: Time Investigated: ☐ A.M. ☐ P.M.

Person Investigating: Telephone Number: ( )

Action Taken By DNR

☐ No Action Taken ☐ Investigation ☐ Supervise/Conduct Cleanup

☐ Spiller Required To Take Action; Type

☐ Contractor Hired By DNR; Name

☐ Amount Recovered

☐ 29.29 Enforcement

Other Agencies on Scene

Local

State

Federal

Action Taken By Spiller

☒ No Action Taken ☐ No Notification ☐ Investigate

☐ Containment; Type

☐ Cleanup; Method

☐ Amount Recovered

☐ Monitor

☐ Contractor Hired; Name

☐ Other Action

RECEIVED
Wis. Dept. of Natural Resources
FEB 14 1995
N. C. Dist. Hdqtrs.
Rhinelander, WI

Spill Location

☐ Industrial Facility/Paper Mill/Chem. Co.
☐ Gas/Service Station/Garage, Auto Dealer, Repair Shop
☐ Ag Coop/Facility/Cheese Factory/Creamery
☐ Other Small Business (bank, grocery, insurance co., etc.)
☐ Public Property (city, county, state, church, school, etc.)
☐ Utility Co., Power Generating/Transfer Facility
☐ Private Property (home/farm)
☐ Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler
☐ Transportation Accident, Fuel Supply Tank Spill
☐ Transportation Accident, Load Spill
☐ Construction, Excavation, Wrecking, Quarry, Mine
☒ Other Rock Quarry

Spilled Substance Destination

☐ Air
☒ Soil
☐ Groundwater
☐ Surface Water
☐ Storm Sewer
☐ Sanitary Sewer
☐ Contained/Recovered
☐ Other

RECEIVED
NOV 1 1994
EMERG & REMEDIAL RESPONSE SECTION
BUR OF SOLID & HAZRD WASTE

Person Filing This Report (print name): Cathy Howard 608 266-2141

Signature: Cathy Howard Date Signed: 10 31-94

Additional Comments:
St. 11 excavating.

REA

54417-9999-00-A

jlc

Department of Natural Resources

File Transfer: 3-17-98

LEAKING UNDERGROUND STORAGE TANK (Case Tracking)
Form 4400-146 Rev. 9-92

UID Number	FID Number	PMN Number
1186		

County: Marathon
Site Name: 3-M Greystone Plant
Address: 4th Ave & Decatur St
Municipality: Brokaw
Legal Descript.:
____1/4____1/4 Sec.____T____N R____(E/W)

Initial Contact Date: 10/31/94
Date RP Letter Sent: 11/2/94
Date Closure Approved: 3/27/98

Person/Firm Reporting: Bob Siegel, 3-M Products
Phone Number: 612/778-6130

Priority Screening
___1 = High
___2 = Medium
___3 = Low
___4 = Unknown

Scoring Criteria
1. _____
2. _____
3. _____
4. _____
5. _____
Score_____Init._____ Date ___/___/___

Funding Source
___1 = RP
___2 = LTF
___3 = EF
___4 = Other

Effective Date
___/___/___
___/___/___
___/___/___
___/___/___

LUST Trust Eligible
___1 = Federal
___2 = Non-Federal

CASE STATUS	Start Date	End Date
___ (N) No Action Taken		
___ (E) RP Emergency Response	___/___/___	___/___/___
___ (R) LTF Emergency Response	___/___/___	___/___/___
___ (L) Long Term Monitoring	___/___/___	___/___/___

Responsible Party:
Company Name: 3-M Products
Contact Person: Bob Siegel
Address: PO Box 33331 Bld-21-2W05
St Paul MN 55133
Telephone: 612/778-6130

CC's:_____

Impacts:
Enter "P" for potential and "K" for known
___ (1) Fire/Explosion Threat
___ (2) Contaminated Private Well(s) ___# of Wells
___ (3) Contaminated Public Well
P (4) Groundwater Contamination
K (5) Soil Contamination
___ (6) Other: _____
___ (7) Surface Water Impacts
___ (9) Floating Product

Consultant:
Company Name: Delta
Contact Name: Craig Johnson
Address: _____
Telephone: 612/486-5807

Substances:	# Tank(s)	Size
___ (1) Leaded Gas		
___ (2) Unleaded Gas		
___ (3) Diesel		
✓ (4) Fuel Oil		50,000
___ (5) Unkwn Hydrocrbn		
___ (8) Other		
___ (12) Waste Oil		

State of Wisconsin
Department of Natural Resources

TO: NCO L.U.S.T.

Form 4400-91 Rev. 6-86

State Div. Emergency Gov't. (608) 266-3232
U.S. Nat'l. Response Center (800) 424-8802
Chemtrec/Pesticides/Chlorine (800) 424-9300

Spill ID Number
Y Y M M D D 0-99

Date of Incident 10-31-94	Day of Week MON	Time of Incident ☐ A.M. ☐ P.M.	Reported By (Name) Bob Siegel	Telephone Number (612) 778-6130	
Date Reported 10-31-94	Day of Week MON	Time Reported 1425 ☐ A.M. ☒ P.M.	Agency or Firm Reporting SAME	Reported thru Div. Emergen. Gov't. ☐ Yes ☐ No	
Substance Involved Fuel Oil	Quantity ?	Units	Person or Firm Responsible 3-M Co.		
Substance Involved	Quantity	Units	Contact Name	Telephone Number ( )	

Physical Characteristics
☐ Solid ☒ Liquid Color
☐ Semisolid ☐ Gas Odor

Address — Street or Route P.O. BOX 33331
City, State, Zip Code St. Paul MN 55133

Cause of Incident L.U.S.T.

Exact Location Description (intersection, mileage, etc.) 445 Am: Decatur St. Maine, WI

County Location Marathon

¼¼, ¼, Section, Town, Range ___, ___, ___, T___N, R___

DNR Dist NCO DNR Area Antigo

Groundwaters Affected ☐ Yes ☐ No ☒ Potential

Surface Waters Affected ☐ Yes ☒ No ☐ Potential

Name of Surface Water

Date District Notified 10-31-94	Day of Week MON	Time District Notified 1430 ☐ A.M. ☒ P.M.
District Person Notified FAXED		Telephone Number ( )
Date Investigated	Day of Week	Time Investigated ☐ A.M. ☐ P.M.
Person Investigating		Telephone Number ( )

Action Taken By DNR
☐ No Action Taken ☐ Investigation ☐ Supervise/Conduct Cleanup
☐ Spiller Required To Take Action; Type
☐ Contractor Hired By DNR; Name
☐ Amount Recovered
☐ 29.29 Enforcement

Other Agencies on Scene
Local
State
Federal

Action Taken By Spiller
☒ No Action Taken ☐ No Notification ☐ Investigate
☐ Containment; Type
☐ Cleanup; Method
☐ Amount Recovered
☐ Monitor
☐ Contractor Hired; Name
☐ Other Action

Spill Location
☐ Industrial Facility/Paper Mill/Chem. Co.
☐ Gas/Service Station/Garage, Auto Dealer, Repair Shop
☐ Ag Coop/Facility/Cheese Factory/Creamery
☐ Other Small Business (bank, grocery, insurance co., etc.)
☐ Public Property (city, county, state, church, school, etc.)
☐ Utility Co., Power Generating/Transfer Facility
☐ Private Property (home/farm)
☐ Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler
☐ Transportation Accident, Fuel Supply Tank Spill
☐ Transportation Accident, Load Spill
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Spilled Substance Destination
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☐ Surface Water
☐ Storm Sewer
☐ Sanitary Sewer
☐ Contained/Recovered
☐ Other

Person Filing This Report (print name) Cathy Howard 608-266-2141
Signature Cathy Howard Date Signed 10-31-94

Additional Comments:
Still excavating.

CENTRAL OFFICE COORDINATOR