FOCUSED SITE INVESTIGATION & REMEDIAL ACTION COMPLETION REPORT (Addendum)

The Morey Corporation
2659 Wisonsin Street
Downers Grove, Illinois

Prepared For:

MC Holdings, Inc.
100 Morey Drive
Woodridge, Illinois 60517
Attn: Mr. Dana Morey

Prepared By:

Pioneer Environmental, Inc.
1000 North Halsted Street, Suite 202
Chicago, Illinois 60622
(312) 587-1021

Date Submitted:

January 23, 2001

Pioneer Project # 00618B

Illinois Environmental Protection Agency
Bureau of Land
Remedial Project Management Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

FOR ILLINOIS EPA USE:
LOG NO. _____

Site Remediation Program Form (DRM-2)
(To Be Submitted with all Plans and Reports)

I. Site Identification:

Site Name: The Morey Corporation
Street Address: 2659 Wisconsin Street
City: Downers Grove Illinois Inventory I. D. Number: 0430305029
IEMA Incident Number: NA

II. Remediation Applicant:

Applicant's Name: Dana Morey Company: MC Holdings, Inc.
Street Address: 100 Morey Drive
City: Woodridge State: IL ZIP Code: 60517 Phone: 630.754.2124

I hereby request that the Illinois EPA review and evaluate the attached project documents in accordance with the terms and conditions of the Environmental Protection Act (415 ILCS 5), implementing regulations, and the review and evaluation services agreement.

Remediation Applicant's Signature: Dana J Morey Date: 1-18-01

III. Contact Person:

Contact's Name: Tom Brecheisen Company: Pioneer Environmental, Inc.
Street Address: 1000 N. Halsted, 202
City: Chicago State: IL ZIP Code: 60622 Phone: 312.587.1021

IV. Review & Evaluation Licensed Professional Engineer ("RELPE"), if applicable:

RELPE's Name: _____ Company: _____
Street Address: _____
City: _____ State: _____ ZIP Code: _____ Phone: _____

Registration Number: _____ License Expiration Date: _____

All information submitted is available to the public except when specifically designated by the Remediation Applicant to be treated confidentially as a trade secret or secret process in accordance with the Illinois Compiled Statutes, Section 7(a) of the Environmental Protection Act, applicable Rules and Regulations of the Illinois Pollution Control Board and applicable Illinois EPA rules and guidelines. The Illinois EPA is authorized to require this information under Sections 415 ILCS 5/58 - 58.12 of the Environmental Protection Act and regulations promulgated thereunder. Disclosure of this information is required as a condition of participation in the Site Remediation Program. Failure to do so may prevent this form from being processed and could result in your plan(s) or report(s) being rejected. This form has been approved by the Forms Management Center.

IL 532 2547
LPC 566 Feb-2000

V. Project Documents Being Submitted:

Document Title: FSI/RACR Addendum Date of Preparation of Plan or Report: 1-23-01

Prepared by: Pioneer Environmental, Inc. Prepared for: MC Holdings, Inc.

Type of Document Submitted:

- ☐ Site Investigation Report - Comprehensive
- ☑ Site Investigation Report - Focused
- ☑ Remediation Objectives Report-Tier 1or 2
- ☐ Remediation Objectives Report-Tier 3
- ☐ Remedial Action Plan
- ☑ Remedial Action Completion Report
- ☐ Sampling Plan
- ☐ Health and Safety Plan
- ☐ Community Relations Plan
- ☐ Risk Assessment
- ☑ Contaminant Fate & Transport Modeling
- ☐ Environmental Remediation Tax Credit - Budget Plan Review
- Other: RACR Addendum

Document Title: _____ Date of Preparation of Plan or Report: _____

Prepared by: _____ Prepared for: _____

Type of Document Submitted:

- ☐ Site Investigation Report - Comprehensive
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- ☐ Community Relations Plan
- ☐ Risk Assessment
- ☐ Contaminant Fate & Transport Modeling
- ☐ Environmental Remediation Tax Credit - Budget Plan Review
- Other: _____

Document Title: _____ Date of Preparation of Plan or Report: _____

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- ☐ Remedial Action Plan
- ☐ Remedial Action Completion Report
- ☐ Sampling Plan
- ☐ Health and Safety Plan
- ☐ Community Relations Plan
- ☐ Risk Assessment
- ☐ Contaminant Fate & Transport Modeling
- ☐ Environmental Remediation Tax Credit - Budget Plan Review
- Other: _____

VI. Professional Engineer's Seal or Stamp:

I attest that all site investigations or remedial activities that are the subject of this plan(s) or report(s) were performed under my direction, and this document and all attachments were prepared under my direction or reviewed by me, and to the best of my knowledge and belief, the work described in the plan and report has been designed or completed in accordance with the Illinois Environmental Protection Act (415 ILCS 5), 35 Ill. Adm. Code 740, and generally accepted engineering practices, and the information presented is accurate and complete.

Engineer Name: Mike Ciserella

Company: Pioneer Phone: 312.587.1021

Registration Number: 062-048884

Signature: _____

Professional Engineer's Seal or Stamp:

STATE OF ILLINOIS
MICHAEL
P.
CISERELLA
NO. 062-048884
REGISTERED
PROFESSIONAL ENGINEER

License Expiration Date: 11/2001

PIONEER
ENVIRONMENTAL, INC.

1000 North Halsted Street, Suite 202 • Chicago, Illinois 60622
312.587.1021 • Fax: 312.587.8210

January 23, 2001

Illinois Environmental Protection Agency
Voluntary Site Remediation Unit
Bureau of Land
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
Attn: Steve McCaslin

Re: FSI / RACR Addendum
0430305029 – DuPage County
2659 Wisconsin Street
Downers Grove, Illinois
Pioneer Project No. 00618B

Dear Mr. McCaslin:

As you requested, Pioneer Environmental, Inc. (Pioneer) has performed additional assessment work at the above captioned site in connection with our *Focused Site Investigation & Remedial Action Completion Report* (FSI/RACR), dated November 8, 2000, which was submitted to the Site Remediation Program for review and evaluation. Based on our telephone conversations that took place after your review of the FSI/RACR, it was agreed that two additional soil borings would be advanced in order to further define the horizontal extent of contamination to the south, the vertical extent of contamination in the source area, and to assess the contaminant conditions directly beneath the former floor drain discharge pipe. In addition, a Tier 2 Groundwater Evaluation was performed as you suggested to expedite the review and subsequent closure of this site, and the proper disposal of contaminated soil that was previously excavated from beneath the floor drain discharge pipe (i.e. source area) was also conducted. Thus, this letter discusses the procedures and results of these requested activities and is intended to serve as an addendum to Pioneer's original FSI/RACR (Addendum).

Pioneer mobilized to the site and advanced two additional soil borings, B-16 and B-17, on January 2, 2001. These borings were placed in the specific locations discussed by Pioneer and the Agency prior to mobilization to the site. The soil sampling procedures were performed in accordance with Pioneer's Standard Protocol for Subsurface Sampling as described in the original FSI/RACR and in Attachment 1 of this Addendum. The soil boring locations are shown on Figure 1 and soil boring logs are included in Attachment 1.

In order to obtain the additional data requested, Pioneer selected three soil samples from the two boring locations for analytical testing. The selected samples were then shipped overnight to an independent laboratory under standard chain-of-custody procedures, and submitted for analysis

of the appropriate targeted compounds (VOCs). The results of the laboratory analyses are summarized in Table No. 1 and copies of the laboratory reports are included in Attachment 2.

The results indicated that all contaminant concentrations detected were below the Tier 2 SROs established for the site (Appendix H of FSI/RACR). It should be noted the Tier 2 SROs calculated for the site were based on the Mass-Limit Equations (S-26, S-27 & S-28) for the inhalation exposure route and the soil component of groundwater ingestion exposure route, found in Appendix C, Table A of TACO. The results of this recent sampling event confirm that *maximum* contaminant concentrations detected at the site are the same as those shown in Table 4.5.1 of the original FSI/RACR.

As we also discussed, in order to expedite the overall review and closure of the site, a Tier 2 Groundwater Evaluation, pursuant to 35 IAC 742.805, is presented herein as opposed to the Tier 3 approach originally presented in the FSI/RACR. Pioneer performed the weighted average calculation as outlined in 35 IAC 742.805(c). According to Table F of Appendix A of TACO, three similar-acting carcinogenic compounds affect the liver: tetrachloroethylene (PCE), trichloroethylene (TCE), and vinyl chloride (VC). Since other target organs listed in Table F are affected by fewer than three similar-acting compounds, the weighted average calculation for liver will yield the most conservative value.

Since no actual groundwater data was collected from the site for use in calculating the weighted average and as we discussed, Pioneer predicted groundwater concentrations from *maximum* detected soil concentrations using Equation R-14 (Appendix H of FSI/RACR) and then calculated Tier 2 Groundwater Remediation Objectives (GROs) using Equation R-26. Given the fact that an institutional control will eliminate any exposure point on the remediation site, Pioneer used Equation R-26 to "back calculate" allowable source area concentrations to ensure Tier 1 Class I GROs will be achieved at the eastern property boundary, the nearest exposure point. Tier 2 GRO calculations are included in Attachment 3. The results of these calculations were used to determine the weighted average for liver and are summarized as follows:

Tier 2 GROs / Weighted Average Parameters

COC	Maximum Soil Concentration (Actual)	Predicted Groundwater Concentration (x_s)	Calculated Tier 2 GROs ($CUOx_s$)
Tetrachloroethylene	110,000	56,075	4,860,000
Trichloroethylene	8,000	3,897	20,800
cis-1,2-Dichloroethylene	3,300	5,457	24,800
Vinyl Chloride	46	91	709
Methylene Chloride	40	118	$2.03(10^{25})$

All values in parts per billion (ppb).

Using predicted groundwater concentrations as x_a values and the Tier 2 GROs as the $CUOx_a$ values, as outlined in Section 742.805(c)(1), the following equation was solved using the parameters listed above.

$$W_{ave} = \frac{x_1}{CUOx_1} + \frac{x_2}{CUOx_2} + \ldots \frac{x_a}{CUOx_a}$$

The result of this calculation yielded a W_{ave} value of 0.327. Since this value is less than 1.0, remediation objectives are met for the above listed chemicals pursuant to Section 742.805(c)(1)(i). The calculation is included as Attachment 3.

The four drums of contaminated soil, which were previously excavated from beneath the floor drain discharge pipe, have been disposed of as hazardous waste. A copy of the hazardous waste manifest is included as Attachment 4. Finally, per your request, Pioneer submitted a revised Site Base Map (Figure 2) and ascertained that the site operated for approximately 35 years.

Pioneer hopes this information sufficiently addresses your comments and can allow the review and subsequent closure of this site to proceed. Pioneer appreciates your time in this matter and if you have any questions regarding any of the information presented herein, please contact me at (312) 587-1021. Further, any efforts that can be made to expedite your review of this submittal would be greatly appreciated.

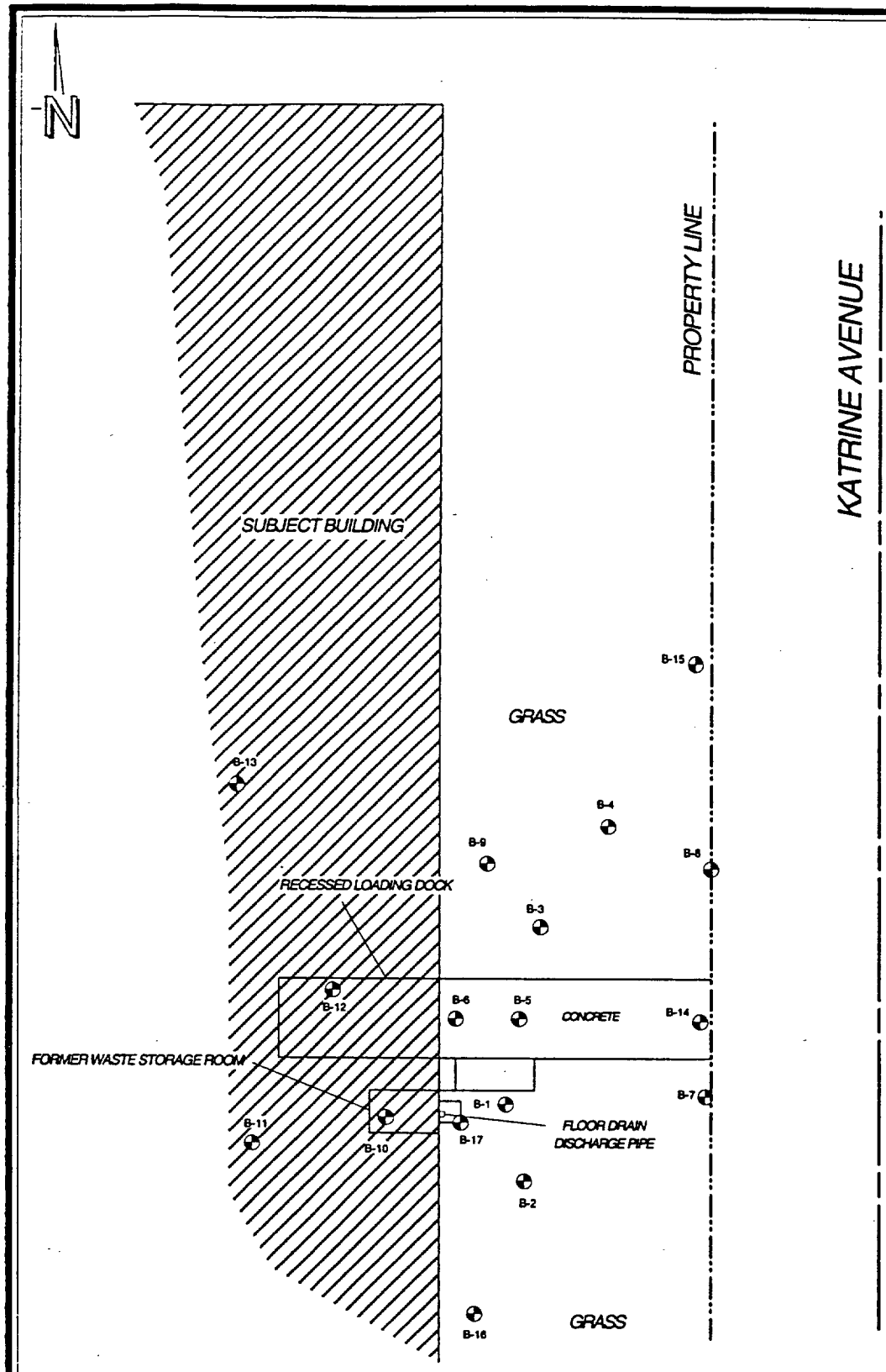
Sincerely,
PIONEER ENVIRONMENTAL, INC.

Thomas A. Brecheisen

Thomas A. Brecheisen
Project Manager

Attachments

Cc: Dana Morey, MC Holdings, Inc.

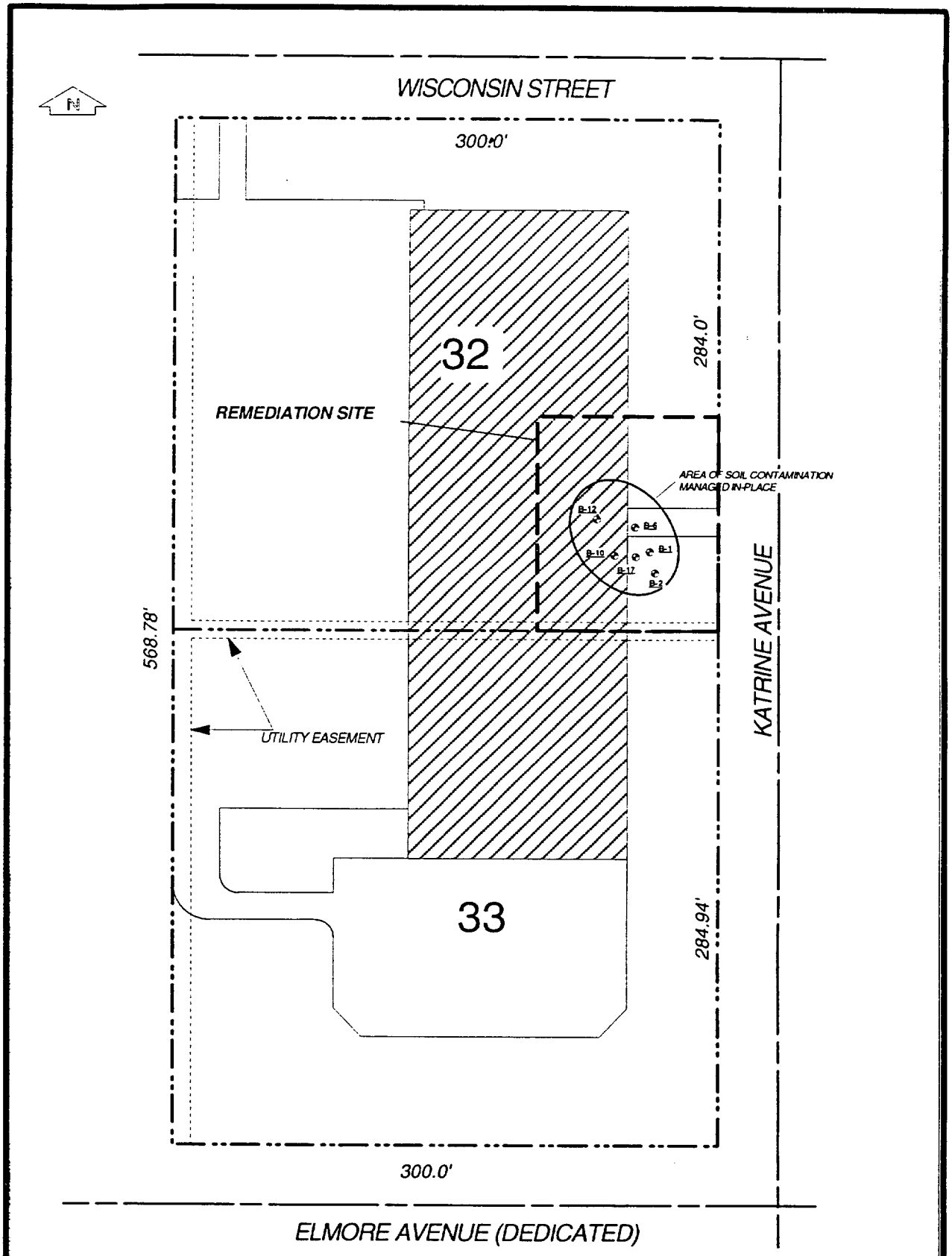


PIONEER ENVIRONMENTAL, INC.

Scale: 1' = 30'	Date: January, 2001
Drawn by: T. Brecheisen	Checked by: W. Smith
Soil Boring Location	Job No. 00618B

Figure 1
Soil Boring Locations
The Morey Corporation
2659 Wisconsin Street
Downers Grove, Illinois

SITE BASE MAP
0430305029 - DuPAGE COUNTY
DOWNERS GROVE / 2659 WISCONSIN STREET
SITE REMEDIATION PROGRAM



PIONEER ENVIRONMENTAL, INC.

Legend:
Soil Boring Location exceeding Tier 1 SROs (Industrial/Commercial)

Scale: 1" = 80'	Date: January, 2001
Drawn by: T. Brecheisen	Checked by: W. Smith
Job No.: 00618B	

Figure 2
Site Base Map
The Morey Corporation
Downers Grove, Illinois

MOR 000019

TABLE NO. 1 (page 1 of 2)
Soil Sample Analytical Results: Illinois VOCs
The Morey Corporation
2659 Wisconsin Street / Downers Grove, Illinois

											Tier 1 Soil Remediation Objectives (Tier 1 SROs) Industrial/Commercial Property Use*						Soil Saturation Limit
											Route Specific Values				Soil Component of Groundwater Ingestion Exposure Route		
											Industrial - Commercial		Construction Worker				
ANALYTE	B-1 (3'-6')	B-1 (9'-12')	B-2 (6'-9')	B-3 (3'-6')	B-5 (6'-9')	B-6 (3'-6')	B-6 (9'-12')	B-7 (3'-6')	B-10 (4'-6')	B-10 (10'-12')	Ingestion	Inhalation	Ingestion	Inhalation	Class I	Class II	C_{sat}
2-Butanone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	--	--	--	--	--	--	--
Methyl isobutyl ketone	<10.0	<10.0	<10.0	<10.0	20	<10.0	<10.0	<10.0	<10.0	<10.0	--	--	--	--	--	--	--
4-Methyl-2-Pentanone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	--	--	--	--	--	--	--
1,1-Dichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	200,000,000	1,700,000	200,000,000	130,000	23,000	110,000	1,700,000
1,1-Dichloroethene	<10.0	<10.0	<10.0	<10.0	<10.0	18	<10.0	<10.0	<10.0	<10.0	18,000,000	1,500,000	1,800,000	1,500,000	60.0	300	1,500,000
1,2-Dibromo-3-chloropropane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	4,000	17,000	89,000	110	2.0	2.0	1,400,000
1,2-Dibromoethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	70.0	320	1,500	450	0.4	4.0	2,800,000
1,2-Dichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	63,000	700	1,400,000	990	20.0	100	1,800,000
1,2-Dichloropropane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	84,000	23,000	1,800,000	500	30.0	150	1,100,000
1,3-Dichloropropene (total)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	33,000	230	610,000	330	4.0	20.0	1,400,000
1,1,1-Trichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	--	1,200,000	--	1,200,000	2,000	9,600	1,200,000
1,1,2-Trichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	8,200,000	1,800,000	8,200,000	1,800,000	20.0	300	1,800,000
1,1,2,2-Tetrachloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	--	--	--	--	--	--	--
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	200,000,000	100,000,000	200,000,000	100,000,000	16,000	16,000	100,000,000
Benzene	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	200,000	1,500	4,300,000	2,100	30.0	170	870,000
Bromodichloromethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	92,000	3,000,000	2,000,000	3,000,000	600	600	3,000,000
Bromoform	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	720,000	100,000	16,000,000	140,000	800	800	1,900,000
Bromomethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	2,900,000	15,000	1,000,000	3,900	200	1,200	3,200,000
Butanol	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	200,000,000	10,000,000	200,000,000	10,000,000	17,000	17,000	10,000,000
Carbon Disulfide	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	200,000,000	720,000	20,000,000	9,000	32,000.0	160,000	720,000
Carbon Tetrachloride	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	44,000	640	410,000	900	70.0	330	1,100,000
Chlorobenzene	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	41,000,000	210,000	4,100,000	1,300	1,000	6,500	680,000
Chlorodibromomethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	41,000,000	1,300,000	41,000,000	1,300,000	400	400	1,300,000
Chloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	--	--	--	--	--	--	--
Chloroform	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	940,000	540	2,000,000	760	600	2,900	2,900,000
Chloromethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	--	--	--	--	--	--	--
cis 1,2-Dichloroethene	2,600	1,000	<10.0	<10.0	<10.0	3,300	30	<10.0	14	49	20,000,000	1,200,000	20,000,000	1,200,000	400	1,100	1,200,000
Ethylbenzene	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	200,000,000	400,000	20,000,000	58,000	13,000	19,000	400,000
Methylene Chloride	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	760,000	24,000	12,000,000	34,000	20.0	200	2,400,000
Styrene	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	410,000,000	1,500,000	41,000,000	430,000	4,000	18,000	1,500,000
Tetrachloroethene	110,000	<10.0	160	<10.0	<10.0	1,600	55	<10.0	59,000	5,800	110,000	20,000	2,400,000	28,000	60.0	300	240,000
Toluene	<10.0	<10.0	<10.0	<10.0	<10.0	14	<10.0	<10.0	<10.0	<10.0	410,000,000	650,000	410,000,000	42,000	12,000	29,000	650,000
trans 1,2-Dichloroethene	35	22	<10.0	<10.0	<10.0	91	<10.0	<10.0	<10.0	<10.0	41,000,000	3,100,000	41,000,000	3,100,000	700	3,400	3,100,000
Trichloroethene	8,000	<10.0	<10.0	<10.0	<10.0	1,000	10	<10.0	45	19	520,000	8,900	1,200,000	12,000	60.0	300	1,300,000
Vinyl Acetate	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	1,000,000,000	1,600,000	200,000,000	10,000	170,000.0	170,000.0	2,700,000
Vinyl Chloride	16	<10.0	<10.0	<10.0	<10.0	46	<10.0	<10.0	<10.0	<10.0	3,000	60.0	65,000	80.0	10.0	70.0	1,200,000
Xylenes (total)	<30.0	<30.0	<30.0	<30.0	<30.0	<30.0	<30.0	<30.0	<30.0	15	1,000,000,000	410,000	410,000,000	410,000	150,000	150,000	410,000

Notes:

Results listed in µg/kg (parts per billion-ppb)
EPA test method SW846, 8260/5035
"<" indicates not detected at stated detection limits
"--" indicates value not available
Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO
(1) Pursuant to 35 IAC 742 - Tiered Approach to Corrective Action Objectives

TABLE NO. 1 (page 2 of 2)
Soil Sample Analytical Results: Illinois VOCs
The Morey Corporation
2659 Wisconsin Street / Downers Grove, Illinois

									Tier 1 Soil Remediation Objectives (Tier 1 SROs) Industrial/Commercial Property Use*						Soil Saturation Limit
									Route Specific Values				Soil Component of Groundwater Ingestion Exposure Route		
									Industrial - Commercial		Construction Worker				
ANALYTE	B-11 (4'-6')	B-12 (4'-6')	B-13 (6'-8')	B-13 (6'-8')	B-14 (6'-9')	B-16 (6'-9')	B-17 (6'-9')	B-17 (15'-18')	Ingestion	Inhalation	Ingestion	Inhalation	Class I	Class II	C_{sat}
2-Butanone	<10.0	<10.0	<10.0	<10.0	<10.0	<250	<250	<250	--	--	--	--	--	--	--
2-Hexanone	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	--	--	--	--	--	--	--
4-Methyl-2-Pentanone	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	--	--	--	--	--	--	--
1,1-Dichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	200,000,000	1,700,000	200,000,000	130,000	23,000	110,000	1,700,000
1,1-Dichloroethene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	18,000,000	1,500,000	1,800,000	1,500,000	60.0	300	1,500,000
1,2-Dibromo-3-chloropropane	<10.0	<10.0	<10.0	<10.0	<10.0	<18	<18	<18	4,000	17,000	89,000	110	2.0	2.0	1,400,000
1,2-Dibromoethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	70.0	320	1,500	450	0.4	4.0	2,800,000
1,2-Dichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	63,000	700	1,400,000	990	20.0	100	1,800,000
1,2-Dichloropropane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	84,000	23,000	1,800,000	500	30.0	150	1,100,000
1,3-Dichloropropene (total)	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	33,000	230	610,000	330	4.0	20.0	1,400,000
1,1,1-Trichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	--	1,200,000	--	1,200,000	2,000	9,600	1,200,000
1,1,2-Trichloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	8,200,000	1,800,000	8,200,000	1,800,000	20.0	300	1,800,000
1,1,2,2-Tetrachloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	--	--	--	--	--	--	--
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	200,000,000	100,000,000	200,000,000	100,000,000	16,000	16,000	100,000,000
Benzene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	< 10	200,000	1,500	4,300,000	2,100	30.0	170	870,000
Bromodichloromethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	92,000	3,000,000	2,000,000	3,000,000	600	600	3,000,000
Bromoform	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	720,000	100,000	16,000,000	140,000	800	800	1,900,000
Bromomethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	2,900,000	15,000	1,000,000	3,900	200	1,200	3,200,000
Butanol	<10.0	<10.0	<10.0	<10.0	<10.0	<980	<980	<980	200,000,000	10,000,000	200,000,000	10,000,000	17,000	17,000	10,000,000
Carbon Disulfide	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	200,000,000	720,000	20,000,000	9,000	32,000.0	160,000	720,000
Carbon Tetrachloride	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	44,000	640	410,000	900	70.0	330	1,100,000
Chlorobenzene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	41,000,000	210,000	4,100,000	1,300	1,000	6,500	680,000
Chlorodibromomethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	41,000,000	1,300,000	41,000,000	1,300,000	400	400	1,300,000
Chloroethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	--	--	--	--	--	--	--
Chloroform	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	940,000	540	2,000,000	760	600	2,900	2,900,000
Chloromethane	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	--	--	--	--	--	--	--
cis 1,2-Dichloroethene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	1,900	<10	20,000,000	1,200,000	20,000,000	1,200,000	400	1,100	1,200,000
Ethylbenzene	<10.0	<10.0	<10.0	<10.0	<10.0	14	<10	<10	200,000,000	400,000	20,000,000	58,000	13,000	19,000	400,000
Methylene Chloride	<10.0	40	<10.0	<10.0	<10.0	<10	<10	<10	760,000	24,000	12,000,000	34,000	20.0	200	2,400,000
Styrene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	410,000,000	1,500,000	41,000,000	430,000	4,000	18,000	1,500,000
Tetrachloroethene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	58,000	<10	110,000	20,000	2,400,000	28,000	60.0	300	240,000
Toluene	<10.0	<10.0	<10.0	<10.0	<10.0	58	19	<10	410,000,000	650,000	410,000,000	42,000	12,000	29,000	650,000
trans 1,2-Dichloroethene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	37	<10	41,000,000	3,100,000	41,000,000	3,100,000	700	3,400	3,100,000
Trichloroethene	<10.0	<10.0	<10.0	<10.0	<10.0	<10	1,600	<10	520,000	8,900	1,200,000	12,000	60.0	300	1,300,000
Vinyl Acetate	<10.0	<10.0	<10.0	<10.0	<10.0	<53	<53	<53	1,000,000,000	1,600,000	200,000,000	10,000	170,000.0	170,000.0	2,700,000
Vinyl Chloride	<10.0	<10.0	<10.0	<10.0	<10.0	<10	<10	<10	3,000	60.0	65,000	80.0	10.0	70.0	1,200,000
Xylenes (total)	<30.0	<30.0	<30.0	<30.0	<30.0	<30	<20	<30	1,000,000,000	410,000	410,000,000	410,000	150,000	150,000	410,000

Notes:

Results listed in µg/kg (parts per billion-ppb)

EPA test method SW846, 8260/5035

"<" indicates not detected at stated detection limits

"--" indicates value not available

Shaded/Bolded cell indicates concentration detected above most stringent Tier 1 SRO

(1) Pursuant to 35 IAC 742 - Tiered Approach to Corrective Action Objectives

ATTACHMENT 1

Pioneer Protocol for Subsurface Soil Sampling

Soil Boring Logs

PROTOCOL FOR SUBSURFACE SOIL SAMPLING

Subsurface samples are collected by employing various soil boring techniques based on certain site specific conditions. Soil borings are performed using a Hollow or Solid Stem (site specific) auger with split-spoon sampling techniques, a hydraulic percussive split-spoon sampler, a percussive Macro-Core® barrel sampler, and/or a stainless steel hand auger. The soil sampling activities are conducted in accordance with American Society of Testing and Materials (ASTM) standards (ASTM:D 1586). Soil samples are collected with a stainless steel hand auger, a split-spoon sampler, and/or a Macro-Core® sampler at 2-3 foot intervals depending on the specific method used. In the split-spoon sampling procedures, a split-barrel sampler having either a 2-inch or 1-3/16 inch outside diameter, an inside diameter of 1-3/8 or 7/8 inches, and a length of 2.5 or 3 feet is driven into the soil to collect a representative and undisturbed sample. In the Macro-Core® barrel sampling technique, a stainless steel barrel having a 2-inch outside diameter, an inside diameter of 1-1/2 inches, and a length of 2 or 3 feet is fitted with a PVC liner and is driven into the soil to collect a representative and undisturbed sample.

The drilling is directed by a Pioneer Environmental Field Project Geologist/Engineer, who logs geologic materials encountered during drilling, field screens auger cuttings and soil samples, observes the drilling activities, and supervises sample collection. Each sample is examined in the field for odor and visual evidence of hydrocarbon or other organic contamination. The field observations are noted in the soil boring logs that are included in the Appendices.

A representative portion of each sample is placed into an unused, air-tight plastic bag which is sealed and dedicated to that discrete sample. The sample is allowed to achieve a constant temperature and the headspace above each sample is screened for volatile organic compounds (VOCs) using either a Photovac MP-1000 handheld air monitor / photoionization detector (PID) or a Photovac IS 3000 handheld air monitor / flame ionization detector (FID), depending on the nature of the targeted contaminants. The PID/FID are devices that are sensitive to a variety of VOCs. The headspace is screened by inserting the PID/FID probe into the space above the soil and recording the maximum reading of the instrument. The results of the headspace screening are also listed on the soil boring logs.

When soil samples will be laboratory tested for VOCs, one of two field sampling methods are used as required by US EPA's SW-846 Method 5035. 1) A representative portion of the sample collected in the field is placed in an EnCore™ sampler, or equivalent, immediately after collection, with the appropriate quantity and volume of the containers determined by the scope of work and field conditions. The EnCore™ samplers, or equivalent, are delivered to the laboratory within 48 hours of sample collection. 2) An appropriate weight of a representative portion of the sample collected in the field is placed in laboratory-provided glassware, immediately after collection, and then the appropriate preservative is added, either sodium bisulfate-for samples with estimated VOC concentrations less than 200 ppb; or methanol-for samples with estimated VOC concentrations greater than 200 ppb.

Any soil samples chosen for analysis are packed in appropriate containers, properly labeled, and shipped in a cooler on ice via a delivery service overnight to an independent laboratory under standard chain-of-custody procedures. Samples are selected based on the scope of work, field observations (i.e. visual/odor observations, elevated PID readings, etc.), other site specific conditions, and the judgment of the Pioneer Field Project Geologist/Engineer.

Drill cuttings and liquids generated are left at the borehole. All boreholes are decommissioned in accordance with applicable Illinois Department of Public Health guidelines. When required, these spoils are contained in 55 gallon Type 17H drums. Decontamination procedures for the drilling equipment consists of steam cleaning the augers after each boring using a biodegradable detergent and high-pressure steam rinse. The split-spoon samplers are decontaminated between each sample interval by washing in a solution of Alconox and water, and triple rinsing with clean heated water.

Any deviations to or modifications of this standard protocol will be described on a site by site basis.

PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-16

Site: The Morey Corporation
2659 Wisconsin Street
Downers Grove, Illinois

Date Begin: 1/02/01

Date End: 1/02/01

Sample Recovery	FID (ppm)	Sample	Depth Feet	Lithology	Description	Notes
75%	0.0				Grade = Topsoil (6") Brown SILTY CLAY with trace sand and gravel Firm, Moist	No Odor No Visual
			3			
100%	0.0				Brown SILTY CLAY mottled reddish-brown with trace sand and gravel Firm, Moist	
			6			
100%	0.3				Gray SILTY CLAY with trace sand and gravel Firm, Moist	
			9			
100%	0.0				Gray SILTY CLAY with trace gravel Firm, Moist	
			12		End of Boring @ 12 feet BSG	
			15			
			18			

Completion Notes:

Hatched interval denotes sample submitted for laboratory analysis
Sampling method: Geoprobe MacroCore

Drill Rig: SIMCO Earthprobe 200

Driller: Predrag Vrhovac

Geologist: Tom Brecheisen

LUST Incident No: NA

Water Depth While Drilling: NA Water Depth After Drilling: NA

Project Number: 00618B

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PIONEER ENVIRONMENTAL, INC.

Boring Log

Boring No.: B-17

Site: The Morey Corporation
2659 Wisconsin Street
Downers Grove, Illinois

Date Begin: 1/02/01

Date End: 1/02/01

Sample Recovery	FID (ppm)	Sample	Depth Feet	Lithology	Description	Notes
75%	0.0		3		Grade = Topsoil (6") Brown SILTY CLAY with trace sand and gravel Firm, Loose, Moist	
100%	0.0		6		Brown SILTY CLAY with trace sand and gravel Firm, Moist	No Odor No Visual
100%	5.2		9		Brown SILTY CLAY Stiff, Moist	
100%	0.0		12		Brown SILTY CLAY mottled gray Firm, Moist	
100%	3.5		15		Gray SILTY CLAY Firm, Moist	No Odor No Visual
75%	0.0		18		Gray SILTY CLAY Firm, Moist	
75%	0.0		21		Gray SILTY CLAY with trace sand and gravel Firm, Moist	
100%	0.0		24		Gray SILTY CLAY with trace sand and gravel Firm to soft, Moist	
					End of Boring @ 24 feet BSG	

Completion Notes:

Hatched interval denotes sample submitted for laboratory analysis
Sampling method: Geoprobe MacroCore

Drill Rig: SIMCO Earthprobe 200

Driller: Predrag Vrhovac

Geologist: Tom Brecheisen

LUST Incident No: NA

Water Depth While Drilling: NA Water Depth After Drilling: NA

Project Number: 00618B

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ATTACHMENT 2

Laboratory Analytical Results

U.S. Analytical Lab

TOM BRECHEISEN
PIONEER ENVIRONMENTAL
1000 NORTH HALSTED
CHICAGO IL 60622

Project # 00618B
Project Name MOREY CORPORATION
Invoice # E31855

Report Date *09-Jan-01*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5031855A						**Sample Type**	Soil		
Sample ID B-16 (6-9)						**Sample Date**	1/2/01		
Inorganic									
General									
Solids Percent	83.9	%			1	1/4/01	5021	JDB	1
Organic									
VOC's									
1-Butanol	< 980	ug/kg	980	3300	1	1/4/01	8260B	CJR	1
Acetone	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	2 4
Benzene	< 10	ug/kg	6.8	23	1	1/4/01	8260B	CJR	1
Bromodichloromethane	< 10	ug/kg	5.8	19	1	1/4/01	8260B	CJR	1
Bromoform	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	1
Bromomethane	< 10	ug/kg	10	35	1	1/4/01	8260B	CJR	4
Carbon Disulfide	< 10	ug/kg	5.7	19	1	1/4/01	8260B	CJR	1
Carbon Tetrachloride	< 10	ug/kg	10	33	1	1/4/01	8260B	CJR	1
Chlorobenzene	< 10	ug/kg	5.6	19	1	1/4/01	8260B	CJR	1
Chloroethane	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	4
Chloroform	< 10	ug/kg	4.1	14	1	1/4/01	8260B	CJR	1
Chloromethane	< 10	ug/kg	10	35	1	1/4/01	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 18	ug/kg	18	61	1	1/4/01	8260B	CJR	1
Dibromochloromethane	< 10	ug/kg	9.1	30	1	1/4/01	8260B	CJR	1
1,2-Dichloroethane	< 10	ug/kg	3.8	13	1	1/4/01	8260B	CJR	1
1,1-Dichloroethane	< 10	ug/kg	8.3	28	1	1/4/01	8260B	CJR	1
1,1-Dichloroethene	< 10	ug/kg	8.7	29	1	1/4/01	8260B	CJR	1
cis-1,2-Dichloroethene	< 10	ug/kg	9.3	31	1	1/4/01	8260B	CJR	1
trans-1,2-Dichloroethene	< 10	ug/kg	8.8	29	1	1/4/01	8260B	CJR	1
1,2-Dichloropropane	< 10	ug/kg	8.8	29	1	1/4/01	8260B	CJR	1
trans-1,3-Dichloropropene	< 10	ug/kg	8.7	29	1	1/4/01	8260B	CJR	1
cis-1,3-Dichloropropene	< 10	ug/kg	7.6	25	1	1/4/01	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 10	ug/kg	6	20	1	1/4/01	8260B	CJR	1
Ethylbenzene	14 "J"	ug/kg	4.4	15	1	1/4/01	8260B	CJR	1
2-Hexanone	< 10	ug/kg	8.2	27	1	1/4/01	8260B	CJR	1
Methyl ethyl ketone	< 250	ug/kg	10	35	1	1/4/01	8260B	CJR	2 4
Methyl isobutyl ketone	< 10	ug/kg	8.6	29	1	1/4/01	8260B	CJR	1
Methylene chloride	< 10	ug/kg	9	30	1	1/4/01	8260B	CJR	2
Styrene	< 10	ug/kg	3.8	13	1	1/4/01	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 10	ug/kg	5.2	17	1	1/4/01	8260B	CJR	1
Tetrachloroethene	< 10	ug/kg	6.6	22	1	1/4/01	8260B	CJR	1

U.S. Analytical Lab

TOM BRECHEISEN
PIONEER ENVIRONMENTAL
1000 NORTH HALSTED
CHICAGO IL 60622

Project # 00618B
Project Name MOREY CORPORATION
Invoice # E31855

Report Date *09-Jan-01*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5031855A						**Sample Type** Soil			
Sample ID B-16 (6-9)						**Sample Date** 1/2/01			
Toluene	58	ug/kg	7	23	1	1/4/01	8260B	CJR	1
1,1,1-Trichloroethane	< 10	ug/kg	10	33	1	1/4/01	8260B	CJR	1
1,1,2-Trichloroethane	< 10	ug/kg	9.3	31	1	1/4/01	8260B	CJR	1
Trichloroethene	< 10	ug/kg	7.7	26	1	1/4/01	8260B	CJR	1
Vinyl acetate	< 53	ug/kg	53	180	1	1/4/01	8260B	CJR	1
Vinyl Chloride	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	1
Xylene's	< 30	ug/kg	16	54	1	1/4/01	8260B	CJR	1
Lab Code 5031855B						**Sample Type** Soil			
Sample ID B-17 (6-9)						**Sample Date** 1/2/01			
Inorganic									
General									
Solids Percent	84.0	%			1	1/4/01	5021	JDB	1
Organic									
VOC's									
1-Butanol	< 980	ug/kg	980	3300	1	1/4/01	8260B	CJR	1
Acetone	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	2 4
Benzene	< 10	ug/kg	6.8	23	1	1/4/01	8260B	CJR	1
Bromodichloromethane	< 10	ug/kg	5.8	19	1	1/4/01	8260B	CJR	1
Bromoform	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	1
Bromomethane	< 10	ug/kg	10	35	1	1/4/01	8260B	CJR	4
Carbon Disulfide	< 10	ug/kg	5.7	19	1	1/4/01	8260B	CJR	1
Carbon Tetrachloride	< 10	ug/kg	10	33	1	1/4/01	8260B	CJR	1
Chlorobenzene	< 10	ug/kg	5.6	19	1	1/4/01	8260B	CJR	1
Chloroethane	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	4
Chloroform	< 10	ug/kg	4.1	14	1	1/4/01	8260B	CJR	1
Chloromethane	< 10	ug/kg	10	35	1	1/4/01	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 18	ug/kg	18	61	1	1/4/01	8260B	CJR	1
Dibromochloromethane	< 10	ug/kg	9.1	30	1	1/4/01	8260B	CJR	1
1,2-Dichloroethane	< 10	ug/kg	3.8	13	1	1/4/01	8260B	CJR	1
1,1-Dichloroethane	< 10	ug/kg	8.3	28	1	1/4/01	8260B	CJR	1
1,1-Dichloroethene	< 10	ug/kg	8.7	29	1	1/4/01	8260B	CJR	1
cis-1,2-Dichloroethene	1900	ug/kg	9.3	31	1	1/4/01	8260B	CJR	1
trans-1,2-Dichloroethene	37	ug/kg	8.8	29	1	1/4/01	8260B	CJR	1
1,2-Dichloropropane	< 10	ug/kg	8.8	29	1	1/4/01	8260B	CJR	1
trans-1,3-Dichloropropene	< 10	ug/kg	8.7	29	1	1/4/01	8260B	CJR	1

U.S. Analytical Lab

TOM BRECHEISEN
PIONEER ENVIRONMENTAL
1000 NORTH HALSTED
CHICAGO IL. 60622

Project # 00618B
Project Name MOREY CORPORATION
Invoice # E31855

Report Date *09-Jan-01*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5031855B						**Sample Type**	Soil		
Sample ID B-17 (6-9)						**Sample Date**	1/2/01		
cis-1,3-Dichloropropene	< 10	ug/kg	7.6	25	1	1/4/01	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 10	ug/kg	6	20	1	1/4/01	8260B	CJR	1
Ethylbenzene	< 10	ug/kg	4.4	15	1	1/4/01	8260B	CJR	1
2-Hexanone	< 10	ug/kg	8.2	27	1	1/4/01	8260B	CJR	1
Methyl ethyl ketone	< 250	ug/kg	10	35	1	1/4/01	8260B	CJR	2 4
Methyl isobutyl ketone	< 10	ug/kg	8.6	29	1	1/4/01	8260B	CJR	1
Methylene chloride	< 10	ug/kg	9	30	1	1/4/01	8260B	CJR	2
Styrene	< 10	ug/kg	3.8	13	1	1/4/01	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 10	ug/kg	5.2	17	1	1/4/01	8260B	CJR	1
Tetrachloroethene	58000	ug/kg	130	440	20	1/5/01	8260B	CJR	1
Toluene	19 "J"	ug/kg	7	23	1	1/4/01	8260B	CJR	1
1,1,1-Trichloroethane	< 10	ug/kg	10	33	1	1/4/01	8260B	CJR	1
1,1,2-Trichloroethane	< 10	ug/kg	9.3	31	1	1/4/01	8260B	CJR	1
Trichloroethene	1600	ug/kg	7.7	26	1	1/4/01	8260B	CJR	1
Vinyl acetate	< 53	ug/kg	53	180	1	1/4/01	8260B	CJR	1
Vinyl Chloride	< 10	ug/kg	10	34	1	1/4/01	8260B	CJR	1
m&p-Xylene	< 20	ug/kg	9.3	31	1	1/4/01	8260B	CJR	1
o-Xylene	< 10	ug/kg	7	23	1	1/4/01	8260B	CJR	1
Xylene's	< 30	ug/kg	16	54	1	1/4/01	8260B	CJR	1
Lab Code 5031855C						**Sample Type**	Soil		
Sample ID B-17 (15-18)						**Sample Date**	1/2/01		
Inorganic									
General									
Solids Percent	86.0	%			1	1/4/01	5021	JDB	1
Organic									
VOC's									
1-Butanol	< 980	ug/kg	980	3300	1	1/5/01	8260B	CJR	1
Acetone	< 10	ug/kg	10	34	1	1/5/01	8260B	CJR	3 4 7
Benzene	< 10	ug/kg	6.8	23	1	1/5/01	8260B	CJR	1
Bromodichloromethane	< 10	ug/kg	5.8	19	1	1/5/01	8260B	CJR	1
Bromoform	< 10	ug/kg	10	34	1	1/5/01	8260B	CJR	1
Bromomethane	< 10	ug/kg	10	35	1	1/5/01	8260B	CJR	4
Carbon Disulfide	< 10	ug/kg	5.7	19	1	1/5/01	8260B	CJR	1
Carbon Tetrachloride	< 10	ug/kg	10	33	1	1/5/01	8260B	CJR	1
Chlorobenzene	< 10	ug/kg	5.6	19	1	1/5/01	8260B	CJR	1

U.S. Analytical Lab

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PIONEER ENVIRONMENTAL
1000 NORTH HALSTED
CHICAGO IL 60622

Project # 00618B
Project Name MOREY CORPORATION
Invoice # E31855

Report Date *09-Jan-01*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code
Lab Code 5031855C						**Sample Type** Soil			
Sample ID B-17 (15-18)						**Sample Date** 1/2/01			
Chloroethane	< 10	ug/kg	10	34	1	1/5/01	8260B	CJR	4
Chloroform	< 10	ug/kg	4.1	14	1	1/5/01	8260B	CJR	1
Chloromethane	< 10	ug/kg	10	35	1	1/5/01	8260B	CJR	1
1,2-Dibromo-3-chloropropane	< 18	ug/kg	18	61	1	1/5/01	8260B	CJR	1
Dibromochloromethane	< 10	ug/kg	9.1	30	1	1/5/01	8260B	CJR	1
1,2-Dichloroethane	< 10	ug/kg	3.8	13	1	1/5/01	8260B	CJR	1
1,1-Dichloroethane	< 10	ug/kg	8.3	28	1	1/5/01	8260B	CJR	1
1,1-Dichloroethene	< 10	ug/kg	8.7	29	1	1/5/01	8260B	CJR	1
cis-1,2-Dichloroethene	< 10	ug/kg	9.3	31	1	1/5/01	8260B	CJR	1
trans-1,2-Dichloroethene	< 10	ug/kg	8.8	29	1	1/5/01	8260B	CJR	1
1,2-Dichloropropane	< 10	ug/kg	8.8	29	1	1/5/01	8260B	CJR	1
trans-1,3-Dichloropropene	< 10	ug/kg	8.7	29	1	1/5/01	8260B	CJR	1
cis-1,3-Dichloropropene	< 10	ug/kg	7.6	25	1	1/5/01	8260B	CJR	1
EDB (1,2-Dibromoethane)	< 10	ug/kg	6	20	1	1/5/01	8260B	CJR	1
Ethylbenzene	< 10	ug/kg	4.4	15	1	1/5/01	8260B	CJR	1
2-Hexanone	< 10	ug/kg	8.2	27	1	1/5/01	8260B	CJR	1
Methyl ethyl ketone	< 250	ug/kg	10	35	1	1/5/01	8260B	CJR	3 4 5 7
Methyl isobutyl ketone	< 10	ug/kg	8.6	29	1	1/5/01	8260B	CJR	1
Methylene chloride	< 10	ug/kg	9	30	1	1/5/01	8260B	CJR	1
Styrene	< 10	ug/kg	3.8	13	1	1/5/01	8260B	CJR	1
1,1,2,2-Tetrachloroethane	< 10	ug/kg	5.2	17	1	1/5/01	8260B	CJR	3 7
Tetrachloroethene	< 10	ug/kg	6.6	22	1	1/5/01	8260B	CJR	1
Toluene	< 10	ug/kg	7	23	1	1/5/01	8260B	CJR	1
1,1,1-Trichloroethane	< 10	ug/kg	10	33	1	1/5/01	8260B	CJR	1
1,1,2-Trichloroethane	< 10	ug/kg	9.3	31	1	1/5/01	8260B	CJR	1
Trichloroethene	< 10	ug/kg	7.7	26	1	1/5/01	8260B	CJR	1
Vinyl acetate	< 53	ug/kg	53	180	1	1/5/01	8260B	CJR	1
Vinyl Chloride	< 10	ug/kg	10	34	1	1/5/01	8260B	CJR	1
Xylene's	< 30	ug/kg	16	54	1	1/5/01	8260B	CJR	1

U.S. Analytical Lab

TOM BRECHEISEN
PIONEER ENVIRONMENTAL
1000 NORTH HALSTED
CHICAGO IL 60622

Project # 00618B
Project Name MOREY CORPORATION
Invoice # E31855

Report Date *09-Jan-01*

Analyte	Result	Units	LOD	LOQ	Dil	Run Date	Method	Analyst	QC Code

LOD Limit of Detection "J" Flag: Analyte detected between LOD and LOQ LOQ Limit of Quantitation

Code	*Comment*
1	All laboratory QC requirements were met for this sample.
2	The duplicate RPD failed to meet acceptable QC limits.
3	The spike recovery failed to meet acceptable QC limits.
4	The check standard failed to meet acceptable QC limits.
5	The blank failed to meet acceptable QC limits.
7	The LCS spike recovery failed to meet acceptable QC limits.

Authorized Signature Katherine A Brahmstedt

CHAIN Or CUSTODY RECORD

A. .lytical Lab

1090 Kennedy Ave. • Kimberly, WI 54136
(920) 735-8295 • FAX 920-739-1738 • 800-490-4902
LAB@USOIL.COM

Rev. Date: 12-17-9

Chain # № 21284

Page 1 of 1

Lab I.D. # 5031855

Account No. : Quote No.:

Project #: 00618B

Sampler: (signature) Thomas A. Brecheisen

Sample Integrity: To be completed by receiving lab
Method of Shipment: UPS Temp. of Temp. Blank: 4 °C On Ice:
Cooler seal intact upon receipt: X Yes No Labcoded By: RMB

Project (Name / Location): The Morey Corporation / 2659 Wisconsin

Reports To: Tom Brecheisen Invoice To:

Company: Pioneer Environmental Company

Address: 1110 N. Halsted, 202 Address

City State Zip: Chicago, IL 60622 City State Zip

Phone: 312.587.1821 Phone

Sample Handling Request

___ Rush Analysis Date Required X

___ Normal Turn Around

Analysis Requested

Lab I.D.	Sample I.D.	Collection Date	Collection Time	No. of Containers Size and Type	Description*	Preservation	DRO (Mod/TPH)	GRO (Mod/TPH)	PVOC (EPA 8021)	BTEX (EPA 8021)	VOC (EPA 8021)	VOC (EPA 8260)	O&G (EPA 413.1)	PAH (EPA 8310)	Pb	Flash Point	Other Analysis					PID/ FID
5031855A	B-16 (6'-9')	1-2-01		1-4 oz 1-40 mL	S							X										
B	B-17 (6'-9')	1-2-01		1-4 oz 1-40 mL	S							X										
C	B-17 (15'-18')	1-2-01		1-4 oz 1-40 mL	S							X										

Department Use Only

Split Samples: Offered ? ___ Yes ___ No

Accepted? ___ Yes ___ No

Accepted By: ___

Comments/ Special Instructions

*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", et

RUSH

Department Use Optional for Soil Samples

Disposition of unused portion of sample

Lab Should:

___ Dispose ___ Retain for ___ days

___ Return ___ Other

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
Thomas A Brecheisen	17:00	1-2-01	UPS		

Received in Laboratory By: R Blan Time: 11:00 Date: 1/3/01

MOR 000032

ATTACHMENT 3

Tier 2 GRO Calculations

Weighted Average Calculation

Equation R-26 Solved for C(Source)

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Contaminant of Concern	**PCE**	**TCE**	**DCE**	**VC**	**MC**
Reqd. concn. at the prop line (GRO) -- $C_{(x)}$ - µg/L:	5	5	70	2	5
Dist. along centerline of gw plume in direction of gw flow (X) - cm:	610	610	610	610	610
Source width perpendicular to gw flow direction in horiz. plane (S_w) - cm:	2,438	2,438	2,438	2,438	2,438
Source width perpendicular to gw flow direction in vert. plane (S_d) - cm:	30.48	30.48	30.48	30.48	30.48
First Order Degradation Constant App. C, Table E (λ) - day^{-1}:	0.00096	0.00042	0.00024	0.00024	0.012
Hydraulic Conductivity (K) - cm/day:	0.86	0.86	0.86	0.86	0.86
Hydraulic gradient (i) - cm/cm:	0.01	0.01	0.01	0.01	0.01
Total Soil Porosity App. C, Table C (Θ_T) - cm^3/cm^3_{soil}:	0.43	0.43	0.43	0.43	0.43
Longitudinal Dispersivity (α_x) - cm R-16 α_x=0.10*X :	61.00	61.00	61.00	61.00	61.00
Transverse Dispersivity (α_y) - cm R-17 α_y=α_x/3 :	20.33	20.33	20.33	20.33	20.33
Vertical Dispersivity (α_z) - cm R-18 α_z=α_x/20 :	3.05	3.05	3.05	3.05	3.05
Error Functions: B_1 = S_w/(4*SQRT(α_y*X))	5.47	5.47	5.47	5.47	5.47
From App. C, Table G enter corresp. error function value -- erf(B_1):	1	1	1	1	1
B_2 = S_d/(2*SQRT(α_z*X))	0.35	0.35	0.35	0.35	0.35
From App. C, Table G enter corresp. error function value -- erf(B_2):	0.38269404	0.38269404	0.38269404	0.38269404	0.38269404
Specific Discharge (U) - cm/day R-19 U=K*i/Θ_T :	0.020	0.020	0.020	0.020	0.020
R-26 Concentration at Source $C_{(source)}$ - µg/L:	**4.86E+06**	**2.08E+04**	**2.48E+04**	**7.09E+02**	**2.03E+25**

Intermediate Solutions:

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Contaminant of Concern	**PCE**	**TCE**	**DCE**	**VC**	**MC**
a = X/2*α_x =	5	5	5	5	5
b = SQRT (1+(4*λ*α_x/U) =	3.565	2.475	1.982	1.982	12.141
c = (1-b)*a =	-12.827	-7.373	-4.910	-4.910	-55.704
d = EXP(c) =	0.000	0.001	0.007	0.007	0.000
$C_{(source)}$ = C(x)/(d*erf(B2)*erf(B1)) =	4861722.07	20812.64	24800.18	708.58	2.03E+25

Equation R-26 Solved for C(x)

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Contaminant of Concern	**PCE**	**TCE**	**DCE**	**VC**	**MC**
Conc. at the Source -- $C_{(source)}$ - µg/L:	4,860,000	20,800	24,800	709	2.03E+25
Dist. along centerline of gw plume in direction of gw flow (X) - cm:	610	610	610	610	610
Source width perpendicular to gw flow direction in horiz. plane (S_w) - cm:	2,438	2,438	2,438	2,438	2,438
Source width perpendicular to gw flow direction in vert. plane (S_d) - cm:	30.48	30.48	30.48	30.48	30.48
First Order Degradation Constant App. C, Table E (λ) - day^{-1}:	0.00096	0.00042	0.00024	0.00024	0.012
Hydraulic Conductivity (K) - cm/day:	0.86	0.86	0.86	0.86	0.86
Hydraulic gradient (i) - cm/cm:	0.01	0.01	0.01	0.01	0.01
Total Soil Porosity App. C, Table D (Θ_T) - cm^3/cm^3_{soil}:	0.43	0.43	0.43	0.43	0.43
Longitudinal Dispersivity (α_x) - cm **R-16** α_x=0.10*X :	61.00	61.00	61.00	61.00	61.00
Transverse Dispersivity (α_y) - cm **R-17** $\alpha_y=\alpha_x/3$:	20.33	20.33	20.33	20.33	20.33
Vertical Dispersivity (α_z) - cm **R-18** $\alpha_z=\alpha_x/20$:	3.05	3.05	3.05	3.05	3.05
Error Functions: $B_1 = S_w/(4*SQRT(\alpha_y*X))$	5.47	5.47	5.47	5.47	5.47
From App. C, Table G enter corresp. error function value -- $erf(B_1)$:	1	1	1	1	1
$B_2 = S_d/(2*SQRT(\alpha_z*X))$	0.35	0.35	0.35	0.35	0.35
From App. C, Table G enter corresp. error function value -- $erf(B_2)$:	0.38269404	0.38269404	0.38269404	0.38269404	0.38269404
Specific Discharge (U) - cm/day **R-19** $U=K*i/\Theta_T$:	0.020	0.020	0.020	0.020	0.020
R-26 Concentration at distance(X) from the source -- $C_{(x)}$ - µg/L:	**4.998**	**4.997**	**70.000**	**2.001**	**4.993**

Tier 2 GROs

Tier 1 GROs

Intermediate Solutions:

Check

	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Contaminant of Concern	**PCE**	**TCE**	**DCE**	**VC**	**MC**
$a = X/2*\alpha_x =$	5	5	5	5	5
$b = SQRT\ (1+(4*\lambda*\alpha_x/U) =$	3.565	2.475	1.982	1.982	12.141
$c = (1-b)*a =$	-12.827	-7.373	-4.910	-4.910	-55.704
$d = EXP(c) =$	0.000	0.001	0.007	0.007	0.000
$C_{(x)} = d*erf(B2)*erf(B1)*C_{(source)} =$	5.00	5.00	70.00	2.00	4.99

No. 5505 Engineer's Computation Pad

§ 742.805(c):

$$W_{AVE} = \frac{x_1}{CUO_{x_1}} + \frac{x_2}{CUO_{x_2}} + \dots + \frac{x_a}{CUO_{x_a}}$$

FROM APPENDIX A, TABLE F,

Similar-Acting Carcinogens for Liver

Trichloroethylene (TCE)
Tetrachloroethylene (PCE)
Vinyl chloride (VC)

$$\therefore W_{AVE} = \frac{x_{TCE}}{CUO_{TCE}} + \frac{x_{PCE}}{CUO_{x_{PCE}}} + \frac{x_{VC}}{CUO_{x_{VC}}}$$

From R-14 (Appendix H, 11-8-00 FSI / RACR),

x_{TCE} = 3,897 mg/L

x_{PCE} = 56,075 mg/L

x_{VC} = 91 mg/L

From R-26 Solved for C_{source} (i.e. Tier 2 GRDs)

CUO_{TCE} = 2.08 (10^4) mg/L

CUO_{PCE} = 4.86 (10^6) mg/L

CUO_{VC} = 7.09 (10^2) mg/L

$$W_{AVE}\Big|_{LIVER} = \frac{3{,}897}{2.08(10^4)} + \frac{56{,}075}{4.86(10^6)} + \frac{91}{7.09(10^2)} \boxed{= .327} < 1.0$$

ATTACHMENT 4

Hazardous Waste Manifest

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY DIVISION OF LAND POLLUTION CONTROL

P.O. BOX 19276 SPRINGFIELD, ILLINOIS 62794-9276 (217) 782-6761

FOR SHIPMENT OF HAZARDOUS AND SPECIAL WASTE

State Form LPC 62 8/81 IL532-0810

PLEASE TYPE (Form designed for use on elite (12-pitch) typewriter.) EPA Form 8700-22 (Rev. 5-89) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NA — Manifest Document No. [illegible]

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law, but is required by Illinois law.

3. Generator's Name and Mailing Address — Location II Different
Empty Building
[illegible] Wisconsin
Downers Grove Illinois

4. 24 HOUR EMERGENCY AND SPILL ASSISTANCE NUMBERS: [illegible]

A. Illinois Manifest Document Number: IL 9237247 — FEE PAID IF APPLICABLE

B. Generator's IL ID Number: NA

C. Transporter's ID Number: [illegible]

D. Transporter's Phone: [illegible]

E. Transporter's ID Number:

F. Transporter's Phone ( )

G. Facility's IL ID Number: NA

H. Facility's Phone: [illegible]

5. Transporter 1 Company Name: [illegible] — 6. US EPA ID Number: [illegible]

7. Transporter 2 Company Name: — 8. US EPA ID Number:

9. Designated Facility Name and Site Address: [illegible] Industries of Indiana, [illegible] Kennedy Avenue, East Chicago Indiana 46312 — 10. US EPA ID Number: [illegible]

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Non regulated material Not Hazardous By D.O.T. (Soil)	0.04	[illegible]	[illegible]	[illegible]	EPA HW Number: [illegible]
b.					EPA HW Number:
c.					EPA HW Number:
d.					EPA HW Number:

J. Additional Description for Materials Listed Above: [illegible]

K. Handling Codes for Wastes Listed Above In Item #14

15. Special Handling Instructions and Additional Information
[illegible]
Generator Phone
Certificate of Destruction Required

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: FRED PFEIFFER — Signature: Fred Pfeiffer — Date: Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials — Printed/Typed Name: [illegible] — Signature: [illegible] — Date: Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials — Printed/Typed Name: — Signature: — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. — Printed/Typed Name: — Signature: — Date: Month Day Year

This Agency is authorized to require, pursuant to Illinois Revised Statute, 1989, Chapter 111 1/2, Section 1004 and 1021, that this information be submitted to the Agency. Failure to provide this information may result in a civil penalty against the owner or operator not to exceed $25,000 per day of violation. Falsification of this information may result in a fine up to $50,000 per day of violation and imprisonment up to 5 years. This form has been approved by the Forms Management Center.

COPY 6. GENERATOR'S COPY

In case of a spill call the Illinois Office of Emergency Response at 217/782-7860 and the National Response Center at 800/424-8802 or 202/426-2675.

JAN-17 01 12:38 FROM:THE MOREY CORP PURCH 6307542101 TO:3125878210 PAGE:02

MOR 000038

Jan 15 00 29657

DATE 56434 ORDER NO.

CUSTOMER NO.

P.O. NO.

MANIFEST NO. IL 4237247 P

HAZCHEM ENVIRONMENTAL CORPORATION
ENVIRONMENTAL MANAGEMENT & REMEDIATION SERVICES
1115 West National Avenue Addison, IL 60101 630-458-1910 Fax 630 458-1918

BILL TO
PIONEER ENVIRONMENTAL
ATTN: ACCOUNTS PAYABLE
1000 N. HALSTED, STE 202
CHICAGO, IL.
60622

SHIP TO
EMPTY BUILDING
2659 WISCONSIN
DOWNERS GROVE, IL.

P/U ONLY: 4 55GAL DRUMS NON-HAZ SOIL DENNIS DAUGHERTY

SPECIAL INSTRUCTIONS
1.00EA ND-100 PICK UP ONLY

SUPPLIES USED	
	5 GAL-OTP
	30 GAL OTP
	55 GAL-OTP
	30GAL-CTS
	55GAL-CTS
	55GAL-OTS-NEW
	55GAL-OTS-USED
	85GAL-OTS
	85GAL-OTP
	CUBIC YD BOX
	PIH BOX
	VERMICULITE

PERSONNEL	
NAME	HOURS
Dave	$35 / 1.45

DISPOSAL OUTLET	PROFILE #	DRUM #	QUANTITY	SIZE	CATEGORY
PCC	206107		4	55	NH SOIL

GENERATOR ACKNOWLEDGEMENT:

SIGNATURE Fred Pfeiffer

NAME (PRINT) FRED PFEIFFER TITLE Safety Mgr. DATE 1/16/01

*** Generator acknowledges by signature below that the original quotation was exceeded due to additional time and materials ***

SIGNATURE

NAME (PRINT) TITLE DATE

JAN-17 01 12:38 FROM:THE MOREY CORP PURCH 6307542101 TO:3125878210 PAGE:02

MOR 000039

LAND DISPOSAL RESTRICTION NOTIFICATION FORM 1

Generator Name/Location Empty Building Downers Grove

EPA ID Number NA Manifest Number IL9237247

Waste Analysis Available _____ Yes X No _____ On file at facility Date 1/15/00

PROFILE #	RCRA NON-REGULATED Please check if waste stream is not regulated by RCRA.	RCRA WASTE CODES (List all that apply)	SUBCATEGORY (See Table II and Select Key # if applicable).	TREATABILITY GROUP Please check the applicable treatability group.		CALIFORNIA LIST WASTES	REGULATED CONSTITUENTS FOR D001*, D002, D012-D043, F001-F005 & F039
a	b	c	d	Nonwastewater >1% TOC & >1% TSS e	Wastewater f	List all applicable constituents from key below g	List all applicable constituents from Table I and/or key below h
208107	X						

CALIFORNIA LIST WASTES (for Column g)

1) PCB > = 50 ppm 2) Halogenated Organic Carbon (HOC's) > = 1000 mg/l 3) Nickel (Ni) > = 134 mg/l 4) Thallium (Tl) > = 130 mg/l

REGULATED CONSTITUENTS FOR F001, F002, F003, F004, F005 (for Column h)

5) Acetone
6) Benzene
7) N-Butly Alcohol
8) Carbon Disulfide
9) Carbon Tetrachloride
10) Chlorobenzene
11) Cresols (o,m, or p isomers)
12) Cresylic Acid
13) Cyclohexanone
14) 1,2-Dichlorobenzene
15) Ethyl Acetate
16) Ethyl Benzene
17) Ethyl Ether
18) Isobutanol (Isobutyl alcohol)
19) Methanol
20) Methylene Chloride
21) Methyl Ethyl Ketone
22) Methyl Isobutyl Ketone
23) Nitrobenzene
24) Pyridine
25) Tetrachloroethylene
26) Toluene
27) 1,1,1 Trichloroethane
28) 1,1,2 Trichloroethane
29) 1,1,2 Trichloro 1,2,2 Trifluoroethane
30) Trichloroethylene
31) Trichlorofluoromethane
32) Xylene (Total)

I certify under penalty of law that the above information is accurate and true.

Signature Fred Pfeiffer Print Name FRED PFEIFFER