State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

September 14, 2016

Mr. Jason Smith
Corporate Environmental Director
Tecumseh Products Company
2700 West Wood Street
Paris TN 38242

Mr. Edward Jones
c/o Rightway Fasteners Inc.
7945 South International Drive
Columbus IN 47201

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure
Tecumseh- Fill Area @ MW-1, 1604 Michigan Ave., New Holstein, WI
DNR BRRTS Activity #: 02-08-193776

Dear Mr. Smith and Mr. Jones:

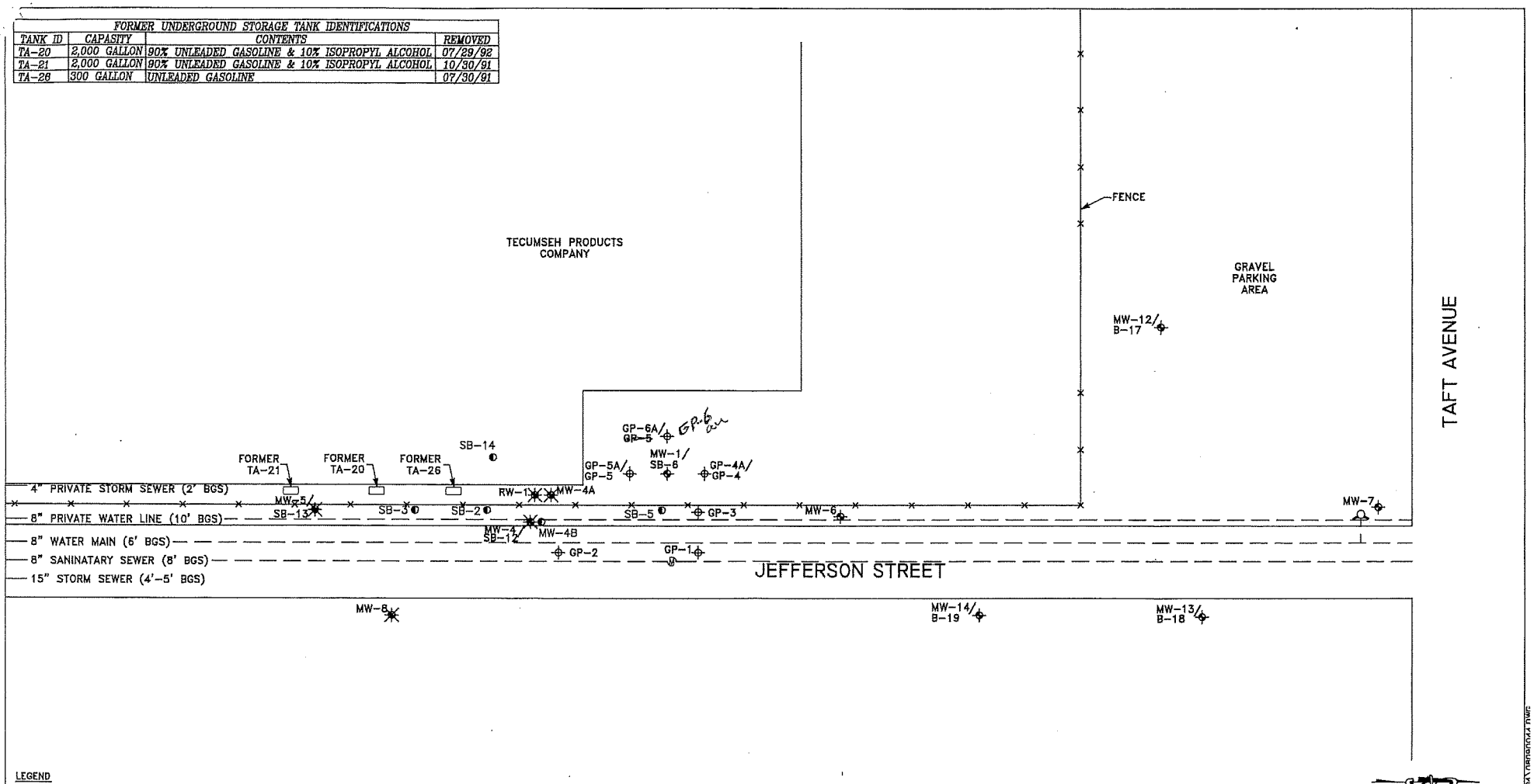
The Department of Natural Resources (DNR) considers Tecumseh- Fill Area @ MW-1 closed. No further investigation or remediation is required at this time. Provide this letter to anyone who purchases this property from you.

This final closure decision is based on the correspondence and data provided, and is issued under ch. NR 726, Wis. Adm. Code. The Northeast Region Project Manager reviewed the request for closure on August 4, 2004. The DNR reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. A conditional closure letter was issued by the DNR on August 4, 2004, and documentation that the conditions in that letter were met was received on August 30, 2012.

This case was an investigation of contaminated soil fill on the northeast portion of the Tecumseh Products Company facility. Limited contamination including the PCB Aroclor 1254 was identified in the area however it was determined that further investigation was not warranted at the time of closure review.

Some PCB contamination remains in the soil in the vicinity of soil sample location GP-6 (Figure 1, Site Layout, Key Environmental, May 1, 2003). If this soil is excavated in the future, the property owner or right-of-way holder at the time of excavation must determine if contamination remains. If contamination is present, the property owner or right-of-way holder at the time of

FORMER UNDERGROUND STORAGE TANK IDENTIFICATIONS			
TANK ID	CAPASITY	CONTENTS	REMOVED
TA-20	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	07/29/92
TA-21	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	10/30/91
TA-26	300 GALLON	UNLEADED GASOLINE	07/30/91



LEGEND

- FIRE HYDRANT
- MANHOLE
- GROUNDWATER MONITORING WELL LOCATION
- SOIL PROBE LOCATION
- SOIL PROBE LOCATION
- ABANDONED MONITORING WELL LOCATION

SCALE IN FEET

0 50'

DESIGNED BY DKP	DATE 05/01/03
DRAWN BY CTM	PROJECT 0809004
APPROVED BY DJG	SHEET NO. 2
CADFILE G:\ACAD\0809004\0809044.dwg XREF LMAN Jay	

FIGURE 1
SITE LAYOUT
EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

KEY ENGINEERING GROUP LTD.
ENVIRONMENTAL • CIVIL • RAILROAD

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
CASE SUMMARY AND CLOSE OUT FORM

Form 4400-202
5-98

NOTE: Use of this form is required by the Department for any case close out application filed pursuant to ch. 292, Wis. Stats. and ch. NR 726, Wis. Adm. Code. Completion of this form is mandatory for applications for case closure. The Department will not consider or act upon your application unless you complete and submit this application form. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than reviewing close out requests and determining the need for additional response action.

I certify that, to the best of my knowledge, the information presented on and attached to this form is true and accurate. This recommendation for case closure is based upon all available data as of March 14, 2000. I have read the Case Summary and Close Out Form Instructions and all required information has been included.

Form Completed By: _____ 3/14/00
(Signature) (Date)

Printed Name: Curtis M. Hoffart Company Name: Key Engineering Group, Ltd.

If not site owner, relationship to site owner: Environmental Consultant

Address: W66 N215 Commerce Court, Cedarburg, WI 53012

Telephone Number: (262) 374-4750 FAX Number: (262) 375-9680

Environmental Consultant (if different then above): _____

Address: _____

Telephone Number: (____)_____ FAX Number: (____)_____

FEE RECEIVED
Date 3/15/2000
WDNR - NER

FOR DEPARTMENT USE ONLY

Type of Case: LUST Spill ER Land Recycling Other_____ DNR Reviewer:_____

WDNR Site Name: Tecumseh - East Section Fill Area

Complete Site Address: 1604 Michigan Avenue, New Holstein, Wisconsin

WDNR BRRTS Case #: 02 - 08 - 193776 FID #: NA

PECFA Claim #: NA

Responsible Party Name: Tecumseh Products Company

Complete Responsible Party Address: 1604 Michigan Avenue, New Holstein, Wisconsin

Site Legal Description :_____¼, _____¼, SE ¼, Sec 10, T 17 N, R 20 E Town: New Holstein

County: Calumet Latitude: ____° ____' ____ ____.____" Longitude: ____° ____' ____ ____.____"

Type Of Closure Requested:

Soil	Groundwater
___< NR 720.09/720.11 Generic RCLs	_X_< NR 140.10 Table 1 & Table 2 Values
___NR 720.19(2) Soil Performance Stds.	___NR 140.28(2) PAL Exemption
___NR 720.19(3) Site Specific Stds.	___NR 726.05(2)(b) Natural Attenuation

Contaminant Type(s): Fill Material Quantity Released: Unknown

Date of Incident/Discovery: 1991 Zoning of Property: Heavy Industrial

Enforcement Actions Closed Out?____ Yes _____No __X__NA Permits Closed Out?_____Yes _____No __X__NA

Form 4 Pending? _____Yes _____No __X__NA Date Closure Submitted to DNR: March 14, 2000

WDNR BRRTS Case #: 02 - 08 - 193776 WDNR Site Name: Tecumseh - East Section Fill Area

1. **CASE HISTORY AND JUSTIFICATION FOR CLOSURE ATTACHED?** ___Yes __X__No - Documented in enclosed letter.

2. **SOIL PRE-REMEDIATION OR INVESTIGATION ANALYTICAL RESULTS**

Extent Defined? ___Yes ___No Soil Type(s): Sandy clay/sandy silt Depth to Bedrock: >30 feet

Potential Receptors for Direct Contact (i.e. vapor migration, contaminated soil left in place): None which could reasonably be affected.

Tables of Pre-remedial Analytical Results Attached? __X__Yes___No Maps of Pre-remedial Sample Locations Attached? __X__Yes __No

3. **SOIL POST REMEDIATION ANALYTICAL RESULTS**

Remedial Action Completed? ____Yes __X__No 720.19 Analysis? ____Yes __X__No (If yes, attach supporting documentation)

Were Soils Excavated? _____Yes __X__ No Quantity: NA Disposal Method: NA

Final Confirmation Sampling Methods: NA

Soil Disposal Form Attached? __NA__Yes _____No Final Disposal Location: NA

Estimated volume of insitu soils exceeding NR 720 RCLs: Isolated areas in fill material.

Tables for Post Remedial Analytical Results Attached? __NA__Yes__No Maps of Post Remedial Sample Locations Attached?__Yes_No

Brief Description of Remedial Action Taken: NA None

4. **GROUNDWATER ANALYTICAL RESULTS**

Potential Receptors for Groundwater Migration Pathway: None which could reasonably be affected.

Extent of Contamination Defined?_____Yes _ ___No __X__NA Remedial Action Completed? _____Yes _____No __X__NA

# of Sample Rounds: 16 Depth(s) to Groundwater/Flow Direction(s): 3 to 15 feet / northwesterly to northerly.

Field Analyses? _____Yes __X__No Lab Analyses? __X__Yes _____No # of Sampling Points: 2 to 9 (LUST case)

NR 141 Monitoring Wells Sampled: 9 (LUST case) # Temporary Groundwater Sampling Points Sampled: 0

Recovery Sumps Sampled: 1 # Municipal Wells Sampled: 0 # Private Wells Sampled: 0

Has DNR Been Notified of Substances in Groundwater w/o Standards? __NA__Yes ___No

Any Potable Wells Within 1200 Feet of Site? ___Yes ___No If Yes, How Many? ____

Have They Been Sampled? __NA__Yes ___No Have Well Owners/Occupants Been Notified of Results? __NA__Yes___ No

Preventive Action Limit Exceeded? _ _Yes ___No (If Yes, identify location(s)____

Enforcement Standard Exceeded? _ _ _Yes ___No (If Yes, identify location(s)_____

Tables of Analytical Results Attached? ___Yes ___No Map of Groundwater Sample Locations Attached? __X__Yes____No

Brief Description of Remedial Action Taken: NA

None

WDNR BRRTS Case #: 02 - 08 - 193776 WDNR Site Name: Tecumseh - East Section Fill Area

FOR DEPARTMENT USE ONLY

FIRST REVIEW DATE: 8-4-04 [X] **Approved** [ ] **Denied**

Alan Shaw
(Signature) (Signature) (Signature) (Signature)

SECOND REVIEW DATE: _____ [ ] **Approved** [ ] **Denied**

(Signature) (Signature) (Signature) (Signature)

COMMITTEE RECOMMENDATION:

X **Closure Approved Per:**
- X No Restrictions
- _____ Groundwater Use Restriction
- _____ Zoning Verification
- _____ Deed Restriction
- _____ Deed Affidavit
- _____ Site Specific Close Out Letter Necessary
- X Well Abandonment Documentation → MW-1
- _____ Soil Disposal Documentation
- _____ Public Notice Needed
- _____ NR 140 Exemption For: _____
- _____ Specific Comments: Urben & Polczynski concur that no action/control needed for PCB cont. @ GP6-A.

_____ **Closure Denied, Needs More:**
- _____ Investigation
- _____ Groundwater Monitoring
- _____ Soil Remediation
- _____ Groundwater Remediation
- _____ Documentation Of Soil Landspreading Or Biopile Destiny

Reviewed 9-9-16 KMK

- Reviewed by C.C. on 9-9-2016. See McKnight E-mail to Fassbender dated 8-23-2016 (attach to Closure Request when scanning).
- PCB @ GP-6 - CONCENTRATION 1.5 mg/kg — above 1.4 mg/kg detection limit. Close. Add lang to final closure letter explaining timeline, detection, + limited quantity (other samples)

Spills: (Location Unk.) All Cls.
04-08-168369 (polyglycol)
04-08-283169 (gasoline)
04-08-229768 (not presumptive)

✓ = open (8/04)

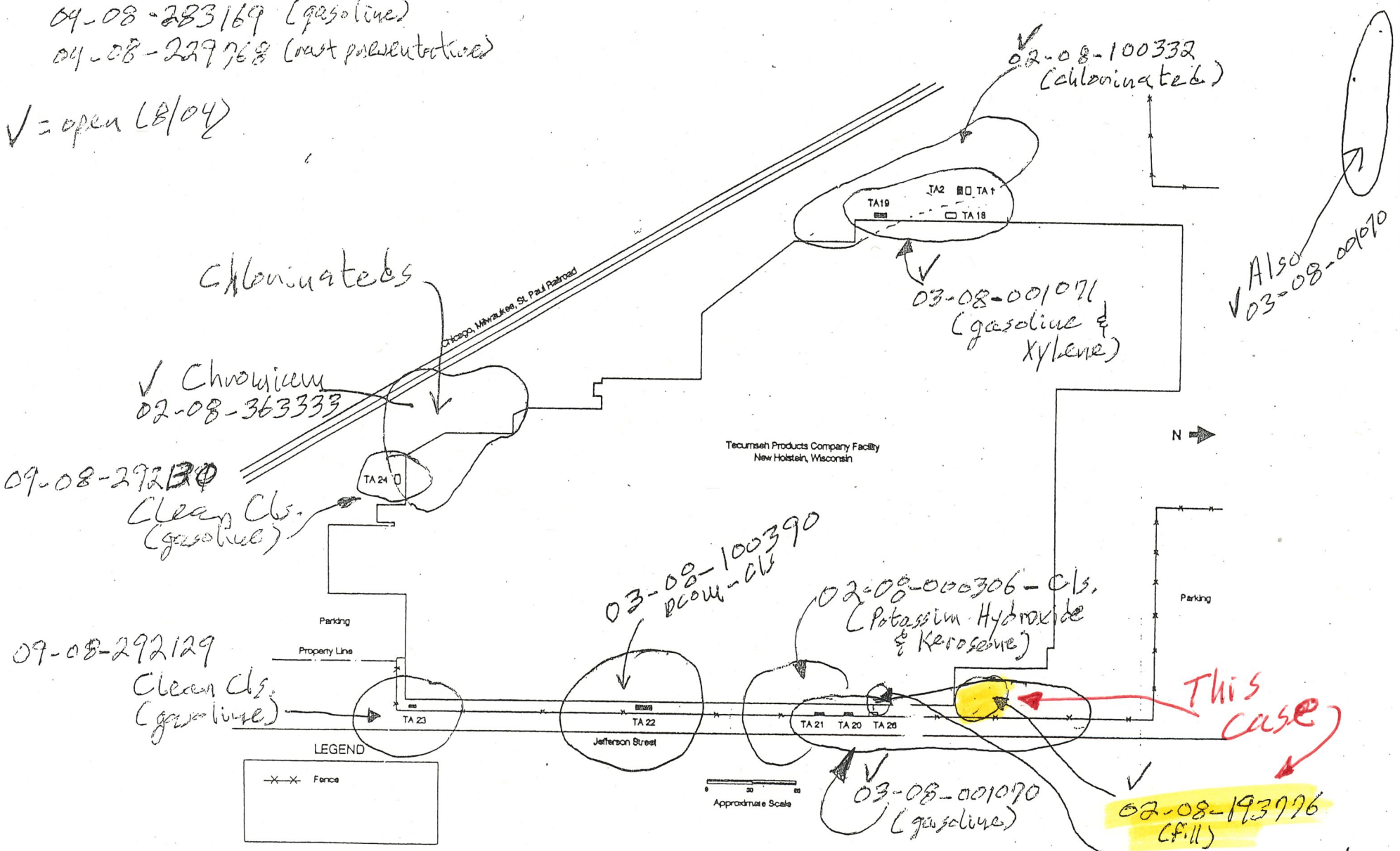


Figure 1

Case History & Justification - Closure

KEY ENGINEERING GROUP LTD.
ENVIRONMENTAL ▪ CIVIL/GEOTECH ▪ COMPLIANCE

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
(262) 375-4750
(800) 645-7365
Fax (262) 375-9680

March 14, 2000

Mr. Alan Nass
Wisconsin Department of Natural Resources
Northeast Region
1125 North Military Avenue
Post Office Box 10448
Green Bay, Wisconsin 53407-0448

Reference: ***Case Closure Request/***
Limited Site Investigation Report
Tecumseh-East Section Fill Area
1604 Michigan Avenue
New Holstein, Wisconsin
WDNR BRRTS #02-08-193776

KEY ENGINEERING GROUP, LTD.
File No. 0809004

Dear Mr. Nass:

The purpose of this letter is to provide the Wisconsin Department of Natural Resources (WDNR) with the results of the limited site investigation (LSI) and request case closure for the above referenced site. This letter was prepared by Key Engineering Group, Ltd. (KEY) on behalf of Tecumseh Products Company (Tecumseh).

Purpose and Objectives

Approximately 8 feet of fill material, which included paint chips, metal shavings and ash, was encountered during the gasoline leaking underground storage tank (LUST) site investigation in the East Section (WDNR LUST ID# 03-08-01070). The fill material was encountered at soil boring SB-6 (MW-1), located near the northeast corner of the Tecumseh facility. Concentrations of benzene, ethylbenzene, xylenes and trimethylbenzenes were detected in a sample of the fill material collected from 4 to 6 feet below ground surface (bgs). The benzene concentration exceeded the NR 720 generic residual contaminant level (GRCL) based on the protection of groundwater.

The WDNR notified Tecumseh in a July 29, 1998 letter to submit a work plan for the investigation of the fill material impacts since they appeared to be unrelated to the East Section LUST impacts. Additionally, the WDNR notified Tecumseh in an August 4, 1998 letter that management of this area of contamination in accordance with NR 700 through NR 728 is required.

The objectives of the LSI were to identify whether fill material impacts detected at SB-6/MW-1 have impacted native soils beyond the area of fill and evaluate whether remedial action associated with the fill material impacts is warranted. Additionally, LSI data was also used to evaluate whether the fill material impacts at SB-6/MW-1 are representative of an isolated area or are indicative of a widespread area of contaminated fill material.

Background Information

Significant soil and groundwater sample data has been collected in the vicinity of the Fill Area in association with the East Section LUST case. LUST case data was most previously documented in KEY's January 27, 2000 *Case Closure Request*.

LUST case information pertinent to the Fill Area is summarized as follows:

- The groundwater flow direction in the East Section is northerly to northwesterly.
- MW-1 was the only monitoring well installed within the area of fill material (other than areas of exclusively soil fill).
- The average depth to groundwater at MW-1 is approximately 12 feet bgs; soil contamination within fill material is not present at depths greater than 6 to 7 feet bgs at SB-6/MW-1.
- No petroleum volatile organic compounds (VOCs) (most significant contaminants detected in fill material concentrations) have historically been detected in groundwater within or downgradient of the Fill Area (MW-1 and MW-12, respectively).

No!

Investigation Procedures

The LSI was conducted in general accordance with KEY's October 6, 1998 *Limited Site Investigation Work Plan* and October 12 and 15, 1998 letters from the WDNR. The LSI consisted of advancing three soil probes to the north, west and south of SB-6/MW-1 (GP-4, GP-5 and GP-6). One soil probe was also conducted east of SB-6/MW-1 in conjunction with LUST investigation activities conducted concurrently with the LSI (GP-3). The soil probes were advanced with a truck-mounted Geoprobe® unit operated by Briohn Environmental Contractors, Inc. on September 29, 1999. The soil probe locations are depicted on Figure 1.

Each soil probe was advanced to 10 or 12 feet bgs. Soil samples were collected at 2-foot intervals and were classified in the field in accordance with the Unified Soil Classification System. Each soil sample was also field screened for the presence of VOCs with a photoionization detector (PID). Two soil samples collected from GP-4, GP-5 and GP-6 were submitted to Great Lakes Analytical laboratory for analysis of VOCs and Resource Conservation and Recovery Act metals. One soil sample collected from GP-3 (LUST soil probe) was submitted for gasoline range organics and petroleum volatile organic compounds. Soil boring and sampling information, soil sample classification data and field screening results are documented on soil boring logs included in Attachment 1. Borehole abandonment forms are also included in Attachment 1.

No PCBs on PAHs!

Results

Approximately 8 to 9 feet of fill material consisting of silty clay or clayey silt with glass and wood fragments was encountered at GP-4, GP-5 and GP-6. The fill material was underlain by sandy clay, sandy silt or silty clay. Fill material was not encountered at GP-3. The depth and type of fill material was generally consistent with the fill documented by Dames & Moore at SB-6/MW-1. The depth to groundwater in MW-1 at the time of the LSI was approximately 12 feet bgs.

Soil sample field screening results generally indicated PID readings above background for soil samples collected from the fill material at GP-4, GP-5 and GP-6. Lower PID readings were measured in underlying native soils. No significant PID readings were measured at GP-3. Soil sample field screening results are included on the attached boring logs.

The soil sample analytical results are summarized in Table 1 and on Figure 2 and the Great Lakes Analytical laboratory report and chain of custody documentation are included in Attachment 2. The soil sample analytical results indicated that several VOCs were detected in soil samples collected primarily from fill material at depths of 4 to 6 bgs or 6 to 8 bgs. The VOCs were generally petroleum related with the exception of 1,2-dichlorobenzene and 2,2-dichloropropane, which were detected at GP-4 and/or GP-5. Naphthalene and xylene were detected at concentration exceeding NR 720 or WDNR interim guidance GRCLs for the protection of groundwater in soil samples collected from fill material at GP-4 and GP-5. No NR 720 GRCLs or United States Environmental Protection Agency preliminary remediation goals or soil screening levels were exceeded in soil samples collected at GP-6 or GP-3 or in native soils underlying fill material. Benzene was not detected in any of the soil samples.

Several metals were detected at low (background) concentrations in soil and fill material samples.

Conclusions

Based on the LUST case and LSI results, further investigation and remedial action associated with the on-site fill material is not considered warranted. This conclusion is supported by the following rationale:

- Residual fill material petroleum VOC impacts are confined to the layer of fill material and have not significantly impacted underlying native soils.
- Residual contaminant concentrations do not present a direct contact risk.
- Based on the lack of groundwater impacts within and down gradient of the Fill Area, residual benzene, naphthalene and xylene concentrations in soil represent a localized area within the Fill Area, and therefore, do not represent a significant source of future groundwater impacts.
- No land use changes are projected at the site.

Based on the LUST case/LSI data and this rationale, case closure is appropriate.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Curtis M. Hoffart, CHMM
Project Scientist

Gregory L. Johnson, CHMM, P.G., P.E.
Manager of Technical Services

CMH/mas

Enclosures:

	Table 1	Summary of Soil Sample Analytical Results
	Figure 1	Site Layout
	Figure 2	Summary of Soil and Groundwater Sample Analytical Results
	Attachment 1	Soil Boring Logs/Abandonment Forms
	Attachment 2	Laboratory Report and Chain of Custody Documentation

cc: Mr. Kerry DeKeyser, Tecumseh Products Company

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KEY ENGINEERING GROUP LTD.
ENVIRONMENTAL • CIVIL/GEOTECH • COMPLIANCE

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
(262) 375-4750
(800) 645-7365
Fax (262) 375-9680

Case History - Continued
Cls. Justification - Continued

May 20, 2003

Mr. Alan Nass
Wisconsin Department of Natural Resources
Northeast Region
1125 North Military Avenue
Post Office Box 10448
Green Bay, Wisconsin 53407-0448

Reference: *Response to WDNR's May 31, 2000 Correspondence*
Tecumseh-East Section Fill Area
1604 Michigan Avenue
New Holstein, Wisconsin
WDNR BRRTS #: 02-08-193776

KEY ENGINEERING GROUP, LTD.
File No. 0809004

Dear Mr. Nass:

Pursuant to the Wisconsin Department of Natural Resources (WDNR) May 31, 2000 correspondence (attached), the purpose of this letter is to provide the additional requested soil analytical data for the above referenced site. Key Engineering Group, Ltd. (KEY) previously submitted a *Case Closure Request/Limited Site Investigation Report* (KEY, March 14, 2000) with the $750.00 closure review fee and the WDNR *Case Summary and Closeout Forms*. Moreover, it is understood that once the WDNR receives this information the case closure review process will continue. This letter was prepared by KEY on behalf of Tecumseh Products Company.

Investigation Procedures

Three soil probes (GP-4A, GP-5A and GP-6A) were advanced with a truck-mounted Geoprobe® unit operated by Soil Essentials on April 8, 2003, in the immediate vicinity of the previous soil probe locations. The soil probe locations are depicted on Figure 1.

The soil probes were advanced to 10 or 12 feet below ground surface. Soil samples were collected at 2-foot intervals and were classified in the field in accordance with the Unified Soil Classification System. Each soil sample was also field screened for the presence of volatile organic compounds with a photoionization detector (PID). Two soil samples from each soil probe were collected from GP-4A, GP-5A and GP-6A and submitted to Test America for analysis of polynuclear aromatic hydrocarbons (PAHs) and three soil samples were collected and submitted for analysis of polychlorinated biphenyls (PCBs). The soil samples were collected from the fill (one PAHs and two PCBs) and native soil (one PAHs and one PCBs) as outlined in the WDNR, May 31, 2000, correspondence. Soil probe and sampling information, soil sample classification data and field screening results are documented on soil boring logs which are included in Attachment 1. Borehole abandonment forms are also included in Attachment 1.

Results

The soil sample analytical results are summarized in Table 1. The soil sample analytical reports and chain of custody documentation are included in Appendix 2.

The results of field screening indicated that PID readings ranged from <1.0 instrument unit (i.u.) to 18 i.u. Soil sample field screening results generally indicated PID readings above background for soil samples collected from the fill material at GP-4A, GP-5A and GP-6A. Lower PID readings were measured in underlying native soils. The boring logs included in Appendix 1 include PID readings for each interval sampled.

The site investigation (SI) laboratory PAH soil sample analytical results indicated that no soil sample concentrations were greater than WDNR Interim Guidance Generic Residual Contaminant Levels for the protection of groundwater or for the direct-contact exposure pathway.

The SI laboratory PCB soil sample analytical results indicate that no soil samples contained more than 50 micrograms per kilogram.

Conclusions

Based the PAH and PCB soil analysis and the previously submitted *Case Closure Request/Limited Site Investigation Report* (KEY, March 14, 2000) with the $750.00 closure review fee and the WDNR *Case Summary and Closeout Forms* it is understood that the case closure review process will continue upon receipt of this letter.

Please call if you have any questions.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Daniel K. Pelczar, CPG, P.G.
Senior Hydrogeologist

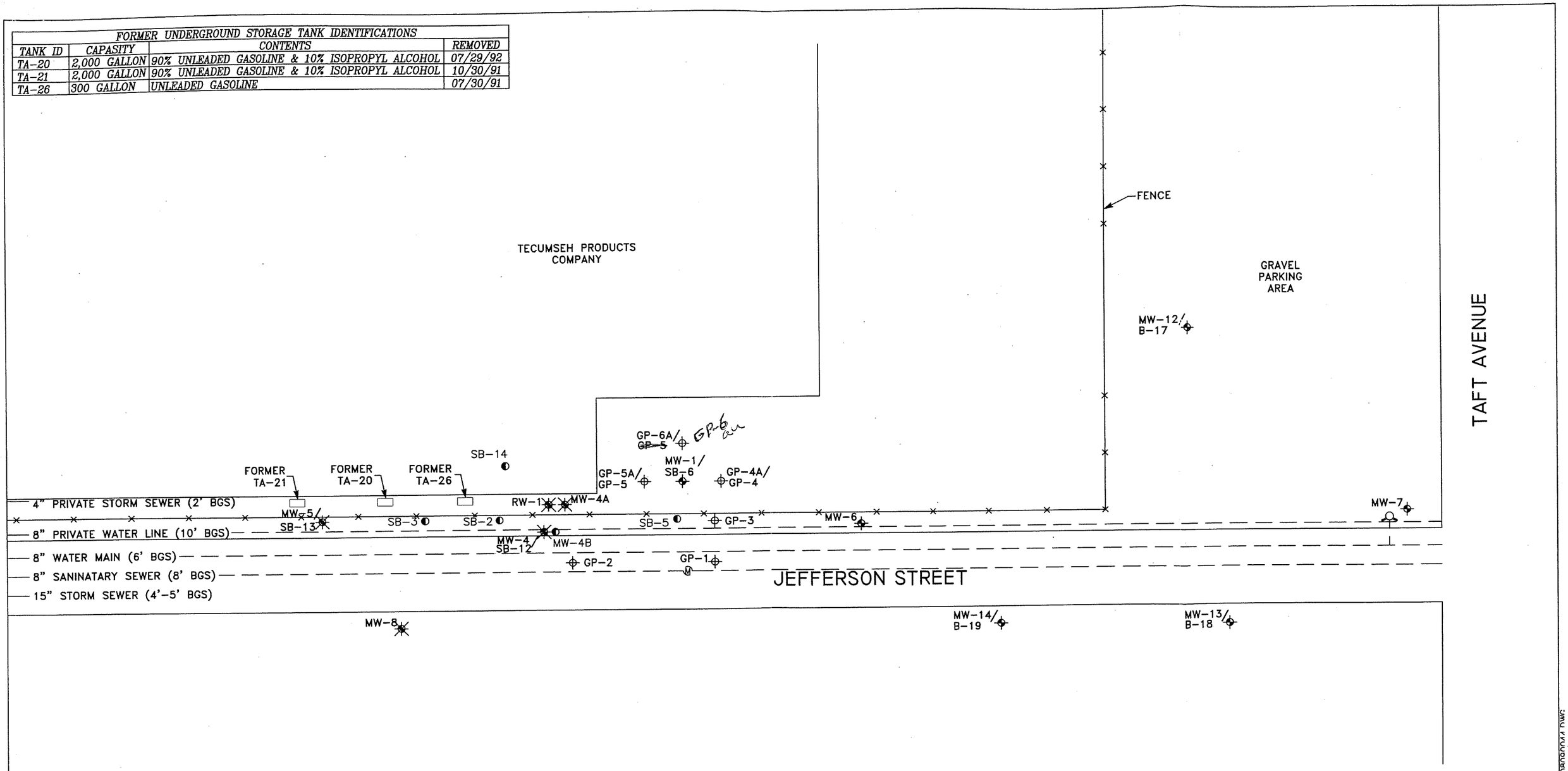
Andrew B. Graham, P.E., P.G., CHMM
Senior Engineer

DKP/vjc

cc: Mr. Bharat Shah, Tecumseh Products Company

Attachments: *Case Closure Review* (WDNR, May 31, 2000)
Table 1 - Summary of Soil Analytical Data
Figure 1 - Site Layout
Attachment 1 - Soil Probing Logs/Abandonment Forms
Attachment 2 - Soil Analytical Report/Chain of Custody Form

FORMER UNDERGROUND STORAGE TANK IDENTIFICATIONS			
TANK ID	CAPASITY	CONTENTS	REMOVED
TA-20	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	07/29/92
TA-21	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	10/30/91
TA-26	300 GALLON	UNLEADED GASOLINE	07/30/91



LEGEND

- FIRE HYDRANT
- MANHOLE
- GROUNDWATER MONITORING WELL LOCATION
- SOIL PROBE LOCATION
- SOIL PROBE LOCATION
- ABANDONED MONITORING WELL LOCATION

SCALE IN FEET

0 50'

DESIGNED BY DKP	DATE 05/01/03
DRAWN BY CTM	PROJECT 0809004
APPROVED BY DJG	SHEET NO. 2
CADFILE G:\ACAD\0809004\0809044.dwg XREF LMAN .lay	

~~FIGURE 1~~
SITE LAYOUT
EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

Figure 2

KEY ENGINEERING GROUP LTD.
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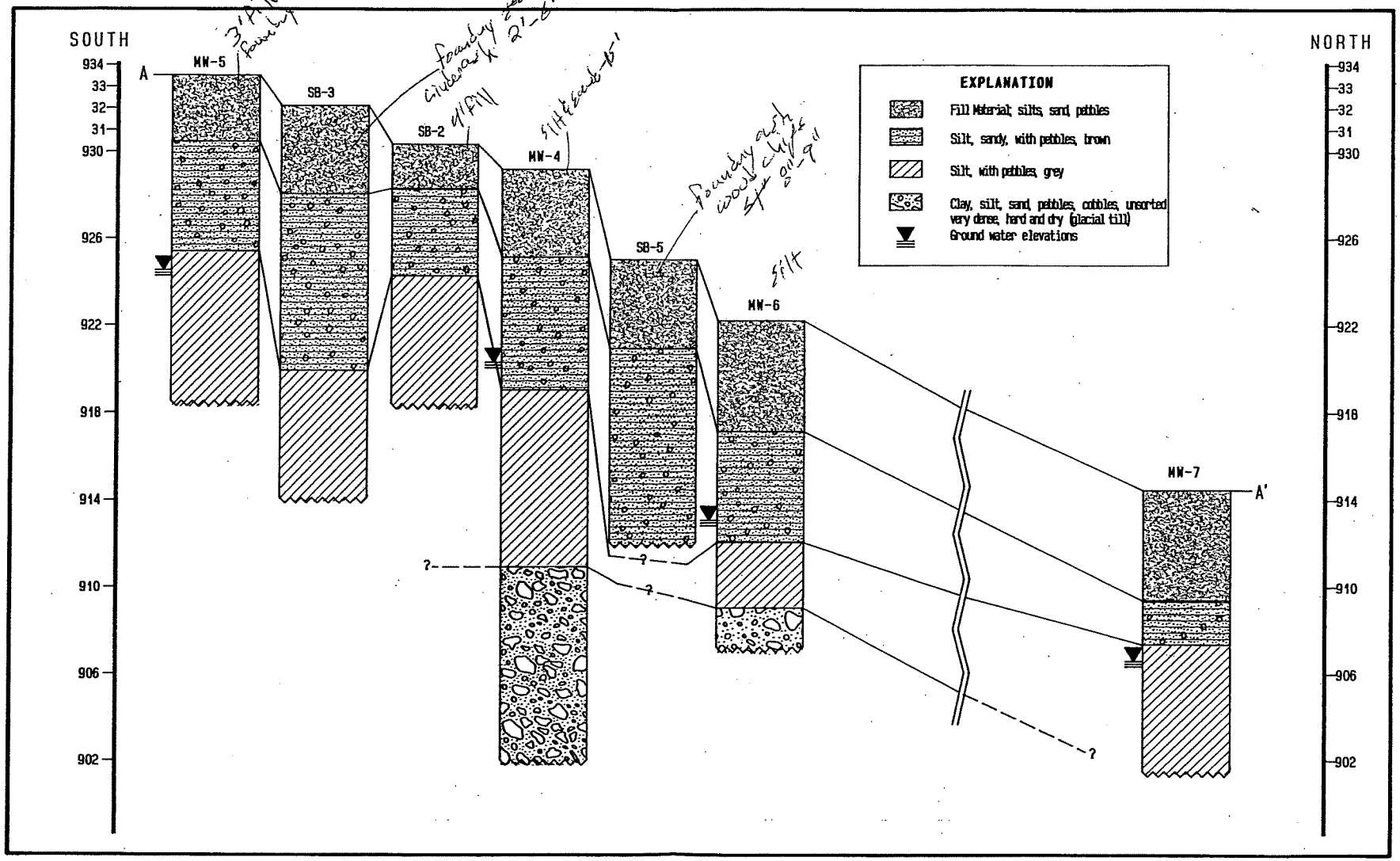


Vertical scale in feet above mean sea level

V.E. = 13 x
Approximate Horizontal Scale
0 50 100 feet

Dames & Moore, Inc.
Milwaukee, Wisconsin

~~Figure 5A~~

Cross Section A-A': East Section

Tecumseh Products Company
New Holstein, Wisconsin

Figure 3

TABLE 1

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS (Sampled 10/99)

TECUMSEH - EAST SECTION FILL AREA
1604 Michigan Avenue
New Holstein, Wisconsin

	GP-3	GP-4		GP-5		GP-6		SB-6 / MW-1[4]	NR 720 GRCL	USEPA PRG	USEPA SSL
Depth (feet)	6-8	6-8	10-12	4-6	10-12	4-6	10-12	4-6			
PID (i.u.)	3	67	3	140	4	182	4	1,011			
Detected VOCs (µg/kg)											
Benzene	<25	<25	<25	<25	<25	<25	<25	**1,500**	5.5	1,400	30
n-Butylbenzene	---	1,300	120	2,200	<25	620	<25	---	---	5.5 E 05	---
sec-Butylbenzene	---	<25	<25	1,700	<25	300	<25	---	---	4.1 E 05	---
tert-Butylbenzene	---	620	<25	450	<25	<25	<25	---	---	4.9 E 05	---
1,2-Dichlorobenzene	---	<25	<25	360	<25	<25	<25	---	---	3.7 E 05	1.7 E 04
2,2-Dichloropropane	---	53	<25	<25	<25	<25	<25	---	---	---	---
Di-Isopropyl ether	---	<25	<25	<25	<25	200	<25	---	---	---	---
Ethylbenzene	<25	210	<25	2,200	34	440	<25	1,600	2,900	2.3 E 05	1.3 E 04
Isopropylbenzene	---	430	<25	2,200	<25	210	<25		---	5.2 E 05	---
Naphthalene	---	**410**	110	**2,500**	<25	**190**	<25	---	400[1]	1.9 E 05	8.4 E 04
n-Propylbenzene	---	360	<25	1,200	<25	240	<25	---	---	5.5 E 05	---
Toluene	<25	200	<25	250	<25	90	<25	---	1,500	5.2 E 05	1.2 E 04
1,2,4-Trimethylbenzene	<25	750	95	2,000	38	870	<25	1,800	---	1.7 E 05	---
1,3,5-Trimethylbenzene	140	450	<25	1,200	<25	320	<25	1,100	---	7.0 E 04	---
Xylene	<25	750	<25	**9,700**	170	970	<25	1,000	4,100	2.8 E 05[2]	1.9 E 05[2]
Detected Metals (mg/kg)[5]											
Barium	---	64	<28	71	<28	43	35	---	---	1.0 E 05	1,600
Chromium	---	14	3.9	13	4.8	12	8.8	---	200[3]	4,500	38
Lead	---	13	<1.1	35	<1.1	14	6.7	---	500[3]	1,000	---
Mercury	---	0.083	<0.045	0.13	<0.045	<0.049	<0.044	---	---	560	---
Selenium	---	1.0	0.63	1.6	<0.56	1.8	<0.56	---	---	10,000	5

20/110

14/30

Total Chromium Not Hex Chrom.

Notes:
Bold concentration exceeds applicable GRCL or SSL based on the protection of groundwater
1 - WDNR interim guidance 20/110
2 - o-xylene referenced
3 - industrial direct contact GRCL
4 - soil boring by Dames & Moore (10/91)
5 - Arsenic, Cadmium and Silver were analyzed but not detected
--- - not analyzed or not applicable
GRCL - NR 720 generic residual contaminant level based on the protection of groundwater
mg/kg - milligrams per kilogram
PID - photoionization detector
PRG - USEPA Region 9 industrial direct contact Preliminary Remediation Goal
SSL - USEPA Region 9 Soil Screening Level for the protection of groundwater (with dilution)
µg/kg - micrograms per kilogram
USEPA - United States Environmental Protection Agency
VOCs - volitale organic compounds

Note: Any Petroleum-Related Contamination Is Not From This Case (i.e. Ignore).

- Above WT
- Below WT
- > 720
- > 720 NI
- > 720 I

H:\PROJECTS\1998\0809004\TABLES\0809004.TABLE1.xls

Table 2

~~TABLE 1~~

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

TECUMSEH - EAST SECTION FILL AREA

1604 Michigan Avenue
New Holstein, Wisconsin

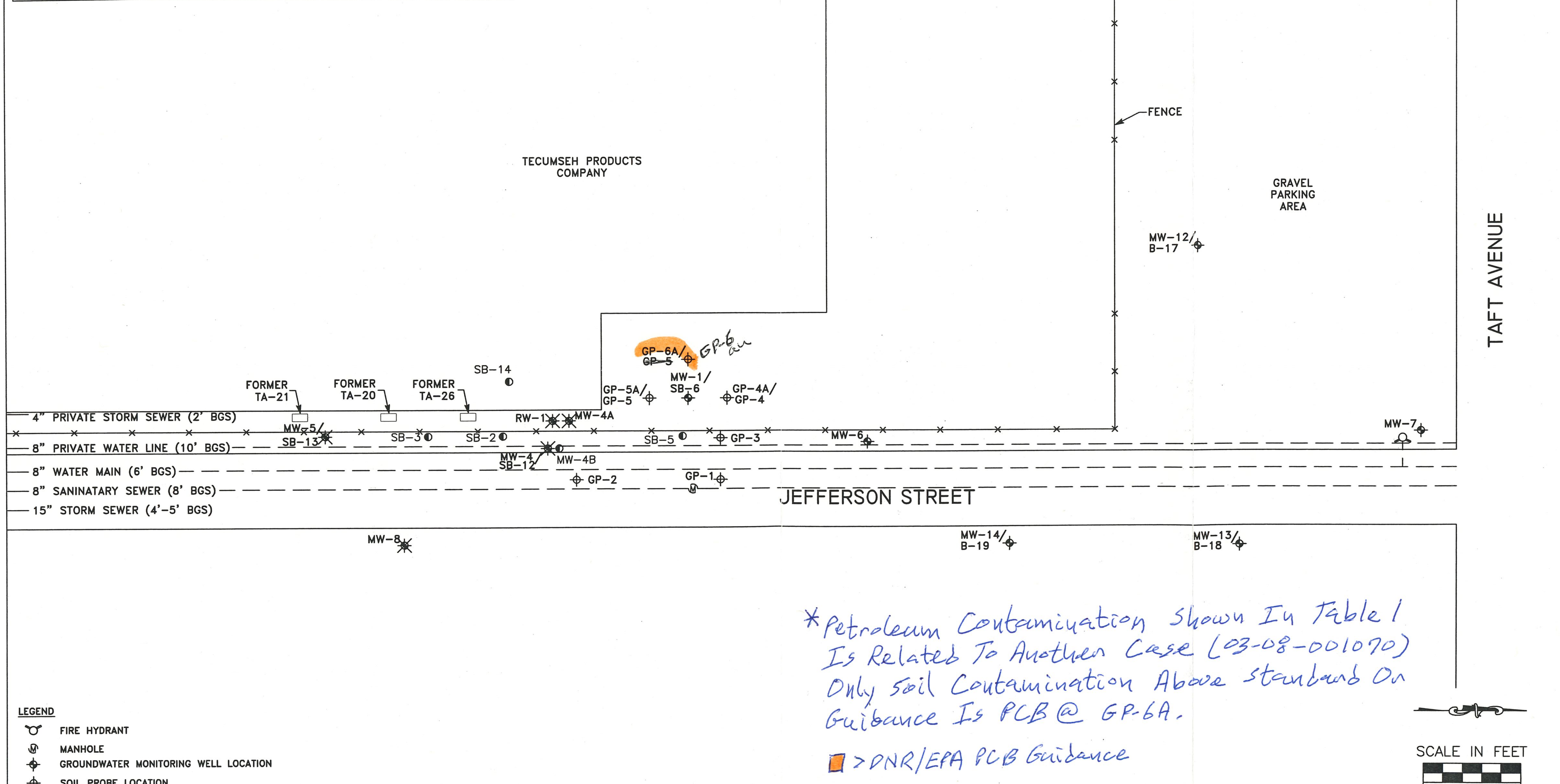
	SAMPLE IDENTIFICATION									GENERIC RCLs	
	GP-4A			GP-5A			GP-6A			PROTECTION OF GROUNDWATER	DIRECT CONTACT (INDUSTRIAL)
Date Sampled	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	---	---
Depth (feet)	0-2	4-6	8-10	0-2	4-6	8-10	0-2	4-6	8-10	---	---
PID (i.u.)	<1	<1	<1	<1	18	<1	<1	<1	<1	---	---
PAHs (µg/kg)											
Acenaphthene	---	<600	<61	---	<550	<60	---	<59	<64	38,000 (1)	60,000,000 (1)
Acenaphthylene	---	<1,000	<100	---	<930	<100	---	<100	<110	700 (1)	360,000 (1)
Anthracene	---	<60	<6.1	---	<55	<6.0	---	<5.9	<6.4	3,000,000 (1)	300,000,000 (1)
Benzo(a)anthracene	---	<60	<6.1	---	<55	<6.0	---	86	14	17,000 (1)	3,900 (1)
Benzo(a)pyrene	---	<60	<6.1	---	<55	<6.0	---	60	<6.4	48,000 (1)	390 (1)
Benzo(b)fluoranthene	---	<60	<6.1	---	<55	<6.0	---	12	<6.4	360,000 (1)	3,900 (1)
Benzo(g,h,i)perylene	---	<60	<6.1	---	<55	<6.0	---	89	<6.4	6,800,000 (1)	390,000 (1)
Benzo(k)fluoranthene	---	<60	<6.1	---	<55	<6.0	---	26	<6.4	870,000 (1)	39,000 (1)
Chrysene	---	<60	<6.1	---	69	<6.0	---	34	14	37,000 (1)	390,000 (1)
Dibenzo(a,h)anthracene	---	<91	<9.1	---	<82	<9.1	---	<8.9	<9.6	38,000 (1)	390 (1)
Fluoranthene	---	<120	<12	---	<110	<12	---	142	31	500,000 (1)	40,000,000 (1)
Fluorene	---	<120	<12	---	<110	<12	---	<12	<13	100,000 (1)	40,000,000 (1)
Indeno(1,2,3-cd)pyrene	---	<60	<6.1	---	<55	<6.0	---	30	<6.4	680,000 (1)	3,900 (1)
1-methyl naphthalene	---	<360	<36	---	<330	<36	---	<35	<38	23,000 (1)	70,000,000 (1)
2-methyl naphthalene	---	<300	<30	---	<270	<30	---	<30	<32	20,000 (1)	40,000,000 (1)
Naphthalene	---	<360	<36	---	<330	<36	---	<35	<38	400 (1)	110,000 (1)
Phenanthrene	---	<60	<6.1	---	175	<6.0	---	57	19	1,800 (1)	390,000 (1)
Pyrene	---	<60	<6.1	---	131	<6.0	---	236	36	8,700,000 (1)	30,000,000 (1)
PCBs (mg/kg)											
Aroclor 1016	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1221	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1232	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1242	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1248	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1254	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	1.5	<0.60	<0.32	---	---
Aroclor 1260	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Total PCBs	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	1.5	<0.60	<0.32	---	---

Notes:

Bold values exceed the WDNR Interim Guidance (1) protection of groundwater values
Boxed values exceed the WDNR Interim Guidance (1) direct-contact values
--- - not analyzed, not applicable or no standard established
(1) - From Soil Cleanup Levels for PAHs Interim Guidance, WDNR, PUBL-RR-519-97, April 1997, Corrected.
bgs - below ground surface
mg/kg - millgrams per kilogram
NA - not applicable
PAHs - polynuclear aromatic hydrocarbons
PCB - polychlorinated biphenyls
Q - result between the limit of detection and limit of quantitation
RCLs - residual contaminant levels
µg/kg - micrograms per kilogram

Above WT
Below WT
> DNR PAH Guidance
> DNR/EPA PCB Guidance

FORMER UNDERGROUND STORAGE TANK IDENTIFICATIONS			
TANK ID	CAPASITY	CONTENTS	REMOVED
TA-20	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	07/29/92
TA-21	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	10/30/91
TA-26	300 GALLON	UNLEADED GASOLINE	07/30/91



*Petroleum Contamination Shown In Table 1 Is Related To Another Case (03-08-001070) Only Soil Contamination Above Standard On Guidance Is PCB @ GP-6A.

▇ > DNR/EPA PCB Guidance

LEGEND

- FIRE HYDRANT
- MANHOLE
- GROUNDWATER MONITORING WELL LOCATION
- SOIL PROBE LOCATION
- SOIL PROBE LOCATION
- ABANDONED MONITORING WELL LOCATION

DESIGNED BY	DKP	DATE	05/01/03
DRAWN BY	CTM	PROJECT	0809004
APPROVED BY	DJG	SHEET NO.	2

CADFILE G:\ACAD\0809004\08090044.dwg
XREF
LMAN Joy

~~FIGURE 1~~ Figure 4

SITE LAYOUT
EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

KEY ENGINEERING GROUP LTD.
ENVIRONMENTAL • CIVIL • RAILROAD

~~TABLE 2~~ Table 3

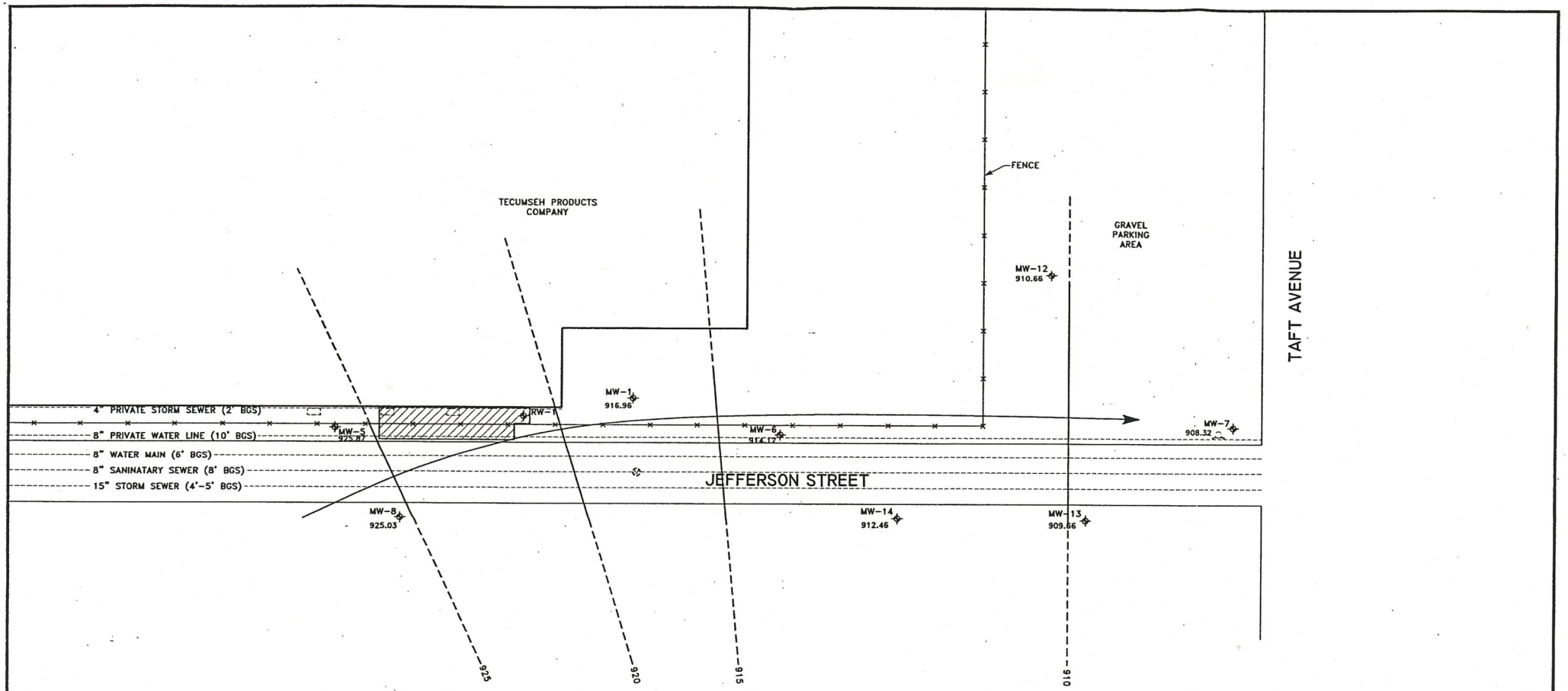
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

TECUMSEH PRODUCTS COMPANY - EAST SECTION
1604 Michigan Avenue
New Holstein, Wisconsin

	DATE	GRO	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	TRIMETHYLBENZENES	MTBE	LEAD
MW-1	11/14/91	---	<1.0	<1.0	<1.0	<4.0	<2.0	---	---
	7/30/92	14	<1	<1	<1	<3	---	---	<4.0
	5/5/93	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	2.7
	12/17/93	<50	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2
	4/27/94	<100	<1.0	<1.0	<1.0	<2.0	3.8	<1.0	---
	9/8/94	<100	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	1/10/95	---	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	4/17/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	7/18/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	10/2/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	5/16/96	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<1.0	---
	6/10/97	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.20	---
MW-4/MW-4A/RW-1	11/14/91	---	40	53	92	237	189	---	---
	7/30/92	325	7	1	4	16	---	---	<4.0
	5/5/93	160	12.1	16.7	13.8	37.9	21.9	<1.0	5.9
	12/17/93	3080	447.0	<50.0	149.0	333.0	521.0	<50.0	3
	5/4/94	540	38	4.3	1.1	61	46	3.4	---
	9/8/94	2000	90	31	81	<20	170	<10	---
	1/10/95	---	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	4/17/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	7/18/95	2100	66	5.8	120	64.4	175.5	7.2	---
	10/2/95	400	25	1.9	24	4.4	29	1.5	---
	5/16/96	<50	3.0	<0.50	<0.50	<0.50	<2.0	<5.0	---
	8/7/96	360	13	1.8	14	11	5.6	14	---
	11/21/96	92	5.5	1.0	<0.50	<0.50	<2.0	160	---
	3/27/97	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.20	---
	6/10/97	250	4.1	2.6	3.9	36	45	<0.20	---
	9/18/97	420	4.0	2.2	23	19	52	5.0	---
MW-5	11/14/91	---	<1.0	<1.0	<1.0	<4.0	<2.0	---	---
	7/30/92	<10	<1	<1	<1	<3	---	---	<4.0
	5/5/93	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	9.3
	12/17/93	<50	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	0.23
	5/4/94	<100	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	9/8/94	<100	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	1/10/95	---	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	4/17/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	7/18/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	10/2/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	5/16/96	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<5.0	---
	6/10/97	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.20	---
MW-6	7/30/92	300	4	<1	<1	<3	---	---	<4.0
	5/5/93	60	11.4	1.4	<1.0	<1.0	<2.0	57	4.7
	4/27/94	<100	<1.0	<1.0	<1.0	<2.0	<2.0	4.2	---
	9/8/94	170	5.3	<1.0	<1.0	<2.0	<2.0	130	---
	1/10/95	---	<1.0	<1.0	<1.0	<2.0	<2.0	74	---
	4/17/95	94	1.2	<1.0	<1.0	<2.0	<2.0	110	---
	7/18/95	120	5.6	<1.0	<1.0	<2.0	<2.0	150	---
	10/2/95	110	2.5	<1.0	<1.0	<2.0	<2.0	140	---
	5/16/96	<50	2.8	<0.50	<0.50	<0.50	<2.0	59	---
	8/7/96	76	13	<0.50	<0.50	<0.50	<2.0	39	---
	11/21/96	440	3.8	1.4	5.9	2.3	28	13	---
	3/27/97	71	3.3	<0.50	<0.50	<0.50	<2.0	51	---
	6/10/97	89	13	<0.50	<0.50	<0.50	<2.0	140	---
	9/18/97	56	6.0	<0.50	<0.50	1.0	<2.0	38	---
MW-7	5/5/93	<10	<1.0	<1.0	<1.0	<1.0	<2.0	1.5	3.8
	5/16/96	---	<2.5	<2.5	<2.5	<2.5	<10.0	<25	---
MW-8	7/30/92	<10	<1	<1	<1	<3	---	---	<4.0
	5/5/93	<10	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	7.9
	12/17/93	<50	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	3
	9/8/94	<100	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	1/10/95	---	<1.0	<1.0	<1.0	<2.0	<2.0	<1.0	---
	4/17/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	7/18/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	10/2/95	<50	<0.6	<1.0	<1.0	<2.0	<2.0	<1.0	---
	5/16/96	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<5.0	---
	6/10/97	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<0.20	---
MW-12	5/5/93	60	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	3.5
	7/9/96	---	<2.5	<2.5	<2.5	<2.5	<10.0	<25	---
MW-13	5/5/93	---	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	---
	5/16/96	---	<2.5	<2.5	<2.5	<2.5	<100	<250	---
MW-14	5/5/93	---	<1.0	<1.0	<1.0	<1.0	<2.0	10.3	---
	5/16/96	---	<0.50	<0.50	<0.50	<0.50	<2.0	19	---
	9/29/99	---	0.58	<0.50	<0.50	0.58	<2.0	52	---
NR 140 ES		NE	5	343	700	620	480	60	15
NR 140 PAL		NE	0.5	68.6	140	124	96	12	1.5

Notes:
all concentrations in micrograms per liter
bolded concentrations exceed NR 140 PAL
ES - enforcement standard
GRO - gasoline range organics
MTBE - methyl tert-butyl-ether
NE - not established
PAL - preventive action limit
shaded concentrations exceed NR 140 ES

Note: Any Petroleum-Related Contamination Is Not From This Case (i.e. Iguone)



Petroleum Contamination Shown In Table 3
Is Related To Another Case (03-08-001090)
No Water-Related Contamination Associated
With This Case

Figure 5

LEGEND

- FIRE HYDRANT
- MANHOLE
- MONITORING WELL LOCATION
- 916.96 GOUNDWATER ELEVATION (9/29/99)
- GROUNDWATER FLOW DIRECTION

> ES

> PAL

N

0 30 60

SCALE: 1"=60'

DRN. BY:	J.J.J.	DATE:	01/11/00
DSN. BY:	C.M.H.	FILE NO.:	0303002
CHK. BY:	C.M.H.	DWG. NO.:	3030024
REV. BY:	G.L.J.	SHEET NO.:	3

KEY ENGINEERING GROUP LTD.

~~FIGURE~~

GROUNDWATER ELEVATION CONTOUR MAP
(SEPTEMBER 29, 1999)
EAST SECTION
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

TABLE 4

SUMMARY OF GROUNDWATER ELEVATION DATA

TECUMSEH PRODUCTS COMPANY - EAST SECTION
New Holstein, Wisconsin

WELL NUMBER	PVC PIPE ELEVATION (FEET)	DATE	DEPTH TO GROUNDWATER (FEET)	GROUNDWATER ELEVATION (FEET)
MW-1	928.98	8/9/92	13.42	915.56
		5/5/93	13.22	915.76
		6/9/93	10.11	918.87
		5/5/94	9.06	919.92
		9/9/94	13.89	915.09
		1/10/95	15.21	913.77
		4/17/95	12.72	916.26
		7/18/95	14.13	914.85
		10/2/95	14.17	914.81
		5/16/96	9.00	919.98
		7/9/96	10.72	918.26
		8/7/96	11.05	917.93
		11/21/96	13.83	915.15
		3/27/97	10.72	918.26
		6/10/97	11.86	917.12
		9/18/97	12.95	916.03
		9/29/99	12.02	916.96
MW-5	933.19	8/9/92	8.53	924.66
		5/5/93	8.30	924.89
		6/9/93	4.41	928.78
		5/5/94	3.85	928.34
		9/9/94	9.16	924.03
		1/10/95	10.12	923.07
		4/17/95	8.41	924.78
		7/18/95	9.11	924.08
		10/2/95	9.30	923.89
		5/16/96	6.68	926.51
		7/9/96	6.16	927.03
		8/7/96	6.74	926.45
		11/21/96	8.83	924.36
		3/27/97	4.39	928.80
		6/10/97	9.00	924.19
		9/18/97	8.09	925.10
		9/29/99	7.32	925.87
MW-6	921.90	8/9/92	8.93	912.19
		5/5/93	5.24	916.66
		6/9/93	5.60	916.30
		5/5/94	5.24	916.66
		9/9/94	9.20	912.70
		1/10/95	10.14	911.76
		4/17/95	8.20	913.70
		7/18/95	9.39	912.51
		10/2/95	9.33	912.57
		5/16/96	6.08	915.82
		7/9/96	6.77	915.13
		8/7/96	7.06	914.84
		11/21/96	9.15	912.75
		3/27/97	6.42	915.43
		6/10/97	7.90	914.00
		9/18/97	8.50	913.40
		9/29/99	7.78	914.12
MW-7	914.21	8/9/92	7.46	906.75
		5/5/93	3.16	911.05
		6/9/93	4.21	910.00
		5/5/94	3.16	911.05
		9/9/94	7.55	906.66
		1/10/95	7.86	906.35
		4/17/95	5.58	908.63
		7/18/95	8.04	906.17
		10/2/95	7.51	906.70
		5/16/96	5.64	908.57
		7/9/96	5.29	908.92
		8/7/96	5.48	908.73
		11/21/96	7.32	906.89
		3/27/97	4.05	910.16
		6/10/97	6.51	907.70
		9/18/97	7.14	907.07
		9/29/99	5.89	908.32

Notes: PVC pipe elevations were referenced to the rim of the sanitary sewer within Jefferson Street which has a mean sea level elevation of 932.17 feet.

4

TABLE 4 (CONTINUED)

SUMMARY OF GROUNDWATER ELEVATION DATA

TECUMSEH PRODUCTS COMPANY - EAST SECTION
New Holstein, Wisconsin

WELL NUMBER	PVC PIPE ELEVATION (FEET)	DATE	DEPTH TO GROUNDWATER (FEET)	GROUNDWATER ELEVATION (FEET)
MW-8	932.14	8/9/92	8.01	924.13
		5/5/93	6.54	925.60
		6/9/93	2.33	929.81
		5/5/94	1.95	930.19
		9/9/94	7.14	925.00
		1/10/95	9.58	922.56
		4/17/95	5.77	926.37
		7/18/95	8.62	923.52
		10/2/95	8.96	923.18
		5/16/96	3.51	928.63
		7/9/96	4.58	927.56
		8/7/96	4.88	927.26
		11/21/96	7.74	924.40
		3/27/97	3.58	928.56
		6/10/97	4.43	927.71
		9/18/97	7.54	924.6
		9/29/99	7.11	925.03
MW-12	921.07	8/9/92	--	--
		5/5/93	--	--
		6/9/93	--	--
		5/5/94	7.66	913.41
		9/9/94	--	--
		1/10/95	--	--
		4/17/95	--	--
		7/18/95	--	--
		10/2/95	--	--
		5/16/96	--	--
		7/9/96	9.36	911.71
		8/7/96	10.10	910.97
		11/21/96	11.23	909.84
		3/27/97	9.28	911.79
		6/10/97	10.45	910.62
		9/18/97	11.03	910.04
		9/29/99	10.41	910.66
MW-13	916.64	8/9/92	--	--
		5/5/93	--	--
		6/9/93	3.80	912.84
		5/5/94	1.48	915.16
		9/9/94	8.06	908.58
		1/10/95	8.29	908.35
		4/17/95	6.22	910.42
		7/18/95	8.18	908.46
		10/2/95	8.03	908.61
		5/16/96	8.84	907.80
		7/9/96	4.69	911.95
		8/7/96	5.60	911.04
		11/21/96	7.62	909.02
		3/27/97	4.51	912.13
		6/10/97	7.32	909.32
		9/18/97	7.56	909.08
		9/29/99	6.98	909.66
MW-14	919.55	8/9/92	--	--
		5/5/93	--	--
		6/9/93	4.28	915.27
		5/5/94	3.42	916.13
		9/9/94	8.06	911.49
		1/10/95	8.73	910.82
		4/17/95	7.01	912.54
		7/18/95	8.18	911.37
		10/2/95	8.12	911.43
		5/16/96	5.37	914.18
		7/9/96	5.38	914.17
		8/7/96	5.75	913.80
		11/21/96	7.96	911.59
		3/27/97	4.43	915.12
		6/10/97	6.81	912.74
		9/18/97	7.56	911.99
		9/29/99	7.09	912.46

Notes: PVC pipe elevations were referenced to the rim of the sanitary sewer within Jefferson Street which has a mean sea level elevation of 932.17 feet.

McKnight, Kevin - DNR

From: McKnight, Kevin - DNR
Sent: Tuesday, August 23, 2016 1:08 PM
To: McKnight, Kevin - DNR; Fassbender, Judy L - DNR
Subject: Tecumseh - Fill Area @ MW-1 Closure Question

Judy, Does this information accurately reflect our discussion? I added some additional information I found on BRRTS. Thanks for your time.

BTW, My computer will need to be reimaged to fix whatever software problem is going on stopping me from using the EPA software.

Link to scan of closure packet
\\Greenbay\RR_NER_E_FILES\Calumet_08\0208193776_TECUMSEH-FILL_AREA_@_MW-1_CLOSURE_PACKET\0208193776_Closure_Packet.pdf

8/23/2016 Discussion with Judy Fassbender regarding PCB issue at site.

Tecumseh – Fill Area @ MW-1
02-08-193776

Conditional closure letter sent on August 4, 2004 requiring abandonment of MW-1 as the only condition of closure. Well was thought to be associated with other open sites.

May 4, 2011- Confirmation of abandonment received. Final closure letter never sent.

During review of two Tecumseh case closure requests (03-08-100332 & 03-08-001071) it was noted that MW-1 was not part of these investigations in the area so the file was reviewed to determine status. Upon finding the abandonment form in the file the closure request was reviewed to allow for drafting of final closure letter.

Highlights:

- PVOC's in the area noted to be associated with other nearby cases. BRRTS Case 03-08001070 Tecumseh Products – East TA 20,21,26 has this location in the GIS packet (closed 8/6/2004)
- 3 Soil borings with 3 samples each analyzed for PCB's. GP-6A (0-2') had 1.5 mg/kg Aroclor 1254 (MDL 1.4mg/kg) No other detections noted.
- Case closure signed by project manager with note that Urben and Polczinski concurred with no action needed.

Issue:

- This detection is above both soil-gw RCL and DC currently.

Conclusion:

Based on multiple samples not exceeding detection limit for 8 PCB's and only 1 detection above MDL (0.1mg/kg over) further action is not needed however language should be added to the closure letter noting this.

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2984 Shawano Avenue
Green Bay WI 54313-6727

Scott Walker, Governor
Cathy Stepp, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

WISCONSIN
DEPT. OF NATURAL RESOURCES

August 30, 2012

Alyssa Sellwood, P.E.
TRC Solutions, Inc.
708 Heartland Trail
Suite 3000
Madison, Wisconsin 53717

Subject: Confirmed Approval of the Report, *Status Update CVOC Plume Delineation, PVOC Plume Conditions, and MW-1 Abandonment, Tecumseh Products Company, New Holstein, Wisconsin,* WDNR BRRTS #: 02-08-100332, 03-08-001071, 02-08-193776

Dear Ms. Sellwood:

This letter is to confirm the March 28, 2012 email approval by myself of the above report and the proposed sampling plan contained therein. The report and the review fee were received on March 14, 2012. TRC wanted to begin sampling at the site during the week of March 26, 2012. Because I would not have time to do a complete review of the report and I did not want to hold up work at the site, I gave an approval of the spring sampling round as proposed. With this letter, I am also approving the fall sampling round.

Jason Smith (Tecumseh Products Company) and I met today to discuss the upcoming fall sampling round and the site groundwater sampling results of Robert E. Lee & Associates (REL). REL had been hired by the City of New Holstein under the Wisconsin Plant Recovery Initiative Grant to conduct an environmental investigation on those parts of the Tecumseh property not being covered by any of the currently on-going environmental investigations.

Based on the REL data, it would appear that some additional groundwater monitoring points will need to be added to TRC's monitoring plan – at least to the CVOC Plume investigation. Jason and I agreed that we would wait on the completion of the REL investigation before determining which monitoring points should be added. As such, we will look at making any needed changes to the 2013 sampling events and keep the 2012 sampling as proposed.

If you have any questions regarding this letter, please contact me at the address above, by calling 920-662-5161, or by email at alan.nass@wisconsin.gov . Thank you Alyssa.

Yours truly,

Alan Thomas Nass

Alan Thomas Nass, P.G., P.S.S.
Hydrogeologist
Bureau for Remediation and Redevelopment

Cc: Jason Smith, Tecumseh Products Company
Tom Stolzenburg, TRC – electronic copy

Nass, Alan T - DNR

From: Sellwood, Alyssa [ASellwood@trcsolutions.com]
Sent: Wednesday, March 28, 2012 9:50 AM
To: Nass, Alan T - DNR
Subject: RE: Tecumseh Products
Attachments: 2012 Monitoring Program Note.xlsx

Thank you Al. I appreciate your quick response, recognizing the limited time allowed between the submittal and the spring sampling.

I attached an Excel file with some quick notes on our sampling program that may be our use to you in your review of the wells included/not included in the sampling program.

I believe MW-06, MW-19D, and MW-20 are the only wells with NR 140 ES exceedences that were omitted from the sampling program. In each case we felt that other wells in proximity to these wells could be used to delineate the plume. However, if after you have time to complete your review, you would like these back in the program, we will be prepared to sample these in the fall (at your direction).

Thank you-

Alyssa Sellwood, P.E.
Project Engineer

TRC
Results you can rely on

708 Heartland Trail, Suite 3000 Madison, WI 53717
T: 608.826.3658 | F: 608.826.3941 | C: 608.234.8001
asellwood@trcsolutions.com
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Alyssa

From: Nass, Alan T - DNR [mailto:Alan.Nass@wisconsin.gov]
Sent: Wednesday, March 28, 2012 8:28 AM
To: Sellwood, Alyssa
Subject: Tecumseh Products
Importance: High

Hello Alyssa - I did a quick look at the TRC report titled *Status Update CVOC Plume Delineation, PVOC Plume Conditions, and MW-1 Abandonment - Tecumseh Products Company*, and dated March 2012. I know your crew started sampling out there this week. Having only received the report on the 14th, I haven't had time to look at the report in any detail before TRC started the spring sampling round. I have some questions - for example why some impacted wells were left out of the planned sampling all together or for at least the spring round. Because I don't have time to do much of a detailed review right now, please continue with the spring sampling as described in the report with the knowledge that the plan for fall may change. When I get my review completed, I'll contact you. Thanks.

= Not includec

= Inlcuded in p

Notes on Sampling Program
Proposed Groundwater Monitoring Plan – 2012
Tecumseh – New Holstein, Wisconsin

WELL ID	SPRING ANALYTICAL PROGRAM[1]	FALL ANALYTICAL PROGRAM[1]	Notes of Why not Sampled	
			CVOCs	PVOCs
Monitoring Wells				
MW-02/02R			Clean	Clean
MW-06			Vinyl Chloride>ES (near MW-14)	Benzene>PAL
MW-15P			TCE>PAL	Clean
MW-17			Clean	Clean
MW-18			Clean	Clean
MW-19D			TCE >ES (Similar to MW-19P)	Clean
MW-25			Clean	Clean
MW-25D			Clean	Clean
MW-27			Clean (missing)	Clean (missing)
MW-27D			Clean (missing)	Clean (missing)
MW-32			Clean (Upgradient)	Clean (Upgradient)
MW-32D			Clean (Upgradient)	Clean (Upgradient)
MW-07	X	X		
MW-09	X	X		
MW-12	X	X		
MW-13	X	X		
MW-14	X	X		
MW-16	X	X		
MW-11			Clean	Clean
MW-19P	X	X		
MW-20			PCE>ES (Similar to MW-9)	Clean
MW-18P			Clean	Clean
MW-21	X	X		
MW-23D	X	X		
MW-22	X	X		
MW-22P	X	X		
MW-24	X	X		

d in proposed program (at least one round)

proposed program

Status Update
CVOC Plume Delineation, PVOC Plume Conditions, and MW-1 Abandonment

Tecumseh Products Company
New Holstein, Wisconsin

WDNR BRRTS #: 02-08-100332, 03-08-001071, 02-08-193776

March 2012

Prepared For
Tecumseh Products Company

Nate Keller, P.G.
Project Hydrogeologist

Alyssa Sellwood, P.E.
Project Manager

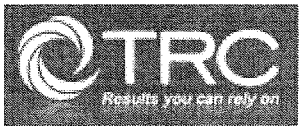
Tom Stolzenburg, Ph.D.
Client Service Manager

Nass, Alan T - DNR

From: Sellwood, Alyssa [ASellwood@trcsolutions.com]
Sent: Wednesday, March 14, 2012 3:35 PM
To: Nass, Alan T - DNR
Subject: RE: Receipt of status update & fee - Former Tecumseh Products Company

Thanks for the response. We'll be in touch.

Alyssa Sellwood, P.E.
Project Engineer



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asellwood@trcsolutions.com
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From: Nass, Alan T - DNR [mailto:Alan.Nass@wisconsin.gov]
Sent: Wednesday, March 14, 2012 3:31 PM
To: Sellwood, Alyssa
Subject: Receipt of status update & fee - Former Tecumseh Products Company

Hello Alyssa - Today I received the TRC report *Status Update CVOC Plume Delineation, PVOC Plume Conditions, and MW-1 Abandonment*, dated March 2012. I also received the fee for technical assistance. I need to finish up another project, but I hope to start on your submitted report tomorrow / early next week. Thanks for the telephone call earlier today.

708 Heartland Trail
Suite 3000
Madison, WI 53717

608.826.3600 PHONE
608.826.3941 FAX

www.TRCsolutions.com

March 13, 2012

Mr. Al Nass
Hydrogeologist
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Madison, WI 54313

Subject: Status Update: Former Tecumseh Products Company Facility - New Holstein, WI
BRRTS #02-08-100332: CVOC Plume
BRRTS #03-08-001071: PVOC West
BRRTS #02-08-193776: MW-1 Fill Area

Dear Mr. Nass:

Enclosed is the 2011 Status Report for the former Tecumseh Products Company (TPC) facility in New Holstein, Wisconsin. The report documents the following:

- Installation of six downgradient monitoring wells
- Delineation of the CVOC plume is complete
- Natural attenuation of the PVOC and CVOC plumes is evident
- Abandonment of MW-1 is complete

We have recommended semi-annual groundwater monitoring program to determine the on-going natural attenuation trend and plume stability for the CVOC and PVOC impacts. TPC is requesting WDNR approval of the proposed monitoring program, and a check for $500 to cover the review fee is included with this transmittal.

Please note that TRC plans to complete the spring sampling event the week of March 26, 2012. If you would like to discuss the proposed groundwater program prior to the March sampling, please contact me at 608-826-3658.

Sincerely,

TRC Environmental Corporation

Alyssa Sellwood, P.E.
Project Manager

Enclosed Status Update Report
Check #778467 for $500

cc: Jason Smith – TPC (pdf of CD)
Tom Stolzenburg, John Rice, Nate Keller – TRC

Nass, Alan T - DNR

From: Sellwood, Alyssa [ASellwood@trcsolutions.com]
Sent: Tuesday, February 28, 2012 1:52 PM
To: Nass, Alan T - DNR
Subject: Tecumseh New Holstein -BRRTS# 02-08-193776
Attachments: TPC New Holstein_05.04.2011 Letter.pdf

Al

Attached is a copy of a letter documenting well abandonment for BRRTS #02-08-193776 (Tecumseh New Holstein Fill Area) dated May 4, 2011. I see that this letter is not include in the BRRTS database, perhaps indicating that you never received it. As we work to finalize the documentation report for the 2011 work completed at the site, I would like to include reference that this project has been closed out.

Could you please review the attached letter, and let me know if WDNR agrees the conditions of closure have been met for #02-08-193776 , and if final closure has been granted.

Please feel free to contact me with any questions, or if you need us to provide you with a new hard copy.

Thank you-

Alyssa Sellwood, P.E.
Project Engineer

TRC
Partnership you can rely on

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asellwood@trcsolutions.com
Follow us on LinkedIn or Twitter | www.trcsolutions.com

RMT

• ENVIRONMENT • ENERGY • ENGINEERING

May 4, 2011

Mr. Alan Nass
Pollution Remediation Division
Wisconsin Department of Natural Resources
2984 Shawano Avenue
PO Box 10448
Green Bay, WI 53313-0436

Subject: Final Closure Condition Met – Abandonment of MW-1
East Section Fill Area - Tecumseh Products Company
1604 Michigan Avenue, New Holstein, Wisconsin
BRRTS # 02-08-193776, FID 408020690

Dear Mr. Nass:

Tecumseh Products Company (TPC) completed investigation of the impacts to soil and groundwater associated with the fill area on the east side of the former TPC facility located at 1604 Michigan Avenue, New Holstein, Wisconsin (Site Map - Attachment A). TPC requested closure for the fill area from the Wisconsin Department of Natural Resources (WDNR) in March 2000. The WDNR responded in May 2000 stating that additional data was needed. TPC submitted the additional information to the WDNR in May 2003, and closure was approved by the WDNR in a letter dated August 4, 2004. The WDNR's only condition of closure for the fill area was the abandonment of monitoring well MW-1.

During review of historical files for the site, RMT, Inc. (RMT), found records that MW-1 was abandoned on June 21, 2006. The well was abandoned by SES, Inc. (SES), and the work was overseen by RMT. To abandon the well, SES removed the pro-top flush mount casing, overdrilled the well to a depth of 19 feet, removed the casing, and backfilled the borehole with bentonite chips. The well abandonment form for MW-1 is included in Attachment B, and the original well construction log is included in Attachment C. (Please note that the well construction log was only obtained recently by RMT, and was not available at the time of the well abandonment).

Documentation of the well abandonment was previously submitted to the WDNR by RMT as Attachment 2 to a letter report dated April 19, 2007. The purpose of the 2007 letter was to document the construction of five new wells and delineate the chlorinated volatile organic compound (CVOC) plume at the site (BRRTS # 02-08-100332). Monitoring well MW-1 was abandoned by SES during their mobilization to the site to construct the five new wells. It appears that the abandonment was

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State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Tecumseh	Rock	MW-1
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
_____	54	_____	_____

		Before Development	After Development
1. Can this well be purged dry?	☒ Yes ☐ No		
2. Well development method			
surged with bailer and bailed	☒ 41		
surged with bailer and pumped	☐ 61		
surged with block and bailed	☐ 42		
surged with block and pumped	☐ 62		
surged with block, bailed and pumped	☐ 70		
compressed air	☐ 20		
bailed only	☐ 10		
pumped only	☐ 51		
pumped slowly	☐ 50		
Other _____	☐ __		
3. Time spent developing well	50 min.		
4. Depth of well (from top of well casing)	18.__ ft.		
5. Inside diameter of well	2.__ in.		
6. Volume of water in filter pack and well casing	6.1 gal.		
7. Volume of water removed from well	15.__ gal.		
8. Volume of water added (if any)	___.__ gal.		
9. Source of water added	_____		
10. Analysis performed on water added? (If yes, attach results)	☐ Yes ☐ No		
11. Depth to Water (from top of well casing)		a. 12.01 ft.	DRY ft.
Date		b. 11/11/91 m m d d y y	11/11/91 m m d d y y
Time		c. 10:00 ☒ a.m. ☐ p.m.	11:00 ☒ a.m. ☐ p.m.
12. Sediment in well bottom		___.__ inches	___.__ inches
13. Water clarity		Clear ☐ 10 Turbid ☒ 15 (Describe) very silty	Clear ☐ 20 Turbid ☒ 25 (Describe)
Fill in if drilling fluids were used and well is at solid waste facility:			
14. Total suspended solids		_____.__ mg/l	_____.__ mg/l
15. COD		_____.__ mg/l	_____.__ mg/l

16. Additional comments on development:

Purged dry within 10 gallons. After 30 min. recovered 4 gallons.

Well developed by: Person's Name and Firm

Name: Kristine Stehr
Duane Stillings

Firm: Dames & Moore

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Kristine Stehr

Print Initials: K M S

Firm: Dames & Moore

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

RMT

ENVIRONMENT • ENERGY • ENGINEERING

May 4, 2011

Mr. Alan Nass
Pollution Remediation Division
Wisconsin Department of Natural Resources
2984 Shawano Avenue
PO Box 10448
Green Bay, WI 53313-0436

Subject: Final Closure Condition Met – Abandonment of MW-1
East Section Fill Area - Tecumseh Products Company
1604 Michigan Avenue, New Holstein, Wisconsin
BRRTS # 02-08-193776, FID 408020690

Dear Mr. Nass:

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During review of historical files for the site, RMT, Inc. (RMT), found records that MW-1 was abandoned on June 21, 2006. The well was abandoned by SES, Inc. (SES), and the work was overseen by RMT. To abandon the well, SES removed the pro-top flush mount casing, overdrilled the well to a depth of 19 feet, removed the casing, and backfilled the borehole with bentonite chips. The well abandonment form for MW-1 is included in Attachment B, and the original well construction log is included in Attachment C. (Please note that the well construction log was only obtained recently by RMT, and was not available at the time of the well abandonment).

Documentation of the well abandonment was previously submitted to the WDNR by RMT as Attachment 2 to a letter report dated April 19, 2007. The purpose of the 2007 letter was to document the construction of five new wells and delineate the chlorinated volatile organic compound (CVOC) plume at the site (BRRTS # 02-08-100332). Monitoring well MW-1 was abandoned by SES during their mobilization to the site to construct the five new wells. It appears that the abandonment was

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inadvertently omitted from the discussion of the report, since the focus of the report centered on the delineation of the CVOC impacts.

With this submittal, the final condition of closure for the fill area is complete, and RMT on behalf of TPC requests the WDNR approve final closure for BRRTS #02-08-193776.

Please feel free to contact me at 608-662-5480 with any questions. We look forward to confirmation of final closure for this portion of the site.

Sincerely,

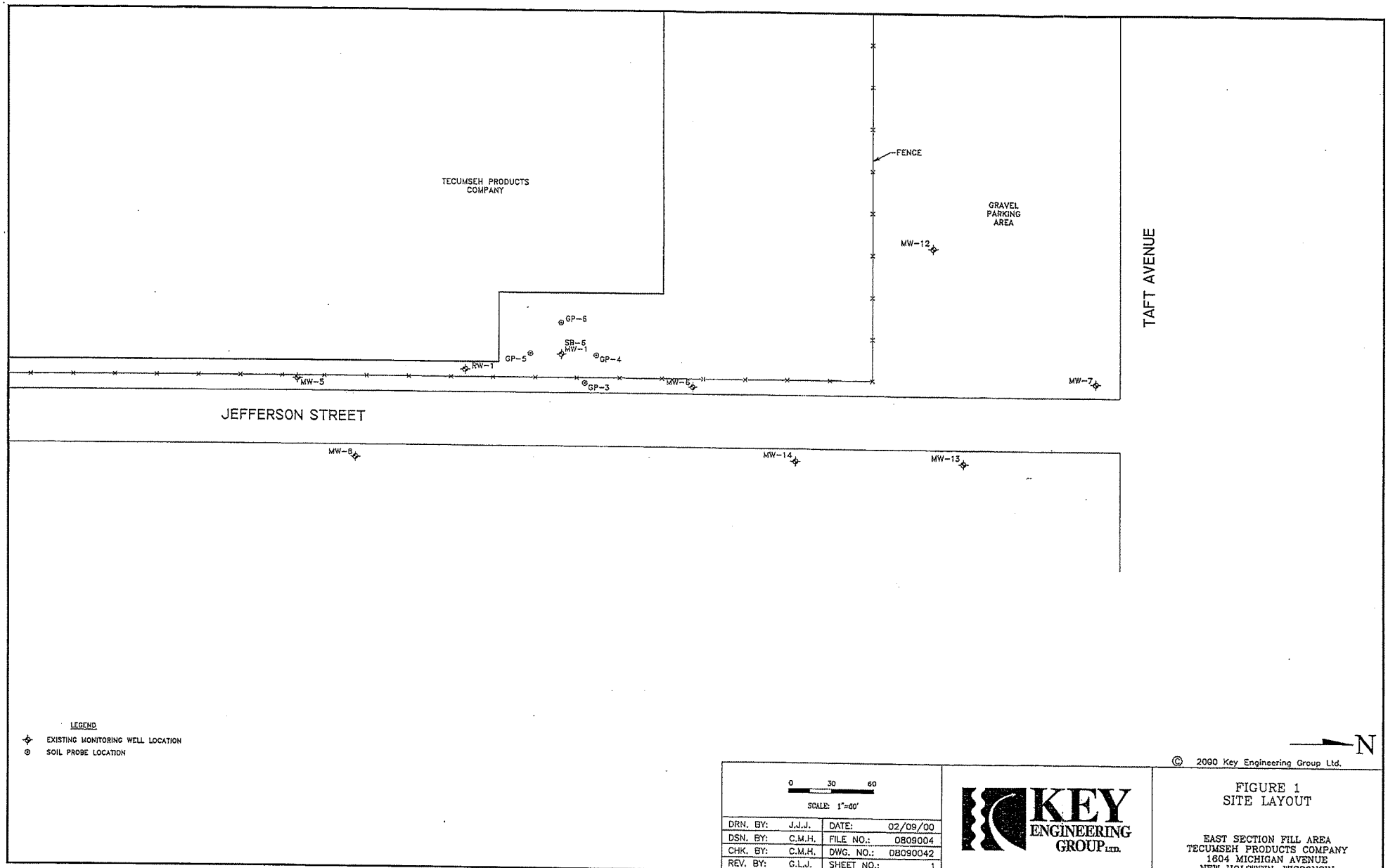
RMT, Inc.

Alyssa Sellwood
Project Engineer

Attachments Attachment A – Site Figure from Key Environmental Group, Ltd.
Attachment B – Well Abandonment Form
Attachment C – Original Well Construction Form

cc: Jason Smith, TPC
Tom Stolzenburg, RMT

Attachment A – Site Figure from Key Environmental Group, Ltd.



0 30 60

SCALE: 1"=60'

DRN. BY:	J.J.J.	DATE:	02/09/00
DSN. BY:	C.M.H.	FILE NO.:	0809004
CHK. BY:	C.M.H.	DWG. NO.:	08090042
REV. BY:	G.L.J.	SHEET NO.:	1

KEY ENGINEERING GROUP LTD.

FIGURE 1
SITE LAYOUT

EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

Attachment B – Well Abandonment Form

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5 2/2000

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☒ Remediation/Redevelopment ☐ Other

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Calumet

Common Well Name: MW-1 Gov't Lot (if applicable)

Grid Location: ___ 1/4 of ___ 1/4 of Sec. ___ ; T. ___ N; R. ___ ☐ E ☐ W

___ ft. ☐ N. ☐ S., ___ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒

Lat ___ ° ___ ' ___ " Long ___ ° ___ ' ___ "

State Plane ___ ft. N. ___ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: Testing completed | WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: Tecumseh - New Holstein

Facility ID | License/Permit/Monitoring No.:

Street Address of Well: 1604 Michigan Ave.

City, Village, or Town: New Holstein

Present Well Owner: Tecumseh | Original Owner: Tecumseh

Street Address or Route of Owner: 1604 Michigan Ave.

City, State, Zip Code: New Holstein, WI 53061

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 6/21/2006

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:

☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify) ___

Formation Type:

☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) ___ (From ground surface) Casing Diameter (in.) ___

Casing Depth (ft.) ___

Lower Drillhole Diameter (in.) ___

Was Well Annular Space Grouted? ☐ Yes ☐ No ☒ Unknown

If Yes, To What Depth? ___ Feet

Depth to Water (Feet) ___

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☒ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☒ No	

Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☒ Screened & Poured ☐ Other (Explain)
(Bentonite Chips)

Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite chips	Surface	19.0		

(6) Comments: No well construction information available - well overdrilled to 19 feet bgs and backfilled with bentonite.

(7) Name of Person or Firm Doing Sealing Work: SES, Inc. | Date of Abandonment: 6/21/06

Signature of Person Doing Work: (RMT) | Date Signed: 4/19/07

Street or Route: 1102 Stewart Street | Telephone Number: (608) 274-7600

City, State, Zip Code: Madison, WI 53713

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

Comments

Attachment C – Original Well Construction Form

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-9(

Facility/Project Name: Tecumseh Products Co.

Facility License, Permit or Monitoring Number: _____

Type of Well: Water Table Observation Well ☒ 11 ☐ 12 Piezometer

Distance Well Is From Waste/Source Boundary: _____ ft.

Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No

Local Grid Location of Well: _____ ft. ☐ N. ☐ S. _____ ft. ☐ E. ☐ W.

Grid Origin Location: Lat. _____ Long. _____ or

St. Plane _____ ft. N, _____ ft. E.

Section Location of Waste/Source: ☒ E. ☐ W. ___ 1/4 of SE 1/4 of Sec. 10 T. 17 N, R 20

Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known

Well Name: MW1 SB6

Wis. Unique Well Number: _____ DNR Well Numbe: _____

Date Well Installed: 10 / 30 / 91 (m m d d y y)

Well Installed By: (Person's Name and Firm)
Gary Wellner
Twin City Testing

A. Protective pipe, top elevation 928.98 ft. MSL

B. Well casing, top elevation 943.3 (929.70) ft. MSL

C. Land surface elevation 944.0 ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 Other ☐ _____

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or 1 ft.

F. Fine sand, top _____ ft. MSL or 5 ft.

G. Filter pack, top _____ ft. MSL or 6 ft.

H. Screen joint, top _____ ft. MSL or 8 ft.

I. Well bottom _____ ft. MSL or 18 ft.

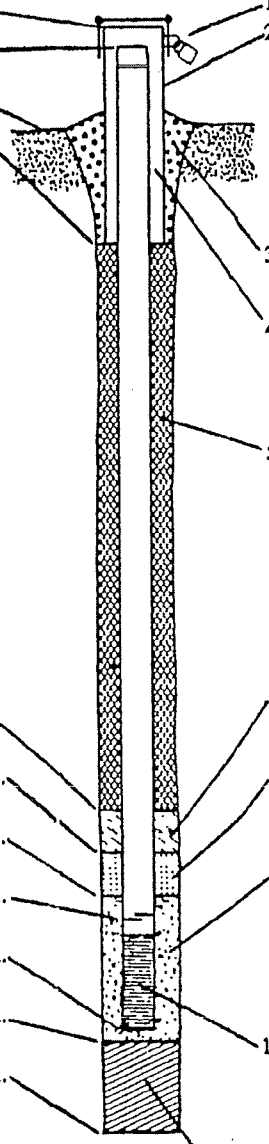
J. Filter pack, bottom _____ ft. MSL or 18 ft.

K. Borehole, bottom _____ ft. MSL or 18 ft.

L. Borehole, diameter 8. in.

M. O.D. well casing 2.25 in.

N. I.D. well casing 2.0 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8. in
b. Length: 1. ft
c. Material: Steel ☐ 0 Cast Aluminum Other ☐ _____
d. Additional protection? ☒ Yes ☐ No
If yes, describe: Expansion Cap

3. Surface seal: Bentonite ☐ 3 Concrete ☒ 0 Other ☐ _____

4. Material between well casing and protective pipe: Bentonite ☐ 3 Annular space seal ☐ _____ Sand Other ☐ _____

5. Annular space seal: a. Granular Bentonite ☒ 3
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 3
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 5
e. 0.5 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 0 Tremie pumped ☐ 0 Gravity ☒ 0

6. Bentonite seal: a. Bentonite granules ☒ 3
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 3
c. _____ Other ☐ _____

7. Fine sand material: Manufacturer, product name & mesh size
a. Badger Mine Silica
b. Volume added 0.5 ft³

8. Filter pack material: Manufacturer, product name and mesh s
a. Red Flint
b. Volume added 4.0 ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 Flush threaded PVC schedule 80 ☐ 2 Other ☐ _____

10. Screen material: Schedule 40 PVC
a. Screen type: Factory cut ☒ 1 Continuous slot ☐ 0 Other ☐ _____
b. Manufacturer TIMCO
c. Slot size: 0010
d. Slotted length: 10 '

11. Backfill material (below filter pack): None ☒ 1 Other ☐ _____

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature | Firm

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Sta and ch. NR 141, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more thar $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Tecumseh	Calumet Rock RMT-2011	MW-1
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
_____	54		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
Other _____	☐	

3. Time spent developing well: 50 min.

4. Depth of well (from top of well casing): 18. ft.

5. Inside diameter of well: 2. in.

6. Volume of water in filter pack and well casing: 6.1 gal.

7. Volume of water removed from well: 15. gal.

8. Volume of water added (if any): _____ gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 12.01 ft.	DRY ft.
Date	b. 11/11/91 (m m d d y y)	11/11/91 (m m d d y y)
Time	c. 10:00 ☒ a.m. ☐ p.m.	11:00 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) very silty	Clear ☐ 20 Turbid ☒ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

16. Additional comments on development:

Purged dry within 10 gallons. After 30 min. recovered 4 gallons.

Well developed by: Person's Name and Firm

Name: Kristine Stehr
Dwane Stillings

Firm: Dames & Moore

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Kristine Stehr

Print Initials: K M S

Firm: Dames & Moore

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste
☐ Wastewater
☐ Emergency Response
☐ Haz. Waste
☐ Underground Tanks
☐ Water Resources
☐ Other

SOIL BORING LOG INFORMATION

Form 4400-122 7-91

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh Products Company		SB-6

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Twin City Testing Gary Wellner	10 / 30 / 91 (MM DD YY)	10 / 30 / 91 (MM DD YY)	Hollow-stem Auger 3 1/4" i.d.

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-1	____ Feet MSL	____ Feet MSL	7 inches

Boring Location
State Plane ____ N. ____ E S/C/N | Lat. ___ ___ ___
____ 1/4 of SE 1/4 of Section 10 T 17 N, R 20 (E)W | Long ___ ___ ___

Local Grid Location (If Applicable)
☐ N ____ Feet ☐ E
☐ S ____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Calumet	0 8	New Holstein

Sample Number	Sample Length Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID ppm	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
6-1	19	13		1-3' FILL: sandy with pebbles, gravel, tan FILL: Next 3" black, paint chips, metal shavings, ash Bottom 14" SAND: silty, grey, gravel and pebbles	SP			57.2 2.5						
* 6-2	16	5	5	4-6' SAND: Top 2" silty, brown - grey, gravel and pebbles, some organics Bottom 14" SAND: silty, brown, course, foundry ash, pyrite (trace), some green staining, moist	SP			1011						slight odor petroleum odor
6-3	14	10		7-9' Fill: Top 10" sand, silty, gravel, wood chips, red brown mottling throughout Bottom 4" SILT: clayey, light brown some limonite (yellow) nodules, moist	SM			1.0						odor
6-4	19	7	10	10-12' SILT: sandy, tan, pebbles and gravel, wet	SM			0.3						no odor
6-5	14	5		13-15' SAND: silty, gravel and pebbles, water bearing	SM			0.4						no odor
* 6-6	24	5	15	16-18' SILT: sandy, pebbles and gravel (trace), wet	SM			0.0						no odor
6-7	2	Bounced	20	19-21' Same as above, water bearing Boring Terminated at 21'	SM									
			25											

* Sample submitted for analysis

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature ____ Firm DAMES & MOORE

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a seperate offense, pursuant to ss 144.99 and 162.06, Wis. Stats

RMT

ENVIRONMENT • ENERGY • ENGINEERING

May 4, 2011

Mr. Alan Nass
Pollution Remediation Division
Wisconsin Department of Natural Resources
2984 Shawano Avenue
PO Box 10448
Green Bay, WI 53313-0436

Subject: Final Closure Condition Met – Abandonment of MW-1
East Section Fill Area - Tecumseh Products Company
1604 Michigan Avenue, New Holstein, Wisconsin
BRRTS # 02-08-193776, FID 408020690

Dear Mr. Nass:

Tecumseh Products Company (TPC) completed investigation of the impacts to soil and groundwater associated with the fill area on the east side of the former TPC facility located at 1604 Michigan Avenue, New Holstein, Wisconsin (Site Map - Attachment A). TPC requested closure for the fill area from the Wisconsin Department of Natural Resources (WDNR) in March 2000. The WDNR responded in May 2000 stating that additional data was needed. TPC submitted the additional information to the WDNR in May 2003, and closure was approved by the WDNR in a letter dated August 4, 2004. The WDNR's only condition of closure for the fill area was the abandonment of monitoring well MW-1.

During review of historical files for the site, RMT, Inc. (RMT), found records that MW-1 was abandoned on June 21, 2006. The well was abandoned by SES, Inc. (SES), and the work was overseen by RMT. To abandon the well, SES removed the pro-top flush mount casing, overdrilled the well to a depth of 19 feet, removed the casing, and backfilled the borehole with bentonite chips. The well abandonment form for MW-1 is included in Attachment B, and the original well construction log is included in Attachment C. (Please note that the well construction log was only obtained recently by RMT, and was not available at the time of the well abandonment).

Documentation of the well abandonment was previously submitted to the WDNR by RMT as Attachment 2 to a letter report dated April 19, 2007. The purpose of the 2007 letter was to document the construction of five new wells and delineate the chlorinated volatile organic compound (CVOC) plume at the site (BRRTS # 02-08-100332). Monitoring well MW-1 was abandoned by SES during their mobilization to the site to construct the five new wells. It appears that the abandonment was

744 Heartland Trail • Madison, WI 53717 • 608.831.4444 • 608.831.3334 FAX • www.rmtinc.com

inadvertently omitted from the discussion of the report, since the focus of the report centered on the delineation of the CVOC impacts.

With this submittal, the final condition of closure for the fill area is complete, and RMT on behalf of TPC requests the WDNR approve final closure for BRRTS #02-08-193776.

Please feel free to contact me at 608-662-5480 with any questions. We look forward to confirmation of final closure for this portion of the site.

Sincerely,

RMT, Inc.

Alyssa Sellwood
Project Engineer

Attachments Attachment A – Site Figure from Key Environmental Group, Ltd.
Attachment B – Well Abandonment Form
Attachment C – Original Well Construction Form

cc: Jason Smith, TPC
Tom Stolzenburg, RMT

Attachment A – Site Figure from Key Environmental Group, Ltd.

Attachment B – Well Abandonment Form

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5 2/2000

Notice: Please complete Form 3300-5 and return it to the appropriate DNR office and bureau. Completion of this report is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See the instructions for more information.

Route to: ☐ Drinking Water ☐ Watershed/Wastewater ☐ Waste Management ☒ Remediation/Redevelopment ☐ Other

(1) GENERAL INFORMATION

WI Unique Well No. | DNR Well ID No. | County: Calumet

Common Well Name: MW-1 Gov't Lot (if applicable)

Grid Location: ___ 1/4 of ___ 1/4 of Sec. ___ ; T. ___ N; R. ___ ☐ E ☐ W

___ ft. ☐ N. ☐ S., ___ ft. ☐ E. ☐ W.

Local Grid Origin ☐ (estimated: ☐) or Well Location ☒

Lat ___ ° ___ ' ___ " Long ___ ° ___ ' ___ " or

State Plane ___ ft. N. ___ ft. E. S ☐ C ☐ N ☐ Zone

Reason For Abandonment: Testing completed

WI Unique Well No. of Replacement Well:

(2) FACILITY /OWNER INFORMATION

Facility Name: Tecumseh - New Holstein

Facility ID | License/Permit/Monitoring No.

Street Address of Well: 1604 Michigan Ave.

City, Village, or Town: New Holstein

Present Well Owner: Tecumseh | Original Owner: Tecumseh

Street Address or Route of Owner: 1604 Michigan Ave.

City, State, Zip Code: New Holstein, WI 53061

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date: 6/21/2006

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
☒ Drilled ☐ Driven (Sandpoint) ☐ Dug
☐ Other (Specify)

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) (From ground surface) ___ Casing Diameter (in.) ___
Casing Depth (ft.) ___
Lower Drillhole Diameter (in.) ___

Was Well Annular Space Grouted? ☐ Yes ☐ No ☒ Unknown
If Yes, To What Depth? ___ Feet
Depth to Water (Feet) ___

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☒ Yes	☐ No	☐ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	
Was Casing Cut Off Below Surface?	☐ Yes	☐ No	
Did Sealing Material Rise to Surface?	☒ Yes	☐ No	
Did Material Settle After 24 Hours?	☐ Yes	☒ No	
If Yes, Was Hole Retopped?	☐ Yes	☒ No	

Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☒ Screened & Poured ☐ Other (Explain)
(Bentonite Chips)

Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☒ Bentonite Chips
☐ Granular Bentonite
☐ Bentonite-Cement Grout
☐ Bentonite - Sand Slurry

(5) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Bentonite chips	Surface	19.0		

(6) Comments: No well construction information available - well overdrilled to 19 feet bgs and backfilled with bentonite.

(7) Name of Person or Firm Doing Sealing Work: SES, Inc. | Date of Abandonment: 6/21/06

Signature of Person Doing Work: (RMT) | Date Signed: 4/17/07

Street or Route: 1102 Stewart Street | Telephone Number: (608) 274-7600

City, State, Zip Code: Madison, WI 53713

FOR DNR OR COUNTY USE ONLY

Date Received | Noted By

Comments

Attachment C – Original Well Construction Form

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 4-9(

Facility/Project Name: Tecumseh Products Co.

Facility License, Permit or Monitoring Number:

Type of Well: Water Table Observation Well ☒ 11 Piezometer ☐ 12

Distance Well Is From Waste/Source Boundary: ft.

Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No

Local Grid Location of Well: ft. ☐ N. ☐ S. ft. ☐ E. ☐ W.

Grid Origin Location: Lat. Long. or St. Plane ft. N, ft. E.

Section Location of Waste/Source: 1/4 of SE 1/4 of Sec. 10 T. 17 N, R 20 ☒ E. ☐ W.

Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known

Well Name: MW1 SB6

Wis. Unique Well Number: DNR Well Numbe

Date Well Installed: 10/30/91 (m m / d d / y y)

Well Installed By: (Person's Name and Firm)
Gary Wellner
Twin City Testing

A. Protective pipe, top elevation 928.98 ft. MSL

B. Well casing, top elevation 929.70 ft. MSL

C. Land surface elevation 926.0 ft. MSL

D. Surface seal, bottom ft. MSL or 1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe

17. Source of water (attach analysis):

E. Bentonite seal, top ft. MSL or 1 ft.

F. Fine sand, top ft. MSL or 5 ft.

G. Filter pack, top ft. MSL or 6 ft.

H. Screen joint, top ft. MSL or 8 ft.

I. Well bottom ft. MSL or 18 ft.

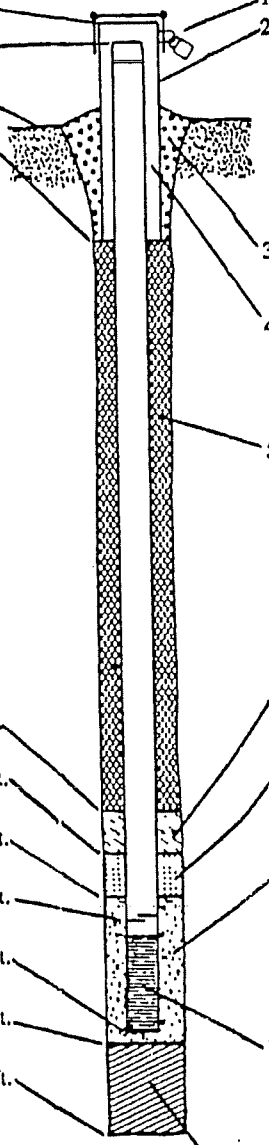
J. Filter pack, bottom ft. MSL or 18 ft.

K. Borehole, bottom ft. MSL or 18 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2.25 in.

N. I.D. well casing 2.0 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in
b. Length: 1 ft
c. Material: Steel ☐ 0
Cast Aluminum Other ☐
d. Additional protection? ☒ Yes ☐ No
If yes, describe: Expansion Cap

3. Surface seal: Bentonite ☐ 3
Concrete ☒ 0
Other ☐

4. Material between well casing and protective pipe:
Bentonite ☐ 3
Annular space seal ☐
Sand Other ☐

5. Annular space seal: a. Granular Bentonite ☒ 3
b. Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 3
c. Lbs/gal mud weight . . . . . Bentonite slurry ☐ 3
d. % Bentonite . . . . . Bentonite-cement grout ☐ 5
e. 0.5 Ft³ volume added for any of the above
f. How installed: Tremie ☐ 0
Tremie pumped ☐ 0
Gravity ☒ 0

6. Bentonite seal: a. Bentonite granules ☒ 3
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 3
c. Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. Badger Mine Silica
b. Volume added 0.5 ft³

8. Filter pack material: Manufacturer, product name and mesh s
a. Red Flint
b. Volume added 4.0 ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 2
Flush threaded PVC schedule 80 ☐ 2
Other ☐

10. Screen material: Schedule 40 PVC
a. Screen type: Factory cut ☒ 1
Continuous slot ☐ 0
Other ☐
b. Manufacturer TIMCO
c. Slot size: 0010
d. Slotted length: 10

11. Backfill material (below filter pack): None ☒ 1
Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature | Firm

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Sta and ch. NR 141, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Tecumseh	Calumet Rock RMT-2011	MW-1
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well Number**
_____	54		

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☒	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
Other _____	☐	

3. Time spent developing well: 50 min.

4. Depth of well (from top of well casing): 18. ft.

5. Inside diameter of well: 2. in.

6. Volume of water in filter pack and well casing: 6.1 gal.

7. Volume of water removed from well: 15. gal.

8. Volume of water added (if any): _____ gal.

9. Source of water added: _____

10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 12.01 ft.	DRY ft.
Date	b. 11/11/91 (m m d d y y)	11/11/91 (m m d d y y)
Time	c. 10:00 ☒ a.m. ☐ p.m.	11:00 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) very silty	Clear ☐ 20 Turbid ☒ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

16. Additional comments on development:

Purged dry within 10 gallons. After 30 min. recovered 4 gallons.

Well developed by: Person's Name and Firm

Name: Kristine Stehr / Dwane Stillings

Firm: Dames & Moore

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Kristine M Stehr

Print Initials: K M S

Firm: Dames & Moore

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste
☐ Wastewater
☐ Emergency Response
☐ Haz. Waste
☐ Underground Tanks
☐ Water Resources
☐ Other _____

SOIL BORING LOG INFORMATION

Form 4400-122 7-91

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh Products Company		SB-6

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Twin City Testing Gary Wellner	10 / 30 / 91 (MM DD YY)	10 / 30 / 91 (MM DD YY)	Hollow-stem Auger 3 1/4" I.d.

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-1	_____ Feet MSL	_____ Feet MSL	7 inches

Boring Location
State Plane _____ N, _____ E S/C/N | Lat. ___ ___ ___
___ 1/4 of SE 1/4 of Section 10 T 17 N, R 20 (E)W | Long ___ ___ ___

Local Grid Location (If Applicable)
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

County	DNR County Code	Civil Town/City/ or Village
Calumet	0 8	New Holstein

Sample Number	Sample Length Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID ppm	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
6-1	19	13		1-3' FILL: sandy with pebbles, gravel, tan FILL: Next 3' black, paint chips, metal shavings, ash Bottom 14" SAND: silty, grey, gravel and pebbles	SP			57.2 2.5						
* 6-2	16	5	5	4-6' SAND: Top 2" silty, brown - grey, gravel and pebbles, some organics Bottom 14" SAND: silty, brown, course, foundry ash, pyrite (trace), some green staining, moist	SP			1011						slight odor petroleum odor
6-3	14	10		7-9' Fill: Top 10" sand, silty, gravel, wood chips, red brown mottling throughout Bottom 4" SILT: clayey, light brown some limonite (yellow) nodules, moist	SM			1.0						odor
6-4	19	7	10	10-12' SILT: sandy, tan, pebbles and gravel, wet	SM			0.3						no odor
6-5	14	5		13-15' SAND: silty, gravel and pebbles, water bearing	SM			0.4						no odor
* 6-6	24	5	15	16-18' SILT: sandy, pebbles and gravel (trace), wet	SM			0.0						no odor
6-7	2	Bounced	20	19-21' Same as above, water bearing Boring Terminated at 21'	SM									
			25											

* Sample submitted for analysis

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm DAMES & MOORE

This form is authorized by Chapters 144.147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a seperate offense, pursuant to ss 144.99 and 162.06, Wis. Stats

Nass, Alan T - DNR

From: Nass, Alan T - DNR
Sent: Thursday, March 03, 2011 2:57 PM
To: 'Rice, John'; 'Alyssa.Sellwood@rmtinc.com'
Cc: 'Smith, Jason'; 'Tom.Stolzenburg@rmtinc.com'
Subject: Approval - Tecumseh Work Plan

Importance: High

Hello John and Alyssa:

I have reviewed and hereby approve the January 31, 2011 work plan RMT submitted for BRRTS cases 02-08-100332, 03-08-001071, and 02-08-193776 at the former Tecumseh Products Company in New Holstein, Wisconsin. Please proceed with the work. Please contact me with any questions you may have.

Jason - thanks to Tecumseh Products for doing this work.

Nass, Alan T - DNR

From: Smith, Jason [Jason.Smith@tecumseh.com]
Sent: Thursday, May 20, 2010 8:12 AM
To: Nass, Alan T - DNR
Cc: Stolzenburg, Tom
Subject: RE: Former Tecumseh - New Holstein. WI
Attachments: Tom Stolzenburg.vcf

Alan,

I was in Nashville the last two days at a waste water training class. As soon as I opened your first e-mail, I realized that RMT would be our assistance group. I have contacted Tom Stolzenburg for assistance regarding these matters. I am certain that they will be able to assist us.

Regards,

Jason Smith

Tom Stolzenburg
RMT, Inc.
Project Manager

+1 (608) 662-5287 Work
tom.stolzenburg@rmtinc.com

744 Heartland Trail
Madison, WI 53717

S. Jason Smith

Corporate Environmental Director

Tecumseh Products Company

2700 West Wood Street

Paris, TN 38242

e-mail - jason.smith@tecumseh.com

phone - 731-644-8127

cell - 731-707-2889

fax - 731-644-8156

"Before printing, think about the environment"

From: Nass, Alan T - DNR [mailto:Alan.Nass@wisconsin.gov]
Sent: Wednesday, May 19, 2010 4:56 PM
To: Smith, Jason
Subject: FW: Former Tecumseh - New Holstein. WI
Importance: High

Jason - The company that produced the May 3, 2007 report was RMT not TRC. Sorry for the confusion.

- DNR
May 19, 2010 4:25 PM
opher (Chicago,IL-US)'; 'SMcAnulty@TRCSOLUTIONS.com'; 'JRice@TRCSOLUTIONS.com'; Jason Smith
Tecumseh - New Holstein. WI

Hello to all - I am looking for help and hope you can assist me. I am looking for contacts and updates on the status of the investigation of three environmental contamination cases at the former Tecumseh Plant in New Holstein, Wisconsin. It is my understanding that this property was sold to Heus Manufacturing in 2007. You may not be aware of it, but Heus closed its doors due to bankruptcy several months ago. The most recent information that I have is that the current owner (not the one who owned Heus at the time it purchased the Tecumseh property) can not be located. For that reason, I am looking to you for assistance to update me on these sites.

There are five open environmental contamination investigations at the site. Two of the cases (02-08-363333 chromium and 02-08-281506 PCBs) are being handled by TRC. I don't have any questions regarding those two cases.

Two of the three remaining cases (02-08-100332 chlorinated/petroleum, 03-08-001071 petroleum/chlorinated) were the responsibility of Tecumseh with the responsibility likely transferring to Heus at the time of property sale **(is this correct?)**. The third remaining open case (02-08-193776 petroleum) again was the responsibility of Tecumseh with that responsibility likely transferring to Heus at the time of property sale **(again - correct?)**. This later case had been given conditional closure in August 2004 but remains open due to the need to abandon a monitoring well.

In regards to two of the three remaining open cases (02-08-100332 and 03-08-001071), TRC produced a work plan dated May 3, 2007 which proposed the placement of 4 additional monitoring wells NE of the Tecumseh Plant and also proposed additional groundwater sampling. **Were these wells installed and/or has there any additional sampling or any other work done at the site in regards to these two cases?**

Regarding the conditionally closed case (02-08-193776), **do you know if the monitoring well has been abandoned?**

I would appreciate what ever information you can provide me. Thank you in advance.

Nass, Alan T - DNR

From: Nass, Alan T - DNR
Sent: Wednesday, May 19, 2010 4:56 PM
To: Jason Smith
Subject: FW: Former Tecumseh - New Holstein. WI

Importance: High

Jason - The company that produced the May 3, 2007 report was RMT not TRC. Sorry for the confusion.

From: Nass, Alan T - DNR
Sent: Wednesday, May 19, 2010 4:25 PM
To: 'Harvey, Christopher (Chicago,IL-US)'; 'SMcAnulty@TRCSOLUTIONS.com'; 'JRice@TRCSOLUTIONS.com'; Jason Smith
Subject: Former Tecumseh - New Holstein. WI
Importance: High

Hello to all - I am looking for help and hope you can assist me. I am looking for contacts and updates on the status of the investigation of three environmental contamination cases at the former Tecumseh Plant in New Holstein, Wisconsin. It is my understanding that this property was sold to Heus Manufacturing in 2007. You may not be aware of it, but Heus closed its doors due to bankruptcy several months ago. The most recent information that I have is that the current owner (not the one who owned Heus at the time it purchased the Tecumseh property) can not be located. For that reason, I am looking to you for assistance to update me on these sites.

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Regarding the conditionally closed case (02-08-193776), **do you know if the monitoring well has been abandoned?**

I would appreciate what ever information you can provide me. Thank you in advance.

Nass, Alan T - DNR

From: Nass, Alan T - DNR
Sent: Wednesday, May 19, 2010 4:48 PM
To: 'Harvey, Christopher (Chicago,IL-US)'
Subject: RE: Former Tecumseh - New Holstein. WI

Chris - Yes, I realized that as soon as I hit send. It was RMT not TRC. Thanks!

From: Harvey, Christopher (Chicago,IL-US) [mailto:CHarvey@TRCSOLUTIONS.com]
Sent: Wednesday, May 19, 2010 4:36 PM
To: Nass, Alan T - DNR; SMcAnulty@TRCSOLUTIONS.com; JRice@TRCSOLUTIONS.com; Jason Smith
Subject: RE: Former Tecumseh - New Holstein. WI

Alan,

TRC did not produce a work plan, dated May 3, 2007, for the two of the three remaining open cases.

If there is anything else I can help you with, please let me know.

Chris

From: Nass, Alan T - DNR [mailto:Alan.Nass@wisconsin.gov]
Sent: Wednesday, May 19, 2010 4:25 PM
To: Harvey, Christopher (Chicago,IL-US); SMcAnulty@TRCSOLUTIONS.com; JRice@TRCSOLUTIONS.com; Jason Smith
Subject: Former Tecumseh - New Holstein. WI
Importance: High

Hello to all - I am looking for help and hope you can assist me. I am looking for contacts and updates on the status of the investigation of three environmental contamination cases at the former Tecumseh Plant in New Holstein, Wisconsin. It is my understanding that this property was sold to Heus Manufacturing in 2007. You may not be aware of it, but Heus closed its doors due to bankruptcy several months ago. The most recent information that I have is that the current owner (not the one who owned Heus at the time it purchased the Tecumseh property) can not be located. For that reason, I am looking to you for assistance to update me on these sites.

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Regarding the conditionally closed case (02-08-193776), **do you know if the monitoring well has been**

abandoned?

I would appreciate what ever information you can provide me. Thank you in advance.

Nass, Alan T - DNR

From: Nass, Alan T - DNR
Sent: Wednesday, May 19, 2010 4:34 PM
To: 'John.Rice@rmtinc.com'
Subject: FW: Former Tecumseh - New Holstein. WI

Importance: High

John - Sorry, I placed you at TRC not RMT. I understand Stacy is no longer with RMT. Hope you can help me.

From: Nass, Alan T - DNR
Sent: Wednesday, May 19, 2010 4:25 PM
To: 'Harvey, Christopher (Chicago,IL-US)'; 'SMcAnulty@TRCSOLUTIONS.com'; 'JRice@TRCSOLUTIONS.com'; Jason Smith
Subject: Former Tecumseh - New Holstein. WI
Importance: High

Hello to all - I am looking for help and hope you can assist me. I am looking for contacts and updates on the status of the investigation of three environmental contamination cases at the former Tecumseh Plant in New Holstein, Wisconsin. It is my understanding that this property was sold to Heus Manufacturing in 2007. You may not be aware of it, but Heus closed its doors due to bankruptcy several months ago. The most recent information that I have is that the current owner (not the one who owned Heus at the time it purchased the Tecumseh property) can not be located. For that reason, I am looking to you for assistance to update me on these sites.

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To: 'Harvey, Christopher (Chicago,IL-US)'; 'SMcAnulty@TRCSOLUTIONS.com'; 'JRice@TRCSOLUTIONS.com'; Jason Smith
Subject: Former Tecumseh - New Holstein. WI

Importance: High

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I would appreciate what ever information you can provide me. Thank you in advance.

Nass, Alan T - DNR

From: Nass, Alan T - DNR
Sent: Monday, April 06, 2009 3:12 PM
To: Jason Smith
Subject: Tecumseh - New Holstein
Importance: High

Jason - Hello, I am the WDNR Project Manager for all of the Tecumseh contamination cases in New Holstein. What would be very helpful is if you can confirm or provide correct information of who is responsible (company name, contact person name, address, telephone number, e-mail, etc.) for each open cases in New Holstein / or if you could put me in touch with who would know.

According to my records,there are 5 open cases:

02-08-363333 (chromium line) TRC is responsible
02-08-281506 (Hayton PCB Remediation) TRC is responsible

02-08-193776 (conditionally closed - needs proof of monitoring well abandonment) Tecumseh is responsible
02-08-100332 (chlorinated mixed w/petroleum - case below) Tecumseh is responsible
03-08-001071 (petroleum mixed w/ chlorinated - case above) Tecumseh is responsible

Can you provide me with or direct me to someone in Tecumseh who can provide me with updates on the status of the cases that Tecumseh is responsible for?

Also, I need to have a copy of all written agreements (e.g. between Tecumseh & TRC or Tecumseh & Hues Manufacturing) regarding who is responsible for the different environmental investigation/remediation cases at the Tecumseh New Holstein site. Can you provide this to me or can you direct me to someone who can?

Thanks Jason!

From: Tom Stolzenburg [mailto:Tom.Stolzenburg@rmtinc.com]
Sent: Monday, April 06, 2009 2:15 PM
To: Jason Smith
Cc: Nass, Alan T - DNR
Subject: Tecumseh, New Holstein legal liabilities

Alan Nass can make changes to the state records as to who is responsible for which project/property in New Holstein if you send him some documentation. Alan's address is:

Attn. Alan Nass
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727

His phone number is 920-662-5161
His e-mail address should appear above.

Alan would like to know who at Tecumseh should be his contact.

Outgoing messages, along with any attachments, are scanned for viruses prior to sending.

CASE ACTIVITY REPORT
Form 4100-160 3-90

State of Wisconsin
Department of Natural Resources
Law Enforcement

Case Number	Case Title
02-08-100332 / 03-08-001071 / 02-08-193776, 06-08-548742	Tecumseh Products Company – New Holstein

Activity	Date of Activity
Meeting with Tecumseh & Heus Manufacturing	4/24/07 (10 AM – 11:30 AM)

Narrative

On this date, a meeting was held at the Oshkosh WDNR Office. Present were: S. Jason Smith (Tecumseh Corporate Environmental Director), John Rice & Stacy McAnulty (RMT, Inc. – consultants for Tecumseh), Edward Daeger (VP – Heus Manufacturing), Mark Enneper (Chief Executive Officer – Heus Manufacturing), D'Arcy Gravelle (Key Environmental Group, Inc. – consultant for Heus), and Alan Nass (WDNR). The meeting was held at the request of Stacy McAnulty for the purpose of reviewing status of open contamination cases being handled by Key for Tecumseh and discuss what additional work would be needed at the site.

RMT made a brief presentation on the status of the cases, a summary of work done to date, and their proposal for additional work on 02-08-100332 (chlorinated case). Regarding the proposed work for 02-08-100332, I stated that the DNR would want to see more then one new well nest down-gradient of M-33/M-33D – possibly 3 to 4 new nests with piezometers (two depths), sample 1/4ly, include NA parameters, and include remaining old wells at NW & SW corner of plant. An effort should be made to locate old, lost monitoring wells at the NW and SW corners. Work on 02-08-001071 could be included with 02-08-100332. I said that 02-08-193776 would be closed soon now that I had received the well abandonment form from RMT. RMT will send me a proposal for the additional work. I will review & discuss it with Key Environmental. & respond to RMT.

Hydrogeologist	Date of Report	Exhibit Reference
Alan Thomas Nass	4/24/07	

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Ronald W. Kazmierczak, Regional Director

Northeast Region Headquarters
1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TTY 711

August 4, 2004

Mr. Bharat Shah
Tecumseh Products
1604 Michigan Avenue
New Holstein, Wisconsin 53061

Subject: Conditional Case Closure By Project Manager, Tecumseh East Section Fill Area, 1604 Michigan Avenue, New Holstein, Wisconsin BRRTS #: 02-08-193776

Dear Mr. Shah:

On August 4, 2004, the above case was reviewed for closure by the Department of Natural Resources. The Department reviews environmental remediation cases for compliance with state laws and standards to maintain consistency in the closure of these cases. Upon review of the case, it was determined that it could be closed pending the abandonment of the monitoring well.

The original case closure was received March 15, 200O. The Department responded with a letter dated May 31, 2000 stating that additional investigation was needed. This additional investigation information was then received on May 22, 2003. At that time, I filed the information and forgot about the closure request. I apologize for the delay of my review of your request, this was total my error.

This case will be closed upon receipt of documentation of proper abandonment of monitoring well MW-1. According to Department records, this well still exists. If this well has already been abandon or you would like to keep it for monitoring purposes, please inform me. Otherwise, please have it properly abandon and submit the documentation of such. Upon receipt of the documentation or your request to keep the well for monitoring purposes, this case will be officially closed.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact me in Green Bay at 920-492-5861.

Yours truly,

Alan Thomas Nass, P.G., P.S.
Hydrogeologist

cc: Dan Pelczar, KEY Engineering Group, Inc., 735 North Water Street, Milwaukee, Wisconsin 53202

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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Northeast Region Headquarters
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Telephone 920-492-5800
FAX 920-492-5913
TDD 920-492-5912

WASTE MANAGEMENT AND BUREAU FOR REMEDIATION AND REDEVELOPMENT

FAX TRANSMITTAL SHEET

Date: August 4, 2004

TO

Name: Mr. Bharat Shah

Company/Agency: Tecumseh Products

Fax Number: 920-898-2701

FROM

Name: Alan Nass

Company/Agency: WDNR

Phone Number: 920-492-5861

Pages to follow (excluding cover sheet): 1

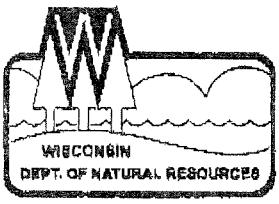
Comments/Message: Conditional Closure – Tecumseh Products East Fill Area, BRRTS # 02-08-193776. Case was conditionally closed pending the proper abandonment / documentation of Monitoring Well MW-1. I apologize for the delay in reviewing this request. Please contact me if you have any questions.

MESSAGE CONFIRMATION

08/04/2004 11:48
ID=WI DNR NER SOLID WASTE

DATE	S.R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
08/04	00'27"	9208982701	CALLING	02	OK	0000

08/04/2004 11:47 WI DNR NER SOLID WASTE → 819208982701 NO.167 001



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
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WASTE MANAGEMENT AND BUREAU FOR REMEDIATION AND REDEVELOPMENT

FAX TRANSMITTAL SHEET

Date: August 4, 2004

TO

Name: Mr. Bharat Shah

Company/Agency: Tecumseh Products

Fax Number: 920-898-2701

FROM

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Ronald Kazmierczak, Regional Director

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WASTE MANAGEMENT AND BUREAU FOR REMEDIATION AND REDEVELOPMENT

FAX TRANSMITTAL SHEET

Date: August 4, 2004

TO

Name: Dan Pelczar

Company/Agency: Key Engineering Group, Ltd.

Fax Number: 414-224-8383

FROM

Name: Alan Nass AN

Company/Agency: WDNR

Phone Number: 920-492-5861

Pages to follow (excluding cover sheet): 1

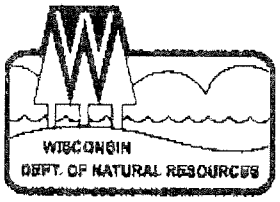
Comments/Message: Conditional Closure – Tecumseh Products East Fill Area, BRRTS # 02-08-193776. Case was conditionally closed pending the proper abandonment / documentation of Monitoring Well MW-1. I apologize for the delay in reviewing this request. If Tecumseh wants to keep the well for monitoring purposes, please let me know (are we expecting any other wells that might be abandoned/installed in the near future – i.e. to save on costs?). I hate to shag the crew out to abandon just one well when there are so many on the property. Please contact me if you have any questions.

MESSAGE CONFIRMATION

08/04/2004 11:50
ID=WI DNR NER SOLID WASTE

DATE	S.R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
08/04	00'31"	1 262 375 9680	CALLING	02	OK	0000

08/04/2004 11:49 WI DNR NER SOLID WASTE → 814142248383 NO.168 P01



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TDD 920-492-5812

WASTE MANAGEMENT AND BUREAU FOR REMEDIATION AND REDEVELOPMENT

FAX TRANSMITTAL SHEET

Date: August 4, 2004

TO

Name: Dan Pelczar

Company/Agency: Key Engineering Group, Ltd.

Fax Number: 414-224-8383

FROM

KEY ENGINEERING GROUP LTD.
ENVIRONMENTAL • CIVIL/GEOTECH • COMPLIANCE

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
(262) 375-4750
(800) 645-7365
Fax (262) 375-9680

May 20, 2003

Mr. Alan Nass
Wisconsin Department of Natural Resources
Northeast Region
1125 North Military Avenue
Post Office Box 10448
Green Bay, Wisconsin 53407-0448

Reference: *Response to WDNR's May 31, 2000 Correspondence*
Tecumseh-East Section Fill Area
1604 Michigan Avenue
New Holstein, Wisconsin
WDNR BRRTS #: 02-08-193776

KEY ENGINEERING GROUP, LTD.
File No. 0809004

Dear Mr. Nass:

Pursuant to the Wisconsin Department of Natural Resources (WDNR) May 31, 2000 correspondence (attached), the purpose of this letter is to provide the additional requested soil analytical data for the above referenced site. Key Engineering Group, Ltd. (KEY) previously submitted a *Case Closure Request/Limited Site Investigation Report* (KEY, March 14, 2000) with the $750.00 closure review fee and the WDNR *Case Summary and Closeout Forms*. Moreover, it is understood that once the WDNR receives this information the case closure review process will continue. This letter was prepared by KEY on behalf of Tecumseh Products Company.

Investigation Procedures

Three soil probes (GP-4A, GP-5A and GP-6A) were advanced with a truck-mounted Geoprobe® unit operated by Soil Essentials on April 8, 2003, in the immediate vicinity of the previous soil probe locations. The soil probe locations are depicted on Figure 1.

The soil probes were advanced to 10 or 12 feet below ground surface. Soil samples were collected at 2-foot intervals and were classified in the field in accordance with the Unified Soil Classification System. Each soil sample was also field screened for the presence of volatile organic compounds with a photoionization detector (PID). Two soil samples from each soil probe were collected from GP-4A, GP-5A and GP-6A and submitted to Test America for analysis of polynuclear aromatic hydrocarbons (PAHs) and three soil samples were collected and submitted for analysis of polychlorinated biphenyls (PCBs). The soil samples were collected from the fill (one PAHs and two PCBs) and native soil (one PAHs and one PCBs) as outlined in the WDNR, May 31, 2000, correspondence. Soil probe and sampling information, soil sample classification data and field screening results are documented on soil boring logs which are included in Attachment 1. Borehole abandonment forms are also included in Attachment 1.

Results

The soil sample analytical results are summarized in Table 1. The soil sample analytical reports and chain of custody documentation are included in Appendix 2.

The results of field screening indicated that PID readings ranged from <1.0 instrument unit (i.u.) to 18 i.u. Soil sample field screening results generally indicated PID readings above background for soil samples collected from the fill material at GP-4A, GP-5A and GP-6A. Lower PID readings were measured in underlying native soils. The boring logs included in Appendix 1 include PID readings for each interval sampled.

The site investigation (SI) laboratory PAH soil sample analytical results indicated that no soil sample concentrations were greater than WDNR Interim Guidance Generic Residual Contaminant Levels for the protection of groundwater or for the direct-contact exposure pathway.

The SI laboratory PCB soil sample analytical results indicate that no soil samples contained more than 50 micrograms per kilogram.

Conclusions

Based the PAH and PCB soil analysis and the previously submitted *Case Closure Request/Limited Site Investigation Report* (KEY, March 14, 2000) with the $750.00 closure review fee and the WDNR *Case Summary and Closeout Forms* it is understood that the case closure review process will continue upon receipt of this letter.

Please call if you have any questions.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Daniel K. Pelczar, CPG, P.G.
Senior Hydrogeologist

Andrew B. Graham, P.E., P.G., CHMM
Senior Engineer

DKP/vjc

cc: Mr. Bharat Shah, Tecumseh Products Company

Attachments: *Case Closure Review* (WDNR, May 31, 2000)
Table 1 - Summary of Soil Analytical Data
Figure 1 - Site Layout
Attachment 1 - Soil Probing Logs/Abandonment Forms
Attachment 2 - Soil Analytical Report/Chain of Custody Form

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Ronald W. Kazmierczak, Regional Director

Northeast Region Headquarters
1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TDD 920-492-5912

May 31, 2000

Mr. Kerry DeKeyser
Tecumseh Products
1604 Michigan Avenue
New Holstein, Wisconsin 53061

Subject: Case Closure Review, Tecumseh Products, Contaminated Fill Area at MW-1, 1604 Michigan Avenue, New Holstein, Wisconsin **BRRTS #: 02-08-193776**

Dear Mr. DeKeyser:

I have completed my review of the above case that was submitted for closure and have noted some information to be missing. Upon receipt of this information, the case closure review process will continue.

In the Department's letter dated 10/12/98 that was addressed to yourself (copy attached), the Department required analysis for PAHs and PCBs in addition to the analysis for VOCs and RCRA metals. The PCB and PAH analyses do not appear to have been done. For the Department to consider this case for closure, PCB and PAH analyses of the soil will be needed in the area around monitoring well MW-1.

The Department will require a minimum of three soil borings in the fill around MW-1 (by GP-4, GP-5 and GP-6) with analysis for PCBs and PAHs. Samples for analysis should be collected from within the fill material and the native material immediately below the fill material. In addition, due to the thickness of the fill material, two soil samples from **within the fill per boring** should be analyzed for PCBs (i.e. a total of three PCB analyses per boring).

Once this data has been submitted to the Department, the closure review of this case will continue. Thank you for your cooperation in this matter. If you have any questions, please contact me in Green Bay at 920-492-5861.

Yours truly,

Alan Thomas Nass, P.G.
Hydrogeologist

Enclosure

Cc: Curtis Hoffart, KEY Engineering Group, W66 N215 Commerce Court, Cedarburg, Wisconsin 53012
Dale Ziege – RR/3

TABLE 1

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

TECUMSEH - EAST SECTION FILL AREA
1604 Michigan Avenue
New Holstein, Wisconsin

	SAMPLE IDENTIFICATION									GENERIC RCLs	
	GP-4A			GP-5A			GP-6A			PROTECTION OF GROUNDWATER	DIRECT CONTACT (INDUSTRIAL)
Date Sampled	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	4/8/03	---	---
Depth (feet)	0-2	4-6	8-10	0-2	4-6	8-10	0-2	4-6	8-10	---	---
PID (i.u.)	<1	<1	<1	<1	18	<1	<1	<1	<1	---	---
PAHs (µg/kg)											
Acenaphthene	---	<600	<61	---	<550	<60	---	<59	<64	38,000 (1)	60,000,000 (1)
Acenaphthylene	---	<1,000	<100	---	<930	<100	---	<100	<110	700 (1)	360,000 (1)
Anthracene	---	<60	<6.1	---	<55	<6.0	---	<5.9	<6.4	3,000,000 (1)	300,000,000 (1)
Benzo(a)anthracene	---	<60	<6.1	---	<55	<6.0	---	86	14	17,000 (1)	3,900 (1)
Benzo(a)pyrene	---	<60	<6.1	---	<55	<6.0	---	60	<6.4	48,000 (1)	390 (1)
Benzo(b)fluoranthene	---	<60	<6.1	---	<55	<6.0	---	12	<6.4	360,000 (1)	3,900 (1)
Benzo(g,h,i)perylene	---	<60	<6.1	---	<55	<6.0	---	89	<6.4	6,800,000 (1)	390,000 (1)
Benzo(k)fluoranthene	---	<60	<6.1	---	<55	<6.0	---	26	<6.4	870,000 (1)	39,000 (1)
Chrysene	---	<60	<6.1	---	69	<6.0	---	34	14	37,000 (1)	390,000 (1)
Dibenzo(a,h)anthracene	---	<91	<9.1	---	<82	<9.1	---	<8.9	<9.6	38,000 (1)	390 (1)
Fluoranthene	---	<120	<12	---	<110	<12	---	142	31	500,000 (1)	40,000,000 (1)
Fluorene	---	<120	<12	---	<110	<12	---	<12	<13	100,000 (1)	40,000,000 (1)
Indeno(1,2,3-cd)pyrene	---	<60	<6.1	---	<55	<6.0	---	30	<6.4	680,000 (1)	3,900 (1)
1-methyl naphthalene	---	<360	<36	---	<330	<36	---	<35	<38	23,000 (1)	70,000,000 (1)
2-methyl naphthalene	---	<300	<30	---	<270	<30	---	<30	<32	20,000 (1)	40,000,000 (1)
Naphthalene	---	<360	<36	---	<330	<36	---	<35	<38	400 (1)	110,000 (1)
Phenanthrene	---	<60	<6.1	---	175	<6.0	---	57	19	1,800 (1)	390,000 (1)
Pyrene	---	<60	<6.1	---	131	<6.0	---	236	36	8,700,000 (1)	30,000,000 (1)
PCBs (mg/kg)											
Aroclor 1016	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1221	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1232	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1242	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1248	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Aroclor 1254	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	1.5	<0.60	<0.32	---	---
Aroclor 1260	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	<1.4	<0.60	<0.32	---	---
Total PCBs	<0.29	<0.30	<0.30	<0.29	<0.28	<0.30	1.5	<0.60	<0.32	---	---

Notes:

Bold values exceed the WDNR Interim Guidance (1) protection of groundwater values
Boxed values exceed the WDNR Interim Guidance (1) direct-contact values
--- - not analyzed, not applicable or no standard established
(1) - From Soil Cleanup Levels for PAHs Interim Guidance, WDNR, PUBL-RR-519-97, April 1997, Corrected.
bgs - below ground surface
mg/kg - millgrams per kilogram
NA - not applicable
PAHs - polynuclear aromatic hydrocarbons
PCB - polychlorinated biphenyls
Q - result between the limit of detection and limit of quantitation
RCLs - residual contaminant levels
µg/kg - micrograms per kilogram

FORMER UNDERGROUND STORAGE TANK IDENTIFICATIONS			
TANK ID	CAPASITY	CONTENTS	REMOVED
TA-20	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	07/29/92
TA-21	2,000 GALLON	90% UNLEADED GASOLINE & 10% ISOPROPYL ALCOHOL	10/30/91
TA-26	300 GALLON	UNLEADED GASOLINE	07/30/91

TECUMSEH PRODUCTS COMPANY

GRAVEL PARKING AREA

FENCE

TAFT AVENUE

GP-6A/ GP-5 GP-6

MW-1/ SB-6

GP-5A/ GP-5

GP-4A/ GP-4

SB-14

FORMER TA-21

FORMER TA-20

FORMER TA-26

4" PRIVATE STORM SEWER (2' BGS)

8" PRIVATE WATER LINE (10' BGS)

8" WATER MAIN (6' BGS)

8" SANINATARY SEWER (8' BGS)

15" STORM SEWER (4'-5' BGS)

MW-5/ SB-13

SB-3

SB-2

RW-1

MW-4A

MW-4/ SB-12

MW-4B

GP-2

GP-1

SB-5

GP-3

MW-6

MW-7

MW-12/ B-17

JEFFERSON STREET

MW-8

MW-14/ B-19

MW-13/ B-18

LEGEND

- FIRE HYDRANT
- MANHOLE
- GROUNDWATER MONITORING WELL LOCATION
- SOIL PROBE LOCATION
- SOIL PROBE LOCATION
- ABANDONED MONITORING WELL LOCATION

SCALE IN FEET

0 50'

DESIGNED BY DKP	DATE 05/01/03
DRAWN BY CTM	PROJECT 0809004
APPROVED BY DJG	SHEET NO. 2
CADFILE G:\ACAD\0809004\08090044.dwg XREF LMAN Jay	

FIGURE 1
SITE LAYOUT
EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

KEY ENGINEERING GROUP LTD.
ENVIRONMENTAL • CIVIL • RAILROAD

May 01, 2003 - 11:51am G:\ACAD\0809004\08090044.DWG

Nass, Alan T.

From: Dan Pelczar [dpelczar@keyengineering.com]
Sent: Wednesday, June 16, 2004 11:35 AM
To: Nass, Alan T.
Subject: Tecumseh Products Company

Al:

I received your June 14, 2004 letter. Here is a summary of where these cases are at:

BRRTS #: 02-08-363333 (Chrome case)

KEY is not handling this case. Please contact the following environmental consultant:

NewFields #5503 Fax: 608-442-9013
Mark McColloch
2110 Luann Lane, Suite 101
Madison, WI 53713
(608) 442-5223

KEY has sampled these wells as part of the case below.

BRRTS #:02-08-100332 (Chlorinated West)
BRRTS #:03-08-001071 (Petroleum West)

KEY has completed the installation of four well nest and has developed these wells in accordance with your October 31, 2003 correspondence. KEY also has sampled all wells/piezometers on site (54 total) in March 2004 and I am in the process of putting together a *Quarterly Status Update* which I should have completed next month. KEY plans on performing a second groundwater sampling event in July 2004 after some past due invoiced get paid. Also Bhart Shah has left Tecumseh earlier this year and Tecumseh is currently looking for a replacement. My temporary contact is Scott Sibert (920/898-2700) who is their Human Resources Director.

BRRTS #: 02-08-193776 (Fill case)

KEY submitted a *Response to WDNR's May 31, 2000 Correspondence* (KEY, May 20, 2003) and is awaiting for WDNR review.

BRRTS #:02-001070 (Petroleum East)

KEY is awaiting a final case closure letter and proof of the recorded deed was submitted to the WDNR in a *Letter of Transmittal* (KEY, July, 16, 2003).

Tecumseh Products Company would really like to see the WDNR act and respond on the last two BRRTS cases ASAP cause it have been over a year now.

I hope this helps refresh your memory regarding the BRRTS cases. Please call me with any questions.

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Ronald W. Kazmierczak, Regional Director

Northeast Region Headquarters
1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TTY 711

June 14, 2004

Dan Pelczar
KEY Engineering Group, Ltd.
735 North Water Street
Suite 1000
Milwaukee, Wisconsin 53202

Subject: Status of Tecumseh Products Cases, 1604 Michigan Avenue, New Holstein, Wisconsin (BRRTS #'s: 02-08-363333, 02-08-100332, 03-08-001071, & 02-08-193776)

Dear Dan:

I heard you have a new office – hope it is nice. Enclosed are four fax transmittal sheets that I attempted to send to you via fax last Friday and again this morning. Evidently, you fax machine is not operational. Basically, I was wondering about the status of our Tecumseh cases. Thanks Dan.

Yours truly,

Alan Thomas Nass, P.G., P.S.
Hydrogeologist

Encl.

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Scott Hassett, Secretary
Ronald Kazmierczak, Regional Director

Northeast Region Headquarters
1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TDD 920-492-5912

WASTE MANAGEMENT AND BUREAU FOR REMEDIATION AND REDEVELOPMENT

FAX TRANSMITTAL SHEET

Date: June 11, 2004

TO

Name: Dan Pelczar

Company/Agency: KEY Engineering Group, Ltd.

Fax Number: 414-224-8383

FROM

Name: Alan Nass AN

Company/Agency: WDNR

Phone Number: 920-492-5861 4/4

Pages to follow (excluding cover sheet): 0

Comments/Message: Regarding Tecumseh Products – Contaminated Fill, 1604 Michigan Avenue, New Holstein, WI (BRRTS #: 02-08-193776) >>> Could you please update me as to the status of this case? Based on your letter of 5/20/03, I have a feeling I should have been reviewing this case for closure. Is that correct? If so, I apologize and will do it very shortly after I hear from you. Thanks Dan!

Attachment 1

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh - East Section Fill Area	-	GP-4A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Corey Soil Essentials	4/8/2003	4/8/2003	Soilprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		GP-4A	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
1/4 of SE 1/4 of Section 10, T 17 N, R 20 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Calumet	8	New Holstein

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	Pocket Penetrometer
1 SS	48 42		1	Brown, gravelly FILL, moist	Fill			<1*						
2 SS	48 38		4	-light brown, sandy lense				<1*						
			6	Dark brown to dark gray, sandy CLAY, with some gravel and organics, slight odor, (fill) moist	Fill									
3 SS	24 20		8	Brown, fine to medium, silty SAND, moist	SM			<1*						
			10	End of soil boring at 10' *Sample submitted for laboratory analysis										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm KEY ENGINEERING GROUP, LTD.
W66 N215 COMMERCE CT. CEDARBURG, WI 53012
Tel: (262) 375-4750
Fax: (262) 375-9680

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh - East Section Fill Area	-	GP-5A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Corey Soil Essentials	4/8/2003	4/8/2003	Soilprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		GP-5A	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
1/4 of SE 1/4 of Section 10, T 17 N, R 20 E
Lat ___° ___' ___"
Long ___° ___' ___"
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Calumet	8	New Holstein

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	Pocket Penetrometer
1 SS	48 / 40		1	Brown, silty SAND with gravel, and rocks (fill), moist	Fill			<1*						
			2	-clayey sand lense										
			3					3						
2 SS	48 / 36		4	Dark brown, SAND with gravel (fill), moist	Fill			18*						
			5	Black, soft, silty SAND with gravel (fill), moist										
			6		Fill			18						
			7											
3 SS	24 / 24		8	Light brown to orangish brown, SAND with gravel, (fill), moist	Fill			<1*						
			9	Brown, soft, silty CLAY with gravel, moist	CL									
			10	End of soil boring at 10'. *Sample submitted fpr laboratory analysis										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [signature] Firm KEY ENGINEERING GROUP, LTD.
W66 N215 COMMERCE CT. CEDARBURG, WI 53012
Tel: (262) 375-4750
Fax: (262) 375-9680

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh - East Section Fill Area	-	GP-6A

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Corey Soil Essentials	4/8/2003	4/8/2003	Soilprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		GP-6A	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
1/4 of SE 1/4 of Section 10, T 17 N, R 20 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Calumet	8	New Holstein

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plasticity Index	P 200	Pocket Penetrometer
1 SS	48 44		1	Brown, fine to medium SAND with gravel (fill), moist	Fill			<1*						
			2											
			3	Gray to olive gray, sandy CLAY, slight odor (fill), moist	Fill									
2 SS	48 40		4	Brown, fine to medium, sandy GRAVEL (fill), moist	Fill			<1*						
			5											
			6	Dark brown to reddish brown, soft, sandy CLAY with gravel (fill), moist	Fill									
			7											
3 SS	48 38		8					<1*						
			9	-Light brown, SAND lense, wet										
			10	Brown, fine to medium, silty SAND with some gravel, moist	SM									
			11											
			12	End of soil boring at 12' *Sample submitted for laboratory analysis										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm KEY ENGINEERING GROUP, LTD.
W66 N215 COMMERCE CT. CEDARBURG, WI 53012
Tel: (262) 375-4750
Fax: (262) 375-9680

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 4-97

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Calumet

____ 1/4 of SE 1/4 of Section 10 ; T. 17 N; R. 20 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: 1604 Michigan Avenue

City, Village: New Holstein

(2) FACILITY NAME Tecumseh - East Section Fill Area

Original Well Owner (If Known): Tecumseh Products Company

Present Well Owner: Tecumseh Products Company

Street or Route: 1604 Michigan Avenue

City, State, Zip Code: New Holstein, WI 53061

Facility Well No. and/or Name (If Applicable): GP-4A

WI Unique Well No.:

Reason For Abandonment: Investigative Soilprobe

Date of Abandonment: 4/8/03

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On

(Date) 4/8/03

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Soilprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) (From ground surface) 10.0

Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) 2.0

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown

If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain NA

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Pellets
☒ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Cetco Crumbles	Surface	10.0		

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: Key Engineering Group, Ltd.

Signature of Person Doing Work: [signature]

Date Signed: 4/15/03

Street or Route: W66 N215 Commerce Court

Telephone Number: (262) 375-4750

City, State, Zip Code: Cedarburg, WI 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 4-97

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Calumet

____ 1/4 of SE 1/4 of Section 10 ; T. 17 N; R. 20 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: 1604 Michigan Avenue

City, Village: New Holstein

(2) FACILITY NAME Tecumseh - East Section Fill Area

Original Well Owner (If Known): Tecumseh Products Company

Present Well Owner: Tecumseh Products Company

Street or Route: 1604 Michigan Avenue

City, State, Zip Code: New Holstein, WI 53061

Facility Well No. and/or Name (If Applicable): GP-5A

WI Unique Well No.:

Reason For Abandonment: Investigative Soilprobe

Date of Abandonment: 4/8/03

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On

(Date) 4/8/03

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Soilprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) 10.0 (From ground surface)

Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) 2.0

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown

If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain NA

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Pellets
☒ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Cetco Crumbles	Surface	10.0		

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work

Key Engineering Group, Ltd.

Signature of Person Doing Work: [signature]

Date Signed: 4/15/03

Street or Route: W66 N215 Commerce Court

Telephone Number: (262) 375-4750

City, State, Zip Code: Cedarburg, WI 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 4-97

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Calumet

____ 1/4 of SE 1/4 of Section 10 ; T. 17 N; R. 20 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: 1604 Michigan Avenue

City, Village: New Holstein

(2) FACILITY NAME Tecumseh - East Section Fill Area

Original Well Owner (If Known): Tecumseh Products Company

Present Well Owner: Tecumseh Products Company

Street or Route: 1604 Michigan Avenue

City, State, Zip Code: New Holstein, WI 53061

Facility Well No. and/or Name (If Applicable): GP-6A

WI Unique Well No.:

Reason For Abandonment: Investigative Soilprobe

Date of Abandonment: 4/8/03

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On

(Date) 4/8/03

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Soilprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) (From ground surface) 12.0

Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) 2.0

Was Well Annular Space Grouted? ☐ Yes ☒ No ☐ Unknown

If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain NA

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material

☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials

☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☐ Chipped Bentonite

For monitoring wells and monitoring well boreholes only

☐ Bentonite Pellets
☒ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
Cetco Crumbles	Surface	12.0		

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: Key Engineering Group, Ltd.

Signature of Person Doing Work

Date Signed: 4/15/03

Street or Route: W66 N215 Commerce Court

Telephone Number: (262) 375-4750

City, State, Zip Code: Cedarburg, WI 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

Attachment 2

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003

Job No: 03.02972

The following samples were received by TestAmerica for analysis:

0809004 Tecumseh Products Co.

Sample Number	Sample Description	Date Taken	Date Received
519883	GP-4A 0-2'	04/08/2003	04/09/2003
519884	GP-4A 4-6'	04/08/2003	04/09/2003
519885	GP-4A 8-10'	04/08/2003	04/09/2003
519886	GP-5A 0-2'	04/08/2003	04/09/2003
519887	GP-5A 4-6'	04/08/2003	04/09/2003
519888	GP-5A 8-10'	04/08/2003	04/09/2003
519889	GP-6A 0-2'	04/08/2003	04/09/2003
519890	GP-6A 4-6'	04/08/2003	04/09/2003
519891	GP-6A 8-10'	04/08/2003	04/09/2003

Soil results reported
on a dry weight basis.

Brian D. DeJong
Organic Operations Manager

KEY TO DATA FLAGS

The attached sample(s) may have a result flag shown on the report. The following are the result flag definitions:

A = Analyzed/extracted past hold time
B = Blank is contaminated
C = Standard outside of control limits
D = Diluted for analysis
E = TCLP extraction outside of method required temperature range
F = Sample filtered in lab
G = Received past hold time
H = Late eluting hydrocarbons present
I = Improperly handled sample
J = Estimated concentration
L = Common lab solvent and contaminant
M = Matrix interference
P = Improperly preserved sample
Q = Result confirmed via re-analysis
S = Sediment present
T = Does not match typical pattern
W = BOD re-set due to missed dilution
X = Unidentified compound(s) present
Z = Internal standard outside limits
* = See Case Narrative

KEY TO ANALYST INITIALS

The attached sample(s) may have been analyzed by another certified laboratory. If a number appears in the Analyst Initials field, the following are the appropriate certifications (if the lab code does not appear below, that means that WDNR certification is not required for the work performed):

Lab Code	Certification Number
008	WDNR - 999766900
009	WDNR - 241293690
020	WDNR - 999447680
030	ILNELAC - 100230; WDNR - 998294430
060	ILNELAC - 100221; WDNR - 999447130
070	IA - 007; ILNELAC - 000668; MDH - 019-999-319; WDNR - 999917270
130	WDNR - 632021390
147	WDNR - 721026460
300	FLNELAC - 87358; IA - 131; MDH - 047-999-345; WDNR - 998020430
400	WDNR - 113133790
510	WDNR - 241249360
520	WDNR - 999518190; ILNELAC - 100439
700	WDNR - 113289110

TestAmerica Watertown WDNR - 128053530; IDNR - 294; MDH - 055-999-366; ND - R-046

For questions regarding this report, please contact Dan Milewsky or Warren Topel.

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519883
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-4A 0-2'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 14:10 Date Received: 04/09/2003

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep Batch	Run
Solids, Total	86.9	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS	Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS						070		
PCB-1016	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1221	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1232	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1242	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1248	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1254	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1260	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
Surr: TCMX	72	%	n/a	SW 8082	04/15/2003	070	695	1005
Surr: DCB	85	%	n/a	SW 8082	04/15/2003	070	695	1005

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519884
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-4A 4-6'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 14:20 Date Received: 04/09/2003

Parameter		Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep/Run Batch	
Solids, Total		82.8	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS		Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS							070		
PCB-1016		<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1221		<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1232		<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1242		<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1248		<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1254		<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1260		<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
Surr: TCMX		80	%	n/a	SW 8082	04/15/2003	070	695	1005
Surr: DCB		76	%	n/a	SW 8082	04/15/2003	070	695	1005
PNA Extraction		04/16/2003			SW 3550B	04/16/2003	jts	698	
PNA - 8310 NONAQUEOUS	M								
Acenaphthene		<600	ug/kg	50	SW 8310	04/21/2003	clj	698	1543
Acenaphthylene		<1,000	ug/kg	85	SW 8310	04/21/2003	clj	698	1543
Anthracene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(a)anthracene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(b)fluoranthene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(k)fluoranthene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(a)pyrene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(ghi)perylene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Chrysene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Dibenzo(a,h)anthracene		<91	ug/kg	7.5	SW 8310	04/21/2003	clj	698	1543
Fluoranthene		<120	ug/kg	10	SW 8310	04/21/2003	clj	698	1543
Fluorene		<120	ug/kg	10	SW 8310	04/21/2003	clj	698	1543
Indeno(1,2,3-cd)pyrene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
1-Methylnaphthalene		<360	ug/kg	30	SW 8310	04/21/2003	clj	698	1543
2-Methylnaphthalene		<300	ug/kg	25	SW 8310	04/21/2003	clj	698	1543
Naphthalene		<360	ug/kg	30	SW 8310	04/21/2003	clj	698	1543
Phenanthrene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Pyrene		<60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Surr: 2-Fluorobiphenyl		D/O	ug/L	51-130	SW 8310	04/21/2003	clj	698	1543

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519885
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-4A 8-10'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 14:30 Date Received: 04/09/2003

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep/Run Batch	
Solids, Total	82.4	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS	Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS						070		
PCB-1016	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1221	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1232	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1242	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1248	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1254	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1260	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
Surr: TCMX	87	%	n/a	SW 8082	04/15/2003	070	695	1005
Surr: DCB	89	%	n/a	SW 8082	04/15/2003	070	695	1005
PNA Extraction	04/16/2003			SW 3550B	04/16/2003	jts	698	
PNA - 8310 NONAQUEOUS								
Acenaphthene	<61	ug/kg	50	SW 8310	04/18/2003	clj	698	1542
Acenaphthylene	<100	ug/kg	85	SW 8310	04/18/2003	clj	698	1542
Anthracene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(a)anthracene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(b)fluoranthene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(k)fluoranthene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(a)pyrene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(ghi)perylene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Chrysene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Dibenzo(a,h)anthracene	<9.1	ug/kg	7.5	SW 8310	04/18/2003	clj	698	1542
Fluoranthene	<12	ug/kg	10	SW 8310	04/18/2003	clj	698	1542
Fluorene	<12	ug/kg	10	SW 8310	04/18/2003	clj	698	1542
Indeno(1,2,3-cd)pyrene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
1-Methylnaphthalene	<36	ug/kg	30	SW 8310	04/18/2003	clj	698	1542
2-Methylnaphthalene	<30	ug/kg	25	SW 8310	04/18/2003	clj	698	1542
Naphthalene	<36	ug/kg	30	SW 8310	04/18/2003	clj	698	1542
Phenanthrene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Pyrene	<6.1	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Surr: 2-Fluorobiphenyl	107	%	51-130	SW 8310	04/18/2003	clj	698	1542

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519886
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-5A 0-2'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 13:20 Date Received: 04/09/2003

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep Batch	Run
Solids, Total	87.2	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS	Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS						070		
PCB-1016	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1221	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1232	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1242	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1248	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1254	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1260	<0.29	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
Surr: TCMX	83	%	n/a	SW 8082	04/15/2003	070	695	1005
Surr: DCB	93	%	n/a	SW 8082	04/15/2003	070	695	1005

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519887
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-5A 4-6'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 13:30 Date Received: 04/09/2003

Parameter		Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep/Run Batch	
Solids, Total		91.6	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS		Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS							070		
PCB-1016		<0.28	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1221		<0.28	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1232		<0.28	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1242		<0.28	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1248		<0.28	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1254		<0.28	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1260		<0.28	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
Surr: TCMX		89	%	n/a	SW 8082	04/15/2003	070	695	1005
Surr: DCB		93	%	n/a	SW 8082	04/15/2003	070	695	1005
PNA Extraction		04/16/2003			SW 3550B	04/16/2003	jts	698	
PNA - 8310 NONAQUEOUS	M								
Acenaphthene		<550	ug/kg	50	SW 8310	04/21/2003	clj	698	1543
Acenaphthylene		<930	ug/kg	85	SW 8310	04/21/2003	clj	698	1543
Anthracene		<55	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(a)anthracene		<55	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(b)fluoranthene		<55	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(k)fluoranthene		<55	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(a)pyrene		<55	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(ghi)perylene		<55	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Chrysene		69	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Dibenzo(a,h)anthracene		<82	ug/kg	7.5	SW 8310	04/21/2003	clj	698	1543
Fluoranthene		<110	ug/kg	10	SW 8310	04/21/2003	clj	698	1543
Fluorene		<110	ug/kg	10	SW 8310	04/21/2003	clj	698	1543
Indeno(1,2,3-cd)pyrene		<55	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
1-Methylnaphthalene		<330	ug/kg	30	SW 8310	04/21/2003	clj	698	1543
2-Methylnaphthalene		<270	ug/kg	25	SW 8310	04/21/2003	clj	698	1543
Naphthalene		<330	ug/kg	30	SW 8310	04/21/2003	clj	698	1543
Phenanthrene		175	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Pyrene		131	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Surr: 2-Fluorobiphenyl		91	%	51-130	SW 8310	04/21/2003	clj	698	1543

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ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519888
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-5A 8-10'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 13:35 Date Received: 04/09/2003

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep/Run Batch	
Solids, Total	82.7	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS	Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS						070		
PCB-1016	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1221	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1232	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1242	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1248	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1254	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1260	<0.30	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
Surr: TCMX	76	%	n/a	SW 8082	04/15/2003	070	695	1005
Surr: DCB	84	%	n/a	SW 8082	04/15/2003	070	695	1005
PNA Extraction	04/16/2003			SW 3550B	04/16/2003	jts	698	
PNA - 8310 NONAQUEOUS								
Acenaphthene	<60	ug/kg	50	SW 8310	04/18/2003	clj	698	1542
Acenaphthylene	<100	ug/kg	85	SW 8310	04/18/2003	clj	698	1542
Anthracene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(a)anthracene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(b)fluoranthene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(k)fluoranthene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(a)pyrene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(ghi)perylene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Chrysene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Dibenzo(a,h)anthracene	<9.1	ug/kg	7.5	SW 8310	04/18/2003	clj	698	1542
Fluoranthene	<12	ug/kg	10	SW 8310	04/18/2003	clj	698	1542
Fluorene	<12	ug/kg	10	SW 8310	04/18/2003	clj	698	1542
Indeno(1,2,3-cd)pyrene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
1-Methylnaphthalene	<36	ug/kg	30	SW 8310	04/18/2003	clj	698	1542
2-Methylnaphthalene	<30	ug/kg	25	SW 8310	04/18/2003	clj	698	1542
Naphthalene	<36	ug/kg	30	SW 8310	04/18/2003	clj	698	1542
Phenanthrene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Pyrene	<6.0	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Surr: 2-Fluorobiphenyl	101	%	51-130	SW 8310	04/18/2003	clj	698	1542

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ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519889
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-6A 0-2'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 13:40 Date Received: 04/09/2003

Parameter		Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep Batch	Run
Solids, Total		86.6	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS		Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS	M						070		
PCB-1016		<1.4	mg/kg	0.25	SW 8082	04/18/2003	070	695	1006
PCB-1221		<1.4	mg/kg	0.25	SW 8082	04/18/2003	070	695	1006
PCB-1232		<1.4	mg/kg	0.25	SW 8082	04/18/2003	070	695	1006
PCB-1242		<1.4	mg/kg	0.25	SW 8082	04/18/2003	070	695	1006
PCB-1248		<1.4	mg/kg	0.25	SW 8082	04/18/2003	070	695	1006
PCB-1254		1.5	mg/kg	0.25	SW 8082	04/18/2003	070	695	1006
PCB-1260		<1.4	mg/kg	0.25	SW 8082	04/18/2003	070	695	1006
Surr: TCMX		119	%	n/a	SW 8082	04/18/2003	070	695	1006
Surr: DCB		112	%	n/a	SW 8082	04/18/2003	070	695	1006

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ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519890
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-6A 4-6'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 13:45 Date Received: 04/09/2003

Parameter		Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep/Run Batch	
Solids, Total		84.7	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS		Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS	M						070		
PCB-1016		<0.60	mg/kg	0.25	SW 8082	04/17/2003	070	695	1007
PCB-1221		<0.60	mg/kg	0.25	SW 8082	04/17/2003	070	695	1007
PCB-1232		<0.60	mg/kg	0.25	SW 8082	04/17/2003	070	695	1007
PCB-1242		<0.60	mg/kg	0.25	SW 8082	04/17/2003	070	695	1007
PCB-1248		<0.60	mg/kg	0.25	SW 8082	04/17/2003	070	695	1007
PCB-1254		<0.60	mg/kg	0.25	SW 8082	04/17/2003	070	695	1007
PCB-1260		<0.60	mg/kg	0.25	SW 8082	04/17/2003	070	695	1007
Surr: TCMX		89	%	n/a	SW 8082	04/17/2003	070	695	1007
Surr: DCB		99	%	n/a	SW 8082	04/17/2003	070	695	1007
PNA Extraction		04/16/2003			SW 3550B	04/16/2003	jts	698	
PNA - 8310 NONAQUEOUS									
Acenaphthene		<59	ug/kg	50	SW 8310	04/21/2003	clj	698	1543
Acenaphthylene		<100	ug/kg	85	SW 8310	04/21/2003	clj	698	1543
Anthracene		<5.9	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(a)anthracene		86	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(b)fluoranthene		12	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(k)fluoranthene		26	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(a)pyrene		60	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Benzo(ghi)perylene		89	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Chrysene		34	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Dibenzo(a,h)anthracene		<8.9	ug/kg	7.5	SW 8310	04/21/2003	clj	698	1543
Fluoranthene		142	ug/kg	10	SW 8310	04/21/2003	clj	698	1543
Fluorene		<12	ug/kg	10	SW 8310	04/21/2003	clj	698	1543
Indeno(1,2,3-cd)pyrene		30	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
1-Methylnaphthalene		<35	ug/kg	30	SW 8310	04/21/2003	clj	698	1543
2-Methylnaphthalene		<30	ug/kg	25	SW 8310	04/21/2003	clj	698	1543
Naphthalene		<35	ug/kg	30	SW 8310	04/21/2003	clj	698	1543
Phenanthrene		57	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Pyrene		236	ug/kg	5.0	SW 8310	04/21/2003	clj	698	1543
Surr: 2-Fluorobiphenyl		86	%	51-130	SW 8310	04/21/2003	clj	698	1543

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ANALYTICAL REPORT

Mr. Dan Pelczar
KEY ENGINEERING GROUP LTD
W66 N215 Commerce Court
Cedarburg, WI 53012

04/22/2003
Job No: 03.02972
Sample No: 519891
Account No: 45150

JOB DESCRIPTION: 0809004 Tecumseh Products Co.
PROJECT DESCRIPTION: Soil Analysis
SAMPLE DESCRIPTION: GP-6A 8-10'
New Holstein, WI
Rec'd at 4 degrees C

Date/Time Taken: 04/08/2003 13:55 Date Received: 04/09/2003

Parameter	Results	Units	Reporting Limit	Method	Date Analyzed	Analyst	Prep/Run Batch	
Solids, Total	78.0	%	n/a	SW 5035	04/10/2003	kls		4835
Prep, PCB - NONAQUEOUS	Complete				04/11/2003	070	695	
PCB'S - 8082 NONAQUEOUS						070		
PCB-1016	<0.32	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1221	<0.32	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1232	<0.32	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1242	<0.32	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1248	<0.32	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1254	<0.32	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
PCB-1260	<0.32	mg/kg	0.25	SW 8082	04/15/2003	070	695	1005
Surr: TCMX	55	%	n/a	SW 8082	04/15/2003	070	695	1005
Surr: DCB	74	%	n/a	SW 8082	04/15/2003	070	695	1005
PNA Extraction	04/16/2003			SW 3550B	04/16/2003	jts	698	
PNA - 8310 NONAQUEOUS								
Acenaphthene	<64	ug/kg	50	SW 8310	04/18/2003	clj	698	1542
Acenaphthylene	<110	ug/kg	85	SW 8310	04/18/2003	clj	698	1542
Anthracene	<6.4	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(a)anthracene	14	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(b)fluoranthene	<6.4	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(k)fluoranthene	<6.4	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(a)pyrene	<6.4	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Benzo(ghi)perylene	<6.4	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Chrysene	14	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Dibenzo(a,h)anthracene	<9.6	ug/kg	7.5	SW 8310	04/18/2003	clj	698	1542
Fluoranthene	31	ug/kg	10	SW 8310	04/18/2003	clj	698	1542
Fluorene	<13	ug/kg	10	SW 8310	04/18/2003	clj	698	1542
Indeno(1,2,3-cd)pyrene	<6.4	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
1-Methylnaphthalene	<38	ug/kg	30	SW 8310	04/18/2003	clj	698	1542
2-Methylnaphthalene	<32	ug/kg	25	SW 8310	04/18/2003	clj	698	1542
Naphthalene	<38	ug/kg	30	SW 8310	04/18/2003	clj	698	1542
Phenanthrene	19	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Pyrene	36	ug/kg	5.0	SW 8310	04/18/2003	clj	698	1542
Surr: 2-Fluorobiphenyl	102	%	51-130	SW 8310	04/18/2003	clj	698	1542

03.02972

TestAmerica INCORPORATED

Watertown Division
602 Commerce Drive
Watertown, WI 53094

Phone 920-261-1660 or 800-833-7036
Fax 920-261-8120

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: KEY ENGINEERING Client #: WT45150

Address: W66 N215 COMMERCE CT Project Name: TECUMSEH PRODUCTS CO.

City/State/Zip Code: CEDARBURG WI 53012 Project #: 0809004

Project Manager: DAN PELCZAR Site/Location ID: NEW HOLSTEIN State: WI

Telephone Number: (262) 375-4750 Fax: 375-9680 Report To: DAN PELCZAR

Sampler Name: (Print Name) MIKE MANTZ Invoice To: KEY

Sampler Signature: Quote #: 03050 PO#:

TAT
X Standard
___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: Y N

QC Deliverables
___ None
___ Level 2 (Batch QC)
___ Level 3
___ Level 4
Other: _____

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, WW - Wastewater, S - Soil/Solid, Specify Other	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	Analyze For: PCB	PAH	% SOLID	REMARKS
GP-4A (0-2')	4/8/03	2:10	G		SOIL						2		X		X	
GP-4A (4-6')		2:20									3		X	X	X	
GP-4A (8-10')		2:30									3		X	X	X	
GP-5A (0-2')		1:20									2		X		X	
GP-5A (4-6')		1:30									3		X	X	X	
GP-5A (8-10')		1:35									3		X	X	X	
GP-6A (0-2')		1:40									2		X		X	
GP-6A (4-6')		1:45									3		X	X	X	
GP-6A (8-10')	↓	1:55	↓		↓						3		X	X	X	

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp: 4°
Rec Lab Temp:

	Date:	Time:		Date:	Time:
Relinquished By:			Received By:	4/9	9:45
Relinquished By:	4/9	11:15	Received By:		
Relinquished By:	Date:	Time:	Received By:	4/9/03	1530

Custody Seals: Y N N/A
Bottles Supplied by Test America: Y N
Method of Shipment: TA

RA 4/10/03

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Ronald W. Kazmierczak, Regional Director

Northeast Region Headquarters
1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TDD 920-492-5912

May 31, 2000

Mr. Kerry DeKeyser
Tecumseh Products
1604 Michigan Avenue
New Holstein, Wisconsin 53061

Subject: Case Closure Review, Tecumseh Products, Contaminated Fill Area at MW-1, 1604 Michigan Avenue, New Holstein, Wisconsin **BRRTS #: 02-08-193776**

Dear Mr. DeKeyser:

I have completed my review of the above case that was submitted for closure and have noted some information to be missing. Upon receipt of this information, the case closure review process will continue.

In the Department's letter dated 10/12/98 that was addressed to yourself (copy attached), the Department required analysis for PAHs and PCBs in addition to the analysis for VOCs and RCRA metals. The PCB and PAH analyses do not appear to have been done. For the Department to consider this case for closure, PCB and PAH analyses of the soil will be needed in the area around monitoring well MW-1.

The Department will require a minimum of three soil borings in the fill around MW-1 (by GP-4, GP-5 and GP-6) with analysis for PCBs and PAHs. Samples for analysis should be collected from within the fill material and the native material immediately below the fill material. In addition, due to the thickness of the fill material, two soil samples from **within the fill per boring** should be analyzed for PCBs (i.e. a total of three PCB analyses per boring).

Once this data has been submitted to the Department, the closure review of this case will continue. Thank you for your cooperation in this matter. If you have any questions, please contact me in Green Bay at 920-492-5861.

Yours truly,

Alan Thomas Nass, P.G.
Hydrogeologist

Enclosure

Cc: Curtis Hoffart, KEY Engineering Group, W66 N215 Commerce Court, Cedarburg, Wisconsin 53012
Dale Ziege – RR/3

File

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

Northeast Region Headquarters
1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TDD 920-492-5912

October 12, 1998

Mr. Kerry DeKeyser
Tecumseh Products
1604 Michigan Avenue
New Holstein, WI 53061

Subject: Acknowledgement of Receipt/Site Investigation Work Plan, Tecumseh Products - East Section Contaminated Fill Area, 1604 Michigan Avenue, New Holstein, Wisconsin, Calumet County, WDNR BRRTS ID# 02-08-193776

Dear Mr. DeKeyser:

I have received and reviewed the above-referenced submittal from your environmental consultant, Key Engineering. However, staffing and workload levels do not allow me to provide you with detailed review and oversight at this time.

Therefore, this letter serves as your **"Notice to Proceed"** with investigation and remediation of the site. All actions must comply with all applicable statutes, program guidance, standards and Administrative Rules. This letter is not an approval of your work plans and reports. They will be filed as public records until the Department is able to review them, or until site remediation is completed.

In addition to the work proposed by your consultant and based on my discussions with them today, you should include the following:

1. Drill at least two additional soil borings, one located north of SB-6/MW-1 and one located west of SB-6/MW-1. All borings should be drilled within a reasonable distance to the contaminated fill found at SB-6/MW-1. These would be used in addition to the ones proposed by your consultant to identify whether fill material impacts detected at SB-6/MW-1 have impacted native soils beyond the known area of fill by defining the limits of fill.
2. Because of the unknown waste types present, samples should also be analyzed for PAHs and PCBs, in addition to VOCs and the eight RCRA metals.
3. Your consultant has indicated today that a starting date for the investigative field work has not been identified yet. We would like to observe and potentially collect samples during the drilling. Please notify us at least 5 working days prior to drilling activities.

Your consultant must follow the Wisconsin Administrative Code NR 700 series. It is very important that your consultant understands and meets the minimum standards established by the Department; however, you, as the responsible party, are ultimately responsible for the

KEY ENGINEERING GROUP LTD.
ENVIRONMENTAL ▪ CIVIL/GEOTECH ▪ COMPLIANCE

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
(262) 375-4750
(800) 645-7365
Fax (262) 375-9680

March 14, 2000

Mr. Alan Nass
Wisconsin Department of Natural Resources
Northeast Region
1125 North Military Avenue
Post Office Box 10448
Green Bay, Wisconsin 53407-0448

Reference: ***Case Closure Request/***
Limited Site Investigation Report
Tecumseh-East Section Fill Area
1604 Michigan Avenue
New Holstein, Wisconsin
WDNR BRRTS #02-08-193776

KEY ENGINEERING GROUP, LTD.
File No. 0809004

Dear Mr. Nass:

The purpose of this letter is to provide the Wisconsin Department of Natural Resources (WDNR) with the results of the limited site investigation (LSI) and request case closure for the above referenced site. This letter was prepared by Key Engineering Group, Ltd. (KEY) on behalf of Tecumseh Products Company (Tecumseh).

Purpose and Objectives

Approximately 8 feet of fill material, which included paint chips, metal shavings and ash, was encountered during the gasoline leaking underground storage tank (LUST) site investigation in the East Section (WDNR LUST ID# 03-08-01070). The fill material was encountered at soil boring SB-6 (MW-1), located near the northeast corner of the Tecumseh facility. Concentrations of benzene, ethylbenzene, xylenes and trimethylbenzenes were detected in a sample of the fill material collected from 4 to 6 feet below ground surface (bgs). The benzene concentration exceeded the NR 720 generic residual contaminant level (GRCL) based on the protection of groundwater.

The WDNR notified Tecumseh in a July 29, 1998 letter to submit a work plan for the investigation of the fill material impacts since they appeared to be unrelated to the East Section LUST impacts. Additionally, the WDNR notified Tecumseh in an August 4, 1998 letter that management of this area of contamination in accordance with NR 700 through NR 728 is required.

The objectives of the LSI were to identify whether fill material impacts detected at SB-6/MW-1 have impacted native soils beyond the area of fill and evaluate whether remedial action associated with the fill material impacts is warranted. Additionally, LSI data was also used to evaluate whether the fill material impacts at SB-6/MW-1 are representative of an isolated area or are indicative of a widespread area of contaminated fill material.

Background Information

Significant soil and groundwater sample data has been collected in the vicinity of the Fill Area in association with the East Section LUST case. LUST case data was most previously documented in KEY's January 27, 2000 *Case Closure Request*.

LUST case information pertinent to the Fill Area is summarized as follows:

- The groundwater flow direction in the East Section is northerly to northwesterly.
- MW-1 was the only monitoring well installed within the area of fill material (other than areas of exclusively soil fill).
- The average depth to groundwater at MW-1 is approximately 12 feet bgs; soil contamination within fill material is not present at depths greater than 6 to 7 feet bgs at SB-6/MW-1.
- No petroleum volatile organic compounds (VOCs) (most significant contaminants detected in fill material concentrations) have historically been detected in groundwater within or downgradient of the Fill Area (MW-1 and MW-12, respectively).

Investigation Procedures

The LSI was conducted in general accordance with KEY's October 6, 1998 *Limited Site Investigation Work Plan* and October 12 and 15, 1998 letters from the WDNR. The LSI consisted of advancing three soil probes to the north, west and south of SB-6/MW-1 (GP-4, GP-5 and GP-6). One soil probe was also conducted east of SB-6/MW-1 in conjunction with LUST investigation activities conducted concurrently with the LSI (GP-3). The soil probes were advanced with a truck-mounted Geoprobe® unit operated by Briohn Environmental Contractors, Inc. on September 29, 1999. The soil probe locations are depicted on Figure 1.

Each soil probe was advanced to 10 or 12 feet bgs. Soil samples were collected at 2-foot intervals and were classified in the field in accordance with the Unified Soil Classification System. Each soil sample was also field screened for the presence of VOCs with a photoionization detector (PID). Two soil samples collected from GP-4, GP-5 and GP-6 were submitted to Great Lakes Analytical laboratory for analysis of VOCs and Resource Conservation and Recovery Act metals. One soil sample collected from GP-3 (LUST soil probe) was submitted for gasoline range organics and petroleum volatile organic compounds. Soil boring and sampling information, soil sample classification data and field screening results are documented on soil boring logs included in Attachment 1. Borehole abandonment forms are also included in Attachment 1.

Results

Approximately 8 to 9 feet of fill material consisting of silty clay or clayey silt with glass and wood fragments was encountered at GP-4, GP-5 and GP-6. The fill material was underlain by sandy clay, sandy silt or silty clay. Fill material was not encountered at GP-3. The depth and type of fill material was generally consistent with the fill documented by Dames & Moore at SB-6/MW-1. The depth to groundwater in MW-1 at the time of the LSI was approximately 12 feet bgs.

Soil sample field screening results generally indicated PID readings above background for soil samples collected from the fill material at GP-4, GP-5 and GP-6. Lower PID readings were measured in underlying native soils. No significant PID readings were measured at GP-3. Soil sample field screening results are included on the attached boring logs.

The soil sample analytical results are summarized in Table 1 and on Figure 2 and the Great Lakes Analytical laboratory report and chain of custody documentation are included in Attachment 2. The soil sample analytical results indicated that several VOCs were detected in soil samples collected primarily from fill material at depths of 4 to 6 bgs or 6 to 8 bgs. The VOCs were generally petroleum related with the exception of 1,2-dichlorobenzene and 2,2-dichloropropane, which were detected at GP-4 and/or GP-5. Naphthalene and xylene were detected at concentration exceeding NR 720 or WDNR interim guidance GRCLs for the protection of groundwater in soil samples collected from fill material at GP-4 and GP-5. No NR 720 GRCLs or United States Environmental Protection Agency preliminary remediation goals or soil screening levels were exceeded in soil samples collected at GP-6 or GP-3 or in native soils underlying fill material. Benzene was not detected in any of the soil samples.

Several metals were detected at low (background) concentrations in soil and fill material samples.

Conclusions

Based on the LUST case and LSI results, further investigation and remedial action associated with the on-site fill material is not considered warranted. This conclusion is supported by the following rationale:

- Residual fill material petroleum VOC impacts are confined to the layer of fill material and have not significantly impacted underlying native soils.
- Residual contaminant concentrations do present a direct contact risk.
- Based on the lack of groundwater impacts within and down gradient of the Fill Area, residual benzene, naphthalene and xylene concentrations in soil represent a localized area within the Fill Area, and therefore, do not represent a significant source of future groundwater impacts.
- No land use changes are projected at the site.

Based on the LUST case/LSI data and this rationale, case closure is appropriate.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Curtis M. Hoffart, CHMM
Project Scientist

Gregory L. Johnson, CHMM, P.G., P.E.
Manager of Technical Services

CMH/mas

Enclosures:

	Table 1	Summary of Soil Sample Analytical Results
	Figure 1	Site Layout
	Figure 2	Summary of Soil and Groundwater Sample Analytical Results
	Attachment 1	Soil Boring Logs/Abandonment Forms
	Attachment 2	Laboratory Report and Chain of Custody Documentation

cc: Mr. Kerry DeKeyser, Tecumseh Products Company

H:\PROJECTS\1998\0809004\LETTERS\031400.cmh.wpd

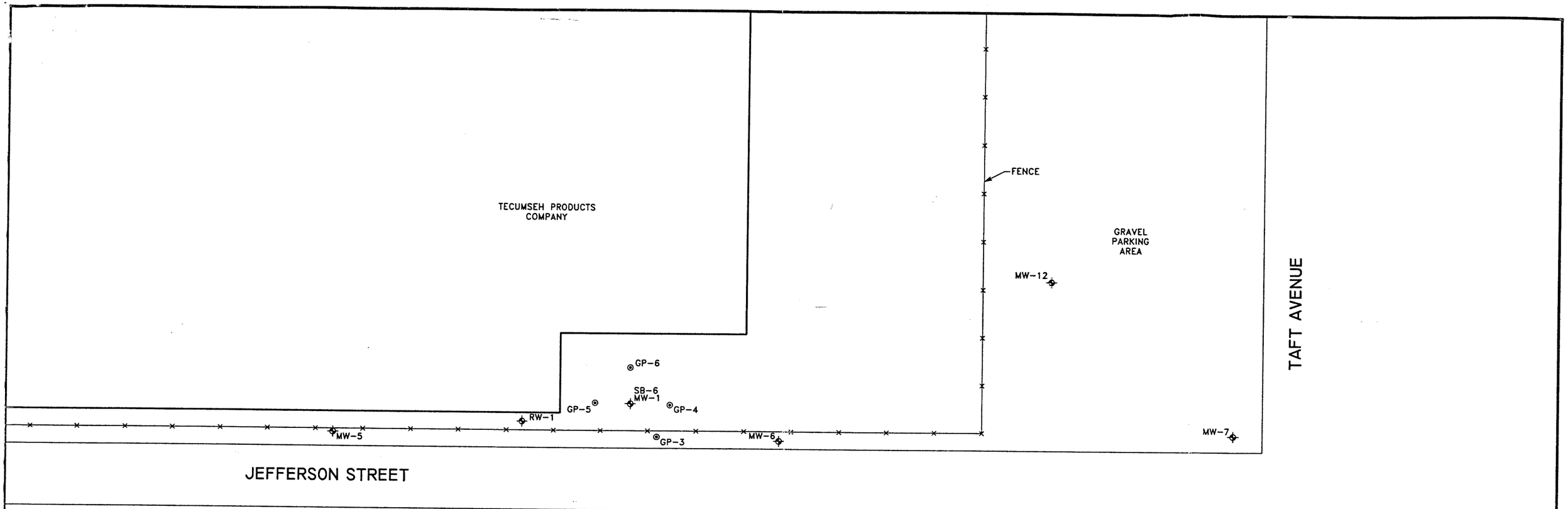
TABLE 1

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

TECUMSEH - EAST SECTION FILL AREA
1604 Michigan Avenue
New Holstein, Wisconsin

	GP-3	GP-4		GP-5		GP-6		SB-6 / MW-1[4]	NR 720 GRCL	USEPA	
										PRG	SSL
Depth (feet)	6-8	6-8	10-12	4-6	10-12	4-6	10-12	4-6			
PID (i.u.)	3	67	3	140	4	182	4	1,011			
Detected VOCs (µg/kg)											
Benzene	<25	<25	<25	<25	<25	<25	<25	**1,500**	5.5	1,400	30
n-Butylbenzene	—	1,300	120	2,200	<25	620	<25	—	—	5.5 E 05	—
sec-Butylbenzene	—	<25	<25	1,700	<25	300	<25	—	—	4.1 E 05	—
tert-Butylbenzene	—	620	<25	450	<25	<25	<25	—	—	4.9 E 05	—
1,2-Dichlorobenzene	—	<25	<25	360	<25	<25	<25	—	—	3.7 E 05	1.7 E 04
2,2-Dichloropropane	—	53	<25	<25	<25	<25	<25	—	—	—	—
Di-Isopropyl ether	—	<25	<25	<25	<25	200	<25	—	—	—	—
Ethylbenzene	<25	210	<25	2,200	34	440	<25	1,600	2,900	2.3 E 05	1.3 E 04
Isopropylbenzene	—	430	<25	2,200	<25	210	<25		—	5.2 E 05	—
Naphthalene	—	**410**	110	**2,500**	<25	190	<25	—	400[1]	1.9 E 05	8.4 E 04
n-Propylbenzene	—	360	<25	1,200	<25	240	<25	—	—	5.5 E 05	—
Toluene	<25	200	<25	250	<25	90	<25	—	1,500	5.2 E 05	1.2 E 04
1,2,4-Trimethylbenzene	<25	750	95	2,000	38	870	<25	1,800	—	1.7 E 05	—
1,3,5-Trimethylbenzene	140	450	<25	1,200	<25	320	<25	1,100	—	7.0 E 04	—
Xylene	<25	750	<25	**9,700**	170	970	<25	1,000	4,100	2.8 E 05[2]	1.9 E 05[2]
Detected Metals (mg/kg)[5]											
Barium	—	64	<28	71	<28	43	35	—	—	1.0 E 05	1,600
Chromium	—	14	3.9	13	4.8	12	8.8	—	200[3]	4,500	38
Lead	—	13	<1.1	35	<1.1	14	6.7	—	500[3]	1,000	—
Mercury	—	0.083	<0.045	0.13	<0.045	<0.049	<0.044	—	—	560	—
Selenium	—	1.0	0.63	1.6	<0.56	1.8	<0.56	—	—	10,000	5

Notes:
Bold concentration exceeds applicable GRCL or SSL based on the protection of groundwater
1 - WDNR interim guidance
2 - o-xylene referenced
3 - industrial direct contact GRCL
4 - soil boring by Dames & Moore (10/91)
5 - Arsenic, Cadmium and Silver were analyzed but not detected
— - not analyzed or not applicable
GRCL - NR 720 generic residual contaminant level based on the protection of groundwater
mg/kg - milligrams per kilogram
PID - photoionization detector
PRG - USEPA Region 9 industrial direct contact Preliminary Remediation Goal
SSL - USEPA Region 9 Soil Screening Level for the protection of groundwater (with dilution)
µg/kg - micrograms per kilogram
USEPA - United States Environmental Protection Agency
VOCs - volitals organic compounds



LEGEND

- EXISTING MONITORING WELL LOCATION
- SOIL PROBE LOCATION

N

0 30 60

SCALE: 1"=60'

DRN. BY:	J.J.J.	DATE:	02/09/00
DSN. BY:	C.M.H.	FILE NO.:	0809004
CHK. BY:	C.M.H.	DWG. NO.:	08090042
REV. BY:	G.L.J.	SHEET NO.:	1

KEY ENGINEERING GROUP LTD.

FIGURE 1
SITE LAYOUT

EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

TECUMSEH PRODUCTS COMPANY

GRAVEL PARKING AREA

FENCE

TAFT AVENUE

JEFFERSON STREET

MW-5 MW-6 MW-7 MW-8 MW-12 MW-13 MW-14

RW-1

GP-3 GP-4 GP-5 GP-6

SB-6 MW-1

GP-5 SOIL		
DEPTH	4'-6'	10'-12'
N	2,500	<25
X	9,700	170
METALS	NSE	NSE

GP-6 SOIL		
DEPTH	4'-6'	10'-12'
VOCs	NSE	NSE
METALS	NSE	NSE

SB-6 SOIL		
DEPTH	4'-6'	16'-18'
B	1,500	ND

MW-1 GROUNDWATER	
PVOCs	ND

GP-3 SOIL	
DEPTH	6'-8'
PVOCs	NSE

GP-4 SOIL		
DEPTH	6'-8'	10'-12'
N	410	110
METALS	NSE	NSE

MW-12 GROUNDWATER	
PVOCs	ND

LEGEND

- EXISTING MONITORING WELL LOCATION
- SOIL PROBE LOCATION
- GROUNDWATER FLOW DIRECTION

NOTES

VOCs: VOLATILE ORGANIC COMPOUNDS
PVOCs: PETROLEUM VOLATILE ORGANIC COMPOUNDS
B: BENZENE, ug/kg
X: TOTAL XYLENES, ug/kg
N: NAPHTHALENE, ug/kg
ug/kg: MICROGRAMS PER KILOGRAM
< : LESS THAN
ND: NOT DETECTED
NSE: NO STANDARD EXCEEDED

N

0 30 60

SCALE: 1"=60'

DRN. BY:	J.J.J.	DATE:	02/09/00
DSN. BY:	C.M.H.	FILE NO.:	0809004
CHK. BY:	C.M.H.	DWG. NO.:	08090043
REV. BY:	G.L.J.	SHEET NO.:	2

KEY ENGINEERING GROUP LTD.

FIGURE 2
SUMMARY OF SOIL AND GROUNDWATER SAMPLE ANALYTICAL RESULTS

EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

ATTACHMENT 1

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh - East Section	-	GP-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Briohn Environmental Drilling Services, Inc.	9/29/1999	9/29/1999	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
1/4 of SE 1/4 of Section 10, T 17 N, R 20 E
Lat ___ ° ___ ' ___ "
Long ___ ° ___ ' ___ "
Local Grid Location: Feet ☐ N ☐ S Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Calumet	8	New Holstein

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	24 16			Grass				2						
			1	Dark brown, silty CLAY, with some gravel, moist										
2	24 18		2		CL			2						
			3											
3	24 14		4	Light brown, silty CLAY, with some sand and gravel, moist				<1						
			5		CL									
4	24 12		6	Light brown,sandy clay, with some gravel, moist to wet				3 *						
			7											
5	24 6		8	- wet	CL			3						
			9											
			10	End of boring at 10 feet. * Sample submitted for laboratory analysis.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: [signature]

Firm: KEY ENGINEERING GROUP, LTD
W66 N215 COMMERCE CT CEDARBURG WI 53012
Tel: (262) 375-4750
Fax: (262) 375-9680

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh - East Section Fill Area	-	GP-4

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Briohn Environmental Contractors, Inc.	9/29/1999	9/29/1999	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
1/4 of SE 1/4 of Section 10, T 17 N, R 20 E
Lat ___ ° ___ ' ___ "
Long ___ ° ___ ' ___ "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Calumet	8	New Holstein

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	24 24		0	Grass and Topsoil				6						
			1	Dark brown, silty CLAY, with some gravel, moist (fill)	CL									
2	24 12		2	Gray, clayey SILT, with some sand and gravel, moist (fill)	ML			51						
3	24 12		4	Black, silty CLAY, with some gravel and glass fragments, moist (fill)	CL			31						
4	24 18		6					67 *						
5	24 18		8	Light brown, sandy CLAY, with some gravel, moist	CL			20						
6	24 14		10	Light brown, silty SAND, with some gravel, wet	SM			3 *						
			12	End of boring at 12 feet. * Sample submitted for laboratory analysis										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Christopher K

Firm KEY ENGINEERING GROUP, LTD
W66 N215 COMMERCE CT CEDARBURG WI 53012
Tel: (262) 375-4750
Fax: (262) 375-9680

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh - East Section Fill Area	-	GP-5

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Briohn Environmental Contractors, Inc.	9/29/1999	9/29/1999	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
1/4 of SE 1/4 of Section 10, T 17 N, R 20 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Calumet	8	New Holstein

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	24 24		0–1	Grass and Topsoil				1						
			1–2	Light brown, silty SAND, with some gravel, moist (fill)	SM									
2	24 18		2–4	Dark brown, silty CLAY, with some gravel, moist, poorly graded sand seam (fill)	CL			2						
3	24 18		4–6	Dark brown, silty CLAY, with some gravel, moist (fill)				140 *						
4	24 18		6–8		CL			24						
5	24 24		8–9					8						
			9–12	Light brown, silty SAND, with some gravel, moist to wet	SM									
6	24							4 *						
				End of boring at 12 feet. * Sample submitted for laboratory analysis										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature Christopher K. Firm KEY ENGINEERING GROUP, LTD
W66 N215 COMMERCE CT CEDARBURG WI 53012
Tel: (262) 375-4750
Fax: (262) 375-9680

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Tecumseh - East Section Fill Area	-	GP-6

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Briohn Environmental Contractors, Inc.	9/29/1999	9/29/1999	Geoprobe

WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
			Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
1/4 of SE 1/4 of Section 10, T 17 N, R 20 E
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Calumet	8	New Holstein

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	24 24		0–1	Well graded gravel	GW			<1						
			1–2	Light brown, silty CLAY, with some sand and gravel, moist (fill)										
2	24 12		2–3		CL			4						
			3–4											
3	24 18		4–5	Black, silty CLAY, with some glass and wood fragments, and sand and gravel, moist (fill)				182 *						
			5–6											
4	24 18		6–7		CL			32						
			7–8											
5	24 12		8–9	Light brown, silty CLAY, with some gravel, moist				26						
			9–10											
6	24 18		10–11	- wet	CL			4 *						
			11–12											
			12	End of boring at 12 feet. * Sample submitted for laboratory analysis										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Kristopher K

Firm: KEY ENGINEERING GROUP, LTD
W66 N215 COMMERCE CT CEDARBURG WI 53012
Tel: (262) 375-4750
Fax: (262) 375-9680

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 4-97

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location
County: Calumet

___ 1/4 of SE 1/4 of Sec. 10 ; T. 17 N; R. 20 ☒ E ☐ W

(If Applicable)
_____ Gov't Lot _____ Grid Number

Grid Location
_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: 1604 Michigan Avenue

City, Village: New Holstein

(2) FACILITY NAME Tecumseh - East Section

Original Well Owner (If Known): Tecumseh Products Company

Present Well Owner

Street or Route: 1604 Michigan Avenue

City, State, Zip Code: New Holstein, WI

Facility Well No. and/or Name (If Applicable): GP-3

WI Unique Well No.

Reason For Abandonment: Investigative Boring

Date of Abandonment: 9/29/99

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On
(Date) 9/29/99

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) 10.0 (From ground surface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain: Not Installed

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7) Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
3/8" Chipped Bentonite	Surface	10.0	0.25	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work
Key Engineering Group, Ltd.

Signature of Person Doing Work: Christopher [illegible]
Date Signed: 10/21/99

Street or Route: W66 N215 Commerce Court
Telephone Number: (262) 375-4750

City, State, Zip Code: Cedarburg, Wisconsin 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 4-97

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Calumet

____ 1/4 of SE 1/4 of Sec. 10 ; T. 17 N; R. 20 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: 1604 Michigan Avenue

City, Village: New Holstein

(2) FACILITY NAME Tecumseh - East Section Fill Area

Original Well Owner (If Known): Tecumseh Products Company

Present Well Owner

Street or Route: 1604 Michigan Avenue

City, State, Zip Code: New Holstein, WI

Facility Well No. and/or Name (If Applicable): GP-4

WI Unique Well No.

Reason For Abandonment: Investigative Boring

Date of Abandonment: 9/29/99

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 9/29/99

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) (From ground surface) 12.0

Casing Diameter (in.) _____

Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain: Not Installed

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
3/8" Chipped Bentonite	Surface	12.0	0.25	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: Key Engineering Group, Ltd.

Signature of Person Doing Work: [signature]

Date Signed: 10/21/99

Street or Route: W66 N215 Commerce Court

Telephone Number: (262) 375-4750

City, State, Zip Code: Cedarburg, Wisconsin 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 4-97

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Calumet

___ 1/4 of SE 1/4 of Sec. 10 ; T. 17 N; R. 20 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: 1604 Michigan Avenue

City, Village: New Holstein

(2) FACILITY NAME Tecumseh - East Section Fill Area

Original Well Owner (If Known): Tecumseh Products Company

Present Well Owner

Street or Route: 1604 Michigan Avenue

City, State, Zip Code: New Holstein, WI

Facility Well No. and/or Name (If Applicable): GP-5

WI Unique Well No.

Reason For Abandonment: Investigative Boring

Date of Abandonment: 9/29/99

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 9/29/99

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) 12.0 (From ground surface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain: Not Installed

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
3/8" Chipped Bentonite	Surface	12.0	0.25	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: Key Engineering Group, Ltd.

Signature of Person Doing Work: [signature] Date Signed: 10/21/99

Street or Route: W66 N215 Commerce Court Telephone Number: (262) 375-4750

City, State, Zip Code: Cedarburg, Wisconsin 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

State of Wisconsin
Department of Natural Resources

WELL/DRILLHOLE/BOREHOLE ABANDONMENT
Form 3300-5B Rev. 4-97

All abandonment work shall be performed in accordance with the provisions of Chapters NR 811, NR 812 or 141, Wis. Admin. Code, whichever is applicable.

(1) GENERAL INFORMATION

Well/Drillhole/Borehole Location

County: Calumet

___ 1/4 of SE 1/4 of Sec. 10 ; T. 17 N; R. 20 ☒ E ☐ W

(If Applicable)

_____ Gov't Lot _____ Grid Number

Grid Location

_____ ft. ☐ N. ☐ S., _____ ft. ☐ E. ☐ W.

Civil Town Name

Street Address of Well: 1604 Michigan Avenue

City, Village: New Holstein

(2) FACILITY NAME Tecumseh - East Section Fill Area

Original Well Owner (If Known): Tecumseh Products Company

Present Well Owner

Street or Route: 1604 Michigan Avenue

City, State, Zip Code: New Holstein, WI

Facility Well No. and/or Name (If Applicable): GP-6

WI Unique Well No.

Reason For Abandonment: Investigative Boring

Date of Abandonment: 9/29/99

WELL/DRILLHOLE/BOREHOLE INFORMATION

(3) Original Well/Drillhole/Borehole Construction Completed On (Date) 9/29/99

☐ Monitoring Well
☐ Water Well
☐ Drillhole
☒ Borehole

Construction Report Available? ☒ Yes ☐ No

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth (ft) 12.0 (From ground surface)
Casing Diameter (in.) _____
Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) _____

Was Well Annular Space Grouted? ☐ Yes ☐ No ☐ Unknown
If Yes, To What Depth? _____ Feet

(4) Depth to Water (Feet) _____

Pump & Piping Removed?	☐ Yes	☐ No	☒ Not Applicable
Liner(s) Removed?	☐ Yes	☐ No	☒ Not Applicable
Screen Removed?	☐ Yes	☐ No	☒ Not Applicable
Casing Left in Place?	☐ Yes	☒ No	

If No, Explain: Not Installed

Was Casing Cut Off Below Surface?	☐ Yes	☐ No
Did Sealing Material Rise to Surface?	☒ Yes	☐ No
Did Material Settle After 24 Hours?	☐ Yes	☒ No
If Yes, Was Hole Retopped?	☐ Yes	☐ No

(5) Required Method of Placing Sealing Material
☐ Conductor Pipe - Gravity ☐ Conductor Pipe - Pumped
☐ Dump Bailer ☒ Other (Explain) Gravity

(6) Sealing Materials
☐ Neat Cement Grout
☐ Sand-Cement (Concrete) Grout
☐ Concrete
☐ Clay-Sand Slurry
☐ Bentonite-Sand Slurry
☒ Chipped Bentonite

For monitoring wells and monitoring well boreholes only
☐ Bentonite Pellets
☐ Granular Bentonite
☐ Bentonite-Cement Grout

(7)

Sealing Material Used	From (Ft.)	To (Ft.)		Mix Ratio or Mud Weight
3/8" Chipped Bentonite	Surface	12.0	0.25	

(8) Comments _____

(9) Name of Person or Firm Doing Sealing Work: Key Engineering Group, Ltd.

Signature of Person Doing Work: Christopher K

Date Signed: 10/21/99

Street or Route: W66 N215 Commerce Court

Telephone Number: (262) 375-4750

City, State, Zip Code: Cedarburg, Wisconsin 53012

(10) FOR DNR OR COUNTY USE ONLY

Date Received/Inspected	District/County
Reviewer/Inspector	☐ Complying Work ☐ Noncomplying Work
Follow-up Necessary	

DNR/COUNTY

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Date: October 12, 1999

Key Environmental Services, Inc.
W66 N215 Commerce Ct
Cedarburg, WI 53012
Attention: Curt Hoffart

Project: Tecumseh East

Enclosed are the results from 6 soil samples and 1 liquid sample received at Great Lakes Analytical on September 30, 1999. The requested analyses are listed below:

SAMPLE#	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
B909542-01	Soil: GP-4 6-8	9/29/99	RCRA Metals VOC, EPA 5030/8021 Percent Solids, EPA 7.3.3.1.5
B909542-02	Soil: GP-4 10-12	9/29/99	RCRA Metals VOC, EPA 5030/8021 Percent Solids, EPA 7.3.3.1.5
B909542-03	Soil: GP-5 4-6	9/29/99	RCRA Metals Percent Solids, EPA 7.3.3.1.5 VOC, EPA 5030/8021
B909542-04	Soil: GP-5 10-12	9/29/99	RCRA Metals VOC, EPA 5030/8021 Percent Solids, EPA 7.3.3.1.5
B909542-05	Soil: GP-6 4-6	9/29/99	RCRA Metals VOC, EPA 5030/8021 Percent Solids, EPA 7.3.3.1.5
B909542-06	Soil: GP-6 10-12	9/29/99	RCRA Metals Percent Solids, EPA 7.3.3.1.5 VOC, EPA 5030/8021
B909542-07	Liquid: MeOH Blank	9/29/99	VOC, EPA 5030/8021

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-4 6-8	Received:	Sep 30, 1999
Cedarburg, WI 53012				
Attention: Curt Hoffart	Lab Number:	B909542-01	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

RCRA METALS

Analyte	EPA Method	Detection Limit mg/kg, Dry Weight	Sample Results mg/kg, Dry Weight
Arsenic	3050B/6010B	3.1	N.D.
Barium	3050B/6010B	31	64
Cadmium	3050B/6010B	0.63	N.D.
Chromium	3050B/6010B	0.63	14
Lead	3050B/6010B	1.2	13
Mercury	7471	0.050	0.083
Selenium	3050B/6010B	0.63	1.0
Silver	3050B/6010B	3.1	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-4 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012				
Attention: Curt Hoffart	Lab Number:	B909542-02	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

RCRA METALS

Analyte	EPA Method	Detection Limit mg/kg, Dry Weight	Sample Results mg/kg, Dry Weight
Arsenic	3050B/6010B	2.8	N.D.
Barium	3050B/6010B	28	N.D.
Cadmium	3050B/6010B	0.57	N.D.
Chromium	3050B/6010B	0.57	3.9
Lead	3050B/6010B	1.1	N.D.
Mercury	7471	0.045	N.D.
Selenium	3050B/6010B	0.57	0.63
Silver	3050B/6010B	2.8	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-5 4-6	Received:	Sep 30, 1999
Cedarburg, WI 53012				
Attention: Curt Hoffart	Lab Number:	B909542-03	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

RCRA METALS

Analyte	EPA Method	Detection Limit mg/kg, Dry Weight	Sample Results mg/kg, Dry Weight
Arsenic	3050B/6010B	3.0	N.D.
Barium	3050B/6010B	30	71
Cadmium	3050B/6010B	0.60	N.D.
Chromium	3050B/6010B	0.60	13
Lead	3050B/6010B	1.2	35
Mercury	7471	0.048	0.13
Selenium	3050B/6010B	0.60	1.6
Silver	3050B/6010B	3.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

B909542-01.KEY <3>

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-5 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012				
Attention: Curt Hoffart	Lab Number:	B909542-04	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

RCRA METALS

Analyte	EPA Method	Detection Limit mg/kg, Dry Weight	Sample Results mg/kg, Dry Weight
Arsenic	3050B/6010B	2.8	N.D.
Barium	3050B/6010B	28	N.D.
Cadmium	3050B/6010B	0.56	N.D.
Chromium	3050B/6010B	0.56	4.8
Lead	3050B/6010B	1.1	N.D.
Mercury	7471	0.045	N.D.
Selenium	3050B/6010B	0.56	N.D.
Silver	3050B/6010B	2.8	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE: Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-6 4-6	Received:	Sep 30, 1999
Cedarburg, WI 53012				
Attention: Curt Hoffart	Lab Number:	B909542-05	Analyzed:	Oct 6, 1999
			Revised Report:	Feb 4, 2000

RCRA METALS

Analyte	EPA Method	Detection Limit mg/kg, Dry Weight	Sample Results mg/kg, Dry Weight
Arsenic	3050B/6010B	3.0	N.D.
Barium	3050B/6010B	30	43
Cadmium	3050B/6010B	0.61	N.D.
Chromium	3050B/6010B	0.61	12
Lead	3050B/6010B	1.2	14
Mercury	7471	0.049	N.D.
Selenium	3050B/6010B	0.61	1.8
Silver	3050B/6010B	3.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-6 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012				
Attention: Curt Hoffart	Lab Number:	B909542-06	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

RCRA METALS

Analyte	EPA Method	Detection Limit mg/kg, Dry Weight	Sample Results mg/kg, Dry Weight
Arsenic	3050B/6010B	2.8	N.D.
Barium	3050B/6010B	28	35
Cadmium	3050B/6010B	0.56	N.D.
Chromium	3050B/6010B	0.56	8.8
Lead	3050B/6010B	1.1	6.7
Mercury	7471	0.044	N.D.
Selenium	3050B/6010B	0.56	N.D.
Silver	3050B/6010B	2.8	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis for:	Percent Solids, EPA 7.3.3.1.5		
Attention: Curt Hoffart	First Sample #:	B909542-01	Analyzed:	Oct 6-7, 1999
			Reported:	Oct 12, 1999

LABORATORY ANALYSIS FOR: Percent Solids, EPA 7.3.3.1.5

Sample Number	Sample Description	Detection Limit %	Sample Result %
B909542-01	GP-4 6-8	0.10	80
B909542-02	GP-4 10-12	0.10	88
B909542-03	GP-5 4-6	0.10	84
B909542-04	GP-5 10-12	0.10	89
B909542-05	GP-6 4-6	0.10	82
B909542-06	GP-6 10-12	0.10	90

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-4 6-8	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-01	Analyzed:	Oct 8, 1999
			Revised Reported:	Oct 21, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quantitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Benzene	2.6	8.1	25	N.D.
Bromobenzene	6.9	22	25	N.D.
Bromodichloromethane	5.1	16	25	N.D.
n-Butylbenzene	9.6	31	25	1,300
sec-Butylbenzene	6.0	19	25	N.D.
tert-Butylbenzene	6.1	19	25	620
Carbon tetrachloride	3.0	9.4	25	N.D.
Chlorobenzene	6.2	20	25	N.D.
Chloroethane	13	40	25	N.D.
Chloroform	3.8	12	25	N.D.
Chloromethane	8.1	26	25	N.D.
2-Chlorotoluene	6.7	21	25	N.D.
4-Chlorotoluene	9.8	31	25	N.D.
Dibromochloromethane	6.2	20	25	N.D.
1,2-Dibromo-3-chloropropane	11	34	25	N.D.
1,2-Dibromoethane	8.4	27	25	N.D.
1,2-Dichlorobenzene	5.4	17	25	N.D.
1,3-Dichlorobenzene	7.1	23	25	N.D.
1,4-Dichlorobenzene	7.6	24	25	N.D.
Dichlorodifluoromethane	11	35	25	N.D.
1,1-Dichloroethane	7.2	23	25	N.D.
1,2-Dichloroethane	2.3	7.5	25	N.D.
1,1-Dichloroethene	5.7	18	25	N.D.
cis-1,2-Dichloroethene	6.0	19	25	N.D.
trans-1,2-Dichloroethene	5.4	17	25	N.D.
1,2-Dichloropropane	3.6	12	25	N.D.
1,3-Dichloropropane	6.1	19	25	N.D.
2,2-Dichloropropane	9.3	30	25	53
Di-Isopropyl-Ether	5.3	17	25	N.D.
Ethyl Benzene	3.5	11	25	210

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-4 6-8	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-01	Analyzed:	Oct 8, 1999
			Revised Reported:	Oct 21, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quantitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Hexachlorobutadiene	16	51	25	N.D.
Isopropylbenzene	3.5	11	25	430
p-Isopropyltoluene	9.8	31	25	N.D.
Methylene chloride	34	110	100	260B
Methyl-tert-Butyl-Ether	6.6	21	25	N.D.
Napthalene	7.4	24	25	410
n-Propylbenzene	8.4	27	25	360
1,1,2,2-Tetrachloroethane	8.9	28	25	N.D.
Tetrachloroethene	5.2	16	25	N.D.
Toluene	3.4	11	25	200
1,2,3-Trichlorobenzene	8.5	27	25	N.D.
1,2,4-Trichlorobenzene	7.3	23	25	N.D.
1,1,1-Trichloroethane	5.6	18	25	N.D.
1,1,2-Trichloroethane	4.6	15	25	N.D.
Trichloroethene	6.2	20	25	N.D.
Trichlorofluoromethane	8.1	26	25	N.D.
1,2,4-Trimethylbenzene	5.0	16	25	750
1,3,5-Trimethylbenzene	6.2	20	25	450
Vinyl chloride	8.2	26	25	N.D.
Total Xylenes	6.6	21	25	750

Analytes reported as N.D. were not present above the WDNR Reporting Limit IN WET WEIGHT as specified in Release News, Volume 4, Number 3, July 1994.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Please Note:
B= The blank associated with this sample contained 170 ppb of Methylene Chloride.

B909542-01.KEY <9>

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-4 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-02	Analyzed:	Oct 8, 1999
			Reported:	Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Benzene	2.6	8.1	25	N.D.
Bromobenzene	6.9	22	25	N.D.
Bromodichloromethane	5.1	16	25	N.D.
n-Butylbenzene	9.6	31	25	120
sec-Butylbenzene	6.0	19	25	N.D.
tert-Butylbenzene	6.1	19	25	N.D.
Carbon tetrachloride	3.0	9.4	25	N.D.
Chlorobenzene	6.2	20	25	N.D.
Chloroethane	13	40	25	N.D.
Chloroform	3.8	12	25	N.D.
Chloromethane	8.1	26	25	N.D.
2-Chlorotoluene	6.7	21	25	N.D.
4-Chlorotoluene	9.8	31	25	N.D.
Dibromochloromethane	6.2	20	25	N.D.
1,2-Dibromo-3-chloropropane	11	34	25	N.D.
1,2-Dibromoethane	8.4	27	25	N.D.
1,2-Dichlorobenzene	5.4	17	25	N.D.
1,3-Dichlorobenzene	7.1	23	25	N.D.
1,4-Dichlorobenzene	7.6	24	25	N.D.
Dichlorodifluoromethane	11	35	25	N.D.
1,1-Dichloroethane	7.2	23	25	N.D.
1,2-Dichloroethane	2.3	7.5	25	N.D.
1,1-Dichloroethene	5.7	18	25	N.D.
cis-1,2-Dichloroethene	6.0	19	25	N.D.
trans-1,2-Dichloroethene	5.4	17	25	N.D.
1,2-Dichloropropane	3.6	12	25	N.D.
1,3-Dichloropropane	6.1	19	25	N.D.
2,2-Dichloropropane	9.3	30	25	N.D.
Di-Isopropyl-Ether	5.3	17	25	N.D.
Ethyl Benzene	3.5	11	25	N.D.

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

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Buffalo Grove, Illinois 60089

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Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-4 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-02	Analyzed:	Oct 8, 1999
			Reported:	Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Hexachlorobutadiene	16	51	25	N.D.
Isopropylbenzene	3.5	11	25	N.D.
p-Isopropyltoluene	9.8	31	25	N.D.
Methylene chloride	34	110	100	230B
Methyl-tert-Butyl-Ether	6.6	21	25	N.D.
Napthalene	7.4	24	25	110
n-Propylbenzene	8.4	27	25	N.D.
1,1,2,2-Tetrachloroethane	8.9	28	25	N.D.
Tetrachloroethene	5.2	16	25	N.D.
Toluene	3.4	11	25	N.D.
1,2,3-Trichlorobenzene	8.5	27	25	N.D.
1,2,4-Trichlorobenzene	7.3	23	25	N.D.
1,1,1-Trichloroethane	5.6	18	25	N.D.
1,1,2-Trichloroethane	4.6	15	25	N.D.
Trichloroethene	6.2	20	25	N.D.
Trichlorofluoromethane	8.1	26	25	N.D.
1,2,4-Trimethylbenzene	5.0	16	25	95
1,3,5-Trimethylbenzene	6.2	20	25	N.D.
Vinyl chloride	8.2	26	25	N.D.
Total Xylenes	6.6	21	25	N.D.

Analytes reported as N.D. were not present above the WDNR Reporting Limit IN WET WEIGHT as specified in Release News, Volume 4, Number 3, July 1994.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Please Note:
B= The blank associated with this sample contained 170 ppb of Methylene Chloride.

B909542-01.KEY <11>

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

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(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-5 4-6	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-03	Analyzed:	Oct 8, 1999
			Revised Reported:	Oct 21, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quantitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Benzene	2.6	8.1	25	N.D.
Bromobenzene	6.9	22	25	N.D.
Bromodichloromethane	5.1	16	25	N.D.
n-Butylbenzene	9.6	31	25	2,200
sec-Butylbenzene	6.0	19	25	1,700
tert-Butylbenzene	6.1	19	25	450
Carbon tetrachloride	3.0	9.4	25	N.D.
Chlorobenzene	6.2	20	25	N.D.
Chloroethane	13	40	25	N.D.
Chloroform	3.8	12	25	N.D.
Chloromethane	8.1	26	25	N.D.
2-Chlorotoluene	6.7	21	25	N.D.
4-Chlorotoluene	9.8	31	25	N.D.
Dibromochloromethane	6.2	20	25	N.D.
1,2-Dibromo-3-chloropropane	11	34	25	N.D.
1,2-Dibromoethane	8.4	27	25	N.D.
1,2-Dichlorobenzene	5.4	17	25	360
1,3-Dichlorobenzene	7.1	23	25	N.D.
1,4-Dichlorobenzene	7.6	24	25	N.D.
Dichlorodifluoromethane	11	35	25	N.D.
1,1-Dichloroethane	7.2	23	25	N.D.
1,2-Dichloroethane	2.3	7.5	25	N.D.
1,1-Dichloroethene	5.7	18	25	N.D.
cis-1,2-Dichloroethene	6.0	19	25	N.D.
trans-1,2-Dichloroethene	5.4	17	25	N.D.
1,2-Dichloropropane	3.6	12	25	N.D.
1,3-Dichloropropane	6.1	19	25	N.D.
2,2-Dichloropropane	9.3	30	25	N.D.
Di-Isopropyl-Ether	5.3	17	25	N.D.
Ethyl Benzene	3.5	11	25	2,200

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

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Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-5 4-6	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-03	Analyzed:	Oct 8, 1999
			Revised Reported:	Oct 21, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Hexachlorobutadiene	16	51	25	N.D.
Isopropylbenzene	3.5	11	25	2,200
p-Isopropyltoluene	9.8	31	25	N.D.
Methylene chloride	34	110	100	140B
Methyl-tert-Butyl-Ether	6.6	21	25	N.D.
Napthalene	7.4	24	25	2,500
n-Propylbenzene	8.4	27	25	1,200
1,1,2,2-Tetrachloroethane	8.9	28	25	N.D.
Tetrachloroethene	5.2	16	25	N.D.
Toluene	3.4	11	25	250
1,2,3-Trichlorobenzene	8.5	27	25	N.D.
1,2,4-Trichlorobenzene	7.3	23	25	N.D.
1,1,1-Trichloroethane	5.6	18	25	N.D.
1,1,2-Trichloroethane	4.6	15	25	N.D.
Trichloroethene	6.2	20	25	N.D.
Trichlorofluoromethane	8.1	26	25	N.D.
1,2,4-Trimethylbenzene	5.0	16	25	2,000
1,3,5-Trimethylbenzene	6.2	20	25	1,200
Vinyl chloride	8.2	26	25	N.D.
Total Xylenes	6.6	21	25	9,700

Analytes reported as N.D. were not present above the WDNR Reporting Limit IN WET WEIGHT as specified in Release News, Volume 4, Number 3, July 1994.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Please Note:
B= The blank associated with this sample contained 170 ppb of Methylene Chloride.

B909542-01.KEY <13>

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

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Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-5 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-04	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Benzene	2.6	8.1	25	N.D.
Bromobenzene	6.9	22	25	N.D.
Bromodichloromethane	5.1	16	25	N.D.
n-Butylbenzene	9.6	31	25	N.D.
sec-Butylbenzene	6.0	19	25	N.D.
tert-Butylbenzene	6.1	19	25	N.D.
Carbon tetrachloride	3.0	9.4	25	N.D.
Chlorobenzene	6.2	20	25	N.D.
Chloroethane	13	40	25	N.D.
Chloroform	3.8	12	25	N.D.
Chloromethane	8.1	26	25	N.D.
2-Chlorotoluene	6.7	21	25	N.D.
4-Chlorotoluene	9.8	31	25	N.D.
Dibromochloromethane	6.2	20	25	N.D.
1,2-Dibromo-3-chloropropane	11	34	25	N.D.
1,2-Dibromoethane	8.4	27	25	N.D.
1,2-Dichlorobenzene	5.4	17	25	N.D.
1,3-Dichlorobenzene	7.1	23	25	N.D.
1,4-Dichlorobenzene	7.6	24	25	N.D.
Dichlorodifluoromethane	11	35	25	N.D.
1,1-Dichloroethane	7.2	23	25	N.D.
1,2-Dichloroethane	2.3	7.5	25	N.D.
1,1-Dichloroethene	5.7	18	25	N.D.
cis-1,2-Dichloroethene	6.0	19	25	N.D.
trans-1,2-Dichloroethene	5.4	17	25	N.D.
1,2-Dichloropropane	3.6	12	25	N.D.
1,3-Dichloropropane	6.1	19	25	N.D.
2,2-Dichloropropane	9.3	30	25	N.D.
Di-Isopropyl-Ether	5.3	17	25	N.D.
Ethyl Benzene	3.5	11	25	34

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
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Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-5 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-04	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Hexachlorobutadiene	16	51	25	N.D.
Isopropylbenzene	3.5	11	25	N.D.
p-Isopropyltoluene	9.8	31	25	N.D.
Methylene chloride	34	110	100	240B
Methyl-tert-Butyl-Ether	6.6	21	25	N.D.
Napthalene	7.4	24	25	N.D.
n-Propylbenzene	8.4	27	25	N.D.
1,1,2,2-Tetrachloroethane	8.9	28	25	N.D.
Tetrachloroethene	5.2	16	25	N.D.
Toluene	3.4	11	25	N.D.
1,2,3-Trichlorobenzene	8.5	27	25	N.D.
1,2,4-Trichlorobenzene	7.3	23	25	N.D.
1,1,1-Trichloroethane	5.6	18	25	N.D.
1,1,2-Trichloroethane	4.6	15	25	N.D.
Trichloroethene	6.2	20	25	N.D.
Trichlorofluoromethane	8.1	26	25	N.D.
1,2,4-Trimethylbenzene	5.0	16	25	38
1,3,5-Trimethylbenzene	6.2	20	25	N.D.
Vinyl chloride	8.2	26	25	N.D.
Total Xylenes	6.6	21	25	170

Analytes reported as N.D. were not present above the WDNR Reporting Limit IN WET WEIGHT as specified in Release News, Volume 4, Number 3, July 1994.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Please Note:
B= The blank associated with this sample contained 170 ppb of Methylene Chloride.

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

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Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-6 4-6	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-05	Analyzed:	Oct 8, 1999
			Reported:	Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Benzene	2.6	8.1	25	N.D.
Bromobenzene	6.9	22	25	N.D.
Bromodichloromethane	5.1	16	25	N.D.
n-Butylbenzene	9.6	31	25	620
sec-Butylbenzene	6.0	19	25	300
tert-Butylbenzene	6.1	19	25	N.D.
Carbon tetrachloride	3.0	9.4	25	N.D.
Chlorobenzene	6.2	20	25	N.D.
Chloroethane	13	40	25	N.D.
Chloroform	3.8	12	25	N.D.
Chloromethane	8.1	26	25	N.D.
2-Chlorotoluene	6.7	21	25	N.D.
4-Chlorotoluene	9.8	31	25	N.D.
Dibromochloromethane	6.2	20	25	N.D.
1,2-Dibromo-3-chloropropane	11	34	25	N.D.
1,2-Dibromoethane	8.4	27	25	N.D.
1,2-Dichlorobenzene	5.4	17	25	N.D.
1,3-Dichlorobenzene	7.1	23	25	N.D.
1,4-Dichlorobenzene	7.6	24	25	N.D.
Dichlorodifluoromethane	11	35	25	N.D.
1,1-Dichloroethane	7.2	23	25	N.D.
1,2-Dichloroethane	2.3	7.5	25	N.D.
1,1-Dichloroethene	5.7	18	25	N.D.
cis-1,2-Dichloroethene	6.0	19	25	N.D.
trans-1,2-Dichloroethene	5.4	17	25	N.D.
1,2-Dichloropropane	3.6	12	25	N.D.
1,3-Dichloropropane	6.1	19	25	N.D.
2,2-Dichloropropane	9.3	30	25	N.D.
Di-Isopropyl-Ether	5.3	17	25	200
Ethyl Benzene	3.5	11	25	440

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

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Key Environmental Services, Inc.
W66 N215 Commerce Ct
Cedarburg, WI 53012
Attention: Curt Hoffart

Client Project ID: Tecumseh East
Sample Descript: Soil: GP-6 4-6
Analysis Method: EPA 5030/8021
Lab Number: B909542-05

Sampled: Sep 29, 1999
Received: Sep 30, 1999
Analyzed: Oct 8, 1999
Reported: Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Hexachlorobutadiene	16	51	25	N.D.
Isopropylbenzene	3.5	11	25	210
p-Isopropyltoluene	9.8	31	25	N.D.
Methylene chloride	34	110	100	230B
Methyl-tert-Butyl-Ether	6.6	21	25	N.D.
Napthalene	7.4	24	25	190
n-Propylbenzene	8.4	27	25	240
1,1,2,2-Tetrachloroethane	8.9	28	25	N.D.
Tetrachloroethene	5.2	16	25	N.D.
Toluene	3.4	11	25	90
1,2,3-Trichlorobenzene	8.5	27	25	N.D.
1,2,4-Trichlorobenzene	7.3	23	25	N.D.
1,1,1-Trichloroethane	5.6	18	25	N.D.
1,1,2-Trichloroethane	4.6	15	25	N.D.
Trichloroethene	6.2	20	25	N.D.
Trichlorofluoromethane	8.1	26	25	N.D.
1,2,4-Trimethylbenzene	5.0	16	25	870
1,3,5-Trimethylbenzene	6.2	20	25	320
Vinyl chloride	8.2	26	25	N.D.
Total Xylenes	6.6	21	25	970

Analytes reported as N.D. were not present above the WDNR Reporting Limit IN WET WEIGHT as specified in Release News, Volume 4, Number 3, July 1994.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Please Note:
B= The blank associated with this sample contained 170 ppb of Methylene Chloride.

B909542-01.KEY <17>

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

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Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Soil: GP-6 10-12	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-06	Analyzed:	Oct 6, 1999
			Reported:	Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Benzene	2.6	8.1	25	N.D.
Bromobenzene	6.9	22	25	N.D.
Bromodichloromethane	5.1	16	25	N.D.
n-Butylbenzene	9.6	31	25	N.D.
sec-Butylbenzene	6.0	19	25	N.D.
tert-Butylbenzene	6.1	19	25	N.D.
Carbon tetrachloride	3.0	9.4	25	N.D.
Chlorobenzene	6.2	20	25	N.D.
Chloroethane	13	40	25	N.D.
Chloroform	3.8	12	25	N.D.
Chloromethane	8.1	26	25	N.D.
2-Chlorotoluene	6.7	21	25	N.D.
4-Chlorotoluene	9.8	31	25	N.D.
Dibromochloromethane	6.2	20	25	N.D.
1,2-Dibromo-3-chloropropane	11	34	25	N.D.
1,2-Dibromoethane	8.4	27	25	N.D.
1,2-Dichlorobenzene	5.4	17	25	N.D.
1,3-Dichlorobenzene	7.1	23	25	N.D.
1,4-Dichlorobenzene	7.6	24	25	N.D.
Dichlorodifluoromethane	11	35	25	N.D.
1,1-Dichloroethane	7.2	23	25	N.D.
1,2-Dichloroethane	2.3	7.5	25	N.D.
1,1-Dichloroethene	5.7	18	25	N.D.
cis-1,2-Dichloroethene	6.0	19	25	N.D.
trans-1,2-Dichloroethene	5.4	17	25	N.D.
1,2-Dichloropropane	3.6	12	25	N.D.
1,3-Dichloropropane	6.1	19	25	N.D.
2,2-Dichloropropane	9.3	30	25	N.D.
Di-Isopropyl-Ether	5.3	17	25	N.D.
Ethyl Benzene	3.5	11	25	N.D.

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
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Key Environmental Services, Inc.
W66 N215 Commerce Ct
Cedarburg, WI 53012
Attention: Curt Hoffart

Client Project ID: Tecumseh East
Sample Descript: Soil: GP-6 10-12
Analysis Method: EPA 5030/8021
Lab Number: B909542-06

Sampled: Sep 29, 1999
Received: Sep 30, 1999
Analyzed: Oct 6, 1999
Reported: Oct 12, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/kg	Practical Quanitation Limit µg/kg	WDNR Reporting Limit µg/kg Wet Weight	Sample Results µg/kg Dry Weight
Hexachlorobutadiene	16	51	25	N.D.
Isopropylbenzene	3.5	11	25	N.D.
p-Isopropyltoluene	9.8	31	25	N.D.
Methylene chloride	34	110	100	240B
Methyl-tert-Butyl-Ether	6.6	21	25	N.D.
Napthalene	7.4	24	25	N.D.
n-Propylbenzene	8.4	27	25	N.D.
1,1,2,2-Tetrachloroethane	8.9	28	25	N.D.
Tetrachloroethene	5.2	16	25	N.D.
Toluene	3.4	11	25	N.D.
1,2,3-Trichlorobenzene	8.5	27	25	N.D.
1,2,4-Trichlorobenzene	7.3	23	25	N.D.
1,1,1-Trichloroethane	5.6	18	25	N.D.
1,1,2-Trichloroethane	4.6	15	25	N.D.
Trichloroethene	6.2	20	25	N.D.
Trichlorofluoromethane	8.1	26	25	N.D.
1,2,4-Trimethylbenzene	5.0	16	25	N.D.
1,3,5-Trimethylbenzene	6.2	20	25	N.D.
Vinyl chloride	8.2	26	25	N.D.
Total Xylenes	6.6	21	25	N.D.

Analytes reported as N.D. were not present above the WDNR Reporting Limit IN WET WEIGHT as specified in Release News, Volume 4, Number 3, July 1994.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Please Note:
B= The blank associated with this sample contained 170 ppb of Methylene Chloride.

B909542-01.KEY <19>

Accreditations/Certifications: Illinois EPA-100231; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Liquid: MeOH Blank	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-07	Analyzed:	Oct 6, 1999
			Revised Reported:	Oct 21, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/L	Practical Quanitation Limit µg/L	WDNR Reporting Limit µg/L	Sample Results µg/L
Benzene	2.6	8.1	25	N.D.
Bromobenzene	6.9	22	25	N.D.
Bromodichloromethane	5.1	16	25	N.D.
n-Butylbenzene	9.6	31	25	N.D.
sec-Butylbenzene	6.0	19	25	N.D.
tert-Butylbenzene	6.1	19	25	N.D.
Carbon tetrachloride	3.0	9.4	25	N.D.
Chlorobenzene	6.2	20	25	N.D.
Chloroethane	13	40	25	N.D.
Chloroform	3.8	12	25	N.D.
Chloromethane	8.1	26	25	N.D.
2-Chlorotoluene	6.7	21	25	N.D.
4-Chlorotoluene	9.8	31	25	N.D.
Dibromochloromethane	6.2	20	25	N.D.
1,2-Dibromo-3-chloropropane	11	34	25	N.D.
1,2-Dibromoethane	8.4	27	25	N.D.
1,2-Dichlorobenzene	5.4	17	25	N.D.
1,3-Dichlorobenzene	7.1	23	25	N.D.
1,4-Dichlorobenzene	7.6	24	25	N.D.
Dichlorodifluoromethane	11	35	25	N.D.
1,1-Dichloroethane	7.2	23	25	N.D.
1,2-Dichloroethane	2.3	7.5	25	N.D.
1,1-Dichloroethene	5.7	18	25	N.D.
cis-1,2-Dichloroethene	6.0	19	25	N.D.
trans-1,2-Dichloroethene	5.4	17	25	N.D.
1,2-Dichloropropane	3.6	12	25	N.D.
1,3-Dichloropropane	6.1	19	25	N.D.
2,2-Dichloropropane	9.3	30	25	N.D.
Di-Isopropyl-Ether	5.3	17	25	N.D.
Ethyl Benzene	3.5	11	25	N.D.

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

1380 Busch Parkway
Buffalo Grove, Illinois 60089

Email: info@glalabs.com
(847) 808-7766 FAX (847) 808-7772

Key Environmental Services, Inc.	Client Project ID:	Tecumseh East	Sampled:	Sep 29, 1999
W66 N215 Commerce Ct	Sample Descript:	Liquid: MeOH Blank	Received:	Sep 30, 1999
Cedarburg, WI 53012	Analysis Method:	EPA 5030/8021		
Attention: Curt Hoffart	Lab Number:	B909542-07	Analyzed:	Oct 6, 1999
			Revised Reported:	Oct 21, 1999

WDNR VOLATILE ORGANIC COMPOUNDS (5030/8021)

Analyte	Method Detection Limit µg/L	Practical Quanitation Limit µg/L	WDNR Reporting Limit µg/L	Sample Results µg/L
Hexachlorobutadiene	16	51	25	N.D.
Isopropylbenzene	3.5	11	25	N.D.
p-Isopropyltoluene	9.8	31	25	N.D.
Methylene chloride	34	110	100	170B
Methyl-tert-Butyl-Ether	6.6	21	25	N.D.
Napthalene	7.4	24	25	N.D.
n-Propylbenzene	8.4	27	25	N.D.
1,1,2,2-Tetrachloroethane	8.9	28	25	N.D.
Tetrachloroethene	5.2	16	25	N.D.
Toluene	3.4	11	25	N.D.
1,2,3-Trichlorobenzene	8.5	27	25	N.D.
1,2,4-Trichlorobenzene	7.3	23	25	N.D.
1,1,1-Trichloroethane	5.6	18	25	N.D.
1,1,2-Trichloroethane	4.6	15	25	N.D.
Trichloroethene	6.2	20	25	N.D.
Trichlorofluoromethane	8.1	26	25	N.D.
1,2,4-Trimethylbenzene	5.0	16	25	N.D.
1,3,5-Trimethylbenzene	6.2	20	25	N.D.
Vinyl chloride	8.2	26	25	N.D.
Total Xylenes	6.6	21	25	N.D.

Analytes reported as N.D. were not present above the WDNR Reporting Limit IN WET WEIGHT as specified in Release News, Volume 4, Number 3, July 1994.

GREAT LAKES ANALYTICAL

Kevin W. Keeley
Laboratory Director

Please Note:
B= The blank associated with this sample contained 170 ppb of Methylene Chloride.

B909542-01.KEY <21>

Accreditations/Certifications: Illinois EPA-100261; New Jersey DEP-54001;
USACE; Wisconsin DNR-999917160

GREAT LAKES ANALYTICAL

CHAIN OF CUSTODY REPORT

1380 Busch Parkway
Buffalo Grove, IL 60089-4505
(847) 808-7766
FAX (847) 808-7772

20725 Watertown Road
Brookfield, WI 53501
(414) 798-1030
FAX (414) 798-1066

Client: Key Engineering
Address: W66 N215 Commerce Ct
Cedarburg, WI 53012
Report to: Curt Hoffert
Phone #: ( )
Fax #: ( )

Bill To: Accounting
Address:
State & Program:
Phone #: ( )
Fax #: ( )

TAT: (5 DAY) 4 DAY 3 DAY 2 DAY 1 DAY < 24 HRS.
DATE RESULTS NEEDED: 10-7-99
TEMPERATURE UPON RECEIPT:
AIR BILL NO. GLA P/U

Project: Tecumseh East 0809004
Sampler: Kris King
PO/Quote #: DK90924A

	FIELD ID, LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	PRESERVATIVES	NO. CONTAINERS	TYPE CONTAINERS	VOC	RCRA Metals	% Sol	CRACKED-BROKEN	IMPROPERLY SEALED	GOOD CONDITION	LABORATORY ID NUMBER
1	GP-4/6-8	9/29/99	am	S	MeOH	3	2oz WM, 4oz WM	X	X	X			X	B9095-1
2	GP-4/10-12	↓	↓	↓	↓	3	↓	X	X	X			X	2
3	GP-5/4-6	↓	↓	↓	↓	3	↓	X	X	X			X	3
4	GP-5/10-12	↓	↓	↓	↓	3	↓	X	X	X			X	4
5	GP-6/4-6	↓	↓	↓	↓	3	↓	X	X	X			X	5
6	GP-6/10-12	↓	↓	↓	↓	3	↓	X	X	X			X	6
7	MeOH Blank	↓	↓	↓	↓	1	2oz WM	X					X	7
8														
9														
10														

RELINQUISHED	DATE/TIME	RECEIVED	DATE/TIME	RELINQUISHED	DATE/TIME	RECEIVED	DATE/TIME
Kris King	9/30 10:45	K Altman	09/30 10:45	K Altman	09/30/99	Amy Lessner	9-30-99
RELINQUISHED		RECEIVED		RELINQUISHED		RECEIVED	

COMMENTS:

PAGE OF

JG958198

File

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

Northeast Region Headquarters
1125 N. Military Ave., P.O. Box 10448
Green Bay, Wisconsin 54307-0448
Telephone 920-492-5800
FAX 920-492-5913
TDD 920-492-5912

October 15, 1998

Mr. Kerry DeKeyser
Tecumseh Products
1604 Michigan Avenue
New Holstein, WI 53061

Subject: SI Work Plan for Tecumseh Products - East Section Contaminated Fill Area, 1604 Michigan Avenue, New Holstein, Wisconsin, Calumet County, WDNR BRRTS ID# 02-08-193776

Dear Mr. DeKeyser:

In response to our telephone conversation today, I need to correct the locations of the two additional borings that you should drill during the site investigation at this site. One should be located south of MW-1 while the second should be located west of MW-1. The borings should be located within a reasonable distance to MW-1.

Please call me at (920) 492-5868 if you have any questions.

Sincerely,

Jennifer Huffman

Jennifer Huffman, P.G.
Hydrogeologist
Remediation and Redevelopment Program

Cc: Curt Hoffart – Key Engineering, W66 N215 Commerce Court, Cedarbury, WI 53012
bc: Karl Rovers

File

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

Northeast Region Headquarters
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FAX 920-492-5913
TDD 920-492-5912

October 12, 1998

Mr. Kerry DeKeyser
Tecumseh Products
1604 Michigan Avenue
New Holstein, WI 53061

Subject: Acknowledgement of Receipt/Site Investigation Work Plan, Tecumseh Products - East Section Contaminated Fill Area, 1604 Michigan Avenue, New Holstein, Wisconsin, Calumet County, WDNR BRRTS ID# 02-08-193776

Dear Mr. DeKeyser:

I have received and reviewed the above-referenced submittal from your environmental consultant, Key Engineering. However, staffing and workload levels do not allow me to provide you with detailed review and oversight at this time.

Therefore, this letter serves as your **"Notice to Proceed"** with investigation and remediation of the site. All actions must comply with all applicable statutes, program guidance, standards and Administrative Rules. This letter is not an approval of your work plans and reports. They will be filed as public records until the Department is able to review them, or until site remediation is completed.

In addition to the work proposed by your consultant and based on my discussions with them today, you should include the following:

1. Drill at least two additional soil borings, one located north of SB-6/MW-1 and one located west of SB-6/MW-1. All borings should be drilled within a reasonable distance to the contaminated fill found at SB-6/MW-1. These would be used in addition to the ones proposed by your consultant to identify whether fill material impacts detected at SB-6/MW-1 have impacted native soils beyond the known area of fill by defining the limits of fill.
2. Because of the unknown waste types present, samples should also be analyzed for PAHs and PCBs, in addition to VOCs and the eight RCRA metals.
3. Your consultant has indicated today that a starting date for the investigative field work has not been identified yet. We would like to observe and potentially collect samples during the drilling. Please notify us at least 5 working days prior to drilling activities.

Your consultant must follow the Wisconsin Administrative Code NR 700 series. It is very important that your consultant understands and meets the minimum standards established by the Department; however, you, as the responsible party, are ultimately responsible for the

KEY ENGINEERING GROUP LTD.
Environmental • Civil/Geotech • Compliance

W66 N215 Commerce Court
Cedarburg, Wisconsin 53012
(414) 375-4750
(800) 645-7365
Fax (414) 375-9680

October 6, 1998

Ms. Jennifer Huffman, Hydrogeologist
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
Northeast Region Headquarters
1125 North Military Avenue
Post Office Box 10448
Green Bay, Wisconsin 54307-0448

Reference: *Limited Site Investigation Work Plan*
Tecumseh Products Company-East Section Fill Area
1604 Michigan Avenue
New Holstein, Wisconsin
WDNR BRRTS #02-08-193776

KEY ENGINEERING GROUP, LTD.
File No. 0809004

Dear Ms. Huffman:

The purpose of this letter is to provide the Wisconsin Department of Natural Resources (WDNR) with a *Limited Site Investigation (LSI) Work Plan* for the above referenced site. This letter was prepared by Key Engineering Group, Ltd. (KEY) on behalf of Tecumseh Products Company (Tecumseh).

Purpose of Limited Site Investigation

Approximately 8 feet of fill material, which included gravel, paint chips, metal shavings, ash, and green stained soil, was encountered during a gasoline leaking underground storage tank (LUST) site investigation in the East Section (WDNR LUST ID# 03-08-01070). The fill material was encountered at soil boring SB-6 (MW-1), located near the northeast corner of the Tecumseh facility. Concentrations of benzene, ethylbenzene, xylenes, and trimethylbenzenes (TMBs) were detected in a sample of the fill material collected from 4 to 6 feet below ground surface (bgs). The benzene concentration exceeded the NR 720 generic residual contaminant level (GRCL) based on the protection of groundwater.

The WDNR notified Tecumseh in a July 29, 1998 letter to submit a work plan for the investigation of the fill material impacts. Additionally, the WDNR notified Tecumseh in an August 4, 1998 letter that management of this area of contamination in accordance with NR 700 through NR 728 is required.

Objective and Scope of Limited Site Investigation

The objectives of the LSI are to identify whether fill material impacts detected at SB-6/MW-1 have impacted native soils beyond the area of fill and to evaluate whether remedial action associated with the fill material impacts is warranted. Based on these objectives, the LSI will consist of advancing two (2) soil probes to a depth of approximately 15 feet bgs (groundwater is present at approximately 10 to 12 feet bgs at MW-1). The soil probes will be placed north and east of SB-6/MW-1 as depicted on Figure 1. Following collection of additional soil/fill material data, additional activities, such as the development of site-specific soil standards or the collection of additional groundwater samples from MW-1 may be warranted.

Soil Probes and Soil Sampling

The soil probes will be advanced with a van-mounted Geoprobe® unit. A 2-foot long stainless steel sampler with an acetate liner will be driven to the desired sampling depth using stainless steel rods and a hydraulic ram. Downhole soil probe equipment and associated tools will be washed prior to the initiation of field activities. The soil probe equipment will be decontaminated between each soil sampling interval to minimize the potential for cross-contamination. The decontamination procedure will consist of scrubbing the 2-foot stainless steel sampler with a brush and a soap and water Alconox® solution followed by one (1) tap water rinse after each sampling interval.

Soil samples will be classified in accordance with the Unified Soil Classification System (USCS). Soil boring logs will be completed by KEY to document the drilling method, sampling method, depth of the sample, sample recovery, the soil USCS classifications, soil moisture, color, field screening results, olfactory observations, and groundwater level observations.

A portion of each soil sample will be placed into a resealable plastic bag for field screening. The soil samples will be field screened for organic vapors using a model 580B Organic Vapor Meter (OVM) photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp, calibrated to isobutylene. The sealed bag will be shaken to release volatile organic vapors. The bag will then be slightly opened and the tip of the PID will be inserted into the headspace and the highest reading recorded. After field screening, two (2) soil samples collected from each soil probe from the unsaturated zone will be submitted to a WDNR certified laboratory for analysis of volatile organic compounds (VOCs) and eight (8) Resource Conservation and Recovery Act (RCRA) metals. At soil probe locations where fill material is encountered, one (1) sample collected from the fill material and one (1) sample collected from underlying native soil will be submitted for analysis. Three (3) soil samples will also be submitted for analysis of total organic carbon (TOC) to support potential evaluation of site-specific soil cleanup standards.

Following soil sample collection, the soil probes will be abandoned in accordance with NR 141, and WDNR borehole abandonment forms will be completed.

Site Investigation Letter Report Preparation

Following the completion of the LSI, a letter report documenting the results of the LSI will be prepared and submitted to the WDNR. The letter will include soil probe logs, a figure showing the

locations of the soil probes, laboratory analytical results, results of field activities, and conclusions and recommendations.

Preliminary Schedule

Tecumseh will proceed with the identified LSI scope in October 1998.

Please call if you have any questions.

Sincerely,

KEY ENGINEERING GROUP, LTD.

Rachel A. Ames
Staff Hydrogeologist

Curtis M. Hoffart, CHMM
Project Associate

Gregory L. Johnson, CHMM, P.G., P.E.
Manager of Technical Services

RAA/jml

cc: Mr. Kerry DeKeyser
Mr. Bruce McCuaig

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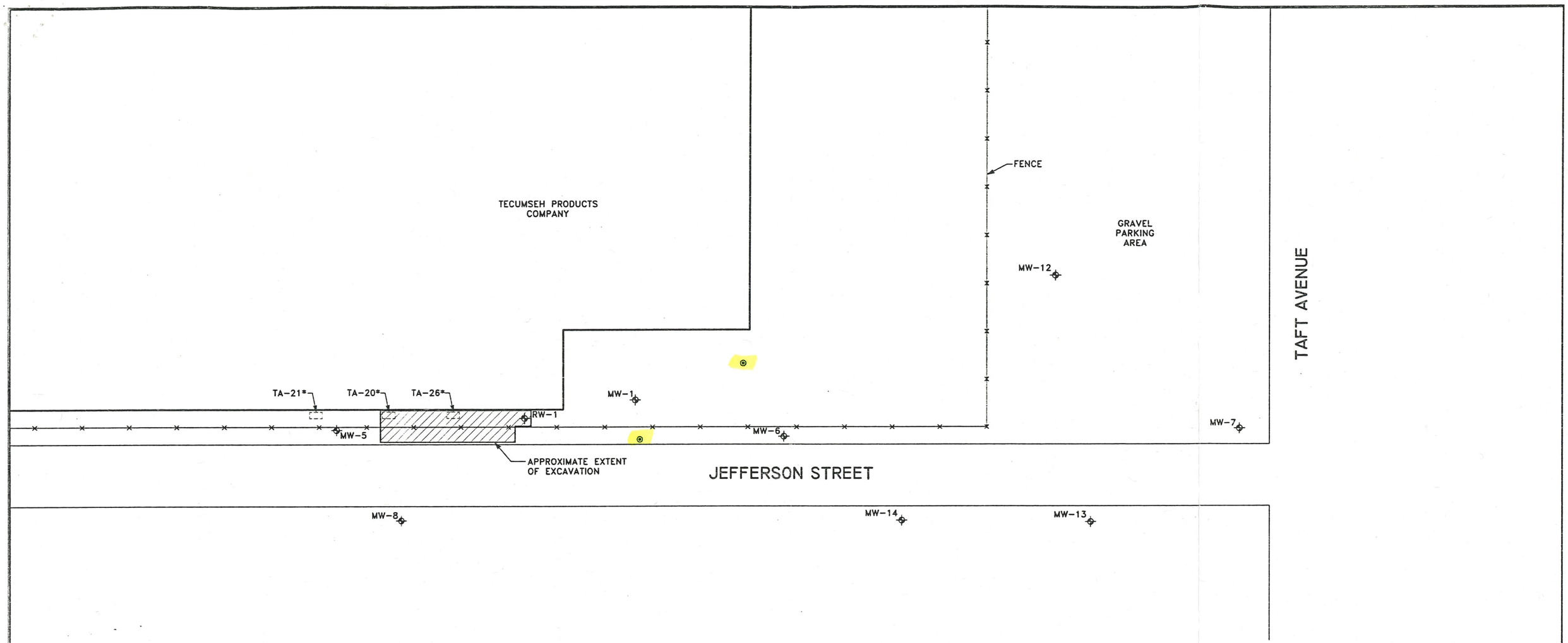

LEGEND

- EXISTING MONITORING WELL LOCATION
- FORMER UST LOCATION ESTIMATED BASED ON PREVIOUS DAMES & MOORE, LTD. DOCUMENTATION
- PROPOSED SOIL PROBE LOCATION

N

0 30 60

SCALE: 1"=60'

DRN. BY:	S.L.G.	DATE:	09/30/98
DSN. BY:	C.M.H.	FILE NO.:	0809004
CHK. BY:	C.M.H.	DWG. NO.:	08090042
REV. BY:	G.L.J.	SHEET NO.:	1

KEY ENGINEERING GROUP LTD.

FIGURE 1
PROPOSED SOIL PROBE LOCATIONS

LIMITED SITE INVESTIGATION WORK PLAN
EAST SECTION FILL AREA
TECUMSEH PRODUCTS COMPANY
1604 MICHIGAN AVENUE
NEW HOLSTEIN, WISCONSIN

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William R. Selbig, Regional Director

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Solid Waste Office
PO Box 10448, 1125 N. Military Ave.
Green Bay, Wisconsin 54307-0448
TELEPHONE 414-492-5916
FAX 414-492-5859
TDD 414-492-5812

August 4, 1998

Tecumseh Products
Kerry Dekeyser
1604 Michigan Ave.
New Holstein, WI 53061

SUBJECT: Reported Contamination at Tecumseh Products; 1604 Michigan Ave., Fill Area at MW-1; New Holstein, WI
BRRTS CASE #02-08-193776

Dear Mr. DeKeyser:

The Wisconsin Department of Natural Resources has been notified of soil contamination at the above referenced location.

Based on the information received by the Department of Natural Resources, we believe you are responsible for restoring the environment at this site under Section 292.11, Wisconsin Stats., known as the hazardous substances spills law. Your responsibilities include investigating the extent of the contamination and 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, possible financial assistance, and working cooperatively with the Department of Natural Resources.

Legal Responsibilities:
Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substances spill law, Section 292.11 (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 chapters NR 700 through NR 728 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Chapter NR 708 includes provisions for immediate actions in response to limited contamination. Wisconsin Administrative Code chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

Steps to Take:
The longer contamination is left in the environment the farther it can spread and the more it may cost to

Information for Site Owners:
Enclosed is a list of environmental consultants and some important tips on selecting a consultant. 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 have any questions about this letter or your responsibilities, please call Jennifer Huffman at (920) 492-5868.

Thank you for your cooperation.

Sincerely,

Joshua J. Van Lieshout
Waste Management Specialist
Remediation and Redevelopment

Enclosure

cc: Curtis Hoffart; Key Environmental; W66 N215 Commerce Ct.; Cedarburg, WI 53012
Jennifer Huffman--WDNR
File

File

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
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July 29, 1998

Mr. Kerry DeKeyser
Tecumseh Products
1604 Michigan Avenue
New Holstein, WI 53061

Subject: Denial of Case Closure for Tecumseh Products - East Section, 1604 Michigan Ave., New Holstein, Wisconsin, Calumet County, WDNR BRRTS ID# 03-08-1070, PECFA Claim Number 53061-1153-04B

Dear Mr. DeKeyser:

I've reviewed the case closure request submitted by Key Environmental on your behalf for the site identified above. Based on my review, I can not forward the case to the Northeast Region Closure Committee at this time. To move this case towards closure you should do the following:

1. Submit information on how the soils and groundwater in the TA-21 area have been investigated and remediated. The tank closure assessment for this tank indicates that the tank had leaked and the soils below the tank bed and water table are contaminated. Based on the information I have, it appears that the soil in this area was not included in the excavated area for tanks TA-20 and TA-26. In addition, I do not have enough information to lead me to believe that the groundwater in the former tank area immediately downgradient of TA-21 was investigated. I know that MW-5 is in the general area but where is it located with respect to TA-21 and how far away is it?
2. Include the natural attenuation geochemical indicator parameters in the groundwater monitoring program to show whether natural attenuation is occurring at the site (by causing a reduction in mass and concentration of the contaminants). This is required as part of any groundwater monitoring program if a closure using natural attenuation as the final groundwater remedy is be sought for the site.
3. Provide an estimated time that the groundwater will reach the groundwater quality standards in NR 140, Wis. Adm. Code, using natural attenuation as the final groundwater remedy and show that this is a reasonable period of time considering the criteria in NR 722.07, Wis. Adm. Code. This information is required for any natural attenuation closure for groundwater in NR 726.05(2)(b)2.
4. Include napthalene in the final rounds of groundwater monitoring as required by the WDNR's April 12, 1994 correspondence. You should also include MW-14 in the monitoring program since recent results from the chlorinated contaminant investigation show that this well has been contaminated with MTBE above the NR 140 Preventive Action Limit (PAL).

Your consultant has been in touch with me about the urgent need for Department approval to biopile contaminated soils from the Tecumseh West Section (#03-08-1071) on the area of previously spread East Section soils. The results for the East Section (#03-08-1070) biopile soils showed that the excavated soil had been remediated to concentrations below the NR 720 RCLs for the PVOCs prior to spreading.

TABLE 1

UNDERGROUND STORAGE TANK IDENTIFICATION

TECUMSEH PRODUCTS CORPORATION
NEW HOLSTEIN, WISCONSIN

Tank Identification	Capacity	Product Contained	Date of Installation	Date of Removal
TA-1 03-08-001091	3,000 gallons	Xylene	1966	7/30/91
TA-2	3,000 gallons	Xylene (recycled solvent)	1966	10/28/91
TA-18	2,000 gallons	90% Unleaded Gasoline 10% Isopropyl Alcohol	~1966	7/30/91
TA-19[1]	2,000 gallons	Unleaded Gasoline	~1966	
TA-20[1] 03-08-001070	2,000 gallons	90% Unleaded Gasoline 10% Isopropyl Alcohol	~1967	7/29/92
TA-21	2,000 gallons	90% Unleaded Gasoline 10% Isopropyl Alcohol	~1967	10/30/91
TA-22[1]	2,000 gallons	Kerosene	~1967	7/29/92
TA-23 Clean Cls.	1,000 gallons	Unleaded Gasoline	~1967	7/31/92
TA-24 Clean Cls.	1,000 gallons	Unleaded Gasoline	1956	~1989
TA-26 03-08-001090	300 gallons	Unleaded Gasoline	1967	7/30/91

[1] UST essential to operations at Tecumseh New Holstein facility.