

February 26, 1999

Mr. Paul Zuege 102 E. Cook Street New London, WI 54961

Subject:

Case Closure - Zuege Products Waste Oil Tank

102 E. Cook Street, New London

COMMERCE #54961-1453-02 DNR #03-69-002197

Dear Mr. Zuege:

Because of recent changes in Wisconsin's environmental policies, the above referenced site was transferred to the Wisconsin Department of Commerce (COMM) from the WDNR. The staff within the Department of Commerce's PECFA Bureau now administers all issues relating to the petroleum contamination at this site.

Your consultant, ECCI, had recommended site closure. A review of the data shows that all petroleum contaminated soil associated with the former waste oil tank has been removed from the site. Therefore <u>no further action</u> with regards to petroleum contamination is necessary.

It must be noted that low levels of PCE, a chlorinated solvent commonly associated with the dry cleaning industry, was detected in one of the soil borings completed during the investigation. At this time there is no reason to believe this is a widespread problem at the site.

This decision is based on the information provided. If, in the future, site conditions indicate that any contamination that might remain poses a threat, the need for further remediation would be determined and required if necessary. If subsequent information indicates a need to reopen this case, any original claim under the PECFA fund would also reopen and you may apply for assistance to the extent of remaining eligibility.

Thank you for your efforts in the protection of the environment. If you have any questions, please call me at 920-424-0025.

Sincerely,

Thomas Verstegen

Hydrogeologist

Department of Commerce

- CÇ

Case File - Oshkosh

Ms. Catherine Sanders - ECCI



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary William R. Selbig, Regional Director Northeast Region Headquarters Remediation & Redevelopment PO Box 10448, 1125 N. Military Avenue Green Bay, WI 54307-0448 TELEPHONE 920-492-5916 TELEFAX 920-492-5859

February 22, 1999

Mr. Paul Zuege 102 E. Cook Street New London, WI 54961

SUBJECT:

Zuege Products, 102 E. Cook Street, New London

WDNR ID # 03-69-002197

Transfer of Your File to the Wisconsin Department of Commerce

As of July 1, 1996, the Department of Commerce is responsible for governmental oversight of environmental cleanup activities at properties contaminated by petroleum storage systems when contamination has not impacted groundwater above state preventive action levels.

This is to notify you that the Department of Natural Resources (DNR) has an open file regarding contamination at the above site. Information presented to the DNR to date shows that this site falls into the group of sites identified for transfer. Therefore, we are transferring your file to the Department of Commerce effective immediately. Commerce will provide all future oversight of your cleanup at the property, including determination of file closure.

All future contacts regarding this site should be directed to the Department of Commerce. Correspondence should be addressed to:

Wisconsin Department of Commerce Attn: Thomas Verstegen 2129 Jackson Street Oshkosh, WI 54901 Phone: 920-424-0025

Please include both your PECFA claim number, if you have one, and your WDNR site identification number in your correspondence. The PECFA program reimbursement staff have also been transferred to Commerce from the Department of Industry, Labor & Human Relations (DILHR), effective July 1, 1996.

Your efforts toward cleanup of this site are greatly appreciated.

Sincerely,

Janis DeBrock, Program Assistant

Remediation & Redevelopment Program

anis DeBrock

cc: Thomas Verstegen, WI DCOM, 2129 Jackson Street, Oshkosh, WI 54901 Catherine Sanders, ECCI, PO Box 11417, Green Bay, WI 54307-1414







P.O. Box 11417 • Green Bay, WI 54307-1417 • 920-434-6380 (VOICE) • 920-434-6381 (Fax)

January 21, 1999

Mr. Thomas Sturm Wisconsin Department of Natural Resources 647 Lakeland Road Shawano, WI 54166

Re:

Zuege Products, 102 E. Cook Street, New London, Wisconsin 54961-1453

WDNR LUST ID #03-69-2197

Dear Tom:

This letter is a follow-up to a phone message I left several weeks ago. I apologize for not sending it to you sooner. The above referenced facility will be transferred to the Department of Commerce, specifically Tom Verstegen.

This transfer is per the memorandum of understanding between the Department of Commerce and the Department of Natural Resources. The Zuege LUST site does not exhibit any indication of soil contamination that could contaminate the groundwater above NR140 Enforcement Standards.

If you have any questions, please contact me directly at 920-434-5022.

Respectfully,

Environmental Compliance Consultants, Inc.

Catherine Sanders

Catherine Sanders Project Manager

cc: Paul Zuege

Tom Verstegen



ENVIRONMENTAL COMPLIANCE CONSULTANTS, INC.

P.O. Box 11417 Green Bay, WI 54307-1417 • 920-434-6380 (Voice) • 920-434-6381 (Fax)

JAN 2 0 1999 ERS DIVISION

Leaking Underground Storage Tank

Site Investigation Report

Zuege Products 102 E. Cook Street New London, Wisconsin LUST ID No. 03-69-2197

Prepared for:
Paul Zuege
102 E. Cook Street
New London, Wisconsin 54961-1453

December 1998

Sharing Your Concerns. Creating Sound Solutions.



P.O. Box 11417 • Green Bay, WI 54307-1417 • 920-434-6380 (Voice) • 920-434-6381 (Fax)

December 27, 1998

Mr. Tom Verstegen Wisconsin Department of Commerce P.O. Box 2565 Oshkosh, WI 54903-2565

RE:

Site Investigation Report and Request for Closure for Zuege Products

102 East Cook Street, New London, WI 54961-1453

WDNR BRRTS Case #03-69-2197 PECFA Claim #54961-1453-02

Dear Tom:

Environmental Compliance Consultants, Inc. (ECCI) is pleased to submit the above referenced report on behalf of Mr. Paul Zuege, the responsible party for the Zuege Products LUST site. This report is submitted in response to the letter mailed to Mr. Zuege on November 2, 1995, from the WDNR regarding Mr. Zuege's responsibility for restoring the environment as required in Section 144.76 (since renumbered to Section 292.11), Wisconsin Statutes, normally referred to as the hazardous substances spills law.

This report details the results of the subsurface investigation carried out to define the extent and nature of petroleum hydrocarbon contamination at the Zuege Products site. The investigative actions undertaken at this site were outlined in the Site Investigation Work Plan submitted to Mr. Tom Sturm of the WDNR by ECCI on April 23, 1996, and follow the regulations and guidelines presented in the WDNR's: NR 716 Site Investigations (April 1995), NR720 Soil Cleanup Standards (April 1995), Leaking Underground Storage Tank (LUST) Analytical and Quality Assurance Guidance (July 1993), and Guidance for Conducting Environmental Response Actions (publ. SW-157-92, March 1992).

At this time ECCI is requesting site closure status be granted for this site based on the evidence presented in this report.

Please contact me at (920) 434-5022 if you have any questions or comments pertaining to this project.

Respectfully,

Environmental Compliance Consultants, Inc.

Catherine Sanders

Catherine Sanders Project Manager

DISTRIBUTION LIST

No. of Copies	Sent To
1	Mr. Tom Verstegen Wisconsin Dept. of Commerce P.O. Box 2565 Oshkosh, WI 54903-2565
1	Mr. Paul Zuege Zuege Products 102 E. Cook Street New London, WI 54961-1453
1	Environmental Compliance Consultants, Inc. P.O. Box 11417 Green Bay, WI 54307-1417
1	WCOMM/PECFA (to be submitted with claim) 201 E. Washington Ave. P.O. Box 7969 Madison, WI 53707-7969

Leaking Underground Storage Tank Site Investigation Report

contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

I, Boyd N. Possin, hereby certify that I am a registered professional geologist, registered in accordance with the

I, Boyd N. Possin, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information

Hydrogeologist

date

Zuege Products 102 E. Cook Street New London, Wisconsin

BRRTS Case #03-69-2197

PECFA Claim #54961-1453-02

requirements of Ch. A-E Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in malifility and its correct and the society with all applicable requirements in Ch. NR 700 of the information completely with all applicable requirements in Ch. NR 700 of the information completely with all applicable requirements in Ch. NR 700 of the information contained in Ch. NR 700 of the inf

I, Catherine Sanders, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm.

Prepared for: Paul Zuege New London, Wisconsin

December 1998

Environmental Compliance Consultants, Inc.

P. O. Box 11417 Green Bay, WI 54307-1417 920-434-6380; fax: 920-434-6381 Copyright[®], Environmental Compliance Consultants, Inc.

1998

TABLE OF CONTENTS

1.0	EXE	CUTIVE SUMMARY	1									
2.0	INTI	RODUCTION	2									
	2.1	General	2									
	2.2	Responsible Party	2									
	2.3	Consultants and Contractors										
	2.4	Purpose of the Report										
	2.5											
	2.5	Scope of Work										
3.0	GEN	IERAL INFORMATION	4									
	3.1	Site Location	4									
	3.2	Past Activities	4									
	3.3	Current Activities	5									
4.0	MET	THODS OF INVESTIGATION	6									
1.0	4.1	Sampling Methods										
	4.1	3.1.1 Soil Sampling Methods										
	4.2	4.1.2 Groundwater Sampling Methods										
	4.2	QA/QC Methods	/									
		4.2.1 Soil Sampling QA/QC										
		4.2.2 Field Instrument Quality Control										
		4.2.3 Field Sampling and Transportation Quality Control										
	4.3	Laboratory Receipt and Analysis	8									
5.0	ENV	TRONMENTAL ANALYSIS	9									
	5.1	Site Historical Significance	9									
	5.2	Presence of Sensitive Environmental Receptors										
	5.3	Contaminant Migration Pathway and Receptor Assessment										
6.0	GEC	DLOGIC AND HYDROGEOLOGIC SETTING	10									
0.0	6.1	Areal Geology										
	6.2	Site-Specific Geology and Soils Information										
	6.2	Site-Specific Groundwater Information										
	0.2	Site-Specific Groundwater Information	11									
7.0		ALYTICAL RESULTS										
	7.1	Soils Analysis	12									
8.0	CON	ICLUSIONS AND RECOMMENDATIONS	13									
	8.1 Conclusions											
		8.1.1 Soil	13									
		8.1.2 Groundwater										
	8.2	Recommendations										

9.0 PROFESSIONAL STANDARDS
LIST OF FIGURES
Figure 1 - Site Location Map Figure 2 - Site Detail Map
LIST OF TABLES
Table 1 - Summary of Soil Analytical Results, Tank Removal Samples Table 2 - Summary of Soil Analytical Results, Site Investigation Samples
LIST OF APPENDICES
Appendix A - Figures Appendix B - Tables Appendix C - Boring Log Forms, Boring Abandonment Forms Appendix D - Laboratory Analytical Reports Appendix E - Tank Information Appendix F - Resumes

1.0 EXECUTIVE SUMMARY

On August 28, 1997, field activities were undertaken to investigate the vertical and horizontal extent of contamination at the Zuege Products LUST site. Field activities included installation of four borings to a depth of sixteen feet each via a GeoprobeTM sampler. The borings were termed SB-1 through SB-4.

A soil sample for each two foot interval from each of the four borings was collected for field headspace analysis. Samples from all borings, yielded headspace results of 0.0 instrument units (iu) at all depths. Soil samples for laboratory analysis for the four borings were collected at depths of 6 to 8 and 14 to 16 feet below ground surface. The 6 to 8 foot range was the estimated bottom of the tank bed. The 14 to 16 foot range was the vertical extent of the GeoprobeTM borings. Each sample was analyzed for 8021 VOCs, GRO, DRO, lead, and cadmium.

Laboratory analysis of eight samples collected from the borings yielded only one detectable VOC. Tetrachloroethene (PCE) was detected at $28\,\mu g/kg$, which is only $2\,\mu g/kg$ above the limit of detection for this parameter, and is therefore a questionable result. A small stockpile of less than a cubic yard of soil that had been excavated during the tank removal was also sampled and analyzed. The laboratory results indicated $300\,\mu g/kg$ PCE. No other parameters were indicated at any level of concern for any of the samples.

The source of potential contamination, the USTs and associated piping, as well as a minor amount of contaminated soil, has been removed from this site. Therefore, no additional petroleum contaminants can be released into the environment. There is no soil contamination above generic NR720 Residual Soil Contaminant Levels present in the area investigated for this report.

Groundwater or bedrock was not encountered at the site, even at the maximum depth explored of 16 feet. It is expected that groundwater is likely 30-feet below grade.

This site has shown no indication to present any threat to human health or the environment. Therefore, we recommend that this site receive closure status.

2.0 INTRODUCTION

2.1 General

Environmental Compliance Consultants, Inc. (ECCI) has prepared this Leaking Underground Storage Tank (LUST) Site Investigation Report for Mr. Paul Zuege, the representative of the subject site. The site is located at 102 East Cook Street, New London, Wisconsin. In this report the site is referred to as the "Zuege" site or simply, the "site".

2.2 Responsible Party

The responsible party for this site is Mr. Paul Zuege, who can be contacted at the following address:

Zuege Products 102 East Cook Street New London, WI 54961-1453 (920) 982-3212

2.3 Consultants and Contractors

This report has been prepared by ECCI. Ms. Catherine Sanders is the project consultant. Ms. Sanders' resume, along with other personnel that have assisted with the work at this site, is appended to this report in Appendix F. Ms. Sanders may be contacted at:

Environmental Compliance Consultants, Inc. (ECCI) P.O. Box 11417 Green Bay, Wisconsin 54307-1417 (920) 434-5022, fax (920) 434-6381

Soil boring services for the investigation were performed by:

Best Drilling & Geoprobing P.O. Box 12494 Green Bay, WI 54307 (800) 326-1889 or (920) 497-2977

The laboratory which performed the analyses for the project was:

En Chem, Inc. 1795 Industrial Drive Green Bay, WI 54302 (800) 736-2436 or (920) 469-2436 Wisconsin Certification Number 405132750

2.4 Purpose of the Report

The purpose of this report is to meet the Wisconsin Department of Natural Resources (WDNR) requirements per NR716 regarding the investigation of subsurface hydrocarbon fuel contamination, which issued from an underground storage tank prior to its removal on October 9, 1995.

2.5 Scope of Work

This report discusses:

- general and background site information;
- the investigation and sampling strategy employed;
- sample types, numbers, and collection procedures;
- site specific geology and hydrogeology;
- field and laboratory investigative results; and
- recommendations for the future of the site.

3.0 GENERAL INFORMATION

3.1 Site Location

The Zuege site is located at 102 East Cook Street, New London, Wisconsin. Based on the U.S. Geologic Survey's *New London*, *Wisconsin* (1969) 7.5 minute topographic quadrangle map, the site is located in the Southeast ¼ of the Southeast ¼ of Section 12, Township 22 North, Range 14 East, in the City of New London, Waupaca County, Wisconsin. The subject site is located on the southeast corner of the intersection of East Cook Street and State Highway 45. It is approximately 1000 feet south of the Wolf River. (See *Figure 1 - Site Location Map*, and *Figure 2 - Site Detail Map*, Appendix B.)

3.2 Past Activities

The site is currently owned and operated as a dry cleaner by Zuege Products. The site was purchased by Mr. Paul Zuege in 1982. The site has been a dry cleaner since 1966. Before that time it was a gasoline and service station. Two underground storage tanks (USTs) remain on the subject site. They were abandoned in place in 1966. These tanks are located in northwest corner of the property. They are unrelated to the waste oil UST, which was located in the southeast corner of the property, and is the subject of this report. A tank inventory form and a tank abandonment form for the subject tank can be found in Appendix E.

In the Summer of 1995, the piping for an underground storage tank was discovered at the Zuege site during preparation for remodeling of the Zuege Products/Drycleaners Etc. building. On October 9, 1995, Jerry Sauby of Jerry's Excavating removed a 500-gallon waste oil tank from the site.

Two soil samples were collected from each end of the tank for off-site laboratory analysis. Maxim Technologies, Inc. of Wausau, Wisconsin analyzed the samples for Diesel Range Organics (DRO). Laboratory results indicated that the sample collected from the west end of the tank indicated 330 mg/kg of DRO and sample collected from the east end of the tank less than 10 mg/kg of DRO. *Table 1 -Summary of Soil Analytical Reports, Tank Removal Samples* can be found in Appendix B. *Figure 2 - Site Detail Map*, Appendix A, shows the location of the tank in relationship to the site.

Evidence of petroleum contamination was subsequently reported to the Wisconsin Department of Natural Resources (WDNR). The WDNR then issued a letter on November 2, 1995, requiring a site investigation and appropriate actions be undertaken to remediate the site.

3.3 Current Activities

On August 28, 1997, ECCI undertook field activities to investigate the vertical and horizontal extent of contamination at the site. Field activities included installation of four borings to a depth of sixteen feet each via a GeoprobeTM apparatus. The borings were termed SB-1 through SB-4. One boring was installed on each side of the tank bed location. The location of the borings are shown on *Figure 2 - Site Detail Map*, Appendix A.

Boring logs were prepared for each boring. All soils were described according to the Unified Soil Classification System. Characteristics such as soil structure, voids, layering, lenses, odor, staining, mottling, and so forth are noted on the logs. Boring logs are presented on WDNR Form 4400-122, *Soil Boring Log Information*, in Appendix C.

Two samples per boring were submitted to an off-site laboratory for analysis. The following analytical parameters were tested for by the state-certified laboratory:

VOC	Volatile Organic Compounds (EPA Method 8021).
GRO	Wisconsin Gasoline Range Organics, with methanol preservation.
DRO	Wisconsin Diesel Range Organics.
Pb and Cd	Total Lead and Cadmium.

The Wisconsin GRO and Wisconsin DRO methods were used for samples submitted from this site in accordance with the most recent revisions as published in NR149 that became effective March 1, 1996.

Each soil boring was backfilled and abandoned with granular bentonite. WDNR Form 3300-5B, *Borehole Abandonment Forms*, were filled out for each abandoned boring, and are presented in Appendix C. No visual or olfactory evidence of petroleum contamination was indicated during field activities in any of the samples taken from the four borings. Detailed evaluation of the geologic and laboratory data is presented later in this report.

4.0 METHODS OF INVESTIGATION

The work performed during the site investigation consisted of the completion and sampling of four soil probe borings. The following sections describe the procedures employed during the above-referenced activities as well as quality assurance and quality control (QA/QC) measures and analytical methods used.

4.1 Sampling Methods

3.1.1 Soil Sampling Methods

A soil probe rig (Geoprobe) was brought to the site in order to explore the soil and groundwater of the area in and around the former UST location. Soil sampling was performed with the GeoprobeTM advancing a 2.5-inch diameter sampling sleeve into the ground using a hydraulic hammer mechanism. Soil samples were collected with this sampler in continuous 4-foot intervals to the total depth desired.

All samples were split longitudinally, with half of the samples used to test for headspace, and selected portions of the other half used for laboratory analysis. Because sampling was done by hand and fresh latex gloves were used for each sample, no decontamination of sampling equipment was necessary between these samples.

The portion of the sample for off-site analytical work will be dealt with immediately. The samples for off-site testing were sealed in EnCore™ samplers, pending preservation in methanol at the laboratory within 48-hours of sample collection. These samples were placed on ice in coolers for delivery to the laboratory.

Each soil sample was analyzed for DRO, GRO, VOCs, total cadmium, and total lead. The material for the total cadmium and total lead samples was obtained from the headspace jars after headspace screening had been performed.

After samples were obtained for laboratory analysis, a portion of the sample was screened with a photoionization detector (PID) using the jar headspace method. The jar headspace method is not described in this report but can be found in Attachment 2 (Field Instrument Techniques) of Closure Assessments for Underground Storage Tanks (WDNR, September 1990). All field headspace readings were recorded. Results from the field screening and laboratory analysis are discussed later in this report.

4.1.2 Groundwater Sampling Methods

A temporary well was placed in the hole left by B-2. This well was constructed of one-inch diameter PVC and consisted of a 10-foot slotted screen and a 7-foot solid riser. The well extended to the depth of the original boring, 16-feet below grade. The temporary well was

left in place for several hours. By the conclusion of soil sampling activities, no water had collected in the well and no groundwater samples were taken. At that time the screen and riser were removed and the hole was abandoned in accordance with applicable regulations.

4.2 QA/QC Methods

4.2.1 Soil Sampling QA/QC

Decontamination was performed to minimize cross-contamination between soil samples and individual borings. All soil probe sampling equipment was decontaminated between each sample. Decontamination of the sampling equipment consisted of washing with detergent and water and a double rinse with clear tap water. A stiff brush was used, where required, to remove soil adhering to the equipment.

Generally, methanol field blanks are prepared and submitted to the laboratory and analyzed for VOCs with the samples. This was not done at this site because EnCore™ samplers were used, and do not require field blank samples.

4.2.2 Field Instrument Quality Control

The PID used for this project was a RAE Systems MiniRAE (Serial No. 000788) utilizing a 10.6 eV lamp. A test calibration, cleaning, and instrument operating check was performed the day before use on the site, and a field calibration of the instrument was performed before work began during the morning of the day of field operations. All readings were taken as "instrument units" (IU) with no attempt made to interpret these readings as ppm values for "gasoline."

The temperature at the site during the drilling operations was 70 ± 5 degrees Fahrenheit. Weather conditions were partly sunny. No precipitation was encountered. ECCI does not believe that weather had any significant effect upon the headspace testing or the performance of the PID.

4.2.3 Field Sampling and Transportation Quality Control

Soil samples which were to be submitted for analytical work were handled, processed, and packed away first, before log descriptions were made, and before field screening samples were prepared. Laboratory samples were packed on ice in coolers for transport. The field screening samples (jar headspace samples) were prepared next, and lastly, the log descriptions were written. Field screening samples were stored out of the direct sunlight until tested with the PID.

4.3 Laboratory Receipt and Analysis

Chain-of-custody procedures were followed throughout the fieldwork performed for this project. Following collection of samples by ECCI personnel, the samples chosen for analysis were entered on chain-of-custody documents supplied by the analytical laboratory, and these documents accompanied the samples until their delivery to the laboratory. The chain-of-custody documents pertaining to this project are attached to this report within Appendix D.

Soil analysis methods are listed on the laboratory report sheets. Similarly, all detection limits for all parameters are shown on the laboratory report sheets as well.

5.0 ENVIRONMENTAL ANALYSIS

5.1 Site Historical Significance

As far as ECCI has been able to determine, there are no impacts or potential impacts to significant historical or archeological features due to the release from the UST or to the past response activities.

5.2 Presence of Sensitive Environmental Receptors

The Zuege site does not contain sensitive environmental receptors of the following types, as mentioned in the NR716.07(8) Site Investigation Scoping:

- Wildlife habitat
- State or federal threatened or endangered species
- Sensitive or unique ecosystems or species
- Areas of special natural resource interest
- Other surface waters and wetlands, as appropriate

5.3 Contaminant Migration Pathway and Receptor Assessment

To the extent that Quaternary geologic and hydrogeologic features have been researched, no unusual conditions that would enhance contaminant transport were discovered. Furthermore, the physical properties of the site, whether natural or manmade, do not appear to allow the rapid and concentrated transmission, or enhanced reception of either vapors or liquid product at this site. The situation at the Zuege site presents no level of appreciable risk to human health.

6.0 GEOLOGIC AND HYDROGEOLOGIC SETTING

6.1 Areal Geology

According to the USDA Waupaca County Soil Survey¹, surface soils consist of what has been classified as Oshkosh silty clay loam. These soils developed from deposits under glaciolacustrine conditions on convex ridges and knolls. The surface soils are generally of a dark brown silty clay loam about 10-inches thick underlain by a reddish brown, firm clay. Bordering the Oshkosh soils in the area of the site are the Hortonville fine sandy loam, which is underlain by a sandy clay loam and clay loam starting at about 12-inches below the surface.

Discussion of the geologic deposits in Waupaca County have been summarized in a 1964 Geologic Survey Water-Supply Paper 1669-U by C.F. Berkstresser, Jr.¹. The surface deposits are of Pleistocene Age and were deposited in lakes between the ice front and the terminal moraines. The Wolf River cuts across the Lake Oshkosh lake basin. Under these lacustrine deposits is glacial till that was deposited during several phases of glaciation in this area.

Stratigraphically, the first bedrock unit encountered under the Zuege site is the Prairie du Chien Group. The Prairie du Chien Group is of Ordovician Age and consists of dolomite containing sandy and shaly layers. Beneath the dolomite lies sandstone of Cambrian Age. Industrial and municipal wells that have been drilled within a quarter-mile of the site indicate bedrock to be over 200 feet below the surface in the area of the site.

Due to the significant amount of development in the area, local overland flow is controlled by the engineered design of the adjacent road beds (Cook Street and Pearl Street) that channel the flow to storm sewer catch basins which transport the water a short distance to the Wolf River. The local horizontal groundwater flow direction would presumably mirror the slope of the land and move towards the north. However, variations in groundwater flow direction are to be expected in the study area due predominantly to such conditions as buried utilities, fill material, and changes in soil stratigraphy.

In the area of the Zuege site, the first significant hydrogeologic formations are the Quaternary deposits. Wells for the City of New London have been drilled to a maximum of 170-feet below the surface in these deposits. The other significant water bearing deposits in Waupaca County are the sandstones of Cambrian Age. The regional potentiometric groundwater surface for the Waupaca County upper aquifer system lies at approximately 760 feet MSL near the Zuege site, which is approximately twenty feet below grade.

¹ Berkstresser, C.F., 1964, Ground-water Resources of Waupaca County, Wisconsin, Geological Survey Water-Supply Paper 1669-U, Wis. Geological and Natural History Survey.

6.2 Site-Specific Geology and Soils Information

The surface at the site is composed of approximately three to eighteen inches of black clayey silt topsoil. Beneath the topsoil, to a depth of approximately 7.5 feet, is an orange brown silty clay. Beneath the silty clay there is orange brown silty fine to medium sand to the maximum depth explored. Many fine orange mottles, and a few fine black mottles were noted in the bottom one foot of the soil core samples.

6.2 Site-Specific Groundwater Information

The groundwater at the Zuege site was expected to be greater than 20-feet below the surface due to the site's proximity to the Wolf River, the elevation difference between the river and the site, and the underlying glacial sediments. The approximate elevation of the site is at 790 feet above mean sea level (msl) and the Wolf River at approximately 760 feet above msl. The site specific groundwater flow is not known at this time, but is likely to the north.

Based upon the lack of field indications of contamination, visual and olfactory, at a depth over eight feet below the bottom of the tank, a temporary well was installed in SB-2 and left in place for several hours. The depth of this temporary well was to the bottom of the boring, approximately sixteen feet. The temporary well remained dry for the entire time it was in place. It was decided, due to the permeable nature of the sandy soils in the vicinity of the well, that since groundwater had not yet presented itself, it was not present at the site above sixteen feet below grade. Therefore, the temporary well was removed and the boring abandoned at the conclusion of the day's sampling activities.

7.0 ANALYTICAL RESULTS

7.1 Soils Analysis

A soil sample for each two foot interval from each of the four borings was collected for field headspace analysis. Each sample was allowed to come to temperature for at least 20 minutes prior to screening with the PID. Samples from all borings, yielded headspace results of 0.0 instrument units (iu) at all depths.

The samples for laboratory analysis for the four borings were collected at depths of 6 to 8 and 14 to 16 feet below ground surface. The 6 to 8 foot range was the estimated bottom of the tank bed. The 14 to 16 foot range was the vertical extent of the geoprobe borings. Each sample was analyzed for 8021 VOCs, GRO, DRO, lead, and cadmium. Laboratory analytical results are summarized in Table 2, Appendix B.

The laboratory analysis of SB-1 samples revealed a lead concentration of 16 ppm in the 6 to 8 foot sample, and a tetrachloroethene (PCE) concentration of 28 ppb in the 14 to 16 foot sample. The limit of detection (LOD) for PCE is 26 ppb and the limit of quantitation (LOQ) is 65 ppb. Therefore, this data is of a questionable nature. All other parameters were not reported above the LOD.

Laboratory analysis of SB-2 samples revealed a lead concentration of 4.5 ppm in the 6 to 8 foot sample, and a cadmium concentration of 0.25 ppb and a lead concentration of 4.5 ppm in the 14 to 16 foot sample. All other parameters were not reported above the LOD.

Laboratory analysis of SB-3 samples revealed no concentrations above the LOD for any parameter analyzed.

Laboratory analysis of SB-4 samples revealed a lead concentration of 5.7 ppm in the 14 to 16 foot sample. All other parameters were not reported above the LOD.

A sample of soil was also taken from a small soil stockpile left on site from the tank removal. Laboratory analysis of this sample revealed a PCE concentration of 360 ppb. All other parameters were not reported above the LOD.

8.0 CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

8.1.1 Soil

Field observations and laboratory analysis of the soils collected during the site investigation performed at the Zuege's site revealed no evidence of soil contamination from petroleum products. Only minor levels of cadmium and lead were indicated in several samples collected from the borings. The metals are present at levels below those specified as Residual Contaminant Levels in NR 720.11 based on human health risks from direct contact in a non-industrial setting.

PCE was indicated in a sample from boring SB-1 at a depth of 14 to 16 feet. PCE has no NR720 generic standard, and was indicated at a questionable low concentration of 28 ppb, which is only 2 ppb above the LOD, and likely above the water table. PCE was also indicated at a level of 300 ppb in a stockpile of soil removed from the tank bed area. The stockpile measures approximately a cubic yard and is on plastic, bermed and covered with plastic.

8.1.2 Groundwater

Groundwater was not encountered at this site to the maximum depth explored of 16 feet below grade. Given the low concentration of PCE in the soil, it is unlikely that it is leaching to the groundwater at a sufficient concentration to exceed the enforcement standard.

8.2 Recommendations

The source of potential contamination, the USTs and associated piping, as well as a minor amount of significantly contaminated soil, has been removed from the site. Therefore, no additional petroleum contaminants can be released into the environment. There is no soil contamination above generic NR720 Residual Soil Contaminant Levels present in the area investigated for this report. Bedrock was not encountered at the site, even at the maximum depth explored of 16 feet.

Based on the information presented within this report, ECCI formally requests closure of this site with no further action.

9.0 PROFESSIONAL STANDARDS

This report was developed from data obtained at a specific time and place. The scope of this report, and the conclusions drawn, are limited to the Zuege's site. The site description and the interpretations represent our understanding of the significant aspects of this project.

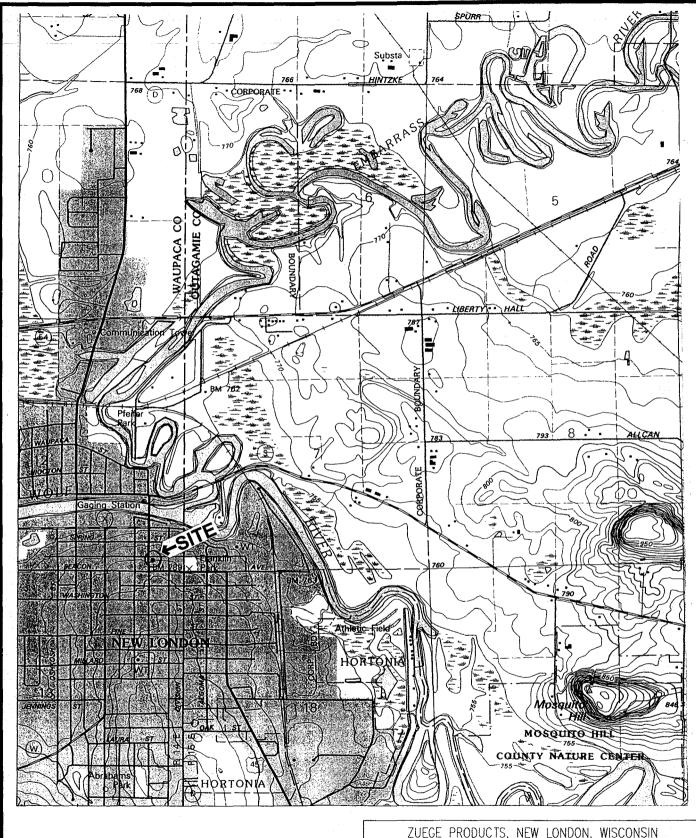
This site investigation was performed using the degree of care and skill ordinarily exercised by Professional Consultants practicing in this or similar localities. No warranty, expressed or implied has been made.

A subsurface exploration was performed and the results were presented in this report. However, subsurface exploration cannot reveal all aspects of the subsurface. Sampling methods and frequency do not allow the observation of every condition and as a result, some materials or layers in the subsurface may not have been noted.

The findings of this report are valid as of the date of the investigation. However, changes in the conditions of a property can occur with the passage of time, whether due to natural processes or the work of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether from legislation, a broadening of knowledge, or from other causes. Accordingly, the findings of this report may be invalid wholly or partially by changes outside our control.

Appendix A

Figures



NOTE: Taken from the NEW LONDON, WIS. 7.5 Minute USGS Topographic Map 1992 ZUEGE PRODUCTS, NEW LONDON, WISCONSIN FIGURE 1

SITE LOCATION MAP

SCALE: 1" = 2000°

DATE: DECEMBER 1998

Environmental Compliance Consultants, Inc.

BY: CMS

Appendix B

Tables

Table 1 Tank Removal Soil Analytical Results Sample Identification ----> Zuege 1W Zuege 2E NR720 Standard Sample Depth (ft) Feet below ground surface 4 4 Direct Fuel Parameters (ppm) DRO 100 330 ND

All units are parts per million unless otherwise indicated ND = Parameter not detected above the Limit of Detection Shaded - Parameter detected above NR720 Standard

Table 2
Site Investigation Soil Analytical Results

Sample ID and Depth>		SB1-2	SB1-4	SB2-2	SB2-4	SB3-2	SB3-4	SB4-2	SB4-4	PILE
		6 - 8	14 - 16	6 - 8	14 - 16	6 - 8	14 - 16	6 - 8	14 - 16	
Parameter Analyzed (ug/kg)	NR720 RCL									
Lead (mg/kg)	50	16	<3.3	4.5	4.5	<3.6	<3.4	5.7	<3.2	NT
Cadmium (mg/kg)	50	<0.29	<0.26	<0.28	<u>0.25</u>	<0.27	<0.27	<0.28	<0.25	NT
GRO (mg/kg)	100	<2.9	<2.7	<2.9	<2.6	<2.9	<2.8	<3.0	<2.6	NŢ
DRO (mg/kg)	100	<4.6	<4.4	<4.3	<3.9	<4.8	<4.7	<4.9	<4.4	NT
Benzene	5.5	<25	<25	<25	<25	<25	<25	<25	<25	<25
Ethyl Benzene	2900	<25	<25	<25	<25	<25	<25	<25	<25	<25
Methyl-tert-Butyl-Ether	*****	<25	<25	<25	<25	<25	<25	<25	<25	< <u>2</u> 5
Napthalene		<25	<25	<25	<25	<25	<25	<25	<25	<25
Toluene	1500	<25	<25	<25	<25	<25	<25	<25	<25	<25
1,2,4-Trimethylbenzene		<25	<25	<25	<25	<25	<25	<25	<25	<25
1,3,5-Trimethylbenzene		<25	<25	<25	<25	<25	<25	<25	<25	<25
Xylenes, m+p	4100*	<25	<25	<25	<25	<25	<25	<25	<25	<25
Xylene, o	4100*	<25	<25	<25	<25	<25	<25	<25	<25	<25
Tetrachloroethene (PCE)	que de les les de	<25	<u>28</u>	<25	<25	<25	<25	<25	<25	360
Trichloroethene (TCE)		<25	<25	<25	<25	<25	<25	<25	<25	<25

[&]quot;Underline" - Result between laboratory LOD and LOQ

NT - Not Tested

^{* -} Total Xylenes

^{** -} Cadmium and Lead standards from NR 720, Table 2, Direct Contact, Non-industrial

Appendix C

Boring Log Forms Boring Abandonment Forms

	of Wisc		ral Res	ources	☐ Eme	To: id Waste ergency Respon	se 🛛 t	Jnder	Waste ground Resou	d Tanks				Soil Bo Form 44		Log Ir	ıform	ation 7-91	
					⊔ wa:	sicwaici		vaici Other		nces					Pag	e 1	of .	2	
	y/Proje							1			I onitori	ng Nur	nber	1 -	Numb				
	-			rcleaners,		chiaf)			-69-2	ing Star	rted	Dot	Drillir	B-1	nleted	ed Drilling Method			
-	t, Inc.	• .	iiii iai	ne and name	or crew t	cinci)		Dav		/28/97		Dan		28/97	='	Geoprobe			
	acility		lo. W	I Unique We	l No.	Common Well	Name	Fina	al Stati	c Water Fee	r Level et MSL	1	ace Ele 80.0			Borehole Diameter 2.5 Inches			
Boring State	Location Plane	on				N, E			Lat	011	t	Loc	Local Grid Location (If applicable) N E						
SE		of SE	1/4	4 of Section	12	T 22 NN,R 1	14 E	L	ong	011	t		Fe	et 🗌]	Feet [」 E] W	
County						· · · · · · · · · · · · · · · · · · ·	DNR Co	unty	Code		Town/C		Village						
	upaca		Γ	· · · · · · · · · · · · · · · · · · ·			69	- 1		New	Lond	on	1	Soil	Prope	rties			
	ipic													301	Порс	lies		1	
	G D	ınts	Fe	1		ck Description							l g				į.	Si	
er	th (i	S	I I	A		logic Origin : Major Unit	ror		S	ဒ္ဌ	am	Ð	ard ratio	it de	-D	ပ	<u> </u>	nent	
Number	Length (in) Recovered	Blow Counts	Depth In Feet						nsc	Graphic Log	Well Diagram		Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments	
B1-1	36		E	Grass-Bl	ack top	soil, SILT		/	ML ML	$\mathbb{H}\mathbb{H}$	-	0.0							
B1-2	36		-1 -2 -3 -4 -5	orange b mottles, (Disturbe removal)	rown S no odo ed soil,	ayey SILT wilty CLAY, if backfill from	no n tank friable,		CL			0.0							
B1-3	48		-7 8 10 11	Silty fine brown Fine to r	ery frid. SAN white SANI med SA	SAND, oran able, no odor (D, med. tan orange mottl D, friable, da ND, loose, 1	r -brown, es ark orang light tan		SM SP ML SP			0.0							
		y that t	the info	rmation on th	is form	is true and corre			•	nowled	ge.								
Signati	ıre							Firm			onmer lox 1211 14)434						Inc.		

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 separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

B-1 of 2 Boring Number Use only as an attachment to Form 4400-122. 2 Sample Soil Properties Depth In Feet Soil/Rock Description Blow Counts Standard Penetration And Geologic Origin For Moisture Content Graphic Log Well Diagram PID/FID USCS Each Major Unit P 200 Fine to med SAND, loose, orange brown -13 14 Fine to med. SAND, loose, tan, prominent fine orange mottles, few -15 fine black mottles -16 **END OF BORING AT 16'**

State of Wisconsin Department of Natural Resources Route To: Solid Waste Emergency Response Underground Tanks													Soil Bo Form 44		Log In	ıform	ation 7-91
				☐ Was	The second section of the section of the second section of the section of the second section of the secti		Vater R							Pag	e 1	of :	2
Facilit	y/Proje	ct Nam	ne	· · · · · · · · · · · · · · · · · · ·		<u> </u>		se/Pe	rmit/M	onitorin	g Nun	nber	Boring	Numb			
				cleaners, etc.)	<u> </u>		03-6						B-2				
			irm nai	ne and name of crew c	hief)		Date Drilling Started					Drillin	ig Com	pleted	Drilling Method		
Des	t, Inc.				1.		8/28/97					8/2	28/97		Geoprobe		
DNR	Facility	Well N	No. W	I Unique Well No.	Common Well	Name	Final Static Water Level Feet MSL					ace Ele	vation Feet M		Borehole Diameter 2.5 Inches		
	Locati	on	!			1 -		0111		Loca				plicable			
State		a O'E			N, E	4 10	Lat					_				_	E
SE		of SE	1/-	4 of Section 12	T 22 NN,R 14	DNR Cou	Lor			`own/Ci	tv/ or		et 🗌	<u>s</u>		Feet [<u> </u>
	, upaca				69	unty Co	, ac		Londo		· mage						
Sar	nple												Soil	Proper	ties		
		S	¥	Soil/Roo	ck Description	n							į				:
	in (ii)	Junc	H.	l control of the cont	ogic Origin F					اہا	_	T ioi	a)				ıts
ıber	gth (ŭ	l di	1	Major Unit			CS	hic	Tan	ĮĮ.	darc trat	stur	ig t	.e. E.	0	mer >
Number	Length (in Recovered	Blow Counts	Depth In Feet		-			S O	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
B2-1	32		 	Grass-Black tops	soil, sandy cl	ayey		ИL	ĬĬĬĬĬ		0.0	V2.A	-				
			F ₁	SILT	•												
			E				ᆀ.										
			-2	Silty fine-med. S	SAND			SM									
			E														
			- 3	-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1								:					
			F,														
B2-2	36		F ⁴	·							0.0						
			<u>-</u> 5	Dark red brown	Silty CLAY	, sbk,	\dashv	CL									
			E	firm, extremely			ı										
			<u>-</u> 6				}					1					
			F				ĺ										
			7									,					
			E	Silty clayey fine brown, very fria			e N	ИL									
B2-3	48		<u>⊢</u> 8	Fine-med. SAN				SP			0.0						
			<u>-</u> 9	loose		·											
			þ′														
			F_10					~~									
			F	Fine-med. SAN brown, loose	D, dark orang	ge	'	SP									
			-11	010 111, 10000													
			Ė														
I herel	v certif	v that	12 the info	rmation on this form is	s true and correc	t to the h	est of =	1V V-	owleda	<u> </u>		L					<u> </u>
Signat		j mat	- IMEO		s a uo ano correc		Firm				~	4.					
										onmen ox 1211 14)434-						inc.	

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 separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Boring Number B-2 Use only as an attachment to Form 4400-122. Page 2 of											of	2		
	nple		D -2	Ose only as an attachment to Porm 4	100-122	 T			<u> </u>	Soil	Proper		UI -	
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration				P 200	RQD/ Comments
82-4 B2-4	Length	Blow	即dəQ	Silty fine to med SAND, light tan, loose, many fine orange mottles END OF BORING AT 16'	O S N		Well Diagra	e. o. PID/F	Stands Penetr	Moisti Conte	Liquic	Plastic Limit Limit	P 200	RQD/ Comm
										-				

State of Wisconsin Route To: Department of Natural Resources Solid Waste] Над	Soil Boring Log Information Haz. Waste Form 4400-122								ation 7-91			
_						rgency Respon			Underground Tanks											
					☐ Wast	tewater		_	ter Resou	rces						4		•		
Facilit	y/Proje	ct Nam					<u>L</u>	Oth	Other Page License/Permit/Monitoring Number Boring Number								of .	<u></u>		
				cleaners,	etc.)				3-69-2		TOIRTOI	ng ivui	B-3							
Boring	Drilled	By (F		ne and name		hief)		D	ate Drill	ing Sta	rted	Date	Date Drilling Complete				d Drilling Method			
Bes	t, Inc.								8	/28/9	7		8/28/97				Geoprobe			
DNR I	Facility	Well N	o. W	I Unique We	li No.	Common Well	Name	F	inal Stati		r Level et MSL	- 1	Surface Elevation Borehol Feet MSL					eter nches		
Boring	Location	on											al Grid							
State 1		. 015				N, E	433		Lat OIII				_			_	-	E		
SE		of SE	1/4	4 of Section	12	т 22 N N,R 1			Long y Code			ity/ or	Fe Village	et 🗌	<u>s</u>	1	Feet [<u> </u>		
	upaca		-				69	Count	.y 00 00		Lond		· mago							
San	nple		,			·····								Soi	Prope	rties				
		S	Feet		Soil/Roc	k Description	on					·				:				
	g E	ounc	n Fe	l		ogic Origin							l ion	l o	:		ľ	ats		
ıbeı	oyer N	Č.	th L		Each	Major Unit			CS)iic		HE/	dar	stur tent	.g .±	ا <u>ن</u> زز	9	/C		
Number	Length (in) Recovered	Blow Counts	Depth In						O S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments		
B3-1	36		-	Grass-Bl	ack tons	soil, clayey	TIP		ML			0.0	1							
				Orano Di	dok topi	on, olayoy i											ì			
			_1														i			
				Silty CI	AV rad	l brown, sbk	r frial	hla	CL											
				Sity CL	A1, ICC	i diowii, sur	i, mai	DIC												
			_ —3																	
			-												! !					
B3-2	48		4	GH- CT			 1		CL			0.0			 					
DJ 2			-	Suty CI	∠AY, re	d brown, sb	K, III	n				0.0		<u> </u>			:			
;			—5 -														r			
																	ı.			
			-6																	
			- 7						-								İ			
			- ′												 - -		, I			
D2 2	40		8	034	<u></u>	C(1)1D	-		٠,,,		Ä						1			
B3-3	48			friable, i	yey fine no odor	SAND, red	brow	n,	ML			0.0					İ			
			_9											ŀ	į					
			-														ı			
			- 10	Silty clay	 vev fine	SAND, tan	browi	– – - n.	ML				-	<u> </u>			i			
			-	friable	, -,	, , , , , , , , , , , , , , , , , , , ,		,									r			
			—11 -														İ			
		÷	- -12												ļ		ì			
I hereb	y certif	y that t		rmation on th	nis form is	true and corre	ct to the	e best	of my k	iowled	ge.	1	1	L	I	L		L		
Signati		<u>-</u>						Fir			-	ntal C	ompli	ance (Once	tanta	Inc			
													en Bay Fax: (IIIC.			
								- 1		(-	,	5500,			. 5551					

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 separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Boring Number B-3 Use only as an attachment to Form 4400													Page	2	of	2
	nple						T					Soil	Proper			
Number	Length (in) Recovered	Blow Counts	Depth In Feet		Soil/Rock Descri nd Geologic Orig Each Major U	in For	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
В3-4	36		-13 -14 -15 -16	Fine to med SAND, loose, med. brown transition to tan and light tan many fine orange mottles END OF BORING AT 16'						0.0						
					•				·							
										•						
				. *												
				·												

State of Wisconsin Route To: Department of Natural Resources Solid Waste Emergency Respo								Iaz. W		l Tanks		Soil Boring Log Informa Form 4400-122					ation 7-91	
					☐ Wast		□ v	Vater 1	-		······································				_			
Facilit	y/Projec	et Nam							nce/De	rmit/M	lonitorin	a Nun	her	Boring	Page		of	2
				ycleaners, et	c.)			1	69-2 :		·	ig Mun	1001	B-4	INGILIE	-1		
				me and name of		nief)				ng Star	ted	Date	Drillin		leted	Drillin	g Metl	hod
Best	t, Inc.			,			·		8/28/97 8/28/97				Geoprobe					
DNR I	Racility	Well N	o. W	I Unique Well l	No.	Common Well	n Well Name Final St				Water Level Surface Feet MSL			Elevation Be Feet MSL			orehole Diameter 2.5 Inches	
Boring Location					NI IC		Lat O'"				Loca	l Grid			plicable			
State Plane SE 1/4 of SE 1/4 of Section				A of Section		N, E T 22 Nn,r 1	4 F	- [ong	011	•		E _e	et 🗌		ī		□ e □ w
County		01 15112		4 of Section	12	1 22 144,14	DNR Cou		-	Civil T	own/Ci	ty/ or			-			
	upaca						69				Lond							
San	nple													Soil	Proper	ties		
		য	Feet	Sc	oil/Roc	k Description	on					•						
	g E	unc	n F	l .		ogic Origin		ı			ا ا	0		ره				nts
ıber	it s	ŭ	th I			Major Unit		1	CS	hic		/FII	dar	Stur	it id	<u>ن</u> ين	0	me >
Number	Length (in) Recovered	Blow Counts	Depth In			-			C S	Graphic Log	Well Diagram	PID/FIL	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
B4-1	42		- 	Grass-Blac	ck tops	soil, sandy c	layey		ML			0.0	37.					
			- 1	Silty fine S	SAND	, gray brow	n, platy,	-	SM									
			-2	very friabl	le													
			- - -		·····				CL									
			-3 - - -	Dark red t sand, sbk,	friable	Silty CLAY e	with											
B4-2	48		-4 -	Dark red l sand, sbk,	 brown firm	Silty CLAY	with		CL			0.0						
			<u>-</u> 5	, , , , , , , , , , , , , , , , , , , ,														
			-6 -															
			- ₇															
B4-3	48		-8	Fine-med.	SANI	D, red brow	n, loose	,	SP			0.0						
			<u>-</u> 9	110 0401														
			10															
			É															
			-11			D, med. bro			SP									
			- 12	<u> </u>	•					:.·:·	·							
	•	y that	the inf	ormation on this	form is	true and corre			my kı	nowled	ge.							
Signat	ure							Firm			onmer						Inc.	
										P.O. B	lox 1211	4, Gre	en Bay	WI 54	1307-2 1-6381	114		

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 separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

B-4 Boring Number Use only as an attachment to Form 4400-122. Page Soil Properties Sample Soil/Rock Description Depth In Feet Blow Counts Standard Penetration And Geologic Origin For Moisture Content Liquid Limit Graphic Log Well Diagram S PID/FID Number USCS Each Major Unit Plastic Limit P 200 -13 Fine to med SAND, light tan, loose, abundant fine orange mottles SP -14 -15 -16 **END OF BORING AT 16'**

treet or Route

P.O. BOX 11417

City, State, Zip Code

Gleen Bou

Telephone Number

54307

1)I

(920) 434-6380

abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back. GENERAL INFORMATION (2) FACILITY NAME Original Well Owner (If Known) Well/Drillhole/Borchole County Location Zuege Products Waupaca Present Well Owner X E <u>SE 1/4 of SE</u> 1/4 of Soc. 12 : T. 22 N. R. <u>14</u> same (If applicable) Street or Route 100 E. Cook Street Gov't Lot Grid Number Grid Location City, State, Zip Code 54961 WI N. □ S., ft. | E. | W. New London Civil Town Name Facility Well No. and/or Name (If Applicable) WI Unique Well No. Street Address of Well Reason For Abandonment 102 E. Cook Street Environmental sample City, Village New London 8/29/97 ELL/DRILLHOLE/BOREHOLE INFORMATION 3) Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) 8/29/97 Yes No No Applicable (Date) Pump & Piping Removed? Liner(s) Removed? Yes No Not Applicable Screen Removed? ☐ Monitoring Well Construction Report Available? Yes No X Not Applicable Water Well Casing Left in Place? Yes ☐ Yes ☒ No ☐ Drillhole If No, Explain X Borehole Was Casing Cut Off Below Surface? Yes Mo Construction Type: Did Sealing Material Rise to Surface? X Yes ☐ No 7 Drilled ☐ Yes ☑ No Dug Did Material Settle After 24 Hours? Driven (Sandpoint) Other (Specify) If Yes, Was Hole Retopped? Yes \square No <u>600/060</u> (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped Bedrock Other (Explain) Gravity Dump Bailer Total Well Depth (ft.) \(\lambda_0\) Casing Diameter (ins.) (6) Sealing Materials For monitoring wells and (From groundsurface) Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout Casing Depth (ft.) NA Concrete Bentonite Pellets S Granular Bentonite Clay-Sand Slurry Was Well Annular Space Grouted? Yes No Unknown Bentonite - Cement Grout ☐ Bentonite-Sand Slurry If Yes, To What Depth? Chipped Bentonite No. Yards, Sacks Sealant or Volume Mix Ratio or Mud Weight Sealing Material Used From (Ft.) To (FL) Surface 0,5 16.0 0.5 Comments: Name of Person or Firm Doing Sealing Work (10) FOR DNR OR COUNTY USE ONLY Environmental Compliance Consultants, Inc Date Received/Inspected District/County Signature of Person Doing Work Date Signed Reviewer/Inspector

Follow-up Necessary

City, State, Zip Code

101000

54307

.II

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 8-89

abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back. FACILITY NAME GENERAL INFORMATION Original Well Owner (If Known) Well/Drillhole/Borchole County Zuege Products ocation Waupaca Present Well Owner XE <u>SE 1/4 of SE</u> 1/4 of S∞. 12 : T. 22 N; R. <u>14</u> same (If applicable) Street or Route 100 E. Cook Street Gov't Lot Grid Number City, State, Zip Code Grid Location 54961 WI New London ft. □ N. □ S., ft. 🗌 E. 🔲 W. Facility Well No. and/or Name (If Applicable) | WI Unique Well No. Civil Town Name Street Address of Well Reason For Abandonment Date of Abandonment 100 E. Cook Street City, Village New London 8/29/97 ELL/DRILLHOLE/BOREHOLE INFORMATION 3) Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) 8/29/97 ☐ Yes ☐ No ☐ Not Applicable Pump & Piping Removed? (Date) Liner(s) Removed? Yes No Not Applicable Screen Removed? ☐ No ☐ Not Applicable ☐ Monitoring Well Construction Report Available? Yes Casing Left in Place? Water Well Yes ☐ Yes 図 No Drillhole If No, Explain X Borehole ∏ Yα ∏ Nb Was Casing Cut Off Below Surface? Did Sealing Material Rise to Surface? Yes No Construction Type: Drilled ☐ Dug Did Material Settle After 24 Hours? Yes X No Driven (Sandpoint) If Yes, Was Hole Retopped? Other (Specify) 6001066 Yes \ \ No (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped Unconsolidated Formation Bedrock Other (Explain) 6/au, ty Dump Bailer Total Well Depth (ft.) \(\lambda_0\). Casing Diameter (ins.) Sealing Materials For monitoring wells and -(From groundsurface) Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout Casing Depth (ft.) NA Concrete Bentonite Pellets Granular Bentonite Clay-Sand Shurry Was Well Annular Space Grouted? Yes No Unknown ☐ Bentonite - Cement Grout Bentonite-Sand Slurry If Yes, To What Depth? Chipped Bentonite No. Yards, Mix Ratio or Mud Weight Sacks Sealant or Volume Sealing Material Used From (Ft.) To (FL) Surface 0.5 16.0 0.5 Comments: Name of Person or Firm Doing Sealing Work (40) FOR DNR OR COUNTY USE ONLY <u>Environmental</u> Compliance Consultants Inc Date Received/Inspected District/County Bignature of Person Doing Work Date Signed Reviewer/Inspector treet or Route Telephone Number P.O. Box 11417 (970) 434-6380 Follow-up Necessary

WELL/DRILLHOLE/BOREHOLE ABANDONMENT Form 3300-5B Rev. 8-89

Il abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Umin. Code, whichever is applicable. Also, see instructions on back.

11) GENERAL INFORMATION		1:	ITY NAME		
I٢	Well/Drillhole/Borchole County				r (If Known)	
	Location Waupaca		Zue	ge Proo	lucts	
		E	Present	Well Owner		
	SE 1/4 of SE 1/4 of Soc. 12 : T. 22 N. R. 14	W	Sam	16		
-	(If applicable)	L		r Route		
	Gov't Lot Grid Number				ok Stree	4
_	Grid Location Grid Number			tate, Zip Coc		
						54961
_		W.	New	Lond	o_{Λ} ω_{I}	- ·
	Civil Town Name		ľ.	•	Vor Name (II A	pplicable) WI Unique Well No.
			,	b-3		
-	Street Address of Well		Reason	For Abandon	ment	
	102 E. Cook Street		Fanice	on ment	al samp	line
	City, Village		Date of	Abandonmen	it	
	New London		8	129/97	1	
	ELL/DRILLHOLE/BOREHOLE INFORMATION			1011		
3)	Original Well/Drillhole/Borehole Construction Completed On	_	(4) Denth to	Water (Feel	1 1/0	
-,			•	•		·
	(Date) 8/29/97		_	Piping Rem	oved?	Yes No Not Applicable
	·	_	Liner(s)	Removed?		Yes No Not Applicable
	Monitoring Well Construction Report Available?	i	Screen P	lemoved?	一	Yes No Not Applicable
	☐ Water Well ☐ Yes ☒ No	- 1	Casing I	Left in Place?	· H	Yes No "
	Drillhole Drillhole	- 1	If No, E	xplain	لسا	L
	☑ Borehole					
	IAI Dolube	Ì	Was Car	ing Out Off 1	Below Surface?	☐ Yes ☐ No
	Construction	- 1		_		terms terms
	Construction Type:			-	Rise to Surface?	
	Drilled Driven (Sandpoint) Dug	- 1			fter 24 Hours?	☐ Y⇔ ⊠ No
	Y Other (Specify) Geoplobe	_	If Yes,	Was Hole R	etopped?	Yes No
	,	1	(5) Required	Method of F	lacing Sealing I	Material
	Formation Type:		· ·			
	☐ Unconsolidated Formation ☐ Bedrock	ļ		luctor Pipe-G	· ==	Conductor Pipe-Pumped
		Ĺ	Dum		凶.	Other (Explain) 6/00, ty
	Total Well Depth (ft.) 10.0 Casing Diameter (ins.)	- 1	(6) Sealing 1	Materials		For monitoring wells and
	(From groundsurface)	- [☐ Neat	Cement Gro	ut	monitoring well boreholes only
			☐ Sand	-Cement (Con	ncrete) Grout	
	Casing Depth (ft.) NA	- 1	☐ Conc		•	Bentonite Pellets
		- 1		Sand Slurry		Granular Bentonite
	Was Well Annular Space Grouted?			onite-Sand Sl		Bentonite - Cement Grout
		WII	_		•	D Bentonie - Canan Grout
-	If Yes, To What Depth? Feet			ped Bentonite		•
-	0-2-27	T			No. Yards,	16. D 16-177 : 1.
	Sealing Material Used		From (Ft.)	To (FL)	Sacks Sealant or Volume	Mix Ratio or Mud Weight
		┰			OI TOIGING	
	Toponil	- 1	Surface	0.5		
•	Bentonite					
	0.		0.5	16.0		·
	bentonite		0,3			
		- 1				
_			<u>.</u>			
		T			· · · · · · · · · · · · · · · · · · ·	
-	Comments:					
			·			
)	Name of Person or Firm Doing Sealing Work	Т	((10)	EQ.D	NP NP	OUNTY USE ONLY
١.	Environmental Compliance Consultants, I	~~	Date	R <mark>eceived/In</mark> sp	ected:	District/County
•	Signature of Person Doing Work Date Signed					
	Street or Route Telephone Number		Revie	wer/Inspector		
	10 5 C					
,	P.O. Box 11417 (920) 434-6380		Follo	v∙up N∞essa	ıry	
	City, State, Zip Code (2)(120, 434, 430)7					
	CATACA MAGALLADE POLOCI					

P.O. BOX 11417

City, State, Zip Code

101000

(920) 434-6380

54307

abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back. FACILITY NAME GENERAL INFORMATION Original Well Owner (If Known) Well/Drillhole/Borchole Zuege Products Location Waupaca Present Well Owner XE <u>SE</u> 1/4 of <u>SE</u> 1/4 of S∞. 12 : T. 22 N. R. <u>14</u> Same (If applicable) Street or Route 100 E. Cook Street Gov't Lot Grid Number City, State, Zip Code Grid Location 54961 WI ft. | E. | W. ft. 🗌 N. 🔲 S., New London Facility Well No. and/or Name (If Applicable) | WI Unique Well No. Civil Town Name Street Address of Well Reason For Abandonment 102 E. Cook Street Environmental sampling City, Village Date of Abandonment New London 8/29/97 LL/DRILLHOLE/BOREHOLE INFORMATION 3) Original Well/Drillhole/Borehole Construction Completed On (4) Depth to Water (Feet) 8/29/97 Yes No No Applicable (Date) Pump & Piping Removed? Liner(s) Removed? Yes No Not Applicable Screen Removed? ☐ Monitoring Well Construction Report Available? Yes No Not Applicable Casing Left in Place? Water Well ∐ Yes ⊠ No Yes Drillhole If No, Explain X Borehole Was Casing Cut Off Below Surface? | Yes | No Construction Type: Did Sealing Material Rise to Surface? X Yes No ☐ Drilled ☐ Dug Did Material Settle After 24 Hours? ☐ Yes ⊠ No Driven (Sandpoint) 1 Other (Specify) 600106 C If Yes, Was Hole Retopped? Yes \ \ \ No (5) Required Method of Placing Sealing Material Formation Type: Conductor Pipe-Gravity Conductor Pipe-Pumped Unconsolidated Formation ☐ Bedrock Dump Bailer Other (Explain) Graunty Total Well Depth (ft.) \(\frac{1}{0}\). Casing Diameter (ins.) (6) Sealing Materials For monitoring wells and (From groundsurface) Neat Cement Grout monitoring well boreholes only Sand-Cement (Concrete) Grout Casing Depth (ft.) NA Concrete Bentonite Pellets M Granular Bentonite Clay-Sand Slurry Was Well Annular Space Grouted? Yes No Unknown ☐ Bentonite-Sand Slurry Bentonite - Cement Grout If Yes, To What Depth? Feet ☐ Chipped Bentonite No. Yards, Sacks Sealant Sealing Material Used Mix Ratio or Mud Weight From (FL) To (FL) or Volume Surface 0.5 16.0 0.5 Comments: Name of Person or Firm Doing Sealing Work (10) FOR DAR OR COUNTY USE ONLY Environmental Compliance Consultants, Inc District/County Date Received/Inspected Signature of Person Doing Work Date Signed Reviewer/Inspector treet or Route Telephone Number

Follow-up Necessary

Appendix D

Laboratory Analytical Reports



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM Fax: 920-469-8827

- Analytical Report -

Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CO

WI DNR LAB ID: 40513270

Report Date: 9/5/97

Sample No.	Field ID	Collection Date	Sample No.	Field ID	Collection Date
872231-001	B1-2	8/28/97			
872231-002	B1-4	8/28/97			
872231-003	B2-2	8/28/97			
872231-004	B2-4	8/28/97			
872231-005	B3-2	8/28/97			
872231-006	B3-4	8/28/97			
872231-007	B4-2	8/28/97			
872231-008	B4-4	8/28/97			
872231-009	PILE	8/28/97			

The "Q" flag is present when a parameter has been detected below the LOQ. This indicates the results are qualified due to the uncertainty of the parameter concentration between the LOD and the LOQ.

Soil VOC detects are corrected for the total solids, unless otherwise noted.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and Laboratory Standard Operating Procedure. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this final report is authorized by Laboratory management, as is verified by the following signature.

Approval Signature 9/5/97

Date



1795 Industrial Drive Green Bay, WI 54302 920-469-2436 800-7-ENCHEM Fax: 920-469-8827

Lab#:

TestGroupID:

Comment:

872231-002

8260+-S-ME

The presence of Tetrachloroethene was confirmed on 9/3/97 by a second GC/MS analysis.



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B1-2

Report Date: 9/4/97

Lab Sample Number: 872231-001

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units Code	Analysis Date	Prep Method	Analysis Method	Analys
Cadmium	< 0.29	0.29	0.92		mg/kg	9/3/97	SW846 3051	SW846 7131	MWM
Lead	16	3.7	12		mg/kg	9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent	84.8				%	9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date:

8/29/97

DIESEL RANGE ORGANICS - SOIL Prep Method: WI MOD DRO Prep Date: 9/2/97 Analyst: NJS **Analysis Analysis** Result LOD LOQ **EQL** Units Code Date Method Analyte **DIESEL RANGE ORGANICS** 4.6 4.6 mg/kg 9/2/97 WI MOD DRO Blank spike 94 50 %Recov 9/2/97 WI MOD DRO Blank spike duplicate 92 50 %Recov 9/2/97 WI MOD DRO

Organic Results

EPA 8260 VOLATILE LIST	METHANO	L	Prep Met	hod: SW8	346 5030	Prep Date:		Analyst: RJN	
Analyte	Result		LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	<	25	25	60		ug/kg		9/2/97	SW846 8260
Bromobenzene	<	25	25	60		ug/kg		9/2/97	SW846 8260
Bromochloromethane	<	25	25	60		ug/kg		9/2/97	SW846 8260
Bromodichloromethane	<	25	25	60		ug/kg		9/2/97	SW846 8260
Bromoform	<	25	25	60		ug/kg		9/2/97	SW846 8260
Bromomethane	<	25	25	60		ug/kg		9/2/97	SW846 8260
s-Butylbenzene	<	25	25	60		ug/kg		9/2/97	SW846 8260
t-Butylbenzene	. <	25	25	60		ug/kg		9/2/97	SW846 8260
n-Butylbenzene	<	25	25	60		ug/kg		9/2/97	SW846 8260
Carbon tetrachloride	<	25	25	60		ug/kg		9/2/97	SW846 8260
Chloroform	. <	25	25	60		ug/kg		9/2/97	SW846 8260
Chlorobenzene	<	25	25	60		ug/kg		9/2/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B1-2

Report Date: 9/4/97

Lab Sample Number: 872231-001

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

Chlorodibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
4-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromo-3-chloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromoethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,4-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dichlorodifluoromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Diisopropyl ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Ethylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Fluorotrichloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Hexachlorobutadiene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Isopropylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
p-Isopropyltoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methylene chloride	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methyl-tert-butyl-ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Naphthalene	<	25	25	60	ug/kg	9/2/97	SW846 8260
n-Propylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Styrene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2,2-Tetrachloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B1-2

Report Date: 9/4/97

Lab Sample Number: 872231-001

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

			'			
1,1,1,2-Tetrachloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
Tetrachloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Toluene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1,1-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Trichloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,3,5-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Vinyl chloride	< 25	25	60	ug/kg	9/2/97	SW846 8260
Xylenes, -m, -p	< 25	25	60	ug/kg	9/2/97	SW846 8260
Xylene, -o	< 25	25	60	ug/kg	9/2/97	SW846 8260
4-Bromofluorobenzene	88			%Recov	9/2/97	SW846 8260
Dibromofluoromethane	87			%Recov	9/2/97	SW846 8260
Toluene-d8	95			%Recov	9/2/97	SW846 8260

GASOLINE RANGE ORGAN	Prep Met	hod: Wil	MOD.GRO	Prep Date:	9/2/97	Analyst: PMS		
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.9			2.9	mg/kg		9/3/97	WDNR MOD GRO
Blank Spike	101			1.00	%Recov		9/3/97	WDNR MOD GRO
Blank Spike Duplicate	99			1.0	%Recov		9/3/97	WDNR MOD GRO





Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B1-4 Report Date: 9/4/97

Lab Sample Number: 872231-002 Collection Date: 8/28/97

WI DNR LAB ID: 40513270 Matrix Type: SOIL

Inorganic Results

Test		Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Cadmium	<	0.26	0.26	0.83		mg/kg		9/3/97	SW846 3051	SW846 7131	MWM
Lead	<	3.3	3.3	11		mg/kg		9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent		94.1				%		9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date: 8/29/97

DIESEL RANGE ORGANICS -	SOIL		Prep Met	hod: Wil	MOD DRO	Prep Date:	9/2/97	Analyst: NJS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.4			4.4	mg/kg		9/2/97	WI MOD DRO
Blank spike	94			50	%Recov		9/2/97	WI MOD DRO
Blank spike duplicate	92			50	%Recov		9/2/97	WI MOD DRO

Organic Results

EPA 8260 VOLATILE LIST	- SOIL/METHANOL		Prep Met	hod: SW8	346 5030	Prep Date:	9/2/97	Analyst: RJN	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method	
Benzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromochloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromodichloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromoform	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromomethane	< 25	25	60		ug/kg		9/2/97	SW846 8260	
s-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
t-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
n-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Carbon tetrachloride	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Chloroform	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Chlorobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	



Project Name: ZUEGE PRODUCTS

Project Number:

Field ID: B1-4

Lab Sample Number: 872231-002

WI DNR LAB ID: 40513270

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Collection Date: 8/28/97

Matrix Type: SOIL

Chlorodibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
4-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromo-3-chloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromoethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dibromomethane	<	25	25	60	ug/k̞g	9/2/97	SW846 8260
1,3-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,4-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dichlorodifluoromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Diisopropyl ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Ethylbenzene	<	25	. 25	60	ug/kg	9/2/97	SW846 8260
Fluorotrichloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Hexachlorobutadiene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Isopropylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
p-Isopropyltoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methylene chloride	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methyl-tert-butyl-ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Naphthalene	<	25	25	60	ug/kg	9/2/97	SW846 8260
n-Propylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Styrene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2,2-Tetrachloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B1-4

Report Date: 9/4/97

Lab Sample Number: 872231-002

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

1,1,1,2-Tetrachioroethane	<	25	25	60	ug/kg		9/2/97	SW846 8260
Tetrachloroethene		28	27	65	ug/kg	Q	9/2/97	SW846 8260
Toluene	<	25	25	60	ug/kg		9/2/97	SW846 8260
1,2,3-Trichlorobenzene	<	25	25	60	ug/kg		9/2/97	SW846 8260
,2,4-Trichlorobenzene	<	25	25	60	ug/kg		9/2/97	SW846 8260
,1,1-Trichloroethane	<	25	25	60	ug/kg		9/2/97	SW846 8260
,1,2-Trichloroethane	<	25	25	60	ug/kg		9/2/97	SW846 8260
,2,4-Trimethylbenzene	<	25	25	60	ug/kg		9/2/97	SW846 8260
richloroethene	<	25	25	60	ug/kg		9/2/97	SW846 8260
,2,3-Trichloropropane	<	25	25	60	ug/kg		9/2/97	SW846 8260
,3,5-Trimethylbenzene	<	25	25	60	ug/kg		9/2/97	SW846 8260
inyl chloride	<	25	25	60	ug/kg		9/2/97	SW846 8260
(ylenes, -m, -p	<	25	25	60	ug/kg		9/2/97	SW846 8260
(ylene, -o	<	25	25	60	ug/kg		9/2/97	SW846 8260
-Bromofluorobenzene		87			%Recov		9/2/97	SW846 8260
Dibromofluoromethane		78			%Recov		9/2/97	SW846 8260
Toluene-d8		92			%Recov		9/2/97	SW846 8260

GASOLINE RANGE ORGAN	IICS - SOIL/METH	IANOL	Prep Met	hod: Wil	MOD.GRO	Prep Date:	9/2/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.7			2.7	mg/kg		9/3/97	WDNR MOD GRO
Blank Spike	101			1.00	%Recov		9/3/97	WDNR MOD GRO
Blank Spike Duplicate	99			1.0	%Recov		9/3/97	WDNR MOD GRO



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B2-2

Report Date: 9/4/97

Lab Sample Number: 872231-003

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Cadmium	< 0.28	0.28	0.89		mg/kg		9/3/97	SW846 3051	SW846 7131	MWM
Lead	4.5	3.6	11		mg/kg	Q	9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent	85.5				%		9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date:

8/29/97

DIESEL RANGE ORGANICS - SOIL			Prep Met	rep Method: WI MOD DRO Prep Date:				Analyst: NJS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.3			4.3	mg/kg		9/2/97	WI MOD DRO
Blank spike	94			50	%Recov		9/2/97	WI MOD DRO
Blank spike duplicate	92			50	%Recov		9/2/97	WI MOD DRO

Organic Results

EPA 8260 VOLATILE LIST - SOIL/METHANOL			Prep Met	hod: SW8	846 5030	Prep Date:	9/2/97 Ar	Analyst: RJN
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromochloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromodichloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromoform	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromomethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
s-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
t-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
n-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Carbon tetrachloride	< 25	25	60		ug/kg		9/2/97	SW846 8260
Chloroform	< 25	25	60		ug/kg		9/2/97	SW846 8260
Chlorobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260

Client: ENVIRONMENTAL COMPLIANCE CONSULT



- Analytical Report -

Project Name: ZUEGE PRODUCTS

Project Number:

Field ID: B2-2

Report Date: 9/4/97

Collection Date: 8/28/97

Lab Sample Number: 872231-003

Matrix Type: SOIL

WI DNR LAB ID: 40513270

Chlorodibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
4-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromo-3-chloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromoethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,4-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dichlorodifluoromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Diisopropyl ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Ethylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Fluorotrichloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Hexachlorobutadiene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Isopropylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
p-Isopropyltoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methylene chloride	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methyl-tert-butyl-ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Naphthalene	<	25	25	60	ug/kg	9/2/97	SW846 8260
n-Propylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Styrene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2,2-Tetrachloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B2-2

Report Date: 9/4/97

Lab Sample Number: 872231-003

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

W DIW EAD ID	. 40010270			-		
1,1,1,2-Tetrachloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
Tetrachloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Toluene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1,1-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Trichloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,3,5-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
/inyl chloride	< 25	25	60	ug/kg	9/2/97	SW846 8260
(ylenes, -m, -p	< 25	25	60	ug/kg	9/2/97	SW846 8260
(ylene, -o	< 25	25	60	ug/kg	9/2/97	SW846 8260
4-Bromofluorobenzene	90			%Recov	9/2/97	SW846 8260
Dibromofluoromethane	88			%Recov	9/2/97	SW846 8260
oluene-d8	95			%Recov	9/2/97	SW846 8260

GASOLINE RANGE ORGAN	ICS - SOIL/METH	IANOL	Prep Met	hod: Wil	MOD.GRO	Prep Date:	9/2/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.9			2.9	mg/kg		9/3/97	WDNR MOD GRO
Blank Spike	101			1.00	%Recov		9/3/97	WDNR MOD GRO
Blank Spike Duplicate	99			1.0	%Recov		9/3/97	WDNR MOD GRO



Project Name: ZUEGE PRODUCTS

Project Number :

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B2-4

Report Date: 9/4/97

Lab Sample Number: 872231-004

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Cadmium	0.25	0.25	0.80		mg/kg	Q	9/3/97	SW846 3051	SW846 7131	MWM
Lead	4.5	3.2	10		mg/kg	Q	9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent	95.4				%		9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date:

8/29/97

DIESEL RANGE ORGANICS - SOIL			Prep Met	hod: WI	MOD DRO	Prep Date:	9/2/97	9/2/97 Analyst: NJS		
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method		
DIESEL RANGE ORGANICS	< 3.9			3.9	mg/kg		9/2/97	WI MOD DRO		
Blank spike	94			50	%Recov		9/2/97	WI MOD DRO		
Blank spike duplicate	92			50	%Recov		9/2/97	WI MOD DRO		

Organic Results

EPA 8260 VOLATILE LIST - SOIL/METHANOL			Prep Met	hod: SW846 5030 Prep Date:				Analyst: RJN	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method	
Benzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromochloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromodichloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromoform	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Bromomethane	< 25	25	60		ug/kg		9/2/97	SW846 8260	
s-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
n-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Carbon tetrachloride	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Chloroform	< 25	25	60		ug/kg		9/2/97	SW846 8260	
Chlorobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260	



Project Name: ZUEGE PRODUCTS

Project Number:

Field ID: B2-4

Lab Sample Number: 872231-004

WI DNR LAB ID: 40513270

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Collection Date: 8/28/97

Matrix Type: SOIL

Chlorodibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
4-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromo-3-chloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromoethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,4-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dichlorodifluoromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,3-Dichloropropene	<	25	25 .	60	ug/kg	9/2/97	SW846 8260
trans-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Diisopropyl ether	. <	25	25	60	ug/kg	9/2/97	SW846 8260
Ethylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Fluorotrichloromethane	<	25	25	60	ug/k g	9/2/97	SW846 8260
Hexachlorobutadiene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Isopropylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
p-Isopropyltoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methylene chloride	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methyl-tert-butyl-ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Naphthalene	<	25	25	60	ug/kg	9/2/97	SW846 8260
n-Propylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Styrene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2,2-Tetrachioroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Collection Date: 8/28/97

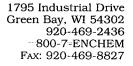
Matrix Type: SOIL

Field ID: B2-4

Lab Sample Number: 872231-004 WI DNR LAB ID: 40513270

1,1,1,2-Tetrachloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
Tetrachloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Toluene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1,1-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Trichloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,3,5-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Vinyl chloride	< 25	25	60	ug/kg	9/2/97	SW846 8260
Xylenes, -m, -p	< 25	25	60	ug/kg	9/2/97	SW846 8260
Xylene, -o	< 25	25	60	ug/kg	9/2/97	SW846 8260
4-Bromofluorobenzene	96			%Recov	9/2/97	SW846 8260
Dibromofluoromethane	97			%Recov	9/2/97	SW846 8260
Toluene-d8	103			%Recov	9/2/97	SW846 8260

GASOLINE RANGE ORGANICS - SOIL/METHANOL			Prep Method: WI MOD.GRO			Prep Date:	9/2/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.6			2.6	mg/kg		9/3/97	WDNR MOD GRO
Blank Spike	101			1.00	%Recov		9/3/97	WDNR MOD GRO
Blank Spike Duplicate	99			1.0	%Recov		9/3/97	WDNR MOD GRO





Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B3-2 Report Date: 9/4/97

Lab Sample Number: 872231-005 Collection Date: 8/28/97

WI DNR LAB ID: 40513270 Matrix Type: SOIL

Inorganic Results

Test	Resu	alt LOD	LOQ	EQL	Units Co	Analysis de Date	Prep Method	Analysis Method	Analys
Cadmium	< 0.27	0.27	0.86		mg/kg	9/3/97	SW846 3051	SW846 7131	MWM
Lead	< 3.6	3.6	11		mg/kg	9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent	87.0				%	9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date: 8/29/97

DIESEL RANGE ORGANICS -		Prep Met	hod: Wl	MOD DRO	Prep Date:	9/2/97	Analyst: NJS	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.8	·		4.8	mg/kg		9/2/97	WI MOD DRO
Blank spike	94			50	%Recov	÷	9/2/97	WI MOD DRO
Blank spike duplicate	92			50	%Recov		9/2/97	WI MOD DRO

Organic Results

EPA 8260 VOLATILE LIST	PA 8260 VOLATILE LIST - SOIL/METHANOL					Prep Date:		Analyst: RJN
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromochloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromodichloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromoform	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromomethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
s-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
n-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Carbon tetrachloride	< 25	25	60		ug/kg		9/2/97	SW846 8260
Chloroform	< 25	25	60		ug/kg		9/2/97	SW846 8260
Chlorobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
					-			



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B3-2

Report Date: 9/4/97

Lab Sample Number: 872231-005

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

					·		
Chlorodibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Chloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
4-Chlorotoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromo-3-chloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromoethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dibromomethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,4-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Dichlorodifluoromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
2,2-Dichloropropane	· <	25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,3-Dichloropropene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Diisopropyl ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Ethylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Fluorotrichloromethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Hexachlorobutadiene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Isopropylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
p-Isopropyltoluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methylene chloride	<	25	25	60	ug/kg	9/2/97	SW846 8260
Methyl-tert-butyl-ether	<	25	25	60	ug/kg	9/2/97	SW846 8260
Naphthalene	<	25	25	60	ug/kg	9/2/97	SW846 8260
n-Propylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Styrene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2,2-Tetrachloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B3-2

Report Date: 9/4/97

Lab Sample Number: 872231-005

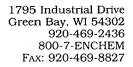
Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

1,1,1,2-Tetrachloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
Tetrachloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Toluene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trichlorobenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1,1-Trichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2-Trichloroethane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2,4-Trimethylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Trichloroethene	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,2,3-Trichloropropane	<	25	25	60	ug/kg	9/2/97	SW846 8260
1,3,5-Trimethylbenzene	<	25	25	60	ug/kg	9/2/97	SW846 8260
Vinyl chloride	<	25	25	60	ug/kg	9/2/97	SW846 8260
Xylenes, -m, -p	<	25	25	60	ug/kg	9/2/97	SW846 8260
Xylene, -o	<	25	25	60	ug/kg	9/2/97	SW846 8260
4-Bromofluorobenzene		93			%Recov	9/2/97	SW846 8260
Dibromofluoromethane		91			%Recov	9/2/97	SW846 8260
Toluene-d8		100			%Recov	9/2/97	SW846 8260

GASOLINE RANGE ORGANICS - SOIL/METHANOL			Prep Met	hod: Wil	MOD.GRO	Prep Date:	9/2/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.9			2.9	mg/kg		9/3/97	WDNR MOD GRO
Blank Spike	101			1.00	%Recov		9/3/97	WDNR MOD GRO
Blank Spike Duplicate	99			1.0	%Recov		9/3/97	WDNR MOD GRO





Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B3-4

Report Date: 9/4/97

Collection Date: 8/28/97

Lab Sample Number: 872231-006

Matrix Type: SOIL

WI DNR LAB ID: 40513270

Inorganic Results

Test	Res	sult LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Cadmium	< 0.2	7 0.27	0.86		mg/kg		9/3/97	SW846 3051	SW846 7131	MWM
Lead	< 3.4	3.4	11		mg/kg		9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent	88.	7			%		9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date:

8/29/97

DIESEL RANGE ORGANICS -		Prep Meti	nod: WI	MOD DRO	Prep Date:	9/2/97	Analyst: NJS	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.7	•		4.7	mg/kg		9/2/97	WI MOD DRO
Blank spike	94			50	%Recov		9/2/97	WI MOD DRO
Blank spike duplicate	92			50	%Recov		9/2/97	WI MOD DRO

Organic Results

EPA 8260 VOLATILE LIST		Prep Met	hod: SW8	346 5030	Prep Date:	9/2/97	Analyst: RJN	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Benzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromochloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromodichloromethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromoform	< 25	25	60		ug/kg		9/2/97	SW846 8260
Bromomethane	< 25	25	60		ug/kg		9/2/97	SW846 8260
s-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
t-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
n-Butylbenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260
Carbon tetrachloride	< 25	25	60		ug/kg		9/2/97	SW846 8260
Chloroform	< 25	25	60		ug/kg		9/2/97	SW846 8260
Chlorobenzene	< 25	25	60		ug/kg		9/2/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Field ID: B3-4

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Lab Sample Number: 872231-006

Matrix Type: SOIL

Chlorodibromomethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
Chloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
Chloromethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
2-Chlorotoluene	< 25	25	60	ug/kg	9/2/97	SW846 8260
4-Chlorotoluene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromo-3-chloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dibromoethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
Dibromomethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,4-Dichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
cis-1,2-Dichloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Dichlorodifluoromethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,2-Dichloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,2-Dichloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,3-Dichloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260
2,2-Dichloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1-Dichloropropene	< 25	25	60	· ug/kg	9/2/97	SW846 8260
cis-1,3-Dichloropropene	< 25	25	60	ug/kg	9/2/97	SW846 8260
trans-1,3-Dichloropropene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Diisopropyl ether	< 25	25	60	ug/kg	9/2/97	SW846 8260
Ethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Fluorotrichloromethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
Hexachlorobutadiene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Isopropylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
p-Isopropyltoluene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Methylene chloride	< 25	25	60	ug/kg	9/2/97	SW846 8260
Methyl-tert-butyl-ether	< 25	25	60	ug/kg	9/2/97	SW846 8260
Naphthalene	< 25	25	60	ug/kg	9/2/97	SW846 8260
n-Propylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260
Styrene	< 25	25	60	ug/kg	9/2/97	SW846 8260
1,1,2,2-Tetrachloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260
				- - -		



Project Name: ZUEGE PRODUCTS

Field ID: B3-4

Lab Sample Number: 872231-006

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Collection Date: 8/28/97

WI DNR LAB ID: 40513270 Matrix Type: SOIL

WI DNR LAB IL): 40513270			matrix Typo . o				
1,1,1,2-Tetrachloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260		
Tetrachioroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260		
Toluene	< 25	25	60	ug/kg	9/2/97	SW846 8260		
1,2,3-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260		
1,2,4-Trichlorobenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260		
1,1,1-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260		
1,1,2-Trichloroethane	< 25	25	60	ug/kg	9/2/97	SW846 8260		
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260		
Trichloroethene	< 25	25	60	ug/kg	9/2/97	SW846 8260		
1,2,3-Trichloropropane	< 25	25	60	ug/kg	9/2/97	SW846 8260		
1,3,5-Trimethylbenzene	< 25	25	60	ug/kg	9/2/97	SW846 8260		
Vinyl chloride	< 25	25	60	ug/kg	9/2/97	SW846 8260		
Xylenes, -m, -p	< 25	25	60	ug/kg	9/2/97	SW846 8260		
Xylene, -o	< 25	25	60	ug/kg	9/2/97	SW846 8260		
4-Bromofluorobenzene	96			%Recov	9/2/97	SW846 8260		
Dibromofluoromethane	92			%Recov	9/2/97	SW846 8260		
Toluene-d8	98			%Recov	9/2/97	SW846 8260		

GASOLINE RANGE ORGAN	ICS - SOIL/METH	IANOL	Prep Met	hod: Wil	MOD.GRO	Prep Date:	9/2/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 2.8	***		2.8	mg/kg	•	9/3/97	WDNR MOD GRO
Blank Spike	101			1.00	%Recov		9/3/97	WDNR MOD GRO
Blank Spike Duplicate	99			1.0	%Recov		9/3/97	WDNR MOD GRO



Project Name: ZUEGE PRODUCTS

Project Number:

Olietit. Live

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B4-2

Report Date: 9/4/97

Collection Date: 8/28/97

Lab Sample Number: 872231-007

Matrix Type: SOIL

WI DNR LAB ID: 40513270

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Cadmium	< 0.28	0.28	0.89		mg/kg		9/3/97	SW846 3051	SW846 7131	MWM
Lead	5.7	3.7	12		mg/kg	Q	9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent	83.5				%		9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date :

8/29/97

DIESEL RANGE ORGANICS - SOIL Prep Method: WI MOD DRO Prep Date: 9/2/97 Analyst: NJS **Analysis Analysis** Result LOD LOQ **EQL** Units Code Date Method Analyte **DIESEL RANGE ORGANICS** < 4.9 4.9 mg/kg 9/2/97 WI MOD DRO Blank spike 50 9/2/97 WI MOD DRO 86 %Recov Blank spike duplicate 85 50 %Recov 9/2/97 WI MOD DRO

Organic Results

PA 8260 VOLATILE LIST - SOIL/METHANOL			Prep Met	hod: SW	346 5030	Prep Date:	9/2/97	Analyst: RJN	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method	
Benzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromobenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromochloromethane	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromodichloromethane	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromoform	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromomethane	< 25	25	60		ug/kg		9/3/97	SW846 8260	
s-Butylbenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
t-Butylbenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
n-Butylbenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Carbon tetrachloride	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Chloroform	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Chlorobenzene	< 25	25	60 [°]		ug/kg		9/3/97	SW846 8260	



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B4-2

Report Date: 9/4/97

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Lab Sample Number: 872231-007

Matrix Type: SOIL

Chlorodibromomethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
Chloroethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
Chloromethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
2-Chlorotoluene	<	25	25	60	ug/kg	9/3/97	SW846 8260
4-Chlorotoluene	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dibromo-3-chloropropane	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dibromoethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
Dibromomethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,3-Dichlorobenzene	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,4-Dichlorobenzene	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dichloroethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dichlorobenzene	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloroethene	<	25	25	60	ug/kg	9/3/97	SW846 8260
cis-1,2-Dichloroethene	<	25	25	60	ug/kg	9/3/97	SW846 8260
Dichlorodifluoromethane	<	25	25	60 -	ug/kg	9/3/97	SW846 8260
trans-1,2-Dichloroethene	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dichloropropane	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloroethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,3-Dichloropropane	<	25	25	60	ug/kg	9/3/97	SW846 8260
2,2-Dichloropropane	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloropropene	<	25	25	60	ug/kg	9/3/97	SW846 8260
cis-1,3-Dichloropropene	<	25	25	60	ug/kg	9/3/97	SW846 8260
trans-1,3-Dichloropropene	<	25	25	60	ug/kg	9/3/97	SW846 8260
Diisopropyl ether	<	25	25	60	ug/kg	9/3/97	SW846 8260
Ethylbenzene	<	25	25	60	ug/kg	9/3/97	SW846 8260
Fluorotrichloromethane	<	25	25	60	ug/kg	9/3/97	SW846 8260
Hexachlorobutadiene	<	25	25	60	ug/kg	9/3/97	SW846 8260
Isopropylbenzene	<	25	25	60	ug/kg	9/3/97	SW846 8260
p-Isopropyltoluene	<	25	25	60	ug/kg	9/3/97	SW846 8260
Methylene chloride	<	25	25	60	ug/kg	9/3/97	SW846 8260
Methyl-tert-butyl-ether	<	25	25	60	ug/kg	9/3/97	SW846 8260
Naphthalene	<	25	25	60	ug/kg	9/3/97	SW846 8260
n-Propylbenzene	<	25	25	60	ug/kg	9/3/97	SW846 8260
Styrene	<	25	25	60	ug/kg	9/3/97	SW846 8260
1,1,2,2-Tetrachioroethane	<	25	25	60	ug/kg	9/3/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Field ID: B4-2

Lab Sample Number: 872231-007

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

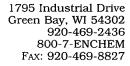
Report Date: 9/4/97

Collection Date: 8/28/97

WI DNR LAB ID: 40513270 Matrix Type: SOIL

WI DNR LAB ID : 40513270				matrix type . C		
1,1,1,2-Tetrachioroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Tetrachloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Toluene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,3-Trichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,4-Trichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,1-Trichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,2-Trichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Trichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,3-Trichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,3,5-Trimethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Vinyl chloride	< 25	25	60	ug/kg	9/3/97	SW846 8260
Xylenes, -m, -p	< 25	25	60	ug/kg	9/3/97	SW846 8260
Xylene, -o	< 25	25	60	ug/kg	9/3/97	SW846 8260
4-Bromofluorobenzene	91			%Recov	9/3/97	SW846 8260
Dibromofluoromethane	89			%Recov	9/3/97	SW846 8260
Toluene-d8	97			%Recov	9/3/97	SW846 8260

GASOLINE RANGE ORGAN	IICS - SOIL/METH	IANOL	Prep Met	hod: Wi	MOD.GRO	Prep Date:	9/2/97	Analyst: PMS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Gasoline Range Organics	< 3.0			3.0	mg/kg		9/3/97	WDNR MOD GRO
Blank Spike	101			1.00	%Recov		9/3/97	WDNR MOD GRO
Blank Spike Duplicate	99			1.0	%Recov		9/3/97	WDNR MOD GRO





Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Field ID: B4-4

Collection Date: 8/28/97

Lab Sample Number: 872231-008

Matrix Type: SOIL

WI DNR LAB ID: 40513270

Inorganic Results

Test		Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Cadmium	<	0.25	0.25	0.80		mg/kg		9/3/97	SW846 3051	SW846 7131	MWM
Lead	<	3.2	3.2	10		mg/kg		9/2/97	SW846 3051	SW846 7421	MWM
Solids, percent		94.5				%		9/2/97	SM2540G	SM2540G	PHS

Organic Results

Preservation Date:

8/29/97

DIESEL RANGE ORGANICS -	SOIL		Prep Met	hod: WII	MOD DRO	Prep Date:	9/2/97	Analyst: NJS
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
DIESEL RANGE ORGANICS	< 4.4	•		4.4	mg/kg		9/2/97	WI MOD DRO
Blank spike	86			50	%Recov		9/2/97	WI MOD DRO
Blank spike duplicate	85			50	%Recov		9/2/97	WI MOD DRO

Organic Results

EPA 8260 VOLATILE LIST	- SOIL/METHANOL	-	Prep Method: SW846 5030			Prep Date:	9/2/97	Analyst: RJN	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method	
Benzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromobenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromochloromethane	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromodichloromethane	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromoform	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Bromomethane	< 25	25	60		ug/kg		9/3/97	SW846 8260	
s-Butylbenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
t-Butylbenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
n-Butylbenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Carbon tetrachloride	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Chloroform	< 25	25	60		ug/kg		9/3/97	SW846 8260	
Chlorobenzene	< 25	25	60		ug/kg		9/3/97	SW846 8260	



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: B4-4

Report Date: 9/4/97

Lab Sample Number: 872231-008

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

	·					
Chlorodibromomethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Chloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Chloromethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
2-Chlorotoluene	< 25	25	60	ug/kg	9/3/97	SW846 8260
4-Chlorotoluene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dibromo-3-chloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dibromoethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Dibromomethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,3-Dichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,4-Dichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
cis-1,2-Dichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Dichlorodifluoromethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
trans-1,2-Dichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,3-Dichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
2,2-Dichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloropropene	< 25	25	60	ug/kg	9/3/97	SW846 8260
cis-1,3-Dichloropropene	< 25	25	60	ug/kg	9/3/97	SW846 8260
trans-1,3-Dichloropropene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Diisopropyl ether	< 25	25	60	ug/kg	9/3/97	SW846 8260
Ethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Fluorotrichloromethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Hexachlorobutadiene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Isopropylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
p-Isopropyltoluene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Methylene chloride	< 25	25	60	ug/kg	9/3/97	SW846 8260
Methyl-tert-butyl-ether	< 25	25	60	ug/kg	9/3/97	SW846 8260
Naphthalene	< 25	25	60	ug/kg	9/3/97	SW846 8260
n-Propylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Styrene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,2,2-Tetrachloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Field ID: B4-4

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Lab Sample Number: 872231-008

Matrix Type: SOIL

1,1,1,2-Tetrachloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Tetrachloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Toluene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,3-Trichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,4-Trichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,1-Trichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,2-Trichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Trichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,3-Trichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,3,5-Trimethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Vinyl chloride	< 25	25	60	ug/kg	9/3/97	SW846 8260
Xylenes, -m, -p	< 25	25	60	ug/kg	9/3/97	SW846 8260
Xylene, -o	< 25	25	60	ug/kg	9/3/97	SW846 8260
4-Bromofluorobenzene	93			%Recov	9/3/97	SW846 8260
Dibromofluoromethane	90			%Recov	9/3/97	SW846 8260
Toluene-d8	98			%Recov	9/3/97	SW846 8260

GASOLINE RANGE ORGANICS - SOIL/METHANOL			Prep Met	hod: WI	MOD.GRO	Prep Date:	9/2/97	Analyst: PMS	
Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis M ethod	
Gasoline Range Organics	< 2.6			2.6	mg/kg		9/3/97	WDNR MOD GRO	
Blank Spike	99			1.0	%Recov		9/3/97	WDNR MOD GRO	
Blank Spike Duplicate	95			1.0	%Recov		9/3/97	WDNR MOD GRO	



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Field ID: PILE

Report Date: 9/4/97

Lab Sample Number: 872231-009

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Matrix Type: SOIL

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method	Analys
Solids, percent	87.1	,			%		9/2/97	SM2540G	SM2540G	PHS

Organic Results

EPA 8260 VOLATILE LIST - S	Prep Metho	od: SW846 5030	Prep Date:		Analyst: RJN		
Analyte	Result	LOD	LOQ	EQL Units	Code	Analysis Date	Analysis M ethod
Benzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
Bromobenzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
Bromochloromethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
Bromodichloromethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
Bromoform	< 25	25	60	ug/kg		9/3/97	SW846 8260
Bromomethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
s-Butylbenzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
t-Butylbenzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
n-Butylbenzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
Carbon tetrachloride	< 25	25	60	ug/kg		9/3/97	SW846 8260
Chloroform	< 25	25	60	ug/kg		9/3/97	SW846 8260
Chlorobenzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
Chlorodibromomethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
Chloroethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
Chloromethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
2-Chlorotoluene	< 25	25	60	ug/kg		9/3/97	SW846 8260
4-Chlorotoluene	< 25	25	60	ug/kg		9/3/97	SW846 8260
1,2-Dibromo-3-chloropropane	< 25	25	60	ug/kg		9/3/97	SW846 8260
1,2-Dibromoethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
Dibromomethane	< 25	25	60	ug/kg		9/3/97	SW846 8260
1,3-Dichlorobenzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
1,4-Dichlorobenzene	< 25	25	60	ug/kg		9/3/97	SW846 8260
1,2-Dichloroethane	< 25	25	60	ug/kg		9/3/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Field ID: PILE

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

Report Date: 9/4/97

Lab Sample Number: 872231-009 Collection Date: 8/28/97

WI DNR LAB ID: 40513270 Matrix Type: SOIL

WI DIKK EAD II	3. 40010210					
1,2-Dichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
cis-1,2-Dichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Dichlorodifluoromethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
trans-1,2-Dichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2-Dichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,3-Dichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
2,2-Dichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1-Dichloropropene	< 25	25	60	ug/kg	9/3/97	SW846 8260
cis-1,3-Dichloropropene	< 25	25	60	ug/kg	9/3/97	SW846 8260
trans-1,3-Dichloropropene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Diisopropyl ether	< 25	25	60	ug/kg	9/3/97	SW846 8260
Ethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Fluorotrichloromethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Hexachlorobutadiene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Isopropylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
p-Isopropyltoluene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Methylene chloride	< 25	25	60	ug/kg	9/3/97	SW846 8260
Methyl-tert-butyl-ether	< 25	25	60	ug/kg	9/3/97	SW846 8260
Naphthalene	< 25	25	60	ug/kg	9/3/97	SW846 8260
n-Propylbenzene	< 25	. 25	60	ug/kg	9/3/97	SW846 8260
Styrene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,2,2-Tetrachloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,1,2-Tetrachloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
Tetrachloroethene	360	29	70	ug/kg	9/3/97	SW846 8260
Toluene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,3-Trichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,4-Trichlorobenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,1-Trichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,1,2-Trichloroethane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,4-Trimethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260
Trichloroethene	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,2,3-Trichloropropane	< 25	25	60	ug/kg	9/3/97	SW846 8260
1,3,5-Trimethylbenzene	< 25	25	60	ug/kg	9/3/97	SW846 8260



Project Name: ZUEGE PRODUCTS

Project Number:

Client: ENVIRONMENTAL COMPLIANCE CONSULT

•

Report Date: 9/4/97

Lab Sample Number: 872231-009

Collection Date: 8/28/97

WI DNR LAB ID: 40513270

Field ID: PILE

Matrix Type: SOIL

							
Vinyl chloride	<	25	25	60	ug/kg	9/3/97	SW846 8260
Xylenes, -m, -p	<	25	25	60	ug/kg	9/3/97	SW846 8260
Xylene, -o	<	25	25	60	ug/kg	9/3/97	SW846 8260
4-Bromofluorobenzene		85			%Recov	9/3/97	SW846 8260
Dibromofluoromethane		91			%Recov	9/3/97	SW846 8260
Toluene-d8		90			%Recov	9/3/97	SW846 8260

Company Name: ECCI Branch or Location: Green Bay	EHEM	1241 Bellevue St., Suite 9 Green Bay, WI 54302 920-469-2436 • 1-800-736-2436 FAX 920-469-8827	802 Deming Way Madison, WI 53717 608-827-5501 • 1-888-536-2436 Fax: 608-827-5503	1423 N. 8th Street., Suite 122 Superior, WI 54880 715-392-5844 • 1-800-837-8238 FAX 715-392-5843
Project Contact: Catherine Sanders Telephone: 497-8315 Project Number:	CHAIN OF CUS	STODY Leturn of	Page P.O. #	e of Quote # To: Cather me Sinders
Project Name: Zuege Froducts, Project Location: New London, WI Sampled By (Print): Catherine Sanders	FILTERED? (YES/NO) PRESERVATION (CODE)*		Company: E	CCI DuChateau en Bay, Wl
Regulatory Program (circle): UST RCRA CLP SDWA NPDES/WPDES CAA NR Other NR720 Confirmation Analysis Required? (circle): N			Company: FCC1 Address: P. O. Bo:	<u> </u>
12262 1214 0/ 1	NE PORTO DE LA COMPANIA DE LA COMPAN	Mail I	GOOD TOTAL COMMEN	ABORATORY USE ONLY VIS LABORATORY NUMBER
B1-4 Boring1-4 9221 9457 97 98 B2-2 Boring 2-2 3112 929710		5	X '37nC	104 31
B3-2 Boring 3-2 1704 2397 8/2/10 B3-4 Boring 3-4 4928 18560 138/11	25 V V V V	S	oray ms	01911 01911
B4-4 Boring4-4 5486205869711	30 00 00 00 00		1 Spend	
		3 2		
*Preservation Code A=None B=HCL C=H2SO4 D=HN03 E=EnCore F=Methanol** Relinquished By:	anders 729/97 1235	Received By:	Date/Time:	En Chem Project No. 8 7223 / Sample Receipt Temp.
G=NaOH O=Other (Indicate) **If not using En Chem's methanol, indicate volume of methanol added and rk th priate consiles. Relinquished By: **Relinquished By:	Date/Time: F	Received By:	Date/Time:	Sample Receipt pH (Wet/Metals)

Appendix E

Tank Information





REPORT OF: CHEMICAL ANALYSES

PROJECT:

ZUEGE PRODUCTS

DATE: October 19, 1995

REPORTED TO:

Jerry's Excavating, Inc. Attn: Mr. Jerry Sauby

E7210 CTY "C"

Clintonville, WI 54929

PROJECT NO: 3417500597

INTRODUCTION

This report presents the results of the analyses of two samples received on October 10, 1995, from Mr. Jerry Sauby of Jerry's Excavating, Inc. The scope of our service was limited to the parameters listed in the attached tables.

METHODOLOGY

Analyses are performed according to Maxim Technologies, Inc. (Maxim) Standard Operating Procedures. The procedures are based on the references stated in the analytical results tables.

RESULTS

The results are listed in the attached tables.

<u>REMARKS</u>

The samples were collected on October 9, 1995. If samples are not consumed in the analysis, they will be held until their designated expiration date, and then disposed, unless written instructions to the contrary are received.

MAXIM TECHNOLOGIES, INC.

Wisconsin Laboratory Certification #737105930

Richard A. Abreu

Chemist

Dennis J. Daigle

Wausau Chemistry Manager

RAA/DJD/tcl

555 South 72nd Avenue • Wausau, WI 54401 • Telephone: 715/845-4100 • Fax: 715/842-0381

PROJECT NO: 3417500597 DATE: October 19, 1995

PAGE: 2

DIESEL RANGE ORGANICS ANALYSIS RESULTS

WISCONSIN MODIFIED DRO

(All values are in mg/Kg which is equivalent to parts-per-million)
(All results are reported on a dry weight basis.)

				·
Client Sample ID:	Zuege 1W	Zuege 2E	•••	
LAB SAMPLE ID:	3886	3887	Method Blank Q17CA9B6	
Parameter:				Practical Ouantitation Limit
Diesel Range Organics (par #78919)	3301	ND	ND	10 (30)1
Surrogate Recovery:				
Triacontane:	92%	92%	90%	
Percent Moisture:	19%	21%	N/A	
Date Collected:	10/9/95	10/9/95	N/A	
Date Received:	10/10/95	10/10/95	N/A	•
Date Preserved:	10/10/95	10/10/95	N/A	
Date Extracted:	10/10/95	10/10/95	10/10/95	
Date Analyzed:	10/12/95	10/11/95	10/10/95	

ND = Not Detected

N/A = Not Applicable

BQL = Below Quantitation Limit

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

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

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

¹ Parameter analyzed at a 1:3 dilution. The chromatogram indicates the presence of higher boiling hydrocarbons beyond the DRO window.

PROJECT NO: 3417500597 DATE: October 19, 1995

PAGE: 3

QUALITY CONTROL DIESEL RANGE ORGANICS ANALYSIS RESULTS

WISCONSIN MODIFIED DRO

(All values are in percent recovery)

LAB SAMPLE ID:	Spike Q17BC645	Replicate Spike Q17BD125	
Parameter Recovery:			WDNR Acceptance Criteria
Diesel Range Organics (par #78919)	82%	90%	89-129%
Surrogate Recovery:			
Triacontane:	101%	97%	
Date Extracted:	10/9/95	10/9/95	
Date Analyzed:	10/10/95	10/10/95	

N/A = Not Applicable

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

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

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

Visconsin Department of Industry, Labor and Human Relations

CHECKLIST FOR UNDERGROUND

RETURN COMPLETED CHECKLIST TO Safety & Buildings Division

Fire Prevention & Underground Storage Tank Section P. O. Box 7969 Madison WI. 53707

Comp	ete	one	forr	n for
each s	ite c	losu	re.	eriast i i ins

SBD-8951 (R. 12/91)

TANK CLOSURE

each site closure.	1000年8月17日 韓華	27世 明明 。 3116年	a Turking to Missan	医俄利巴巴姆斯	Military of	CHROX (30	3 IVI ALI	Boll Miles of
A. IDENTIFICATION: (P.	ease Print) I	ndicate whethe	r closure is for:	Tank Sy er Name	stem	☐ Tank On	ly [Piping Only
DRYCLEANE	es, Ect	•			ZUF	GF		
Site Street Address (not P.O. E	Box)			Street Address		0010		O)
102 E COOK	STRE A	F Town of the R		7638		RANDE of Brate		
NEW LONDO			,	EW LOA	TOON	- W	1 .	54961
State Z	54961	County WAUP!	County	UPACA	Telepho	one No. (include		(5 2 3
3. Closure Company Name (i		Clo	Sure Company Str E 72/0			linton.	•	
Closure Company Telephone N	lo: (include area (sure Company Cit				<u> </u>	17.00mm。第二个。
4. Name of Company Perform	409	ssment As	sessment Company	Street Address	City, Slat	54929	! "	
	CAVATI		1210 C	•	• • •	Inton vi	1/e	W1 549
Telephone # (include area co	xde) Certifièd Ass	essor Namel (Print)	1 Asy	sessor Signature			_	or Certification No.
(7/5)823.640				4/1/-6	2/10			09
Tank ID #	 	Temp. Closure	 	lace lank Ci	apacity	Centents *		ure Assessmen
NONE	X		<u> </u>	5	00	11	1	MY DN
<u>2. </u>			<u> </u>		· · · · · ·		1	OY ON
<u>۲</u> .		<u> </u>						OY ON
4. (-49.1) (-5.1)			<u> </u>	- - 	123 - 2777	The state of the s	7	OY ON A
<u> </u>		<u> </u>					1	DY DN
Indicate which product by	numeric code:	01-Diesel: 02-Le	aded: 03-Unlead	ed: 04-Fuel Oil	: 05-Gas	chol: 06-Other		□Y □N known: 10-Premi
Indicate which product by 11-Waste oil; 13-Chemic	al (indicate the	chemical name(s)	or numbers(s)			;1	4-Keros	ene; 15-Aviation.
Written notification was prov All local permits were obtain	ided to the loca ied before begi	al agent 15 days ii nning closure	n advance of clo	sure date.				
Check applicable box a			tements in Se	ctions B - E.			_	Inspector NA
B. TEMPORARILY OUT Written inspector appro			1. which			<u>Ve</u>	rified	Verified
is effective until (provide				· · · · · · · · · · · · ·			Y 🔲 N	
Product Removed Product-lines drai	ned into tanki(o	r other container)	and resulting lig	uid removed A	ND on the		Y DN	
 b. All product remov 	ed to bottom of	suction line, OR					Υ 🗌 И	
c. All product remov2. Fill pipe, gauge pipe	ed _a to within 1" . tank truck van	of bottom.	s and vanor reti	rn linescanne			Y D N	
All product lines at the	e islands or pu	mps located elser	where are remov	ed and capped	i, OR		Y N	<u> </u>
 Dispensers/pumps te Vent lines left open. 	•	locked and power					Y N	
6. Inventory form filed i	ndicating temp	orary closure		r. Østra. 1461	alle et en		Y DA	· dimet i
C. CLOSURE BY REMO	VAL							
Product from piping							Y DN	
 Piping disconnected All liquid and residue 	from tank and i	removed	ion proof number	or hand nume		· · · · · · · · · · · · · · · · · · ·	YOUN	12 [
All pump motors and	suction hoses	bonded to tank or	otherwise group	ded			Y \square N	
5. Fill pipes, gauge pipe NOTE: DROP TUBE	es, vapor recovi	ery connections, s	submersible bum	ps and other fi	ixtures re	moved. 📉	N D N	Sutinitie C
THE USE OF AN FD	HCTOR.							4
 Vent lines left connect Tank openings temperature 	cted until tanks prarily plugged	purged so vapors exit thro	ough vent			2	Y D N	
Tank atmosphere rec	duced to 10% o	f the lower flamm	able range (LEL)	- see Section	<u>F.</u>	· · · · · · · · · · [52]	Y DN	, d
Tank removed from comments To prevent movements	excavation after	PURGING/INERT	ING; placed on	level ground a	nd blocke	od Carlos (18 <mark>12</mark> 16)	(TIS A)	
10. Tank cleaned before							V □ N	ובא. ר

- CONTINUE ON NEXT PAGE -

_	•	LOSURE BY REMOVAL (continued)	Remover Verified	Inspector Verified	<u>NA</u>
U.		Tank labeled in 2" high letters after removal but before being moved from site	□Y □N		X
	12	FORMER CONTENTS; VAPOR STATE; VAPOR FREEING TREATMENT; DATE. Tank vent hole (1/8 th " in uppermost part of tank) installed prior to moving the tank from site.	□Y □ N		X
	13.		多、目が		
_		LOSURE IN PLACE			<u> </u>
		NOTE: CLOSURES IN PLACE ARE ONLY ALLOWED WITH THE PRIOR WRITTEN APPROVAL OF THE DEPARTMENT OF INDUSTRY, LABOR AND HUMAN RELATIONS OR LOCAL AGENT.	in in the second second second second second second second second second second second second second second se	na viriali sitä tileksi (s. 1. 1. 1. 1. 1. 1.	:
	2.	Product traffipling drained into tank (foliather container). All the second second from tank and removed.			6
		All liquid and residue removed from tank using explosion proof pumps or hand pumps	DY DN	_	R
		Fill pipes, gauge pipes, vapor recovery connections, submersible pumps and other fixtures removed. NOTE: DROP TUBE SHOULD NOT BE REMOVED IF THE TANK IS TO BE PURGED THROUGH	H Y H N	-	F
	6.	THE USE OF AN EDUCTOR - EDUCTOR OUTPUT 12 FT ABOVE GRADE. *Vehit lines left connected until tanks purged: #22 11 11 12 12 12 12 12 12 12 12 12 12 1	⊟n ™N		
	7.	Tank openings temporarily plugged so vapors exit through vent. Tank atmosphere reduced to 10% of the lower flammable range (LEL) - see Section F.			===
		Tank properly cleaned to remove all sludge and residue.			
	10.	Solid inert material (sand, cyclone boiler slag, pea gravel recommended) introduced and tank filled. Vent line disconnected or removed.		_	#
		Inventory form filed by owner with Safety and Buildings Division indicating closure in place.			4
E.	C	LOSURE ASSESSMENTS			
	•	NOTE: DETERMINE IF A CLOSURE ASSESSMENT IS REQUIRED BY REFERRING TO ILHR 10. Individual conducting the assessment has a closure assessment plan (written) which			
	١.	is used as the basis for their work on the site.	⊠ Y □ N	Z	
	2.	Do points of obvious contamination exist?	□ Y S N	KAKKK	Ę
	4.	Are there strong odors in the soils? Was a field screening instrument used to pre-screen soil sample locations?	N X Y	N X	<u> </u>
	5.	Was a closure assessment omitted because of obvious contamination?	□ Y 🔀 N		
	6.	Was the DNR notified of suspected or obvious contamination?	N		Ā
	7.	Contamination suspected because of: Odor Soil Staining Free Product Sheen On Groundwa	ter Field	Instrument	Test
F.		ETHOD OF ACHIEVING 10% LEVEL DESCRIPTION			
		Educator On Diffused Air Blowers as the company of			**
		Eductor driven by compressed air, bonded and drop tube left in place; vapors discharged minimum of Diffused air blower bonded and drop tube removed. Air pressure not exceeding 5 psig.	1 12 1661 20	ove ground.	
		Dry Ice			
		Dry ice introduced at 1.5 pounds per 100 gallons of tank capacity. Dry ice crushed and distributed carea. Dry ice evaporated before proceeding.	iver the grea	atest possible	e tan
		Inert Gas (CO/2 or N/2) NOTE: INERT GASSES PRODUCE AN OXYGEN DEFICIENT ATMOSPHER	E. THE TA	NK MAY NO	ЭТ В
	ii lin	ENTERED IN THIS STATE WITHOUT SPECIAL EQUIPMENT Gas introduced through a single opening at a point near the bottom of the tank at the end of the tank	personite the	akika pedat	11.1.
		 Gas introduced under low pressure not to exceed 5 psig to reduce static electricity. Gas introducing 			
	X	Tank atmosphere monitored for flammable or combustible vapor levels.		ŧ.	1
		Calibrate combustible gas indicator. Drop tube removed prior to checking atmosphere. Tank space and upper portion of tank. Readings of 10% or less of the lower flammable range (LEL) obtained be			
	. 1841.77	ground.	1231 21 4150 1 H	and the season of the me	
3.	Ň	TE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW DEATH PIPE TO	TANK	TOPINE	it
	P	OUTE SPECIFIC PROBLEMS OR NONCOMPLIANCE ISSUES BELOW/ DEAIN PIPE TO COULD NOT BE REMOVED THERE WAS GAS LINE OUTE D OURED OVER IT ALLOWED TO CLOSE PIPE IN PLACE DB.	-7 A N	9 (00.	
Н.	RE	EMOVER/CLEANER INFORMATION	100	100	
!		Personer Name (print) Remover Certification	ication No.	Date Signer	ਰ / ਰ /
١. ً	IN	ISPECTOR INFORMATION			
	Īn:	De bby Bayer Justice Signature	71 - 00. Inspector Ce	359 ertification No	0.
. }		The Control of the Co		ALTON BOOK	Epit.
-		DID # For Location Where Inspection Performed	Date Signed	i	

OWNER

Appendix F

Resumes

Your Personal Consultant

Catherine M. Sanders

Project Scientist

Experience

Ms. Sanders has over eight years of environmental investigation and consulting experience. This experience has come in the form of a wide range of projects, including Phase I environmental assessments, soils evaluation for landfill cover and liners, UST investigations, landfill quarterly monitoring data review, and soils investigations for alternative wastewater treatment systems.

The following projects are cited as a range of examples of Ms. Sanders' applied experience.

- Phase I and II environmental site assessments (ESA) for a variety of commercial and undeveloped properties. Examples of the varieties of properties assessed have included 60-acre farm fields, feed mills, hotels, restaurants, and vehicle repair facilities.
- Project scientist/manager on a variety of LUST sites at various stages of investigation and remediation. Responsibilities have included site investigation work plan preparation; coordination of geoprobe and drilling operations for the installation of borings and groundwater monitoring wells; site investigation and remedial action plan preparation; supervision of the remedial excavation of contaminated soil; and preparation of documentation to petition for case closure of sites.
- After gasoline fumes had leaked into a home from a leaking underground storage tank at an adjacent gas station in the town of Baileys Harbor, Foth & VanDyke was hired by the home owner's lawyer to review work done by the tank owner's consultant. Ms. Sanders' responsibilities included reviewing reports and documents relative to the investigation and cleanup efforts; formulate comments and questions regarding these reports; conduct site visits and interview home owners; and attend meetings with concerned parties, including WDNR, tank owners, home owners, and respective lawyers.

- Volatile organic compounds, mainly vinyl chloride, had been detected in several wells adjacent to a landfill in Clintonville, Wisconsin. Because of the laboratory results the WDNR required that an in-field conditions investigation be conducted. This included defining the hydrogeologic conditions down gradient of the landfill, determine the extent of the VOC plume, and make recommendations for response actions. As principal investigator, Ms. Sanders was required to formulate a work plan and budget; coordinate field operations; supervise installation of additional monitoring wells; review laboratory data; and submit a report of the findings to the WDNR.
- As technical client representative for an analytical laboratory, Ms. Sanders prepared price quotes and proposals to clients, provided liaison services between clients and analytical staff, ensured that testing programs were being completed in a timely manner; and assisted clients with test programs to meet government requirements.

Education

B. S., Land Reclamation-Soils Emphasis (Geology minor), University of Wisconsin-Platteville, 1982

ASTM Environmental Site Assessment for Commercial Real Estate course, 1997

Certifications & Qualifications

NR 712.03(3) Qualified Scientist, Wisconsin DNR Certified IHLR47 PECFA Participant, #06402, Wisconsin Dept. of Commerce

Certification, Hazardous Waste Operations

Affiliations

Wisconsin Ground Water Association

Alliance for Environmental Regulatory Communications

Your Personal Consultant

Boyd N. Possin, P.G.

Project Director

Experience

The president and, in 1990, the founder of Environmental Compliance Consultants, Inc., Mr. Possin became a professional environmental consultant following the 1973 completion of his formal graduate-level training as a hydrogeologist. Since that time he has accumulated experience in geological, hydrogeological, and water resource management projects dealing environmental contamination and remedial design. This work has taken him to sites in more than twenty states, on projects as diverse as RI/FSs, RFI/CMSs, RCRA Parts A and B permitting, PA/SIs, site assessments, UST investigations, spill cleanups, and landfill investigations, designs and closures. His clients have included such large, diverse entities as the U. S. EPA, various state environmental regulatory agencies, the U.S. Army Corps of Engineers, FEMA, Kennecott Copper Company, Waste Management, Inc., Laidlaw Waste Systems, and Chevron Chemical Company. In addition he has worked for many other smaller industrial and municipal clients. He serves on the Wisconsin Department of Natural Resources' NR 700 External Advisory Committee, and on the Wisconsin Department of Industry, Labor & Human Relations' ILHR 47 Code committee. He is cofounder, and president of, the Alliance for Environmetnal Regulatory Communications, a Wisconsin PECFA professional organization.

The following projects are cited as a relatively recent range of examples of Mr. Possin's applied experience.

- Mr. Possin has conducted many UST investigations in Wisconsin, under state protocols. Among these are projects in all types of environments including sand, clay till, and bedrock. Levels of contamination have ranged from no detection to free product, with one site entailing the removal of more than 5,000 gallons of free product from the water table surface. In addition to conducting the site investigations, Mr. Possin has also assisted in designing the site cleanups using such techniques as soil excavation to landfill and to incinerators, soil vapor extraction, and groundwater cleanup with stripping towers.
- Since 1984, Mr. Possin has personally conducted more than three dozen Phase 1 and 2 Environmental Site Assessments (ESAs) in Wisconsin. These have included sites as diverse as rural vacant lots to active industrial facilities.
- For several Wisconsin landfills, Mr. Possin evaluated the effects of landfill closure and capping

on the release rate and distribution of landfill leachates into the groundwater. At the City of Clintonville's landfill and at the Land Reclamation, Ltd., Landfill in Racine, the specific leachate problem involved vinyl chloride; at the Village of Bonduel Landfill it involved sodium chloride; and at the La Crosse County Landfill and the Lake Area Disposal Landfill near Sarona, it involved fuels and several chlorinated solvents. In each case private water wells were threatened along with devaluation in local real estate values.

For the Wisconsin Department of Natural Resources, Mr. Possin managed the first two projects conducted for the Environmental Repair Fund, Wisconsin's state "Superfund" program. Both projects involved extensive volatile organic compound contamination of private wells. One investigation was near Wausau in the Town of Stettin and the other near Eau Claire in the Town of Hallie. Both projects required the installation and sampling of dozens of monitoring wells and the additional sampling of hundreds of private wells. Potential contamination sources were identified.

Education

- B. S., Physical Science, University of Wisconsin, 1970
- M. S., Water Resources Management, University of Wisconsin, 1973
- M. S., Geology, University of Wisconsin, 1974 (Thesis: The Hydrogeology of Mirror and Shadow Lakes in Waupaca, Wisconsin, 1973)

Certifications & Qualifications

Registered Professional Geologist (#929), State of Wisconsin

ILHR 47 PECFA Program Participant (#00502), Wisconsin DILHR

NR 600.03(98), and NR 712.03(1) Qualified Hydrogeologist, Wisconsin DNR

Affiliations

Association of Groundwater Scientists and Engineers Federation of Environmental Technologists Alliance for Environmental Regulatory Communications (President)

TELEPHONE LOG

SITE NAME:	wese F.	nodu	ts	#* #*	DATE:_/	1/20/98
SITE #:		· · · · · · · · · · · · · · · · · · ·			TIME:	10 AW.
INCOMING/OUTG	OING					
contact: <u>Ca</u>	therno S	sinde	<u> </u>	TEL:	20 43	t 502;
POSITION:						
to Day Will foll	Most	loous		nf crm	ed in	e that
The SI	report	will	be SU	self ma	2 drie	chly
to Day	M per M	nov (No GW	cond	found	Ste
WIN Poll	ows pow	416	UHW.		145 ¹	
	1 /	1		and the same		
· · · · · · · · · · · · · · · · · · ·			<u> </u>	•		
	,					
				A Section of the sect		<u>- 4</u>
				: ::		
					1.00	
•		1			· · · · · · · · · · · · · · · · · · ·	
				<u> </u>		· · · ·
						<u> </u>
					. "	·.
By: \(\tilde{\mathcal{D}} \tilde{\mathcal{M}} \).	Dlun	<u> </u>				



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary William R. Selbig, Regional Director Shawano Office 647 Lakeland Rd. Shawano, Wisconsin 54166 Telephone 715-524-2183 FAX 715-524-3214



November 16, 1998

Mr. Paul Zuege 102 E. Cook St. New London, WI 54961

Subject: Site Investigation Report for Zuege Products, 102 E. Cook St., New London, WI; DNR ID # 03-69-2197.

Dear Mr. Zuege:

On April 29, 1996, the Department received a workplan prepared by ECCI Inc. on your behalf, that detailed the work that will be performed to define the extent of soil and groundwater contamination at the site On April 30, 1996, the Department issued a letter indicating you may proceed with the proposed work. I have not received any correspondence that this work was completed.

You or your consultant needs to provide a case update within 10 days. This update should indicate when the Site Investigation Report will be submitted. Please contact me at 715-525-4320 if you have any questions.

Sincerely,

Tom Sturm

Hydrogeologist

Remediation and Redevelopment Program

c: Catherine Sanders - ECCI, PO Box 12114, Green Bay, WI 54307-2114







P.O. Box 11417 • Green Bay, WI 54307-1417 • 920-434-6380 (Voice) • 920-434-6381 (Fax)

R + R - OSH RECEIVED

JAN 26 1999

January 21, 1999

Mr. Thomas Sturm Wisconsin Department of Natural Resources 647 Lakeland Road Shawano, WI 54166 TRACKED
REVIEWED

Re:

Zuege Products, 102 E. Cook Street, New London, Wisconsin 54961-1453

WDNR LUST ID #03-69-2197

Dear Tom:

This letter is a follow-up to a phone message I left several weeks ago. I apologize for not sending it to you sooner. The above referenced facility will be transferred to the Department of Commerce, specifically Tom Verstegen.

This transfer is per the memorandum of understanding between the Department of Commerce and the Department of Natural Resources. The Zuege LUST site does not exhibit any indication of soil contamination that could contaminate the groundwater above NR140 Enforcement Standards.

If you have any questions, please contact me directly at 920-434-5022.

Respectfully,

Environmental Compliance Consultants, Inc.

Catherine Sanders

Catherine Sanders

Project Manager

cc: Pa

Paul Zuege Tom Verstegen



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor George E. Meyer, Secretary William R. Selbig, District Director 647 Lakeland Road Shawano, Wisconsin 54166 TELEPHONE 715-524-2183 FAX 715-524-3214

April 30, 1996

Mr. Paul Zuege 102 E Cook Street New London WI 54961



Subject:

Acknowledgement of Workplan/Notice to Proceed

Site Name & Address: Zuege Products, 102 E Cook St., New London

WDNR LUST ID #:03-69-2197

Dear Mr. Zuege:

We have received the above-referenced submittal on April 29, 1996 from Environmental Compliance Consultants, Inc., (ECCI). However, staffing and workload levels do not allow us to provide you with 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 order to assist you and your consultant in understanding what is required by the Department, I have attached a "Site Investigation Checklist" for your reference; this checklist was prepared by the Department as a summary of what needs to be done, the rules that need to be followed, and the standards which need to be met for complete assessment of a LUST site. Your consultant should also follow the Department's "Guidance for Conducting Environmental Response Actions." Groundwater and soil samples should be analyzed according to the parameters in the LUST Analytical Guidance publication. It is very important that your consultant understand and meet the minimum standards established by the Department; however, you, as the responsible party, are ultimately responsible for the investigation and remediation that is required at your site, according to Wisconsin Statute 144.76. Failure to follow guidance may result in delays when the project is reviewed for closure or reimbursement from PECFA.

Any well construction variances or WPDES permits shall be obtained well <u>prior</u> to construction, disposal or discharge.



Effective this date, on a quarterly basis, you or your consultant should provide the Department with a brief status report of one or two pages, providing an update on site activities and your proposed schedule. Immediately notify the WDNR project manager of any emergency actions and note them in a report. As workload and staff levels are adjusted, the status of this case may be changed and we may be able to review your consultant's work for completeness and acceptability. You will be informed, in writing, if the site status is changed.

ALL CORRESPONDENCE AND REPORTS SHOULD BE SENT TO THE DEPARTMENT AT THE FOLLOWING ADDRESS. PLEASE IDENTIFY ALL SUBMITTALS WITH THE WDNR LUST ID NUMBER. UNLESS OTHERWISE REQUESTED, PLEASE SEND ONLY ONE COPY OF ALL SUBMITTALS.

Wisconsin Department of Natural Resources ATTN: Thomas Sturm 647 Lakeland Road Shawano, WI 54166 Phone: 715-526-4230

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

The Department will review your case when the full extent of contamination has been determined and appropriate cleanup has occurred. If you have any questions concerning this letter, please contact Mr. Tom Sturm at (715) 526-4230.

Sincerely,

Dee Alsteen, Hydrogeologist

Doe alition

Leaking Underground Storage Tank Unit

Enc: Site Investigation Checklist

cc: Catherine Sanders, ECCI, PO Box 12114, Green Bay Wi 54307-2114



APR 2 9 1996

Ans'd TV

Leaking Underground Storage Tank

Site Investigation Work Plan

Zuege Products 102 E. Cook Street New London, Wisconsin LUST ID No. 03-69-2197

Prepared for:

Paul Zuege 102 E. Cook Street New London, Wisconsin 54961-1453

April 1996

Sharing Your Concerns. Creating Sound Solutions.



Environmental Compliance Consultants, Inc.

April 23, 1996

Mr. Thomas Sturm Wisconsin Department of Natural Resources 647 Lakeland Road Shawano, WI 54166

Re:

Site Investigation Workplan for Petroleum Contamination at the Zuege Products,

102 E. Cook St., New London, Wisconsin 54961-1453

WDNR LUST ID #03-69-2197

Dear Tom:

Environmental Compliance Consultants, Inc. (ECCI) is pleased to submit the above referenced work plan on behalf of Mr. Paul Zuege, owner of Zuege Products. This workplan is submitted in response to the letter mailed to Mr. Zuege on November 2, 1995 from Ms. Janis DeBrock of your office regarding Mr. Zuege's responsibility for restoring the environment under Section 144.76, Wisconsin Statutes, normally referred to as the hazardous substances spills law.

The enclosed workplan follows the guidelines presented in the WDNR's: NR 716 Site Investigations (April 1995) Leaking Underground Storage Tank (LUST) Analytical and Quality Assurance Guidance (July 1993), and Guidance for Conducting Environmental Response Actions (publ. SW-157-92, March 1992).

We wish to work with the WDNR to remediate this site in a timely and cost-effective manner. Please call me at 414-434-5022 if you have any questions or comments regarding this workplan.

Respectfully,

Catherine Sanders

Carpenine Sanders

Project Scientist

DISTRIBUTION LIST

No. of Copies	Sent To
1	Mr. Thomas Sturm Wisconsin Dept. of Natural Resources 647 Lakeland Road Shawano, WI 54166
1	Mr. Paul Zuege Zuege Products 102 E. Cook Street New London, WI 54961-1453

LUST SITE INVESTIGATION WORK PLAN

Zuege Products 102 E. Cook Street New London, Wisconsin

(LUST Case #03-69-2197)

Prepared for: Paul Zuege New London, Wisconsin

April 1996

I, Catherine Sanders, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Project Scientist

Environmental Compliance Consultants, Inc.

P. O. Box 12114 Green Bay, WI 54307-2114 414-434-6380; fax: 414-434-6381 Copyright®, Environmental Compliance Consultants, Inc.

1996

TABLE OF CONTENTS

INTRODUCTION		 	1
General	• • • • •	 	1
Client Information	• • • • ·	 	1
Consultant			
Purpose of the Workplan			
Scope of Work			
BACKGROUND	• • • • •	 	3
Site Location	• • • • ·	 	3
Underground Storage Tanks		 • • • • •	3
History of Previous Hazardous Substance Discharges			
Possible Other Sources of Contamination			
ENVIRONMENTAL ANALYSIS		 	7
Presence of Sensitive Environmental Receptors			
Topography			
Geology			
Groundwater Conditions			
SITE MANAGEMENT PLAN		 '	9
Health and Safety Plan		 	9
Waste Management Plan			
Site Access		 1	0
Access to Adjacent Properties		 1	0
*			
INVESTIGATORY TECHNIQUES AND SAMPLING PLAN		 1	1
Soils Investigation			
Groundwater Sampling		 1	4
Quality Assurance/Quality Control		 1	6
Schedule of Events			
REPORTING	• • • •	 1	8
Site Investigation Report			
Remedial Action Options Report		 1	9

LIST OF APPENDICES

Appendix A	ECCI Personnel Resumes	
Appendix B	Site Health and Safety Plan	
Appendix C	Jar Headspace Field Testing Methodology	
	FIGURES	
Figure 1 - Site Loca	tion Map	. 4
Figure 2 - Site Deta	il Map	. 5
Figure 2 Roving L	ocation Man	12

INTRODUCTION

General

Environmental Compliance Consultants, Inc. (ECCI) has prepared this leaking underground storage tank (LUST) site investigation workplan for Zuege Products. The site is located at 102 E. Cook Street, New London, Wisconsin. For this workplan the site will be referred to as the "Zuege site".

Client Information

The representative for Zuege Products is:

Mr. Paul Zuege Zuege Products 102 E. Cook Street New London, WI 54961-1453 414-982-3212

Consultant

This workplan was written by Ms. Catherine Sanders of ECCI. Ms. Sanders' resume, along with other personnel that may be assisting with the work at this site, is appended to this workplan in Appendix A. Ms. Sanders will be the project consultant and may be contacted at:

Environmental Compliance Consultants, Inc. (ECCI) P.O. Box 12114
Green Bay, Wisconsin 54307-2114
(414) 434-5022, fax (414) 434-6381.

Purpose of the Workplan

The purpose of this workplan is to describe activities which have been designed to discover the extent of soil, and possibly groundwater, contamination that was produced by the release of petroleum product to the subsurface environment by an underground storage tank (UST) system.

Scope of Work

This workplan discusses:

- the site background;
- the investigation and sampling strategy to be employed;
- the types and numbers of samples to be collected;
- the sample collection procedures;
- the in-field quality control;
- the site-specifc health and safety plan; and
- report procedures.

BACKGROUND

Site Location

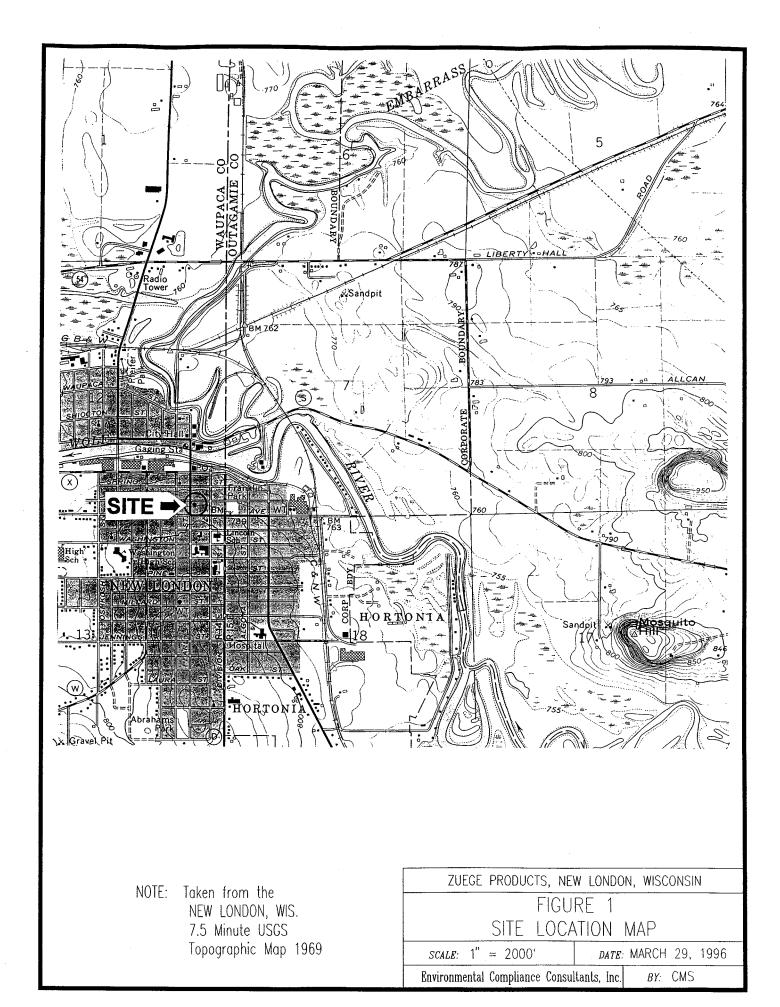
The Zuege site is located at 102 E. Cook Street, New London, Waupaca County, Wisconsin. This site is in the SE1/4 of the SE1/4 of Section 12, Township 22 North, Range 14 East as shown on the U.S. Geological Survey's *New London*, *Wis.* 7.5-minute topographic quadrangle map. A regional site location map is presented in Figure 1.

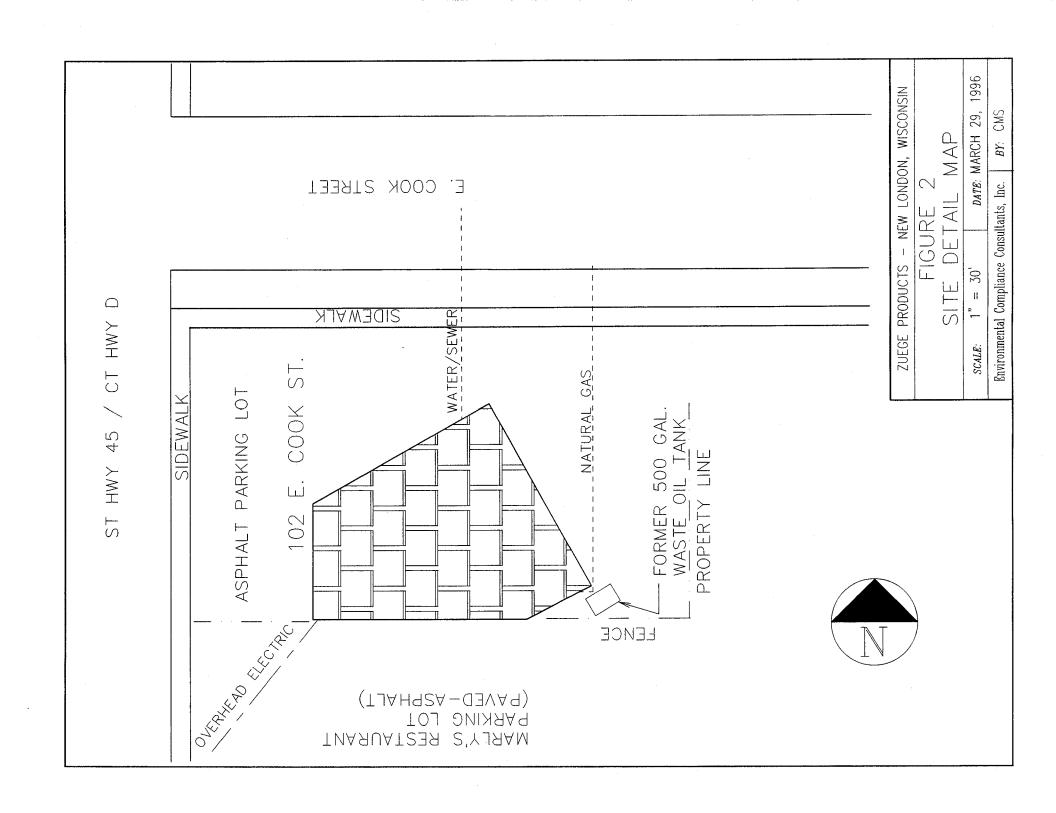
The Zuege Products site is an operating drycleaner. The property was purchased by Mr. Paul Zuege in 1982. ECCI has learned from interviews with Mr. Zuege that the facility has been a drycleaner since 1966, and before that time the facility was a gas station.

The Zuege site is in an area with a mixture of small commercial businesses and residences. The site is bordered on the south by Marly's Restaurant, on the north by Cook Street, on the east by a residential area, and on the west by Business State Highway 45/County Highway D (Pearl Street) as it passes through New London.

Underground Storage Tanks

In the Summer of 1995, the piping for an underground storage tank was discovered at the Zuege site during preparation for remodeling of the Zuege Products/Drycleaners Etc. building at the site. On October 9, 1995, Jerry Sauby of Jerry's Excavating removed a 500-gallon waste oil tank from the site. Two soil samples were collected from each end of the tank for off-site laboratory analysis. Maxim Technologies, Inc. of Wausau, Wisconsin analyzed the samples for Diesel Range Organics (DRO). Laboratory results indicated that the sample collected from the west end of the tank indicated 330 mg/kg of DRO and sample collected from the east end of the tank less than 10 mg/kg of DRO. Figure 2 is a site detail map showing the location of the tank in relationship to the site.





History of Previous Hazardous Substance Discharges

There is currently no information available to suggest that this property has ever had environmental problems beyond that discussed above. At one time, the site had been an operating gas station, and is currently an operating drycleaner. There is no evidence to indicate that Zuege Products would have undertaken any activities which would have been a risk to the environment. Finally, since there are no records, there is no way to determine the amount of product released from the tank system over time while it was in use.

Possible Other Sources of Contamination

ECCI has been informed that Marly's Restaurant, located south of the Zuege site, had been a gas station at one time. Also, Paul Zuege has two other tanks that were abandoned in place before 1966, when the site was a gas station, and are located in the northwest portion of the property. It is not known at this time if environmental contamination exists relative to either of these situations.

ENVIRONMENTAL ANALYSIS

Presence of Sensitive Environmental Receptors

The Zuege site does not contain or show potential of impacting sensitive environmental receptors of the following types, as mentioned in NR 716.07 Site Investigation Scoping:

- State or federal threatened or endangered species
- · Sensitive or unique species, habitats, or ecosystems
- Wetlands and other outstanding water resource areas
- · Historical or archaeological significant areas

The Wolf River is approximately 1000 feet north of the site. The Wolf River State Fishery Areas and Mukwa State Wildlife Area are within two-miles to the west of the site. Based on current site information, it does not appear physically possible for contamination to migrate to either the water resource or the wildlife areas due to the distance and the manmade features in the area that would intercept the contamination.

Topography

The Zuege site lies at an elevation of 780± five feet above mean sea level (MSL). The site is located on the side of a hill approximately thirty feet in elevation above the Wolf River. The landforms in the area are a result of ice movement, stagnation and melting. Large drumlins and moraines with steep sides are common along with many kettles where lakes formed are located throughout Waupaca County. Regionally, the land gently slopes to the south and east toward Lake Winnebago.

Geology

According to the USDA Waupaca County Soil Survey¹, surface soils consist of what has been classified as Oshkosh silty clay loam. These soils developed from deposits under glaciolacustrine conditions on convex ridges and knolls. The surface soils are generally of a dark brown silty clay loam about 10-inches thick underlain by a reddish brown, firm clay. Bordering the Oshkosh soils in the area of the site are the Hortonville fine sandy loam, which is underlain by a sandy clay loam and clay loam starting at about 12-inches below the surface.

¹ United States Department of Agriculture Soil Conservation Service, September 1984, Soil Survey of Waupaca County, Wisconsin.

Discussion of the geologic deposits in Waupaca County have been summarized in a 1964 Geologic Survey Water-Supply Paper 1669-U by C.F. Berkstresser, Jr.². The surface deposits are of Pleistocene Age and were deposited in lakes between the ice front and the terminal moraines. The Wolf River cuts across the Lake Oshkosh lake basin. Under these lacustrine deposits is glacial till that was deposited during several phases of glaciation in this area.

Stratigraphically, the first bedrock unit encountered under the Zuege site is the Prairie du Chien Group. The Prairie du Chien Group is of Ordovician Age and consists of dolomite containing sandy and shaly layers. Beneath the dolomite lies sandstone of Cambrian Age. Industrial and municipal wells that have been drilled within a quarter-mile of the site indicate bedrock to be over 200 feet below the surface in the area of the site.

Groundwater Conditions

Due to the significant amount of development in the area, local overland flow is controlled by the engineered design of the adjacent road beds (Cook Street and Pearl Street) that channel the flow to storm sewer catch basins which transport the water a short distance to the Wolf River. The local horizontal groundwater flow direction would presumably mirror the slope of the land and move towards the north. However, variations in groundwater flow direction are to be expected in the study area due predominantly to such conditions as buried utilities, fill material, and changes in soil stratigraphy.

The groundwater at the Zuege site is expected to be less than ten feet below the surface due to the close proximity of the site to the Wolf River and the underlying glacial sediments. The site specific groundwater flow is not known at this time, but is likely to the north.

In the area of the Zuege site, the first significant hydrogeologic formations are the Quaternary deposits. Wells for the City of New London have been drilled to a maximum of 170-feet below the surface in these deposits. The other significant water bearing deposits in Waupaca County are the sandstones of Cambrian Age. The regional potentiometric groundwater surface for the Waupaca County upper aquifer system lies at approximately 760 feet MSL near the Zuege site, which is only twenty feet below grade.

² Berkstresser, C.F., 1964, *Ground-water Resources of Waupaca County, Wisconsin, Geological Survey Water-Supply Paper 1669-U, Wis. Geological and Natural History Survey.*

SITE MANAGEMENT PLAN

The following sections describe a site-specific health and safety plan, a waste management plan, and a description of site access. These are components of the investigation which require planning prior to commencement of the field work.

Health and Safety Plan

ECCI personnel are fully trained according to the Occupational Health and Safety Administration requirements of 29 CFR Part 1910. Health and safety plans are prepared for ECCI's field operations personnel at every site where there is potential for environmental contamination with hazardous materials. The site-specific health and safety plan for this site is included as Appendix B.

The health and safety plan found in Appendix B applies only to ECCI personnel and does not govern safety procedures for non-ECCI personnel. At work sites where ECCI personnel and non-ECCI personnel are both present, ECCI assumes that non-ECCI personnel will act under their own health and safety plans or under the health and safety plan provided by a general contractor or the owner of the site.

Subsurface investigations such as the one outlined in this workplan involve the hazard of intersecting and potentially destroying underground utilities such as pipelines, electrical lines, telephone lines, sewer lines, and other subsurface structures. Additionally, the destruction of utilities may be hazardous either to the operator(s) of the equipment or to the environment.

ECCI will use due precaution in proceeding with investigatory work at this site. ECCI will check to be sure that the drillers and/or excavators working at this site have obtained clearance from Diggers Hotline and all other appropriate contacts. However, ECCI cannot and does not guarantee that all underground utilities present at the site have been located. ECCI recommends that the client approve of the proposed drilling locations prior to drilling, so that no private utilities are hit. If an underground utility is unintentionally intersected during investigative operations at this site, the reactions of ECCI personnel at the site will be governed by the applicable site-specific Health & Safety Plan. In addition, ECCI recommends that the chosen driller be required to carry insurance appropriate to cover such an incidence.

Waste Management Plan

Waste materials will be generated during the investigation. The anticipated wastes are soils and water (both contaminated and non-contaminated). Soil will be generated during drilling of geoprobes, soil borings, and/or monitoring wells. Wastewater will be generated during decontamination of the drilling augers and during development and

sampling of the groundwater monitoring wells, if monitoring wells are necessary. This soil and water may require special handling and/or disposal.

To the extent possible, soils will be screened during drilling, and clean soils will be segregated from contaminated soils. Excavated soils will be stored on-site until appropriate off-site disposal or treatment can be arranged. There is ample on-site storage space for these soils. Contaminated waste soils generated during drilling of the geoprobes, soil borings, and/or monitoring wells will be contained on site either in 55-gallon drums or in individually enclosed pods of plastic sheeting. Clean soils may be used as clean fill at any site, while off-site disposal of contaminated soil will require testing and disposal at a WDNR-approved engineered sanitary landfill or other final disposal site. Contaminated soils will be subjected to appropriate numbers and types of analytical procedures to determine their suitability for various remediation alternatives.

Wastewater produced during equipment decontamination, well development and sampling will be placed directly into 55-gallon drums. The water will be tested as appropriate, to distinguish barrels of uncontaminated water from barrels of contaminated water. Arrangements will be made with the local Publicly-Owned Treatment Works (POTW) or other licensed authority for disposal of the contaminated water after an analysis of the water is obtained.

Site Access

The Zuege site is an operating business, but there is ample room for investigative work to take place. Access to the property is from Cook Street or Pearl Street. The former tank was located on the southeast side of the building, so any vehicles or materials to be used during the investigation will not be blocking any means of egress. Therefore, no special site preparation will be required. During the drilling and sampling activities, the public at no time will be allowed near the drill rig; this will include bystanders and traffic.

Electric service enters the building overhead on the southwest side of the building. Gas service enters the building on the southeast side of the building, near the former tank location. A water meter is located on the north wall of the building. It is assumed that water and sewer laterals lie on the north side of the building trending toward Cook Street. A detailed site map is shown in Figure 2 with the above information designated on it.

Access to Adjacent Properties

Permission to access adjacent properties will be necessary due to the location of the underground storage tank along the southern property line. Permission to access public right-of-way will likely not be necessary since the tank was located at least sixty feet from the roadway.

INVESTIGATORY TECHNIQUES AND SAMPLING PLAN

This workplan was designed primarily to explore the degree and extent of petroleum fuel contamination in the soil of the Zuege site. Secondarily, the program will assist in defining the geology and hydrogeology present beneath the site. Finally, the results of this investigation will provide data for selection of remedial techniques.

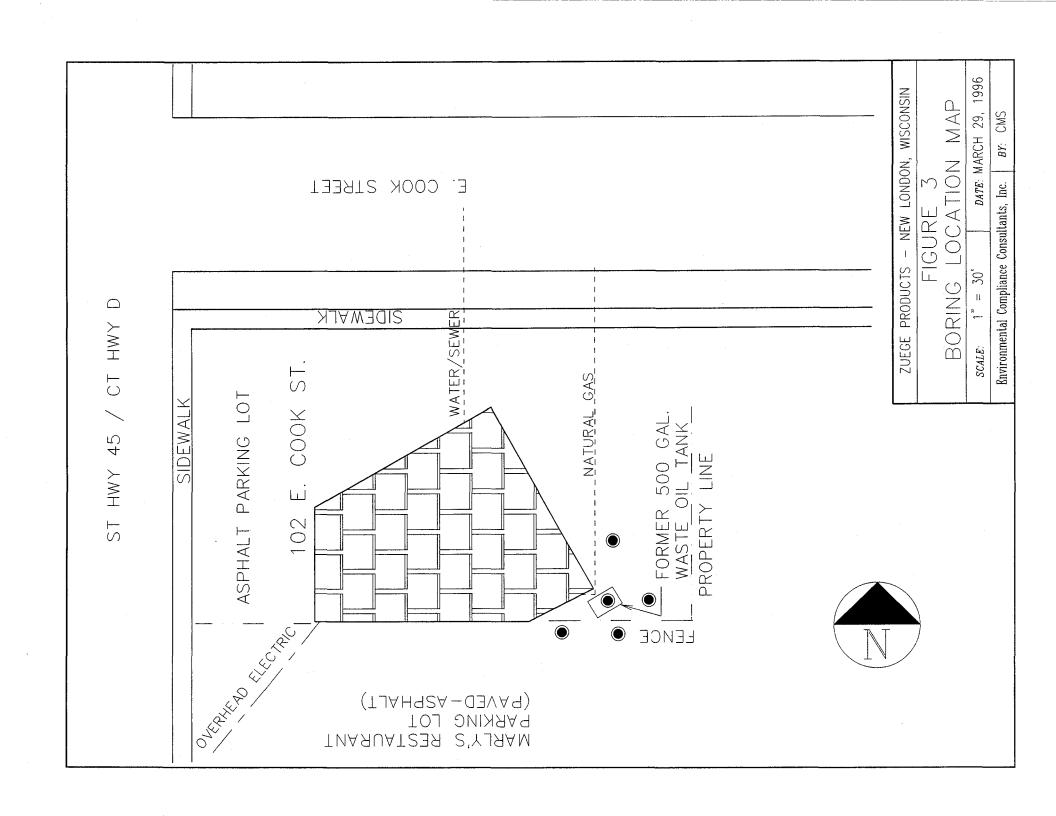
ECCI plans to follow, where applicable, current WDNR guidelines pertaining to the conducting and reporting of UST Site Investigations as outlined in the following documents:

- Remedial Investigation Checklist (SW-115), February 1992
- Soil Sampling Requirements for LUST Site Investigations and Excavations, March 1991
- Leaking Underground Storage Tank (LUST) Analytical Guidance, July 1993
- Guidance for Conducting Environmental Response Actions (SW-157-92), March 1992
- Groundwater Sampling Procedures Field Manual (WR168-87), September 1987
- NR 716 Site Investigations, April 1995
- NR 720 Soil Cleanup Standards, April 1995
- NR 722 Standards for Selecting Remedial Actions, April 1995
- NR 724 Remedial and Interim Action Design, Implementation, Operation, Maintenance and Monitoring Requirements, April 1995

The types of investigations to be performed, types of samples to be collected, sample handling methods, analytical methods, and decontamination methods are discussed below for each sample type.

Soils Investigation

ECCI proposes to begin the site investigation with the use of a Geoprobe[™] (geoprobe) mounted on the back of a utility van. The geoprobe investigation will begin by exploring soil conditions in the area surrounding the existing UST area. At locations suggested by the information in hand, supplemented by on-going discoveries during the drilling program, soil sampling will be performed by advancing the geoprobe into the ground. It is not possible to predict the exact number of geoprobe soil borings which will be performed, or the exact pattern of borings which will develop; however, a sufficient number will be performed to characterize the horizontal and vertical extent of residual petroleum fuel contamination which may be present. Figure 3 shows a conceptual layout for the soil borings. The initial boring locations will be approximately those shown in the figure, subject to on-site utilities and structure clearance.



If the initial investigation shows that the groundwater may be impacted, then it will be necessary to return to the site to install monitoring wells. If monitoring wells are required, it will be necessary to use a drill rig.

Boring logs will be prepared describing all soils according to the Unified Soil Classification System. Characteristics such as soil structure, voids, layering, lenses, odor, staining, mottling, and so forth will be noted on the logs. Boring logs will be presented on WDNR Form 4400-122 (Soil Boring Log Information).

To collect soil samples with the geoprobe sampler, the sampler is driven to the appropriate sampling depth, where the tip is then withdrawn. The sampler is then driven 24 inches into undisturbed soil. The soil sample is collected in a split spoon sampler, which can be opened so that field headspace and analytic samples can be obtained.

The portion of the sample for off-site analytical work will be dealt with immediately. The samples for off-site testing will be sealed in $EnCore^{TM}$ samplers, pending preservation in methanol at the laboratory within 48-hours of sample collection, or immediately placed in appropriate sample vials and preserved with methanol. These samples will be placed on ice pending delivery to the laboratory. The following analytical parameters will be tested for by the state-certified laboratory:

VOC	Volatile Organic Compounds (EPA Method 8021).
GRO	Wisconsin Gasoline Range Organics, with methanol preservation.
DRO	Wisconsin Diesel Range Organics.
Pb and Cd	Total Lead and Cadmium.

The Wisconsin GRO and Wisconsin DRO methods will be used at this site, in accordance with the most recent revisions as published in NR149 that became effective March 1, 1996.

It is anticipated that a minimum of two samples per boring will be submitted to an off-site laboratory for analysis, although more samples will be submitted if conditions warrant. One of the samples from each boring will be the one which first encounters the water table. Since the water table is expected to be less than ten feet in depth, this sampling interval will likely yield the highest field headspace reading in the boring. However, a shallower soil sample will be considered for analytic testing if significant contamination is indicated. The second sample will likely be obtained from the first sampling interval beneath the water table to exhibit nondetectable headspace readings.

Following off-site sample preparation, the other half of the sample will then be placed in a Mason®-type jar in order that it may be screened with a photoionization detector (PID) using the *jar headspace method*.³ Appendix C to this report consists of an extract from the WDNR's description of this method. A PID with a lamp voltage of 10.6 eV or higher will be used to perform this screening. All samples from which sufficient soil is recovered will be screened in this manner. All results from this field testing will be recorded. The results of the headspace screening for each boring will be used, together with other relevant information, to select the most appropriate samples from that boring for analytical work.

The samples for total lead and cadmium will be obtained from the headspace jar after the headspace reading has been taken and the samples for off-site analysis have been chosen. Generally one total lead and cadmium sample is run for every VOC analysis performed.

Each soil boring will be backfilled and abandoned with granular bentonite. Borehole abandonment forms (WDNR Form 3300-5B) will be filled out for each abandoned boring. Copies of the forms will be included as part of the report of the site investigation.

Decontamination will be performed to minimize cross-contamination between soil samples and individual borings. All sampling equipment will be decontaminated between each sample. Decontamination of the sampling equipment will consist of washing with a detergent solution and a double rinse with clean tap water. Additionally, the hand tools used by the sampler to select and divide sample portions will be given a final rinse with deionized water before use on each new sample. All used drilling rods will be decontaminated by steam-cleaning or by high-pressure hot-water washing before use in each new boring. A stiff brush will be used, if required, to remove soil adhering to the rods.

If hollow stem augers are used at a later time to install monitoring wells, these will also be steam cleaned before reuse in a new boring.

Groundwater Sampling

If the geoprobe investigation indicates that groundwater has been impacted, a groundwater sampling program will be implemented in order to check for the present degree and extent of contaminated groundwater in the vicinity of the tank.

Monitoring wells will be placed at locations suggested by the geoprobe investigation as being near the periphery of the groundwater contamination plume. Hollow stem auger borings will be drilled for their construction. The soils in these borings will be sampled and screened for headspace with a PID as described previously. The wells will be constructed and developed according to NR 141-Groundwater Monitoring Well Requirements.

³ Wisconsin Department of Natural Resources, September 1990, Field Instrument Techniques: Attachment 2 to Closure Assessments for Underground Storage Tanks.

Schedule 40 PVC with threaded joints will be used for both well casing and screen. A 10-foot well screen will be placed in the borings to intersect the water table with well screen both above and below the water table. The well screens will be filter-packed with coarse sand. Fine-grained sand will be placed over the filter-pack. Bentonite seals will be placed on top of the fine sand. The remaining annular space will be sealed with granular bentonite. In untrafficked areas, the wells will be installed with above grade protective covers (Protops). In areas where traffic is expected, the wells will be installed with flush-mounted covers. At this time, ECCI does not know whether it will be necessary to request a variance from NR 141 monitoring well construction guidelines due to shallow groundwater. The results of the geoprobe investigation should provide the necessary information to establish the depth to groundwater.

The wells will be developed after a minimum of 12 hours (to permit the grout to set) by surging and purging for a minimum of 30 minutes. Water will then be pumped from the well until 10 well volumes have been removed or clear water is produced. If the permeabilities of the glacial deposits are too low to permit the described development, the wells will be bailed dry and permitted to recover, and surging techniques will not be employed (NR141:21(2)). Well construction and development details will be documented as required by NR 141 on WDNR Forms 4400-A (Monitoring Well Construction) and 4400-113B (Monitoring Well Development).

The wells will be allowed to equilibrate for at least two days prior to sampling. Groundwater sampling and decontamination procedures will follow guidelines suggested in the WDNR's *Groundwater Sampling Procedures Field Manual* (1987). Groundwater samples will be submitted for the following analytical parameters, based on the history of the tank, which indicates that waste oil had been stored in the tank.

VOC / PVOC	First round: Volatile Organic Compounds (EPA Method 8021). Subsequent rounds: Petroleum Volatile Organic Compounds (EPA Method 8020) assuming no non-fuel VOC parameters are detected in the first sampling round.
DRO	Diesel Range Organics
GRO	Gasoline Range Organics
Pb and Cd	First round: Total Lead and Cadmium. Subsequent rounds: only analyzed if first round indicates above NR140 standards.

The monitoring wells will be surveyed in accordance with standards required by the WDNR. The following information will be obtained for each monitoring well:

- Elevation of ground
- Elevation of top of PVC casing
- Elevation of protector pipe
- Horizontal location of well

This information will be tied into a known surveyed location and elevation and will be referenced to mean sea level (MSL).

Quality Assurance/Quality Control

The following procedures will be used during sample collection to minimize loss of volatiles and to maintain the suitability of samples for analysis:

- All sampling containers and preservatives for off site analyses will be supplied by a state-certified laboratory, and analyses will be performed by a state-certified laboratory.
- All samples will be handled in such a manner as to minimize the loss of organic compounds to volatilization and biodegradation.
 - Soil from a given sample which is to be submitted for off-site laboratory analytical work will be handled and prepared before soil from that sample which is to be used for field screening.
 - All samples for off-site analysis will be placed in a cooler on ice (not blue ice) immediately following collection, and will be maintained on ice until delivery to the laboratory.
 - Samples for off-site analyses will be delivered to the laboratory on either the day they are collected or the morning of the next day, unless the samples are collected on a Friday, in which case they will be delivered on that day.
 - If EnCoreTM samplers are used, no more than 48 hours be allowed to elapse between the collection of soil samples and the preservation of chosen samples with methanol.
 - One pre-sampling methanol trip blank, and one post-sampling methanol trip blank will be supplied per sampling event (only if not using EnCores).
- Groundwater samples collected for VOC and GRO analysis will be placed in VOA
 vials which contain HCl and no headspace. Groundwater samples for DRO analysis
 will be collected in amber jars and preserved with HCl. Samples for filtered lead
 analysis will also be collected, if a sufficient volume of water is extracted.

- Duplicate (replicate) sampling of groundwater will be carried out as follows: one duplicate sample will be taken for every 10 (or fewer) samples collected; one trip blank per sampling event (for only GRO, DRO, and VOC) and one temperature blank per sampling event.
- Chain-of-custody procedures will be utilized throughout the sampling and delivery process.

Schedule of Events

It is anticipated that the field investigation will begin within six weeks of submittal of this workplan to the WDNR for review. The completion date of the site investigation report and remedial action plan will be dependent on the degree and extent of the site investigation.

REPORTING

Site Investigation Report

A final Site Investigation Report will be written to document the results of the field investigation described in the work plan. The final report will include the following topics, as applicable:

- An overview consisting of the background material included in this work plan, plus any new relevant material which may come to light during this investigation.
- A description of site specific geologic and hydrogeologic factors as defined during the site investigation. The report will include a discussion of site conditions, including local aquifers, their size, use, and potential for cross contamination.
- An assessment of potential spill pathways, including sewer laterals, utility conduits, nearby wells, surface runoff, geologic structures, and hydrogeologic conditions.
- An identification of receptors of contamination, which will include the location and susceptibility of these potential receptors. Potential receptors may include community water supplies, private water wells, rivers, lakes, streams, lowlands, wetlands, and environmentally sensitive areas.
- An identification of potential health risks to individuals and the community which may occur from the product release.
- Presentation of the technical information obtained during the on-site field work. This will include the methods used to obtain the data, the results of the investigation, analytical results from the soil and water samples, quality control measures used, and conclusions of the investigation. Cross-sections and maps will be used to display the information as appropriate. Other figures and summary tables will also be used as part of the technical presentation.
- As necessary, a summary of remedial action alternatives will be discussed, and a
 preferred alternative presented. Any additional field work required to implement
 the preferred remedial action will also be discussed.

The Site Investigation Report will conform to the requirements set forth in the current version of NR 716.

Remedial Action Options Report

Following the completion of the Site Investigation Report, a Remedial Action Options Report will be written. This report, which will define a plan of remedial action, will include the following topics:

- A summary of the assessment of the degree and extent of contamination at the site as contained in the Site Investigation Report.
- An analysis of three or four alternatives, including passive bioremediation or long term monitoring, which would remediate the site and which could be approved by the WDNR. Consideration of the merits of the alternatives will include basic cost comparisons.
- A detailed cost estimate will be prepared for the selected alternative. This estimate will have separate dollar amounts for consulting services and remediation commodity items.
- As requested by the Department of Industry, Labor and Human Relations (DILHR), a short summary of the Remedial Action Options Report will be prepared in order to aid the decision making process with respect to PECFA, the state reimbursement fund for the LUST program.

Appendix A

ECCI Personnel Resumes



Catherine M. Sanders - Project Scientist

Experience

Ms. Sanders has nearly seven years of environmental investigation and consulting experience. This experience has come in the form of a wide range of projects, including Phase I environmental assessments, soils evaluation for landfill cover and liners, UST investigations, landfill quarterly monitoring data review, and soils investigations for alternative wastewater treatment systems.

The following projects are cited as a range of examples of Ms. Sanders' applied experience.

- Ms. Sanders is project scientist/manager on a variety of LUST sites at various stages of investigation and remediation. She has prepared work plans for investigations; directed geoprobe and drilling operations for the installation of borings and groundwater monitoring wells; prepared site investigation and remedial action plans for sites; supervised the remedial excavation of contaminated soil; prepared documentation to petition for case closure of sites; and prepared PECFA claim documentation.
- After gasoline fumes had leaked into a home from a leaking underground storage tank at an adjacent gas station
 in the town of Baileys Harbor, Foth & VanDyke was hired by the home owner's lawyer to review work done
 by the tank owner's consultant. Ms. Sanders' responsibilities included reviewing reports and documents relative
 to the investigation and cleanup efforts; formulate comments and questions regarding these reports; conduct site
 visits and interview home owners; and attend meetings with concerned parties, including WDNR, tank owners,
 home owners, and respective lawyers.
- Volatile organic compounds, mainly vinyl chloride, had been detected in several wells adjacent to a landfill in Clintonville, Wisconsin. Because of the laboratory results the WDNR required that an in-field conditions investigation be conducted. This included defining the hydrogeologic conditions down gradient of the landfill, determine the extent of the VOC plume, and make recommendations for response actions. As principal investigator, Ms. Sanders was required to formulate a work plan and budget; coordinate field operations; supervise installation of additional monitoring wells; review laboratory data; and submit a report of the findings to the WDNR.
- Ms. Sanders had the responsibility of submitting quarterly reports to the WDNR for twelve Wisconsin landfills
 regarding the groundwater quality found in the monitoring wells surrounding these landfills. This included
 reviewing laboratory data for each quarter; entering the data into a computer; tabulating, graphing, and
 reviewing the correlation to past data; and reporting findings to the WDNR, including PAL and enforcement
 standard exceedances.
- As technical client representative for an analytical laboratory, Ms. Sanders prepared price quotes and proposals to clients, provided liaison services between clients and analytical staff; ensured that testing programs were being completed in a timely manner; and assisted clients with test programs to meet government requirements.

Education

B. S., Land Reclamation-Soils Emphasis (Geology minor), University of Wisconsin-Platteville, 1982

Certifications & Qualifications

NR 712.03(3) Qualified Scientist, Wisconsin DNR Certified IHLR47 PECFA Participant, #06402, Wisconsin Dept. of Industry, Labor, & Human Relations

Affiliations

Wisconsin Ground Water Association

Appendix B

Site Health and Safety Plan

ENVIRONMENTAL COMPLIANCE CONSULTANTS, INC. HEALTH & SAFETY PLAN

Α.	BA		

		-
1.	Site Name: Zuege Products/Dry Cleaners Etc.	
2.	Location: 102 E Cook Street, New London, WI 54961	
3.	Client Contact: Mr. Paul Zuege Phone: (414) 982-3212	
4.	Site Safety Coordinator: Catherine Sanders	·
5.	Project Mgr: Catherine Sanders	

Name	Function				
Catherine Sanders	Selection & preparation of samples; geologic interpretation; selection of boring sites; ECCI safety.				

7.	Plan Prepared by: <u>Catherine Sander</u>	S
8.	Plan Reviewed by: * Division Manager: Dennis C. Gre	il
	Signature:	Date:
	* Site Safety Coordinator: Cather	ine Sanders
	Signature:	Date:
	* Health & Safety Officer: <u>Joseph</u>	J. Austin
	Signature:	Date:

6. Site Investigation Team:

B. EMERGENCY REFERENCES

(Post on Site)

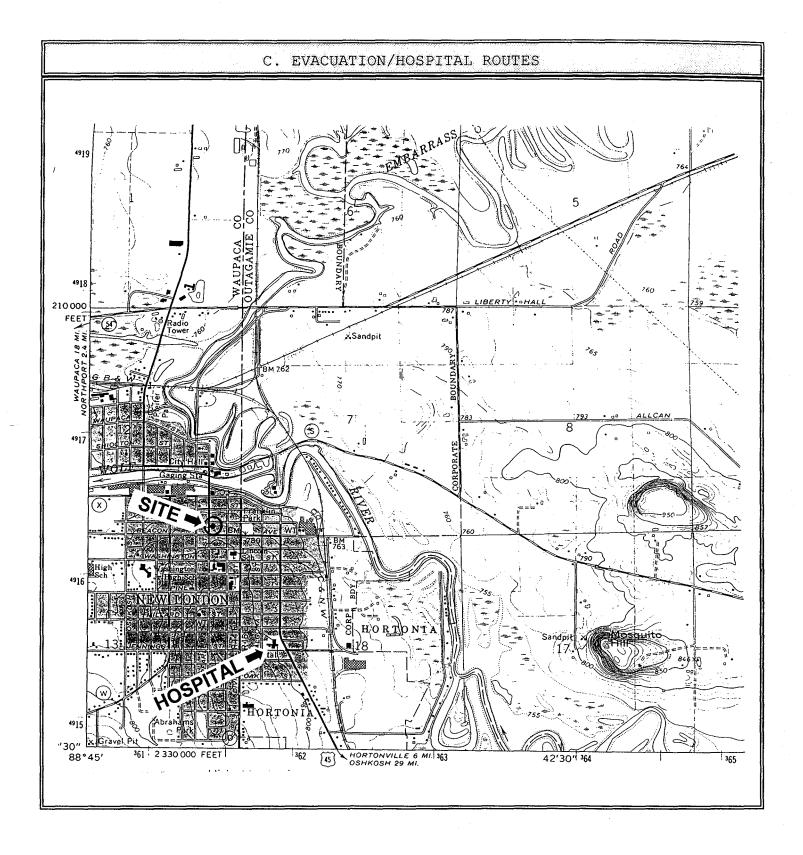
Site: Zuege Products/Dry Cleaners Etc.

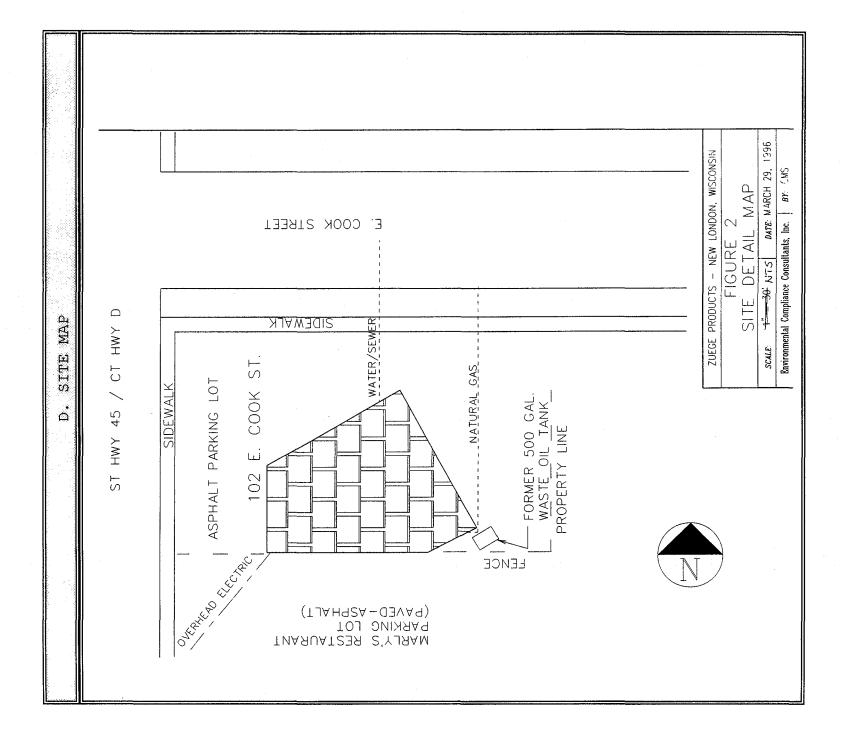
Designated Hospital: New London Family Medical Center

Address: 1405 Mill Street, New London, WI 54961

1. Emergency Resources	Telephone Numbers/Channel		
Ambulance	() 911		
Hospital Emergency Center	(414) 982-5330		
Hospital Life Line	() 982-5330		
Hospital Poison Center	() 982-5330		
Local Police	() 911, 982-8505		
State Police	(414) 929-3700		
Fire Department	() 911, 982-8507		
Explosives Disposal Unit	() 911		
Radio Channel			

2. Emergency Contacts:		
ECCI Consulting Physician		Dr. J. Kaiser
	Office	(414) 497-7771
	Home	()
Project Manager		Catherine Sanders
	Office	(414) 434-5022
	Home	(414) 497-8325
Agency Contact		WDNR-Thomas Sturm
	Office	(715) 526-4230
	Home	()
National Response Center		(800) 424-8802





SITE			

1.	Facility Description _ The sit	e is currently	an operating dry cleaner.
2.	Storage/Disposal Method:		
	Method	Number	Waste Quantity (units)
	Surface impoundment X Pile xx Drum Tank (above ground) Tank (below ground) Landfill Landfarm Open dump Other	2	55-gallon drums
3.	Containment: <u>x</u> Adequate	Moderat	e Inadequate/Poor
	Insecure/dangerous. Explain:	The contami	nated soil will be
	placed on a separate pile wit	<u>ch impermeable</u>	sheeting underneath and
	above it or stored in 55 gall	on drums. The	contaminated groundwater
	will be stored in 55 gallon of	drums.	
4.	Site Status: X Active	e <u> </u>	nactive Unknown
5.	Waste easily accessible?	Y	es <u>XX</u> No
	Explain: Contents of drums a	re sealed with	a bolt and the soil pile
	will be covered at all times	s	
6.	Exposure Potential:	High <u>x</u>	Moderate Low
7.	Waste Categories:		
	XX Solid XX Liquid Other		
8.	Sensitive Areas: <u>Utilities</u>		
9.			
	Prevailing Wind: From S		10 <u>Northeast</u>
10.	<pre>Known, Suspected or Alleged C XX Groundwater Surface water Xx Soils Air Drinking water xx Sewers and storm drains Other</pre>		

11.	Waste C	haracterization	:			
	XX	Toxic Corrosive Radioactive Persistent	XX XX XX	Infectious_ Flammable _		Reactive
12.	Potenti	al Hazardous Co	ndition	ns:		
	XX	Fire/explosive Worker exposur Unstable waste Damage to off- Other <u>vehicu</u>	e/injum containsite pr	Ty Inment Coperty	affic	
13.	Site Fe	atures and Haza	rds: _	Overhead, gr	<u>ound-le</u>	vel, and
	undergr	ound utilities,	such a	as electrical	, water	, gas. Undermining
	of surf	ace and undergr	ound ut	ilities. Tra	ffic co	ntrol must reduce
	risk of	injury to vehi	cular a	and pedestria	n traff	ic. Ordinary
	associa	ted drilling ha	zards.			
14.	History	of Public Comp	laint a	and Agency Ac	tions:	There are no
	known	public complain	ts at t	his time. W	DNR has	requested that a
	<u>site i</u>	nvestigation be	prefor	med due to t	he pres	ence of petroleum
	contam	ination during	a Tank	Closure Asse	ssmant	

F. HAZARD ASSESSMENT

Substance	Maximum Concentration (Units)	Medium ^{1,2}	PEL/TLV (PPM) ³	Cancer Status ⁴	Route ⁵
1) Diesel	Unknown	A,S,GW,SL	Unknown	benzene Group A	I,A,G
2) Gasoline	Unknown	A,S,GW,SL	900/300 mg/m³ (ppm) in air	benzene Group A	I,A,G
3) Waste Oil	Unknown	A,S,GW,SL	Unknown	benzene Group A	I,A,C
4) miscellaneous VOCs I-Waste Oil	Unknown	A,S,GW,SL	Unknown	benzene Group A	I,A,C
1), 2), 3), 4). Benzene	Unknown	A,S,GW,SL	1 ppm	Group A	I,A,C
5) Trichloroethylene	Uknown	A,S,GW,SL	50 ppm	Group A	I,A,C

Environmental Medium: air (A), surface water (SW), groundwater (GW), soil (S), sludge (SL), drinking water (DW).

²List the maximum concentration for each medium separately.

3Use the lower of the two exposure limits (PEL/TLV).

4Cancer status; EPA Classification.

<u>Group A:</u> Human carcinogen - Sufficient evidence to support a causal association between exposure and cancer

Group B1: Probable Human Carcinogen - Limited evidence of carcinogen-icity in humans.

<u>Group B2</u>: Probable Human Carcinogen - Sufficient evidence of carcinogenicity in animals, inadequate evidence of carcinogenicity in humans

<u>Group C</u>: Possible Human Carcinogen - Limited evidence of carcinogenicity in animals

<u>Group D</u>: Not Classified - Inadequate evidence of carcinogenicity in animals.

<u>Group E</u>: No Evidence of Carcinogenicity in Humans - No evidence for carcinogenicity in at least two adequate animal tests or in both epidemiologic and animal studies

⁵Route: (I)-Inhalation, (A)-Absorption, (G)-Ingestion, (J) Injection

G. SITE ACTIVITIES

1. Proposed Date(s) of Activities:	
	July 1996.

	2. Proposed Scope of Work:	Subsurface drilling and sampling, possible installation of monitoring wells.	
--	----------------------------	--	--

H. MEDICAL REQUIREMENTS

Environmental Compliance Consultants, Inc. (ECCI) personnel whose presence may be required on a hazardous waste site where exposure to toxic or hazardous materials exists shall participate in the ECCI medical monitoring program. All medical examinations performed for ECCI personnel shall be conducted in accordance with OSHA Standards 29 CFR 1910.120 and 1910.134.

It may be necessary to require specific clinical tests for certain hazardous waste sites. The necessity for such tests will be determined by the Project Manager in consultation with the company physician and Site Safety Officer. Any site-specific testing shall be identified below:

1. Site-Specific Clinical Tests:			
Parameter	Required Testing	Action Level	
None required, former tanks contained hydrocarbon fuels.			

2.a. Medical Data Summary:

This form shall be completed by Environmental Compliance Consultants, Inc. personnel prior to commencement of activities at a hazardous waste site. It shall be kept at the site for the duration of activities. This form must be delivered to the attending physician when medical assistance is required.

Site: <u>Zuege Products/Dry Cleaners Etc.</u>
Location: 102 E. Cook Street, New London, WI 54961-1453
Name: <u>Catherine Sanders</u>
Address: 924 DuChateau Lane, Green Bay, Wisconsin 54304
Home Phone: (414) 497-8325
Height: <u>5'-4"</u> Weight <u>128</u> Age: <u>36</u> Sex: <u>F</u>
In case of emergency contact: <u>Robert B. Sanders (husband)</u>
Address: 924 DuChateau Lane, Green Bay, Wisconsin 54304
Phone: (414) 497-8325 (home) or (414) 497-4622 (work)
Allergies: N/A
Recent illnesses: <u>none</u>
Previous exposure to hazardous substances?
_XX Yes No
Current medication: None
Medical restrictions: None
Name of personal physician: <u>Dr. Fredrick Sehring (Ob/Gyn) or</u> <u>Dr. Bruce Fenster (General)</u>
Address: <u>720 S VanBuren St., Green Bay, WI or West Side Clinic 15551</u> Dousman St., Green Bay WI 54304
Phone: (414) 433-9000 or (414) 496-4730

2.b. Medical Data Summary:

This form shall be completed by Environmental Compliance Consultants, Inc. personnel prior to commencement of activities at a hazardous waste site. It shall be kept at the site for the duration of activities. This form must be delivered to the attending physician when medical assistance is required.

Site: Zuege Products/Dry Cleaners Etc.
Location: 102 E. Cook Street, New London, WI
Name: Dennis C. Greil
Address: 1124 14th Green Bay, Wisconsin 54304
Home Phone: (414) 494-6181
Height: <u>6'</u> Weight <u>180</u> Age: <u>27</u> Sex: <u>M</u>
In case of emergency contact: Shea Greil
Address: 1124 14th Green Bay, WI
Phone: (414) 494-6181 res
Allergies: N/A
Recent illnesses: <u>none</u>
Previous exposure to hazardous substances?
Yes XX No
Current medication: None
Medical restrictions: None
Name of personal physician: <u>Dr. Ripp</u>
Address: <u>Webster Clinic, 900 S. Webster Ave., Green Bay,</u>
WI. 54301
Phone: (414) 437-0431

I. TRAINING REQUIREMENTS

All Environmental Compliance Consultants, Inc. personnel must complete at least 40 hours of health and safety training for hazardous waste operations as required by OSHA Standard 29 CFR 1910.120. The training must be updated on an annual basis (eight hours). The dates of certification for all ECCI on-site personnel are recorded below or are kept on file at ECCI company headquarters.

1. Certification of Health and Safety Training:				
Name Date of Initial Date of Last Certification Refresher Course				
Catherine Sanders June, 1994 October, 1995				

2. Confined Space Entry:

As a general rule, Environmental Compliance Consultants, Inc. personnel who are engaged in activities at hazardous waste sites are prohibited from entering confined spaces (e.g. trenches, holes, process vessels, storage tanks, etc.). However, if it becomes absolutely necessary to enter confined space to accomplish a required task, the Project Manager and Site Safety Coordinator will establish specific procedures to be followed on a task-by-task basis. These procedures must be approved by the Division Manager prior to implementation.

J. ENVIRONMENTAL MONITORING

Calibration and maintenance of monitoring equipment shall be performed in accordance with Environmental Compliance Consultants, Inc. Standard Operating Procedures.

Monitoring Equipment Checklist				
Type of Equipment	Serial No.	Standard Operating Procedures	Date Calibrated	
Mini Rae	000788	In Manual	Calibrate on each day used.	

2. Surveillance Methods:

During drilling activities, the PID shall be used to scan each sample collected and to monitor the ambient air and the air in the breathing zones of the Environmental Compliance Consultants, Inc. personnel at the site.

K. SITE SAFETY PROCEDURES

1. Perimeter Establishment:

The restricted area shall consist of a 25-foot perimeter around the edge of the drilling area. The perimeter shall be established by means of barricades, ropes, flagging tape, or other appropriate means which will provide a physical barrier to casual entry. If a 25-foot perimeter cannot be established due to site size restrictions, the maximum possible perimeter shall be established.

Site Entry Procedures:

No special protocol necessary.

3. Site Control:

The following procedures shall be observed to minimize the potential for contaminant transfer, personnel exposure to hazardous materials, and work place injury. All pertinent information shall be included on the Site Map.

Site control during drilling will be accomplished through the use of barricades or flagging to prevent casual access by the public. All drilling spoils will be containerized to prevent public contact. Due to the limited nature of the investigation work, excess exposure is not expected. If unusual conditions create excessive levels of hydrocarbons in the work zone, the work will cease until additional site control is established. If work will be performed while the business is open, care will be taken to prevent adverse conditions caused by drilling activities.

4. PPE Requirements:	
Project Task	Level of Protection A, B, C, or D
Soil Monitoring, Sampling, Drilling	D

¹Project Task: soil sampling, drilling, decontamination, etc.

5. PPE Modifications:

Orange safety vests to be worn if working in a high-traffic area. Mandatory if working in roadway. Full-face respirators will be worn if monitoring of site vapors indicates VOCs consistently in excess of permitted amounts. PPE will be worn as necessary to prevent contact with contaminated soils and waters encountered.

6. PPE Selection Criteria:

PID readings in excess of 30 units in the breathing zone will necessitate the use of full-face respirators.

7. Respirator Cartridge Type:

Organic Vapors or combination Organic Vapor/High Efficiency Particulates (HEPA).

8. Action Levels (i.e., limitations to assigned tasks, PPE requirements and rational conditions necessitating PPE modifications and/or withdrawal from site):

Respirators at 30 ppm

L. PERSONAL PROTECTIVE EQUIPMENT (PPE)

- 1. Level A protection should be selected when the highest level of respiratory, skin, eye and mucous membrane protection is needed.
 - * Positive-pressure, self-contained, breathing apparatus (MSHA/NIOSH approved) (REQUIRED)
 - * Fully encapsulated, chemical resistant suit (REQUIRED)
 - * Chemical-resistant inner and outer gloves (REQUIRED)
 - * Chemical-resistant boots with steel toe and shank (REQUIRED)

 * Chemical-resistant coveralls
 - * Two-way radio communication (REQUIRED)
- 2. Level B protection should be selected when the highest level of respiratory protection is needed, but with a lesser degree of skin and eye protection.
 - * Positive-pressure, self contained, breathing apparatus (MSHA/ NIOSH approved) (REQUIRED)
 - * Chemical-resistant clothing (coveralls, hooded two-piece, chem-
 - ical-resistant splash suit; or disposable chemical-resistant coveralls) (REQUIRED)
 - * Coveralls (under splash suit)
 - * Chemical-resistant inner and outer gloves (REQUIRED)
 - * Chemical-resistant boots with steel toe and shank (REQUIRED)

 * Two-way radio communication
 - * Hard hat (REQUIRED)
 - 3. Level C protection should be selected when the type and concentration of hazardous airborne substance is known, the criteria

for using air-purifying respirators is met, and skin and eye exposure is unlikely. Monitoring of the air must be performed to

comply with OSHA regulations and to ensure respirator effective ness.

- * Full face, air-purifying respirator (MSHA/NIOSH approved) with appropriate cartridges (REQUIRED)
- * Chemical-resistant clothing (coveralls, hooded two-piece chemical-resistant splash suit; or disposable, chemical-resistant coveralls (REQUIRED)
 - * Chemical-resistant inner and outer gloves (REQUIRED)
 - * Chemical-resistant boots with steel toe and shank (REQUIRED)
 - * Two-way radio communication * Hard hat (REQUIRED)
 - * Escape respirator
- 4. Level D is primarily a work uniform. It shall not be worn on site where respiratory or skin hazards exist.
 - * Protective coveralls and protective gloves
 - * Boots with steel toe and shank (REQUIRED)
 - * Hard hat (REQUIRED)
 - * Safety glasses

M. DECONTAMINATION

1. Personnel Decontamination Procedures:

Wash hands before eating. Wash gloves, boots, and clothing in warm, soapy water. Rinse with clean water. Launder work clothes daily. Discard disposable work uniforms on site.

2. Sampling Equipment Decontamination Procedures:

All sampling equipment to be washed in detergent solution, with clean water rinse, followed by distilled water spray rinse, following the taking of each sample. All decon solution waste to be left on site.

3. Waste Disposal Procedures:				
On-site: Excavated contaminated soil to be placed on an impermeable surface (concrete, asphalt) or on gasoline-resistant plastic ground covering, and covered with plastic when complete. Berm perim of stockpile area as necessary. Drilling spoil and purged groundwater will be placed in 55-gal drums and sealed.				
Off-site:	Treatment or disposal of contaminated soil stockpile dependant on analytical results and site owner preference, subject to DNR approval.			

N. EMERGENCY PLAN

1. Emergency Personnel Responsibilities:			
Name Responsibility			
Catherine Sanders	ALL		

2. Site Evacuation Procedures:

In case of emergency, all equipment will be immediately shut down. The site safety coordinator will inform the owner/manager of the situation. The owner/manager will then contact local authorities and will assist with the evacuation of the public from the premises.

3. Emergency Decontamination:

Wash & remove gloves and boots, remove & change clothing soaked with product. Wash all skin areas which have come into contact with product.

4. Emergency Equipment:

First Aid kit with burn supplies. Fire extinguisher, eye wash bottle

5. Emergency Personnel Training Requirements:

First Aid.

6. FIRST AID:

BITES * Animal Bites: Thoroughly wash the wound with soap and water. Flush the area with running water and apply a sterile dressing. Immobilize affected part until the victim has been attended by a physician. See that the animal is kept alive and in quarantine. Obtain the name and address of the owner of the animal.

<u>Insect Bites</u>: Remove "stinger" without squeezing if present. Keep affected part below the level of the heart. Apply ice bag. For minor bites and stings apply soothing lotions such as calamine.

BURNS AND SCALDS * <u>Minor Burns</u>: DO NOT APPLY VASELINE OR GREASE OF ANY KIND. Apply cold water until pain subsides if there are no areas of open skin. Cover with a dry, sterile dressing. Do not break blisters or remove tissue. Seek medical attention.

<u>Severe Burns</u>: Do not remove adhered particles of clothing. Do not apply ice or immerse in water. Do not apply any ointments or grease. Cover burns with thick, sterile dressings. Keep burned feet or legs elevated if possible. May need to treat for shock.

<u>Chemical Burns</u>: Wash away the chemical soaked clothing with large amounts of water. Remove victim's chemical soaked clothing. If dry lime, brush away before flushing. Apply sterile dressing and seek medical attention.

CRAMPS * <u>Symptoms</u>: Cramps in muscles of abdomen and extremities. Heat exhaustion may also be present. <u>Treatment</u>: Same as for heat exhaustion.

CUTS * Apply pressure with sterile gauze dressing and elevate the area until bleeding stops. Apply bandage and seek medical attention.

EYES * Foreign Objects: Keep the victim from rubbing his eye. Flush the eye with water. If flushing fails to remove the object, apply a dry protective dressing to both eyes and seek medical attention>

<u>Chemicals</u>: Flood the eye thoroughly with water for 15 minutes. Cover the eye with a dry sterile pad and seek medical attention.

FAINTING * Keep the victim lying down. Loosen tight clothing. If victim vomits, roll him onto his side or turn his head to the side. Maintain an open airway. Bathe his face gently with cool water. Unless recovery is prompt, seek medical attention.

FRACTURES * Deformity of an injured part usually means a fracture. If a fracture is suspected, splint the part. DO NOT ATTEMPT TO MOVE THE VICTIM. Seek medical attention immediately.

FROSTBITE * <u>Symptoms</u>: Just before frostbite occurs skin may be flushed, then changes to white or grayish-yellow. Pain may be felt early then may subside. Blisters may appear, affected part feels very cold and/or may be numb. <u>Treatment</u>: Bring victim indoors, cover the frozen area, provide extra clothing and blankets. Rewarm frozen area quickly by immersion in warm water--NOT HOT WATER. DO NOT RUB THE PART. Seek medical attention.

HEAT EXHAUSTION * Caused by exposure to heat, either sun or indoors. Symptoms: Near normal body temperature. Skin is pale and clammy. Profuse sweating, tiredness, weakness, headache, perhaps cramps, nausea, dizziness and possible fainting. Treatment: Keep victim in lying position and raise feet. Loosen clothing, apply cool wet cloths. If conscious, give sips of water. Seek medical attention immediately.

SUNSTROKE * <u>Symptoms</u>: Body temperature is high. Skin is hot, red and dry. Pulse is rapid. Victim may be unconscious. <u>Treatment</u>: Keep victim in lying position with head elevated. Remove clothing and repeatedly sponge the bare skin with cool water. Seek medical attention immediately.

POISONING * Call the Poison Control Center for instruction on immediate care. If victim becomes unconscious, keep the airway open. If breathing stops, begin rescue breathing. Call EMS immediately.

POISON IVY * Remove contaminated clothing. Wash all exposed areas thoroughly with soap an water. If rash is mild, apply calamine lotion or other soothing skin lotion. If a severe reaction occurs, seek medical attention.

PUNCTURE WOUNDS * If puncture wound is deeper than skin surface, seek medical attention. Serious infection can occur unless proper treatment is received.

SPRAINS * Elevate injured part and apply ice bag or cold packs. Do not soak in hot water. Immobilize affected part and seek medical attention.

UNCONSCIOUSNESS * Never attempt to give anything by mouth. Keep victim lying flat, maintain open airway. If victim is not breathing, perform rescue breathing and Call EMS immediately.

O. SITE SAFETY PLAN REVIEW

This document shall be signed by each member of the Environmental Compliance Consultants, Inc. site investigation team prior to the first site visit.

I have read and understand the contents of this Site Safety Plan and will comply with its provisions, requirements, and restrictions.

Site: Zuege Products/Dry Cleaners Etc.

Location: 102 E. Cook Street, New London, WI

Name	Signature	Date
Catherine Sanders		

	P. SITE SAFETY I	PLAN FOLLOW-UP REPORT
	Was the Site Safety Plan Follo	wed?
	Yes	No
	If no, explain all changes to	the Site Safety Plan:
,	Reason for changes:	
	•	
	Report prepared by:	
		(Site Safety Coordinator)
	Date:	
•	Report reviewed by:	
	1	(ECCI Division Manager)
	Data	(noor protection manager)
	Date:	

Q. INCIDENT REPORT

	Report Number:
Site:	
Tagation	
Name of Affected Individual: _	
Address:	
Age: Sex:	Social Sec No.:
Description of Incident:	
Date of Incident:	Time of Incident:
Work Days Lost? Yes	No Number of Days
Was Medical Care Required?	Yes No
If Yes, Describe Care Received	(attach medical record):
Date Care Received:	Location:
Name of Attending Physician: _	
Outcome of Treatment:	
Future Preventive Measures/Corr	ective Action Taken:
Report Prepared By:	Date:
Report Reviewed By:	Date:

R. ADDENDUM TO SITE SAFETY PLAN

Use this page to add additional site data or describe any special circumstances that have become apparent after the original preparation of this Site Safety Plan. Include any changes in site conditions, PPE and monitoring modifications and other items as appropriate.					
				-	
				· · · · · · · · · · · · · · · · · · ·	
		·			
			·		

ATTACHMENT "A"

TO

ENVIRONMENTAL COMPLIANCE CONSULTANTS, INC. - SITE SAFETY PLAN

The information presented in this site Safety Plan is intended solely to describe the health and safety measures applicable to Environmental Compliance Consultants, Inc. personnel engaged in field activities at the above-mentioned site.

Environmental Compliance Consultants, Inc. makes no warranties regarding the accuracy of the site safety plan, and nothing contained therein shall be construed as providing recommendations or direction, either expressed or implied, regarding health and safety measures to be taken by anyone other than Environmental Compliance Consultants, Inc. personnel. Environmental Compliance Consultants, Inc. disclaims all liability for the actions and omissions of non-Environmental Compliance Consultants, Inc. personnel. Non-Environmental Compliance Consultants, Inc. personnel shall be responsible for complying with site safety plans and local, state, and federal regulations applicable to non-Environmental Compliance Consultants, Inc. personnel.

Appendix C

Jar Headspace Field Testing Methodology

The following description of the jar headspace method has been extracted from Attachment 2 (Field Instrument Techniques) to the WDNR guideline document titled *Closure Assessment for Underground Storage Tanks* (September 1990).

ATTACHMENT 2 FIELD INSTRUMENT TECHNIQUES

Field instruments including photoionization detectors, flame ionization detectors and gas chromatographs may be used to field screen soil and ground-water samples using headspace techniques outlined in this attachment. Other types of field instruments may not be used to screen soil samples in the field without prior approval of the Department of Natural Resources.

Note: The term "headspace sample" is used herein to refer to samples collected for headspace analysis. Samples collected for laboratory analysis must be collected in glass or inert synthetic containers obtained from or approved by the certified laboratory which will analyze the samples.

A. General Requirements:

- 1. A field instrument shall only be used by operators thoroughly familiar with the operation of the instrument. Operators shall, through training or education, be familiar with each of the following aspects of instrument use:
 - -Principles of instrument operation;
 - -Interferences;
 - -Instrument sensitivity and linear range for petroleum constituents;
 - -Calibration procedures;
 - -Flame lighting techniques (for FIDs);
 - -Battery maintenance
- 2. The calibration of field instruments shall be checked at least once per operating day using methods approved by the manufacturer. FIDs shall be checked using methane or other appropriate commercial gases. PIDs shall be checked using an appropriate field standard such as benzene or isobutylene.
- 3. All samples shall be analyzed in a manner consistent with written procedures which substantially conform to this guidance.

- 4. If a headspace sample is found through headspace analysis to be contaminated and laboratory analysis is needed to confirm the analysis, the sample sent to the laboratory shall be a split sample from the same sampling point where the headspace sample was collected. Split samples shall be collected and immediately preserved at the same time the headspace sample is collected. Headspace samples shall not be submitted to environmental laboratories for analysis.
- 5. PID's must have a lamp energy of 10.6 electrovolts or greater.

B. Headspace Sample Containers and Analytical Preparation

- 1. All headspace sample containers (with the exception of new polyethylene bags) must be thoroughly cleaned using water/detergent solutions, methanol, or other appropriate solvents. Following washing, sample containers shall undergo multiple rinses using distilled water.
- 2. Headspace sample containers shall be constructed of glass or inert synthetics. Bottles and caps may be reused if tested in advance for VOC carryover. New one quart plastic bags may also be used.
- 3. Headspace samples shall be collected in accordance with Soil Sampling Requirements. (See Attachment 3 of Closure Assessment Procedures for Underground Storage Tanks).
- 4. Headspace sample containers are to be filled 1/2 to 3/4 full. All headspace sample containers used at an UST site shall be the same size and shall be filled to the same volume. A headspace fill-line shall be marked on all containers.
- 5. Polyethylene bags which are used as headspace sample containers must be resealable freezer bags. A consistent sample/headspace ratio must be maintained.
- 6. Headspace sample containers shall be closed or covered immediately. Sample containers shall be covered with heavy gauge aluminum foil or a tight fitting cap or collar equipped with a tight fitting capped septum. Tight fitting caps or collars may be used only if the field instrument is capable of drawing a sample under tension for a long enough period to take a stable reading.

C. Headspace Sample Analysis

- 1. Once collected and sealed, headspace samples shall be agitated for at least 30 seconds to break soil clods and release vapors. Headspace samples in containers sealed with aluminum foil shall first be capped to allow agitation without damage to the foil seal. Seals shall be left in place during warming and shall not be pierced until the headspace is analyzed.
- 2. Headspace samples must be allowed to equilibrate prior to analysis. Minimum equilibration time shall conform to the specifications in the Table below.

Minimum Sample Headspace Equilibration Time

Minimum Amount of Time Sample Must Equilibrate at 70°F or Greater Temperature*
40 min.
20 min.
10 min.
5 min.

^{*} Headspace samples shall be warmed out of direct sunlight by bringing them into a heated environment. At temperatures less than 55°F, headspace sample equilibration time can be reduced to 10 min. through the use of a 70°F water bath.

3. Following equilibration, the sample headspace shall be analyzed promptly. The highest instrument reading shall be recorded. Time averaged readings may also be recorded but they are not a substitute for the highest instrument reading. Meter "quenching" shall be recorded if experienced. Care shall be taken to insert the instrument tip through a single small hole in the foil seal (if used) and to measure headspace at one-half the distance between the foil seal and the sample surface.

NOTE: The Department of Natural Resources interprets FID responses to be petroleum related unless there is independent confirmation that the gas is not petroleum derived.

D. Documentation

If field instruments are used in conjunction with an UST closure assessment the following minimum documentation standards must be adhered to:

- 1. Record all relevant ambient conditions. At a minimum record:
 - -Ambient outside temperature
 - -Temperature where samples are held during equilibration
 - -Weather conditions (e.g. light rain, windy)
- 2. Record all relevant instrument conditions including:
 - -Instrument make and model
 - -Date of last factory calibration
 - -Field calibration gas used and concentration
 - -Date and time of last field calibration
 - -Lamp energy in electrovolts (for PIDs)
 - -Instrument gain setting
 - -Erratic instrument readings
 - -Cleaning or repairs performed in the field
- 3. Record all field results including:
 - -Headspace results as "instrument units as (calibration gas)" Example: 151 instrument units as benzene. DO NOT RECORD RESULTS AS CONCENTRATIONS UNLESS INSTRUMENT READINGS HAVE BEEN CALIBRATED AGAINST PREPARED SOIL/PETROLEUM PRODUCT CALIBRATION CURVES.
 - -Relative sample moisture content. Example: Saturated, wet, moist, damp, dry.
- 4. Record any noticeable petroleum product odor for any sample.
- 5. Record instrument "quenching" caused by highly contaminated samples.



Environmental Compliance Consultants, Inc.

March 29, 1996

Mr. Thomas Sturm Wisconsin Department of Natural Resources 647 Lakeland Road Shawano, WI 54166 APR 1 1996 Ans'd TU

Re:

Consultant Selection

Zuege Products, 102 E. Cook Street, New London, Wisconsin 54961-1453

WDNR LUST ID #03-69-2197

Dear Tom:

Please be advised that Mr. Paul Zuege has retained Environmental Compliance Consultants, Inc. (ECCI) to be the consultant in connection with the above referenced LUST site.

ECCI will have a workplan finalized for the investigation of this site within the next several weeks for your review. When Mr. Zuege has financing established, fieldwork for the investigation will commence.

ECCI anticipates working closely with the WDNR to comply with the remediation requirements for this site. I will be the consultant contact for this project, and would appreciate any WDNR correspondence to be directed to my attention at the address shown below. You may also reach me directly at 414–434–5022.

Respectfully,

Environmental Compliance Consultants, Inc.

atherine Sanders

Catherine Sanders

Project Manager

CC:

Paul Zuege

Department of Natural Resources

SOLID WASTE MANAGEMENT FACILITY CONTACT FORM Form 4400-106 6-86

NOTE: DO NOT USE THIS FORM WHEN DOCUMENTING INSPECTIONS AT HAZARDOUS WASTE AND SOLID WASTE FACILITIES. SEE BACK SIDE OF THIS FORM FOR MORE INFORMATION.

	700			License Number			
ATTN: Residuals Management	nt SW/3	☐ District		EPA ID Number			
				wi			
Hazardous Waste Ma Unit	nagement SW/3	Environmental En	forcement EE/5	Facility ID Number	1 - 66.		
Systems Management	SW/3						
Facility/Company Name		Location (Address	Location (Address or 1/4 1/4)		City, State, Zip Code		
Facility Type	District	County	Contact Method Telephone In-Person	Date / 10 / 96 M M D D Y Y	Time (24-Hour Clock)		
Facility Representative Co	ontacted 7	Title or Positi	on of Representative	Telephone	Number		
Parl	Z	0/1	ner.	(include ar	ea code))		
			1				
	1000111	Poto	to	Roadly			
0	100014	12/200		D. D. H.J.	2 and 1018		
6	Un to	D link		507 1011	n (g)		
	01501 V	ant our	re sign	my cono.	an -		
	au	watt Ce	nother c	week			
	- 1	Soud C	0 K		* 27		
J							
			a.				
					*		
			-				
-					···		
Check if additional sheets	attached		Ву	Shur			

PAUL ZUEGE

DEC 1 2 1995

Ans'd

102 E. COOK ST.

NEW LONDON, WI 54961

Phone 414-982-3212 Fax 414-982-3212

December 08, 1995

WISCONSIN DEPARTMENT OF NATURAL RESOURCES ATTN: TOM STURM 647 Lake Rd.
Shawano, WI 54166

Dear Mr. Sturm,

This letter is to advise you that I cannot meet the Dec. Deadline concerning the hiring of an environment consultant. My project # is WDNR LUST ID # 03-69-2197.

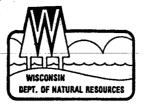
I have reviewed three proposals and have decided on the firm to contract with, but the actual contract has not been signed as of Dec. 8, 1995. My intention is to take care of this as soon as possible.

Thanking you in advance for your consideration of this matter.

Sincerely yours,

Paul Zuege





George E. Meyer, Secretary William R. Selbig, District Director

November 2, 1995

Lake Michigan District Headquarters Solid & Hazardous Waste Program 1125 N. Military Avenue, PO Box 10448 Green Bay, WI 54307-0448 TELEPHONE: (414)492-5916

TELEFAX: (414)492-5859

Mr. Paul Zuege 102 E. Cook Street New London, WI 54961

SUBJECT:

Petroleum Contamination from Underground Storage Tank System

Zuege Products, 102 E. Cook Street, New London

WDNR LUST ID #03-69-2197

Dear Mr. Zuege:

On November 1, 1995, the Department of Natural Resources (DNR) received notification from Jerry Sauby of Jerry's Excavating that petroleum contamination was discovered while performing a tank closure assessment on October 9, 1995, at the above-referenced location.

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

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

Legal Responsibilities:

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

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

Wisconsin Administrative Codes NR 700 through NR 728 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Chapter NR 708 include provisions for immediate actions in response to limited contamination. Wisconsin Administrative Code 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 clean up. Quick action may lessen damage to your property and to neighboring properties and reduce your costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and administrative codes, you should hire a professional environmental consultant who understands what needs to be done. These are the first four steps to take:

- 1. By December 10, 1995, please submit <u>written</u> verification (such as a letter from the consultant) that you have hired an environmental consultant (we would like a contact name, mailing address and phone number); you will need to work quickly to meet this timeline. If you cannot meet this timeline, please send a request for an extension, in writing, to the name listed at the bottom of this page, indicating the reason why the timeline cannot be met and when you expect to be able to meet this requirement.
- 2. By January 10, 1996, your consultant must submit a workplan and a schedule for conducting the investigation. The consultant must follow the Department's administrative codes and our technical guidance documents. Please include with your workplan a copy of any previous information that has been completed for your site (such as an underground tank removal report or a preliminary soil excavation report).
- 3. Please keep us informed of what is being done at your site. You or your consultant must provide us with a <u>brief</u> report at least every 90 days starting after your workplan is submitted. These quarterly reports should summarize the work completed since the last report. Quarterly reports need only include one or two pages of text, plus any relevant maps and tables. Should conditions at your site warrant, you may receive a letter requiring more frequent contacts with the Department. You will also receive an annual site status report form in February.
- 4. When the site investigation is complete, your consultant must submit a full report on the extent and degree of soil and groundwater contamination and a proposal for cleaning up the contamination.

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

Though a WDNR project manager has not been assigned to this case, your correspondence and reports regarding this site should be sent to the Department at the following address:

Wisconsin Department of Natural Resources Attn: Thomas Sturm (715-526-4230) 647 Lakeland Road Shawano, WI 54166

Unless otherwise requested, <u>please send only one copy of all plans and reports</u>. Correspondence and reports should be identified with the assigned WDNR LUST ID number, which can be found on the first page of this letter.

Information for Site Owners:

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

Financial Information:

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

Thank you for your cooperation. If you have any questions about this letter or your responsibilities, please call me at (414) 492-5878.

Sincerely,

Janis DeBrock, Program Assistant

Leaking Underground Storage Tank Program

anis DeBrook

Enclosures

cc: Jerry Sauby, Jerry's Excavating, Inc., E7210 CTH "C", Clintonville, WI 54929

If you are interested in obtaining the protection of limited liability under s. 144.76, Statutes, please contact Mark Giesfeldt (608-267-7562) or Darsi Foss (608-267-6713) in the DNR's Madison office for more information. The liability exemption under s. 144.765, Statutes, is available to persons who meet the definition of "purchaser" in s. 144.765(1)(c) and receive Department approval for the response actions taken at the property undergoing cleanup. The Department will determine eligibility for this program on a case-by-case basis, prior to the "purchaser" developing a scope of work for conducting a ch. NR 716 site investigation at the property.

TELEPHONE LOG

SITE NAME: On Cleaners The DATE: 2-3/-93	
SITE NO.: TIME: 8:08	
TO/FROM: 1/1/he NUMBER: 4/4-427	2-6833
COMPANY/AGENCY: Petro Chemical	
· Plans to remove tanks	
Waste vill?	
Remove tonks & Send 1-50/ts	t
Paul Zigge	
414-982-3212	
Rypleon ETCs) Pr	
100 E Cook st	
Dew Lordon	
9:30 - 7-31-95 Paul Figge	
Had no knotedge of table before the	
Down spout from rain gutter - filles	1 into tall
Recently found waste oil (1) ponding as	nsenface
No Knoledge of tank lupore	*
Jank Full. Having pumped, Will Remo	ove tank
& Send in	

ROXANNE NELEZEN

Telephone:

LEAKING UNDERGROUND STORAGE TANK (Case Tracking) Form 4400-146 Rev. 2-93

Nuns several lucinesses at same PROJECT MANAGER: **UID Number:** FID Number: PMN Number: 11 1 95 County: Initial Contact Date: Site Name: Date RPLetter Sent: Address: Date Closure Approved: Person/Firm Reporting: -Legal Descript.: _____1/4 ______1/4 sec. ____T ____N R _____(E/W) ETRIO CTH" Phone Number: (2/5 Lat.: _ Long.: _ **Priority Screening Effective Date** LUST Trust Eligible Scoring Criteria **Funding Source** 1 = High1 = RP1 = Federal 2 = Medium2 = LTF-2 = Non-Federal 3 = Low3 = EF4 = Other4 = Unknown ____ Init.:____ Date: ____/__ Case Status Start Date End Date (F) Free Product Removal (E) RP Emergency Response (R) LTF Emergency Response (L) Long Term Monitoring Responsible Party **Impacts** Contact Person: Enter "P" for potential and "K" for known Combany Name: (1) Fire/Explosion Threat (2) Contaminated Private Well(s) # of Wells Address: (3) Contaminated Public Well (4) Groundwater Contamination Phone Number: (414 (5) Soil Contamination CC's: (6) Other: (7) Surface Water Impacts (9) Floating Product Consultant Substances # Tank(s) Size Contact Name: - (1) Leaded Gas - (2) Unleaded Gas Company Name::___ — (3) Diesel Address: - (4) Fuel Oil - (5) Unkwn Hydrocrbn --- (8) Other --

- (12) Waste Oil

REMARKS:	Jank	serroued 330 ppm	10-9-93	Lale	resul	t just	5
Lecen	ied -	330 ppm	DRO.		1	0	
			- 1			14 1	
		111.72					- g
							- Jan-i
					4		
W. 70	130 100	173,00				KA T	
	Not a second to		25				
	13				4		
	1	1-2					
		2	7.				
					-		
				× 1	S		

		<i>Y</i>					
					· ·		

1 0/1	1)	5	Trac	CINC
TATAL	1	0 1	11111	11111

IIID#			

SITE NAME	5	ueno.	Reducto
	1	July	- Cumun

nn	0	1	OT	GR

ACTION CODES

02 =	RP Letter Sent *
03 =	Notice of Noncompliance *
04 =	Enforcement Conference *
14 -	Notice of Violation *

18 = Admin. Order Issued * 19 = Admin. Order Modified

20 = Admin. Order Cancelled 21 = Contest Case Hearing * 23 = Referral to DOJ * 30 = Notice to Proceed *

31 = Tnk Cls/SA Workplan Rec'd 32 = Tnk Cls/SA Workplan Appvd 33 = Tank Cls/SA Report Rec'd

34 = Tank Cls/SA Report Appvd 35 = SI Workplan Rec'd * 36 = SI Workplan Appvd *

37 = SI Report Rec'd * 38 = SI Report Appvd *

39 = RA Workplan Rec'd * 40 = RA Workplan Appvd *

41 = RA Report Rec'd * 42 = RA Report Appvd *

43 = Status Reports * 44 = Form 4 Received 45 = Form 4 Approved

46 = Form 4 Denied 47 = PECFA Reimbursement

48 = Free Product Recovery *

49 = Alternate Water Supplied *

60 = Consent Order +

NOTE: * = EPA Reporting Requirements + = LMD Tracking Requirements

ACTION UPDATES

Entered in Tracking	Code	Action Date (Received / Sent)	Compliance Due Date	Comment	Compliance Achieved
1 / 1	02	11/2/95	1 10 196	SIWP due	//
4,30,96	35	4/29/96	/		
	30	4/30/96	///		
/	76	2122199			
//////		///			
//		/			
//		//			
//		///	///		//
//					
//		//	///		
/	****	///			
//		///	/		
/	-	//			
/		//			
//			/		
/		/			
		/	///		
1 /		1	/ /		//