



PARAGON ELECTRIC COMPANY, INC.

606 Parkway Blvd., P.O. Box 28, Two Rivers, WI 54241
414-793-1161 Fax 414-793-3736 Telex 26-3450

February 12, 1991

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Annette Weissbach
State of Wisconsin
Department of Natural Resources
Lake Michigan District Headquarter
P.O. Box 10448
1125 North Military Avenue
Green Bay, Wisconsin 54307-0448

Dear Ms. Weissbach:

For your records, please find the attached report titled,
"Subsurface/Hydrogeologic Investigation at Paragon Electric,
Two Rivers, Wisconsin". The report outlines the services performed
by CBC Environmental Services on November 1, 1990.

If you have any questions or comments in regard to this report,
please contact me at (414) 793-1161, Ext. 3286.

Sincerely,

PARAGON ELECTRIC COMPANY, INC.

Richard J. Lubenow
Manager Maintenance & Facilities

Enclosure

**SUBSURFACE/HYDROGEOLOGIC
INVESTIGATION AT
PARAGON ELECTRIC
TWO RIVERS, WISCONSIN**

PREPARED FOR:
MR. RICHARD LUBENOW
PARAGON ELECTRIC
606 PARKWAY BOULEVARD
TWO RIVERS, WISCONSIN 54241

PREPARED BY:
CRAIG A VARLAND
PROJECT MANAGER
SIGMA ENVIRONMENTAL SERVICES, INC.
9555 SOUTH HOWELL AVENUE
OAK CREEK, WISCONSIN 53154

PROJECT REFERENCE #TEW0224

JANUARY 30, 1991

RECEIVED DNR
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LAKE MICHIGAN DISTRICT

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
II. SITE DESCRIPTION.....	1
III. PREVIOUS WORK.....	1
IV. SUBSURFACE INVESTIGATION.....	2
Soil Borings.....	2
Monitoring Wells.....	3
Groundwater Sampling Program.....	3
Static Water Level Measurements.....	3
V. SITE GEOLOGY AND HYDROGEOLOGY.....	4
Topography and Drainage.....	4
Geology.....	4
Hydrogeology.....	4
VI. SOIL QUALITY.....	4
Soil Quality Results.....	4
VII. GROUNDWATER QUALITY.....	6
Groundwater Quality Results.....	6
VIII. REGULATIONS.....	7
Soil.....	7
Groundwater.....	7
IX. CONCLUSIONS.....	8
X. RECOMMENDATIONS.....	8
XI. LIMITATIONS OF INVESTIGATION.....	9

LIST OF FIGURES

<u>Figure</u>	<u>Follows Page</u>
1. Site Location Map.....	1
2. Site Map.....	1

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1. Soil Quality Results.....		5
2. Groundwater Quality Results.....		6
3. Wisconsin Groundwater Standards.....		7

LIST OF APPENDICES

Appendix

- A. Boring Logs
- B. Well Construction Logs
- C. Well Development Forms
- D. Water Level Measurements
- E. Laboratory Results (Soil)
- F. Laboratory Results (Groundwater)

I. INTRODUCTION

Sigma Environmental Services, Inc. (formerly known as CBC Environmental Services) of Oak Creek, Wisconsin, has been retained by Mr. Richard Lubenow to conduct a subsurface investigation at 606 Parkway Boulevard in Two Rivers, Wisconsin. The purpose of the investigation was to determine general soil and groundwater quality on the perimeter of a former underground diesel fuel storage tank at the property. This report details the results of the investigation conducted between November 1, and November 5, 1990.

II. SITE DESCRIPTION

The subject property is located at 606 Parkway Boulevard, Two Rivers, Wisconsin. Specifically, the property is located in the Southwest Quarter of the Northeast Quarter of Section 2, Township 19 North, Range 24 East, City of Two Rivers, Manitowoc County, Wisconsin. The location of the site is depicted in Figure 1.

The property occupies 26.77 acres of land and contains a large manufacturing facility and offices. The western portion is bordered by a parking lot. The north and east sides of the facility are bordered by 7th Street and Bucholz Street, respectively. Lake Michigan is located approximately one-eighth mile south of the site.

III. PREVIOUS WORK

Previous work conducted at the site included the removal of a 12,000 gallon underground diesel fuel storage tank. The tank was removed on April 25, 1990. Autoquip, Incorporated of Milwaukee, Wisconsin was contracted by CBC Environmental Services to perform the tank removal.

Petroleum hydrocarbons were detected in one (1) sample collected in the excavation following the tank removal. On

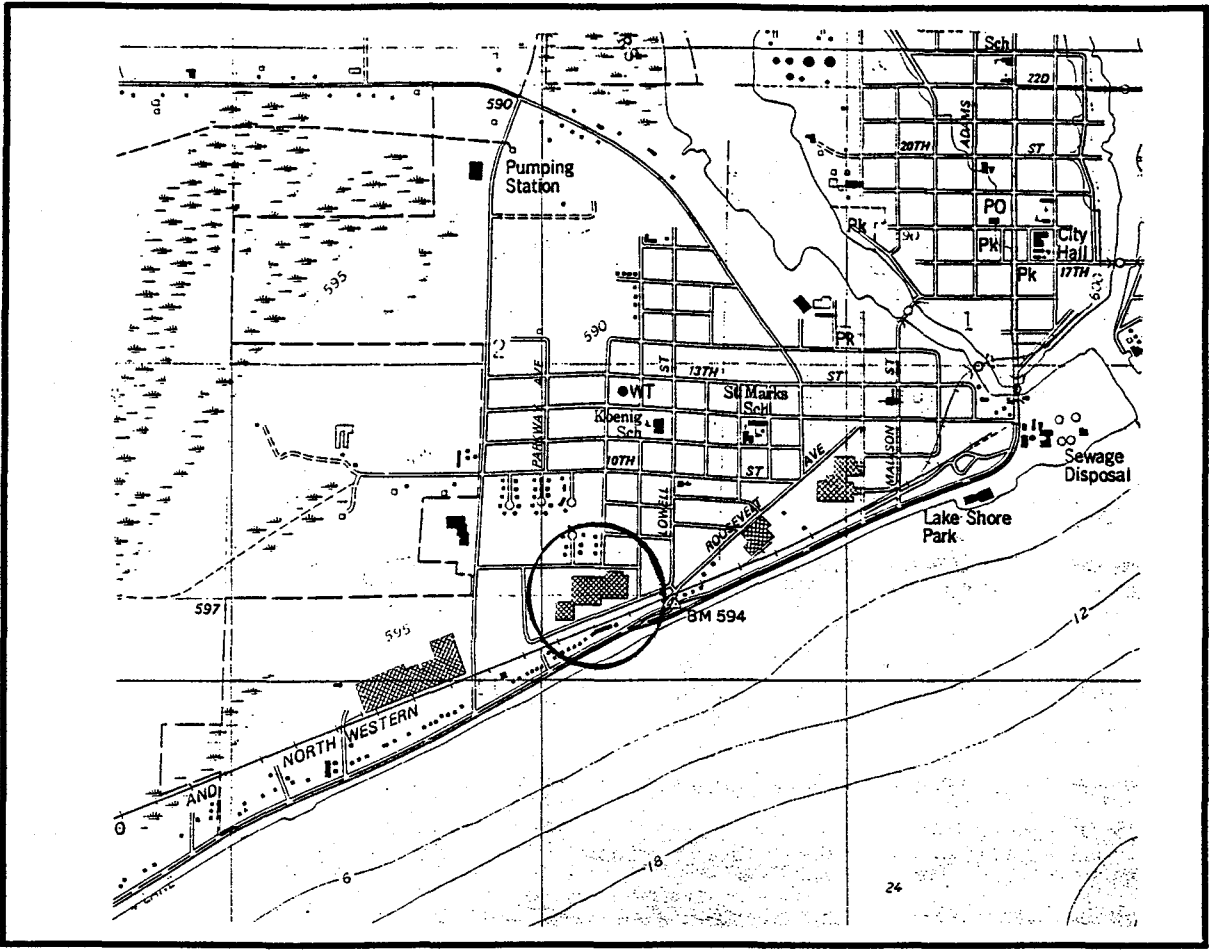


Figure 1
SITE LOCATION MAP
Paragon Electric Company, Inc.

October 9, 1990, CBC Environmental submitted a proposal/cost estimate for a subsurface investigation to Mr. Richard Lubenow.

IV. SUBSURFACE INVESTIGATION

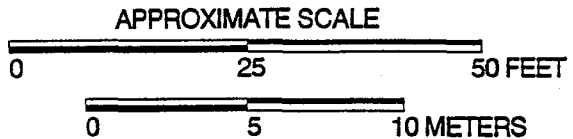
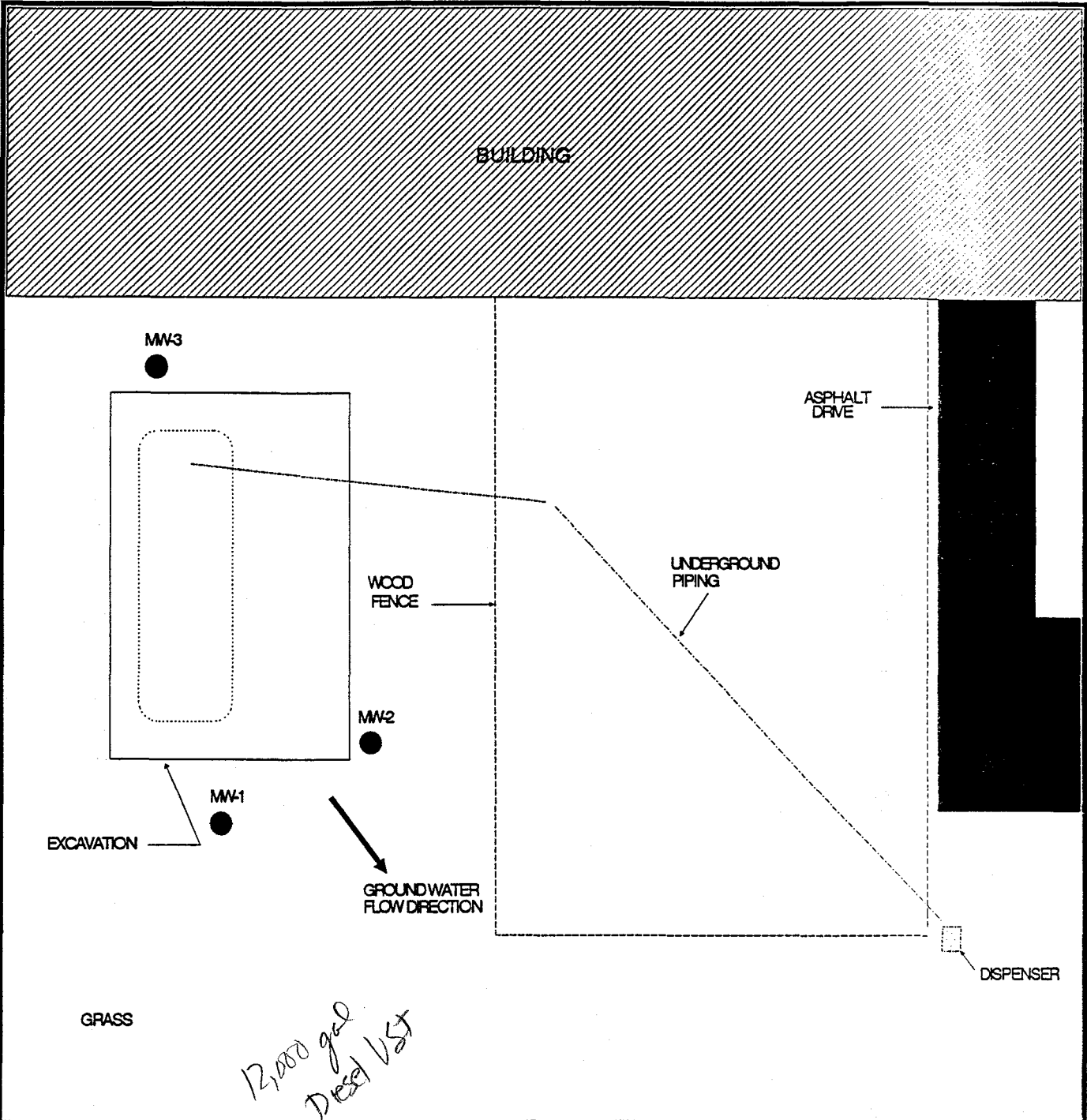
Work conducted at the site during this portion included drilling profile soil borings, installing groundwater monitoring wells, and submitting soil and groundwater samples for laboratory analysis.

Soil Borings. During this phase of the field study, three (3) profile soil borings were drilled near the former tank excavation. The locations of these borings are depicted in Figure 2. The borings were drilled to total depths of sixteen (16) to twenty-one (21) feet. Borings were drilled on November 1, 1990.

During advancement of the augers, split-spoon samples were collected at 2.5 foot intervals. Two (2) samples were collected at each interval; one (1) sample was immediately containerized into a glass jar, sealed with a teflon-lined cap and placed into a cooler. The other sample was also containerized into a glass jar, sealed and placed into a cooler. This sample was later allowed to warm up to room temperature and screened for volatile organic compounds utilizing a PhotovacTM Microtip photoionization detector (PID) instrument. The PID utilized an 11.7 eV (electron volt) lamp and was calibrated to an isobutylene standard. PID results are included with the boring logs in Appendix A.

One (1) sample displaying the highest PID value and one (1) confirmatory sample from each boring were accompanied with a Chain-of-Custody document and transported to the CBC Laboratory in Oak Creek, Wisconsin, for analysis of Total Petroleum Hydrocarbons (TPH). In addition, one (1) sample

as what? 2



KEY

- monitoring well location
- previous UST location



Figure 2
MONITORING WELL LOCATION MAP
 Paragon Electric Company, Inc.

from boring B-2 (7 - 8.5 foot depth) was submitted for solvent scan analysis.

All downhole drilling equipment (augers, drill rods and split-spoon samplers) were steam cleaned prior to mobilization to the site and between borings. Between each boring, the split-spoons were rinsed with hexane and triple rinsed with deionized water. In addition, the split-spoon samplers were washed with analconox soap solution and a final tap water rinse between each sample interval.

Monitoring Wells. Three (3) groundwater monitoring wells were installed in the boreholes following completion. Monitoring well locations are shown in Figure 2. The monitoring wells were constructed of two-inch inside diameter flush-joint casing and .010 inch mill-slotted screen. Wells were installed with the screened portion intersecting the water table. Well construction logs are presented in Appendix B.

Groundwater Sampling Program. The three (3) groundwater monitoring wells were developed on November 5, 1990, by CBC personnel per WDNR guidelines (NR 141). Well development forms are presented in Appendix C.

Following well development, the wells at the site were purged and sampled according to CBC standard sampling protocol. Four (4) 40 milliliter vials were collected from each well and submitted with one (1) set of duplicate samples, trip and field blanks, to the CBC Laboratory for analysis of benzene, toluene, ethylbenzene and xylene (BTEX).

Static Water Level Measurements. Static water level measurements were collected at the site as a means to determine direction of groundwater flow. A tabulated listing of water level measurements is found in Appendix D.

V. SITE GEOLOGY AND HYDROGEOLOGY

Topography and Drainage. The site is principally flat with a gradual slope downward toward Lake Michigan. Regional drainage is southeastward toward Lake Michigan located approximately one-eighth mile south of the site.

Geology. The regional geology of the area ranges from the Precambrian basement rock to the quaternary glacial deposits. Bedrock, from oldest to youngest, consists of the Precambrian crystalline rocks; Cambrian sandstones; Ordovician dolomites, sandstones and shales; Silurian dolomite; and Devonian dolomites. Quaternary glacial deposits overlying the bedrock are mostly lake deposits consisting of organic materials and stratified clay, silts, and sand.

Geology at the site consists of brown silty fine sand in the upper materials grading to gray silty fine sands at approximately 10 feet below ground surface.

Hydrogeology. The principal aquifers for potable water in the Two Rivers area are: the sands and gravel (glacial aquifer); the Niagara (dolomites) and the deep sandstone aquifer. The Maquoketa shale separates the Niagara and sandstone aquifers and presents a relatively impermeable barrier restricting the vertical movement of groundwater between the aquifers.

Groundwater flow at the site, as measured by the monitoring wells, is south-southeast in direction. Static water levels at the site are less than ten (10) feet below ground surfaces. The hydraulic gradient calculated from water level measurements in the monitoring wells is .006 feet/foot.

VI. SOIL QUALITY

Soil Quality Results. Split-spoon samples collected at the site were screened for the presence of volatile organic

compounds having ionization potentials equal to or less than 11.7 eV (electron volts) by means of a head space analysis using a Photovac_{TM} Microtip Photoionization Detector (PID) instrument. Results of the soil screening are shown in the boring logs at Appendix A.

Two (2) samples from each boring were submitted to the CBC Laboratory for analysis of total petroleum Hydrocarbons (TPH). In addition, one (1) sample from boring B-2 was submitted for solvent scan analysis.

Laboratory results reveal no detectable concentrations of the compounds analyzed. Table 1 presents the soil quality results for the samples analyzed.

TABLE 1			
<u>SOIL QUALITY RESULTS</u>			
<u>Location</u>	Sample Depth (in Feet) <u>Below Surface</u>	PID Results <u>(ppm)</u>	Laboratory Results TPH <u>(ppm)</u>
B-1	2-3.5	29.8	<4.0
B-1	7-8.5	2.6	<4.0
B-2	2-3.5	23.6	<4.0
B-2	7-8.5	411	<4.0
B-3	2-3.5	2.0	<4.0
B-3	7-8.5	203	<4.0

ppm - Parts Per Million

Appendix E presents the laboratory results for the samples submitted.

VII. GROUNDWATER QUALITY

Groundwater Quality Results. The groundwater quality study included the sampling of the monitoring wells installed at the site. As stated previously, the monitoring wells were developed following installation. On November 5, 1990, water levels were measured and the wells purged and sampled. Four (4) 40 milliliter vials were collected from each well.

Water samples were placed into a cooler and accompanied by a Chain-of-Custody document to the CBC Laboratory for analysis of benzene, toluene, ethylbenzene, and xylene (BTEX).

Laboratory results of groundwater revealed that concentrations of BTEX were below the detection limit of the analytical method employed (EPA Method 602). Table 2 presents the results of the laboratory analysis. Appendix F presents the groundwater laboratory results.

<u>Location</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylene</u>
MW-1	<1.0	<1.0	<1.0	<1.0
MW-2	<1.0	<1.0	<1.0	<1.0
MW-3	<1.0	<1.0	<1.0	<1.0

Table 3 summarizes the standards that the State of Wisconsin has established for groundwater quality.

<u>Parameter</u>	<u>Enforcement Standard</u>	<u>Preventative Action Limit</u>
Benzene	.67 ppb	.067 ppb
Toluene	343 ppb	68.6 ppb
Ethylbenzene	1360 ppb	272 ppb
Xylene	620 ppb	124 ppb

VIII. REGULATIONS

Soil. The State of Wisconsin has not established standards for the levels of contaminants detected in soil. The Wisconsin Department of Natural Resources (WDNR) evaluates each situation separately to determine if the existence of contaminants in soils will have an adverse affect on the groundwater or otherwise on the environment and public health.

The WDNR has stated that correcting action is required if the level of Total Petroleum Hydrocarbons in soils is above 10 ppm (parts per million). Samples collected from the three (3) borings at the site did not exceed the standard.

Groundwater. The State of Wisconsin has established groundwater quality standards for contaminants detected in or having a reasonable probability of entering the groundwater resources of the State. The standards are found in Chapter NR 140 of the Wisconsin Administrative Code. If Enforcement Standards are exceeded, the State shall require remedial action. Samples collected from the three (3) groundwater

monitoring wells at the site were within the established standards for the compounds analyzed.

IX. CONCLUSIONS

The subsurface/hydrogeologic investigation at Paragon Electric in Two Rivers, Wisconsin is completed. The following conclusions are made based on data collected at the site:

1. The site geology consists of brown to gray silty fine sands.
2. The phreatic surface is encountered at less than 10 feet below ground level. Groundwater flow is south-southeast in direction.
3. TPH (Total Petroleum Hydrocarbons) and solvent scan analysis of samples collected at the site revealed no elevated concentrations of the compounds analyzed.
4. Groundwater samples collected from the three (3) monitoring wells installed at the site did not reveal the presence of contaminants.

X. RECOMMENDATIONS

CBC recommends that groundwater samples from the monitoring wells be analyzed on a quarterly basis for a period of one (1) year to confirm groundwater quality compliance. Beyond groundwater sampling, it is recommended that no further remedial activities be implemented. CBC's recommendations are offered based on the following:

- * The source of contamination has been eliminated.
- * Low level contaminated petroleum hydrocarbons were revealed in only one (1) tank excavation location.

- * Soil samples collected from borings conducted at the site did not reveal additional impacted soils.
- * Groundwater impacts are below the State of Wisconsin Groundwater Standards.

XI. LIMITATIONS OF INVESTIGATION

This report was prepared under constraints of cost, time, and scope, and reflects a limited assessment and evaluation rather than a full, total, complete or extensive assessment and evaluation.

Our assessment was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by Professional Consultants practicing in this or similar localities. No other warranty or guarantee, expressed or implied, is made as to the conclusion and professional advice included in this report.

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

The interpretations and conclusions contained in this report are based upon the result of independent laboratory tests and analysis intended to detect the presence and/or concentrations of certain chemical constituents in samples taken from the subject property. CBC Environmental Services has no control over such testing and analysis and therefore, disclaims any

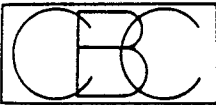
responsibility for any errors and omissions arising therefrom.

A subsurface exploration was performed and presented in this report. However, subsurface exploration cannot reveal totally what is below the surface. Depending upon the sampling method and frequency, every soil condition may not be observed, and some materials or layers which are present in the subsurface may not be noted.

This report is issued with the understanding that it is the responsibility of the owner(s) to ensure that the information and recommendations contained herein are brought to the attention of the appropriate regulatory agency(ies).

This report has been prepared specifically for Paragon Electric. Reproduction or distribution of this report should not be performed without written consent of Paragon Electric and CBC.

APPENDIX A
BORING LOGS



ENVIRONMENTAL SERVICES

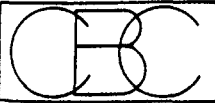
CHEM-BIO CORPORATION 140 East Ryan Road • Oak Creek, WI 53154-4599

NOTES:

Client: Paragon Electric
 Location: Two Rivers, Wisconsin Start Date: 11/1/90
 Boring Number: B-1/MW-1 Completion Date: 11/1/90
 Drilling Co: Giles Engineering Rig: Mobile B-57
 Driller: Jeff Auger or Casing Size: 4 1/4"
 Helper: Paul Hole Advanced By: HS. Auger Wash Boring
 If wash boring used Depth _____ to _____ ft.

WATER LEVEL	READING DATE	TIME	WATER LEVEL BELOW SURFACE	DEPTH CAVED
Encountered when drilling			APPROXIMATELY 7'	
After auger or casing pulled				
24 hour reading	11/2/90	8:30pm	7.8' T.O.C.	
_____ hour reading	11/1/90	12:00pm	6.05'	
Observation well installed	11/2/90	11:00am	Depth <u>14.7</u> Feet	

Sample Number	Blows on Sampler			Sample Recovery	Material Charge	MATERIAL CLASSIFICATION	PID PPM	REMARKS
	0	6	12					
1	3	3	2	14"		2-3.5 - Brown silty fine sand -trace	29.8	
2	3	2	1	4"		4.5-6 - Same as above - Poor recovery	5.5	
3	1	2	4	5"		7-8.5 - Brown silty fine sand -trace coarse sand and small gravel	2.6	Wet
4	7	10	11	16" 10"	10	9.5-11 -Gray silt - very fine sand	2.7	Wet
5	4	9	15	18"		12-13.5-Same as above	3.1	
6	-	8	12	22"	15	14.5-16-Same as above	2.5	
						BORING TERMINATED AT 16'		
					20			
					25			
					30			
					35			
					40			



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION 140 East Ryan Road • Oak Creek, WI 53154-4599

NOTES:

Client: Paragon Electric
 Location: Two Rivers, Wisconsin Start Date: 11/1/90
 Boring Number: B-3-MW-3 Completion Date: 11/1/90
 Drilling Co: Giles Engineering Rig: Mobile B-57
 Driller: Jeff Auger or Casing Size: 4 1/4"
 Helper: Paul Hole Advanced By: HS. Auger Wash Boring
 If wash boring used Depth _____ to _____ ft.

WATER LEVEL	READING		WATER LEVEL BELOW SURFACE	DEPTH CAVED
	DATE	TIME		
Encountered when drilling				
After auger or casing pulled				
24 hour reading	11/2/90	8:30pm	7.77' T.O.C.	
_____ hour reading	11/2/90	4:00pm	6.1	
Observation well installed	11/1/90	3:00pm	Depth <u>15.0</u> Feet	

Sample Number	Blows on Sampler			Sample Recovery	Material Charge	MATERIAL CLASSIFICATION	Signature:	PID PPM	REMARKS
	0-6	6-12	12-18						
1	2	1	2	18"		2-3.5 - Brown silty fine sand, trace coarse sand		2.0	
2	1	1	1	17"		4.5-6- Dark brown fine to medium sand trace coarse sand and organics		N/D	Wet
3	4	5	10	14"	8'	7-8.5- Light brown silty very fine sand in tip with dark brown fine to coarse sand and gravel above		203	Wet
4	10	19	20	18"	10.5'	10 9.5-11-Grey silty very fine sand		1.3	
5	5	16	19	16"		12-13.5 - Same as above		1.2	
6	2	11	17	22"	15'	14.5-16 - Same as above		0.5	
						BORING TERMINATED AT 16'			
					20				
					25				
					30				
					35				
					40				

APPENDIX B
WELL CONSTRUCTION LOGS

Facility/Project Name Paragon Electric	Grid Location _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name MW-1
Facility License, Permit or Monitoring Number _____		Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location SW 1/4 of NE 1/4 of Section 2	Date Well Installed 11/01/90 m m d d y y
Distance Well Is From Waste/Source Boundary 10 ft.	T 19 N, R 24 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) Jeff Anderson
Is Well A Point of Enforcement Std. Application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source <input type="checkbox"/> Upgradient <input type="checkbox"/> Sidegradient <input checked="" type="checkbox"/> Downgradient <input type="checkbox"/> Not Known	Giles Engineering

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ in. b. Length: _____ ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation _____ ft. MSL	d. Additional protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: Expandable Cap
D. Surface seal, bottom _____ ft. MSL or 1.5 ft.	3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: <input type="checkbox"/> GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 30 Annular space seal <input checked="" type="checkbox"/>
13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal: Granular Bentonite <input type="checkbox"/> 33 _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 31 _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 50 _____ Ft ³ volume added for any of the above
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99	6. Bentonite seal: Bentonite granules <input type="checkbox"/> 33 <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input checked="" type="checkbox"/> 32 Other <input type="checkbox"/>
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Fine sand material: Manufacturer, product name and mesh size Red Flint Filter Sand 100 Volume added _____ ft ³
Describe _____	8. Filter pack material: Manufacturer, product name and mesh size Red Flint Filter Sand 20 Volume added _____ ft ³
17. Source of water (attach analysis): _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or 1.5 ft.	10. Screen material: Same Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or 2.5 ft.	Manufacturer Monoflex Slot size: 0.010 in. Slotted length: 10.0 ft.
G. Filter pack, top _____ ft. MSL or 3.7 ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> Other <input type="checkbox"/>
H. Well screen, top _____ ft. MSL or 4.7 ft.	
I. Well screen, bottom _____ ft. MSL or 14.7 ft.	
J. Filter pack, bottom _____ ft. MSL or _____ ft.	
K. Borehole, bottom _____ ft. MSL or _____ ft.	
L. Borehole, diameter 8.0 in.	
M. O.D. well casing 2.25 in.	
N. I.D. well casing 2.00 in.	

I hereby certify that the information on this form is true and correct to the best of my knowledge.
Signature *Eric Valde* Firm **SIGMA ENVIRONMENTAL SERVICES, INC.**

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation.
NOTE: Shaded areas are for DNR use only. See instructions for more information.

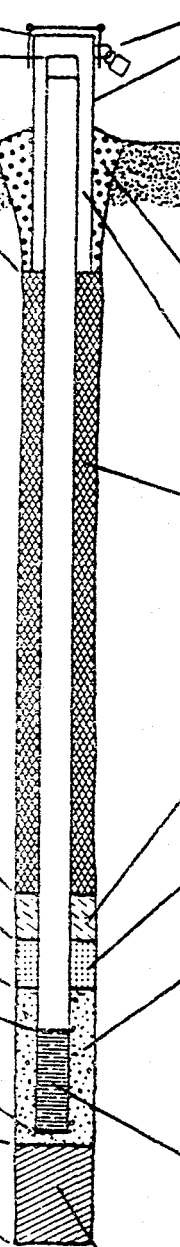
Facility/Project Name Paragon Electric	Grid Location ft. <input type="checkbox"/> N. <input type="checkbox"/> S. ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name MW-2
Facility License, Permit or Monitoring Number		Wis. Unique Well Number _____ DNR Well Number _____
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location SW 1/4 of NE 1/4 of Section 2	Date Well Installed $\frac{11}{m m} / \frac{01}{d d} / \frac{90}{y y}$
Distance Well Is From Waste/Source Boundary 2 ft.	T 19 N, R 24 <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) Jeff Anderson
Well A Point of Enforcement Std. Application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source <input type="checkbox"/> Upgradient <input checked="" type="checkbox"/> Sidegradient <input type="checkbox"/> Downgradient <input type="checkbox"/> Not Known	Giles Engineering

1. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Well casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: _____ 4.0 in. b. Length: _____ 7.0 ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
3. Land surface elevation _____ ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>Expandable Cap</u>
4. Surface seal, bottom _____ ft. MSL or 2.5 ft.	3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/>
5. USCS classification of soil near screen: <input type="checkbox"/> GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Annular space seal <input type="checkbox"/>
6. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal: Granular Bentonite <input checked="" type="checkbox"/> 33 _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 31 _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 50 _____ Ft ³ volume added for any of the above
7. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input checked="" type="checkbox"/> 08
8. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99	6. Bentonite seal: Bentonite granules <input type="checkbox"/> 33 <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input checked="" type="checkbox"/> 32 Other <input type="checkbox"/>
9. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Fine sand material: Manufacturer, product name and mesh size <u>Red Flint Filter Sand 100</u> Volume added _____ ft ³
Describe _____	8. Filter pack material: Manufacturer, product name and mesh size <u>Red Flint Filter Sand 20</u> Volume added _____ ft ³
10. Source of water (attach analysis):	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
11. Bentonite seal, top _____ ft. MSL or 2.5 ft.	10. Screen material: <u>Same</u> Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
12. Fine sand, top _____ ft. MSL or 3.5 ft.	Manufacturer <u>Monoflex</u> Slot size: _____ 0.010 in. Slotted length: _____ 10.0 ft.
13. Filter pack, top _____ ft. MSL or 4.5 ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> Other <input type="checkbox"/>
14. Well screen, top _____ ft. MSL or 5.2 ft.	
15. Well screen, bottom _____ ft. MSL or 15.2 ft.	
16. Filter pack, bottom _____ ft. MSL or _____ ft.	
17. Borehole, bottom _____ ft. MSL or _____ ft.	
18. Borehole, diameter _____ 8.0 in.	
19. O.D. well casing _____ 2.25 in.	
20. I.D. well casing _____ 2.00 in.	

I hereby certify that the information on this form is true and correct to the best of my knowledge.
Signature [Signature] Firm SIGMA ENVIRONMENTAL SERVICES, INC.

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation.

Facility/Project Name Pargon Electric	Grid Location _____ ft. <input type="checkbox"/> N. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name MW-3
Facility License, Permit or Monitoring Number _____		Wis. Unique Well Number: _____ DNR Well Number: _____
Type of Well Water Table Observation Well <input checked="" type="checkbox"/> 11 Piezometer <input type="checkbox"/> 12	Section Location SW 1/4 of NE 1/4 of Section <u>2</u>	Date Well Installed <u>1 1 / 0 1 / 9 0</u> m m d d y y
Distance Well Is From Waste/Source Boundary <u>3</u> ft.	T <u>19</u> N, R <u>24</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W	Well Installed By: (Person's Name and Firm) Jeff Anderson
Is Well A Point of Enforcement Std. Application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Location of Well Relative to Waste/Source <input checked="" type="checkbox"/> Upgradient <input type="checkbox"/> Sidegradient <input type="checkbox"/> Downgradient <input type="checkbox"/> Not Known	Giles Engineering

<p>A. Protective pipe, top elevation _____ ft. MSL</p> <p>B. Well casing, top elevation _____ ft. MSL</p> <p>C. Land surface elevation _____ ft. MSL</p> <p>D. Surface seal, bottom _____ ft. MSL or <u>2.0</u> ft.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>12. USCS classification of soil near screen: <input type="checkbox"/> GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock</p> <p>13. Sieve analysis attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/> _____</p> <p>15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99</p> <p>16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____</p> <p>17. Source of water (attach analysis): _____</p> </div> <p>E. Bentonite seal, top _____ ft. MSL or <u>2.0</u> ft.</p> <p>F. Fine sand, top _____ ft. MSL or <u>3.0</u> ft.</p> <p>G. Filter pack, top _____ ft. MSL or <u>4.0</u> ft.</p> <p>H. Well screen, top _____ ft. MSL or <u>5.0</u> ft.</p> <p>I. Well screen, bottom _____ ft. MSL or <u>15.0</u> ft.</p> <p>J. Filter pack, bottom _____ ft. MSL or _____ ft.</p> <p>K. Borehole, bottom _____ ft. MSL or _____ ft.</p> <p>L. Borehole, diameter <u>8.0</u> in.</p> <p>M. O.D. well casing <u>2.25</u> in.</p> <p>N. I.D. well casing <u>2.00</u> in.</p>	 <p>1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>2. Protective cover pipe: a. Inside diameter: <u>4.0</u> in. b. Length: <u>7.0</u> ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/> _____</p> <p>d. Additional protection? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: <u>Expandable Cap</u></p> <p>3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/> _____</p> <p>4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 30 Annular space seal <input checked="" type="checkbox"/> _____ Other <input type="checkbox"/> _____</p> <p>5. Annular space seal: Granular Bentonite <input type="checkbox"/> 33 _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 _____ Lbs/gal mud weight . . . Bentonite slurry <input type="checkbox"/> 31 _____ % Bentonite . . . Bentonite-cement grout <input type="checkbox"/> 50 _____ Ft³ volume added for any of the above</p> <p>How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08</p> <p>6. Bentonite seal: Bentonite granules <input type="checkbox"/> 33 <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite pellets <input checked="" type="checkbox"/> 32 Other <input type="checkbox"/> _____</p> <p>7. Fine sand material: Manufacturer, product name and mesh size <u>Red Flint Filter Sand 100</u> Volume added _____ ft³</p> <p>8. Filter pack material: Manufacturer, product name and mesh size <u>Red Flint Filter Sand 20</u> Volume added _____ ft³</p> <p>9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/> _____</p> <p>10. Screen material: <u>Same</u> Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/> _____</p> <p>Manufacturer <u>Monoflex</u> Slot size: <u>0.010</u> in. Slotted length: <u>10.0</u> ft.</p> <p>11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> Other <input type="checkbox"/> _____</p>
---	--

I hereby certify that the information on this form is true and correct to the best of my knowledge.
Signature: [Signature] Firm: **SIGMA ENVIRONMENTAL SERVICES, INC.**

Please complete and return both sides of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with ch. 144, Wis. Stats., failure to file this form may result in a forfeiture of not less than \$10, nor more than \$5,000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than \$10,000 for each day of violation.

NOTE: Shaded areas are for DNR use only. See instructions for more information.

APPENDIX C
WELL DEVELOPMENT FORMS

Facility/Project Name PARAGON ELECTRIC	Well Name MW-1
License, Permit or Monitoring Number -----	Wis. Unique Well Number -----
DNR Well Number -----	

1. Can this well be purged dry? Yes No

2. Well development method

surged with bailer and bailed	<input type="checkbox"/>	4 1
surged with bailer and pumped	<input checked="" type="checkbox"/>	6 1
surged with block and bailed	<input type="checkbox"/>	4 2
surged with block and pumped	<input type="checkbox"/>	6 2
surged with block, bailed and pumped	<input type="checkbox"/>	7 0
compressed air	<input type="checkbox"/>	2 0
bailed only	<input type="checkbox"/>	1 0
pumped only	<input type="checkbox"/>	5 1
pumped slowly	<input type="checkbox"/>	5 0
Other _____	<input type="checkbox"/>	<input type="checkbox"/>

3. Time spent developing well **0015** min.

4. Depth of well (from top of well casing) **017.9** ft.

5. Inside diameter of well **02.07** in.

6. Volume of water in filter pack and well casing **007.7** gal.

7. Volume of water removed from well **011.0** gal.

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

9. Source of water added _____

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	007.84 ft.	007.84 ft.
Date	01/05/90 m m d d y y	11/05/90 m m d d y y
Time	11:30 <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	12:45 <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	02.0 inches	00.0 inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) VERY TURBID	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 25 (Describe) VERY CLEAR
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	_____ mg/l	_____ mg/l
15. COD	_____ mg/l	_____ mg/l

Additional comments on development:

WELL RECHARGED VERY WELL, PURGE WATER STORED ON SITE IN 55G STEEL Drums.

Well developed by: Person's Name and Firm	I hereby certify that the above information is true and correct to the best of my knowledge.
Name: D. PALKOWSKI	
Firm: CBC ENVIRONMENTAL	CBC ENVIRONMENTAL

NOTE: Shaded areas are for DNR use only. See instructions for more information.

Facility/Project Name PARAGON ELECTRIC	Well Name MW-2				
License, Permit or Monitoring Number -----	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; padding: 2px;">Wis. Unique Well Number</td> <td style="width:50%; padding: 2px;">DNR Well Number</td> </tr> <tr> <td style="padding: 2px;">-----</td> <td style="padding: 2px;">-----</td> </tr> </table>	Wis. Unique Well Number	DNR Well Number	-----	-----
Wis. Unique Well Number	DNR Well Number				
-----	-----				

1. Can this well be purged dry? Yes No

2. Well development method

surged with bailer and bailed	<input type="checkbox"/>	4 1
surged with bailer and pumped	<input type="checkbox"/>	6 1
surged with block and bailed	<input type="checkbox"/>	4 2
surged with block and pumped	<input type="checkbox"/>	6 2
surged with block, bailed and pumped	<input type="checkbox"/>	7 0
compressed air	<input type="checkbox"/>	2 0
bailed only	<input type="checkbox"/>	1 0
pumped only	<input type="checkbox"/>	5 1
pumped slowly	<input type="checkbox"/>	5 0
Other <u>SURGED WITH PUMP AND AIRPEA</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

3. Time spent developing well 00 45 min.

4. Depth of well (from top of well casing) 0 15.9 ft.

5. Inside diameter of well 02.07 in.

6. Volume of water in filter pack and well casing 0 12.5 gal.

7. Volume of water removed from well 125.0 gal.

8. Volume of water added (if any) --- gal.

9. Source of water added ---

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	<u>007.71</u> ft.	<u>007.71</u> ft.
Date	<u>11/05/90</u> m m d d y y	<u>11/05/90</u> m m d d y y
Time	<u>11:45</u> <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>12:30</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>02.0</u> inches	<u>00.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) <u>VEEY TURBID</u>	Clear <input type="checkbox"/> 20 Turbid <input checked="" type="checkbox"/> 25 (Describe) <u>SLIGHTLY TURBID</u>
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	----- mg/l	----- mg/l
15. COD	----- mg/l	----- mg/l

Additional comments on development:

WELL RECHARGED VERY NICELY, PURGE WATER STORED
ON SITE IN 55G STEEL DRUMS.

Well developed by: Person's Name and Firm	I hereby certify that the above information is true and correct to the best of my knowledge.
Name: <u>D. PALKOWSKI</u>	Signature: <u>[Signature]</u>
Firm: <u>CBC ENVIRONMENTAL</u>	Firm: <u>CBC ENVIRONMENTAL</u>

NOTE: Shaded areas are for DNR use only. See instructions for more information.

Facility/Project Name PARAGON ELECTRIC	Well Name MW-3
License, Permit or Monitoring Number -----	Wis. Unique Well Number: ----- DNR Well Number: -----

1. Can this well be purged dry? Yes No

2. Well development method

surged with bailer and bailed	<input type="checkbox"/>	4 1
surged with bailer and pumped	<input type="checkbox"/>	6 1
surged with block and bailed	<input type="checkbox"/>	4 2
surged with block and pumped	<input type="checkbox"/>	6 2
surged with block, bailed and pumped	<input type="checkbox"/>	7 0
compressed air	<input type="checkbox"/>	2 0
bailed only	<input type="checkbox"/>	1 0
pumped only	<input type="checkbox"/>	5 1
pumped slowly	<input type="checkbox"/>	5 0
Other <u>SURGED WITH PUMP AND PUMPED</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

3. Time spent developing well 00 45 min.

4. Depth of well (from top of well casing) 015.5 ft.

5. Inside diameter of well 0207 in.

6. Volume of water in filter pack and well casing 011.8 gal.
~~012.5~~

7. Volume of water removed from well ----- gal.

8. Volume of water added (if any) ----- gal.

9. Source of water added -----

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	<u>007.73</u> ft.	<u>007.73</u> ft.
Date	<u>08/05/90</u> m m d d y y	<u>11/05/90</u> m m d d y y
Time	<u>12:45</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>01:30</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>02.0</u> inches	<u>00.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10	Clear <input type="checkbox"/> 20
	Turbid <input checked="" type="checkbox"/> 15 (Describe) <u>VERY TURBID</u>	Turbid <input checked="" type="checkbox"/> 25 (Describe) <u>SLIGHTLY TURBID</u>
Fill in if drilling fluids were used and well is at solid waste facility:		
14. Total suspended solids	----- mg/l	----- mg/l
15. COD	----- mg/l	----- mg/l

Additional comments on development:

WELL RECHARGED VERY NICELY, PURGE WATER STORED IN 55G STEEL DRUMS ON SITE.

Well developed by: Person's Name and Firm	I hereby certify that the above information is true and correct to the best of my knowledge.
Name: <u>D. PALKIWSKI</u>	Signature: <u>Dale Palowski</u>
Firm: <u>CBC ENVIRONMENTAL</u>	Firm: <u>CBC ENVIRONMENTAL</u>

NOTE: Shaded areas are for DNR use only. See instructions for more information.

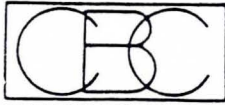
APPENDIX D

WATER LEVEL MEASUREMENTS

PARAGON ELECTRIC
WATER LEVEL MEASUREMENTS

<u>Well#</u>	<u>Elevation</u> <u>(T.O.C.)</u>	<u>Ground</u> <u>Elevation</u>	<u>Depth to</u> <u>Water</u>	<u>Water Table</u> <u>Elevation</u>	<u>Date</u>
MW-1	102.36	100.71	7.81	94.55	11-2-90
			7.84	94.52	11-5-90
MW-2	102.18	100.65	7.71	94.47	11-2-90
			7.71	94.47	11-5-90
MW-3	102.49	100.98	7.77	94.72	11-2-90
			7.73	94.76	11-5-90

APPENDIX E
LABORATORY RESULTS (SOIL)



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/05/90

LABORATORY REPORT

PAGE 1

C739 8456964 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: TIM WIMMER

TEWOCR0224

SAMPLE 90306-C11521 B-1/2-3.5'/PID 29.8/SOIL
PARAGON ELECTRIC-TWO RIVERS,WI
DATE COLLECTED 11/02/90 DATE RECEIVED 11/02/90

TEST NAME	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
@ = ELEVATED DETECTION LIMIT DUE TO MATRIX INTERFERENCE. # = ELEVATED DETECTION LIMIT DUE TO SAMPLE CONCENTRATION.
\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

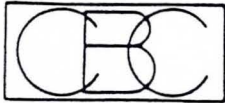
IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

APPROVAL M.F.H.

FAX #414-764-0486

WI DNR LAB CERTIFICATION #241283020
CLIENT SERVICES DIRECT LINE 414-768-7460

1-800-365-3840



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/05/90

LABORATORY REPORT

PAGE 1

C739 8456964 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: TIM WIMMER

TEWOCR0224

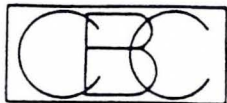
SAMPLE 90306-C11522 B-1/7-8.5' /PID 2.6/SOIL
PARAGON ELECTRIC-TWO RIVERS,WI
DATE COLLECTED 11/02/90 DATE RECEIVED 11/02/90

TEST NAME	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
@ = ELEVATED DETECTION LIMIT DUE TO MATRIX INTERFERENCE. # = ELEVATED DETECTION LIMIT DUE TO SAMPLE CONCENTRATION.
\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

APPROVAL M.F.H.



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/05/90

LABORATORY REPORT

PAGE 1

C739 8456964 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: TIM WIMMER

TEWOCR0224

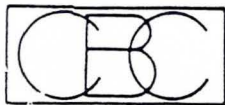
SAMPLE 90306-C11523 B-2/2-3.5'/PID 23.6/SOIL
PARAGON ELECTRIC-TWO RIVERS,WI
DATE COLLECTED 11/02/90 DATE RECEIVED 11/02/90

TEST NAME	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
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\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

APPROVAL *M.J.W.*



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

12/18/90

LABORATORY REPORT

PAGE 1

C739 8456964 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: TIM WIMMER

TEWOCR0224

SAMPLE 90306-C11520 B-2/7-8.5'/PID 411/SOIL
PARAGON ELECTRIC—TWO RIVERS,WI
DATE COLLECTED 11/02/90 DATE RECEIVED 11/02/90

TEST NAME	RESULT	UNITS
TRICHLOROFLUOROMETHANE	<0.010	PPM
ETHYL ETHER	<0.010	PPM
METHANOL	<0.010	PPM
1,1,2TRICHLORO-1,2,2TRIFLU	<0.010	PPM
ETHANOL	<0.010	PPM
ACETONE	<0.010	PPM
METHYLENE CHLORIDE	<0.010	PPM
ISOPROPANOL	<0.010	PPM
CARBON TETRACHLORIDE	<0.010	PPM
ETHYL ACETATE	<0.010	PPM
METHYL ETHYL KETONE	<0.010	PPM
1,1,1-TRICHLOROETHANE	<0.010	PPM
BENZENE	<0.010	PPM
TRICHLOROETHYLENE	<0.010	PPM
ISOBUTANOL	<0.010	PPM
N-BUTANOL	<0.010	PPM
TOLUENE	<0.010	PPM
2-ETHOXYETHANOL	<0.010	PPM
METHYL ISOBUTYL KETONE	<0.010	PPM
TETRACHLOROETHYLENE	<0.010	PPM
BUTYL ACETATE	<0.010	PPM
ETHYLBENZENE	<0.010	PPM
XYLENES	<0.010	PPM
STYRENE	<0.010	PPM
2-ETHOXYETHYL ACETATE	<0.010	PPM
2-BUTOXYETHANOL	<0.010	PPM
CYCLOHEXANONE	<0.010	PPM
CHLOROENZENE	<0.010	PPM
O-DICHLOROENZENE	<0.010	PPM
CARBON DISULFIDE	<0.010	PPM

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
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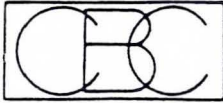
APPROVAL M.T.L.

WI DNR LAB CERTIFICATION #241283020

FAX #414-764-0486

CLIENT SERVICES DIRECT LINE 414-768-7460

1-800-365-3840



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

12/18/90

LABORATORY REPORT

PAGE 2

C739 8456964 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: TIM WIMMER

TEWOCR0224

SAMPLE 90306-C11520 B-2/7-8.5'/PID 411/SOIL
PARAGON ELECTRIC—TWO RIVERS,WI
DATE COLLECTED 11/02/90 DATE RECEIVED 11/02/90

TEST NAME	RESULT	UNITS
CHLOROFORM	<0.010	PPM
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
@ = ELEVATED DETECTION LIMIT DUE TO MATRIX INTERFERENCE. # = ELEVATED DETECTION LIMIT DUE TO SAMPLE CONCENTRATION.
\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

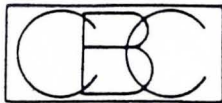
APPROVAL

WI DNR LAB CERTIFICATION #241283020

CLIENT SERVICES DIRECT LINE 414-768-7460

FAX #414-764-0486

1-800-365-3840



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/05/90

LABORATORY REPORT

PAGE 1

C739 8456964 W31

CBC REMEDIAL SERVICES INC.

TEWOCR0224

140 E. RYAN ROAD

OAK CREEK, WI 53154

ATTN: TIM WIMMER

768-7144

SAMPLE 90306-C11524 B-3/2-3.5'/PID 2.0/SOIL
PARAGON ELECTRIC-TWO RIVERS,WI
DATE COLLECTED 11/02/90 DATE RECEIVED 11/02/90

TEST NAME	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM

method SW-846 3810

Chromatograph

since less than detection did not report
which standard compared to
per Dave Scherzer, CBC-Sigma

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
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\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

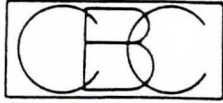
APPROVAL M.F.W.

WI DNR LAB CERTIFICATION #241283020

FAX #414-764-0486

CLIENT SERVICES DIRECT LINE 414-768-7460

1-800-365-3840



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/05/90

LABORATORY REPORT

PAGE 1

C739 8456964 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: TIM WIMMER

TEWOCR0224

SAMPLE 90306-C11525 B-3/7-8.5'/PID 203/SOIL
PARAGON ELECTRIC-TWO RIVERS,WI
DATE COLLECTED 11/02/90 DATE RECEIVED 11/02/90

TEST NAME	RESULT	UNITS
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
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IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

APPROVAL Mr. [Signature]

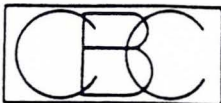
WI DNR LAB CERTIFICATION #241283020

CLIENT SERVICES DIRECT LINE 414-768-7460

FAX #414-764-0486

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APPENDIX F
LABORATORY RESULTS (GROUNDWATER)



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION

140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/12/90

LABORATORY REPORT

PAGE 1

C739 8457043 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: CRAIG VARLAND

TEWOCR0224

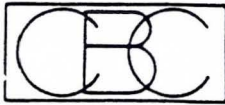
SAMPLE 90309-C11529 FIELD BLANK/WATER/PARAGON ELECTRIC
DATE COLLECTED 11/05/90 DATE RECEIVED 11/05/90

TEST NAME	RESULT	UNITS
BENZENE	<1.0	PPB
ETHYL BENZENE	<1.0	PPB
TOLUENE	<1.0	PPB
XYLENE	<1.0	PPB

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT ; NON-WATER SAMPLES WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE,
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IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

APPROVAL WRS



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION

140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/12/90

LABORATORY REPORT

PAGE 1

C739 8457043 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: CRAIG VARLAND

TEWOCR0224

SAMPLE 90309-C11528 TRIP BLANK/WATER/PARAGON ELECTRIC
DATE COLLECTED 11/05/90 DATE RECEIVED 11/05/90

TEST NAME	RESULT	UNITS
BENZENE	<1.0	PPB
ETHYL BENZENE	<1.0	PPB
TOLUENE	<1.0	PPB
XYLENE	<1.0	PPB

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\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

APPROVAL

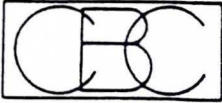
WRS

WI DNR LAB CERTIFICATION #241283020

FAX #414-764-0486

CLIENT SERVICES DIRECT LINE 414-768-7460

1-800-365-3840



ENVIRONMENTAL SERVICES

CHEM-BIO CORPORATION
140 EAST RYAN ROAD OAK CREEK, WI 53154-4599 (414) 764-7005

11/12/90

LABORATORY REPORT

PAGE 1

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CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: CRAIG VARLAND

TEWOCR0224

SAMPLE 90309-C11523 MW-1/WATER/PARAGON ELECTRIC
DATE COLLECTED 11/05/90 DATE RECEIVED 11/05/90

TEST NAME	RESULT	UNITS
BENZENE	<1.0	PPB
ETHYL BENZENE	<1.0	PPB
TOLUENE	<1.0	PPB
XYLENE	<1.0	PPB

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\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

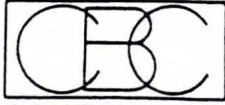
APPROVAL WRS

WI DNR LAB CERTIFICATION #241283020

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11/12/90

LABORATORY REPORT

PAGE 1

C739 8457043 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: CRAIG VARLAND

TEWOCR0224

SAMPLE 90309-C11524 MW-1/DUPLICATE/WATER/PARAGON ELECTRIC
DATE COLLECTED 11/05/90 DATE RECEIVED 11/05/90

TEST NAME	RESULT	UNITS
BENZENE	<1.0	PPB
ETHYL BENZENE	<1.0	PPB
TOLUENE	<1.0	PPB
XYLENE	<1.0	PPB

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\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

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CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: CRAIG VARLAND

TEWOCR0224

SAMPLE 90309-C11525 MW-2/WATER/PARAGON ELECTRIC
DATE COLLECTED 11/05/90 DATE RECEIVED 11/05/90

TEST NAME	RESULT	UNITS
BENZENE	<1.0	PPB
ETHYL BENZENE	<1.0	PPB
TOLUENE	<1.0	PPB
XYLENE	<1.0	PPB

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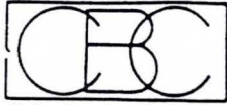
APPROVAL WRS

WI DNR LAB CERTIFICATION #241283020

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PAGE 1

C739 8457043 W31

CBC REMEDIAL SERVICES INC.
140 E. RYAN ROAD
OAK CREEK ,WI 53154
ATTN: CRAIG VARLAND

TEWOCR0224

SAMPLE 90309-C11527 MW-3/WATER/PARAGON ELECTRIC
DATE COLLECTED 11/05/90 DATE RECEIVED 11/05/90

TEST NAME	RESULT	UNITS
BENZENE	<1.0	PPB
ETHYL BENZENE	<1.0	PPB
TOLUENE	<1.0	PPB
XYLENE	<1.0	PPB

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\$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE VOLUME.

IL EPA CERTIFICATION # 100243; AIHA ACCREDITED.

APPROVAL WRS

WI DNR LAB CERTIFICATION #241283020

FAX #414-754-0486

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