

CONSUMERS ENERGY Memorandum

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To: NASTopyak, P-24-513  
From: HWVoigt, T-260  
Date: July 24, 1998  
Subject: CHEVY SUBSTATION  
- Project SME# PE29742  
- Sampling Date Of June 25, June 30, July 06, 1998

CC: File Index No.  
529817-310-150  
529817-310-201  
529817-610-230

CC: Cheryl Kehres-Dietrich  
Soil & Materials Engineers, Inc.  
43980 Plymouth Oaks Blvd.  
Plymouth, MI 48170-9337

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On June 26, July 01, and July 07, 1998 the Chemistry Section (CHEM) of Technical Services received soil and groundwater samples collected at the CHEVY SUBSTATION Site by Soil & Materials Engineers, Inc. (SME).

The samples were returned to CHEM for the determination of:

Aromatic Volatile Organics (BTEX)  
Halogenated Volatile Organics (HalVOCs)  
Polynuclear Aromatic Hydrocarbons (PAHs)  
Polychlorinated Biphenyls (PCBs)  
Michigan 10 Metals

Analytical results are attached for your review.

NOTE VOCs Target Method Detection Limits (TMDL) are revised in accordance with DEQ method ORGLAB-11 (March 26, 1998) as presented April 24, 1998.

NOTE Soil sample SP-2, S8, 14-16 feet (#981150-20) is reported at an elevated TMDLs for several PAHs. This is due to the presence of a hydrocarbon fraction that prohibited quantitation at the 330 ug/kg reporting requirement.

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ANALYTICAL METHODS

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Sample Handling - Sample collection and handling was conducted in accordance with SW-846 recommendations. All samples were returned to the Chemistry Section (CHEM) of Technical Services for analysis.

VOC Sample Collection - VOC samples were collected by DEQ-ORGLAB-11, Methanol Preservation Protocol (Method 5035). Samples were preserved in the laboratory within 40 hours of sample collection.

Aromatic Volatile Organics (BTEX) - Method 8021, Halogenated And Aromatic Volatiles By Gas Chromatography Using Electrolytic Conductivity And Photoionization Detectors In Series: Capillary Technique. SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Halogenated Volatile Organic Compounds (HalVOCs) - Method 8021, Halogenated And Aromatic Volatiles By Gas Chromatography Using Electrolytic Conductivity And Photoionization Detectors In Series: Capillary Technique. SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polynuclear Aromatic Hydrocarbons (PAHs) - Method 8270, Gas Chromatography / Mass Spectrometry For Semivolatile Organics: Capillary Column Technique. SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Polychlorinated Biphenyls (PCBs) - Method 8080, Organochlorine Pesticides and PCB (PCBs Only). SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Total Metals Preparation - Soils - Method 3051, Microwave Assisted Acid Digestion Of Sediments, Sludges, Soils and Oils. SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.

Metal Analytes:

<u>Analyte</u>	<u>SW-846 Method</u>
Arsenic	7061
Barium	7081
Cadmium	7131
Chromium (total)	7191
Copper	7211
Lead	7421
Mercury	7470
Selenium	7741
Silver	7661
Zinc	7950

SW-846, Test Methods For Evaluating Solid Waste - Physical / Chemical Methods, USEPA.



TABLE A2. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b> - SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998					<b>Project Number</b> CHEM-98-1150 CHEM-98-1201 CHEM-98-1230
<b>Sample Identification</b>	SP-4 S2	SP-4 S5	SP-1 S1	SP-1 S6	SP-1 S8	
Sample Depth, ft ("=in)	2-4	13-15	0-2	10-12	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	97	90	93	80	93	
MeOH Preservation Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-01-98	
Control Number	981150-40	981150-43	981150-46	981150-51	981150-53	
<b>BTEX, ug/kg - Method 8021</b>						<b>TMDL</b>
Benzene	nd	nd	nd	nd	nd	50
Toluene	nd	nd	nd	nd	nd	50
Ethylbenzene	nd	nd	nd	nd	nd	50
m/p-Xylene	nd	nd	nd	nd	nd	100
o-Xylene	nd	nd	nd	nd	nd	50
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>Criteria</b>
4-Bromofluorobenzene	95	96	96	97	94	80-120
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<u>        HWW        </u>		Date	<u>        072498        </u>		Data File
						981230

TABLE A3. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b> - SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998					<b>Project Number</b> CHEM-98-1150 CHEM-98-1201 CHEM-98-1230
<b>Sample Identification</b>	B1 S2	B1 S4	B2 S1	SP-2 S8	B2 S3	
Sample Depth, ft (# =in)	5-7	13-15	1-3	14-15	9-11	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-30-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	07-01-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	92	81	92	89	90	
MeOH Preservation Date	06-26-98	06-26-98	06-26-98	06-26-98	07-01-98	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-07-98	
Control Number	981150-62	981150-64	981150-67	981150-68	981201-02	
<b>BTEX, ug/kg - Method 8021</b>						<b>TMDL</b>
Benzene	nd	nd	nd	nd	nd	50
Toluene	nd	nd	nd	nd	nd	50
Ethylbenzene	nd	nd	nd	nd	nd	50
m/p-Xylene	nd	nd	nd	nd	nd	100
o-Xylene	nd	nd	nd	nd	nd	50
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>Criteria</b>
4-Bromofluorobenzene	96	97	95	91	91	80-120
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<u>        HWD        </u>			Date	<u>072498</u>	Data File 981230

TABLE A4. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b> - SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998				<b>Project Number</b> CHEM-98-1150 CHEM-98-1201 CHEM-98-1230	
<b>Sample Identification</b>	B3 S3	B3 S4				
Sample Depth, ft ("=in)	9-11	13-15				
Sample Type	soil	soil				
Sample Date	06-30-98	06-30-98				
Received Date	07-01-98	07-01-98				
Report Date	07-23-98	07-23-98				
Percent Solids, %w/w	90	84				
MeOH Preservation Date	07-01-98	07-01-98				
Analysis Date	07-07-98	07-07-98				
Control Number	981201-08	981201-09				
<b>BTEX, ug/kg - Method 8021</b>						<b>TMDL</b>
Benzene	nd	nd				50
Toluene	nd	nd				50
Ethylbenzene	nd	nd				50
m/p-Xylene	nd	nd				100
o-Xylene	nd	nd				50
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>				<b>Criteria</b>
4-Bromofluorobenzene	94	93				80-120
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/kg (parts-per-billion) nd = Parameter Not Detected At TMDL Results Corrected To Dry-Weight Basis						
Reviewed By <u>                    </u>	Date <u>07 24 98</u>			Data File	981230	

TABLE A5. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-5 GW	SP-2 GW	SP-3 GW	SP-4 GW	SP-1 GW	
Sample Depth, ft ("=in)	-	-	-	-	-	
Sample Type	water	water	water	water	water	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	-	-	-	-	-	
Extraction Date	-	-	-	-	-	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-01-98	
Control Number	981150-12	981150-25	981150-38	981150-45	981150-60	
BTEX, ug/L - Method 8021						TMDL
Benzene	nd	nd	nd	nd	nd	1
Toluene	nd	nd	nd	nd	nd	1
Ethylbenzene	nd	nd	nd	nd	nd	1
m/p-Xylene	nd	nd	nd	nd	nd	1
o-Xylene	nd	nd	nd	nd	nd	1
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
4-Bromofluorobenzene	105	102	103	105	101	80-120
<p>NOTES: TMDL = Target Method Detection Limit, ug/L (parts-per-billion)            nd = Parameter Not Detected At TMDL</p>						
Reviewed By	<u>flw</u>		Date	<u>072498</u>		Data File 981230

TABLE A6. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b>			<b>Project Number</b>		
	- SME# PE29742			CHEM-98-1150		
	- Sampling Date Of June 25, June 30, July 06, 1998			CHEM-98-1201		
				CHEM-98-1230		
<b>Sample Identification</b>	<b>MW-1</b>	<b>MW-2</b>	<b>MW-3</b>			
	GW	GW	GW			
Sample Depth, ft ("=in)	-	-	-			
Sample Type	water	water	water			
Sample Date	07-06-98	07-06-98	07-06-98			
Received Date	07-07-98	07-07-98	07-07-98			
Report Date	07-23-98	07-23-98	07-23-98			
Percent Solids, %w/w	-	-	-			
Extraction Date	-	-	-			
Analysis Date	07-11-98	07-11-98	07-11-98			
Control Number	981230-01	981230-02	981230-03			
<b>BTEX, ug/L - Method 8021</b>						<b>TMDL</b>
Benzene	nd	nd	nd			1
Toluene	nd	nd	nd			1
Ethylbenzene	nd	nd	nd			1
m/p-Xylene	nd	nd	nd			1
o-Xylene	nd	nd	nd			1
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>			<b>Criteria</b>
4-Bromofluorobenzene	102	105	103			80-120
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/L (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Reviewed By	KWD		Date	07-29-98	Data File	981230

TABLE B1.1. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
*Chemistry Section - Technical Services Department*

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-5	SP-2	SP-2	SP-3	SP-3	
	S5	S3	S8	S2	S8	
Sample Depth, ft ("=in)	10-12	4-6	14-16	2-4	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	-	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	-	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	85	97	-	94	83	
MeOH Preservation Date	06-26-98	06-26-98	no sample	06-26-98	06-26-98	
Analysis Date	07-01-98	07-01-98	no sample	07-01-98	07-01-98	
Control Number	981150-05	981150-15	981150-20	981150-27	981150-33	
HaVOCs, ug/kg - Method 8021						TMDL
Bromochloromethane	nd	nd	-	nd	nd	100
Bromodichloromethane	nd	nd	-	nd	nd	100
Bromoform	nd	nd	-	nd	nd	100
Bromomethane	nd	nd	-	nd	nd	250
Carbon Tetrachloride	nd	nd	-	nd	nd	50
Chlorobenzene	nd	nd	-	nd	nd	50
Chloroethane	nd	nd	-	nd	nd	250
Chloroform	nd	nd	-	nd	nd	50
Chloromethane	nd	nd	-	nd	nd	250
Dibromochloromethane	nd	nd	-	nd	nd	100
Dibromomethane	nd	nd	-	nd	nd	100
1,2-Dichlorobenzene	nd	nd	-	nd	nd	100
1,3-Dichlorobenzene	nd	nd	-	nd	nd	100
1,4-Dichlorobenzene	nd	nd	-	nd	nd	100
1,4-Dichloro-2-butene	nd	nd	-	nd	nd	100
Dichlorodifluoromethane	nd	nd	-	nd	nd	250
1,1-Dichloroethane	nd	nd	-	nd	nd	50
1,2-Dichloroethane	nd	nd	-	nd	nd	50
1,1-Dichloroethene	nd	nd	-	nd	nd	50
cis-1,2-Dichloroethene	nd	nd	-	nd	nd	50
trans-1,2-Dichloroethene	nd	nd	-	nd	nd	50
1,2-Dichloropropane	nd	nd	-	nd	nd	50
cis-1,3-Dichloropropene	nd	nd	-	nd	nd	50
trans-1,3-Dichloropropene	nd	nd	-	nd	nd	50
Methylene Chloride	nd	nd	-	nd	nd	250
1,1,1,2-Tetrachloroethane	nd	nd	-	nd	nd	100
1,1,2,2-Tetrachloroethane	nd	nd	-	nd	nd	100
continued next page						Data File 981230



**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-4 S2	SP-4 S5	SP-1 S1	SP-1 S6	SP-1 S8	
Sample Depth, ft ("=in)	2-4	13-15	0-2	10-12	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	97	90	93	80	93	
MeOH Preservation Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-01-98	
Control Number	981150-40	981150-43	981150-46	981150-51	981150-53	
HaVOCs, ug/kg - Method 8021						TMDL
Bromochloromethane	nd	nd	nd	nd	nd	100
Bromodichloromethane	nd	nd	nd	nd	nd	100
Bromoform	nd	nd	nd	nd	nd	100
Bromomethane	nd	nd	nd	nd	nd	250
Carbon Tetrachloride	nd	nd	nd	nd	nd	50
Chlorobenzene	nd	nd	nd	nd	nd	50
Chloroethane	nd	nd	nd	nd	nd	250
Chloroform	nd	nd	nd	nd	nd	50
Chloromethane	nd	nd	nd	nd	nd	250
Dibromochloromethane	nd	nd	nd	nd	nd	100
Dibromomethane	nd	nd	nd	nd	nd	100
1,2-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,3-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,4-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,4-Dichloro-2-butene	nd	nd	nd	nd	nd	100
Dichlorodifluoromethane	nd	nd	nd	nd	nd	250
1,1-Dichloroethane	nd	nd	nd	nd	nd	50
1,2-Dichloroethane	nd	nd	nd	nd	nd	50
1,1-Dichloroethene	nd	nd	nd	nd	nd	50
cis-1,2-Dichloroethene	nd	nd	nd	nd	nd	50
trans-1,2-Dichloroethene	nd	nd	nd	nd	nd	50
1,2-Dichloropropane	nd	nd	nd	nd	nd	50
cis-1,3-Dichloropropene	nd	nd	nd	nd	nd	50
trans-1,3-Dichloropropene	nd	nd	nd	nd	nd	50
Methylene Chloride	nd	nd	nd	nd	nd	250
1,1,1,2-Tetrachloroethane	nd	nd	nd	nd	nd	100
1,1,2,2-Tetrachloroethane	nd	nd	nd	nd	nd	100
continued next page						Data File 981230

TABLE B2.2. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-4	SP-4	SP-1	SP-1	SP-1	
	S2	S5	S1	S6	S8	
Sample Depth, ft (#-in)	2-4	13-15	0-2	10-12	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	97	90	93	80	93	
MeOH Preservation Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-01-98	
Control Number	981150-40	981150-43	981150-46	981150-51	981150-53	
HaVOCs, ug/kg - Method 8021						TMDL
Tetrachloroethene	nd	nd	nd	nd	nd	50
1,1,1-Trichloroethane	nd	nd	nd	nd	nd	50
1,1,2-Trichloroethane	nd	nd	nd	nd	nd	50
Trichloroethene	nd	nd	nd	nd	nd	50
Trichlorofluoromethane	nd	nd	nd	nd	nd	250
1,2,3-Trichloropropane	nd	nd	nd	nd	nd	100
Vinyl Chloride	nd	nd	nd	nd	nd	100
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Bromochloromethane	89	91	86	90	87	80-120
2-Bromo-1-chloropropane	95	93	94	94	96	80-120
4-Bromofluorobenzene	102	103	99	104	101	80-120
<p>NOTES: TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)  nd = Parameter Not Detected At TMDL  Results Corrected To Dry-Weight Basis</p>						
Reviewed By	<u>                    HWD                    </u>		Date	<u>                    072498                    </u>		Data File 981230

TABLE B3.1. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	B1 S2	B1 S4	B2 S1	SP-2 S8	B2 S3	
Sample Depth, ft (* =in)	5-7	13-15	1-3	14-15	9-11	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-30-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	07-01-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	92	81	92	89	90	
MeOH Preservation Date	06-26-98	06-26-98	06-26-98	06-26-98	07-01-98	
Analysis Date	07-01-98	07-01-98	07-01-98	07-07-98	07-07-98	
Control Number	981150-62	981150-64	981150-67	981150-68	981201-02	
HaVOCs, ug/kg - Method 8021						TMDL
Bromochloromethane	nd	nd	nd	nd	nd	100
Bromodichloromethane	nd	nd	nd	nd	nd	100
Bromoform	nd	nd	nd	nd	nd	100
Bromomethane	nd	nd	nd	nd	nd	250
Carbon Tetrachloride	nd	nd	nd	nd	nd	50
Chlorobenzene	nd	nd	nd	nd	nd	50
Chloroethane	nd	nd	nd	nd	nd	250
Chloroform	nd	nd	nd	nd	nd	50
Chloromethane	nd	nd	nd	nd	nd	250
Dibromochloromethane	nd	nd	nd	nd	nd	100
Dibromomethane	nd	nd	nd	nd	nd	100
1,2-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,3-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,4-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,4-Dichloro-2-butene	nd	nd	nd	nd	nd	100
Dichlorodifluoromethane	nd	nd	nd	nd	nd	250
1,1-Dichloroethane	nd	nd	nd	nd	nd	50
1,2-Dichloroethane	nd	nd	nd	nd	nd	50
1,1-Dichloroethene	nd	nd	nd	nd	nd	50
cis-1,2-Dichloroethene	nd	nd	nd	nd	nd	50
trans-1,2-Dichloroethene	nd	nd	nd	nd	nd	50
1,2-Dichloropropane	nd	nd	nd	nd	nd	50
cis-1,3-Dichloropropene	nd	nd	nd	nd	nd	50
trans-1,3-Dichloropropene	nd	nd	nd	nd	nd	50
Methylene Chloride	nd	nd	nd	nd	nd	250
1,1,1,2-Tetrachloroethane	nd	nd	nd	nd	nd	100
1,1,2,2-Tetrachloroethane	nd	nd	nd	nd	nd	100
continued next page						Data File 981230

TABLE B3.2. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	B1 S2	B1 S4	B2 S1	SP-2 S8	B2 S3	
Sample Depth, ft ("=in)	5-7	13-15	1-3	14-15	9-11	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-30-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	07-01-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	92	81	92	89	90	
MeOH Preservation Date	06-26-98	06-26-98	06-26-98	06-26-98	07-01-98	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-07-98	
Control Number	981150-62	981150-64	981150-67	981150-68	981201-02	
HaVOCs, ug/kg - Method 8021						TMDL
Tetrachloroethene	nd	nd	nd	nd	nd	50
1,1,1-Trichloroethane	nd	nd	nd	nd	nd	50
1,1,2-Trichloroethane	nd	nd	nd	nd	nd	50
Trichloroethene	nd	nd	nd	nd	nd	50
Trichlorofluoromethane	nd	nd	nd	nd	nd	250
1,2,3-Trichloropropane	nd	nd	nd	nd	nd	100
Vinyl Chloride	nd	nd	nd	nd	nd	100
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Bromochloromethane	86	88	83	90	91	80-120
2-Bromo-1-chloropropane	93	90	89	92	90	80-120
4-Bromofluorobenzene	98	102	100	99	101	80-120
<p>NOTES: TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)            nd = Parameter Not Detected At TMDL            Results Corrected To Dry-Weight Basis</p>						
Reviewed By	<u>        KWW        </u>		Date	<u>072498</u>		Data File 981230

TABLE B4.1. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
*Chemistry Section - Technical Services Department*

LOCATION	CHEVY SUBSTATION		Project Number			
	- SME# PE29742		CHEM-98-1150			
	- Sampling Date Of June 25, June 30, July 06, 1998		CHEM-98-1201			
			CHEM-98-1230			
<b>Sample Identification</b>	B3	B3				
	S3	S4				
Sample Depth, ft ("=in)	9-11	13-15				
Sample Type	soil	soil				
Sample Date	06-30-98	06-30-98				
Received Date	07-01-98	07-01-98				
Report Date	07-23-98	07-23-98				
Percent Solids, %w/w	90	84				
MeOH Preservation Date	07-01-98	07-01-98				
Analysis Date	07-07-98	07-07-98				
Control Number	981201-08	981201-09				
<b>HalVOCs, ug/kg - Method 8021</b>						<b>TMDL</b>
Bromochloromethane	nd	nd				100
Bromodichloromethane	nd	nd				100
Bromoform	nd	nd				100
Bromomethane	nd	nd				250
Carbon Tetrachloride	nd	nd				50
Chlorobenzene	nd	nd				50
Chloroethane	nd	nd				250
Chloroform	nd	nd				50
Chloromethane	nd	nd				250
Dibromochloromethane	nd	nd				100
Dibromomethane	nd	nd				100
1,2-Dichlorobenzene	nd	nd				100
1,3-Dichlorobenzene	nd	nd				100
1,4-Dichlorobenzene	nd	nd				100
1,4-Dichloro-2-butene	nd	nd				100
Dichlorodifluoromethane	nd	nd				250
1,1-Dichloroethane	nd	nd				50
1,2-Dichloroethane	nd	nd				50
1,1-Dichloroethene	nd	nd				50
cis-1,2-Dichloroethene	nd	nd				50
trans-1,2-Dichloroethene	nd	nd				50
1,2-Dichloropropane	nd	nd				50
cis-1,3-Dichloropropene	nd	nd				50
trans-1,3-Dichloropropene	nd	nd				50
Methylene Chloride	nd	nd				250
1,1,1,2-Tetrachloroethane	nd	nd				100
1,1,2,2-Tetrachloroethane	nd	nd				100
continued next page						Data File 981230

TABLE B4.2. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b>				<b>Project Number</b>	
	- SME# PE29742				CHEM-98-1150	
	- Sampling Date Of June 25, June 30, July 06, 1998				CHEM-98-1201	
					CHEM-98-1230	
<b>Sample Identification</b>	B3	B3				
	S3	S4				
Sample Depth, ft ("=in)	9-11	13-15				
Sample Type	soil	soil				
Sample Date	06-30-98	06-30-98				
Received Date	07-01-98	07-01-98				
Report Date	07-23-98	07-23-98				
Percent Solids, %w/w	90	84				
MeOH Preservation Date	07-01-98	07-01-98				
Analysis Date	07-07-98	07-07-98				
Control Number	981201-08	981201-09				
<b>HaVOCs, ug/kg - Method 8021</b>						<b>TMDL</b>
Tetrachloroethene	nd	nd				50
1,1,1-Trichloroethane	nd	nd				50
1,1,2-Trichloroethane	nd	nd				50
Trichloroethene	nd	nd				50
Trichlorofluoromethane	nd	nd				250
1,2,3-Trichloropropane	nd	nd				100
Vinyl Chloride	nd	nd				100
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>				<b>Criteria</b>
Bromochloromethane	91	86				80-120
2-Bromo-1-chloropropane	90	90				80-120
4-Bromofluorobenzene	101	99				80-120
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	_____ <i>MWJ</i> _____		Date	072498		Data File 981230

TABLE B5.1. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-5 GW	SP-2 GW	SP-3 GW	SP-4 GW	SP-1 GW	
Sample Depth, ft ("=in)	-	-	-	-	-	
Sample Type	water	water	water	water	water	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	-	-	-	-	-	
Extraction Date	-	-	-	-	-	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-01-98	
Control Number	981150-12	981150-25	981150-38	981150-45	981150-60	
Ha/VOCs, ug/L - Method 8021						TMDL
Bromochloromethane	nd	nd	nd	nd	nd	100
Bromodichloromethane	nd	nd	nd	nd	nd	100
Bromoform	nd	nd	nd	nd	nd	100
Bromomethane	nd	nd	nd	nd	nd	250
Carbon Tetrachloride	nd	nd	nd	nd	nd	50
Chlorobenzene	nd	nd	nd	nd	nd	50
Chloroethane	nd	nd	nd	nd	nd	250
Chloroform	nd	nd	nd	nd	nd	50
Chloromethane	nd	nd	nd	nd	nd	250
Dibromochloromethane	nd	nd	nd	nd	nd	100
Dibromomethane	nd	nd	nd	nd	nd	100
1,2-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,3-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,4-Dichlorobenzene	nd	nd	nd	nd	nd	100
1,4-Dichloro-2-butene	nd	nd	nd	nd	nd	100
Dichlorodifluoromethane	nd	nd	nd	nd	nd	250
1,1-Dichloroethane	nd	nd	nd	nd	nd	50
1,2-Dichloroethane	nd	nd	nd	nd	nd	50
1,1-Dichloroethene	nd	nd	nd	nd	nd	50
cis-1,2-Dichloroethene	nd	nd	nd	nd	nd	50
trans-1,2-Dichloroethene	nd	nd	nd	nd	nd	50
1,2-Dichloropropane	nd	nd	nd	nd	nd	50
cis-1,3-Dichloropropene	nd	nd	nd	nd	nd	50
trans-1,3-Dichloropropene	nd	nd	nd	nd	nd	50
Methylene Chloride	nd	nd	nd	nd	nd	250
1,1,1,2-Tetrachloroethane	nd	nd	nd	nd	nd	100
1,1,2,2-Tetrachloroethane	nd	nd	nd	nd	nd	100
continued next page						Data File 981230

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201 CHEM-98-1230
Sample Identification	SP-5 GW	SP-2 GW	SP-3 GW	SP-4 GW	SP-1 GW	
Sample Depth, ft ("=in)	-	-	-	-	-	
Sample Type	water	water	water	water	water	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	-	-	-	-	-	
Extraction Date	-	-	-	-	-	
Analysis Date	07-01-98	07-01-98	07-01-98	07-01-98	07-01-98	
Control Number	981150-12	981150-25	981150-38	981150-45	981150-60	
HaVOCs, ug/L - Method 8021						TMDL
Tetrachloroethene	nd	nd	nd	nd	nd	50
1,1,1-Trichloroethane	nd	nd	nd	nd	nd	50
1,1,2-Trichloroethane	nd	nd	nd	nd	nd	50
Trichloroethene	nd	nd	nd	nd	nd	50
Trichlorofluoromethane	nd	nd	nd	nd	nd	250
1,2,3-Trichloropropane	nd	nd	nd	nd	nd	100
Vinyl Chloride	nd	nd	nd	nd	nd	100
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Bromochloromethane	91	94	92	93	93	80-120
2-Bromo-1-chloropropane	99	101	100	102	101	80-120
4-Bromofluorobenzene	105	102	103	105	101	80-120
NOTES: TMDL = Target Method Detection Limit, ug/L (parts-per-billion) nd = Parameter Not Detected At TMDL						
Reviewed By	<i>FLW</i>			Date	072498	Data File 981230

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION			Project Number	
	- SME# PE29742			CHEM-98-1150	
	- Sampling Date Of June 25, June 30, July 06, 1998			CHEM-98-1201	
				CHEM-98-1230	
Sample Identification	MW-1 GW	MW-2 GW	MW-3 GW		
Sample Depth, ft ("=in)	-	-	-		
Sample Type	water	water	water		
Sample Date	07-06-98	07-06-98	07-06-98		
Received Date	07-07-98	07-07-98	07-07-98		
Report Date	07-23-98	07-23-98	07-23-98		
Percent Solids, %w/w	-	-	-		
Extraction Date	-	-	-		
Analysis Date	07-11-98	07-11-98	07-11-98		
Control Number	981230-01	981230-02	981230-03		
HaVOCs, ug/L - Method 8021					TMDL
Bromochloromethane	nd	nd	nd		1
Bromodichloromethane	nd	nd	nd		1
Bromoform	nd	nd	nd		1
Bromomethane	nd	nd	nd		1
Carbon Tetrachloride	nd	nd	nd		1
Chlorobenzene	nd	nd	nd		1
Chloroethane	nd	nd	nd		1
Chloroform	nd	nd	nd		1
Chloromethane	nd	nd	nd		1
Dibromochloromethane	nd	nd	nd		1
Dibromomethane	nd	nd	nd		5
1,2-Dichlorobenzene	nd	nd	nd		1
1,3-Dichlorobenzene	nd	nd	nd		1
1,4-Dichlorobenzene	nd	nd	nd		1
1,4-Dichloro-2-butene	nd	nd	nd		1
Dichlorodifluoromethane	nd	nd	nd		1
1,1-Dichloroethane	nd	nd	nd		1
1,2-Dichloroethane	nd	nd	nd		1
1,1-Dichloroethene	nd	nd	nd		1
cis-1,2-Dichloroethene	nd	nd	nd		1
trans-1,2-Dichloroethene	nd	nd	nd		1
1,2-Dichloropropane	nd	nd	nd		1
cis-1,3-Dichloropropene	nd	nd	nd		1
trans-1,3-Dichloropropene	nd	nd	nd		1
Methylene Chloride	nd	nd	nd		5
1,1,1,2-Tetrachloroethane	nd	nd	nd		1
1,1,2,2-Tetrachloroethane	nd	nd	nd		1
continued next page					
				Data File	981230

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b> - SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998			<b>Project Number</b> CHEM-98-1150 CHEM-98-1201 CHEM-98-1230		
<b>Sample Identification</b>	<b>MW-1 GW</b>	<b>MW-2 GW</b>	<b>MW-3 GW</b>			
Sample Depth, ft ("=in)	-	-	-			
Sample Type	water	water	water			
Sample Date	07-06-98	07-06-98	07-06-98			
Received Date	07-07-98	07-07-98	07-07-98			
Report Date	07-23-98	07-23-98	07-23-98			
Percent Solids, %w/w	-	-	-			
Extraction Date	-	-	-			
Analysis Date	07-11-98	07-11-98	07-11-98			
Control Number	981230-01	981230-02	981230-03			
<b>HaVOCs, ug/L - Method 8021</b>						<b>TMDL</b>
Tetrachloroethene	nd	nd	nd			1
1,1,1-Trichloroethane	nd	nd	nd			1
1,1,2-Trichloroethane	nd	nd	nd			1
Trichloroethene	nd	nd	nd			1
Trichlorofluoromethane	nd	nd	nd			1
1,2,3-Trichloropropane	nd	nd	nd			1
Vinyl Chloride	nd	nd	nd			1
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>			<b>Criteria</b>
Bromochloromethane	92	90	93			80-120
2-Bromo-1-chloropropane	98	98	101			80-120
4-Bromofluorobenzene	102	105	102			80-120
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/L (parts-per-billion) nd = Parameter Not Detected At TMDL						
Reviewed By	<u>                    HWC                    </u>		Date	<u>                    072498                    </u>		Data File 981230

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-5	SP-2	SP-2	SP-3	SP-3	
	S5	S3	S8	S2	S8	
Sample Depth, ft ("=in)	10-12	4-6	14-16	2-4	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	85	97	86	94	83	
Extraction Date	07-02-98	07-02-98	07-02-98	07-02-98	07-02-98	
Analysis Date	07-13-98	07-13-98	07-13-98	07-13-98	07-13-98	
Control Number	981150-05	981150-15	981150-20	981150-27	981150-33	
PAHs, ug/kg - Method 8270						TMDL
Naphthalene	nd	nd	nd	nd	nd	330
2-Methylnaphtalene	nd	nd	nd	nd	nd	330
Acenaphthylene	nd	nd	nd	nd	nd	330
Acenaphthene	nd	nd	nd	nd	nd	330
Fluorene	nd	nd	<660	nd	nd	330
Phenanthrene	nd	nd	<660	nd	nd	330
Anthracene	nd	nd	<660	nd	nd	330
Fluoranthene	nd	nd	<660	nd	nd	330
Pyrene	nd	nd	<660	nd	nd	330
Benzo(a)anthracene	nd	nd	<660	nd	nd	330
Chrysene	nd	nd	<660	nd	nd	330
Benzo(b)fluoranthene	nd	nd	<660	nd	nd	330
Benzo(k)fluoranthene	nd	nd	<660	nd	nd	330
Benzo(a)pyrene	nd	nd	<660	nd	nd	330
Indeno(1,2,3-cd)pyrene	nd	nd	<660	nd	nd	330
Dibenzo(a,h)anthracene	nd	nd	<660	nd	nd	330
Benzo(g,h,i)perylene	nd	nd	<660	nd	nd	330
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Nitrobenzene-d5	83	85	diluted out	83	80	23-120
2-Fluorobiphenyl	88	92	diluted out	91	85	30-115
p-Terphenyl-d14	105	102	diluted out	101	96	18-137
NOTES:						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<i>PLWJ</i>		Date	072498		Data File 981230

TABLE C2. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-4 S2	SP-4 S5	SP-1 S1	SP-1 S6	SP-1 S8	
Sample Depth, ft ("=in)	2-4	13-15	0-2	10-12	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	97	90	93	80	93	
Extraction Date	07-02-98	07-02-98	07-02-98	07-02-98	07-02-98	
Analysis Date	07-13-98	07-13-98	07-13-98	07-13-98	07-13-98	
Control Number	981150-40	981150-43	981150-46	981150-51	981150-53	
PAHs, ug/kg - Method 8270						TMDL
Naphthalene	nd	nd	nd	nd	nd	330
2-Methylnaphthalene	nd	nd	nd	nd	nd	330
Acenaphthylene	nd	nd	nd	nd	nd	330
Acenaphthene	nd	nd	nd	nd	nd	330
Fluorene	nd	nd	nd	nd	nd	330
Phenanthrene	nd	nd	nd	nd	nd	330
Anthracene	nd	nd	nd	nd	nd	330
Fluoranthene	nd	nd	nd	nd	nd	330
Pyrene	nd	nd	nd	nd	nd	330
Benzo(a)anthracene	nd	nd	nd	nd	nd	330
Chrysene	nd	nd	nd	nd	nd	330
Benzo(b)fluoranthene	nd	nd	nd	nd	nd	330
Benzo(k)fluoranthene	nd	nd	nd	nd	nd	330
Benzo(a)pyrene	nd	nd	nd	nd	nd	330
Indeno(1,2,3-cd)pyrene	nd	nd	nd	nd	nd	330
Dibenzo(a,h)anthracene	nd	nd	nd	nd	nd	330
Benzo(g,h,i)perylene	nd	nd	nd	nd	nd	330
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Nitrobenzene-d5	85	81	83	82	71	23-120
2-Fluorobiphenyl	87	86	91	87	75	30-115
p-Terphenyl-d14	99	101	106	105	80	18-137
NOTES:						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<i>ALW</i>			Date	072498	Data File 981230

TABLE C3. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	B1 S2	B1 S4	B2 S1	SP-2 S8	B2 S3	
Sample Depth, ft ("=in)	5-7	13-15	1-3	14-15	9-11	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-30-98	
Received Date	06-26-98	06-26-98	06-26-98	-	07-01-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	92	81	92	-	90	
Extraction Date	07-02-98	07-02-98	07-02-98	no sample	07-02-98	
Analysis Date	07-13-98	07-13-98	07-13-98	no sample	07-14-98	
Control Number	981150-62	981150-64	981150-67	981150-68	981201-02	
PAHs, ug/kg - Method 8270						TMDL
Naphthalene	nd	nd	nd	-	nd	330
2-Methylnaphtalene	nd	nd	nd	-	nd	330
Acenaphthylene	nd	nd	nd	-	nd	330
Acenaphthene	nd	nd	nd	-	nd	330
Fluorene	nd	nd	nd	-	nd	330
Phenanthrene	nd	nd	nd	-	nd	330
Anthracene	nd	nd	nd	-	nd	330
Fluoranthene	nd	nd	nd	-	410	330
Pyrene	nd	nd	nd	-	390	330
Benzo(a)anthracene	nd	nd	nd	-	nd	330
Chrysene	nd	nd	nd	-	nd	330
Benzo(b)fluoranthene	nd	nd	nd	-	nd	330
Benzo(k)fluoranthene	nd	nd	nd	-	nd	330
Benzo(a)pyrene	nd	nd	nd	-	nd	330
Indeno(1,2,3-cd)pyrene	nd	nd	nd	-	nd	330
Dibenzo(a,h)anthracene	nd	nd	nd	-	nd	330
Benzo(g,h,i)perylene	nd	nd	nd	-	nd	330
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Nitrobenzene-d5	84	81	86	-	84	23-120
2-Fluorobiphenyl	81	85	91	-	80	30-115
p-Terphenyl-d14	97	101	97	-	95	18-137
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/kg (parts-per-billion) nd = Parameter Not Detected At TMDL Results Corrected To Dry-Weight Basis						
Reviewed By	<i>AWD</i>		Date	072498		Data File 981230

TABLE C4. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION		Project Number			
	- SME# PE29742		CHEM-98-1150			
	- Sampling Date Of June 25, June 30, July 06, 1998		CHEM-98-1201			
			CHEM-98-1230			
<b>Sample Identification</b>	B3	B3				
	S3	S4				
Sample Depth, ft ("=in)	9-11	13-15				
Sample Type	soil	soil				
Sample Date	06-30-98	06-30-98				
Received Date	07-01-98	07-01-98				
Report Date	07-23-98	07-23-98				
Percent Solids, %w/w	90	84				
Extraction Date	07-02-98	07-02-98				
Analysis Date	07-14-98	07-14-98				
Control Number	981201-08	981201-09				
<b>PAHs, ug/kg - Method 8270</b>						<b>TMDL</b>
Naphthalene	nd	nd				330
2-Methylnaphtalene	nd	nd				330
Acenaphthylene	nd	nd				330
Acenaphthene	nd	nd				330
Fluorene	nd	nd				330
Phenanthrene	nd	nd				330
Anthracene	nd	nd				330
Fluoranthene	nd	nd				330
Pyrene	nd	nd				330
Benzo(a)anthracene	nd	nd				330
Chrysene	nd	nd				330
Benzo(b)fluoranthene	nd	nd				330
Benzo(k)fluoranthene	nd	nd				330
Benzo(a)pyrene	nd	nd				330
Indeno(1,2,3-cd)pyrene	nd	nd				330
Dibenzo(a,h)anthracene	nd	nd				330
Benzo(g,h,i)perylene	nd	nd				330
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>				<b>Criteria</b>
Nitrobenzene-d5	81	80				23-120
2-Fluorobiphenyl	84	79				30-115
p-Terphenyl-d14	95	92				18-137
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<i>HWJ</i>		Date	072498		Data File 981230

TABLE C5. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number	
	- SME# PE29742					CHEM-98-1150	
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201	
						CHEM-98-1230	
Sample Identification	SP-5 GW	SP-2 GW	SP-3 GW	SP-4 GW	SP-1 GW		
Sample Depth, ft ("=in)	-	-	-	-	-		
Sample Type	water	water	water	water	water		
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98		
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98		
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98		
Percent Solids, %w/w	-	-	-	-	-		
Extraction Date	07-02-98	07-02-98	07-02-98	07-02-98	07-02-98		
Analysis Date	07-20-98	07-20-98	07-20-98	07-20-98	07-20-98		
Control Number	981150-12	981150-25	981150-38	981150-45	981150-60		
PAHs, ug/L - Method 8270						TMDL	
Naphthalene	nd	nd	nd	nd	nd	5	
2-Methylnaphthalene	nd	nd	nd	nd	nd	5	
Acenaphthylene	nd	nd	nd	nd	nd	5	
Acenaphthene	nd	nd	nd	nd	nd	5	
Fluorene	nd	nd	nd	nd	nd	5	
Phenanthrene	nd	nd	nd	nd	nd	5	
Anthracene	nd	nd	nd	nd	nd	5	
Fluoranthene	nd	nd	nd	nd	nd	5	
Pyrene	nd	nd	nd	nd	nd	5	
Benzo(a)anthracene	nd	nd	nd	nd	nd	5	
Chrysene	nd	nd	nd	nd	nd	5	
Benzo(b)fluoranthene	nd	nd	nd	nd	nd	5	
Benzo(k)fluoranthene	nd	nd	nd	nd	nd	5	
Benzo(a)pyrene	nd	nd	nd	nd	nd	5	
Indeno(1,2,3-cd)pyrene	nd	nd	nd	nd	nd	5	
Dibenzo(a,h)anthracene	nd	nd	nd	nd	nd	5	
Benzo(g,h,i)perylene	nd	nd	nd	nd	nd	5	
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria	
Nitrobenzene-d5	92	90	93	91	90	35-114	
2-Fluorobiphenyl	97	95	96	93	94	43-116	
p-Terphenyl-d14	108	100	105	102	103	33-141	
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/L (parts-per-billion) nd = Parameter Not Detected At TMDL							
Reviewed By	<u>        HGW        </u>		Date	<u>        072498        </u>		Data File	981230

TABLE C6. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION			Project Number		
	- SME# PE29742			CHEM-98-1150		
	- Sampling Date Of June 25, June 30, July 06, 1998			CHEM-98-1201		
				CHEM-98-1230		
Sample Identification	MW-1 GW	MW-2 GW	MW-3 GW			
Sample Depth, ft ("=in)	-	-	-			
Sample Type	water	water	water			
Sample Date	07-06-98	07-06-98	07-06-98			
Received Date	07-07-98	07-07-98	07-07-98			
Report Date	07-23-98	07-23-98	07-23-98			
Percent Solids, %w/w	-	-	-			
Extraction Date	07-09-98	07-09-98	07-09-98			
Analysis Date	07-20-98	07-20-98	07-20-98			
Control Number	981230-01	981230-02	981230-03			
PAHs, ug/L - Method 8270						TMDL
Naphthalene	nd	nd	nd			5
2-Methylnaphthalene	nd	nd	nd			5
Acenaphthylene	nd	nd	nd			5
Acenaphthene	nd	nd	nd			5
Fluorene	nd	nd	nd			5
Phenanthrene	nd	nd	nd			5
Anthracene	nd	nd	nd			5
Fluoranthene	nd	nd	nd			5
Pyrene	nd	nd	nd			5
Benzo(a)anthracene	nd	nd	nd			5
Chrysene	nd	nd	nd			5
Benzo(b)fluoranthene	nd	nd	nd			5
Benzo(k)fluoranthene	nd	nd	nd			5
Benzo(a)pyrene	nd	nd	nd			5
Indeno(1,2,3-cd)pyrene	nd	nd	nd			5
Dibenzo(a,h)anthracene	nd	nd	nd			5
Benzo(g,h,i)perylene	nd	nd	nd			5
Surrogate Recovery	% Recovery	% Recovery	% Recovery			Criteria
Nitrobenzene-d5	90	89	93			35-114
2-Fluorobiphenyl	93	90	91			43-116
p-Terphenyl-d14	100	97	104			33-141
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/L (parts-per-billion) nd = Parameter Not Detected At TMDL						
Reviewed By	_____ <i>AWJ</i>		Date	072498	Data File	981230

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b> - SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998					<b>Project Number</b> CHEM-98-1150 CHEM-98-1201 CHEM-98-1230
<b>Sample Identification</b>	SP-5 S5	SP-2 S3	SP-2 S8	SP-3 S2	SP-3 S8	
Sample Depth, ft ("=in)	10-12	4-6	14-16	2-4	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	85	97	86	94	83	
Extraction Date	07-03-98	07-03-98	07-03-98	07-03-98	07-03-98	
Analysis Date	07-14-98	07-14-98	07-14-98	07-14-98	07-14-98	
Control Number	981150-05	981150-15	981150-20	981150-27	981150-33	
<b>PCBs, ug/kg - Method 8080</b>						<b>TMDL</b>
PCB-1016	nd	nd	nd	nd	nd	330
PCB-1221	nd	nd	nd	nd	nd	330
PCB-1232	nd	nd	nd	nd	nd	330
PCB-1242	nd	nd	nd	nd	nd	330
PCB-1248	nd	nd	nd	nd	nd	330
PCB-1254	nd	nd	nd	nd	nd	330
PCB-1260	nd	nd	nd	nd	nd	330
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>Criteria</b>
Decachlorobiphenyl	99	109	114	99	104	80-120
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/kg (parts-per-billion) nd = Parameter Not Detected At TMDL Results Corrected To Dry-Weight Basis						
Reviewed By	<u>HWJ</u>		Date	<u>072498</u>		Data File 981230

TABLE D2. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-4 S2	SP-4 S5	SP-1 S1	SP-1 S6	SP-1 S8	
Sample Depth, ft (" =in)	2-4	13-15	0-2	10-12	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	97	90	93	80	93	
Extraction Date	07-03-98	07-03-98	07-03-98	07-03-98	07-03-98	
Analysis Date	07-14-98	07-14-98	07-14-98	07-14-98	07-14-98	
Control Number	981150-40	981150-43	981150-46	981150-51	981150-53	
PCBs, ug/kg - Method 8080						TMDL
PCB-1016	nd	nd	nd	nd	nd	330
PCB-1221	nd	nd	nd	nd	nd	330
PCB-1232	nd	nd	nd	nd	nd	330
PCB-1242	nd	nd	nd	nd	nd	330
PCB-1248	nd	nd	nd	nd	nd	330
PCB-1254	nd	nd	nd	nd	nd	330
PCB-1260	nd	nd	nd	nd	nd	330
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Decachlorobiphenyl	99	104	100	96	103	80-120
<p>NOTES: TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)  nd = Parameter Not Detected At TMDL  Results Corrected To Dry-Weight Basis</p>						
Reviewed By	<i>FLW</i>		Date	072498	Data File	981230

TABLE D3. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b>					<b>Project Number</b>
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
<b>Sample Identification</b>	B1	B1	B2	SP-2	B2	
	S2	S4	S1	S8	S3	
Sample Depth, ft ("=in)	5-7	13-15	1-3	14-15	9-11	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-30-98	
Received Date	06-26-98	06-26-98	06-26-98	-	07-01-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	92	81	92	-	90	
Extraction Date	07-03-98	07-03-98	07-03-98	no sample	07-03-98	
Analysis Date	07-14-98	07-14-98	07-14-98	no sample	07-14-98	
Control Number	981150-62	981150-64	981150-67	981150-68	981201-02	
<b>PCBs, ug/kg - Method 8080</b>						<b>TMDL</b>
PCB-1016	nd	nd	nd	-	nd	330
PCB-1221	nd	nd	nd	-	nd	330
PCB-1232	nd	nd	nd	-	nd	330
PCB-1242	nd	nd	nd	-	nd	330
PCB-1248	nd	nd	nd	-	nd	330
PCB-1254	nd	nd	nd	-	nd	330
PCB-1260	nd	nd	nd	-	nd	330
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>Criteria</b>
Decachlorobiphenyl	108	101	109	-	98	80-120
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<i>FLW</i>			Date	07/24/98	Data File 981230

TABLE D4. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b> - SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998				<b>Project Number</b> CHEM-98-1150 CHEM-98-1201 CHEM-98-1230	
<b>Sample Identification</b>	B3 S3	B3 S4				
Sample Depth, ft ("=in)	9-11	13-15				
Sample Type	soil	soil				
Sample Date	06-30-98	06-30-98				
Received Date	07-01-98	07-01-98				
Report Date	07-23-98	07-23-98				
Percent Solids, %w/w	90	84				
Extraction Date	07-03-98	07-03-98				
Analysis Date	07-14-98	07-14-98				
Control Number	981201-08	981201-09				
<b>PCBs, ug/kg - Method 8080</b>						<b>TMDL</b>
PCB-1016	nd	nd				330
PCB-1221	nd	nd				330
PCB-1232	nd	nd				330
PCB-1242	nd	nd				330
PCB-1248	nd	nd				330
PCB-1254	nd	nd				330
PCB-1260	nd	nd				330
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>				<b>Criteria</b>
Decachlorobiphenyl	97	102				80-120
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/kg (parts-per-billion) nd = Parameter Not Detected At TMDL Results Corrected To Dry-Weight Basis						
Reviewed By	<u>HWJ</u>		Date	<u>07/21/98</u>		Data File 981230

TABLE D5. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-5 GW	SP-2 GW	SP-3 GW	SP-4 GW	SP-1 GW	
Sample Depth, ft ("=in)	-	-	-	-	-	
Sample Type	water	water	water	water	water	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	-	-	-	-	-	
Extraction Date	07-10-98	07-10-98	07-10-98	07-10-98	07-10-98	
Analysis Date	07-12-98	07-12-98	07-12-98	07-12-98	07-12-98	
Control Number	981150-12	981150-25	981150-38	981150-45	981150-60	
PCBs, ug/L - Method 8080						TMDL
PCB-1016	nd	nd	nd	nd	nd	0.1
PCB-1221	nd	nd	nd	nd	nd	0.1
PCB-1232	nd	nd	nd	nd	nd	0.1
PCB-1242	nd	nd	nd	nd	nd	0.1
PCB-1248	nd	nd	nd	nd	nd	0.1
PCB-1254	nd	nd	nd	nd	nd	0.1
PCB-1260	nd	nd	nd	nd	nd	0.1
Surrogate Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	Criteria
Decachlorobiphenyl	84	96	104	71	106	80-120
<p>NOTES: TMDL = Target Method Detection Limit, ug/L (parts-per-billion)  nd = Parameter Not Detected At TMDL</p>						
Reviewed By	<i>FLW</i>			Date	072498	Data File 981230

TABLE D6. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

<b>LOCATION</b>	<b>CHEVY SUBSTATION</b> - SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998			<b>Project Number</b> CHEM-98-1150 CHEM-98-1201 CHEM-98-1230		
<b>Sample Identification</b>	<b>MW-1 GW</b>	<b>MW-2 GW</b>	<b>MW-3 GW</b>			
Sample Depth, ft ("=in)	-	-	-			
Sample Type	water	water	water			
Sample Date	07-06-98	07-06-98	07-06-98			
Received Date	07-07-98	07-07-98	07-07-98			
Report Date	07-23-98	07-23-98	07-23-98			
Percent Solids, %w/w	-	-	-			
Extraction Date	07-10-98	07-10-98	07-10-98			
Analysis Date	07-12-98	07-12-98	07-12-98			
Control Number	981230-01	981230-02	981230-03			
<b>PCBs, ug/L - Method 8080</b>						<b>TMDL</b>
PCB-1016	nd	nd	nd			0.1
PCB-1221	nd	nd	nd			0.1
PCB-1232	nd	nd	nd			0.1
PCB-1242	nd	nd	nd			0.1
PCB-1248	nd	nd	nd			0.1
PCB-1254	nd	nd	nd			0.1
PCB-1260	nd	nd	nd			0.1
<b>Surrogate Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>	<b>% Recovery</b>			<b>Criteria</b>
Decachlorobiphenyl	100	98	102			80-120
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/L (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Reviewed By	<u>                    HWD                    </u>		Date	<u>                    072498                    </u>		Data File
						981230

TABLE E1. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
<b>Sample Identification</b>	SP-5	SP-2	SP-2	SP-3	SP-3	
	S5	S3	S8	S2	S8	
Sample Depth, ft ("=in)	10-12	4-6	14-16	2-4	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	85	97	86	94	83	
Preparation Date	06-30-98	06-30-98	06-30-98	06-30-98	06-30-98	
Analysis Date, Start	07-02-98	07-02-98	07-02-98	07-02-98	07-02-98	
Analysis Date, End	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Control Number	981150-05	981150-15	981150-20	981150-27	981150-33	
<b>TOTAL METALS, ug/kg</b>						<b>TMDL</b>
Arsenic - 7061	12,000	6,300	5,600	5,500	6,300	100
Barium, 7081	38,000	15,000	16,000	16,000	11,000	1,000
Cadmium - 7131	57	91	94	87	120	50
Chromium (total) - 7191	7,800	5,100	5,700	5,400	11,000	2,500
Copper - 7211	12,000	6,600	5,200	4,900	4,700	1,000
Lead - 7421	12,000	8,200	6,400	5,900	12,000	1,000
Mercury - 7470	nd	nd	nd	nd	nd	100
Selenium - 7741	nd	nd	nd	nd	nd	500
Silver - 7761	nd	nd	nd	nd	nd	500
Zinc - 7950	20,000	44,000	25,000	22,000	23,000	1,000
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<i>flw</i>			Date	07 24 98	Data File 981230

TABLE E2. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
<b>Sample Identification</b>	SP-4 S2	SP-4 S5	SP-1 S1	SP-1 S6	SP-1 S8	
Sample Depth, ft ("=in)	2-4	13-15	0-2	10-12	14-16	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	97	90	93	80	93	
Preparation Date	06-30-98	06-30-98	06-30-98	06-30-98	06-30-98	
Analysis Date, Start	07-02-98	07-02-98	07-02-98	07-02-98	07-02-98	
Analysis Date, End	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Control Number	981150-40	981150-43	981150-46	981150-51	981150-53	
<b>TOTAL METALS, ug/kg</b>						<b>TMDL</b>
Arsenic - 7061	5,300	4,900	13,000	8,000	7,800	100
Barium, 7081	13,000	11,000	100,000	39,000	57,000	1,000
Cadmium - 7131	130	73	350	110	650	50
Chromium (total) - 7191	6,900	4,400	23,000	8,600	5,300	2,500
Copper - 7211	5,200	4,600	26,000	5,900	5,300	1,000
Lead - 7421	9,500	7,900	180,000	11,000	8,600	1,000
Mercury - 7470	nd	nd	nd	nd	3,400	100
Selenium - 7741	nd	nd	nd	nd	nd	500
Silver - 7761	nd	nd	nd	nd	nd	500
Zinc - 7950	24,000	19,000	220,000	27,000	27,000	1,000
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)						
nd = Parameter Not Detected At TMDL						
Results Corrected To Dry-Weight Basis						
Reviewed By	<i>flw</i>			Date	07-24-98	Data File 981230

TABLE E3. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	B1 S2	B1 S4	B2 S1	SP-2 S8	B2 S3	
Sample Depth, ft ("=in)	5-7	13-15	1-3	14-15	9-11	
Sample Type	soil	soil	soil	soil	soil	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-30-98	
Received Date	06-26-98	06-26-98	06-26-98	-	07-01-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-24-98	
Percent Solids, %w/w	92	81	92	-	90	
Preparation Date	06-30-98	06-30-98	06-30-98	no sample	07-07-98	
Analysis Date, Start	07-02-98	07-02-98	07-02-98	no sample	07-07-98	
Analysis Date, End	07-23-98	07-23-98	07-23-98	no sample	07-24-98	
Control Number	981150-62	981150-64	981150-67	981150-68	981201-02	
TOTAL METALS, ug/kg						TMDL
Arsenic - 7061	6,300	23,000	72,000	-	14,000	100
Barium, 7081	65,000	68,000	66,000	-	110,000	1,000
Cadmium - 7131	120	120	170	-	390	50
Chromium (total) - 7191	15,000	16,000	11,000	-	170,000	2,500
Copper - 7211	250,000	10,000	12,000	-	31,000	1,000
Lead - 7421	57,000	15,000	130,000	-	180,000	1,000
Mercury - 7470	nd	nd	nd	-	nd	100
Selenium - 7741	nd	nd	nd	-	nd	500
Silver - 7761	nd	nd	nd	-	910	500
Zinc - 7950	34,000	32,000	46,000	-	100,000	1,000
<p>NOTES: TMDL = Target Method Detection Limit, ug/kg (parts-per-billion)                      nd = Parameter Not Detected At TMDL                      Results Corrected To Dry-Weight Basis</p>						
Reviewed By	<i>HWJ</i>		Date	07 24 98		Data File 981230

TABLE E4. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION		Project Number			
	- SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998		CHEM-98-1150 CHEM-98-1201 CHEM-98-1230			
<b>Sample Identification</b>	B3 S3	B3 S4				
Sample Depth, ft ("=in)	9-11	13-15				
Sample Type	soil	soil				
Sample Date	06-30-98	06-30-98				
Received Date	07-01-98	07-01-98				
Report Date	07-24-98	07-24-98				
Percent Solids, %w/w	90	84				
Preparation Date	07-07-98	07-07-98				
Analysis Date, Start	07-07-98	07-07-98				
Analysis Date, End	07-24-98	07-24-98				
Control Number	981201-08	981201-09				
<b>TOTAL METALS, ug/kg</b>						<b>TMDL</b>
Arsenic - 7061	17,000	8,200				100
Barium, 7081	110,000	120,000				1,000
Cadmium - 7131	590	790				50
Chromium (total) - 7191	23,000	35,000				2,500
Copper - 7211	43,000	180,000				1,000
Lead - 7421	210,000	160,000				1,000
Mercury - 7470	nd	nd				100
Selenium - 7741	nd	nd				500
Silver - 7761	nd	nd				500
Zinc - 7950	110,000	150,000				1,000
<b>NOTES:</b>						
TMDL = Target Method Detection Limit, ug/kg (parts-per-billion) nd = Parameter Not Detected At TMDL Results Corrected To Dry-Weight Basis						
Reviewed By	<i>[Signature]</i>		Date	072498	Data File	981230

TABLE E5. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION					Project Number
	- SME# PE29742					CHEM-98-1150
	- Sampling Date Of June 25, June 30, July 06, 1998					CHEM-98-1201
						CHEM-98-1230
Sample Identification	SP-5 GW	SP-2 GW	SP-3 GW	SP-4 GW	SP-1 GW	
Sample Depth, ft ("=in)	-	-	-	-	-	
Sample Type	water	water	water	water	water	
Sample Date	06-25-98	06-25-98	06-25-98	06-25-98	06-25-98	
Received Date	06-26-98	06-26-98	06-26-98	06-26-98	06-26-98	
Report Date	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Percent Solids, %w/w	-	-	-	-	-	
Preparation Date	-	-	-	-	-	
Analysis Date, Start	07-02-98	07-02-98	07-02-98	07-02-98	07-02-98	
Analysis Date, End	07-23-98	07-23-98	07-23-98	07-23-98	07-23-98	
Control Number	981150-12	981150-25	981150-38	981150-45	981150-60	
DISSOLVED METALS, ug/L						TMDL
Arsenic - 7061	nd	nd	13	nd	31	5
Barium, 7081	nd	nd	210	nd	nd	200
Cadmium - 7131	nd	nd	nd	nd	nd	0.5
Chromium (total) - 7191	nd	nd	nd	nd	nd	50
Copper - 7211	nd	nd	nd	nd	nd	25
Lead - 7421	nd	nd	9	nd	7	3
Mercury - 7470	nd	nd	nd	nd	nd	0
Selenium - 7741	nd	nd	nd	nd	nd	5
Silver - 7761	nd	nd	nd	nd	nd	0.5
Zinc - 7950	nd	nd	nd	nd	nd	20
<b>NOTES:</b> TMDL = Target Method Detection Limit, ug/L (parts-per-billion) nd = Parameter Not Detected At TMDL						
Reviewed By	<i>PLW</i>		Date	072498	Data File	981230

TABLE E6. ANALYTICAL RESULTS

**CONSUMERS ENERGY COMPANY**  
**Chemistry Section - Technical Services Department**

LOCATION	CHEVY SUBSTATION			Project Number		
	- SME# PE29742 - Sampling Date Of June 25, June 30, July 06, 1998			CHEM-98-1150 CHEM-98-1201 CHEM-98-1230		
Sample Identification	MW-1 GW	MW-2 GW	MW-3 GW			
Sample Depth, ft ("=in)	-	-	-			
Sample Type	water	water	water			
Sample Date	07-06-98	07-06-98	07-06-98			
Received Date	07-07-98	07-07-98	07-07-98			
Report Date	07-24-98	07-24-98	07-24-98			
Percent Solids, %w/w	-	-	-			
Preparation Date	-	-	-			
Analysis Date, Start	07-10-98	07-10-98	07-10-98			
Analysis Date, End	07-24-98	07-24-98	07-24-98			
Control Number	981230-01	981230-02	981230-03			
TOTAL METALS, ug/L						TMDL
Arsenic - 7061	20	7	18			5
Barium, 7081	nd	nd	nd			200
Cadmium - 7131	nd	nd	nd			0.5
Chromium (total) - 7191	nd	nd	nd			50
Copper - 7211	41	57	44			25
Lead - 7421	nd	nd	nd			3
Mercury - 7470	nd	nd	nd			0
Selenium - 7741	nd	nd	nd			5
Silver - 7761	nd	nd	nd			0.5
Zinc - 7950	nd	nd	nd			20
NOTES:						
TMDL = Target Method Detection Limit, ug/L (parts-per-billion) nd = Parameter Not Detected At TMDL						
Reviewed By	<i>HWJ</i>		Date	<i>07 24 98</i>		Data File 981230

# CHAIN OF CUSTODY

CONSUMERS POWER COMPANY - ENVIRONMENTAL AND TECHNICAL SERVICES  
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SAMPLING SITE:		PROJECT NUMBER:		ANALYSIS REQUESTED		PAGE	
Chevy Substation		PE2972		PCB HCB THC Dioxin		1 OF 6	
SAMPLING TEAM:		DATE SHIPPED		SITE SKETCH ATTACHED?		SEND REPORT TO:	
LMH/DRC		6/26/98		YES (NO)		Lisa Henry c/o SME PHONE: (734) 454-9900	
CPCO CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	REMARKS
1150-1	6/25/98	9:20	Soil	SP5-S1	1-3	2	*For Spill
2				SP5-S2	4-6	1	Samples, # of
3				SP5-S3	6-8	2	containers
4				SP5-S4	8-10	1	indicates (2)
5				SP5-S5	10-12	2	this means
6				SP5-S6	14-16	1	(1) 16oz jar and
7				SP5-S7	16-18	1	(1) EnCore
8				SP5-S8	18-20	1	Sampler.
9				SP5-S9	20-22	1	*Samples from
10				SP5-S10	22-24	1	SP1 & SP3 may
11				SP5-S11	24-26	1	be hot
12			Water	SP5-GW	-	5	
RELINQUISHED BY: (SIGNATURE)				RECEIVED BY: (SIGNATURE)		COMMENTS	
[Signature]				[Signature]		MDEQ Reg. Standard TAT	
RELINQUISHED BY: (SIGNATURE)				RECEIVED BY: (SIGNATURE)			
[Signature]				[Signature]			
RELINQUISHED BY: (SIGNATURE)				RECEIVED BY: (SIGNATURE)			
[Signature]				[Signature]			

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SAMPLING SITE:		PROJECT NUMBER:		ANALYSIS REQUESTED		PAGE 2 OF 6	
Chevy Substation		PE29742		Brk		Lisa Henry	
SAMPLING TEAM:		DATE SHIPPED:		HYDR		SEND REPORT TO:	
LmH / DEC		6/26/98		PCB		C/D SME	
CPCO CONTROL #		SAMPLE MATRIX		Brk		PHONE: 7347454-9900	
1150-13		Soil		10mm		REMARKS	
14						See p1	
15							
16							
17							
18							
19							
20							
21							
22							
23							
24						see page 6	
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		COMMENTS	
Lisa Henry		6/26/98 10:00		Lisa Henry			
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)			
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)			

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SAMPLING SITE:		PROJECT NUMBER:		DATE SHIPPED:		SITE SKETCH ATTACHED?		ANALYSIS REQUESTED					PAGE 3 OF 3	
Chevy Substation		PE29742		6/26/98		CIRCLE ONE: YES <input type="radio"/> NO <input checked="" type="radio"/>							SEND REPORT TO: Lisa Henry C/O SME PHONE: (734) 454-9900	
SAMPLING TEAM:		CPCO CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	DRINK	PLASTIC	HVAC	PERB	IDM	REMARKS
LMA/DEC		1150-25	6/25/98		Water	SP3-GW	—	5	X	X	X	X		See Page 1
		26			Soil	SP3-S1	0-2	1						
		27				SP3-S2	2-4	2	X	X	X	X		
		28				SP3-S3	4-6	1						
		29				SP3-S4	6-8	1						
		30				SP3-S5	8-10	1						
		31				SP3-S6	10-12	1						
		32				SP3-S7	12-14	2						
		33				SP3-S8	14-16	2	X	X	X	X		
		34				SP3-S9	16-18	1						
		35				SP3-S10	18-20	1						
		36				SP3-S11	20-22	1						
REMOVED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		DATE / TIME		COMMENTS						
Lisa Henry		6/26/98 10:50		[Signature]		6/26/98 10:50								
REMOVED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		DATE / TIME								
[Signature]				[Signature]										
REMOVED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		DATE / TIME								
[Signature]				[Signature]										

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SAMPLING SITE:		PROJECT NUMBER:		DATE SHIPPED:		SITE SKETCH ATTACHED?		ANALYSIS REQUESTED		PAGE		SEND REPORT TO:	
Chevy Substation		PE29742		6/26/98		CIRCLE ONE: YES NO				4 OF 6		Lisa Henry	
SAMPLING TEAM: LmH/DRC		SAMPLE DESCRIPTION / LOCATION		DEPTH		# OF CONTAINERS						C/O SME	
CPCO CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	BTX	P-A	HCB	PCB	DIBP	REMARKS	PHONE: (734) 454-9900
150-37	6/25/98		Soil	SP3-S1a	0-24	1	X	X	X	X		See Page 1	
38			Water	SP3-GW	-	5	X	X	X	X			
39			Soil	SP4-S1	0-2	1							
40				SP4-S2	2-4	2	X	X	X	X			
41				SP4-S3	4-6	1							
42				SP4-S4	9-11	1							
43				SP4-S5	13-15	2	X	X	X	X			
44				SP4-S6	18-20	1							
45			Water	SP4-GW	-	5	X	X	X	X			
46			Soil	SP1-S1	0-2	2	X	X	X	X			
47				SP1-S2	2-4	1							
48				SP1-S3	4-6	1							
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		DATE / TIME		COMMENTS					
Lisa Henry		6/26/98 1000		[Signature]		6/26/98							
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		DATE / TIME							
[Signature]				[Signature]									
RELINQUISHED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		DATE / TIME							
[Signature]				[Signature]									

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SAMPLING SITE:		PROJECT NUMBER:		DATE SHIPPED		SITE SKETCH ATTACHED?		ANALYSIS REQUESTED		PAGE		SEND REPORT TO:			
Chevy Substation		PE29742		6/26/98		CIRCLE ONE: YES <input type="radio"/> NO <input checked="" type="radio"/>				5		OF 6		LISA Henry C/O SMT PHONE: (734) 454-9900	
SAMPLING TEAM:	CPCO CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	PTX	HTC	PCB	DMB	REMARKS			
LMH / DRC	1150-49	6/25/98		Soil	SPI-SA	6-8	1					See Page 1			
	50				SPI-SB	8-10	1								
	51				SPI-SC	10-12	2	X	X	X					
	52				SPI-SF	12-14	1								
	53				SPI-SB	14-16	2	X	X	X					
	54				SPI-SG	16-18	1								
	55				SPI-SIO	18-20	1								
	56				SPI-SII	20-22	1								
	57				SPI-Sa	22-24	1								
	58				SP4-SF	20-22	1								
	59				SP4-SB	22-24	1								
	60			Water	SPI-GW		5	X	X	X					
RELINQUISHED BY: (SIGNATURE)	DATE / TIME	RECEIVED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		DATE / TIME		RECEIVED BY: (SIGNATURE)		RECEIVED BY: (SIGNATURE)		RECEIVED BY: (SIGNATURE)	
Lisa Henry	6/26/98	10:50		6/26/98		10:50		6/26/98		10:50		6/26/98		10:50	



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SAMPLING SITE:		PROJECT NUMBER:		ANALYSIS REQUESTED		PAGE	OF
Chevy Substation		PE29742				1	2
SAMPLING TEAM:		DATE SHIPPED		SITE SKETCH ATTACHED?		SEND REPORT TO:	
LMH		6/31/98		YES <input type="radio"/> NO <input checked="" type="radio"/>		Lisa Henry cb SME	
CPCO CONTROL #	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE DESCRIPTION / LOCATION	DEPTH	# OF CONTAINERS	REMARKS
98-1201-1	6/30/98	1040	Soil	B2-S2	5-7	1	Standard TAT
-2		1050		B2-S3	9-11	2	MDEQ Reg.
-3		1100		B2-S4	13-15	1	
-4		1110		B2-S5	17-19	2	
-5		1120		B2-S6	21-23	1	
-6		100		BB-S1	1-3	1	* 2 for # of containers means
-7		110		BB-S2	5-7	1	(Waste and (1) En
-8		120		BB-S3	9-11	2	Care Sampler.
-9		130		BB-S4	13-15	2	Envelope needs to
-10		140		BB-S5	17-19	2	be preserved with
-11		150		BB-S6	21-23	1	48hrs. of collection
-12		200		BB-S7	25-26	1	
REINQUIRED BY: (SIGNATURE)				RECEIVED BY: (SIGNATURE)			
Lisa Henry				SME dld			
RELINQUISHED BY: (SIGNATURE)				RECEIVED BY: (SIGNATURE)			
SME dld				Mark Burtell			
RELINQUISHED BY: (SIGNATURE)				RECEIVED BY: (SIGNATURE)			
COMMENTS							



