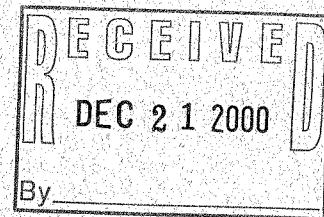




W66 N215 Commerce Court  
Cedarburg, Wisconsin 53012  
(262) 375-4750  
(800) 645-7365  
Fax (262) 375-9680



December 7, 2000

Mr. John Feeny  
Wisconsin Department of Natural Resources  
4041 North Richards Street  
Post Office Box 12436  
Milwaukee, Wisconsin 53212-0436

Via Telefax: (414) 229-0810  
and First Class Mail

Reference: *Project Status*  
Tecumseh Products Company - Grafton Facility  
900 North Street  
Grafton, Wisconsin 53024  
FID #: 246009170  
BRRTS #: 02-46-000751

KEY ENGINEERING GROUP, LTD.  
File No. 1007010

Dear Mr. Feeny:

The purpose of this letter is to confirm our telephone conversation on November 16, 2000 regarding the progress of the soil remediation at the above referenced site and our intention to suspend soil treatment during the winter months and to resume soil treatment again in the spring. As we discussed, soil currently in the treatment tanks will continue to be treated until it is below the target cleanup levels. Currently there are approximately 150 cubic yards of soil in the North Treatment Tank and approximately 250 cubic yards of soil in the South Treatment Tank. Soil was placed in the North Treatment Tank on October 3, 2000 and in the South Treatment Tank on October 18 and 19, 2000.

At this time we are evaluating the feasibility (treatability study) of adding potassium permanganate to accelerate the treatment of the soil. This contingent supplemental treatment approach was discussed in our project meeting on June 15, 2000 and we understand that the Wisconsin Department of Natural Resources has approved this treatment method at other sites in southeastern Wisconsin. At this time we are also requesting a 30 day extension to the 90 day treatment period.

Treatment tank performance soil sample analytical results are summarized in the attached tables and figures. Please call us at (262) 375-4750 if you have questions regarding this letter.

Sincerely,

KEY ENGINEERING GROUP, LTD.

*Larry J. Wehrheim*  
Larry J. Wehrheim, CHMM, P.G.  
Senior Project Manager

*Kenneth W. Wein*  
Kenneth W. Wein, CHMM  
President

LJW/ch

- Attachments: Table 1A North Tank - First Treatment Event
- Table 1B North Tank - Second Treatment Event
- Table 1C North Tank - Third Treatment Event
- Table 2A South Tank - First Treatment Event
- Table 2B South Tank - Second Treatment Event
- Table 2C South Tank - Third Treatment Event
- Table 2D South Tank - Fourth Treatment Event
- Figure 1 Summary of Soil Sample Analytical Results - Area 1
- Figure 2 Summary of Soil Sample Analytical Results - Areas 2 and 3

cc: Mr. Kerry DeKeyser, Tecumseh Products

H:\PROJECTS\2000\1007010\Letters\120700.ljw.wpd

**TABLE 1A**

**NORTH TANK - FIRST TREATMENT EVENT**

**SUMMARY OF TREATMENT TANK SOIL SAMPLE ANALYTICAL RESULTS**

**TECUMSEH PRODUCTS - GRAFTON FACILITY**

900 North Street  
Grafton, Wisconsin

	ECD SOIL SCREENING RESULTS								GC/MS RESULTS (mg/kg)			
	TCE (mg/kg)				TCA (mg/kg)				TCE		TCA	
Date	8/30/00	9/1/00	9/6/00	9/11/00	8/30/00	9/1/00	9/6/00	9/11/00	9/7/00	9/11/00	9/7/00	9/11/00
NT-1	4.170	2.510	0.999	0.458	0.056	0.032	0.016	0.009	1.260	0.528	0.035	<0.017
NT-2	2.100	0.798	0.362		0.014	0.016	0.014					
NT-3	1.260	0.548	0.409		0.028	0.043	0.016		0.802		0.039	
NT-4	0.419	0.559	0.463		0.065	0.026	0.018					
NT-5	0.823	0.972	0.562		0.022	0.019	0.014		0.449		<0.017	
NT-6	3.940	1.320	0.468		0.016	0.029	0.018					
NT-7	5.760	0.474	0.509		0.068	0.029	0.022		0.775		<0.017	
NT-8	0.533	2.060	0.635		0.045	0.037	0.016					
Average	2.376	1.155	0.551	0.458	0.039	0.029	0.017	0.009				

*Notes:*

Soil excavated from Area 1 on 8/23-28/00

mg/kg - milligrams per kilogram

TCA - 1,1,1-trichloroethane

TCE - trichloroethene

GC/MS - gas chromatograph/mass spectrophotometer method, United States Environmental Protection Agency Method 8260

ECD - electron capture detector analytical method

**TABLE 1B**

**NORTH TANK - SECOND TREATMENT EVENT**

**SUMMARY OF TREATMENT TANK SOIL SAMPLE ANALYTICAL RESULTS**

**TECUMSEH PRODUCTS - GRAFTON FACILITY**

900 North Street  
Grafton, Wisconsin

	ECD SOIL SCREENING RESULTS								GC/MS Results	
	TCE (mg/kg)				TCA (mg/kg)				TCE (mg/kg)	TCA (mg/kg)
Date	9/15/00	9/19/00	9/21/00	9/27/00	9/15/00	9/19/00	9/21/00	9/27/00	9/27/00	9/27/00
NT-1	4.500	1.150	0.700	0.460	1.520	0.122	0.099	0.082	0.509	0.066
NT-2	24.000	0.588			0.954	0.052			0.421	0.039
NT-3	1.820	0.276			0.014	0.014				
NT-4		0.371				0.008				
NT-5		0.308				0.006				
NT-6	0.842				0.025				0.492	<0.017
NT-7	7.740	1.090	1.070	0.301	0.160	0.136	0.107	0.058	0.324	0.048
NT-8	0.653				0.168					
Average	6.593	0.6305	0.885	0.3805	0.474	0.056	0.103	0.07		

*Notes:*

Soil excavated from Area 3 on 9/15-18/00

mg/kg - milligrams per kilogram

TCA - 1,1,1-trichloroethane

TCE - trichloroethene

GC/MS - gas chromatograph/mass spectrophotometer method, United States Environmental Protection Agency Method 8260

ECD - electron capture detector analytical method

TABLE 1C

## NORTH TANK - THIRD TREATMENT EVENT

## SUMMARY OF TREATMENT TANK SOIL SAMPLE ANALYTICAL RESULTS

## TECUMSEH PRODUCTS - GRAFTON FACILITY

900 North Street  
Grafton, Wisconsin

Date	ECD SOIL SCREENING RESULTS															
	TCE (mg/kg)								TCA (mg/kg)							
	10/3/00	10/13/00	10/20/00	10/27/00	11/1/00	11/14/00	11/15/00	11/27/00	10/3/00	10/13/00	10/20/00	10/27/00	11/1/00	11/14/00	11/15/00	11/27/00
NT-1	0.762	0.923	0.964	2.270	1.150			1.150	0.032	0.020	0.021	0.057	0.029			0.033
NT-2	23.300	4.490	2.930	1.550	1.850			1.120	0.206	0.055	0.036	0.022	0.041			0.020
NT-3	23.700	4.120	3.480	1.450	1.180		0.847		0.183	0.021	0.024	0.010	0.023		0.011	
NT-4		1.840	1.230	0.622	1.470	0.765	0.475			0.013	0.008	<0.0003	0.021	0.009	0.010	
NT-5		1.670	1.590	1.270	1.780	0.799	0.524			0.014	0.010	0.008	0.022	0.008	0.008	
NT-6	26.500	2.920	3.140	2.000	1.320		0.772		0.173	0.023	0.026	0.015	0.025		0.012	
NT-7	6.790	3.360	1.880	1.460	1.310			0.968	0.097	0.071	0.030	0.024	0.033			0.030
NT-8	5.750	1.270	0.770	0.618	1.190			0.803	0.026	0.017	0.022	0.015	0.037			0.021
Average	14.467	2.574	1.998	1.405	1.406	0.782	0.655	1.010	0.120	0.029	0.022	0.022	0.029	0.009	0.010	0.026

Date	GC/MS Results (mg/kg)	
	TCE	TCA
11/15/00		
NT-1		
NT-2		
NT-3	0.858	<0.015
NT-4		
NT-5		
NT-6	0.823	<0.017
NT-7		
NT-8		

## Notes:

Soil was excavated from Area 3 on 10/3/00

mg/kg - milligrams per kilogram

TCA - 1,1,1-trichloroethane

TCE - trichloroethene

GC/MS - gas chromatograph/mass spectrophotometer method, United States Environmental Protection Agency Method 8260

ECD - electron capture detector analytical method

**TABLE 2A**

**SOUTH TANK - FIRST TREATMENT EVENT**

**SUMMARY OF TREATMENT TANK SOIL SAMPLE ANALYTICAL RESULTS**

**TECUMSEH PRODUCTS - GRAFTON FACILITY**

900 North Street  
Grafton, Wisconsin

	ECD SOIL SCREENING RESULTS								GC/MS RESULTS (mg/kg)	
	TCE (mg/kg)				TCA (mg/kg)				TCE	TCA
Date	8/25/00	8/30/00	9/1/00	9/6/00	8/25/00	8/30/00	9/1/00	9/6/00	9/7/00	9/7/00
ST-1	2.950	1.290	0.353	0.420	0.098	0.050	0.020	0.022	0.378	<0.017
ST-2	0.596	1.140	0.701	0.472	0.038	0.046	0.041	0.030		
ST-3	2.610	1.220	0.452	0.294	0.065	0.089	0.053	0.022	0.198	<0.017
ST-4	0.684	0.536	0.390	0.211	0.074	0.037	0.044	0.021		
ST-5	0.784	1.780	0.807	0.370	0.113	0.097	0.033	0.024	0.246	0.027
ST-6	1.160	0.641	0.231	0.271	0.131	0.056	0.017	0.020		
ST-7	0.272	0.762	0.788	1.250	0.020	0.037	0.044	0.049	0.357	<0.017
ST-8	1.510	1.160	1.090	0.490	0.062	0.043	0.043	0.041		
Average	1.321	1.066	0.602	0.472	0.075	0.057	0.037	0.029		

*Notes:*

Soil excavated from Area 1 on 8/23-28/00

mg/kg - milligrams per kilogram

TCA - 1,1,1-trichloroethane

TCE - trichloroethene

GC/MS - gas chromatograph/mass spectrophotometer method, United States Environmental Protection Agency Method 8260

ECD - electron capture detector analytical method

**TABLE 2B**

**SOUTH TANK - SECOND TREATMENT EVENT**

**SUMMARY OF TREATMENT TANK SOIL SAMPLE ANALYTICAL RESULTS**

**TECUMSEH PRODUCTS - GRAFTON FACILITY**

900 North Street  
Grafton, Wisconsin

	ECD RESULTS		GC/MS RESULTS	
	TCE (mg/kg)	TCA (mg/kg)	TCE (mg/kg)	TCA (mg/kg)
Date	9/15/00	9/15/00	9/18/00	9/18/00
ST-1	<0.00003	0.036		
ST-2	0.025	1.120	0.032	0.836
ST-3	0.019	0.937	<0.025	0.443
ST-4				
ST-5				
ST-6	0.047	0.393	<0.025	0.109
ST-7	<0.00003	0.678		
ST-8	<0.00003	0.068	<0.025	<0.025
Average	0.030	0.539	0.032	0.463

*Notes:*

Soil excavated from Area 2 on 9/14-15/00

mg/kg - milligrams per kilogram

TCA - 1,1,1-trichloroethane

TCE - trichloroethene

GC/MS - gas chromatograph/mass spectrophotometer method,

United States Environmental Protection Agency Method 8260

ECD - electron capture detector analytical method

Cells ST-4 and ST-5 were not filled.

TABLE 2C

SOUTH TANK - THIRD TREATMENT EVENT

SUMMARY OF TREATMENT TANK SOIL SAMPLE ANALYTICAL RESULTS

TECUMSEH PRODUCTS - GRAFTON FACILITY

900 North Street  
Grafton, Wisconsin

Date	ECD SOIL SCREENING RESULTS																			
	TCE (mg/kg)										TCA (mg/kg)									
	9/21/00	9/22/00	9/27/00	9/29/00	10/3/00	10/4/00	10/6/00	10/11/00	10/13/00	10/17/00	9/21/00	9/22/00	9/27/00	9/29/00	10/3/00	10/4/00	10/6/00	10/11/00	10/13/00	10/17/00
ST-1	0.284		0.190								0.429		0.217							
ST-2	0.334		0.770	0.647	0.423						0.116		0.165	0.139	0.119					
ST-3		50.300	1.980	2.460	1.500	0.960	0.646					0.410	0.064	0.078	0.068	0.040	0.032			
ST-4		27.600	2.160	2.480	1.150	2.390	0.777	1.210	0.761	0.585		0.104	0.011	0.024	0.020	0.036	0.016	0.049	0.029	0.026
ST-5		74.000	1.860	4.290	1.980	1.530	0.562					0.248	0.007	0.048	0.030	0.026	0.014			
ST-6		16.900	2.430	4.750	2.360	1.170	0.571	0.824	0.698	0.638		0.217	0.080	0.079	0.144	0.062	0.031	0.022	0.049	0.069
ST-7	0.287		0.278	0.759	0.373						0.136		0.111	0.241	0.148					
ST-8	0.242		0.249								0.431		0.093							
Average	0.287	42.2	1.240	2.564	1.298	1.513	0.639	1.017	0.730	0.612	0.278	0.245	0.094	0.102	0.088	0.041	0.023	0.036	0.039	0.048

Date	GC/MS RESULTS (mg/kg)							
	TCE	TCA	TCE	TCA	TCE	TCA	TCE	TCA
	9/27/00	9/27/00	9/29/00	9/29/00	10/6/00	10/6/00	10/17/00	10/17/00
ST-1								
ST-2	1.030	0.167	0.723	0.090				
ST-3								
ST-4					1.950	<0.017	0.672	<0.025
ST-5								
ST-6					1.290	0.032	0.990	0.065
ST-7								
ST-8	0.288	0.078						

Notes:

Soil excavated from Area 3 on 9/21-22/00

mg/kg - milligrams per kilogram

TCA - 1,1,1-trichloroethane

TCE - trichloroethene

GC/MS - gas chromatograph/mass spectrophotometer method, United States Environmental Protection Agency Method 8260

ECD - electron capture detector analytical method

TABLE 2D

SOUTH TANK - FOURTH TREATMENT EVENT

SUMMARY OF TREATMENT TANK SOIL SAMPLE ANALYTICAL RESULTS

TECUMSEH PRODUCTS - GRAFTON FACILITY

900 North Street  
Grafton, Wisconsin

	ECD RESULTS			
	TCE (mg/kg)		TCA (mg/kg)	
Date	10/27/00	11/1/00	10/27/00	11/1/00
ST-1	6.100		0.032	
ST-2	7.720	5.860	0.019	0.037
ST-3	7.190		0.016	
ST-4	4.340		0.012	
ST-5	4.890		0.01	
ST-6	6.300	6.750	0.017	0.034
ST-7	7.720		0.019	
ST-8	2.900		0.015	
Average	5.895	6.305	0.018	0.036

Notes:

Soil excavated from Area 3 on 10/18-19/00

mg/kg - milligrams per kilogram

TCA - 1,1,1-trichloroethane

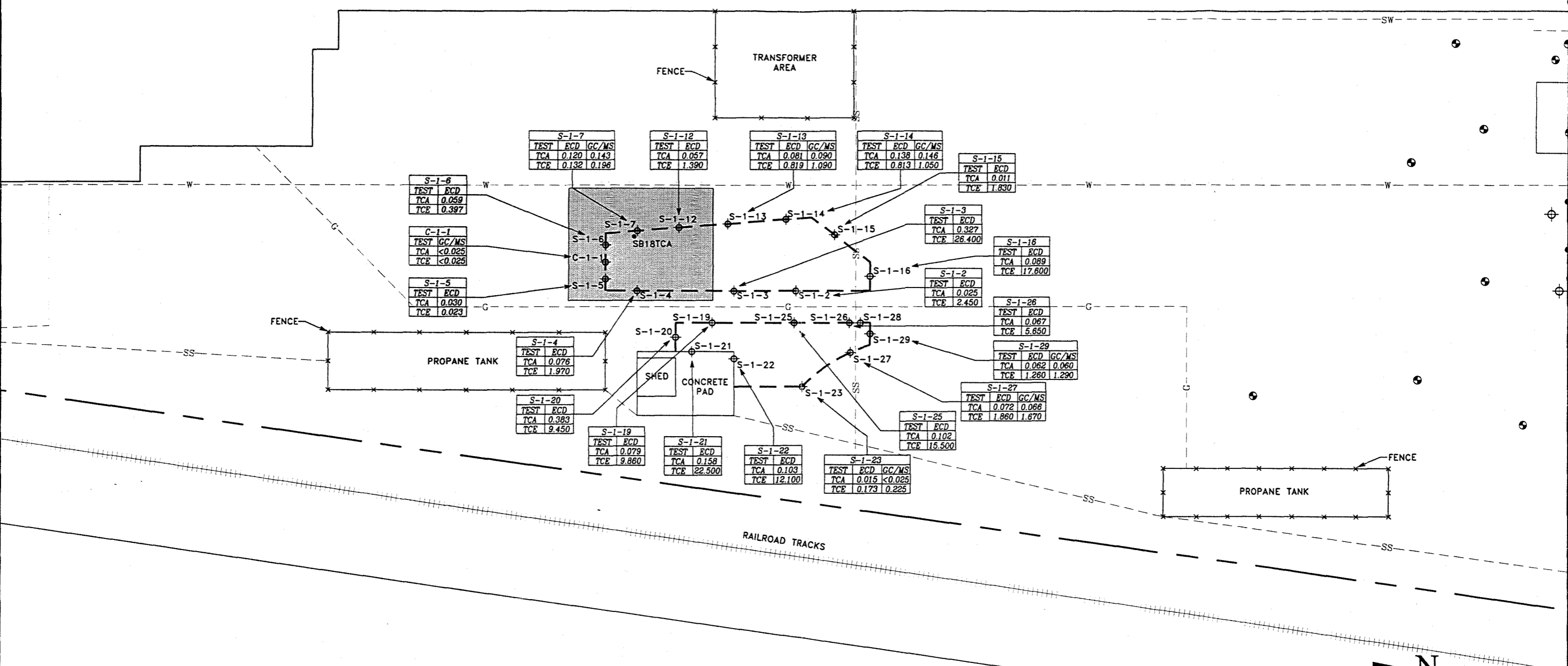
TCE - trichloroethene

GC/MS - gas chromatograph/mass spectrophotometer method,  
United States Environmental Protection Agency Method 8260

ECD - electron capture detector analytical method



TECUMSEH PLANT



NOTES

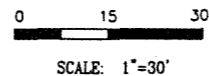
TCA: 1,1,1-TRICHLOROETHANE, mg/kg  
 TCE: TRICHLOROETHENE, mg/kg  
 mg/kg: MILLIGRAMS PER KILOGRAM  
 < : LESS THAN

ECD	LABORATORY RESULTS FOR TCE/TCA
0.022	IN SOIL IN MILLIGRAMS PER KILOGRAM
1.170	USING ELECTRON CAPTURE DETECTOR
	METHOD

GC/MS	LABORATORY RESULTS FOR TCE/TCA
<0.025	IN SOIL IN MILLIGRAMS PER KILOGRAM
<0.025	USING EPA METHOD 8260

LEGEND

- ⊕ SOIL SAMPLE LOCATION
- SOIL BORING PERFORMED BY RMT, INC.
- ▨ PROPOSED EXCAVATION AREA 1
- G- PROPANE GAS LINE
- SS- SEWER LINE
- W- WATER LINE



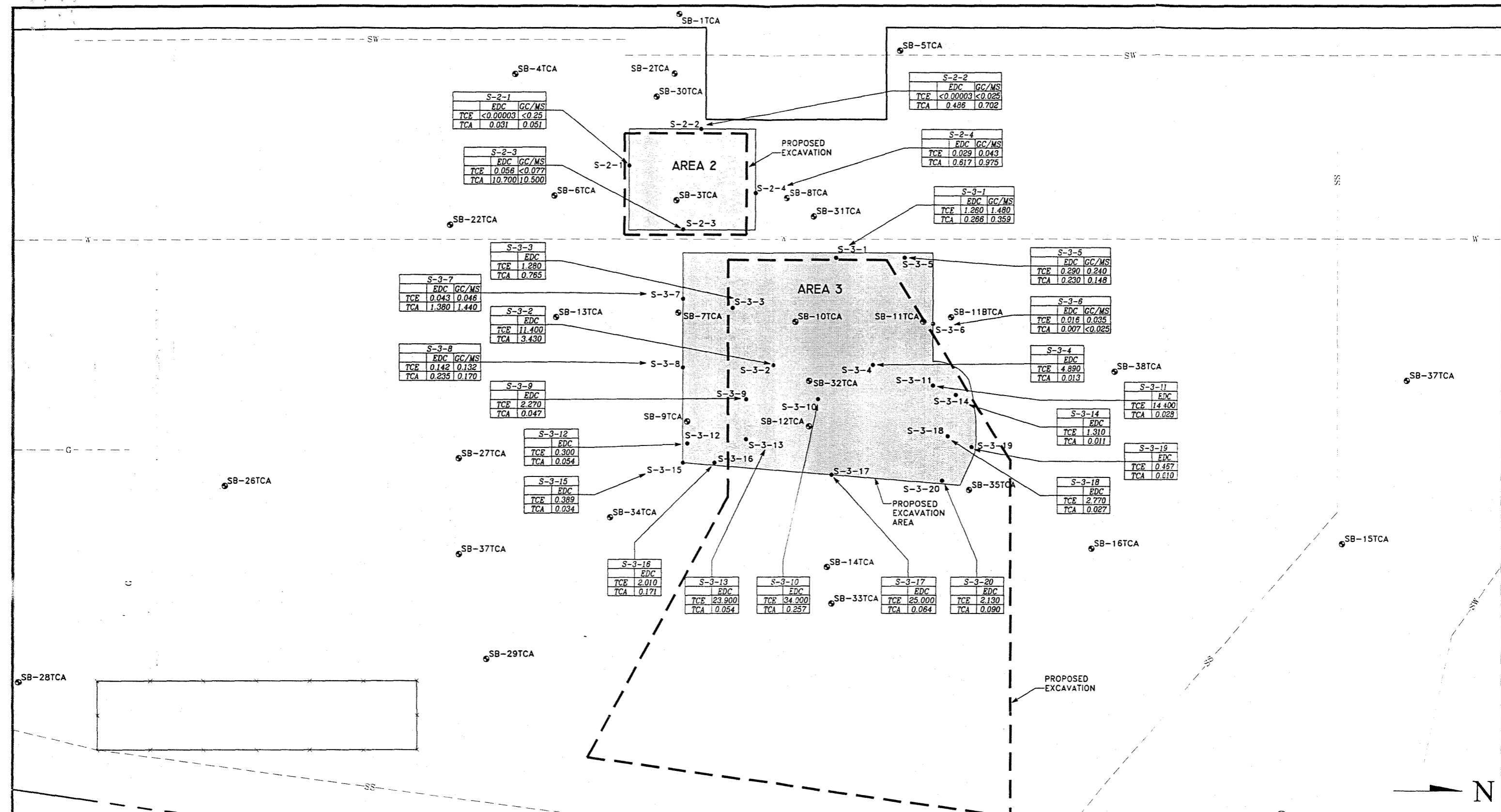
DRN. BY:	J.J.J.	DATE:	12/04/00
DSN. BY:	L.J.W.	FILE NO.:	1007010
CHK. BY:	L.J.W.	DWG. NO.:	10070102
REV. BY:	G.L.J.	SHEET NO.:	1



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FIGURE 1  
 SUMMARY OF SOIL  
 SAMPLE ANALYTICAL RESULTS

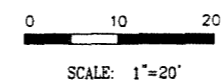
AREA 1 REMEDIAL ACTION  
 EAST PARKING LOT AREA  
 TECUMSEH PRODUCTS COMPANY  
 900 NORTH STREET  
 GRAFTON, WISCONSIN



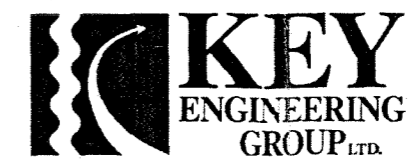
- LEGEND**
- SOIL SAMPLE LOCATION
  - FORMER BORING LOCATION
  - G- GAS LINE
  - SS- SANITARY SEWER LINE
  - SW- STORM WATER SEWER LINE
  - W- WATER LINE

**NOTES**

TCE: TRICHLOROETHENE, mg/kg  
 TCA: 1,1,1-TRICHLOROETHANE, mg/kg  
 ECD: ELECTRON CAPTURE DETECTION  
 GC: GAS CHROMATOGRAPHY  
 MS: MASS SPECTROPHOTOMETRY  
 < : LESS THAN  
 mg/kg: MILLIGRAMS PER KILOGRAM



DRN. BY: J.J.J.	DATE: 12/07/00
DSN. BY: T.E.M.	FILE NO.: 1007010
CHK. BY: L.J.W.	DWG. NO.: 10070104
REV. BY: G.L.J.	SHEET NO.: 2



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**FIGURE 2**  
**SUMMARY OF SOIL**  
**SAMPLE ANALYTICAL RESULTS**  
 AREAS 2 AND 3 REMEDIAL ACTION  
 EAST PARKING LOT AREA  
 TECUMSEH PRODUCTS COMPANY  
 900 NORTH STREET  
 GRAFTON, WISCONSIN