SIGMA
ENVIRONMENTAL SERVICES INC.

220 East Ryan Road
Oak Creek, WI 53154-4533
414-768-7144
FAX: 414-768-7158

November 25, 2002

Project Reference #7029

Ms. Pam Mylotta
Wisconsin Department of Natural Resources
P.O. Box 12436
Milwaukee, WI 53212

RE: Approval for Solid Waste Disposal
Contained-in Determination
FID #241170270
Fritzke Colony Dry Cleaner
10003 W. Carmen Ave
Milwaukee, Wisconsin

Dear Ms. Mylotta:

The purpose of this letter is to petition the Department of Natural Resources for approval to allow for the disposal of soil generated at the Fritzke Colony Dry Cleaner property located at 10003 West Carmen Avenue, Milwaukee, Wisconsin within a Subtitle D landfill. Sigma Environmental Services, Inc. (Sigma), on behalf of Mr. Donald Fritzke, is requesting the approval specifically for the disposal of chlorinated hydrocarbon impacted soil generated during site investigation activities. The identified site impacts are likely associated with a former dry cleaner operation at the site, but are at concentrations that fall within the "contained-in" policy.

DISCUSSION

A total of 14 drums of impacted soil have been generated at the site to date. A review of laboratory analytical results from soil samples collected during soil boring advancement indicated that the soil in the drums contains detectable concentrations of total Tetrachloroethylene (PCE) ranging from 130 to 30,000 µg/kg. EPA guidance document EPA530-F-98-026, October 1998, regarding the Contained-in Policy allows for the disposal of contaminated environmental media that does not exhibit a characteristic of hazardous waste or contain concentrations of hazardous constituents that are above health-based levels. According to this guidance, the soil that meets the site-specific RCL and is not characteristically hazardous as determined by TCLP analysis may be taken to a Subtitle D landfill, with approval of the implementing state agency.

EVALUATION OF SITE SPECIFIC RCLs

Site-specific RCLs associated with the identified chlorinated compounds for the protection of human health were calculated using the EPA web-site and Wisconsin default values. The calculated site specific RCL for PCE is 33 mg/kg. Based on an evaluation of the PCE

concentrations, all of the drums of auger spoils at the site meet the contained-in policy requirements. In addition, composite soil samples from the soil drums passed the TCLP tests. A summary of the soil analytical results, the laboratory analytical results from the TCLP analysis and a copy of the EPA site specific RCL calculation are enclosed for your review.

Sigma, on behalf of Mr. Fritzke, would appreciate a response to this letter approving or denying our request, to allow the disposal of the soil to the appropriate landfill. If you have any questions or comments regarding this request, please contact us at (414)768-7144.

Sincerely,

SIGMA ENVIRONMENTAL SERVICES, INC.

Martin D. Nessman, P.G.
Project Manager/Hydrogeologist

Randy E. Boness, P.G.
Geosciences Group Leader

Enclosures

cc: Mr. Donald Fritzke

TABLES

Table
Drum Composite Soil Samples - Protocol B Results
Fritzke Colony Dry Cleaners
10003 W. Carmen Avenue
Milwaukee, WI

Sample ID	Units	Drum Composite	Acceptance Limits
Miscellaneous Analysis			
pH		8.3	$2.0 \leq pH \leq 12.5$
Specific Gravity	g/ml	1.97	no limit
Total Solids	%	86.8	no limit
Free Liquids	%	0	0%
Flash Point	° F	>200	≥ 140° F
Chlorine (Total Halogens)	%	<0.010	<1.0
Reactive Sulfide	mg/kg	<100	<200
Phenol	mg/l	<0.01	<2000
Reactive Cyanide	mg/kg	<50	200
Metals TCLP Extraction			
Arsenic	mg/l	<0.10	<5.0
Barium	mg/l	<1.0	<100.0
Cadmium	mg/l	<0.10	<1.0
Chromium	mg/l	<0.50	<5.0
Copper	mg/l	<0.50	<100.0
Lead	mg/l	<0.50	<5.0
Mercury	mg/l	<0.010	<0.2
Nickel	mg/l	<0.50	<35.0
Selenium	mg/l	<0.10	<1.0
Silver	mg/l	<0.10	<5.0
Zinc	mg/l	<0.50	<200.0
PCB's			<50 mg/kg (Total)
Aroclor 1016	mg/kg	<0.023	"
Aroclor 1221	mg/kg	<0.046	"
Aroclor 1232	mg/kg	<0.023	"
Aroclor 1242	mg/kg	<0.023	"
Aroclor 1248	mg/kg	<0.023	"
Aroclor 1254	mg/kg	<0.023	"
Aroclor 1260	mg/kg	<0.023	"
Aroclor 1268	mg/kg	<0.023	"
Volatile Organic Compounds - TCLP Extraction			
Benzene	mg/l	<0.020	<0.5
Carbon Tetrachloride	mg/l	<0.020	<0.5
Chlorobenzene	mg/l	<0.020	<100.0
Chloroform	mg/l	<0.020	<6.0
Total Cresol	mg/l	<0.01	<200.0
1,4-Dichlorobenzene	mg/l	<0.020	<7.5
1,2-Dichloroethane	mg/l	<0.020	<0.5
1,1-Dichloroethylene	mg/l	<0.020	<0.7
2,4-Dinitrotoluene	mg/l	<0.01	<0.13
Hexachlorobenzene	mg/l	<0.01	<0.13
Hexachloro-1,3-butadiene	mg/l	<0.01	<0.5
Hexachloroethane	mg/l	<0.01	<3.0
Methyl Ethyl Ketone	mg/l	<0.20	<200.0
Nitrobenzene	mg/l	<0.01	<2.0
Pentachlorophenol	mg/l	<0.01	<100.0
Pyridine	mg/l	<0.01	<5.0
Tetrachloroethylene	mg/l	<0.020	<0.7
Trichloroethylene	mg/l	<0.020	<0.5
2,4,5-Trichlorophenol	mg/l	<0.01	<400.0
2,4,6-Trichlorophenol	mg/l	<0.01	<2.0
Vinyl Chloride	mg/l	<0.020	<0.2

KEY:

mg/l	milligrams per liter
**	No standard established

Table 1
Soil Quality Results - Geoprobe Borings*
Fritzke Colony Dry Cleaners
10003 W. Carmen Avenue
Milwaukee, WI

Boring ID		GP-1	GP-1	GP-2	GP-3	NR 720 RCL	NR 746 Table 1	NR 746 Table 2
Depth (feet bgs)		2-4	14-16	2-4	2-4			
Date	Units	07/03/2001	07/03/2001	07/03/2001	07/03/2001			
Volatile Organic Compounds								
Benzene	µg/kg	<25	<25	<25	<25	5.5	8,500	1,100
Ethylbenzene	µg/kg	<25	<25	<25	<25	2,900	4,600	---
Toluene	µg/kg	<25	<25	<25	<25	1,500	38,000	---
Xylenes	µg/kg	<25	<25	<25	<25	4,100	42,000	---
cis-1,2-Dichloroethene	µg/kg	<25	<25	**453**	<25	---	---	---
trans-1,2-Dichloroethene	µg/kg	<25	<25	**109**	<25	---	---	---
Tetrachloroethene	µg/kg	<25	<25	<25	<25	---	---	---

KEY:

*	Samples collected by Key Environmental.
µg/kg	micrograms per kilogram
---	No standard established
BOLD	Analyte detected above laboratory detection limit.
NR 720 RCL	Chapter NR 720 Generic Resudual Contaminant Limit
NR 746 Table 1	Chapter NR 746 Table 1, Indicators of Residual Petroleum Products.
NR 746 Table 2	Chapter NR 746 Table 2, Protection of Human Health from Direct Contact with Contaminated Soil.

Table 1
Soil Quality Results - Monitoring Wells
Fritzke Colony Dry Cleaners
10003 W. Carmen Avenue
Milwaukee, WI

Boring ID		MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	NR 720 RCL	NR 746 Table 1	NR 746 Table 2
Depth (feet bgs)		5-7	13-15	7-9	17-19	3-5	10-12			
Date	Units	06/24/2002	06/24/2002	06/25/2002	06/25/2002	06/26/2002	06/26/2002			
Volatile Organic Compounds										
Benzene	µg/kg	<130	<25	<25	<25	<25	<25	5.5	8,500	1,100
Ethylbenzene	µg/kg	<130	<25	<25	<25	<25	<25	2,900	4,600	**
Toluene	µg/kg	<130	<25	<25	<25	<25	<25	1,500	38,000	**
Xylenes	µg/kg	<130	<25	<25	<25	<25	<25	4,100	42,000	**
cis-1,2-Dichloroethene	µg/kg	<130	<25	**42**	<25	**2,000**	<25	**	**	**
trans-1,2-Dichloroethene	µg/kg	<130	<25	<25	<25	**110**	<25	**	**	**
Tetrachloroethene	µg/kg	**30,000**	<25	<25	<25	**130**	<25	**	**	**

KEY:
µg/kg micrograms per kilogram
** No standard established
BOLD Analyte detected above laboratory detection limit.
NR 720 RCL Chapter NR 720 Generic Resudual Contaminant Limit
NR 746 Table 1 Chapter NR 746 Table 1, Indicators of Residual Petroleum Products.
NR 746 Table 2 Chapter NR 746 Table 2, Protection of Human Health from Direct Contact with Contaminated Soil.

EPA United States Environmental Protection Agency — Superfund Risk Assessment

Equation Values for Ingestion

Noncarcinogenic Parameter	Value	Carcinogenic Age-adjusted Parameter	Value	Carcinogenic Nonadjusted Parameter	Value
Target Hazard Quotient (unitless)	1	Target Risk (unitless)	1.0E-7	Target Risk (unitless)	1.0E-6
Body Weight (kg)	70	Adult Body Weight (kg)	70	Body Weight (kg)	70
		Child Body Weight (kg)	15		
Exposure Duration (yr)	25	Adult Exposure Duration (yr)	24	Exposure Duration (yr)	25
		Child Exposure Duration (yr)	6		
Exposure Frequency (day/yr)	250	Exposure Frequency (day/yr)	350	Exposure Frequency (day/yr)	250
Intake Rate (mg/day)	100	Adult Intake Rate (mg/day)	100	Intake Rate (mg/day)	100
		Child Intake Rate (mg/day)	200		
		Average Lifetime (yr)	70	Average Lifetime (yr)	70
		Age-adjusted Ingestion Factor (mg-yr/kg-day)	114.29		

Soil Screening Levels for Ingestion (mg/kg)

Analyte	Cas Number	Oral RfD	Oral Slope Factor	Noncarcinogenic	Carcinogenic (Age-adjusted)	Carcinogenic (Nonadjusted)
Tetrachloroethylene	127184	1.00E-02 [a]	5.20E-02 [v]	1.02E+04	1.23E+00	5.50E+01

Equation Values for Inhalation of Volatiles

Volatilization Factor Parameter	Value	Soil Saturation Concentration Parameter	Value	Noncarcinogenic Parameter	Value	Carcinogenic Parameter	Value
Surface Area (acres)	0.5			Target Hazard Quotient (unitless)	1	Target Risk (unitless)	1.0E-6
City (climate zone)	Chicago (VII)			Exposure Duration (yr)	25	Exposure Duration (yr)	25
Q/C (g/m^2-s per kg/m^3)	97.78			Exposure Frequency (day/yr)	250	Exposure Frequency (day/yr)	250
Fraction organic carbon (unitless)	0.006	Fraction organic carbon (unitless)	0.006			Average Lifetime (yr)	70
Dry soil bulk density (g/cm^3)	1.5	Dry soil bulk density (g/cm^3)	1.5				
Soil particle density (g/cm^3)	2.65	Soil particle density (g/cm^3)	2.65				
Water-filled soil porosity (L_{water}/L_{soil})	0.2	Water-filled soil porosity (L_{water}/L_{soil})	0.2				
Exposure interval (s)	9.5e08						

Soil Screening Levels for Inhalation of Volatiles (mg/kg)

Analyte	Cas Number	Inhalation RfC	Inhalation Unit Risk	Volatilization Factor	Soil Saturation Concentration	Noncarcinogenic	Carcinogenic
Tetrachloroethylene	127184	6.0E-01 V	5.8E-07 V	5.0E+03	2.4E+02	4.4E+03	3.5E+01

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URL: http://risk.lsd.ornl.gov/epa/ssl1.htm

This page was last updated on: May 12, 1999
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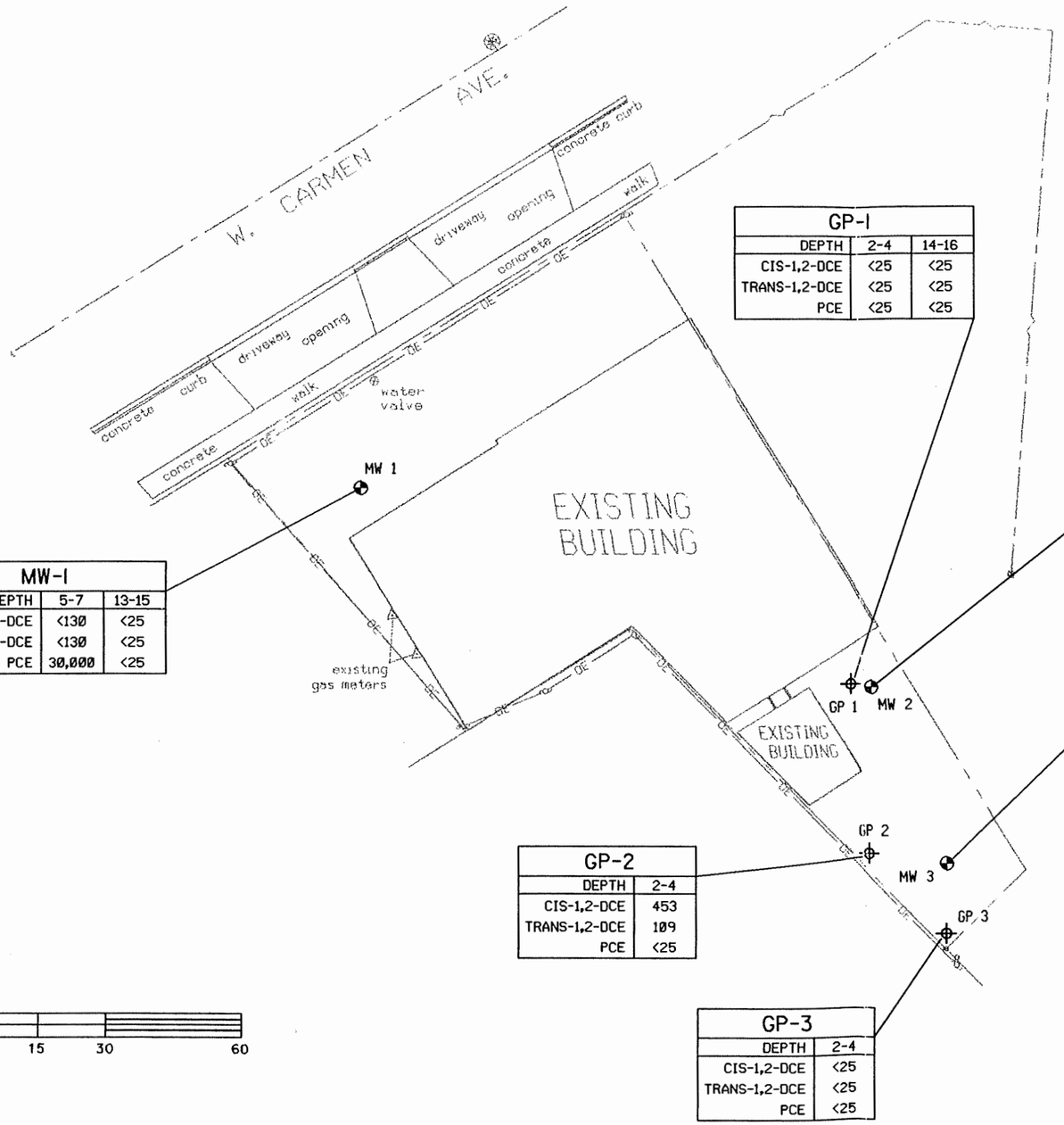
beasley.lynn@epa.gov

FIGURES



GP-1		
DEPTH	2-4	14-16
CIS-1,2-DCE	<25	<25
TRANS-1,2-DCE	<25	<25
PCE	<25	<25

MW-1		
DEPTH	5-7	13-15
CIS-1,2-DCE	<130	<25
TRANS-1,2-DCE	<130	<25
PCE	30,000	<25

MW-2		
DEPTH	7-9	17-19
CIS-1,2-DCE	42	<25
TRANS-1,2-DCE	<25	<25
PCE	<25	<25

MW-3		
DEPTH	3-5	10-12
CIS-1,2-DCE	2,000	<25
TRANS-1,2-DCE	110	<25
PCE	130	<25

GP-2	
DEPTH	2-4
CIS-1,2-DCE	453
TRANS-1,2-DCE	109
PCE	<25

GP-3	
DEPTH	2-4
CIS-1,2-DCE	<25
TRANS-1,2-DCE	<25
PCE	<25

LEGEND

⊕ = GEOPROBE BORING LOCATION

◕ = MONITORING WELL LOCATION

——OE—— = OVERHEAD UTILITY LINE

ANALYTICAL KEY

DCE = DICHLOROETHENE
PCE = TETRACHLOROETHENE

ALL CONCENTRATIONS EXPRESSED IN MILLIGRAMS PER KILOGRAM (mg/kg)

NOTE:
MAP BASED ON SURVEY PERFORMED ON 7-22-02. BY SURVEYING ASSOCIATES. INC.

FRITZKE PROPERTY MILWAUKEE, WI			SIGMA ENVIRONMENTAL SERVICES INC.
DATE: 7-26-02	DR. BY: TMM	DR.# 7029-005	SCALE: 1" = 30'
SOIL QUALITY MAP			FIGURE 4