Waste Management of Wisconsin
104(e) Response Attachments
November 1, 1995

Attachment 1

Soil Borings taken 9/23/88 prior to purchase of property on 9/30/88 by WMI

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

RECEIVED OCT 12 1988

10/10/88 LABORATORY REPORT PAGE 1

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08953 WASTE AAA-9-23-2
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	1.1	PPM				!
TOLUENE	0.57	PPM				!
XYLENE	9.8	PPM				!
TOTAL PETROLEUM HYDROCARBONS	69	PPM				!
	STODDARD SOLVENT -REPORT AMMENDED DUE TO ERROR IN CALCULATION					
BARIUM - EP			0.06	MG/L	100.0	!
CADMIUM - EP			<0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			0.06	MG/L	5.0	!
ARSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			0.035	MG/L	0.2	!
PHENOLICS	0.12	PPM				!
	PHENOLICS ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	<0.13	%				!

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METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.
ANNUAL BOOKS OF ASTM STANDARDS, 1982.
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-0486
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 6 WEEKS FROM THE RECEIVING DATE OF SAMPLE. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.
! = REPRINT N/T = NOT TESTED N/A = NOT APPLICABLE APPROVAL GCC

SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code

FROM SAMPLE CONTAINER

LABORATORY NAME CBC-Environmental Services

ADDRESS 140 E. Ryan Road - Oak Creek, WI LAB MGR PHONE (414) 764-7005

DATE SAMPLE RECEIVED AT LAB 9-23 DATE SAME TAKEN 9-23

LAB SAMPLE NUMBER ASSIGNED 88267-WN5953 CERTIFICATION OF REP SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT 10-3 SIGNATURE Linda Woodie

LAB MANAGER NAME Joanne M. Lipo/Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u				✓	Benzene	1.1		9-23
	Acidity, %, as				✓	Phenols, mg/l	0.12		✓
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C O D, mg/l					Cyanides, as CN, Free mg/l			
	B O D, mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.57		
	R O E @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point, °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	9.8		
✓	Arsenic, as As, mg/l		<0.001	9-23		Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.06			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05						
	Chromium, Hexavalent, as Cr+6, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		0.035			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		0.06	✓		2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l				✓	% Chlorine	<0.13		
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum			
	Sulfates, as SO_4, mg/l				✓	Hydrocarbons	6.9		✓
	Sulfides, as S, mg/l								

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

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10/10/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08954 WASTE/AAA-9-23-8
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	0.004	PPM				!
TOLUENE	0.004	PPM				!
XYLENE	1.8	PPM				!
TOTAL PETROLEUM HYDROCARBONS	12	PPM				!
	REPORT AMMENDED DUE TO ERROR IN CALCULATION					
BARIUM - EP			0.07	MG/L	100.0	!
CADMIUM - EP			<0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			<0.02	MG/L	5.0	!
ARSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.12	PPM				!
	PHENOLICS ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	<0.07	%				!

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
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NUAL BOOKS OF ASTM STANDARDS, 1982.
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SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME CBC-Environmental Services
ADDRESS 140 E. Ryan Rd - Oak Creek, WI. LAB MGR. PHONE (414)764-7005
DATE SAMPLE RECEIVED AT LAB 9/23/88 DATE SAMPLE TAKEN 9/23/88
LAB SAMPLE NUMBER ASSIGNED 88267-W08954 CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT 10/3/88 SIGNATURE Linda Woodie
LAB MANAGER NAME Joanne M. Lipo/ Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity			9/23/88		Sulfur, as S, %			
	pH, s.u.				✓	Benzene	0.004		9/23/8
	Acidity, %, as				✓	Phenols, mg/l	0.12		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.004		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	1.8		
✓	Arsenic, as As, mg/l		<0.001			Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.07			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05		✓	% Chlorine	<0.07		
	Chromium, Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum Hydrocarbons	12		
	Sulfates, as SO_4, mg/l								
	Sulfides, as S, mg/l								

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

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10/10/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08955 WASTE/AAA-9-23-1
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	0.67	PPM				!
TOLUENE	0.29	PPM				!
XYLENE	2.5	PPM				!
TOTAL PETROLEUM HYDROCARBONS	33	PPM				!
	REPORT AMMENDED DUE TO ERROR IN CALCULATION					
BARIUM - EP			0.11	MG/L	100.0	!
CADMIUM - EP			0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			<0.02	MG/L	5.0	!
ARSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.22	PPM				!
	PHENOLICS ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	0.12	%				!

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
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SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME CBC - Environmental Services
ADDRESS 140 E. Ryan Road - Oak Creek, WI LAB MGR PHONE (414) 764-1005
DATE SAMPLE RECEIVED AT LAB 9-23 DATE SAMPLE TAKEN 9-23
LAB SAMPLE NUMBER ASSIGNED 98267-WOS955 CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☒

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT 10-3 SIGNATURE Linda Woodie
LAB MANAGER NAME Joanne M. Lipa / Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR?	PHYSICAL STATE @ 70°F	LAYERS	FREE LIQUIDS
		☐ YES ☐ NO IF KNOWN, DESCRIBE	☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u.				✓	Benzene	0.67		9/23/88
	Acidity, %, as				✓	Phenols, mg/l	0.22		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.29		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point, °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	2.5		
✓	Arsenic, as As, mg/l		<0.001	9-23-88		Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.11			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05		✓	% Chlorine	0.12		
	Chromium, Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002	✓		2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum			
	Sulfates, as SO_4, mg/l				✓	Hydrocarbons	33		✓
	Sulfides, as S, mg/l								

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

ENVIRONMENTAL SERVICES

RECEIVED OCT 12 1988

10/10/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08956 WASTE/AAA-9-23-3
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	0.041	PPM				!
TOLUENE	0.037	PPM				!
XYLENE	0.044	PPM				!
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM				!
BARIUM - EP			0.21	MG/L	100.0	!
CADMIUM - EP			<0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			<0.02	MG/L	5.0	!
RSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.07	PPM				!
	PHENOLICS ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	<0.07	%				!

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME: CBC-Enviromental Services
ADDRESS: 140 E. Ryan Rd. - Oak Creek, WI 53154 LAB MGR PHONE: (414)764-7005
DATE SAMPLE RECEIVED AT LAB: 9-23 DATE SAME TAKEN: 9-23
LAB SAMPLE NUMBER ASSIGNED: 88267-W08956 CERTIFICATION OF REP SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT: 10-10-88 SIGNATURE: Linda Woodie
LAB MANAGER NAME: Joanne M. Lipa/Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u				✓	% Chlorine	<0.07		9-23
	Acidity, %, as				✓	Phenols, mg/l	0.07		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	xylene	0.044		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
✓	Benzene	0.041		9-23		Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
✓	Toluene	0.037							
✓	Arsenic, as As, mg/l		<0.001			Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.21			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05						
	Chromium Hexavalent, as Cr^{+6} mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum Hydrocarbons	<4.0		
	Sulfates, as SO_4, mg/l								
	Sulfides, as S, mg/l								

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

ENVIRONMENTAL SERVICES

OCT 2 1988

10/10/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08957 WASTE/AAA-9-23-7
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	0.030	PPM				!
TOLUENE	0.022	PPM				!
XYLENE	6.0	PPM				!
TOTAL PETROLEUM HYDROCARBONS	80	PPM				!
	STODDARD SOLVENT - REPORT AMMENDED DUE TO ERROR IN CALCULATION					
BARIUM - EP			<0.5	MG/L	100.0	!
CADMIUM - EP			<0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			<0.02	MG/L	5.0	!
ARSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.03	PPM				!
	PHENOLICS ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	<0.08	%				!

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.
ANNUAL BOOKS OF ASTM STANDARDS, 1982.
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-0486
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 6 WEEKS FROM THE RECEIVING DATE OF SAMPLE. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.

! = REPRINT N/T = NOT TESTED N/A = NOT APPLICABLE APPROVAL

SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME CBC- Enviromental Services

ADDRESS 140 E. Ryan Road - Oak Creek WI 53154 LAB MGR PHONE (414) 764-7005

DATE SAMPLE RECEIVED AT LAB 9-23 DATE SAMPLE TAKEN 9-23

LAB SAMPLE NUMBER ASSIGNED 88267-W08957 CERTIFICATION OF REP SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program

DATE OF REPORT 10-10-88 SIGNATURE Linda Woodie

LAB MANAGER NAME Joanne M. Lipo/Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u.				✓	% Chlorine	<0.08		9-23
	Acidity, %, as				✓	Phenols, mg/l	0.03		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l								
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
✓	Benzene	0.030		9-23		Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point, °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
✓	Toluene	0.022							
✓	Arsenic, as As, mg/l		<0.001			Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		<0.5			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05						
	Chromium, Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l					Parathion, mg/l			
	Manganese, as Mn, mg/l		<0.5			Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l					Methoxychlor, mg/l			
	Nickel, as Ni, mg/l		<0.004			Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
✓	Xylene	6.0							
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum Hydrocarbons	80		
	Sulfates, as SO_4, mg/l								
	Sulfides, as S, mg/l								

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

RECEIVED OCT 21 1988

10/10/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08958 WASTE/AAA-9-23-4
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	<0.002	PPM				!
TOLUENE	0.005	PPM				!
XYLENE	0.003	PPM				!
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM				!
BARIUM - EP			<0.05	MG/L	100.0	!
CADMIUM - EP			0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			<0.02	MG/L	5.0	!
RSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.03	PPM				!
	PHENOLIC ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	<0.07	%				!

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.
ANNUAL BOOKS OF ASTM STANDARDS, 1982.
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-0486
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 6 WEEKS FROM THE RECEIVING DATE OF SAMPLE. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.

! = REPRINT N/T = NOT TESTED N/A = NOT APPLICABLE APPROVAL GEE

SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME: CBC - Environmental Services
ADDRESS: 140 E. Ryan Rd. - Oak Creek, WI. LAB MGR PHONE: (414) 764-7005
DATE SAMPLE RECEIVED AT LAB: 9/23/88 DATE SAME TAKEN: 9/23/88
LAB SAMPLE NUMBER ASSIGNED: 88267-WD8958 CERTIFICATION OF REP SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT: 10/3/88 SIGNATURE: Linda Woodie
LAB MANAGER NAME: Joanne M. Lipa / Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u.				✓	Benzene	<0.002		9/23/88
	Acidity, %, as				✓	Phenols, mg/l	0.03		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.005		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point, °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	0.003		
✓	Arsenic, as As, mg/l		<0.001	9/23/88		Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		<0.05			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05						
	Chromium, Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
					✓	% Chlorine	<0.07		
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum			
	Sulfates, as SO_4, mg/l				✓	Hydrocarbons	<4.0		
	Sulfides, as S, mg/l								

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

OCT 2 1988

10/10/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08959 WASTE/AAA-9-23-6
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	0.40	PPM				!
TOLUENE	0.15	PPM				!
XYLENE	2.2	PPM				!
TOTAL PETROLEUM HYDROCARBONS	14	PPM				!
	REPORT AMMENDED DUE TO CALCULATION ERROR					
BARIUM - EP			0.15	MG/L	100.0	!
CADMIUM - EP			<0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
ILVER - EP			<0.02	MG/L	5.0	!
ARSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.04	PPM				!
	PHENOLIC ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	0.09	%				!

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
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LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME: CBC - Environmental Services
ADDRESS: 140 E. Ryan Rd. - Oak Creek, WI. LAB MGR PHONE: (414) 764-7005
DATE SAMPLE RECEIVED AT LAB: 9/23/88 DATE SAMPLE TAKEN: 9/23/88
LAB SAMPLE NUMBER ASSIGNED: 88267-W08959 CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☒

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT: 10/3/88 SIGNATURE: Linda Woodie
LAB MANAGER NAME: Joanne M. Lipo/Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity			9/23/88		Sulfur, as S, %			
	pH, s.u.				✓	Benzene	0.40		9/23/8
	Acidity, %, as				✓	Phenols, mg/l	0.04		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.15		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	2.2		
✓	Arsenic, as As, mg/l		<0.001			Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.15			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05		✓	% Chlorine	0.09		
	Chromium, Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l				✓	Total Petroleum Hydrocarbons	14		
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l								
	Sulfates, as SO_4, mg/l								
	Sulfides, as S, mg/l								

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

OCT 2 1988

10/10/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSS JANESHEK

SAMPLE 88267-W08960 WASTE/AAA-9-23-5
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	1.0	PPM				!
TOLUENE	0.94	PPM				!
XYLENE	7.3	PPM				!
TOTAL PETROLEUM HYDROCARBONS	40	PPM				!
	STODDARD SOLVENT - REPORT AMMENDED DUE TO ERROR IN CALCULATION					
BARIUM - EP			0.60	MG/L	100.0	!
CADMIUM - EP			<0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			<0.02	MG/L	5.0	!
ARSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.05	PPM				!
	PHENOLICS ANALYSIS DONE ON EP EXTRACT					
% CHLORINE	0.08	%				!

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.
ANNUAL BOOKS OF ASTM STANDARDS, 1982.
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-0486
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 6 WEEKS FROM THE RECEIVING DATE OF SAMPLE. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.
! = REPRINT N/T = NOT TESTED N/A = NOT APPLICABLE APPROVAL

SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME CBC - Environmental Services
ADDRESS 140 E. Ryan Rd.-Oak Creek, WI LAB MGR. PHONE (414) 764-7005
DATE SAMPLE RECEIVED AT LAB 9/23/88 DATE SAMPLE TAKEN 9/23/88
LAB SAMPLE NUMBER ASSIGNED 88267-W08960 CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT 10/5/88 SIGNATURE [signature]
LAB MANAGER NAME Joanne M. Lipo/Linda Woodie

PHYSICIAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u				✓	Benzene	1.0		
	Acidity, %, as				✓	Phenols, mg/l	0.05		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.94		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point, °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	7.3		
✓	Arsenic, as As, mg/l		<0.001			Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.60			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05		✓	% Chlorine	0.08		
	Chromium Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum Hydrocarbons	40		
	Sulfates, as SO_4, mg/l								
	Sulfides, as S, mg/l								

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

10/03/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDRY R
MENOMONEE FALLS ,WI 53051
ATTN: RUSTY STORM

SAMPLE 88267-W08956 WASTE/AAA-9-23-3
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	0.041	PPM				
TOLUENE	0.037	PPM				
XYLENE	0.044	PPM				
TOTAL PETROLEUM HYDROCARBONS	<4.0	PPM				
BARIUM - EP			0.21	MG/L	100.0	
CADMIUM - EP			<0.05	MG/L	1.0	
CHROMIUM - EP			<0.05	MG/L	5.0	
LEAD - EP			<0.5	MG/L	5.0	
SILVER - EP			<0.02	MG/L	5.0	
ARSENIC - EP			<0.001	MG/L	5.0	
SELENIUM - EP			<0.002	MG/L	1.0	
MERCURY - EP			<0.0004	MG/L	0.2	
PHENOLICS	0.07	PPM				
% CHLORINE	<0.07	%				

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.
ANNUAL BOOKS OF ASTM STANDARDS, 1982.
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-[illegible]
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 6 WEEKS FROM THE RECEIVING DATE OF SAMPLE. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.
N/T = NOT TESTED N/A = NOT APPLICABLE APPROVAL

LOCATION OF ORIGINAL

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Waste Profile Sheet Code

FROM SAMPLE CONTAINER

LABORATORY NAME CGC - Environmental Services

ADDRESS 140 E. Ryan Road - Oak Creek, WI. LAB MGR PHONE 414 (764-7005)

DATE SAMPLE RECEIVED AT LAB 9-23 DATE SAMPLE TAKEN 9-23

LAB SAMPLE NUMBER ASSIGNED 88267-WO8956 CERTIFICATION OF REP SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT 10-3 SIGNATURE Linda Woodie

LAB MANAGER NAME Joanne M. Lipo / Linda Woodie

PHYSICAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN. DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u.				✓	Benzene	0.041		9/23/
	Acidity, %, as				✓	Phenols, mg/l	0.07		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.037		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point, °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	0.044		
✓	Arsenic, as As, mg/l		<0.001	9/23/88		Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.21			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05						
	Chromium Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02	✓		2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l				✓	% Chlorine	<0.07		
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum			
	Sulfates, as SO_4, mg/l				✓	Hydrocarbons	<4.0		✓
	Sulfides, as S, mg/l								

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

10/05/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS ,WI 53051
ATTN: RUSTY STORM

SAMPLE 88267-W08957 WASTE/AAA-9-23-7
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	0.030	PPM				
TOLUENE	0.022	PPM				!
XYLENE	6.0	PPM				!
TOTAL PETROLEUM HYDROCARBONS	80	PPM				!
	STODDARD SOLVENT - REPORT AMMENDED DUE TO ERROR IN CALCULATION					
BARIUM - EP			<0.5	MG/L	100.0	!
CADMIUM - EP			<0.05	MG/L	1.0	!
CHROMIUM - EP			<0.05	MG/L	5.0	!
LEAD - EP			<0.5	MG/L	5.0	!
SILVER - EP			<0.02	MG/L	5.0	
ARSENIC - EP			<0.001	MG/L	5.0	!
SELENIUM - EP			<0.002	MG/L	1.0	!
MERCURY - EP			<0.0004	MG/L	0.2	!
PHENOLICS	0.03	PPM				!
% CHLORINE	<0.08	%				!

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
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ANNUAL BOOKS OF ASTM STANDARDS, 1982.
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 6 WEEKS FROM THE RECEIVING DATE OF SAMPLE. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.

! = REPRINT N/T = NOT TESTED N/A = NOT APPLICABLE APPROVAL _____

SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME CBC Environmental Services
ADDRESS 140 E Ryan Road Oak Creek WI 53154 LAB MGR PHONE (414) 764-7205
DATE SAMPLE RECEIVED AT LAB 9-23-88 DATE SAME TAKEN 9-23-88
LAB SAMPLE NUMBER ASSIGNED 88267-W08957 CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program

DATE OF REPORT 10/3/88 SIGNATURE Linda Woodie
LAB MANAGER NAME Johnnerlipo / Linda Woodie

PHYSICAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH, s.u				✓	% Chlorine	<0.08		9-23
	Acidity, %, as				✓	Phenols, mg/l	0.03		
	Alkalinity, %, as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l								
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
✓	Benzene	0.030		9-23		Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point, °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content, on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value, BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
✓	Toluene	0.022							
✓	Arsenic, as As, mg/l		<0.001			Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		<0.5			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05						
	Chromium, Hexavalent, as Cr^{+6}, mg/l					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l								
	Zinc, as Zn, mg/l					PCBs, mg/l			
✓	Xylene	6.0							
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l				✓	Total Petroleum			
	Sulfates, as SO_4, mg/l				✓	Hydrocarbons	ND		✓
	Sulfides, as S, mg/l								

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

10/03/88 LABORATORY REPORT

W486 8427429 W61

WASTE MANAGEMENT OF WI-DISTRICT OFFICE
W124 N8925 BOUNDRY R
MENOMONEE FALLS ,WI 53051
ATTN: RUSTY STORM

SAMPLE 88267-W08960 WASTE/AAA-9-23-5
DATE COLLECTED 09/23/88 DATE RECEIVED 09/23/88

TEST NAME	RESULT	UNITS	EP TOXICITY		EP LIMIT	HAZ.CODE
BENZENE	1.0	PPM				
TOLUENE	0.94	PPM				
XYLENE	7.3	PPM				
TOTAL PETROLEUM HYDROCARBONS	4.0	PPM				
	STODDARD SOLVENT					
BARIUM - EP			0.60	MG/L	100.0	
CADMIUM - EP			<0.05	MG/L	1.0	
CHROMIUM - EP			<0.05	MG/L	5.0	
LEAD - EP			<0.5	MG/L	5.0	
SILVER - EP			<0.02	MG/L	5.0	
ARSENIC - EP			<0.001	MG/L	5.0	
SELENIUM - EP			<0.002	MG/L	1.0	
MERCURY - EP			<0.0004	MG/L	0.2	
PHENOLICS	0.05	PPM				
% CHLORINE	0.08	%				

METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, 1979, EPA-600/4-79-020.
TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS, 1982, EPA SW846.
ANNUAL BOOKS OF ASTM STANDARDS, 1982.
IF YOU HAVE ANY QUESTIONS PLEASE CONTACT OUR CLIENT SERVICE DEPARTMENT. FAX # 414-764-0486
ANY REMAINING WASTE SAMPLES WILL BE RETURNED TO THE ADDRESS LISTED ABOVE 6 WEEKS FROM THE RECEIVING DATE OF SAMPLE. WI DNR LAB CERTIFICATION #241283020/A.I.H.A. ACCREDITED.
N/T = NOT TESTED N/A = NOT APPLICABLE APPROVAL

SPECIAL WASTE ANALYSIS REPORT

LOCATION OF ORIGINAL

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Waste Profile Sheet Code
FROM SAMPLE CONTAINER

LABORATORY NAME CBC - Environmental Services
ADDRESS 140 E. Ryan Rd. - Oak Creek, WI. LAB MGR PHONE (414) 764-7005
DATE SAMPLE RECEIVED AT LAB 9/23/88 DATE SAME TAKEN 9/23/88
LAB SAMPLE NUMBER ASSIGNED 88267-W08960 CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

DATE OF REPORT 10/3/88 SIGNATURE Linda Woodie
LAB MANAGER NAME Joanne M. Lipo / Linda Woodie

PHYSICAL CHARACTERISTICS OF WASTE

SAMPLE VOLUME	COLOR	DOES THE WASTE HAVE A STRONG INCIDENTAL ODOR? ☐ YES ☐ NO IF KNOWN, DESCRIBE	PHYSICAL STATE @ 70°F ☐ SOLID ☐ SEMI-SOLID ☐ LIQUID ☐ POWDER	LAYERS ☐ MULTILAYERED ☐ BI-LAYERED ☐ SINGLE PHASED	FREE LIQUIDS ☐ YES ☐ NO VOLUME ____ %

✓	Test	As Received	Extraction Procedure	Date of Analysis	✓	Test	As Received	Extraction Procedure	Date of Analysis
	Specific Gravity					Sulfur, as S, %			
	pH s.u.				✓	Benzene	1.0		9/23/8
	Acidity, % as				✓	Phenols, mg/l	0.05		
	Alkalinity, % as					Cyanides, as CN, Total mg/l			
	C.O.D., mg/l					Cyanides, as CN, Free mg/l			
	B.O.D., mg/l					Ammonia Nitrogen, as N, mg/l			
	Total Solids @ 105°C, %					Total Kjeldahl Nitrogen, as N, mg/l			
	Total Dissolved Solids, mg/l				✓	Toluene	0.94		
	R.O.E. @ 180°C, mg/l					Total Alkalinity, P, as $CaCO_3$, mg/l			
						Total Alkalinity, M, as $CaCO_3$, mg/l			
	Flash Point °F (closed cup)					Total Hardness, as $CaCO_3$, mg/l			
	Ash Content on ignition, %					Calcium Hardness, as $CaCO_3$, mg/l			
	Heating Value BTU/lb					Magnesium Hardness, as $CaCO_3$, mg/l			
					✓	Xylene	7.3		
✓	Arsenic, as As, mg/l		<0.001	9/23/88		Oil and Grease, mg/l			
✓	Barium, as Ba, mg/l		0.60			Paint Filter Test, free liquids, %			
✓	Cadmium, as Cd, mg/l		<0.05			Water Content, as H_2O, %			
✓	Chromium, Total, as Cr, mg/l		<0.05		✓	Total Petroleum Hydrocarbons	4.0		
	Chromium, Hexavalent, as Cr^{+6}, mg					Aldrin, mg/l			
	Cobalt, as Co, mg/l					Chlordane, mg/l			
	Copper, as Cu, mg/l					DDT, mg/l			
	Iron, Total, as Fe, mg/l					Dieldrin, mg/l			
	Iron, Dissolved, as Fe, mg/l					Heptachlor, mg/l			
✓	Lead, as Pb, mg/l		<0.5			Parathion, mg/l			
	Manganese, as Mn, mg/l					Endrin, mg/l			
	Magnesium, as Mg, mg/l					Lindane, mg/l			
✓	Mercury, as Hg, mg/l		<0.0004			Methoxychlor, mg/l			
	Nickel, as Ni, mg/l					Toxaphene, mg/l			
✓	Selenium, as Se, mg/l		<0.002			2,4-D, mg/l			
✓	Silver, as Ag, mg/l		<0.02			2,4,5-TP (Silvex), mg/l			
	Thallium, as Tl, mg/l				✓	% Chlorine	0.08		✓
	Zinc, as Zn, mg/l					PCBs, mg/l			
	Bicarbonates, as HCO_3, mg/l					pH Screen, s.u.			
	Bromides, as Br, mg/l					Cyanide Screen, (+,-)			
	Carbonates, as CO_3, mg/l					Flammability Screen, (+,-)			
	Chlorides, as Cl, mg/l					Oxidizer Screen, (+,-)			
	Fluorides, as F, mg/l					Radiation Screen, (+,-)			
	Nitrates, as NO_3, mg/l					Sulfide Screen, (+,-)			
	Nitrites, as NO_2, mg/l					Water Mix Screen, (+,-)			
	Phosphates, as P, mg/l								
	Sulfates, as SO_4, mg/l								
	Sulfides, as S, mg/l			✓					

FORM WM 55 (REV. 10-87) © 1984 WASTE MANAGEMENT, INC.

Attachment 2

Soil and Groundwater Investigations performed May and June of 1989 by AAA and WMI

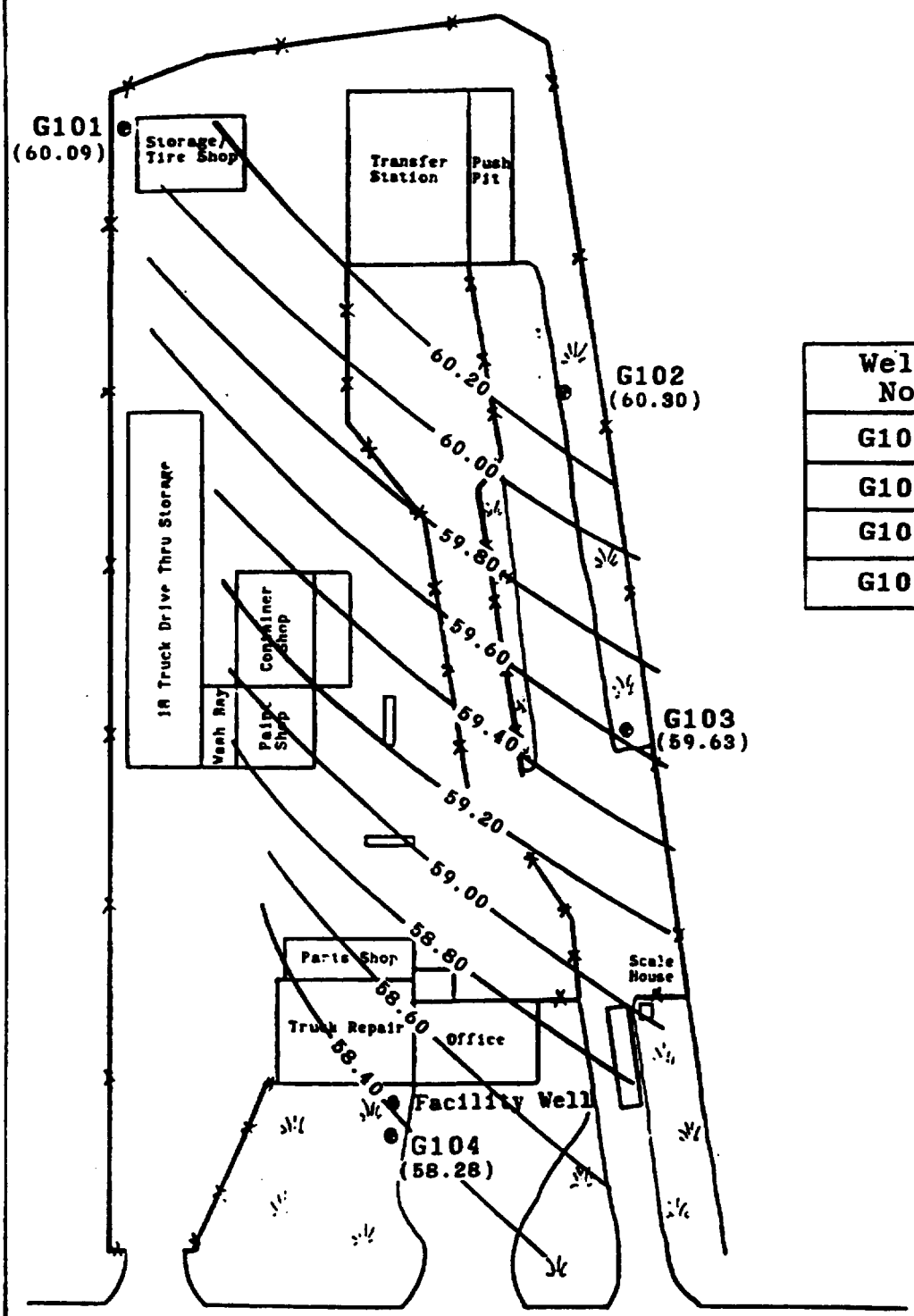
WASTE MANAGEMENT GROUNDWATER SAMPLING

FIELD RESULTS

(5/9/89)

WELL	DEPTH TO		pH	S.C.	TEMP. (°F)
	WATER	BOTTOM			
G101	>42.0'	----	7.45	1181	65.9
G102	28.5'	38.0'	7.28	635	63.3
G103	41.2'	51.8'	7.55	583	64.0
G104	44.9'	48.9'	7.07	857	62.9

Attachment 1



Well No.	Water Elevation
G101	60.09
G102	60.30
G103	59.63
G104	58.28

NOTE: Bench Mark @ 100' msl assumed on concrete slab, NW corner of storage/tire shop. (±765' msl per USGS map)

AAA DISPOSAL SYSTEMS, INC.

Piezeometric Surface Map (5-9-89)

Scale 1"=100' | Date 6-5-89

M. RAPPS ASSOCIATES, INC.

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-7

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown fine SAND (fill)		1SS	6 12 18	67	
Black clayey fine SAND, with occasional gravel, chemical odor (fill)		2SS	5 12 17 24	50	*sample taken at 3.0'
Dark brown silty fine to medium SAND (fill)	5	3SS	20 50 53 41	54	
Black silty fine SAND, with chemical odor (fill)		4SS	13 31 44 50	17	
Light brown to tan silty SAND and GRAVEL		5SS	17 23 31 60	75	*RCRA sample taken at 8.0' *sample taken at 9.0'
Boring terminated at 9.5'	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-8

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Brown silty SAND and GRAVEL (fill)		1SS	15 12 10 9	58	
Light brown to tan SAND and GRAVEL (fill)					
Dark brown silty SAND and GRAVEL (fill)					
Black silty fine SAND (fill)		2SS	13 14 16 19	62	*RCRA sample taken at 2.5'
Brown silty SAND and GRAVEL					*Sample taken at 3.0'
Light brown silty SAND and GRAVEL	5	3SS	2 5 7 18	50	*Sample taken at 3'6"
Boring terminated at 6'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-9

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Light brown SAND and GRAVEL (fill)		1SS	28 27 17	92	
Dark brown silty SAND and GRAVEL (fill)			18 20		
Black silty fine SAND (fill)		2SS	25	71	*sample taken at 3.0'
Brown silty SAND and GRAVEL (fill)			18 13		
Black sandy CLAY			13		
Light brown to tan silty SAND and GRAVEL	5	3SS	17 14 21	71	*sample taken at 5'3"
Boring terminated at 6'					
	10				
	15				
	20				

RANDOM SAMPLES

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-1

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown gravelly CLAY (fill)		1SS	7 8 6 5	83	
Light brown SAND and GRAVEL (fill)					
Dark brown sandy CLAY		2SS	15 14 12 21	58	*sample taken at 2.5'
		3SS	10 12	33	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-2

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown TOPSOIL		1SS	6 5 8	71	
Light brown to tan SAND and GRAVEL		2SS	8 8 11 11 13	67	*sample taken at 2.5'
		3SS	8 9	50	
Boring terminated at 5'	5				
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-3

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown TOPSOIL		1SS	2	79	
Dark brown gravelly CLAY			10		
			15		
Light brown SAND and GRAVEL			10		
		2SS	6	71	*sample taken at 2.5'
			14		
			14		
			26		
		3SS	18	83	
			20		
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-4

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Brown silty SAND and GRAVEL (fill)			20		
Light brown silty SAND and GRAVEL (fill)		1SS	18 16	62	
Dark brown silty SAND and GRAVEL (fill)			17		*sample taken at 2.5'
		2SS	15 10	54	
Black silty CLAY			10		
Dark brown sandy CLAY			14		
Light brown to tan SAND and GRAVEL		3SS	9 13	83	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-5

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE			20		
Brown silty SAND and GRAVEL (fill)		1SS	18 16	54	
Black sandy CLAY			17 15		
Light brown silty SAND and GRAVEL		2SS	10 10	67	*sample taken at 2.5'
			14		
		3SS	9 13	42	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-6

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Brown silty SAND and GRAVEL (fill)			15		
Light brown silty SAND & GRAVEL (fill)			15		
		1SS	15	83	
Black sandy CLAY (fill)			14		
Light brown SAND and GRAVEL (fill)			8		*sample taken at 2.5'
		2SS	13	79	
Dark brown sandy CLAY			11		
			9		
Light brown to tan SAND and GRAVEL			10		
	5	3SS	14	67	
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-7

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Brown silty SAND and GRAVEL (fill)		1SS	30 22 18 16	25	
Dark gray fine SAND (fill)					
Light brown SAND and GRAVEL		2SS	12 12 14 15	25	*sample taken at 2.5'
		3SS	20 16	20	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-8

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE			11		
Brown silty SAND and GRAVEL (fill)			30		
Light brown SAND and GRAVEL (fill)		1SS	13	75	
			8		
Dark brown sandy CLAY			9		*sample taken at 2.5'
			8		
		2SS	8	50	
			10		
			12		
Light brown SAND and GRAVEL		3SS	13	50	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-9

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Brown silty SAND and GRAVEL (fill)		1SS	30 33	92	
Dark brown sandy CLAY			8 4		
Brown silty SAND and GRAVEL, slightly clayey		2SS	14 20	58	*sample taken at 2.5'
			6 7		
		3SS	10 12	58	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-10

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE			4		
Dark brown TOPSOIL		1SS	5 7 10	54	
Dark brown SAND and GRAVEL		2SS	8 13 21	46	*sample taken at 2.5'
Light brown SAND and GRAVEL		3SS	19 20 25	67	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring R-11

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 11, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown TOPSOIL		1SS	4 5 6 11	38	
		2SS	10 16 7 4	50	*sample taken at 2.5'
Brown sandy CLAY					
Light brown SAND and GRAVEL		3SS	12 13	33	
	5				
Boring terminated at 5'					
	10				
	15				
	20				

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System is used to identify the soil unless otherwise noted.

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch O.D. split-spoon.

Qu: Unconfined compressive strength, TSF

Qp: Penetrometer value, unconfined compressive strength, TSF

Mc: Water content, %

LL: Liquid limit, %

PI: Plasticity Index, %

δd: Natural dry density, PCF

▼: Apparent groundwater level at time noted after completion.

DRILLING AND SAMPLING SYMBOLS

SS: Split-Spoon - 1 3/8" I.D., 2" O.D., except where noted.
ST: Shelby Tube - 3" O.D., except where noted.
AU: Auger Sample.
DB: Diamond Bit.
CB: Carbide Bit.
WS: Washed Sample.

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

TERM (NON-COHESIVE SOILS)	STANDARD PENETRATION RESISTANCE
Very Loose	0 - 2
Loose	2 - 4
Slightly Compact	4 - 8
Medium Dense	8 - 16
Dense	16 - 26
Very Dense	Over 26

TERM (COHESIVE SOILS)	Qu - (TSF)
Very Soft	0 - 0.25
Soft	0.25 - 0.50
Firm (Medium)	0.50 - 1.00
Stiff	1.00 - 2.00
Very Stiff	2.00 - 4.00
Hard	4.00+

PARTICLE SIZE

Boulders	8 in. +	Coarse Sand	5mm-0.6mm	Silt	0.074mm-0.005mm
Cobbles	8 in.-3 in.	Medium Sand	0.6mm-0.2mm	Clay	-0.005mm
Gravel	3 in.-5mm	Fine Sand	0.2mm-0.074mm		

FOUNDRY SAND SAMPLES

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-1

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown clayey fine SAND (fill)		1SS	6 8 13 9	17	
		2SS	6 5 3 4	33	*sample taken at 3.0'
	5	3SS	6 3 4 4	100	
Black silty fine SAND (fill)					
Black clayey fine SAND (fill)		4SS	5 4 5 3	58	
Black sandy CLAY (fill)		5SS	2 3 6 15	54	*sample taken at 9'3"
Dark brown clayey SAND and GRAVEL	10				*sample taken at 9'8"
Reddish brown silty SAND and GRAVEL		6SS	5 7 4 4	50	
Boring terminated at 12'					
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-2

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown silty SAND and GRAVEL (fill)			7 9		
Black silty fine SAND, with occasional grave-fill -reddish brown seam at 1.5' -organic fibers at 3.5'		1SS	10 7	67	
		2SS	6 7 5 6	54	*sample taken at 3.0'
Dark brown silty SAND and GRAVEL (fill)	5	3SS	13 7 5 7	54	
Black clayey fine SAND with organic fibers, chemical odor (fill)		4SS	4 3 5 9	50	*RCRA sample taken at 8.0'
Dark brown clayey SAND and GRAVEL		5SS	13 14 10 7	62	*sample taken at 8'9"
Light brown to tan silty SAND and GRAVEL	10				
Boring terminated at 10'					
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-3

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Brown silty SAND and GRAVEL (fill)		1SS	9 8 10 7	79	
Black silty fine SAND with occasional gravel		2SS	14 12 13 9	46	*sample taken at 3.0'
	5	3SS	19 15 15 12	38	
(fill)		4SS	6 4 7 4	67	
Dark brown clayey SAND and GRAVEL		5SS	8 9 8 13	54	*sample taken at 8'6"
Light brown and tan silty SAND and GRAVEL	10				
Boring terminated at 10'					
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-4

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Light brown silty SAND and GRAVEL (fill)		1SS	12 15 20 30	79	
Brown silty SAND and GRAVEL (fill)					
Dark brown clayey SAND and GRAVEL (fill)		2SS	26 18 24 17	96	*sample taken at 3,0'
Black silty fine SAND (fill)					
-reddish brown seam at 3'	5	3SS	38 10 8 7	58	
		4SS	10 10 6 6	46	*sample taken at 8'3"
Dark brown sandy CLAY		5SS	7 7 10 11	38	
Reddish brown silty SAND and GRAVEL	10				
Boring terminated at 10'					
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-5

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Brown silty SAND and GRAVEL (fill)			24		
Light brown silty SAND and GRAVEL (fill)		1SS	17 14 10	67	
Black silty fine SAND (fill) with occasional gravel		2SS	10 17 12 9	62	*RCRA sample taken at 2.5' *sample taken at 3.0'
	5	3SS	18 24 30 32	79	
Light brown to tan silty SAND and GRAVEL					*sample taken at 5'8"
Boring terminated at 6'					
	10				
	15				
	20				

Professional Service Industries, Inc.

RECORD OF SUBSURFACE EXPLORATION

Boring F-6

Project Name: AAA Disposal Systems, Inc. Date of Boring: May 10, 1989

Site: South Beloit, Illinois Project No.: 152-95041

DESCRIPTION	DEPTH	SAMPLE	N	% REC.	REMARKS
SURFACE					
Dark brown fine SAND (fill)		1SS	12 13 16 17	92	
Dark brown to black silty fine SAND with occasional gravel (fill)		2SS	15 20 24 30	79	*sample taken at 3.0'
Brown to dark brown sandy CLAY (fill)					
Black to dark brown clayey fine SAND (fill)	5	3SS	21 26 13 17	79	*sample taken at 5'8"
Light brown silty SAND and GRAVEL					
Boring terminated at 6'					
	10				
	15				
	20				

GROUNDWATER SAMPLES

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622

ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

06-05-89
Sample No: 62374

Project No: AAA Disposal

SAMPLE DESCRIPTION: G101, Grab Groundwater

Date Taken: 05-10-89 1415

Date Received: 05-10-89 1722

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

M. RAPPS ASSOCIATES, INC.

JUN 07 1989

DATE RECEIVED

Tom Gartner, Manager
Rockford Division

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622

ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

06-05-89
Sample No: 62375

Project No: AAA Disposal

SAMPLE DESCRIPTION: G102, Grab Groundwater

Date Taken: 05-10-89 1450

Date Received: 05-10-89 1722

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Toni Gartner, Manager
Rockford Division

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622

ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

06-05-89
Sample No: 62376

Project No: AAA Disposal

SAMPLE DESCRIPTION: G103, Grab Groundwater

Date Taken: 05-10-89 1433

Date Received: 05-10-89 1722

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	9.5	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	1.4	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	5.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	4.3	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Toni Gartner, Manager
Rockford Division

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

06-05-89
Sample No: 62377

Project No: AAA Disposal

SAMPLE DESCRIPTION: G104, Grab Groundwater

Date Taken: 05-10-89 1508

Date Received: 05-10-89 1722

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	4.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	3.1	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	2.3	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

06-05-89
Sample No: 62378

Project No: AAA Disposal

SAMPLE DESCRIPTION: **Field Blank**

Date Taken: 05-10-89 1426

Date Received: 05-10-89 1722

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

06-05-89
Sample No: 62379

Project No: AAA Disposal

SAMPLE DESCRIPTION: Trip Blank

Date Taken: 05-10-89 1719

Date Received: 05-10-89 1722

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Tom Gartner, Manager
Rockford Division

RANDOM SAMPLES

NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62397

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-1 at 2.5', Grab Soil

Date Taken: 05-10-89 1504

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Tom Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62419

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-2 at 2.5', Grab Soil

Date Taken: 05-11-89 1033

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62420

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-3 at 2.5', Grab Soil

Date Taken: 05-11-89 1040

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62421

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-4 at 2.5'. Grab Soil

Date Taken: 05-11-89 0929

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62422

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-5 at 2.5', Grab Soil

Date Taken: 05-11-89 0947

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Tom Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62423

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-6 at 2.5', Grab Soil

Date Taken: 05-11-89 0957

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
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Springfield IL 62704

05-29-89
Sample No: 62424

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-7 at 2.5', Grab Soil

Date Taken: 05-11-89 1054

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
Rockford Division

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Rockford Division
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62425

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-8 at 2.5', Grab Soil

Date Taken: 05-11-89 1020

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	5.4	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Tom Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62426

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-9 at 2.5', Grab Soil

Date Taken: 05-11-89 1107

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62427

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-10 at 2.5',Grab Soil

Date Taken: 05-11-89 1145

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
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2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62428

Project No: AAA Disposal

SAMPLE DESCRIPTION: R-11 at 2.5',Grab Soil

Date Taken: 05-11-89 1159

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

06-01-89
Sample No: 62431

Project No: AAA Disposal

SAMPLE DESCRIPTION: Field Blank

Date Taken: 05-11-89 0934

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Tony Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

06-01-89
Sample No: 62432

Project No: AAA Disposal

SAMPLE DESCRIPTION: Trip Blank

Date Taken: 05-11-89 1205

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

FOUNDRY SAND SAMPLES

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Rockford Division
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62382

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-1 at 3', Grab Soil

Date Taken: 05-10-89 1514

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62383

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-1 at 9'3'', Grab Soil

Date Taken: 05-10-89 1530

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	5.1	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	13.	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62384

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-1 at 9'8''Interface, Grab Soil

Date Taken: 05-10-89 1528

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
Rockford Division

NATIONAL ENVIRONMENTAL TESTING, INC.

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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62387

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-2 at 3', Grab Soil

Date Taken: 05-10-89 1426

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	5.6	ng/g

Toni Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62388

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-2 at 8'9''Interface, Grab Soil

Date Taken: 05-10-89 1438

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Tony Gartner, Manager
Rockford Division

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62389

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-3 at 3', Grab Soil

Date Taken: 05-10-89 1250

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62390

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-3 at 8'5''Interface, Grab Soil

Date Taken: 05-10-89 1306

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62385

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-4 at 3', Grab Soil

Date Taken: 05-10-89 1345

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	11.	ng/g

T Gartner

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62386

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-4 at 8'3'', Grab Soil

Date Taken: 05-10-89 1410

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62391

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-5 at 3', Grab Soil

Date Taken: 05-10-89 1220

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62392

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-5 at 5'9''Interface, Grab Soil

Date Taken: 05-10-89 1229

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
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Springfield IL 62704

05-29-89
Sample No: 62391

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-5 at 3', Grab Soil

Date Taken: 05-10-89 1220

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62392

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-5 at 5'9''Interface, Grab Soil

Date Taken: 05-10-89 1229

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62393

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-6 at 3', Grab Soil

Date Taken: 05-10-89 1145

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Tony Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62394

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-6 at 5'8''Interface, Grab Soil

Date Taken: 05-10-89 1145

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Gartner

Todi Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62395

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-7 at 3', Grab Soil

Date Taken: 05-10-89 1058

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	15.	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	5.4	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	19.	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62396

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-7 at 8'10''Interface, Grab Soil

Date Taken: 05-10-89 1120

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62380

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-8 at 3'Deep, Grab Soil

Date Taken: 05-10-89 1558

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	8.6	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	5.6	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPP ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89
Sample No: 62381

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-8 at 3'6''Interface,Grab Soil

Date Taken: 05-10-89 1602

Date Received: 05-10-89 1700

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	6.8	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62429

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-9 at 3.0', Grab Soil

Date Taken: 05-11-89 0856

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89
Sample No: 62430

Project No: AAA Disposal

SAMPLE DESCRIPTION: F-9 at 5'3''Interval, Grab Soil

Date Taken: 05-11-89 0901

Date Received: 05-11-89 1248

VOLATILE COMPOUNDS

Acrolein	<50.	ng/g
Acrylonitrile	<50.	ng/g
Benzene	<5.0	ng/g
Bromodichloromethane	<5.0	ng/g
Bromoform	<5.0	ng/g
Bromomethane	<50.	ng/g
Carbon tetrachloride	<5.0	ng/g
Chlorobenzene	<5.0	ng/g
Chloroethane	<50.	ng/g
2-Chloroethyl vinyl ether	<5.0	ng/g
Chloroform	<5.0	ng/g
Chloromethane	<50.	ng/g
Dibromochloromethane	<5.0	ng/g
1,2-Dichlorobenzene	<5.0	ng/g
1,3-Dichlorobenzene	<5.0	ng/g
1,4-Dichlorobenzene	<5.0	ng/g
1,1-Dichloroethane	<5.0	ng/g
1,2-Dichloroethane	<5.0	ng/g
1,1-Dichloroethene	<5.0	ng/g
trans-1,2-Dichloroethene	<5.0	ng/g
cis-1,2-Dichloroethene	<5.0	ng/g
1,2-Dichloropropane	<5.0	ng/g
cis-1,3-Dichloropropene	<5.0	ng/g
trans-1,3-Dichloropropene	<5.0	ng/g
Ethylbenzene	<5.0	ng/g
Methylene chloride	<25.	ng/g
1,1,2,2-Tetrachloroethane	<5.0	ng/g
Tetrachloroethene	<5.0	ng/g
Toluene	<5.0	ng/g
1,1,1-Trichloroethane	<5.0	ng/g
1,1,2-Trichloroethane	<5.0	ng/g
Trichloroethene	<5.0	ng/g
Vinyl chloride	<50.	ng/g
Xylenes	<5.0	ng/g

Tony Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-30-89
Sample No: 62398

Project No: AAA Disposal

SAMPLE DESCRIPTION: Field Blank(Soil)

Date Taken: 05-10-89

Date Received: 05-10-89 1722

VOLATILE COMPOUNDS

Acrolein	<10.	ug/L
Acrylonitrile	<10.	ug/L
Benzene	<1.0	ug/L
Bromodichloromethane	<1.0	ug/L
Bromoform	<1.0	ug/L
Bromomethane	<10.	ug/L
Carbon tetrachloride	<1.0	ug/L
Chlorobenzene	<1.0	ug/L
Chloroethane	<10.	ug/L
2-Chloroethyl vinyl ether	<1.0	ug/L
Chloroform	<1.0	ug/L
Chloromethane	<10.	ug/L
Dibromochloromethane	<1.0	ug/L
1,2-Dichlorobenzene	<1.0	ug/L
1,3-Dichlorobenzene	<1.0	ug/L
1,4-Dichlorobenzene	<1.0	ug/L
1,1-Dichloroethane	<1.0	ug/L
1,2-Dichloroethane	<1.0	ug/L
1,1-Dichloroethene	<1.0	ug/L
trans-1,2-Dichloroethene	<1.0	ug/L
cis-1,2-Dichloroethene	<1.0	ug/L
1,2-Dichloropropane	<1.0	ug/L
cis-1,3-Dichloropropene	<1.0	ug/L
trans-1,3-Dichloropropene	<1.0	ug/L
Ethylbenzene	<1.0	ug/L
Methylene chloride	<5.0	ug/L
1,1,2,2-Tetrachloroethane	<1.0	ug/L
Tetrachloroethene	<1.0	ug/L
Toluene	<1.0	ug/L
1,1,1-Trichloroethane	<1.0	ug/L
1,1,2-Trichloroethane	<1.0	ug/L
Trichloroethene	<1.0	ug/L
Vinyl chloride	<10.	ug/L
Xylenes	<1.0	ug/L

Tom Gartner, Manager
Rockford Division

HAZARDOUS CONSTITUENTS

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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield, IL 62704

05-29-89

Sample No: 62433

SAMPLE DESCRIPTION: F-2 at 8', Grab Soil
AAA Disposal

Date Taken: 05-10-89 1443

Date Received: 05-11-89 1722

Solids, Total(non-aqueous)	84.35	%
Paint Filter	Y-Contains No Liquid	
Corrosivity (pH)	8.37	units
Ignitability (Flash Point)	No Flash @ 210	Degree F
Reactive Sulfide	<0.25	ug/g
Reactive Cyanide	<0.025	ug/g
EP Tox - Arsenic	<0.01	mg/L
EP Tox - Barium	<0.01	mg/L
EP Tox - Cadmium	<0.001	mg/L
EP Tox - Chromium	0.015	mg/L
EP Tox - Lead	<0.01	mg/L
EP Tox - Mercury	<0.001	mg/L
EP Tox - Selenium	<0.01	mg/L
EP Tox - Silver	<0.001	mg/L
EP Tox - Copper	0.001	mg/L
EP Tox - Nickel	0.01	mg/L
EP Tox - Zinc	0.031	mg/L

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89

Sample No: 62433

SAMPLE DESCRIPTION: F-2 at 8', Grab Soil
AAA Disposal

Date Taken: 05-10-89 1443

Date Received: 05-11-89 1722

PCBs

PCB-1016	<100.	ng/g
PCB-1221	<100.	ng/g
PCB-1232	<100.	ng/g
PCB-1242	<100.	ng/g
PCB-1248	<100.	ng/g
PCB-1254	<100.	ng/g
PCB-1260	170.	ng/g

Tony Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89

Sample No: 62434

SAMPLE DESCRIPTION: F-5 at 2.5', Grab Soil
AAA Disposal

Date Taken: 05-10-89 1232

Date Received: 05-11-89 1722

Solids, Total(non-aqueous)	87.89	%
Paint Filter	Y-Contains No Liquid	
Corrosivity (pH)	7.87	units
Ignitability (Flash Point)	No Flash @ 210	Degree F
Reactive Sulfide	0.38	ug/g
Reactive Cyanide	<0.025	ug/g
EP Tox - Arsenic	<0.01	mg/L
EP Tox - Barium	0.22	mg/L
EP Tox - Cadmium	0.039	mg/L
EP Tox - Chromium	0.010	mg/L
EP Tox - Lead	<0.01	mg/L
EP Tox - Mercury	<0.001	mg/L
EP Tox - Selenium	<0.01	mg/L
EP Tox - Silver	<0.0011	mg/L
EP Tox - Copper	0.008	mg/L
EP Tox - Nickel	0.03	mg/L
EP Tox - Zinc	0.709	mg/L

Tony Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89

Sample No: 62434

SAMPLE DESCRIPTION: F-5 at 2.5', Grab Soil
AAA Disposal

Date Taken: 05-10-89 1232

Date Received: 05-11-89 1722

PCBs

PCB-1016	<1000.	ng/g
PCB-1221	<1000.	ng/g
PCB-1232	<1000.	ng/g
PCB-1242	<1000.	ng/g
PCB-1248	<1000.	ng/g
PCB-1254	<1000.	ng/g
PCB-1260	<1000.	ng/g

Toni Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
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Springfield IL 62704

05-29-89

Sample No: 62436

SAMPLE DESCRIPTION: F-7 at 8'3'',Grab Soil
AAA Disposal

Date Taken: 05-10-89 1125

Date Received: 05-11-89 1722

Solids, Total(non-aqueous)	86.17	%
Paint Filter	Y-Contains No Liquid	
Corrosivity (pH)	8.41	units
Ignitability (Flash Point)	No Flash @ 210	Degree F
Reactive Sulfide	<0.25	ug/g
Reactive Cyanide	<0.025	ug/g
EP Tox - Arsenic	<0.01	mg/L
EP Tox - Barium	0.32	mg/L
EP Tox - Cadmium	0.026	mg/L
EP Tox - Chromium	0.017	mg/L
EP Tox - Lead	<0.01	mg/L
EP Tox - Mercury	<0.001	mg/L
EP Tox - Selenium	<0.01	mg/L
EP Tox - Silver	<0.001	mg/L
EP Tox - Copper	0.019	mg/L
EP Tox - Nickel	0.11	mg/L
EP Tox - Zinc	1.02	mg/L

Tony Gartner, Manager
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ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89

Sample No: 62436

SAMPLE DESCRIPTION: F-7 at 8'3'',Grab Soil
AAA Disposal

Date Taken: 05-10-89 1125

Date Received: 05-11-89 1722

PCBs

PCB-1016	<1000.	ng/g
PCB-1221	<1000.	ng/g
PCB-1232	<1000.	ng/g
PCB-1242	<1000.	ng/g
PCB-1248	<1000.	ng/g
PCB-1254	1200.	ng/g
PCB-1260	<1000.	ng/g

Toni Gartner, Manager
Rockford Division

NET NATIONAL ENVIRONMENTAL TESTING, INC.

NET Midwest, Inc.
Rockford Division
3548 35th Street
Rockford, IL 61109
Tel: (815) 874-2171
Fax: (815) 874-5622

ANALYTICAL REPORT

Mr. Tim Sheehan
RAPPS ASSOCIATES
2387 West Monroe
Springfield IL 62704

05-29-89

Sample No: 62435

SAMPLE DESCRIPTION: F-8 at 3'3'',Grab Soil
AAA Disposal

Date Taken: 05-10-89 1601

Date Received: 05-11-89 1722

Solids, Total(non-aqueous)	94.31	%
Paint Filter	Y-Contains No Liquid	
Corrosivity (pH)	9.10	units
Ignitability (Flash Point)	No Flash @ 210	Degree F
Reactive Sulfide	<0.25	ug/g
Reactive Cyanide	<0.025	ug/g
EP Tox - Arsenic	<0.01	mg/L
EP Tox - Barium	<0.01	mg/L
EP Tox - Cadmium	0.009	mg/L
EP Tox - Chromium	0.021	mg/L
EP Tox - Lead	<0.01	mg/L
EP Tox - Mercury	<0.001	mg/L
EP Tox - Selenium	<0.01	mg/L
EP Tox - Silver	<0.001	mg/L
EP Tox - Copper	0.014	mg/L
EP Tox - Nickel	0.05	mg/L
EP Tox - Zinc	0.068	mg/L

Tom Gartner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Tim Sheehan
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2387 West Monroe
Springfield IL 62704

05-29-89

Sample No: 62435

SAMPLE DESCRIPTION: F-8 at 3'3'',Grab Soil
AAA Disposal

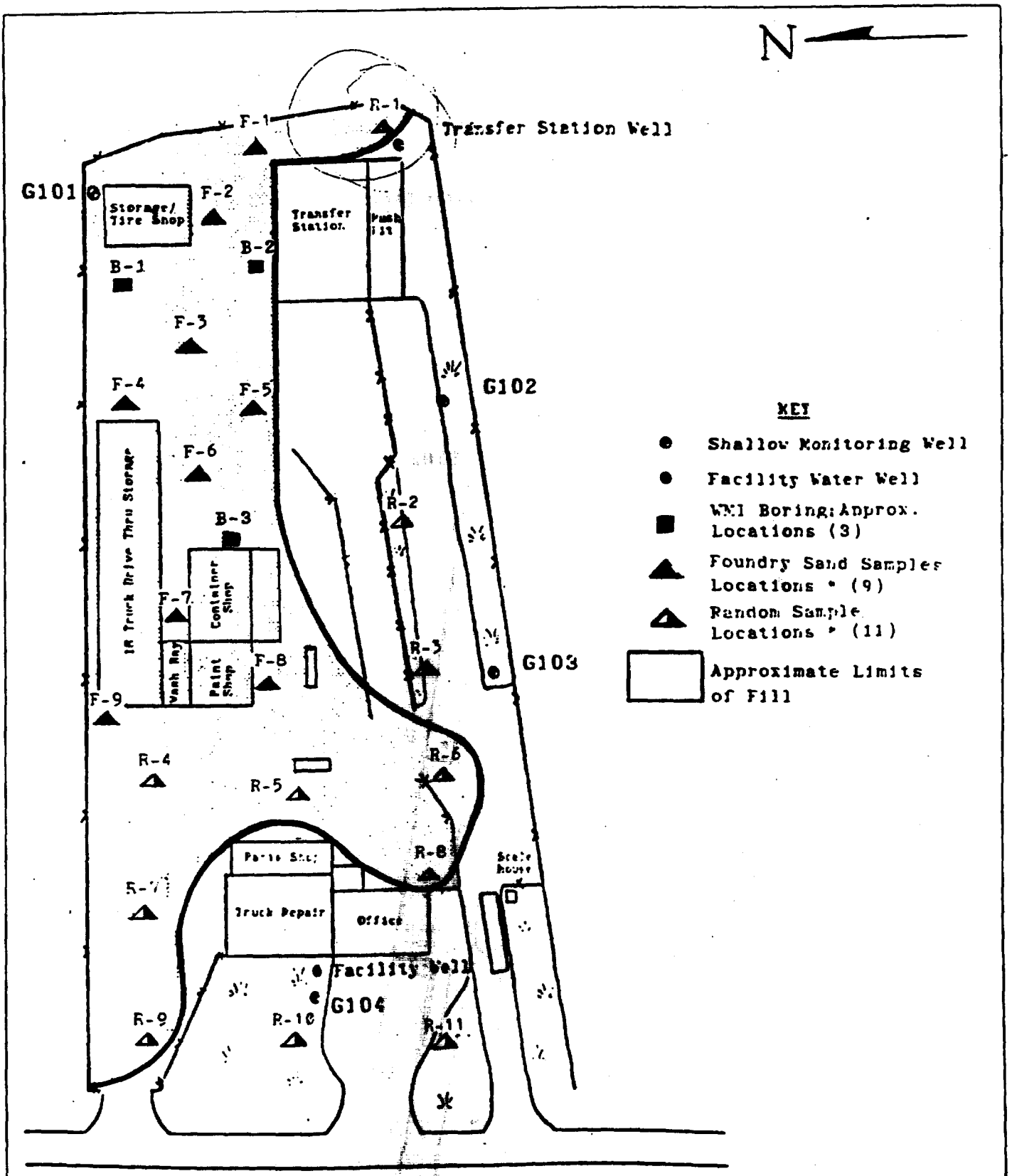
Date Taken: 05-10-89 1601

Date Received: 05-11-89 1722

PCBs

PCB-1016	<100.	ng/g
PCB-1221	<100.	ng/g
PCB-1232	<100.	,ng/g
PCB-1242	<100.	ng/g
PCB-1248	<100.	ng/g
PCB-1254	<100.	ng/g
PCB-1260	<100.	ng/g

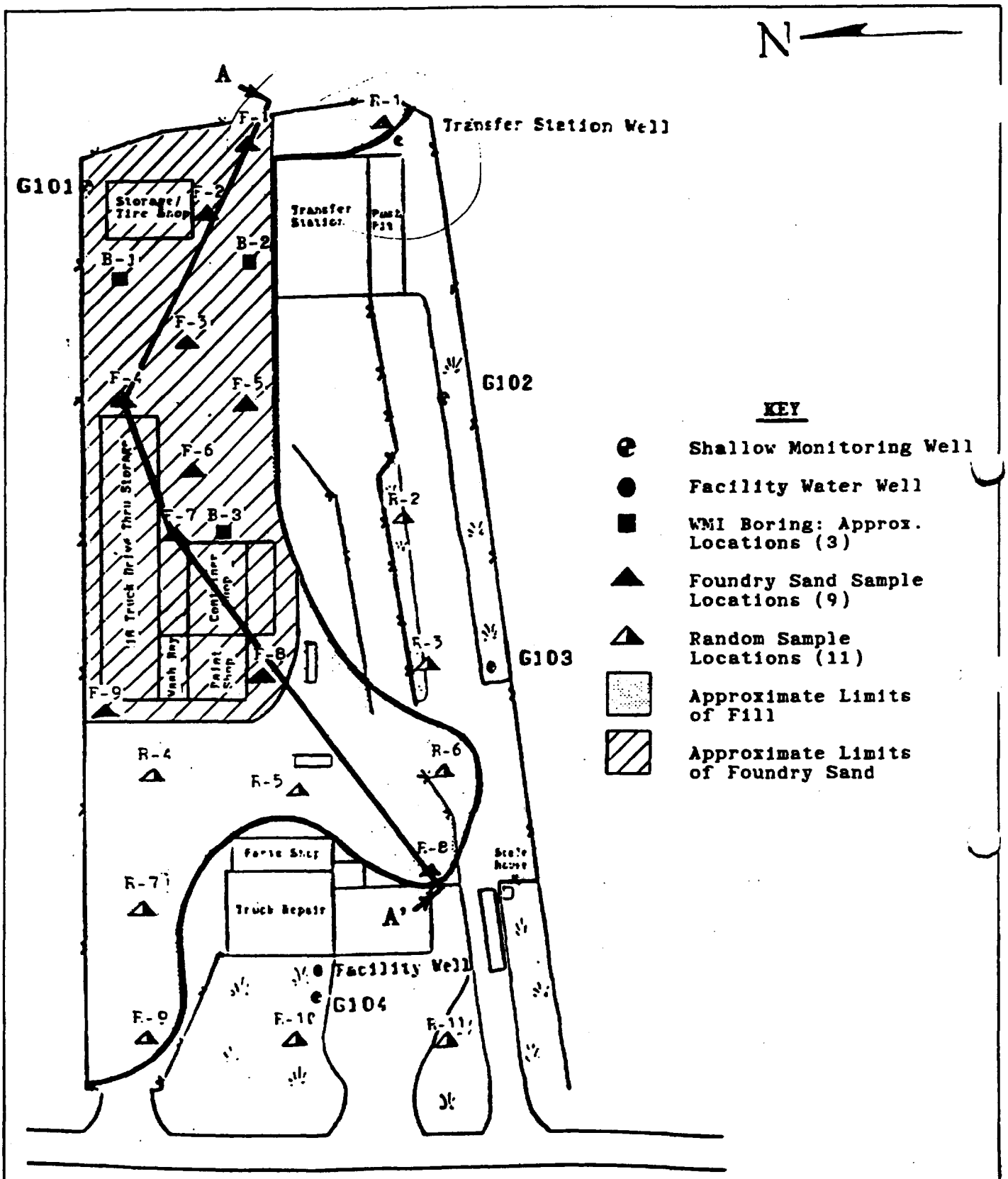
Toni Bartner, Manager
Rockford Division



AAA DISPOSAL SYSTEMS, INC.	
Approximate Limits of Fill	
Scale 1"=100'	Date 6/5/89

M. Rappe Associates, Inc.

Attachment 5



AAA DISPOSAL SYSTEMS, INC.

Cross-Section Key

Scale 1"=100' | Date 6/5/89

M. RAPPS ASSOCIATES, INC.

Attachment 3

Water Samples taken October of 1990 by AAA and WMI

DELOIT / ROCKFORD
TRANSFER STATION

OHM Corporation

RECEIVED
NOV 5 1990

ETC Environmental Testing and Certification Corp.

Special Sampling

Technical Report

for

WASTE MANAGEMENT, INC.

Additional File Copy

Chain of Custody Data Required for ETC Data Management Summary Reports						
FB5265	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG101	901015	1100	
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Richard P. Albert
Vice President, General Manager

TABULATED ANALYTICAL RESULTS

ETC

OCT 30, 1990
QV30470

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5265	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG101	901015	1100	0

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1V	Acrolein	ND	20	3350	1660	ND	160	96	ND	1600	209
2V	Acrylonitrile	ND	20	321	361	ND	16.0	115	ND	160	201
3V	Benzene	ND	.88	106	101	ND	10.0	102	ND	100	106
4V	bis(Chloromethyl)ether	ND	2.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	.94	109	120	ND	10.0	106	ND	100	109
6V	Carbon tetrachloride	ND	.56	100	97.7	ND	10.0	98	ND	100	100
7V	Chlorobenzene	ND	1.2	101	103	ND	10.0	99	ND	100	101
8V	Chlorodibromomethane	ND	.62	108	109	ND	10.0	105	ND	100	108
9V	Chloroethane	ND	2.0	103	91.4	ND	10.0	93	ND	100	103
10V	2-Chloroethylvinyl ether	ND	2.0	98.2	99.5	ND	10.0	114	ND	100	98
11V	Chloroform	ND	.32	105	97.9	ND	10.0	99	ND	100	105
12V	Dichlorobromomethane	ND	.44	105	105	ND	10.0	105	ND	100	105
13V	Dichlorodifluoromethane	ND	2.0	98.8	89.7	ND	10.0	93	ND	100	99
14V	1,1-Dichloroethane	ND	.94	103	99.1	ND	10.0	98	ND	100	103
15V	1,2-Dichloroethane	ND	.56	111	109	ND	10.0	104	ND	100	111
16V	1,1-Dichloroethylene	ND	.56	95.1	97.2	ND	10.0	95	ND	100	95
17V	1,2-Dichloropropane	ND	1.2	103	102	ND	10.0	104	ND	100	103
18V	cis-1,3-Dichloropropylene	ND	1.0	104	103	ND	10.0	103	ND	100	104
19V	Ethylbenzene	ND	1.4	98.9	98.8	ND	10.0	97	ND	100	99
20V	Methyl bromide	ND	2.0	104	91.8	ND	10.0	96	ND	100	104
21V	Methyl chloride	ND	2.0	104	92.4	ND	10.0	95	ND	100	104
22V	Methylene chloride	.740	.56	118	102	BMDL	10.0	100	10.0	100	108
23V	1,1,2,2-Tetrachloroethane	ND	1.4	106	117	ND	10.0	106	ND	100	106
24V	Tetrachloroethylene	ND	.82	95.7	96.4	ND	10.0	95	ND	100	96
25V	Toluene	BMDL	1.2	99.7	98.9	ND	10.0	98	ND	100	100
26V	1,2-Trans-dichloroethylene	ND	.32	102	96.2	ND	10.0	98	ND	100	102
27V	1,1,1-Trichloroethane	BMDL	.76	103	98.7	ND	10.0	99	ND	100	103
28V	1,1,2-Trichloroethane	ND	1.0	110	116	ND	10.0	110	ND	100	110
29V	Trichloroethylene	ND	.38	101	95.7	ND	10.0	98	ND	100	101
30V	Trichlorofluoromethane	ND	2.0	91.1	89.0	ND	10.0	93	ND	100	91
31V	Vinyl chloride	ND	2.0	100	92.0	ND	10.0	96	ND	100	100
18V	trans-1,3-Dichloropropylene	ND	2.0	107	109	ND	10.0	103	ND	100	107

Acrolein and Acrylonitrile values are screen only.

All zero and variable recoveries have been manually verified.

ETC

OCT 29, 1990

TABLE 2: METHOD PERFORMANCE DATA
Surrogate Recovery Water - GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5265	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG101	901015	1100	0

Compound	Amount added ug	% Recovery	IFB EPA Control Limits	
			Lower	Upper
VOLATILE FRACTION (GC/MS)				
Toluene-D8	.250	99	88	110
p-Bromofluorobenzene	.250	99	86	115
1,2-Dichloroethane-D4	.250	100	76	114
ACID FRACTION (GC/MS)				
Phenol-D5	-	-	10	94
2-Fluorophenol	-	-	21	100
2,4,6-Tribromophenol	-	-	10	123
BASE/NEUTRAL FRACTION (GC/MS)				
Nitrobenzene-D5	-	-	35	114
2-Fluorobiphenyl	-	-	43	116
Terphenyl-D14	-	-	33	141
PESTICIDE/PCB FRACTION (GC)				
Dibutylchlorendate	-	-	24**	154**
2,4,5,6-Tetrachloro-m-xylene	-	-	46	185
METHOD 601				
Bromochloromethane	-	-	82	124
METHOD 602				
a,a,a-Trifluorotoluene	-	-	80	120

** Advisory Limits Only

GC/MS QUALITY CONTROL DATA

Instrument Performance Check

- Tuning and Mass Calibration

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3067 BFB Injection Date: 10/18/90

Instrument ID: GC/MS E BFB Injection Time: 1131

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.5
75	30.0 - 60.0% of mass 95	54.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	.9 (1.1)1
174	Greater than 50.0% of mass 95	81.6
175	5.0 - 9.0% of mass 174	6.2 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.6 (98.8)1
177	5.0 - 9.0% of mass 176	6.1 (7.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470VS	>E3068	10/18/90	1225
02		QC30470VS	>E3069	10/18/90	1317
03		QC30470VS	>E3070	10/18/90	1409
04		QC30470VS	>E3071	10/18/90	1502
05		QC30470VS	>E3072	10/18/90	1554
06		~~QC30470V~~	~~>E3073~~	~~10/18/90~~	~~1647~~ AD 10/26/90
07		QC30470V	>E3074	10/18/90	1739
08		FB4581V	>E3075	10/18/90	1831
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3078 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 0913

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	55.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.3
175	5.0 - 9.0% of mass 174	5.8 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.0 (96.0)1
177	5.0 - 9.0% of mass 176	7.0 (9.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470U2	>E3080	10/19/90	1137
02		QC30470US	>E3081	10/19/90	1230
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3082 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 1353

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.0
75	30.0 - 60.0% of mass 95	54.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.3
175	5.0 - 9.0% of mass 174	6.4 (8.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.6 (96.3)1
177	5.0 - 9.0% of mass 176	6.1 (8.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		FB5269V2	>E3083	10/19/90	1445
02		FB5270V2	>E3084	10/19/90	1538
03		FB4581VS	>E3085	10/19/90	1630
04		FB4581VR	>E3086	10/19/90	1723
05		FB4586V2	>E3087	10/19/90	1815
06		FB4584V2	>E3088	10/19/90	1907
07		FB5265V2	>E3090	10/19/90	2053
08		FB5267V2	>E3092	10/19/90	2238
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3093 BFB Injection Date: 10/22/90

Instrument ID: GC/MS E BFB Injection Time: 09-5

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	54.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	76.9
175	5.0 - 9.0% of mass 174	5.9 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.2 (96.5)1
177	5.0 - 9.0% of mass 176	4.1 (5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470MS	>E3094	10/22/90	1017
02		QC30470U	>E3096	10/22/90	1314
03		FB4582U3	>E3097	10/22/90	1447
04		FB5266U3	>E3098	10/22/90	1539
05		FB4576U3	>E3099	10/22/90	1631
06		FB4583U3	>E3100	10/22/90	1723
07		FB4574U3	>E3101	10/22/90	1815
08		FB4589U3	>E3102	10/22/90	1907
09		FB4605U3	>E3103	10/22/90	1959
10		FB4608U3	>E3105	10/22/90	2144
11		FB4606U3	>E3104	10/22/90	2051
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

1/87 Rev.

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3106 BFB Injection Date: 10/23/90

Instrument ID: GC/MS 6 BFB Injection Time: 1005

Matrix: (soil/water) Water Level: (low/med) LOW Column: (pack/cap) Cap

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	52.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.8
175	5.0 - 9.0% of mass 174	4.1 (5.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	75.6 (97.2)1
177	5.0 - 9.0% of mass 176	4.6 (6.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470US	>E3107	10/23/90	1046
02		QC30470U4	>E3109	10/23/90	1335
03		FB4576U4	>E3110	10/23/90	1449
04		FB4583U4	>E3111	10/23/90	1542
05		FB4589U4	>E3112	10/23/90	1635
06		FB4605U4	>E3113	10/23/90	1729
07		FB4606U4	>E3114	10/23/90	1822
08		FB4609U4	>E3116	10/23/90	2009
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

CHAIN OF CUSTODY DOCUMENTATION

- Chain of Custody Forms
- Laboratory Chronicles
- Subcontract

ETC Environmental Testing and Certification Corp.

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Seal No 175863 ETC Job # [illegible]

Date Sealed 90/10/11 By: RD

Company: WASTE MANAGEMENT OF WISCONSIN Attn.: GARY STERKEL

Facility/Site: N96 W13616 Phone: (414) 255 - 0195

Address: COUNTY LINE ROAD, GERMANTOWN, WI 53022

SAMPLE IDENTIFICATION

Facility: WMIWIHAUL (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: W-601 (Source Code (from below); Your Sample Point ID (left justify)) 901015 (Start Date (YY/MM/DD)) 1109 (Start Time (2400 hr clock)) (Elapsed Hours (composite))

Source Codes:

Well	(W)	Outfall	(O)	Bottom Sediment	(B)	Surface Impoundment	(I)	Leachate Collection Sys.	(C)	Other	(X)
Soil	(S)	River/Stream	(R)	Generation Point	(G)	Treatment Facility	(T)	Lake/Ocean	(L)	Specify	

SHUTTLE CONTENTS

BOTTLE				ANALYSIS	SAMPLER		LAB
No	Type	Size	Preserv.		Filt. (Y/N)	Observations	Observations
4	VOA	40	HCL	VOLATILES	N		
1	VS	40	HCL	VOA SCREEN			

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) TERRY MEYER Date: 10-15 90 Time: 0800
   Signature: [signature] Seal #: 175863 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) TERRY MEYER Date: 10-15-90 Time: 1530
   Signature: [signature] Seal #: 175864 Intact: ✓

LAB USE ONLY Opened By: RICHARD DRIZ Date: 10/18/90 Time: 11:00Am

SHUTTLE # 143 TEMP. °C 2°C SEAL # 175864 COND. INTACT

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # FB5265

Sample Point [W] [6101]
Source Code — Sample Point I.D.

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901015	1100	0hrs	10	40

SAMPLING METHOD:

Sampler Type [E] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other ____ (SPECIFY OTHER)

Sampler Material [D] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other ____ (SPECIFY OTHER)

Tubing Material [X] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other Nylon (SPECIFY OTHER)

Sample Composited [Y/N] ____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl) [*]
Depth to Ground water (ft) [42.4]
Groundwater Elevation (ft msl) [ ]
Well Depth (ft) [48.0]
Sample Depth (non-well) (ft) [ ]

	pH	(STD)		spec. cond.	um/cm at 25°C	(other parameter)	value	units
1st	8.13		1st	402				
2nd			2nd					
3rd			3rd					
4th			4th					

Sample Temp: 10.2 (°C)
Turbidity: ____ NTU

FIELD COMMENTS

Sample Appearance: O = O C = Gray T = H
Weather Conditions: Pt. Sunny 55°
Other: * Elevation not known

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: TERRY MEYER (Print) Employer: WMI

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

10-15-90 (Date) Terry Meyer (Signature)

ORIGINAL

ETC Corp. LABORATORY CHRONICLE : GC-MS Department

Date 10-18-90 Instr. E

ype VOA, 524
Tune file APEI01
Seq. file JAI
Method file VOAE
ID file IE0295
CB file CE0295
Analyst
Reviewed By/Date J.Burkhart

Batch #'s QV 30470

Standards Updated CBMACAC
Date 10/19 By

ype # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol. (ul)
P-BFB	50	9971	1.0
Int. STD/SURR	25	10166	10.0
CAL I	50	10158	20,15,10,5,2
CAL II	50	10159	↓
HAA	50	9993	
WAI STD.	50	10166	

R	NAME	DATA File	Inj. (ml/g)	ALS #	Dil	Inj. Time	Comments	P
	P-BFB	>E3067	1 ul	-		1131	ok (69 EMM)	
	QC30470VS	>E3068	25 ml	1		1225	ok 20 ul CAL I, II, HAA, WAI	
	QC30470VS	>E3069		2	CBUPD	1317	ok 15 ul	
	QC30470VS	>E3070		3	CBCAL	1409	ok 10 ul	
	QC30470VS	>E3071		4	RQT	1502	ok 5 ul	
	QC30470VS	>E3072		5		1554	ok 2 ul	
	QC30470V	>E3073		6		1647	ok Blank	
	QC30470V	>E3074		7		1739	ok Blank	
	FB4581V	>E3075	0.5	8	1:10	1831	ok	
	FB4584V	>E3076	0.05	9	1:100		power outage - Did not acquire on 10/19/90	
	FB4586V	>E3077	0.5	10	1:10			
10/19	P-BFB	>E3078	1 ul	-		913	ok (70)	
	QC30470VS	>E3079	25	1		NG	5 ul all STDS	
	QC30470V2	>E3080	↓	2	RQT	1137	ok Blank	
	QC30470V2	>E3081	25	3	QCAL	1230	ok 5 ul all STDS	
	P-BFB	>E3082	1 ul	-		1352	ok (70-56)	
	FB5269V2	>E3083	25	1		NG	ok	
	FB5270V2	>E3084	↓	2		1538	ok	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U91 Page 2 of 7

Date 10/19/90 Instr. E

Type VOA/DL
Tune file AFE101
Seq. file JAX , MJE
Method file VOAE
ID file TE0085
CB file CE0285
Analyst
Reviewed by/Date J.Burkhart

Batch #'s QV30470

Standards Updated
Date 10/19 By TA

Type # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
see p. 1			

R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	FB4581VS	>E3085	2.5	3	1:10	1630	OK 5uL all STDS	
	FB4581VR	>E3086	↓	4	↓	1723	OK ↓	
	FB4586V2	>E3087	↓	5	↓	~~1815~~ 1815	OK	
	FB4584V2	>E3088	0.25	6	1:100	1907	OK	
	FB4582V2	>E3089	2.5	7	1:10	2000	rerun st.	
	FB5265V2	>E3090	25	8		2053	OK	
	FB5266V2	>E3091	5	9		2145	rerun st.	
	FB5267V2	>E3092	25	10		2238	OK	
0/22	p-BFB	>E3093	1uL	—		9:45	OK 75	
	QC30470 V3	>E3094	25uL	1	(QCAL)		OK	
	QC30470 V3	>E3095	↓	2			OK	
	QC30470 V3	>E3096	25uL	2		13:14	OK	
	FB4582 V3	>E3097	25uL	3		14:47	OK	
	FB5266 V3	>E3098	↓	4		15:39	OK	
	FB4576 V3	>E3099	↓	5		16:31	OK rr 1:100 for C7	
	FB4583 V3	>E3100	↓	6		17:23	OK rr 1:100 for C7	
	FB4574 V3	>E3101	↓	7		18:15	OK	
	FB4589 V3	>E3102	↓	8			OK rr 1:50 C7, C17	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U92 Page 3 of 4

Date 10/23/90 Instr. E

Type ~~APE501~~ DL/VOA

Tune file APE501

Seq. file VOE

Method file VOAE BFBE

ID file IE0295

CB file CE0295

Analyst

Reviewed by/Date J. Bunbaut

Batch #'s QV30470

Standards Updated

Date 10/19 By JA

Tape # D00685 Inj. ___ ul

Standard	Conc ppm	Lot No.	Lot Vol.
Surg 1			

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	FB4605 V3	>E3103	25ml	9			OK rr 1:50 C17	
	FB4606 V3	>E3104	↓	10			rr 1:50 2nd Surrog out	
	FB4608 V3	>E3105	↓	1		21:44	OK	
	P-BFB	>E3106	1ul	—		10:05	OK 63	
	QC 30470 V5	>E3107	25ml	1	(QCAL)		OK	
	QC 30470 V4	>E3108	↓	2			NG	
	QC 30470 V4	>E3109	25ml	2	1		OK	
R	FB4576 V4	>E3110	.250	2	1:100	14:49	OK	V2
R	FB4583 V4	>E3111	.250	3	1:100	15:42	OK	V2
R	FB4589 V4	>E3112	.500	4	1:50	16:35	OK	V2
R	FB4605 V4	>E3113	.500	1	1:50	17:29	OK	V2
R	FB4606 V4	>E3114	.500	2	1:50	18:22	OK	V2
	FB4607 V4	>E3115	.500	3	1:50	~~20:06~~	ng rr STR	
	FB4609 V4	>E3116	25ml	4		20:09	OK	
	pos blk	>E3117		5			OK	
	pos. blk	>E3118		6			OK	
	pos. blk	>E3119		7			OK	
	pos. blk	>E3120	↓	8			OK	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 093 Page 2 of 4

Date 10/24/90 Instr. E

Type DL/VOA

Tune file APETD1

Seq. file MTE

Method file VOAE

ID file IE0295

CB file CE0295

Analyst [illegible]

Reviewed by/Date [illegible]

Batch #'s QV30470

Standard	Conc ppm	Lot No.	Lot Vol.
Surg 1			

__ Standards Updated

Date 10/19 By JA

Spe # D00685 Inj. __ ul

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	pos blk	>E3121	25ml	9		[illegible]	OK NG	
	pos blk	>E3122	↓	10			OK	

R : redn P : Aroclor search + : Plus search

DELCIT / ROCKFORD
TRANSFER STATION

OHM Corporation

5 330

ETC Environmental Testing and Certification Corp.

SPECIAL
SAMPLING

Technical Report

for

WASTE MANAGEMENT, INC.

Chain of Custody Data Required for ETC Data Management Summary Reports						
FB5266	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG102	901015	1140	
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Richard P. Albert
Vice President, General Manager

TABULATED ANALYTICAL RESULTS

ETC

OCT 30, 1990
QV30470

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5266	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG102	901015	1140	0

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1V	Acrolein	ND	20	3350	1660	ND	160	96	ND	1600	209
2V	Acrylonitrile	ND	20	321	361	ND	16.0	115	ND	160	201
3V	Benzene	ND	.88	106	101	ND	10.0	102	ND	100	106
4V	bis(Chloromethyl)ether	ND	2.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	.94	109	120	ND	10.0	106	ND	100	109
6V	Carbon tetrachloride	ND	.56	100	97.7	ND	10.0	98	ND	100	100
7V	Chlorobenzene	ND	1.2	101	103	ND	10.0	99	ND	100	101
8V	Chlorodibromomethane	ND	.62	108	109	ND	10.0	105	ND	100	108
9V	Chloroethane	ND	2.0	103	91.4	ND	10.0	93	ND	100	103
10V	2-Chloroethylvinyl ether	ND	2.0	98.2	99.5	ND	10.0	114	ND	100	98
11V	Chloroform	ND	.32	105	97.9	ND	10.0	99	ND	100	105
12V	Dichlorobromomethane	ND	.44	105	105	ND	10.0	105	ND	100	105
13V	Dichlorodifluoromethane	ND	2.0	98.8	89.7	ND	10.0	93	ND	100	99
14V	1,1-Dichloroethane	ND	.94	103	99.1	ND	10.0	98	ND	100	103
15V	1,2-Dichloroethane	ND	.56	111	109	ND	10.0	104	ND	100	111
16V	1,1-Dichloroethylene	ND	.56	95.1	97.2	ND	10.0	95	ND	100	95
17V	1,2-Dichloropropane	ND	1.2	103	102	ND	10.0	104	ND	100	103
18V	cis-1,3-Dichloropropylene	ND	1.0	104	103	ND	10.0	103	ND	100	104
19V	Ethylbenzene	ND	1.4	98.9	98.8	ND	10.0	97	ND	100	99
20V	Methyl bromide	ND	2.0	104	91.8	ND	10.0	96	ND	100	104
21V	Methyl chloride	ND	2.0	104	92.4	ND	10.0	95	ND	100	104
22V	Methylene chloride	ND	.56	118	102	6.58	10.0	100	10.0	100	108
23V	1,1,2,2-Tetrachloroethane	ND	1.4	106	117	ND	10.0	106	ND	100	106
24V	Tetrachloroethylene	ND	.82	95.7	96.4	ND	10.0	95	ND	100	96
25V	Toluene	ND	1.2	99.7	98.9	ND	10.0	98	ND	100	100
26V	1,2-Trans-dichloroethylene	ND	.32	102	96.2	ND	10.0	98	ND	100	102
27V	1,1,1-Trichloroethane	ND	.76	103	98.7	ND	10.0	99	ND	100	103
28V	1,1,2-Trichloroethane	ND	1.0	110	116	ND	10.0	110	ND	100	110
29V	Trichloroethylene	ND	.38	101	95.7	ND	10.0	98	ND	100	101
30V	Trichlorofluoromethane	ND	2.0	91.1	89.0	ND	10.0	93	ND	100	91
31V	Vinyl chloride	ND	2.0	100	92.0	ND	10.0	96	ND	100	100
18V	trans-1,3-Dichloropropylene	ND	2.0	107	109	ND	10.0	103	ND	100	107

ETC

OCT 29, 1990

TABLE 2: METHOD PERFORMANCE DATA
Surrogate Recovery Water - GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5266	WASTE MANAGEMENT, INC.	WMIWIHAUL	WQ102	901015	1140	0

Compound	Amount added ug	% Recovery	IFB EPA Control Limits	
			Lower	Upper
VOLATILE FRACTION (GC/MS)				
Toluene-D8	.250	101	88	110
p-Bromofluorobenzene	.250	96	86	115
1,2-Dichloroethane-D4	.250	109	76	114
ACID FRACTION (GC/MS)				
Phenol-D5	-	-	10	94
2-Fluorophenol	-	-	21	100
2,4,6-Tribromophenol	-	-	10	123
BASE/NEUTRAL FRACTION (GC/MS)				
Nitrobenzene-D5	-	-	35	114
2-Fluorobiphenyl	-	-	43	116
Terphenyl-D14	-	-	33	141
PESTICIDE/PCB FRACTION (GC)				
Dibutylchlorendate	-	-	24**	154**
2,4,5,6-Tetrachloro-m-xylene	-	-	46	185
METHOD 601				
Bromochloromethane	-	-	82	124
METHOD 602				
a,a,a-Trifluorotoluene	-	-	80	120

** Advisory Limits Only

GC/MS QUALITY CONTROL DATA

Instrument Performance Check

- Tuning and Mass Calibration

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3067 BFB Injection Date: 10/18/90

Instrument ID: GC/MS E BFB Injection Time: 1131

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.5
75	30.0 - 60.0% of mass 95	54.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	.9 (1.1)1
174	Greater than 50.0% of mass 95	81.0
175	5.0 - 9.0% of mass 174	6.2 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.0 (98.8)1
177	5.0 - 9.0% of mass 176	6.1 (7.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC304700S	>E3068	10/18/90	1225
02		QC304700S	>E3069	10/18/90	1317
03		QC304700S	>E3070	10/18/90	1409
04		QC304700S	>E3071	10/18/90	1502
05		QC304700S	>E3072	10/18/90	1554
06		~~QC304700~~	~~>E3073~~	~~10/18/90~~	~~1647~~ AD 10/26/90
07		QC304700	>E3074	10/18/90	1739
08		FB4581U	>E3075	10/18/90	1831
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3078 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 0913

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	55.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.3
175	5.0 - 9.0% of mass 174	5.8 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.0 (96.0)1
177	5.0 - 9.0% of mass 176	7.0 (9.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		0C30470V2	>E3080	10/19/90	1137
02		0C30470VS	>E3081	10/19/90	1230
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3082 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 1353

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) cap

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.0
75	30.0 - 60.0% of mass 95	54.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.3
175	5.0 - 9.0% of mass 174	6.4 (8.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	96.6 (96.3)1
177	5.0 - 9.0% of mass 176	6.1 (8.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		FB5269U2	>E3083	10/19/90	1445
02		FB5270U2	>E3084	10/19/90	1538
03		FB4581US	>E3085	10/19/90	1630
04		FB4581UR	>E3086	10/19/90	1723
05		FB4586U2	>E3087	10/19/90	1815
06		FB4584U2	>E3088	10/19/90	1907
07		FB5265U2	>E3090	10/19/90	2053
08		FB5267U2	>E3092	10/19/90	2233
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3093 BFB Injection Date: 10/22/90

Instrument ID: GC/MS E BFB Injection Time: 0945

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	54.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	76.9
175	5.0 - 9.0% of mass 174	5.9 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.2 (96.5)1
177	5.0 - 9.0% of mass 176	4.1 (5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470MS	>E3094	10/22/90	1017
02		QC30470U	>E3096	10/22/90	1314
03		FB4582U3	E3097	10/22/90	1447
04		FB5266U3	>E3098	10/22/90	1539
05		FB4576U3	>E3099	10/22/90	1631
06		FB4583U3	>E3100	10/22/90	1723
07		FB4574U3	>E3101	10/22/90	1815
08		FB4589U3	>E3102	10/22/90	1907
09		FB4605U3	>E3103	10/22/90	1959
10		FB4608U3	>E3105	10/22/90	2144
11		FB4606U3	>E3104	10/22/90	2051
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3106 BFB Injection Date: 10/23/90

Instrument ID: GC/MS 6 BFB Injection Time: 1005

Matrix: (soil/water) Water Level: (low/med) LOW Column: (pack/cap) Cap

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	52.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.8
175	5.0 - 9.0% of mass 174	4.1 (5.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	75.6 (97.2)1
177	5.0 - 9.0% of mass 176	4.6 (6.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470VS	>E3107	10/23/90	1046
02		QC30470V4	>E3109	10/23/90	1335
03		FB4576V4	>E3110	10/23/90	1449
04		FB4583V4	>E3111	10/23/90	1542
05		FB4589V4	>E3112	10/23/90	1635
06		FB4605V4	>E3113	10/23/90	1729
07		FB4606V4	>E3114	10/23/90	1822
08		FB4609V4	>E3116	10/23/90	2009
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

CHAIN OF CUSTODY DOCUMENTATION

- Chain of Custody Forms
- Laboratory Chronicles
- Subcontract

ETC Environmental Testing and Certification Corp.

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Seal No 175863 ETC Job # E95266

Date Sealed 90/10/11 By: SD

Company: WASTE MANAGEMENT OF WISCONSIN Attn.: GARY STERKEL

Facility/Site: N96 W13616 Phone: (414) 255 - 0195

Address: COUNTY LINE ROAD, GERMANTOWN, WI 53022

SAMPLE IDENTIFICATION

Facility: WIMIIWIIHIAIUIL (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: W-6102 (Source Code (from below); Your Sample Point ID (left justify)) 901015 (Start Date (YY/MM/DD)) 1140 (Start Time (2400 hr. clock)) (Elapsed Hours (composite))

Source Codes:

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Fill. (Y/N)	SAMPLER Observations	LAB Observations
4	VOA	40	HCL	VOLATILES	N		✓
1	VS	40	HCL	VOA SCREEN			✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) TERRY MEYER Date: 10-15-90 Time: 0800
   Signature: [signature] Seal #: 175863 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) TERRY MEYER Date: 10-15-90 Time: 1530
   Signature: [signature] Seal #: 175864 Intact: ✓

LAB USE ONLY Opened By: RICHARD ORTIZ Date: 10/18/90 Time: 11:00am

SHUTTLE # 743 TEMP. °C 2°C SEAL # 175864 COND. INTACT

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # FB52660

Sample Point [W] [G1/012] (Source Code / Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901015	1140	0215	12	50

SAMPLING METHOD:

Sampler Type [E] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other ____ (SPECIFY OTHER)

Sampler Material [C] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other ____ (SPECIFY OTHER)

Tubing Material [Y] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other Nylon Rope (SPECIFY OTHER)

Sample Composited [Y/N] ____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl) X

Depth to Ground water (ft) 9.52

Groundwater Elevation (ft msl)

Well Depth (ft) 35.0

Sample Depth (non-well) (ft)

	pH		Spec. Cond.		Other parameter	Value	Units
1st	7.55	(STD)	1st	712 um/cm at 25°C			
2nd		(STD)	2nd	um/cm at 25°C			
3rd		(STD)	3rd	um/cm at 25°C			
4th		(STD)	4th	um/cm at 25°C			

Sample Temp 13 (°C)

Turbidity ____ NTU

FIELD COMMENTS

Sample Appearance: O = Ø C = Gray T = High

Weather Conditions: Pt Sunny 55°

Other:

Well elevation not known

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: TERRY MEYER (Print) Employer: WMI

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

10-15-90 (Date) Terry Meyer (Signature)

ORIGINAL

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 090 Page 1 of 1

Date 10-18-90 Instr. E

Type VOA, SZA
Tune file APEI01
Seq. file JAI
Method file VOAE
ID file IE0295
CB file CE0295
Analyst
Reviewed By/Date J.Burkhart

Batch #'s QV 30470

Standards Updated CBMACK
Date 10/19 By

Tape # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol. (ul)
D-BFB	50	9971	1.0
INT. STD/SURR	25	10166	10.0
CAL I	50	10158	20, 15, 10, 5, 2
CAL II	50	10159	↓
HAVOA	50	9993	
WMI STD.	50	10186	

R	NAME	DATA File	Init. (ml) g	ALS #	Dil	Inj. Time	Comments	P
	D-BFB	>E3067	1 ul	-		1131	ok (69 EVM)	
	QC30470VS	>E3068	25 ml	1		1225	ok 20 ul CAL I, II, HAVOA, WMI	
	QC30470VS	>E3069		2	CBLPO	1317	ok 15 ul	
	QC30470VS	>E3070		3	CBCAL	1409	ok 10 ul	
	QC30470VS	>E3071		4	RQT	1502	ok 5 ul	
	QC30470VS	>E3072		5		1554	ok 2 ul	
	QC30470V	>E3073		6		1647	ok Blank	
	QC30470V	>E3074		7		1739	ok Blank	
	FB4581V	>E3075	0.5	8	1:10	1831	ok	
	FB4584V	>E3076	0.05	9	1:100		power outage - Did not acquire	
	FB4586V	>E3077	0.5	10	1:10			
10/19	D-BFB	>E3078	1 ul	-		913	ok (70)	
	QC30470VS	>E3079	25	1		NG	5 ul all STDS	
	QC30470V2	>E3080	↓	2	RQT	1137	ok Blank	
	QC30470V2	>E3081	25	3	QCAL	1230	ok 5 ul all STDS	
	D-BFB	>E3082	1 ul	-		1352	ok (70-56)	
	FB5269V2	>E3083	25	1		1445	ok	
	FB5270V2	>E3084	↓	2		1538	ok	

R : Rerun P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 091 Page 2 of 4

Date 10/19/90 Instr. E

Type VOA/DL
Tune file MFE101
Seq. file MX , MJE
Method file VOAE
ID file CE0085
CB file CE0085
Analyst
Reviewed by/Date J.Burkhart

Batch #'s QV30470

Standards Updated
Date 10/19 By JA

Tape # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
see p. 1			

R	NAME	DATA File	Int. ml/g	ALS #	Dil	Inj. Time	Comments	P
	FB4581VS	>E3085	2.5	3	1:10	1630	OK 5 uL all STDS	
	FB4581VR	>E3086	↓	4	↓	1723	OK ↓	
	FB4586V2	>E3087	↓	5	↓	1815	OK	
	FB4584V2	>E3088	0.25	6	1:100	1907	OK	
	FB4582V2	>E3089	2.5	7	1:10	2000	rerun st.	
	FB5265V2	>E3090	25	8		2053	OK	
	FB5266V2	>E3091	5	9		2145	rerun st.	
	FB5267V2	>E3092	25	10		2238	OK	
10/22	P-BFB	>E3093	1uL	—		9:45	OK 75	
	QC30470 V3	>E3094	25uL	1	(QLAL)		OK	
	QC30470 V3	>E3095	↓	2			OK	
	QC30470 V3	>E3096	25uL	2		13:14	OK	
	FB4582 V3	>E3097	25uL	3		14:47	OK	
	FB5266 V3	>E3098		4		15:39	OK	
	FB4576 V3	>E3099		5		16:31	OK rr 1:100 for C7	
	FB4583 V3	>E3100		6		17:23	OK rr 1:100 for C7	
	FB4574 V3	>E3101		7		18:15	OK	
	FB4589 V3	>E3102	↓	8			OK rr 1:50 C7, C17	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U42 Page 3 of 4

Date 10/23/90 Instr. E

Type ~~APE501~~ DL/VOA

ne file APE101

Seq. file LOE

Method file VOAE BFBE

ID file TEMAS

CB file CE0295

Analyst

Reviewed by/Date J. Burbank

Batch #'s QV30470

Standards Updated

Date 10/19 By JA

Tape # D00685 Inj. ___ ul

Standard	Conc ppm	Lot No.	Lot Vol.
Sel 9			

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	EB4605 V3	>E3103	25ml	9			OK rr 1:50 C17	
	EB 4606 V3	>E3104		10			rr 1:50 2nd Surrog out	
	EB4608 V3	>E3105		1		21:44	OK	
	P-BFB	>E3106	1ml	—		10:05	OK 63	
	QC 30470 V5	>E3107	25ml	1	(QCAL)		OK	
	QC 30470 V4	>E3108		2			NG	
	QC 30470 V4	>E3109	25ml	2	1		OK	
R	EB4576 V4	>E3110	.250	2	1:100	14:49	OK V2	
R	EB4583 V4	>E3111	.250	3	1:100	15:42	OK V2	
R	EB4589 V4	>E3112	.500	4	1:50	16:35	OK V2	
R	EB4605 V4	>E3113	.500	1	1:50	17:29	OK V2	
R	EB4606 V4	>E3114	.500	2	1:50	18:22	OK V2	
	EB4607 V4	>E3115	.500	3	1:50	~~20:09~~	ng rr STR	
	EB4609 V4	>E3116	25ml	4		20:09	OK	
	pos blk	>E3117		5			OK	
	pos. blk	>E3118		6			OK	
	pos. blk	>E3119		7			OK	
	pos. blk	>E3120		8			OK	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 093 Page 2 of 4

Date 10/24/90 Instr. E

Type DL/VOA

File file APEIDI

Seq. file MTE

Method file VOAE

ID file IE0295

CB file CE0295

Analyst [illegible]

Reviewed by/Date [illegible]

Batch #'s QV30470

Standard	Conc ppm	Lot No.	Lot Vol.
Surg			

Standards Updated

Date 10/19 By JA

Tape # D00695 Inj. ul

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	+ P
	pos blk	>E3121	25ml	9		[illegible]	OK NG	
	pos blk	>E3122	↓	10			OK	

R : redo , P : Aroclor search , + : Plus search

BELOIT / ROCKFORD
TRANSFER STATION

OHM Corporation

5 990

ETC Environmental Testing and Certification Corp.

Special sampling

Technical Report

for

WASTE MANAGEMENT, INC.

Chain of Custody Data Required for ETC Data Management Summary Reports						
FB5267	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG103	901015	1045	
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Richard P. Albert
Vice President, General Manager

TABULATED ANALYTICAL RESULTS

ETC

OCT 30, 1990
QV30470

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5267	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG103	901015	1045	0

NPDES Number	Compound	Results: Sample Concen. ug/l	Results: MDL ug/l	QC Replicate: First ug/l	QC Replicate: Second ug/l	QC Blank and Spiked Blank: Blank Data ug/l	QC Blank and Spiked Blank: Concen. Added ug/l	QC Blank and Spiked Blank: % Recov	QC Matrix Spike: Unspiked Sample ug/l	QC Matrix Spike: Concen. Added ug/l	QC Matrix Spike: % Recov
1V	Acrolein	ND	20	3350	1660	ND	160	96	ND	1600	209
2V	Acrylonitrile	ND	20	321	361	ND	16.0	115	ND	160	201
3V	Benzene	ND	.88	106	101	ND	10.0	102	ND	100	106
4V	bis(Chloromethyl)ether	ND	2.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	.94	109	120	ND	10.0	106	ND	100	109
6V	Carbon tetrachloride	ND	.56	100	97.7	ND	10.0	98	ND	100	100
7V	Chlorobenzene	ND	1.2	101	103	ND	10.0	99	ND	100	101
8V	Chlorodibromomethane	ND	.62	108	109	ND	10.0	105	ND	100	108
9V	Chloroethane	ND	2.0	103	91.4	ND	10.0	93	ND	100	103
10V	2-Chloroethylvinyl ether	ND	2.0	98.2	99.5	ND	10.0	114	ND	100	98
11V	Chloroform	BMDL	.32	105	97.9	ND	10.0	99	ND	100	105
12V	Dichlorobromomethane	ND	.44	105	105	ND	10.0	105	ND	100	105
13V	Dichlorodifluoromethane	ND	2.0	98.8	89.7	ND	10.0	93	ND	100	99
14V	1,1-Dichloroethane	1.09	.94	103	99.1	ND	10.0	98	ND	100	103
15V	1,2-Dichloroethane	ND	.56	111	109	ND	10.0	104	ND	100	111
16V	1,1-Dichloroethylene	ND	.56	95.1	97.2	ND	10.0	95	ND	100	95
17V	1,2-Dichloropropane	ND	1.2	103	102	ND	10.0	104	ND	100	103
18V	cis-1,3-Dichloropropylene	ND	1.0	104	103	ND	10.0	103	ND	100	104
19V	Ethylbenzene	ND	1.4	98.9	98.8	ND	10.0	97	ND	100	99
20V	Methyl bromide	ND	2.0	104	91.8	ND	10.0	96	ND	100	104
21V	Methyl chloride	ND	2.0	104	92.4	ND	10.0	95	ND	100	104
22V	Methylene chloride	ND	.56	118	102	BMDL	10.0	100	10.0	100	108
23V	1,1,2,2-Tetrachloroethane	ND	1.4	106	117	ND	10.0	106	ND	100	106
24V	Tetrachloroethylene	4.71	.82	95.7	96.4	ND	10.0	95	ND	100	96
25V	Toluene	BMDL	1.2	99.7	98.9	ND	10.0	98	ND	100	100
26V	1,2-Trans-dichloroethylene	25.2	.32	102	96.2	ND	10.0	98	ND	100	102
27V	1,1,1-Trichloroethane	4.68	.76	103	98.7	ND	10.0	99	ND	100	103
28V	1,1,2-Trichloroethane	ND	1.0	110	116	ND	10.0	110	ND	100	110
29V	Trichloroethylene	14.1	.38	101	95.7	ND	10.0	98	ND	100	101
30V	Trichlorofluoromethane	ND	2.0	91.1	89.0	ND	10.0	93	ND	100	91
31V	Vinyl chloride	ND	2.0	100	92.0	ND	10.0	96	ND	100	100
18V	trans-1,3-Dichloropropylene	ND	2.0	107	109	ND	10.0	103	ND	100	107

Acrolein and Acrylonitrile values are screen only.

All zero and variable recoveries have been manually verified.

ETC

OCT 29, 1990

TABLE 2: METHOD PERFORMANCE DATA
Surrogate Recovery Water - GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5267	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG103	901015	1045	0

Compound	Amount added ug	% Recovery	IFB EPA Control Limits Lower	IFB EPA Control Limits Upper
VOLATILE FRACTION (GC/MS)				
Toluene-D8	.250	99	88	110
p-Bromofluorobenzene	.250	99	86	115
1,2-Dichloroethane-D4	.250	101	76	114
ACID FRACTION (GC/MS)				
Phenol-D5	-	-	10	94
2-Fluorophenol	-	-	21	100
2,4,6-Tribromophenol	-	-	10	123
BASE/NEUTRAL FRACTION (GC/MS)				
Nitrobenzene-D5	-	-	35	114
2-Fluorobiphenyl	-	-	43	116
Terphenyl-D14	-	-	33	141
PESTICIDE/PCB FRACTION (GC)				
Dibutylchlorendate	-	-	24**	154**
2,4,5,6-Tetrachloro-m-xylene	-	-	46	185
METHOD 601				
Bromochloromethane	-	-	82	124
METHOD 602				
a,a,a-Trifluorotoluene	-	-	80	120

** Advisory Limits Only

GC/MS QUALITY CONTROL DATA

Instrument Performance Check

- Tuning and Mass Calibration

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - BROMOFLUOROBENZENE (BFB)

Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3067 BFB Injection Date: 10/18/90

Instrument ID: GC/MS E BFB Injection Time: 1131

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.5
75	30.0 - 60.0% of mass 95	54.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	.9 (1.1)1
174	Greater than 50.0% of mass 95	81.5
175	5.0 - 9.0% of mass 174	6.2 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.6 (98.8)1
177	5.0 - 9.0% of mass 176	6.1 (7.6)2

1-Value is % mass 174 2-Value is % mass 176

S TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		OC30470US	>E3068	10/18/90	1225
02		OC30470US	>E3069	10/18/90	1317
03		OC30470US	>E3070	10/18/90	1409
04		OC30470US	>E3071	10/18/90	1502
05		OC30470US	>E3072	10/18/90	1554
06		~~OC30470U~~	~~>E3073~~	~~10/18/90~~	~~1647~~ AD 10/26/90
07		OC30470U	>E3074	10/18/90	1739
08		FB4581U	>E3075	10/18/90	1831
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

 FORM V VOA 1/87 Rev.

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3079 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 0913

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	55.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.3
175	5.0 - 9.0% of mass 174	5.8 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	79.0 (96.0)1
177	5.0 - 9.0% of mass 176	7.0 (9.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC3047002	>E3080	10/19/90	1137
02		QC3047005	>E3081	10/19/90	1230
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

1/87 Rev.

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3082 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 1353

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.0
75	30.0 - 60.0% of mass 95	54.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.3
175	5.0 - 9.0% of mass 174	6.4 (8.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.6 (96.3)1
177	5.0 - 9.0% of mass 176	6.1 (8.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		FB5269U2	>E3083	10/19/90	1445
02		FB5270U2	>E3084	10/19/90	1538
03		FB4581US	>E3085	10/19/90	1630
04		FB4581UR	>E3086	10/19/90	1723
05		FB4586U2	>E3087	10/19/90	1815
06		FB4584U2	>E3088	10/19/90	1907
07		FB5265U2	>E3090	10/19/90	2053
08		FB5267U2	>E3092	10/19/90	2238
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3093 BFB Injection Date: 10/22/90

Instrument ID: GC/MS E BFB Injection Time: 0945

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	54.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	76.9
175	5.0 - 9.0% of mass 174	5.9 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.2 (96.5)1
177	5.0 - 9.0% of mass 176	4.1 (5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS DATA APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC304709S	>E3094	10/22/90	1017
02		QC304709	>E3096	10/22/90	1314
03		FB458203	>E3097	10/22/90	1447
04		FB526603	>E3098	10/22/90	1539
05		FB457603	>E3099	10/22/90	1651
06		FB458303	>E3100	10/22/90	1723
07		FB457403	>E3101	10/22/90	1815
08		FB458903	>E3102	10/22/90	1907
09		FB460503	>E3103	10/22/90	1959
10		FB460803	>E3105	10/22/90	2144
11		FB460603	>E3104	10/22/90	2051
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3106 BFB Injection Date: 10/23/90

Instrument ID: GC/MS 6 BFB Injection Time: 1005

Matrix: (soil/water) Water Level: (low/med) LOW Column: (pack/cap) Cap

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	52.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.8
175	5.0 - 9.0% of mass 174	4.1 (5.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	75.6 (97.2)1
177	5.0 - 9.0% of mass 176	4.6 (6.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470VS	>E3107	10/23/90	1046
02		QC30470V4	>E3109	10/23/90	1335
03		FB4576V4	>E3110	10/23/90	1449
04		FB4583V4	>E3111	10/23/90	1542
05		FB4589V4	>E3112	10/23/90	1635
06		FB4605V4	>E3113	10/23/90	1729
07		FB4606V4	>E3114	10/23/90	1822
08		FB4609V4	>E3116	10/23/90	2009
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

CHAIN OF CUSTODY DOCUMENTATION

- Chain of Custody Forms
- Laboratory Chronicles
- Subcontract

ETC Environmental Testing and Certification Corp.

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Seal No. 175863 ETC Job # FB5267

Date Sealed 90/10/11 By: RD

Company: WASTE [redacted]ENT OF WISCONSIN Attn.: GARY STERKEL

Facility/Site: [redacted] Phone: (414) 255 - 0195

Address: N96 W13[redacted] COUNTY L[redacted] ROAD, GERMANTOWN, WI 53022

SAMPLE IDENTIFICATION

Facility: WMIWIHAUL (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: W-6 03 (Source Code (from below); Your Sample Point ID (left justify)) 901015 (Start Date (YYMMDD)) 1045 (Start Time (2400 hr. clock)) (Elapsed Hours (composite))

Source Codes:

Well	(W)	Outfall	(O)	Bottom Sediment	(B)	Surface Impoundment	(I)	Leachate Collection Sys.	(C)	Other	(X)
Soil	(S)	River/Stream	(R)	Generation Point	(G)	Treatment Facility	(T)	Lake/Ocean	(L)	Specify	

SHUTTLE CONTENTS

BOTTLE				ANALYSIS	SAMPLER		LAB
No	Type	Size	Preserv.		FIN. (Y/N)	Observations	Observations
4	VOA	40	HCL	VOLATILES	N		1,4
1	VS	40	HCL	VOA SCREEN			

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) TERRY MEYER Date: 10-15-90 Time: 0800
   Signature: [signature] Seal #: 175863 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) TERRY MEYER Date: 10-15-90 Time: 1530
   Signature: [signature] Seal #: 175864 Intact: ✓

LAB USE ONLY Opened By: RICHARD ORTIZ Date: 10/18/90 Time: 11:00AM

SHUTTLE # 743 TEMP. °C 2°C SEAL # 175864 COND. INTACT

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # F85267

Sample Point W (Source Code) 6103 (Sample Point I.D.)

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
90 10 15	1045	0625	14	60

SAMPLING METHOD:

Sampler Type: E — A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other (SPECIFY OTHER)

Sampler Material: ~~D~~ C TK 10-15-90 — A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other (SPECIFY OTHER)

Tubing Material: ~~X~~ — A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other Nylon (SPECIFY OTHER)

Sample Composited: Y/N — Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl)	*	Well Depth (ft)	5000
Depth to Ground water (ft)	41.52	Sample Depth (non-well) (ft)	
Groundwater Elevation (ft msl)			

	ph		spec. cond.		(other parameter)	value	units
1st	7.61	(STD)	1st 760	um/cm at 25° C			
2nd		(STD)	2nd	um/cm at 25°C			
3rd		(STD)	3rd	um/cm at 25°C			
4th		(STD)	4th	um/cm at 25°C			

Sample Temp: 11.5 (°C) — Turbidity: NTU

FIELD COMMENTS

Sample Appearance: O = Ø C = BROWN T = H

Weather Conditions: Pt Sunny 55°

Other:

* Well elevation not known

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: (Print) TERRY MEYER Employer: WMI

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

10-15-90 (Date) Terry Meyer (Signature)

ORIGINAL

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 090 Page 1 of 1

Date 10-18-90 Instr. E

Type VOA, SZA
Tune file APEI01
Seq. file JA1
Method file VOAE
ID file IE0295
CB file CE0295
Analyst
Reviewed By/Date J. Burkhart

Batch #'s QV 30470

Standards Updated CBMDCCK
Date 10/19 By

Tape # D-684 Inj. ___ ul

Standard	Conc ppm	Lot No.	Lot Vol. (ul)
D-BFB	50	9971	1.0
INT. STD/SURR	25	10166	10.0
CAL I	50	10158	20,15,10,5,2
CAL II	50	10159	↓
HBVOA	50	9993	↓
WMI STD.	50	10186	↓

R	NAME	DATA File	Init. (ml/g)	ALS #	Dil	Inj. Time	Comments	P
	D-BFB	>E3067	1ml	-		1131	ok (69 EVM)	
	QC30470VS	>E3068	25ml	1		1225	ok 20 ul CAL I, II, HBVOA, WMI	
	QC30470VS	>E3069		2	CBUPD	1317	ok 15 ul	
	QC30470VS	>E3070		3	CBCAL	1409	ok 10 ul	
	QC30470VS	>E3071		4	RQT	1502	ok 5 ul	
	QC30470VS	>E3072		5		1554	ok 2 ul	
	QC30470V	>E3073		6		1647	ok Blank	
	QC30470V	>E3074		7		1739	ok Blank	
	FB4581V	>E3075	0.5	8	1:10	1831	ok	
	FB4584V	>E3076	0.05	9	1:100		power outage — Did not acquire	
	FB4586V	>E3077	0.5	10	1:10			
10/19	D-BFB	>E3078	1ml	-		913	ok (70)	
	QC30470VS	>E3079	25	1		NG	5ul all STDS	
	QC30470V2	>E3080	↓	2	RQT	1137	ok Blank	
	QC30470V2	>E3081	25	3	QCAL	1230	ok 5ul all STDS	
	D-BFB	>E3082	1ml	-		1353	ok (70-56)	
	FB5269V2	>E3083	25	1		1445	ok	
	FB5270V2	>E3084	↓	2		1538	ok	

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U91 Page 2 of 4

Date 10/19/90 Instr. E

A : VOA/DL
Tu... file AME101
Seq. file JAX , MJE
Method file VOAE
ID file IE0085
CB file CE0085
Analyst
Reviewed by/Date J.Burkhart

Batch #'s QV30470

Standards Updated
Date 10/19 By JA

Tune # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
see p. 1			

R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	FB4581VS	>E3085	2.5	3	1:10	1630	OK 5uL all STDS	
	FB4581VR	>E3086	↓	4	↓	1723	OK ↓	
	FB4586V2	>E3087	↓	5	↓	1815	OK	
	FB4584V2	>E3088	0.25	6	1:100	1907	OK	
	FB4582V2	>E3089	2.5	7	1:10	2000	rerun st.	
	FB5265V2	>E3090	25	8		2053	OK	
	FB5266V2	>E3091	5	9		2145	rerun st.	
	FB5267V2	>E3092	25	10		2238	OK	
122	p-BFB	>E3093	1uL	—		9:45	OK 75	
	QC30470 V3	>E3094	25uL	1	QCAL		OK	
	QC30470 V3	>E3095	↓	2			OK	
	QC30470 V3	>E3096	25uL	2		13:14	OK	
	FB4582 V3	>E3097	25uL	3		14:47	OK	
	FB5266 V3	>E3098	↓	4		15:39	OK	
	FB4576 V3	>E3099	↓	5		16:31	OK rr 1:100 for C7	
	FB4583 V3	>E3100	↓	6		17:23	OK rr 1:100 for C7	
	FB4574 V3	>E3101	↓	7		18:15	OK	
	FB4589 V3	>E3102	↓	8			OK rr 1:50 C7,C17	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U92 Page 3 of 4

Date 10/23/90 Instr. E

Type ~~APESO1~~ DL/VOA

Tune file APEI01

Seq. file VOE

Method file VOAE BFBE

ID file IEOAS

CB file CEOAS

Analyst [illegible]

Reviewed by/Date J. Burbank

Batch #'s QV30470

Standard	Conc ppm	Lot No.	Lot Vol.
Std 9			

__ Standards Updated

Date 12/19 By JA

Tape # D00685 Inj. __ ul

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	FB4605 V3	>E3103	25ml	9			OK rr 1:50 C17	
	FB 4606 V3	>E3104		10			rr 1:50 2nd Surrog. out	
	FB4608 V3	>E3105		1		21:44	OK	
	P-BFB	>E3106	1ml	—		10:05	OK 63	
	QC 30470 V5	>E3107	25ml	1	(QCAL)		OK	
	QC 30470 V4	>E3108		2			NG	
	QC 30470 V4	>E3109	25ml	2	1		OK	
R	FB4576 V4	>E3110	.250	2	1:100	14:49	OK V2	
R	FB4583 V4	>E3111	.250	3	1:100	15:42	OK V2	
R	FB4589 V4	>E3112	.500	4	1:50	16:35	OK V2	
R	FB4605 V4	>E3113	.500	1	1:50	17:29	OK V2	
R	FB4606 V4	>E3114	.500	2	1:50	18:22	OK V2	
	FB4607 V4	>E3115	.500	3	1:50	~~20:09~~ initials 10/23/90	ng rr STP	
	FB4609 V4	>E3116	25ml	4		20:09	OK	
	pos blk	>E3117		5			OK	
	pos. blk	>E3118		6			OK	
	pos. blk	>E3119		7			OK	
	pos. blk	>E3120		8			OK	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 093 Page 2 of 4

Date 10/24/90 Instr. E

Type DL/VOA

Tune file APEJD1

Seq. file MTE

Method file VOAE

ID file JE0295

CB file CE0295

Analyst [illegible]

Reviewed by/Date [illegible]

Batch #'s QV30470

Standards Updated

Date 10/19 By JA

Tape # D00685 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
Surg 1			

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	pos blk	>E3121	25ml	9		10/01	OK NG	
	pos blk	>E3122	↓	10			OK	

R : redo , P : Aroclor search , + : Plus search

BELOIT / ROCKFORD
TRANSFER STATION

OHM Corporation

5 1990

ETC Environmental Testing and Certification Corp.

SPECIAL
Sampling

Technical Report

for

WASTE MANAGEMENT, INC.

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5268	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG104	901015		

Richard P. Albert
Vice President, General Manager

TABULATED ANALYTICAL RESULTS

ETC

OCT 22, 1990

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Field Parameters (QR16)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5268	WASTE MANAGEMENT, INC.	WMIWIHAUL	WG104	901015		0

Parameter	Results									
	Sample Measure CODE	MDL CODE								
Dry Well	1	-								

CHAIN OF CUSTODY DOCUMENTATION

- Chain of Custody Forms
- Laboratory Chronicles
- Subcontract

ETC Environmental Testing and Certification Corp.

CHAIN OF CUSTODY FORM (CC1) ORIGINAL

Seal No. 175863 ETC Job # [illegible]

Date Sealed [illegible] By: SD

Company: WASTE MANAGEMENT OF WISCONSIN Attn.: GARY STERKEL

Facility/Site: Phone: (414) 255 - 0195

Address: N96 W13616 COUNTY LINE ROAD, GERMANTOWN, WI 53022

SAMPLE IDENTIFICATION

Facility: WMIWIHAUL (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: W-G/04 (Source Code (from below) / Your Sample Point ID (left justify)) 901015 (Start Date (YY/MM/DD)) (Start Time (2400 hr clock)) (Elapsed Hours (composite))

Source Codes:

Well	(W)	Outfall	(O)	Bottom Sediment	(B)	Surface Impoundment	(I)	Leachate Collection Sys.	(C)
Soil	(S)	River/Stream	(R)	Generation Point	(G)	Treatment Facility	(T)	Lake/Ocean	(L)

Other (X) Specify

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER FHL (Y/N)	SAMPLER Observations	LAB Observations
→	VOA	40	HCL	VOLATILES	NOT SAMPLED		
1	VS	40	HCL	VOA SCREEN	obstructed		RUEMPTY

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) TERRY MEYER Date: 10-15-90 Time: 0800
   Signature: [signature] Seal #: 175863 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) TERRY MEYER Date: 10-15-90 Time: 1530
   Signature: [signature] Seal #: 175864 Intact: ✓

LAB USE ONLY Opened By: RICHARD DRIZ Date: 10/15/90 Time: 11:00AM

SHUTTLE # 743 TEMP. °C 2°C SEAL # 175864 COND. INTACT

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # FE5216

Sample Point [redacted] 61/014
Source Code — Sample Point I.D.

FIELD PROCEDURES

PURGE DATE (YY MM DD) | START PURGE (2400 Hr Clock) | ELAPSED HRS | WATER VOL. IN CASING (Gallons) | VOLUME PURGED (Gallons)

SAMPLING METHOD:

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other ____ (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other ____ (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other ____ (SPECIFY OTHER)

Sample Composited [Y/N] ____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl)
Depth to Ground water (ft)
Groundwater Elevation (ft msl)
Well Depth (ft)
Sample Depth (non-well) (ft)

	ph		spec. cond. (um/cm at 25°C)	(other parameter)	value	units
1st		(STD)				
2nd		(STD)				
3rd		(STD)				
4th		(STD)				

Sample Temp (°C) | Turbidity NTU

FIELD COMMENTS

Sample Appearance:
Weather Conditions:
Other: WELL OBSTRUCTED
NOT SAMPLED

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: TERRY NEYER (Print) Employer: WMI

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

10-15-90 (Date) (Signature)

ORIGINAL

Beloit/Rockford Transfer Stat

OHM Corporation

5 990

ETC Environmental Testing and Certification Corp.

Special Sampling

Technical Report

for

WASTE MANAGEMENT, INC.

Chain of Custody Data Required for ETC Data Management Summary Reports						
FB5270	WASTE MANAGEMENT, INC.	WMIWIHAUL	X01TB	901015		
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Richard P. Albert

Vice President, General Manager

TABULATED ANALYTICAL RESULTS

ETC

OCT 30, 1990
QV30470

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5270	WASTE MANAGEMENT, INC.	WMIWIHAUL	X01TB	901015		0

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1V	Acrolein	ND	20	3350	1660	ND	160	96	ND	1600	209
2V	Acrylonitrile	ND	20	321	361	ND	16.0	115	ND	160	201
3V	Benzene	ND	.88	106	101	ND	10.0	102	ND	100	106
4V	bis(Chloromethyl)ether	ND	2.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	.94	109	120	ND	10.0	106	ND	100	109
6V	Carbon tetrachloride	ND	.56	100	97.7	ND	10.0	98	ND	100	100
7V	Chlorobenzene	ND	1.2	101	103	ND	10.0	99	ND	100	101
8V	Chlorodibromomethane	ND	.62	108	109	ND	10.0	105	ND	100	108
9V	Chloroethane	ND	2.0	103	91.4	ND	10.0	93	ND	100	103
10V	2-Chloroethylvinyl ether	ND	2.0	98.2	99.5	ND	10.0	114	ND	100	98
11V	Chloroform	ND	.32	105	97.9	ND	10.0	99	ND	100	105
12V	Dichlorobromomethane	ND	.44	105	105	ND	10.0	105	ND	100	105
13V	Dichlorodifluoromethane	ND	2.0	98.8	89.7	ND	10 0	93	ND	100	99
14V	1,1-Dichloroethane	ND	.94	103	99.1	ND	10 0	98	ND	100	103
15V	1,2-Dichloroethane	ND	.56	111	109	ND	10.0	104	ND	100	111
16V	1,1-Dichloroethylene	ND	.56	95.1	97.2	ND	10.0	95	ND	100	95
17V	1,2-Dichloropropane	ND	1.2	103	102	ND	10.0	104	ND	100	103
18V	cis-1,3-Dichloropropylene	ND	1.0	104	103	ND	10.0	103	ND	100	104
19V	Ethylbenzene	ND	1.4	98.9	98.8	ND	10.0	97	ND	100	99
20V	Methyl bromide	ND	2.0	104	91.8	ND	10.0	96	ND	100	104
21V	Methyl chloride	ND	2.0	104	92.4	ND	10.0	95	ND	100	104
22V	Methylene chloride	1.02	.56	118	102	BMDL	10.0	100	10.0	100	108
23V	1,1,2,2-Tetrachloroethane	ND	1.4	106	117	ND	10.0	106	ND	100	106
24V	Tetrachloroethylene	ND	.82	95.7	96.4	ND	10.0	95	ND	100	96
25V	Toluene	ND	1.2	99.7	98.9	ND	10.0	98	ND	100	100
26V	1,2-Trans-dichloroethylene	ND	.32	102	96.2	ND	10.0	98	ND	100	102
27V	1,1,1-Trichloroethane	ND	.76	103	98.7	ND	10.0	99	ND	100	103
28V	1,1,2-Trichloroethane	ND	1.0	110	116	ND	10.0	110	ND	100	110
29V	Trichloroethylene	ND	.38	101	95.7	ND	10.0	98	ND	100	101
30V	Trichlorofluoromethane	ND	2.0	91.1	89.0	ND	10.0	93	ND	100	91
31V	Vinyl chloride	ND	2.0	100	92.0	ND	10.0	96	ND	100	100
18V	trans-1,3-Dichloropropylene	ND	2.0	107	109	ND	10.0	103	ND	100	107

Acrolein and Acrylonitrile values are screen only.

All zero and variable recoveries have been manually verified.

ETC

OCT 29, 1990

TABLE 2: METHOD PERFORMANCE DATA
Surrogate Recovery Water - GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5270	WASTE MANAGEMENT, INC.	WMIWIHAUL	X01TB	901015		0

Compound	Amount added ug	% Recovery	IFB EPA Control Limits	
			Lower	Upper
VOLATILE FRACTION (GC/MS)				
Toluene-D8	.250	97	88	110
p-Bromofluorobenzene	.250	93	86	115
1,2-Dichloroethane-D4	.250	102	76	114
ACID FRACTION (GC/MS)				
Phenol-D5	-	-	10	94
2-Fluorophenol	-	-	21	100
2,4,6-Tribromophenol	-	-	10	123
BASE/NEUTRAL FRACTION (GC/MS)				
Nitrobenzene-D5	-	-	35	114
2-Fluorobiphenyl	-	-	43	116
Terphenyl-D14	-	-	33	141
PESTICIDE/PCB FRACTION (GC)				
Dibutylchlorendate	-	-	24**	154**
2,4,5,6-Tetrachloro-m-xylene	-	-	46	185
METHOD 601				
Bromochloromethane	-	-	82	124
METHOD 602				
a,a,a-Trifluorotoluene	-	-	80	120

** Advisory Limits Only

GC/MS QUALITY CONTROL DATA

Instrument Performance Check

- Tuning and Mass Calibration

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3067 BFB Injection Date: 10/18/90

Instrument ID: GC/MS 6 BFB Injection Time: 1131

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.5
75	30.0 - 60.0% of mass 95	54.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	.9 (1.1)1
174	Greater than 50.0% of mass 95	81.6
175	5.0 - 9.0% of mass 174	6.2 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.6 (98.8)1
177	5.0 - 9.0% of mass 176	6.1 (7.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470VS	>E3068	10/18/90	1225
02		QC30470VS	>E3069	10/18/90	1317
03		QC30470VS	>E3070	10/18/90	1409
04		QC30470VS	>E3071	10/18/90	1502
05		QC30470VS	>E3072	10/18/90	1554
06		~~QC30470V~~	~~>E3073~~	~~10/18/90~~	~~1647~~ AD 10/26/90
07		QC30470V	>E3074	10/18/90	1739
08		FB4581V	>E3075	10/18/90	1831
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3078 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 0913

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	55.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.3
175	5.0 - 9.0% of mass 174	5.8 (7.1)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.0 (96.0)1
177	5.0 - 9.0% of mass 176	7.0 (9.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470U2	>E3080	10/19/90	1137
02		QC30470US	>E3081	10/19/90	1230
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3082 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 1353

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.0
75	30.0 - 60.0% of mass 95	54.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.3
175	5.0 - 9.0% of mass 174	6.4 (8.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.6 (96.3)1
177	5.0 - 9.0% of mass 176	6.1 (8.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		FB5269V2	>E3083	10/19/90	1445
02		FB5270V2	>E3084	10/19/90	1538
03		FB4581VS	>E3085	10/19/90	1630
04		FB4581VR	>E3086	10/19/90	1723
05		FB4586V2	>E3087	10/19/90	1815
06		FB4584V2	>E3088	10/19/90	1907
07		FB5265V2	>E3090	10/19/90	2053
08		FB5267V2	>E3092	10/19/90	2238
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3093 BFB Injection Date: 10/22/90

Instrument ID: GC/MS E BFB Injection Time: 0945

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	54.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	76.9
175	5.0 - 9.0% of mass 174	5.9 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.2 (96.5)1
177	5.0 - 9.0% of mass 176	4.1 (5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470US	>E3094	10/22/90	1017
02		QC30470U	>E3096	10/22/90	1314
03		FB4582U3	>E3097	10/22/90	1447
04		FB5266U3	>E3098	10/22/90	1539
05		FB4576U3	>E3099	10/22/90	1631
06		FB4583U3	>E3100	10/22/90	1723
07		FB4574U3	>E3101	10/22/90	1815
08		FB4589U3	>E3102	10/22/90	1907
09		FB4605U3	>E3103	10/22/90	1959
10		FB4608U3	>E3105	10/22/90	2144
11		FB4606U3	>E3104	10/22/90	2051
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3106 BFB Injection Date: 10/23/90

Instrument ID: GC/MS 6 BFB Injection Time: 1005

Matrix: (soil/water) Water Level: (low/med) LOW Column: (pack/cap) Cap

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	52.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.8
175	5.0 - 9.0% of mass 174	4.1 (5.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	75.6 (97.2)1
177	5.0 - 9.0% of mass 176	4.6 (6.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470VS	>E3107	10/23/90	1046
02		QC30470V4	>E3109	10/23/90	1335
03		FB4576V4	>E3110	10/23/90	1449
04		FB4583V4	>E3111	10/23/90	1542
05		FB4589V4	>E3112	10/23/90	1635
06		FB4605V4	>E3113	10/23/90	1729
07		FB4606V4	>E3114	10/23/90	1822
08		FB4609V4	>E3116	10/23/90	2009
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

CHAIN OF CUSTODY DOCUMENTATION

- Chain of Custody Forms
- Laboratory Chronicles
- Subcontract

ETC Environmental Testing and Certification Corp.

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Seal No. 175863 ETC Job # [illegible]

Date Sealed 90.10.11 By: [illegible]

Company: WASTE MANAGEMENT OF WISCONSIN Attn.: GARY STERKEL

Facility/Site: Phone: (414) 255 - 0195

N96 W13616

Address: COUNTY LINE ROAD, GERMANTOWN, WI 53022

SAMPLE IDENTIFICATION

Facility: WMWIHAUL (Facility/Site Code) (Optional Sample Point Descriptions)

Sample Point: X-VTB 01TB 901015 SMC 10/15/90

Source Code (from below) | Your Sample Point ID (left justify) | Start Date (YYMMDD) | Start Time (2400 hr clock) | Elapsed Hours (composite)

Source Codes:

Well (W) Outfall (O) Bottom Sediment (B) Surface Impoundment (I) Leachate Collection Sys. (C) Other (X)

Soil (S) River/Stream (R) Generation Point (G) Treatment Facility (T) Lake/Ocean (L) Specify

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Fill. (Y/N)	SAMPLER Observations	LAB Observations
4	VTB	40	GC/MS	VOLATILES			✓

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) TERRY MEYER Date: 10-15-90 Time: 0800
   Signature: [signature] Seal #: 175863 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

3. I have received these materials in good condition from the above person.
   Name: Signature:
   Date: Time: Remarks:

4. Shuttle Sealed By: (print) TERRY MEYER Date: 10-15-90 Time: 1530
   Signature: [signature] Seal #: 175864 Intact: ✓

LAB USE ONLY Opened By: RICHARD ERIC Date: 10/15/90 Time: 11:00AM

SHUTTLE # 743 TEMP. °C 20C SEAL # 175864 COND. INTACT

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # [illegible]

Sample Point [X] (Source Code) [VTB] (Sample Point I D)

FIELD PROCEDURES

PURGE DATE (YY MM DD) | START PURGE (2400 Hr Clock) | ELAPSED HRS | WATER VOL. IN CASING (Gallons) | VOLUME PURGED (Gallons)

SAMPLING METHOD: _____

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other _____ (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other _____ (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other _____ (SPECIFY OTHER)

Sample Composited [Y/N] _____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl) _____

Depth to Ground water (ft) _____

Groundwater Elevation (ft msl) _____

Well Depth (ft) _____

Sample Depth (non-well) (ft) _____

1st	ph (STD)	1st	spec. cond. umhos/cm at 25° C	(other parameter)	value	units
2nd	ph (STD)	2nd	spec. cond. umhos/cm at 25°C	(other parameter)	value	units
3rd	ph (STD)	3rd	spec. cond. umhos/cm at 25°C	(other parameter)	value	units
4th	ph (STD)	4th	spec. cond. umhos/cm at 25°C	(other parameter)	value	units

Sample Temp (°C) | Turbidity NTU

FIELD COMMENTS

Sample Appearance: _____

Weather Conditions: _____

Other: _____

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: _____ (Print) Employer: _____

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

_____ (Date) (Signature)

ORIGINAL

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 090 Page 1 of 1

Date 10-18-89 Instr. E

Type VOA, 524
Tune file APE101
Seq. file JA1
Method file VOAE
ID file IE0295
CB file CE0295
Analyst
Reviewed By/Date J.Burchard

Batch #'s QV 30470

Standards Updated
Date 10/19 By

Tape # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol. (ul)
p-BFB	50	9971	1.0
Int. STD/SURR	25	10166	10.0
CAL I	50	10158	20,15,10,5,2
CAL II	50	10159	↓
HBCD	50	9993	↓
WMI STD.	50	10186	↓

R	NAME	DATA File	Inj. ml/g	ALS #	Dil	Inj. Time	Comments	P
	p-BFB	>E3067	1ul	-		1131	ok (69 EVH)	
	QC30470VS	>E3068	25ml	1		1225	ok 20 ul CAL I, II, HBCD, WMI	
	QC30470VS	>E3069		2	CBUPD	1317	ok 15 ul	
	QC30470VS	>E3070		3	CBCAL	1409	ok 10 ul	
	QC30470VS	>E3071		4	RQT	1502	ok 5 ul	
	QC30470VS	>E3072		5		1554	ok 2 ul	
	QC30470V	>E3073		6		1647	ok Blank	
	QC30470V	>E3074		7		1739	ok Blank	
	FB4581V	>E3075	0.5	8	1:10	1831	ok	
	FB4584V	>E3076	0.05	9	1:100		power outage - Did not acquire	
	FB4586V	>E3077	0.5	10	1:10			
10/19	p-BFB	>E3078	1ul	-		913	ok (70)	
	QC30470VS	>E3079	25	1		NG.	5ul all STDS	
	QC30470V2	>E3080	↓	2	RQT	1137	ok Blank	
	QC30470V2	>E3081	25	3	QCAL	1230	ok 5ul all STDS	
	p-BFB	>E3082	1ul	-		1352	ok (70-56)	
	FB5269V2	>E3083	25	1		1445	ok	
	FB5270V2	>E3084	↓	2		1538	ok	

R : code P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 091 Page 2 of 7

Date 10/19/90 Instr. E

Type VOA/DI
Tune file MFE101
Seq. file JAX , MJE
Method file VOAE
ID file IE0085
CB file CE0085
Analyst
Reviewed by/Date J.Burkhart

Batch #'s QV30970

Standards Updated
Date 10/19 By JA

Tape # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
see p.1			

TR	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	+ P
	FB4581VS	>E3085	2.5	3	1:10	1630	ok 5ul all STDS	
	FB4581VR	>E3086	↓	4	↓	1723	ok ↓	
	FB4586V2	>E3087	↓	5	↓	~~1815~~ 1815	ok	
	FB4584V2	>E3088	0.25	6	1:100	1907	ok	
	FB4582V2	>E3089	2.5	7	1:10	2000	rerun st.	
	FB5265V2	>E3090	25	8		2053	ok	
	FB5266V2	>E3091	5	9		2145	rerun st.	
	FB5267V2	>E3092	25	10		2238	ok	
0/22	p-BFB	>E3093	1ul	—		9:45	OK 75	
	QC30470 V3	>E3094	25ul	1	(QLAL)		ok	
	QC30470 V3	>E3095	↓	2			NG	
	QC30470 V3	>E3096	25ul	2		13:14	OK	
	FB4582 V3	>E3097	25ul	3		14:47	ok	
	FB5266 V3	>E3098	↓	4		15:39	ok	
	FB4576 V3	>E3099	↓	5		16:31	ok rr 1:100 for C7	
	FB4583 V3	>E3100	↓	6		17:23	ok rr 1:100 for C7	
	FB4574 V3	>E3101	↓	7		18:15	OK	
	FB4589 V3	>E3102	↓	8			OK rr 1:50 C7,C17	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U92 Page 3 of 4

Date 10/23/90 Instr. E

-Type ~~AES01~~ DL/VOA

Jne file AE101

Seq. file LOE

Method file VOAE BFBE

ID file TEQ25

CB file CE025

Analyst

Reviewed by/Date J. Burkhart

Batch #'s QV30470

Standards Updated

Date 10/19 By JA

Tape # D00685 Inj. ___ ul

Standard	Conc ppm	Lot No.	Lot Vol
Sel 9 1			

R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	EB4605 V3	>E3103	25ml	9			OK rr 1:50 C17	
	EB4606 V3	>E3104	↓	10			rr 1:50 2nd Surrog. out	
	EB4608 V3	>E3105	↓	1		21:44	OK	
	P-BFB	>E3106	1ml	—		10:05	OK 63	
	QC 30470 V5	>E3107	25ml	1	(QCAL)		OK	
	QC 30470 V4	>E3108	↓	2			NG	
	QC 30470 V4	>E3109	25ml	2	1		OK	
R	EB4576 V4	>E3110	.250	2	1:100	14:49	OK V2	
R	EB4583 V4	>E3111	.250	3	1:100	15:42	OK V2	
R	EB4589 V4	>E3112	.500	4	1:50	16:35	OK V2	
R	EB4605 V4	>E3113	.500	1	1:50	17:29	OK V2	
R	EB4606 V4	>E3114	.500	2	1:50	18:22	OK V2	
	EB4607 V4	>E3115	.500	3	1:50	~~20:02~~	ng rr STR	
	EB4609 V4	>E3116	25ml	4		20:09	OK	
	pos blk	>E3117	↓	5			OK	
	pos. blk	>E3118	↓	6			OK	
	pos. blk	>E3119	↓	7			OK	
	pos. blk	>E3120	↓	8			OK	

R : redo . P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 093 Page 2 of 2

Date 10/24/90 Instr. E

Type DL/VOA

Tune file APEI01

Seq. file MTE

Method file VOAE

ID file IE0295

CB file CE0295

Analyst [illegible]

Reviewed by/Date [illegible]

Batch #'s QV30470

Standards Updated

Date 10/19 By JA

Tape # D00685 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
Surg 1			

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	+ P
	pos blk	>E3121	25ml	9			OK NG	
	pos blk	>E3122	↓	10			OK	

R : redo , P : Aroclor search , + : Plus search

TRANSFER STATION

OHM Corporation

5 990

ETC Environmental Testing and Certification Corp.

Special Sampling

Technical Report

for

WASTE MANAGEMENT, INC.

Chain of Custody Data Required for ETC Data Management Summary Reports						
FB5269	WASTE MANAGEMENT, INC.	WMIWIHAUL	X01FB	901015	1130	
ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours

Richard P. Albert

Vice President, General Manager

TABULATED ANALYTICAL RESULTS

ETC

OCT 30, 1990
QV30470

TABLE 1: QUANTITATIVE RESULTS and QUALITY ASSURANCE DATA

Volatile Compounds - GC/MS Analysis Data (QR01)

Chain of Custody Data Required for ETC Data Management Summary Reports

ETC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5269	WASTE MANAGEMENT, INC.	WMIWIHAUL	X01FB	901015	1130	0

NPDES Number	Compound	Results		QC Replicate		QC Blank and Spiked Blank			QC Matrix Spike		
		Sample Concen. ug/l	MDL ug/l	First ug/l	Second ug/l	Blank Data ug/l	Concen. Added ug/l	% Recov	Unspiked Sample ug/l	Concen. Added ug/l	% Recov
1V	Acrolein	ND	20	3350	1660	ND	160	96	ND	1600	209
2V	Acrylonitrile	ND	20	321	361	ND	16.0	115	ND	160	201
3V	Benzene	ND	.88	106	101	ND	10.0	102	ND	100	106
4V	bis(Chloromethyl)ether	ND	2.0	ND	ND	ND	0	-	ND	0	-
5V	Bromoform	ND	.94	109	120	ND	10.0	106	ND	100	109
6V	Carbon tetrachloride	ND	.56	100	97.7	ND	10.0	98	ND	100	100
7V	Chlorobenzene	ND	1.2	101	103	ND	10.0	99	ND	100	101
8V	Chlorodibromomethane	ND	.62	108	109	ND	10.0	105	ND	100	108
9V	Chloroethane	ND	2.0	103	91.4	ND	10.0	93	ND	100	103
10V	2-Chloroethylvinyl ether	ND	2.0	98.2	99.5	ND	10.0	114	ND	100	98
11V	Chloroform	ND	.32	105	97.9	ND	10.0	99	ND	100	105
12V	Dichlorobromomethane	ND	.44	105	105	ND	10.0	105	ND	100	105
13V	Dichlorodifluoromethane	ND	2.0	98.8	89.7	ND	10.0	93	ND	100	99
14V	1,1-Dichloroethane	ND	.94	103	99.1	ND	10.0	98	ND	100	103
15V	1,2-Dichloroethane	ND	.56	111	109	ND	10.0	104	ND	100	111
16V	1,1-Dichloroethylene	ND	.56	95.1	97.2	ND	10.0	95	ND	100	95
17V	1,2-Dichloropropane	ND	1.2	103	102	ND	10.0	104	ND	100	103
18V	cis-1,3-Dichloropropylene	ND	1.0	104	103	ND	10.0	103	ND	100	104
19V	Ethylbenzene	ND	1.4	98.9	98.8	ND	10.0	97	ND	100	99
20V	Methyl bromide	ND	2.0	104	91.8	ND	10.0	96	ND	100	104
21V	Methyl chloride	ND	2.0	104	92.4	ND	10.0	95	ND	100	104
22V	Methylene chloride	8.03	.56	118	102	BMDL	10.0	100	10.0	100	108
23V	1,1,2,2-Tetrachloroethane	ND	1.4	106	117	ND	10.0	106	ND	100	106
24V	Tetrachloroethylene	ND	.82	95.7	96.4	ND	10.0	95	ND	100	96
25V	Toluene	ND	1.2	99.7	98.9	ND	10.0	98	ND	100	100
26V	1,2-Trans-dichloroethylene	ND	.32	102	96.2	ND	10.0	98	ND	100	102
27V	1,1,1-Trichloroethane	ND	.76	103	98.7	ND	10.0	99	ND	100	103
28V	1,1,2-Trichloroethane	ND	1.0	110	116	ND	10.0	110	ND	100	110
29V	Trichloroethylene	ND	.38	101	95.7	ND	10.0	98	ND	100	101
30V	Trichlorofluoromethane	ND	2.0	91.1	89.0	ND	10.0	93	ND	100	91
31V	Vinyl chloride	ND	2.0	100	92.0	ND	10.0	96	ND	100	100
18V	trans-1,3-Dichloropropylene	ND	2.0	107	109	ND	10.0	103	ND	100	107

Acrolein and Acrylonitrile values are screen only.

All zero and variable recoveries have been manually verified.

ETC

OCT 29, 1990

TABLE 2: METHOD PERFORMANCE DATA
Surrogate Recovery Water - GC/MS Data (QR20)

Chain of Custody Data Required for ETC Data Management Summary Reports

EIC Sample No.	Company	Facility	Sample Point	Date	Time	Elapsed Hours
FB5269	WASTE MANAGEMENT, INC.	WMIWIHAUL	X01FB	901015	1130	0

Compound	Amount added ug	% Recovery	IFB EPA Control Limits	
			Lower	Upper
VOLATILE FRACTION (GC/MS)				
Toluene-D8	.250	109	88	110
p-Bromofluorobenzene	.250	93	86	115
1,2-Dichloroethane-D4	.250	99	76	114
ACID FRACTION (GC/MS)				
Phenol-D5	-	-	10	94
2-Fluorophenol	-	-	21	100
2,4,6-Tribromophenol	-	-	10	123
BASE/NEUTRAL FRACTION (GC/MS)				
Nitrobenzene-D5	-	-	35	114
2-Fluorobiphenyl	-	-	43	116
Terphenyl-D14	-	-	33	141
PESTICIDE/PCB FRACTION (GC)				
Dibutylchlorendate	-	-	24**	154**
2,4,5,6-Tetrachloro-m-xylene	-	-	46	185
METHOD 601				
Bromochloromethane	-	-	82	124
METHOD 602				
a,a,a-Trifluorotoluene	-	-	80	120

** Advisory Limits Only

GC/MS QUALITY CONTROL DATA

Instrument Performance Check

- Tuning and Mass Calibration

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3067 BFB Injection Date: 10/18/90

Instrument ID: GC/MS E BFB Injection Time: 1131

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.5
75	30.0 - 60.0% of mass 95	54.5
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	.9 (1.1)1
174	Greater than 50.0% of mass 95	81.6
175	5.0 - 9.0% of mass 174	6.2 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	80.6 (98.8)1
177	5.0 - 9.0% of mass 176	6.1 (7.6)2

1-Value is % mass 174 2-Value is % mass 176

IS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470VS	>E3068	10/18/90	1225
02		QC30470VS	>E3069	10/18/90	1317
03		QC30470VS	>E3070	10/18/90	1409
04		QC30470VS	>E3071	10/18/90	1502
05		QC30470VS	>E3072	10/18/90	1554
06		~~QC30470V~~	~~>E3073~~	~~10/18/90~~	~~1647~~ AD 10/26/90
07		QC30470V	>E3074	10/18/90	1739
08		FB4581V	>E3075	10/18/90	1831
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3078 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 0913

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.4
75	30.0 - 60.0% of mass 95	55.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	81.3
175	5.0 - 9.0% of mass 174	5.8 (7.1)1
176	Greater than 95.0% but less than 101.0% of mass 174	78.0 (96.0)1
177	5.0 - 9.0% of mass 176	7.0 (9.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470V2	>E3080	10/19/90	1137
02		QC30470VS	>E3081	10/19/90	1230
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3082 BFB Injection Date: 10/19/90

Instrument ID: GC/MS E BFB Injection Time: 1353

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	30.0
75	30.0 - 60.0% of mass 95	54.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.3
175	5.0 - 9.0% of mass 174	6.4 (8.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	70.6 (96.3)1
177	5.0 - 9.0% of mass 176	6.1 (8.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		FB5269U2	>E3083	10/19/90	1445
02		FB5270U2	>E3084	10/19/90	1538
03		FB4581US	>E3085	10/19/90	1630
04		FB4581UR	>E3086	10/19/90	1723
05		FB4586U2	>E3087	10/19/90	1815
06		FB4584U2	>E3088	10/19/90	1907
07		FB5265U2	>E3090	10/19/90	2053
08		FB5267U2	>E3092	10/19/90	2238
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3093 BFB Injection Date: 10/22/90

Instrument ID: GC/MS E BFB Injection Time: 0945

Matrix: (soil/water) water Level: (low/med) LOW Column: (pack/cap) pack

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.5
75	30.0 - 60.0% of mass 95	54.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	76.9
175	5.0 - 9.0% of mass 174	5.9 (7.6)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.2 (96.5)1
177	5.0 - 9.0% of mass 176	4.1 (5.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470US	>E3094	10/22/90	1017
02		QC30470U	>E3096	10/22/90	1314
03		FB4582U3	>E3097	10/22/90	1447
04		FB5266U3	>E3098	10/22/90	1539
05		FB4576U3	>E3099	10/22/90	1631
06		FB4583U3	>E3100	10/22/90	1723
07		FB4574U3	>E3101	10/22/90	1815
08		FB4589U3	>E3102	10/22/90	1907
09		FB4605U3	>E3103	10/22/90	1959
10		FB4608U3	>E3105	10/22/90	2144
11		FB4606U3	>E3104	10/22/90	2051
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ETC Corp. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.:

Lab File ID: >E3106 BFB Injection Date: 10/23/90

Instrument ID: GC/MS 6 BFB Injection Time: 1045

Matrix: (soil/water) Water Level: (low/med) LOW Column: (pack/cap) Cap

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	25.0
75	30.0 - 60.0% of mass 95	52.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	77.8
175	5.0 - 9.0% of mass 174	4.1 (5.2)1
176	Greater than 95.0%, but less than 101.0% of mass 174	75.6 (97.2)1
177	5.0 - 9.0% of mass 176	4.6 (6.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		QC30470VS	>E3107	10/23/90	1046
02		QC30470V4	>E3109	10/23/90	1335
03		FB4576V4	>E3110	10/23/90	1449
04		FB4583V4	>E3111	10/23/90	1542
05		FB4589V4	>E3112	10/23/90	1635
06		FB4605V4	>E3113	10/23/90	1729
07		FB4606V4	>E3114	10/23/90	1822
08		FB4609V4	>E3116	10/23/90	2009
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

ETC

CHAIN OF CUSTODY DOCUMENTATION

- Chain of Custody Forms
- Laboratory Chronicles
- Subcontract

ETC Environmental Testing and Certification Corp.

CHAIN OF CUSTODY FORM (CC1)

ORIGINAL

Seal No. 175863 ETC Job # FB5263

Date Sealed 90/10/11 By: RD

Company: WASTE MANAGEMENT OF WISCONSIN Attn.: GARY STERKEL

Facility/Site: N96 W13616 Phone: (414) 255 - 0195

Address: COUNTY LINE ROAD, GERMANTOWN, WI 53022

SAMPLE IDENTIFICATION

Facility: WMIWIHAUL (Facility Site Code)

Sample Point: XOPP8 (Source Code, from below) TM 10/15/90 (Your Sample Point ID, left justify) 901015 (Start Date YY/MM/DD) 1130 (Start Time, 2400 hr clock) (Elapsed Hours, composite) (Optional Sample Point Descriptions)

Source Codes:

Well ..(W) Outfall.....(O) Bottom Sediment....(B) Surface Impoundment....(I) Leachate Collection Sys.....(C) Other ..... (X)

Soil ..(S) River/Stream ..(R) Generation Point ....(G) Treatment Facility .....(T) Lake/Ocean ..... (L) Specify _____

SHUTTLE CONTENTS

BOTTLE No	Type	Size	Preserv.	ANALYSIS	SAMPLER Filt. (Y/N)	Observations	LAB Observation
4	VOA	40	HCL	VOLATILES	N		
6	FB	40	GC/MS	FIELD BLK H20			RCD empty

CHAIN OF CUSTODY CHRONICLE

1. Shuttle Opened By: (print) TERRY MEYER Date: 10-15-90 Time: 0800
   Signature: [signature] Seal #: 175863 Intact: ✓

2. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

3. I have received these materials in good condition from the above person.
   Name: _____ Signature: _____
   Date: _____ Time: _____ Remarks: _____

4. Shuttle Sealed By: (print) TERRY MEYER Date: 10-15-90 Time: 1530
   Signature: [signature] Seal #: 175864 Intact: ✓

LAB USE ONLY Opened By: RICHARD DRIZ Date: 10/15/90 Time: 11:00AM

SHUTTLE # 743 TEMP. °C 2°C SEAL # 175864 COND. INTACT

ETC

FIELD PARAMETER FORM (CC2)

Form 0002
Sample Management
12/89

ETC JOB # FEE-260

Sample Point [X] [Ø / F B]
Source Code — Sample Point I.D.

FIELD PROCEDURES

PURGE DATE (YY MM DD)	START PURGE (2400 Hr Clock)	ELAPSED HRS	WATER VOL. IN CASING (Gallons)	VOLUME PURGED (Gallons)
901015				

SAMPLING METHOD:

Sampler Type [ ] A-Submersible Pump, B-ISCO, C-Bladder Pump, D-Dipper/Bottle, E-Bailer, F-Scoop/Shovel, X-Other ____ (SPECIFY OTHER)

Sampler Material [ ] A-Teflon, B-Metal, C-PVC, D-Plastic, X-Other ____ (SPECIFY OTHER)

Tubing Material [ ] A-Teflon, B-Tygon, C-Polyethylene, D-Silicon, X-Other ____ (SPECIFY OTHER)

Sample Composited [Y/N] ____ Procedure/Proportions

FIELD MEASUREMENTS

Well Elevation (ft/msl) ____ Well Depth (ft) ____

Depth to Ground water (ft) ____ Sample Depth (non-well) (ft) ____

Groundwater Elevation (ft msl) ____

	pH	(STD)		spec. cond.	um/cm at 25° C	(other parameter)	value	units
1st	906		1st	6				
2nd			2nd					
3rd			3rd					
4th			4th					

Sample Temp 105 (°C) Turbidity ____ NTU

FIELD COMMENTS

Sample Appearance: COT = Ø

Weather Conditions:

Other:

Field blank taken at G101

FILTERING: Use Chain of Custody (CC1) to indicate which bottles were filtered

Sampler: Terry Meyer (Print) Employer: WMI

I certify that sampling procedures were in accordance with applicable EPA state and corporate protocols.

10-15-90 (Date) T. Meyer (Signature)

ORIGINAL

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 090 Page 1 of 1

Date 10-18-89 Instr. E

Type VOA, 524
.ne file APE101
Seq. file JAI
Method file VOAF
ID file IE0295
CB file CE0295
Analyst
Reviewed By/Date J.Burchard

Batch #'s QV 30470

Standards Updated CHECK
Date 10/19 By

Tape # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol. (ul)
D-BFB	50	9971	1.0
INT. STD/SURR	25	10166	10.0
CAL I	50	10158	20, 15, 10, 5, 2
CAL II	50	10159	↓
HBAA	50	9993	↓
WMI STD.	50	10186	↓

R	NAME	DATA File	Init. (ml) g	ALS #	Dil	Inj. Time	Comments	P
	D-BFB	>E3067	1ml	-		1131	ok (69 EM14)	
	QC30470VS	>E3068	25ml	1		1205	ok 20 ul CAL I, II, HBAA, WMI	
	QC30470VS	>E3069		2	CBUPD	1317	ok 15 ul	
	QC30470VS	>E3070		3	CBCAL	1405	ok 10 ul	
	QC30470VS	>E3071		4	RQT	1502	ok 5 ul	
	QC30470VS	>E3072		5		1554	ok 2 ul	
	QC30470V	>E3073		6		1647	ok Blank	
	QC30470V	>E3074		7		1739	ok Blank	
	FB4581V	>E3075	0.5	8	1:10	1831	ok	
	FB4584V	>E3076	0.05	9	1:100		power outtage - Did not acquire on 10/19/89	
	FB4586V	>E3077	0.5	10	1:10			
10/19	D-BFB	>E3078	1ml	-		913	ok (70)	
	QC30470VS	>E3079	25	1		NG	5ul all STDS	
	QC30470V2	>E3080	↓	2	RQT	1137	ok Blank	
	QC30470V2	>E3081	25	3	RCAL	1230	ok 5 ul all STDS	
	D-BFB	>E3082	1ml	-		1352	ok (70-56)	
	FB5269V2	>E3083	25	1		MHS	ok	
	FB5270V2	>E3084	↓	2		1538	ok	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department

Date 10/19/90 Instr. E

A-Type VOA/DL
file AME101
Seq. file JAX , PJE
Method file VOAE
ID file CE0885
CB file CE0885
Analyst
Reviewed by/Date J Burkhart

Batch #'s QV30470

Standards Updated
Date 10/19 By JA

Tape # D-684 Inj. ul

Standard	Conc ppm	Lot No.	Lot Vol.
see p. 1			

	R	NAME	DATA File	Init. ml/g	ALS #	Dil	Inj. Time	Comments	P
		FB4581VS	>E3085	2.5	3	1:10	1630	OK 5ul all STDS	
		FB4581VR	>E3086	↓	4	↓	1723	OK ↓	
		FB4586V2	>E3087	↓	5	↓	1815	OK	
		FB4584V2	>E3088	0.25	6	1:100	1907	OK	
		FB4582V2	>E3089	2.5	7	1:10	2000	rerun st.	
		FB5265V2	>E3090	25	8		2053	OK	
		FB5266V2	>E3091	5	9		2145	rerun st.	
		FB5267V2	>E3092	25	10		2238	OK	
10/22		P-BFB	>E3093	1ul	—		9:45	OK 75	
		QC30470 V3	>E3094	25ul	1	(QCAL)		OK	
		QC30470 V3	>E3095	↓	2			OK	
		QC30470 V3	>E3096	25ul	2		13:14	OK	
		FB4582 V3	>E3097	25ul	3		14:47	OK	
		FB5266 V3	>E3098		4		15:39	OK	
		FB4576 V3	>E3099		5		16:31	OK rr 1:100 for C7	
		FB4583 V3	>E3100		6		17:23	OK rr 1:100 for C7	
		FB4574 V3	>E3101		7		18:15	OK	
		FB4589 V3	>E3102	↓	8			OK rr 1:50 C7, C17	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department U92 Page 3 of 4

Date 10/23/90 Instr. E

A-Type ~~Aroclor~~ DL/VOA
ne file AFEI01
Seq. file LOE
Method file VOAE BFBE
ID file TEOA5
CB file CE0295
Analyst
Reviewed by/Date J. Burchart

Batch #'s QV30470

Standards Updated
Date 10/19 By JA

Tape # D00685 Inj. ___ ul

Standard	Conc ppm	Lot No.	Lot Vol.
Surg 1			

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	P
	EB4605 V3	>E3103	25ml	9			OK rr 1:50 C17	
	EB 4606 V3	>E3104	↓	10			rr 1:50 2nd Surrog. out	
	EB4608 V3	>E3105	↓	1		21:44	OK	
	P-BFB	>E3106	1ul	—		10:05	OK 63	
	QC 30470 V5	>E3107	25ml	1	QCAL		OK	
	QC 30470 V4	>E3108	↓	2			NG	
	QC 30470 V4	>E3109	25ml	2	1		OK	
R	EB4576 V4	>E3110	.250	2	1:100	14:49	OK V2	
R	EB4583 V4	>E3111	.250	3	1:100	15:42	OK V2	
R	EB4589 V4	>E3112	.500	4	1:50	16:35	OK V2	
R	EB4605 V4	>E3113	.500	1	1:50	17:29	OK V2	
R	EB4606 V4	>E3114	.500	2	1:50	18:22	OK V2	
	EB4607 V4	>E3115	.500	3	1:50	~~20:09~~	ng rr STR	
	EB4609 V4	>E3116	25ml	4		20:09	OK	
	pos blk	>E3117	↓	5			OK	
	pos. blk	>E3118	↓	6			OK	
	pos. blk	>E3119	↓	7			OK	
	pos. blk	>E3120	↓	8			OK	

R : redo , P : Aroclor search , + : Plus search

ETC Corp. LABORATORY CHRONICLE : GC-MS Department 093 Page 2 of 2

Date 10/24/90 Instr. E

Type DL/VOA

.e file APE101

Seq. file MTE

Method file VOAE

ID file IE0295

CB file CE0295

Analyst [illegible]

Reviewed by/Date J. Burkhart

Batch #'s QV30470

Standards Updated

Date 10/19 By JA

Tape # D00685 Inj. ___ ul

Standard	Conc ppm	Lot No.	Lot Vol.
5ug/l			

R	NAME	DATA File	init. ml/g	ALS #	Dil	Inj. Time	Comments	+ P
	pos blk	>E3121	25ml	9		[illegible]	OK NG	
	pos blk	>E3122	↓	10			OK	

R : redo , P : Aroclor search , + : Plus search

Attachment 4

August 27, 1990 "Foundry Sand" Excavation performed by WMI

TEAM, Inc.

REPORT OF ACTIVITIES

EXCAVATION OF SOILS AT WASTE MANAGEMENT, INC.-ROCKFORD

ROSCOE, ILLINOIS

FOR:
WASTE MANAGEMENT OF NORTH AMERICA, INC.
W124 N8925 BOUNDARY ROAD
MENOMONEE FALLS, WI 53051
(414) 251-4000

SEPTEMBER 1990

CONDUCTED BY:
TEAM, INC.
207 EAST 127TH STREET
LEMONT, IL 60439
(708) 257-6060

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APPENDIX 1 Photographs of Excavation Activities

APPENDIX 2 Sample Descriptions

LIST OF FIGURES

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EXECUTIVE SUMMARY

Waste Management, Inc.-Rockford had determined from previous investigations that an area at the site required removal of materials referred to as the foundry sand. On April 30, 1990 excavation of the area was initiated. Vials containing an unknown substance and two 55-gallon drums were uncovered. As a result, the excavation was stopped until the materials were analyzed and the excavation activities were scheduled to continue at a later date. Laboratory analysis indicated that the liquid in the vials was hazardous for flash point.

On August 27, 1990, excavation of contaminated soils in an area located in the northeast corner of WMI-Rockford's facility was initiated. The companies which were contracted to complete the work regarding the excavation were: TEAM, Inc., Johns Excavating and Chemical Waste Management, Inc. (CWM). The vials which were excavated were sorted and packaged by CWM personnel. The excavating and soil transportation was completed by Johns Excavating and the field soil testing was completed by TEAM, Inc. An observed total of 162, 16-gallon capacity blue drums of vials were collected and 1,380 cubic yards of material were removed from the excavation. The material was transported to Mallard Ridge Landfill in Delavan, Wisconsin. The excavation was filled in with off-site borrow soils after the removal of contaminated soils. The completion date of the excavation was September 14, 1990.

1.0 PURPOSE

One objective of the project was to remove the black foundry sand. All materials which exhibited readings on an Organic Vapor Monitor (OVM) at levels greater than 7 parts per million (ppm) were to be removed. The 7 ppm level was specified by Waste Management, Inc. (WMI) personnel. This included the removal of the natural soils which underlie the foundry sand and exhibited readings higher than 7 ppm on the OVM. A second objective of the project was to remove the vials which had been discovered in the northeast portion of the excavation area. The final objective of the project was to backfill the excavated area with off-site borrow soils.

2.0 PREVIOUS ACTIVITIES

On April 30, 1990 excavation activities at the Waste Management, Inc.-Rockford facility were initiated. Johns Excavating was retained by WMI to conduct the excavation procedures. TEAM, Inc. was retained by WMI to conduct field screening of soils for organic vapors using an OVM. An initial excavation was started adjacent to the northwest corner of the Storage/Tire Shop building. During this excavation, vials were uncovered. These vials contained unknown substances which were in liquid, solid and semi-solid form. In addition to the vials, two crushed 55-gallon drums were excavated. Since the presence of the vials and drums were unexpected, all excavating activities were stopped until further notice. The contents of the vials and the drums were sent to a laboratory and analyzed for volatile organics. The resulting laboratory analysis indicated that the liquid in the vials was hazardous for flash point.

3.0 SCOPE

Since the liquid in the vials was determined by laboratory analysis to be hazardous for flash point, Chemical Waste Management (CWM) was retained by WMI to remove from the soil, package and dispose of the vials.

Johns Excavating was retained by WMI to conduct the removal of the contaminated soils and to place off-site borrow soils into the excavation. Excavation of the contaminated soils was conducted using a backhoe which in turn loaded dump trucks. The contaminated soils were then transported to Mallard Ridge Landfill located in Delavan, Wisconsin. The off-site borrow soil was transported at a later date to the site in the same dump trucks and placed in the excavation using a front end loader. TEAM, Inc. was retained by WMI to field screen soil samples from the excavation in order to determine the limits of the contaminated material both vertically and horizontally.

4.0 SUMMARY OF ACTIVITIES

On August 27, 1990, excavation activities to remove the black foundry sand and the vials resumed. The excavation period lasted from August 27 to September 14, 1990. Appendix 1 contains photographs of the excavation activities.

4.1 EXCAVATION

4.1.1 Vials

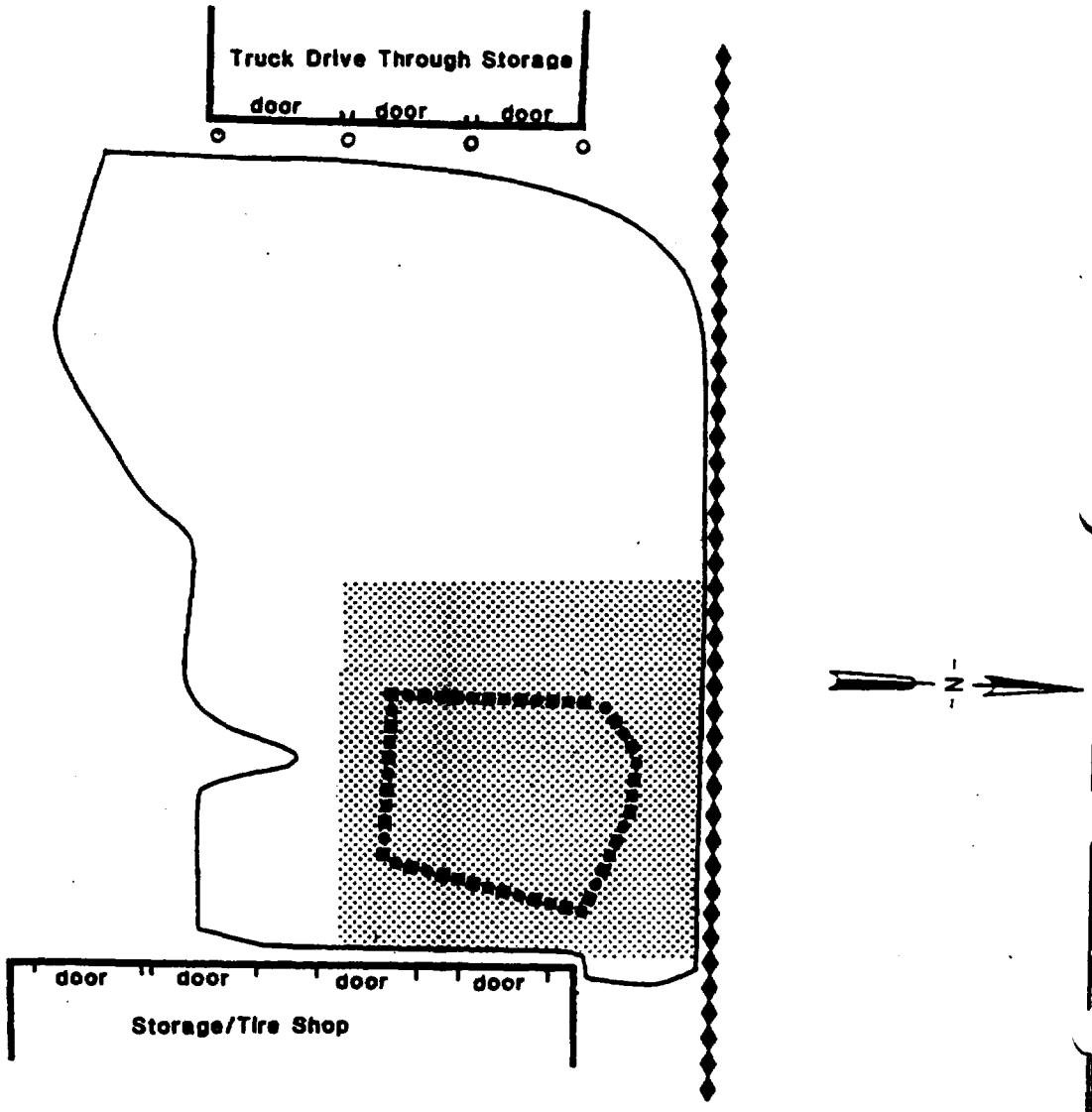
During the first week of the excavation, CWM personnel hand sorted through piles which were a mixture of the foundry sand and the vials. The material to be separated was placed on the surface by the backhoe. On September 5, 1990, an electrically operated soil screen was delivered to the site. Separation of the vials and the foundry sand was conducted using this screen. The backhoe was used to remove the soils from the ground and place them on the operating screen.

The heaviest concentration of vials appeared to be in an 18-inch thick layer. The bottom of the vial layer appeared to be the contact between the black foundry sand and the natural sand and gravel. Some of the vials appeared to have been in cardboard boxes, which had become wet, torn and no longer held the vials. Some of the vials and cardboard boxes had pink lettering on them, but the letters were illegible. The boxes of vials appeared to have been placed on wooden pallets, which were found among the vials during excavation.

The excavated vials were wiped of excess soil and placed in 16-gallon, blue plastic drums. These drums were filled to approximately 3/4 capacity. Each drum was then topped off with an absorbent material, sealed and labelled with the appropriate hazardous waste labels. Removal of the vials from the soil was completed on September 12, 1990. The drums which contain the vials will be transported by CWM personnel and incinerated at a permitted facility. At the present time the drums are stored in the Storage/Tire Shop building on wooden pallets, marked with the appropriate hazardous waste labels and surrounded by "CAUTION" markers. TEAM observed 162 blue drums containing the vials. Figure 1 shows the area of the excavation over which the vials were located.

FIGURE 1

Vial Locations



excavation limit

fence

area containing vials

area excavated of turpentine odor

SCALE 1" = 20'	PROJECT WMI-ROCKFORD
DATE 9/90	SHEET TITLE VIAL LOCATIONS
TEAM, Inc. 707 East 127th Street Lemont, IL 60439 (708) 257-6060	SHEET ___ OF ___ DRAWING NO. FIGURE 1

4.1.2 Soils

The excavation was started near the northeast corner of the Truck Drive Through Storage building and progressed in a southerly direction. The reason that the excavation progressed in this manner was because the vials had to be removed from the soil before excavation of that area could be completed. The area containing the vials was next to the Storage/Tire Shop building and the CWM people needed to conduct the vial removal activities in that area. Excavation was conducted using a Bantam backhoe with a 1 cubic yard capacity shovel. Three dump trucks, each with a 15 cubic yard capacity, were used to transport the excavated material to Mallard Ridge Landfill located in Delavan, Wisconsin. A total of 1,380 cubic yards of material was removed from the excavation. The measured roundtrip mileage was 61 miles.

The general stratigraphy noted during the excavation was as follows: black foundry sand containing vials, wood, aluminum cans, bricks and debris ranged in thickness from 4 feet to 8 feet. Directly under the black foundry sand was a natural looking reddish brown sand and gravel approximately 1 to 2 feet thick. The reddish brown sand was not continuous throughout the excavation. Under the reddish brown sand and gravel was a light brown/yellow sand and gravel. Figure 1 shows the excavation limits.

4.1.3 Natural materials exhibiting an odor

An area, approximately 20 feet by 25 feet, which was located under where the vials were found, appeared wet and exhibited a odor. To the TEAM representative, this odor was similar to a mixture of turpentine and camphor. This odor was present in the light brown/yellow natural sand and gravel which was under the black foundry sand. Readings taken on this wet sand and gravel with the OVM were initially 544 ppm. As a result, this wet sand and gravel was excavated to a depth of approximately 12 feet below the ground surface. Readings taken with the OVM at the 12 foot depth were 0 ppm, but the turpentine/camphor odor was present. WMI personnel were informed of this situation and approved backfilling of this area. Figure 1 shows the area which was excavated.

4.2 TESTING

4.2.1 Soils for OVM analysis

TEAM, Inc. conducted field screening of the soils using an OVM. Soil samples were obtained from the walls and the floors of the excavation. WMI personnel determined that a reading of 7 ppm on the OVM was the upper limit of uncontaminated soils. Each soil sample was placed in a clean glass jar, covered with aluminum foil and set aside for approximately 10 minutes. The aluminum foil was then pierced with the tip of the OVM probe and a reading was taken. If the reading was less than 7 ppm, the soils were considered uncontaminated and the excavation did not proceed any further (for a wall sample) or deeper (for a floor sample). The depth over the area of the excavation ranged from 5 feet below ground surface to 12 feet below ground surface with an average depth of approximately 8 feet below ground surface. All of the excavation walls were maintained close to vertical.

Northern expansion of the excavation was limited by the existence of the property line, which is designated by a four foot high chain link fence. Therefore, any contaminated material which existed in the northern wall of the excavation could not be removed because the property north of the fence is not owned by WMI. The edge of the excavation was approximately one foot south of the fence. An OVM reading of 65 ppm was taken on the north wall, in the northeast corner of the excavation. Moving in a westerly direction along the north wall, the readings from the OVM were 12 ppm, 4 ppm and 82 ppm. All readings were taken in the black foundry sand approximately 1.5 feet from the base of the layer.

Vials were noted in the north wall along the property line after excavation of the northeast portion of the area. However, no further excavation was conducted due to the existence of the property line and chain link fence. All visible bottles were removed from the north wall prior to backfilling.

Western expansion of the excavation was limited by the existence of the Truck Drive Through Storage building. Therefore, any contaminated material which existed in the west wall of the excavation could not be removed because the structural integrity of the Truck Drive Through Storage building would have been damaged. An OVM reading of 82 ppm was taken on the west wall, in the northwest corner of the excavation and a reading of 1 ppm was taken in the center of the west wall. The readings were taken in the lower half of the black foundry sand.

Eastern expansion of the excavation was limited by the existence of the Storage/Tire Shop building. Therefore, any contaminated material which existed in the east wall of the excavation could not be removed because the structural integrity of the Storage/Tire Shop building would have been damaged. An OVM reading of 154 ppm was taken on the east wall, on the northern portion of the excavation wall and a reading of 5 ppm was taken on the southern portion of the east wall. The readings were taken in the lower half of the black foundry sand.

Southern expansion of the excavation was not limited by the existence of property lines or permanent structures. Therefore, all contaminated materials could be removed from the excavation before backfilling with off-site borrow soils. All readings taken from the south wall of the excavation were below 7 ppm, which is considered uncontaminated. The readings were taken in the lower half of the black foundry sand. When the excavation was complete, the soils which were the floor of the excavation had readings from the OVM below 7 ppm, and were therefore considered uncontaminated.

4.2.2 Soils for laboratory analysis

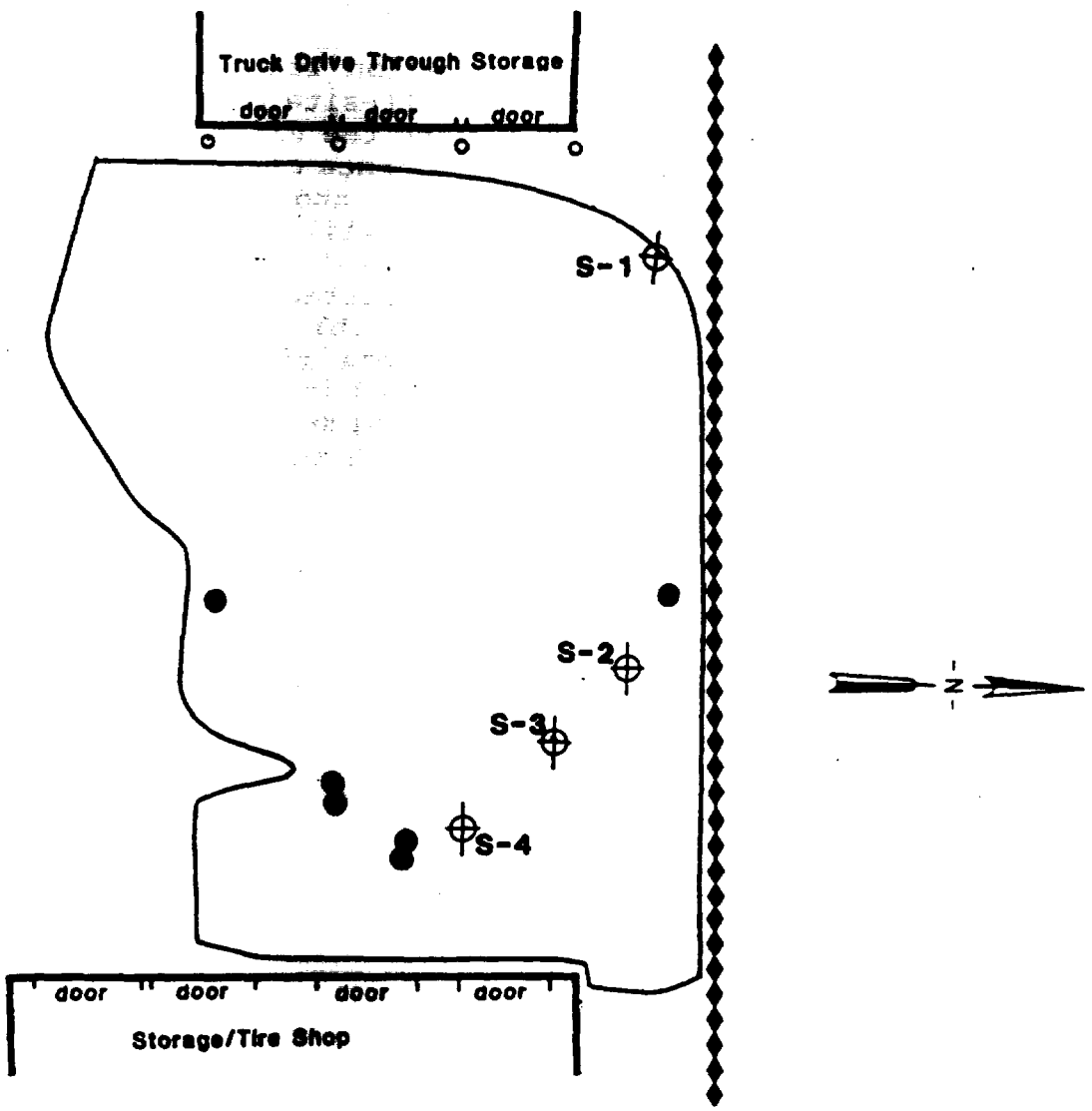
Four soil samples were obtained from various positions in the excavation. These samples were submitted to a laboratory for Volatile Organic Analysis using Method 8240. These samples were designated S-1 through S-4. WMI was responsible for sample delivery to the laboratory and the analysis data will be given to WMI personnel. The locations of these samples are shown on Figure 2. A description of the samples is given in Appendix 2.

4.2.3 Material from drum for laboratory analysis

A total of six drums were removed from the excavation. Five of the drums were crushed and contained a small number of vials. One of the drums was not crushed and contained blackened, metal-like shavings. A sample of the shavings was obtained and sent to a laboratory for TCLP analysis. This sample was designated D-1.

FIGURE 2

Sample and Drum Locations



excavation limit

fence

approximate drum location

approximate laboratory sample location

SCALE 1" = 20'	PROJECT WMI-ROCKFORD
DATE 9/90	SHEET TITLE SAMPLE AND DRUM LOCATIONS
TEAM, Inc. 207 East 127th Street Lemont, IL 60439 (708) 257-0000	SHEET ___ OF ___ DRAWING NO. FIGURE 2

4.3 Backfilling of excavation

Backfilling of the excavation was conducted in stages. The west half was filled with off-site borrow soils while the east half was being excavated and the vials were being removed. WMI personnel approved this sequence of excavation and backfilling and the off-site borrow soils and contaminated soils were not mixed. The source of the backfill was approximately 1/4 mile to the south of the WMI-Rockford facility. The backfill, which is a brown clayey soil, was tested using the OVM and a reading of 1 ppm was obtained. Since this reading was below the 7 ppm limit established by WMI, the fill material was considered off-site borrow and was hauled in on the trucks that were used to transport the material which was excavated. The backfill was placed to final grade with the aid of a front end loader.

APPENDIX 1

PHOTOGRAPHS OF ACTIVITIES

Descriptions

1. Completed excavation of the western half of the area, looking north.

2. Completed excavation of the western half of the area, looking south.

3. Completed excavation of the eastern half of the area, looking northwest. The deeper excavation in the center of the picture is the area which had the turpentine/camphor odor. The upper left corner of the photo shows that the west half of the excavation had been backfilled with off-site borrow soils.

4. Completed excavation of the eastern half of the area, looking southwest.

5. Completed excavation of the south portion of the area, looking west. The brown soils shown on the right side of the photo are the off-site borrow soils used to backfill the excavation. In this photo the west half of the excavation has been backfilled and additional soil has been stockpiled on it for filling of the eastern half of the excavation.

6. Excavated material loaded in a truck for transport to the landfill.

7. 18-inch thick layer of vials which lie directly on the natural sand and gravel.

8. Closer view of the vial layer which is in contact with the natural sand and gravel.

9. General view of vial and soil mixture.

10. The wood in this photo is believed to have been a pallet on which the vials were stored. There are also vials scattered in the soil and around the wood.

11. View of the vials which were found on the north wall along the property line.

12. View of 1 cubic yard of material taken from the area where the vials were found. CWM personnel hand sorted through these piles before the mechanical screen was brought on the site.

13. Front view of the mechanical screen.

14. Back view of the mechanical screen.

15. View of screen and CWM personnel sorting the vials from the soil.

16. CWM personnel collecting the vials which are separated from the soil.

17. View of the soils which previously contained vials, after passing through the screen. This soil was then transported to Mallard Ridge Landfill for disposal.

18. View of 16-gallon blue drum filled to the limit of vials. An absorbent was placed in each drum prior to placing the final seal.

19. Portion of the drums which contain the vials. These drums are stored in the Storage/Tire Shop building.

20. Remainder of the drums which contain the vials and are stored in the Storage/Tire Shop building.

21. Photograph showing that each drum was labelled with hazardous waste stickers. These stickers did show the accumulation dates.

22. Crushed drum being removed from the excavation.

23. View of a crushed drum.

24. View of the only non-crushed drum. This drum contained metal-like shavings. A sample was taken for TCLP analysis at a laboratory.

APPENDIX 2

SAMPLE DESCRIPTION

S-1 Was taken in the northwest corner of the excavation. This sample was taken from the foundry sand approximately 1 1/2 feet above the natural soils. This sample was taken because a previous OVM reading from this area indicated that the foundry sand had 82 ppm. A volatile organics analysis will be completed on this sample.

S-2 Was taken under a heavy concentration of vials. This sample was taken from the reddish brown sand which was directly under the black foundry sand. The OVM reading on this sand was 0 ppm. A volatile organics analysis will be completed on this sample.

S-3 Was taken from an area under where the vials were located. This sample was taken from the light brown/yellow sand and gravel. The sand and gravel of this sample looked wet and had an odor of turpentine and camphor mixed. The OVM reading on this sand was 544 ppm. A volatile organics analysis will be completed on this sample.

S-4 Was taken from an area which had been excavated vertically to remove the turpentine and camphor odor. This sample was taken from the light brown/yellow sand and gravel. The OVM reading on this sand was 0 ppm, but the odor was still present. A volatile organics analysis will be completed on this sample.

D-1 Was taken from a drum which was removed from the excavation. This sample was taken from the inside of the drum which was filled with black material and metal-like shavings. The drum had an odor but the OVM measured 4 ppm. Total TCLP analysis will be completed on this sample.

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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

10/02/1990

Sample No: 80299
Job No: 90.2356

SAMPLE DESCRIPTION: S-1, Foundry Sand

Date Taken: 09/05/1990

Date Received: 09/05/1990

Solids, Total	88.5	%
VOLATILE COMPOUNDS - 8240		
Acrolein	<2000.	ug/kg
Acrylonitrile	<2000.	ug/kg
Benzene	<100.	ug/kg
Bromodichloromethane	<100.	ug/kg
Bromoform	<100.	ug/kg
Bromomethane	<100.	ug/kg
Carbon tetrachloride	<100.	ug/kg
Chlorobenzene	<100.	ug/kg
Chloroethane	<100.	ug/kg
2-Chloroethyl vinyl ether	<6000.	ug/kg
Chloroform	<100.	ug/kg
Chloromethane	<100.	ug/kg
Dibromochloromethane	<100.	ug/kg
1,2-Dichlorobenzene	<100.	ug/kg
1,3-Dichlorobenzene	<100.	ug/kg
1,4-Dichlorobenzene	<100.	ug/kg
1,1-Dichloroethane	<100.	ug/kg
1,2-Dichloroethane	<100.	ug/kg
1,1-Dichloroethene	<100.	ug/kg
trans-1,2-Dichloroethene	<100.	ug/kg
cis-1,2-Dichloroethene	<100.	ug/kg
1,2-Dichloropropane	<100.	ug/kg
cis-1,3-Dichloropropene	<100.	ug/kg

High VOC detection limit due to matrix interference.

Brian Wanner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

10/02/1990

Sample No: 80299
Job No: 90.2356

SAMPLE DESCRIPTION: S-1, Foundry Sand

Date Taken: 09/05/1990

Date Received: 09/05/1990

trans-1,3-Dichloropropene	<100.	ug/kg
Ethylbenzene	<100.	ug/kg
Methylene chloride	<100.	ug/kg
1,1,2,2-Tetrachloroethane	<100.	ug/kg
Tetrachloroethene	<100.	ug/kg
Toluene	<100.	ug/kg
1,1,1-Trichloroethane	<100.	ug/kg
1,1,2-Trichloroethane	<100.	ug/kg
Trichloroethene	<100.	ug/kg
Vinyl chloride	<100.	ug/kg
Xylenes	<100.	ug/kg

High VOC detection limit due to matrix interference.

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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

09/30/1990

Sample No: 80414
Job No: 90.2370

SAMPLE DESCRIPTION: S-2 Foundry Sand

Date Taken: 09/06/1990

Date Received: 09/07/1990

Solids, Total	90.7	%
VOLATILE COMPOUNDS - 8240		
Acrolein	<50.	ug/kg
Acrylonitrile	<50.	ug/kg
Benzene	<5.0	ug/kg
Bromodichloromethane	<5.0	ug/kg
Bromoform	<5.0	ug/kg
Bromomethane	<50.	ug/kg
Carbon tetrachloride	<5.0	ug/kg
Chlorobenzene	<5.0	ug/kg
Chloroethane	<50.	ug/kg
2-Chloroethyl vinyl ether	<10.	ug/kg
Chloroform	<5.0	ug/kg
Chloromethane	<50.	ug/kg
Dibromochloromethane	<5.0	ug/kg
1,2-Dichlorobenzene	<5.0	ug/kg
1,3-Dichlorobenzene	<5.0	ug/kg
1,4-Dichlorobenzene	<5.0	ug/kg
1,1-Dichloroethane	<5.0	ug/kg
1,2-Dichloroethane	<5.0	ug/kg
1,1-Dichloroethene	<5.0	ug/kg
trans-1,2-Dichloroethene	<5.0	ug/kg
cis-1,2-Dichloroethene	<5.0	ug/kg
1,2-Dichloropropane	<5.0	ug/kg
cis-1,3-Dichloropropene	<5.0	ug/kg

Brian Wanner, Manager
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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

09/30/1990

Sample No: 80414
Job No: 90.2370

SAMPLE DESCRIPTION: S-2 Foundry Sand

Date Taken: 09/06/1990

Date Received: 09/07/1990

trans-1,3-Dichloropropene	<5.0	ug/kg
Ethylbenzene	<5.0	ug/kg
Methylene chloride	<25.	ug/kg
1,1,2,2-Tetrachloroethane	<5.0	ug/kg
Tetrachloroethene	<5.0	ug/kg
Toluene	<5.0	ug/kg
1,1,1-Trichloroethane	<5.0	ug/kg
1,1,2-Trichloroethane	<5.0	ug/kg
Trichloroethene	<5.0	ug/kg
Vinyl chloride	<50.	ug/kg
Xylenes	<5.0	ug/kg

Brian Wanner, Manager
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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

11/26/1990

Sample No: 80566
Job No: 90.2396

SAMPLE DESCRIPTION: Rockford/Sand & Gravel S-3

Date Taken: 09/07/1990

Date Received: 09/10/1990

Solids, Total	92.98	%
VOLATILE COMPOUNDS - 8240		
Acrolein	<5000.	ug/kg
Acrylonitrile	<5000.	ug/kg
Benzene	<500.	ug/kg
Bromodichloromethane	<500.	ug/kg
Bromoform	<500.	ug/kg
Bromomethane	<5000.	ug/kg
Carbon tetrachloride	<500.	ug/kg
Chlorobenzene	<500.	ug/kg
Chloroethane	<5000.	ug/kg
2-Chloroethyl vinyl ether	<1000.	ug/kg
Chloroform	<500.	ug/kg
Chloromethane	<5000.	ug/kg
Dibromochloromethane	<500.	ug/kg
1,2-Dichlorobenzene	<500.	ug/kg
1,3-Dichlorobenzene	<500.	ug/kg
1,4-Dichlorobenzene	<500.	ug/kg
1,1-Dichloroethane	<500.	ug/kg
1,2-Dichloroethane	<500.	ug/kg
1,1-Dichloroethene	<500.	ug/kg
trans-1,2-Dichloroethene	<500.	ug/kg
cis-1,2-Dichloroethene	<500.	ug/kg
1,2-Dichloropropane	<500.	ug/kg
cis-1,3-Dichloropropene	<500.	ug/kg

High VOA detection limit due to hydrocarbon interference.

Brian Wanner, Manager
Rockford Division

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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

11/26/1990

Sample No: 80566
Job No: 90.2396

SAMPLE DESCRIPTION: Rockford/Sand & Gravel S-3

Date Taken: 09/07/1990

Date Received: 09/10/1990

trans-1,3-Dichloropropene	<500.	ug/kg
Ethylbenzene	<500.	ug/kg
Methylene chloride	<2500.	ug/kg
1,1,2,2-Tetrachloroethane	<500.	ug/kg
Tetrachloroethene	<500.	ug/kg
Toluene	<500.	ug/kg
1,1,1-Trichloroethane	<500.	ug/kg
1,1,2-Trichloroethane	<500.	ug/kg
Trichloroethene	<500.	ug/kg
Vinyl chloride	<5000.	ug/kg
Xylenes	<500.	ug/kg

High VOA detection limit due to hydrocarbon interference.

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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

11/28/1990

Sample No: 80836
Job No: 90.2491

SAMPLE DESCRIPTION: S-4, Sand-Gravel

Date Taken: 09/13/1990

Date Received: 09/14/1990

Solids, Total	97.27	%
VOLATILE COMPOUNDS - 8240		
Acrolein	<50.	ug/kg
Acrylonitrile	<50.	ug/kg
Benzene	<5.0	ug/kg
Bromodichloromethane	<5.0	ug/kg
Bromoform	<5.0	ug/kg
Bromomethane	<50.	ug/kg
Carbon tetrachloride	<5.0	ug/kg
Chlorobenzene	<5.0	ug/kg
Chloroethane	<50.	ug/kg
2-Chloroethyl vinyl ether	<10.	ug/kg
Chloroform	<5.0	ug/kg
Chloromethane	<50.	ug/kg
Dibromochloromethane	<5.0	ug/kg
1,2-Dichlorobenzene	<5.0	ug/kg
1,3-Dichlorobenzene	<5.0	ug/kg
1,4-Dichlorobenzene	<5.0	ug/kg
1,1-Dichloroethane	<5.0	ug/kg
1,2-Dichloroethane	<5.0	ug/kg
1,1-Dichloroethene	<5.0	ug/kg
trans-1,2-Dichloroethene	<5.0	ug/kg
cis-1,2-Dichloroethene	<5.0	ug/kg
1,2-Dichloropropane	<5.0	ug/kg
cis-1,3-Dichloropropene	<5.0	ug/kg

Brian Wanner, Manager
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ANALYTICAL REPORT

Mr. Phil Stephenson
WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

11/28/1990

Sample No: 80836
Job No: 90.2491

SAMPLE DESCRIPTION: S-4, Sand-Gravel

Date Taken: 09/13/1990

Date Received: 09/14/1990

trans-1,3-Dichloropropene	<5.0	ug/kg
Ethylbenzene	<5.0	ug/kg
Methylene chloride	<25.	ug/kg
1,1,2,2-Tetrachloroethane	<5.0	ug/kg
Tetrachloroethene	<5.0	ug/kg
Toluene	<5.0	ug/kg
1,1,1-Trichloroethane	<5.0	ug/kg
1,1,2-Trichloroethane	<5.0	ug/kg
Trichloroethene	<5.0	ug/kg
Vinyl chloride	<50.	ug/kg
Xylenes	<5.0	ug/kg

Brian Wanner, Manager
Rockford Division

NET Midwest Inc.
3548 35th Street
Rockford IL 61109

815-874-2171

Invoice No. 33521

Date: 11/28/1990
P.O. NO. :
ACCOUNT NO. 24375

PLEASE REMIT TO:

NET - MIDWEST, Dept. 4
850 W. Bartlett Rd.
Bartlett IL 60103

WASTE MANAGEMENT
P.O. Box 590
Roscoe, IL 61073

ATTN: Accounts Payable

SAMPLE NO.	DESCRIPTION	AMOUNT	EXTENSION
80566	Rockford/Sand & Gravel		
80566	Solids, Total	$10.00	$10.00
80566	VOLATILE COMPOUNDS - 8240	$280.00	$280.00

TOTAL $290.00

JOB DESCRIPTION:

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

ENVIRONMENTAL SERVICES

LABORATORY REPORT

10/03/90

W492 8455122 W31
CA/* / / /

WASTE MANAGEMENT-ROCKFORD
P.O. BOX 590 13125 N. 2ND ST.
ROSCOE ,IL 61073
ATTN: LEN CERRENTANO

SAMPLE 90257-W09068 WMA037225 BACKYARD DRUM SLUDGE D-1
DATE COLLECTED 09/13/90 DATE RECEIVED 09/14/90

TEST NAME	RESULT	UNITS	EP RESULT	TCLP RESULT		LIMIT
				<0.1	MG/L	200.0
[illegible]YL ETHYL KETONE-TCLP				<0.1	MG/L	0.5
BENZENE-TCLP				<0.1	MG/L	0.5
CARBON TETRACHLORIDE-TCLP				<0.1	MG/L	6.0
CHLOROFORM-TCLP				<0.1	MG/L	0.5
1,2 DICHLOROETHANE-TCLP				<0.1	MG/L	0.7
1,1 DICHLOROETHYLENE-TCLP				<0.1	MG/L	0.7
TETRACHLOROETHYLENE-TCLP				<0.1	MG/L	0.2
VINYL CHLORIDE-TCLP				<0.1	MG/L	100.0
[illegible]BENZENE-TCLP				<0.1	MG/L	0.5
[illegible]LOROETHYLENE-TCLP				<0.1	MG/L	3.0
HEXACHLOROETHANE-TCLP				<1.0	MG/L	5.0
PYRIDINE-TCLP				<0.1	MG/L	7.5
1,4-DICHLOROBENZENE-TCLP				<0.1	MG/L	0.13
2,4-DINITROTOLUENE-TCLP				<0.1	MG/L	0.13
HEXACHLOROBENZENE-TCLP				<0.1	MG/L	0.5
HEXACHLOROBUTADIENE-TCLP				<0.1	MG/L	2.0
[illegible]ROBENZENE-TCLP				<2.0	MG/L	400.0
2,4,5-TRICHLOROPHENOL-TCLP				<2.0	MG/L	100.0
PENTACHLOROPHENOL-TCLP				<2.0	MG/L	2.0
2,4,6-TRICHLOROPHENOL-TCLP				<6.0	MG/L	
CRESOLS (O,M, AND P) TCLP				N/T	MG/L	0.5
TOXAPHENE - TCLP				N/T	MG/L	0.03
CHLORDANE-TCLP				N/T	MG/L	0.02
ENDRIN-TCLP				N/T	MG/L	0.008
HEPTACHLOR-TCLP				N/T	MG/L	
HEPTACHOLR EPOXIDE - TCLP				N/T	MG/L	0.4
LINDANE (GAMMA BHC)-TCLP				N/T	MG/L	10.0
METHOXYCHLOR-TCLP				N/T	MG/L	10.0
2,4-D-TCLP				N/T	MG/L	1.0
2,4,5-TP (SILVEX)-TCLP				<0.010	MG/L	5.0
ARSENIC - TOTAL	3.2	PPM				

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

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

W492 8455122 W31
CA/* / / /

WASTE MANAGEMENT-ROCKFORD
P.O. BOX 590 13125 N. 2ND ST.
ROSCOE ,IL 61073
ATTN: LEN CERRENTANO

SAMPLE 90257-W09068 WMA037225 BACKYARD DRUM SLUDGE D-1
DATE COLLECTED 09/13/90 DATE RECEIVED 09/14/90

TEST NAME	RESULT	UNITS	EP RESULT	TCLP RESULT		LIMIT
BARIUM - TOTAL	16	PPM		0.54	MG/L	100.0
CADMIUM - TOTAL	7.8	PPM		0.02	MG/L	1.0
CHROMIUM - TOTAL	130	PPM		0.05	MG/L	5.0
LEAD - TOTAL	36	PPM		0.22	MG/L	5.0
MERCURY - TOTAL	0.016	PPM		<0.0004	MG/L	0.2
SELENIUM - TOTAL	<0.20	PPM		<0.020	MG/L	1.0
SILVER - TOTAL	0.11	PPM		<0.02	MG/L	5.0
CONFIRMATION ?	YES	PPM				
	PER PHILLIP STEVENSON TO BL 10-3-90					
COPPER - TOTAL	680	PPM		0.05	MG/L	
NICKEL - TOTAL	72	PPM		<0.06	MG/L	
ZINC - TOTAL	140	PPM				
% CHLORINE	0.20	%				
COLOR	BLACK					
LAYERS	NONE					
ODOR	STRONG					
PHYSICAL STATE	SOLID	PPM				
FREE LIQUIDS	0	%				
WATER SOLUBILITY		PPM				
	PARTIALLY SOLUBLE					
FLASH POINT (FAHRENHEIT)	200	DEG. F				140.0
	OPEN - CUP					
PH (UNITS)	8.5					2.0-12.5
	PH MEASURED AS SOLID IN WATER.					
SPECIFIC GRAVITY	2.99	G/ML				
TOTAL SOLIDS	86	%				
PHENOLICS	14	PPM				
TOTAL CYANIDE	<10	PPM				
REACTIVE SULFIDE	0.21	PPM				
PCB'S - SOLIDS, OIL, WASTE	<10	@ PPM				
TCLP EXT. NON-VOLATILE				COMPLETE	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

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

'90 LABORATORY REPORT

W492 8455122 W31
CA/* / / /

WASTE MANAGEMENT-ROCKFORD
P.O. BOX 590 13125 N. 2ND ST.
ROSCOE ,IL 61073
ATTN: LEN CERRENTANO

SAMPLE 90257-W09068 WMA037225 BACKYARD DRUM SLUDGE D-1
DATE COLLECTED 09/13/90 DATE RECEIVED 09/14/90

TEST NAME	RESULT	UNITS	EP RESULT	TCLP RESULT	LIMIT
	9/18/90				
TCLP EXT. VOLATILE				COMPLETE	PPM
	9/17/90				
GCMS AROCLOR 1016	N/T	PPM			
GCMS AROCLOR 1221	N/T	PPM			
GCMS AROCLOR 1232	N/T	PPM			
GCMS AROCLOR 1242	N/T	PPM			
GCMS AROCLOR 1248	N/T	PPM			
GCMS AROCLOR 1254	N/T	PPM			
AROCLOR 1260	N/T	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

Attachment 5

January 1990 Soil Investigation on adjacent property prior to purchase by WMI

REPORT OF INVESTIGATION:

Soil Sampling Activities

Roscoe, Illinois

FOR:
WASTE MANAGEMENT OF WISCONSIN
W 124 N 8925 BOUNDARY ROAD
MENOMONEE FALLS, WI 53051

FEBRUARY 1990

CONDUCTED BY:
TEAM, INC.
207 EAST 127TH STREET
LEMONT, IL 60439
(708) 257-6060

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1.0 PURPOSE

Total Environmental Assessment and Management, Inc. (TEAM) was retained by Waste Management, Inc. (WMI) to perform soil boring and sampling activities at two properties near WMI's Roscoe facility, located in Roscoe, Illinois.

Soil borings were to be performed, and samples obtained for laboratory analysis, in the eastern portions of the two properties. WMI suspected that fill material, consisting of waste was located on the east portions of the properties. The soil borings performed by TEAM were designed to determine if indeed there is fill, composed of waste, and if the waste produces elevated levels of organic vapors, which in turn would indicate possible contamination.

2.0 SCOPE

Soil borings were to be placed at locations chosen by WMI. At each location, continuous split spoon sampling would occur to a depth of twenty-five feet. Field boring logs were to be prepared of the materials encountered during drilling. Soil samples retrieved while drilling were to be scanned with an organic vapor meter (OVM) equipped with a photoionization detector (PID). One soil sample of the fill material was to be retrieved from each boring where high readings were noted on the OVM, and submitted for laboratory analysis. Table 1 presents the list of parameters for which each sample was analyzed for.

3.0 DRILLING AND SAMPLING

January 22-24, 1990, drilling and sampling activities were performed at the properties near the WMI-Roscoe Facility. The locations of the soil borings performed are illustrated in Figure 1. Field logs prepared for each location are contained in Appendix 1. Tables 2 through 7 contain information regarding sampling depths and readings obtained with the OVM.

According to a map entitled "Quaternary Deposits of Illinois" compiled by Jerry A. Lineback, the quaternary deposits that underlie these sites are a combination of the Cahokia Alluvium which overlies portions of the Mackinaw Member of the Henry Formation. In general, these units are sand and gravel deposits. A detailed description of the Cahokia Alluvium and Mackinaw Member of the Henry Formation is located in Appendix 2.

TABLE 1

LIST OF PARAMETERS

TEST REQUIREMENTS

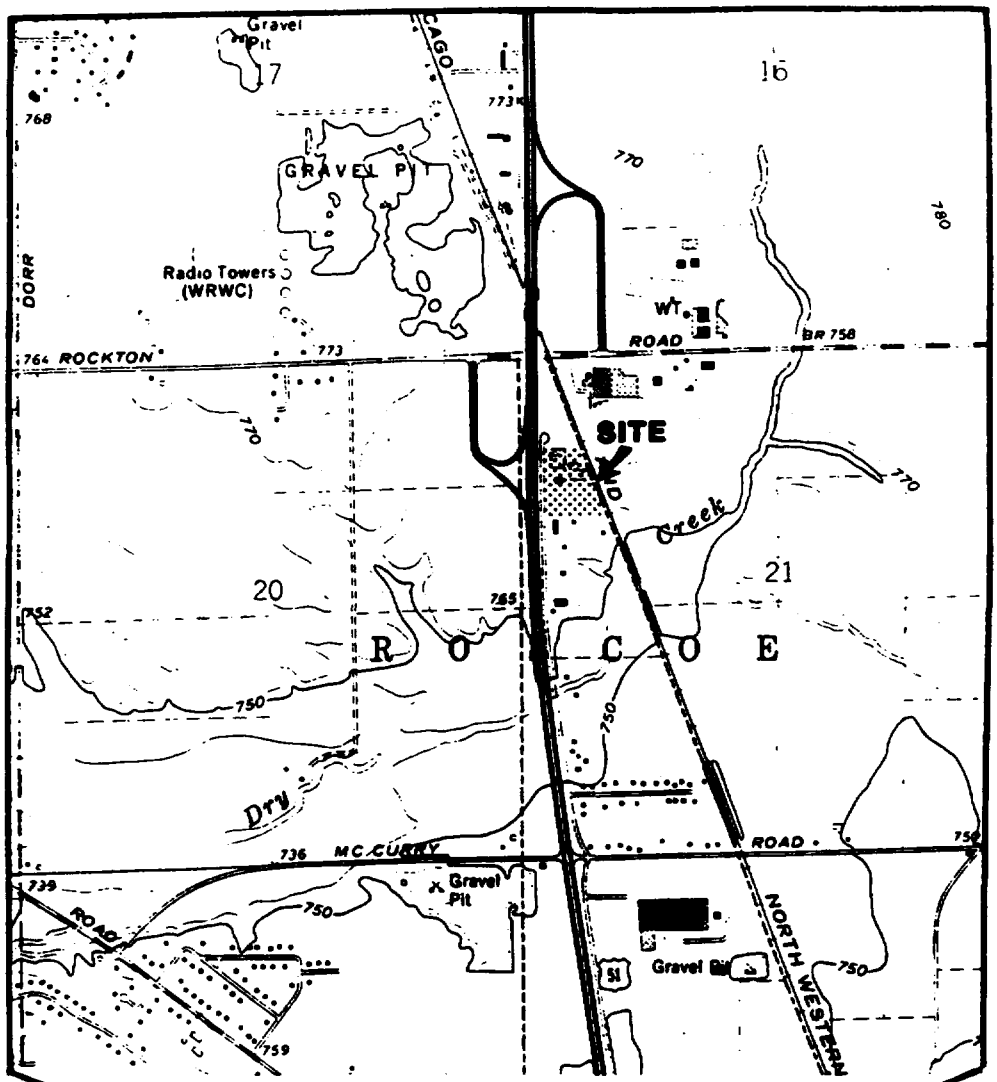
METHODOLOGIES PER SW-846

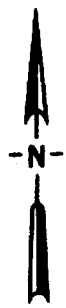
EP Toxic Metals
pH
Flashpoint
Reactive Sulfide
Reactive Cyanide

Chloromethane	74-87-3
Bromomethane	74-83-9
Vinyl Chloride	75-01-4
Chloroethane	75-00-3
Methylene Chloride	75-09-2
Acetone	67-64-1
Carbon Disulfide	75-15-0
1,1-Dichloroethene	75-35-4
1,1-Dichloroethane	75-35-3
trans-1,2-Dichloroethene	156-60-5
Chloroform	67-66-3
1,2-Dichloroethane	107-06-2
2-Butanone	78-93-3
1,1,1-Trichloroethane	71-55-6
Carbon Tetrachloride	56-23-5
Vinyl Acetate	108-05-4
Bromodichloromethane	75-27-4
1,1,2,2-Tetrachloroethane	79-34-5
1,2-Dichloropropane	78-87-5
trans-1,3-Dichloropropene	10061-02-6
Trichloroethene	79-01-6
Dibromochloromethane	124-48-1
1,1,2-Trichloroethane	79-00-5
Benzene	71-43-2
cis-1,3-Dichloropropene	10061-01-5
2-Chloroethyl Vinyl Ether	110-75-8
Bromoform	75-25-2
2-Hexanone	591-78-6
4-Methyl-2-pentanone	108-10-1
Tetrachloroethene	127-18-4
Toluene	108-88-3
Chlorobenzene	108-90-7
Ethyl Benzene	100-41-4
Styrene	100-42-5
Total Xylenes	

FIGURE 1

VICINITY MAP

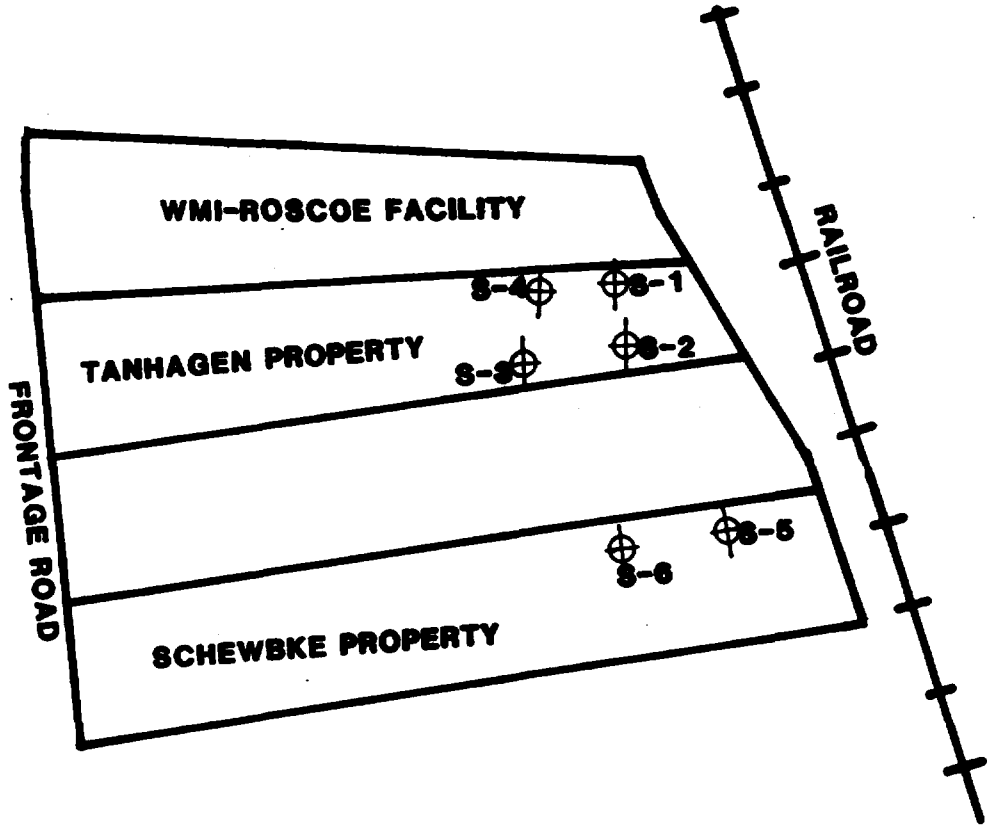




SCALE 1" = 2000'	PROJECT WMI-ROSCOE
DATE 2/90	SHEET TITLE VICINITY MAP
TEAM, Inc.	SHEET ___ OF ___
	FIGURE 1

FIGURE 2

SAMPLING LOCATIONS



SAMPLING LOCATION

-N-

SCALE NONE	PROJECT WMI-ROSCOE
DATE 2/90	SHEET TITLE SAMPLING LOCATIONS
TEAM, Inc. 207 East 157th Street Lemont, IL 60439 (708) 257-4040	SHEET ___ OF ___ DRAWING NO. FIGURE 2

3.1 Soil Boring 1

The location of Soil Boring 1 is illustrated in Figure 1. Continuous split spoon sampling was performed at Boring 1 from the surface to a depth of 25 feet. The field boring log for this location is contained in Appendix 1.

At this location, the following materials were encountered. From ground level to a depth of about 8 inches was topsoil. From 8 inches to a depth of 4 feet, black fill material consisting of sand, cinders, and clay was encountered. Mixed in with this fill material were animal remains, wood pieces, and cloth. From 4 feet to 25 feet was a tan-brown sand that contained substantial amounts of poorly sorted, well rounded gravel. Groundwater was not encountered in the boring.

During the drilling procedure, split spoon samples were scanned with the OVM. The readings obtained while scanning are presented in Table 2.

TABLE 2

Soil Boring 1

Depth Interval	Peak Reading In Split Spoon	Material Description	Comments
0 - 2 ft.	1 ppm	Black fill	
2 - 4 ft.	4 ppm	Black fill	sample S-1 taken
4 - 6 ft.	NR	Tan sand/gravel	
6 - 8 ft.	NR	Tan sand/gravel	
8 - 10 ft.	NR	Tan sand/gravel	
10 - 12 ft.	27 ppm	Tan sand/gravel	
12 - 14 ft.	8 ppm	Tan sand/gravel	
14 - 16 ft.	3 ppm	Tan sand/gravel	
16 - 18 ft.	3 ppm	Tan sand/gravel	
18 - 20 ft.	20 ppm	Tan sand/gravel	
20 - 22 ft.	6 ppm	Tan sand/gravel	
22 - 24 ft.	87 ppm	Tan sand/gravel	
24 - 25 ft.	26 ppm	Tan sand/gravel	

* NR = No response over background levels

3.2 Soil Boring 2

The location of Soil Boring 2 is illustrated in Figure 1. Continuous split spoon sampling was performed at Boring 2 from the surface to a depth of 25 feet. The field boring log for this location is contained in Appendix 1.

At this location, the following materials were found. From the ground level to a depth of about 6 inches was topsoil. From 6 inches to 12 feet was black fill material consisting of sand, cinders and clay. Mixed in with this fill material was bricks, gravel, wood pieces, vegetative material and cloth. From 12 feet to 25 feet was a tan-brown sand that contained a substantial amount of poorly sorted, well rounded gravel. Groundwater was not encountered in the boring.

During the drilling process, the split spoon samples obtained were scanned with the OVM. The levels observed are summarized in Table 3.

TABLE 3

Soil Boring 2

Depth Interval	Peak Reading In Split Spoon	Material Description	Comments
0 - 1.5 ft.	2 ppm	Black fill	
1.5 - 3 ft.	22 ppm	Black fill	sample S-2 taken
3 - 4.5 ft.	5 ppm	Black fill	
4.5 - 6 ft.	16 ppm	Black fill	
6 - 7.5 ft.	5 ppm	Black fill	
7.5 - 9 ft.	6 ppm	Black fill	
9 - 10.5 ft.	6 ppm	Black fill	
10.5 - 12 ft.	7 ppm	Black fill	
12 - 13.5 ft.	3 ppm	Tan sand/gravel	
13.5 - 15 ft.	3 ppm	Tan sand/gravel	
15 - 16.5 ft.	NR	Tan sand/gravel	
16.5 - 18 ft.	3 ppm	Tan sand/gravel	
18 - 19.5 ft.	2 ppm	Tan sand/gravel	
19.5 - 21 ft.	2 ppm	Tan sand/gravel	
21 - 22.5 ft.	3 ppm	Tan sand/gravel	
22.5 - 24 ft.	2 ppm	Tan sand/gravel	
24 - 25 ft.	2 ppm	Tan sand/gravel	

* NR = No response over background levels

3.3 Soil Boring 3

The location of Soil Boring 3 is illustrated in Figure 1. Continuous split spoon sampling was performed at Boring 3 from the surface to a depth of 25 feet. The field boring log for this location is contained in Appendix 1.

At this location, the following materials were found. From the ground level to a depth of about 9 inches was topsoil. From 9 inches to 2 feet was black fill material consisting of sand, cinders and clay. Mixed in with this fill material was gravel, wood pieces, and vegetative material. From 2 feet to 25 feet was a tan-brown sand that contained a substantial amount of poorly sorted, well rounded gravel. The amount of gravel varied with depth. Groundwater was not encountered in the boring.

While drilling at the location of Soil Boring 3, scanning of the split spoon samples was performed with the OVM. Observed readings are summarized in Table 4.

TABLE 4

Soil Boring 3

Depth Interval	Peak Reading In Split Spoon	Material Description	Comments
0 - 1.5 ft.	1 ppm	Black fill	
1.5 - 2 ft.	13 ppm	Black fill	sample S-3 taken
2 - 3 ft.	13 ppm	Tan sand/gravel	
3 - 4.5 ft.	3 ppm	Tan sand/gravel	
4.5 - 6 ft.	NR	Tan sand/gravel	
6 - 7.5 ft.	NR	Tan sand/gravel	
7.5 - 9 ft.	8 ppm	Tan sand/gravel	
9 - 10.5 ft.	4 ppm	Tan sand/gravel	
10.5 - 12 ft.	11 ppm	Tan sand/gravel	
12 - 13.5 ft.	3 ppm	Tan sand/gravel	
13.5 - 15 ft.	3 ppm	Tan sand/gravel	
15 - 16.5 ft.	2 ppm	Tan sand/gravel	
16.5 - 18 ft.	5 ppm	Tan sand/gravel	
18 - 19.5 ft.	3 ppm	Tan sand/gravel	
19.5 - 21 ft.	5 ppm	Tan sand/gravel	
21 - 22.5 ft.	3 ppm	Tan sand/gravel	
22.5 - 24 ft.	5 ppm	Tan sand/gravel	
24 - 25 ft.	3 ppm	Tan sand/gravel	

* NR = No response over background levels

3.4 Soil Boring 4

The location of Soil Boring 4 is illustrated in Figure 1. Continuous split spoon sampling was performed at Boring 4 from the surface to a depth of 25 feet. The field boring log for this location is contained in Appendix 1.

At this location, the following materials were found. From the ground level to a depth of about 7 inches was topsoil. From 7 inches to 1.8 feet was black fill material consisting of sand, cinders and clay. Mixed in with this fill material was gravel, wood pieces, and vegetative material. From 1.8 feet to 25 feet was a tan-brown sand that contained a substantial amount of poorly sorted, well rounded gravel. Groundwater was not encountered in the boring.

The results of scanning the sampled materials from Soil Boring 4 are summarized in Table 5 below. (NOTE: Sample S-4 metals sample jar was broken during transport to the Laboratory. Lab personnel were unable to salvage any soil).

TABLE 5

Soil Boring 4

Depth Interval	Peak Reading In Split Spoon	Material Description	Comments
0 - 1.5 ft.	2 ppm	Black fill	
1.5 - 1.8 ft.	2 ppm	Black fill	sample S-4 taken
1.8 - 3 ft.	2 ppm	Tan sand/gravel	
3 - 4.5 ft.	NR	Tan sand/gravel	
4.5 - 6 ft.	1 ppm	Tan sand/gravel	
6 - 7.5 ft.	1 ppm	Tan sand/gravel	
7.5 - 9 ft.	3 ppm	Tan sand/gravel	
9 - 10.5 ft.	3 ppm	Tan sand/gravel	
10.5 - 12 ft.	2 ppm	Tan sand/gravel	
12 - 13.5 ft.	1 ppm	Tan sand/gravel	
13.5 - 15 ft.	1 ppm	Tan sand/gravel	
15 - 16.5 ft.	NR	Tan sand/gravel	
16.5 - 18 ft.	2 ppm	Tan sand/gravel	
18 - 19.5 ft.	2 ppm	Tan sand/gravel	
19.5 - 21 ft.	3 ppm	Tan sand/gravel	
21 - 22.5 ft.	3 ppm	Tan sand/gravel	
22.5 - 24 ft.	4 ppm	Tan sand/gravel	
24 - 25 ft.	2 ppm	Tan sand/gravel	

* NR = No response over background levels

3.5 Soil Boring 5

The location of Soil Boring 5 is illustrated in Figure 1. Continuous split spoon sampling was performed at Boring 5 from the surface to a depth of 25 feet. The field boring log for this location is contained in Appendix 1.

At this location, the following materials were found. From ground level to about 14 feet a black fill material consisting of cinders was encountered. Mixed in with this fill material was sand, charred wood pieces and bricks. From 14 feet to about 18 feet the cinders were mixed with a brown-tan clay. This clay contained sand, well rounded gravel and appeared to be disturbed. From 18 feet to 25 feet was a tan-brown sand that contained a substantial amount of poorly sorted, well rounded gravel. Groundwater was not encountered in the boring.

The results of scanning the sampled materials from Soil Boring 5 are summarized in Table 5 below.

TABLE 5

Soil Boring 5

Depth Interval	Peak Reading In Split Spoon	Material Description	Comments
0 - 1.5 ft.	NR	Black cinders	
1.5 - 3 ft.	1 ppm	Black cinders	
3 - 4.5 ft.	NR	Black cinders	
4.5 - 6 ft.	NR	Black cinders	
6 - 7.5 ft.	NR	Black cinders/sand	
7.5 - 9 ft.	NR	Black cinders	sample placed in jar
9 - 10.5 ft.	NR	Black cinders	no response with OVM
10.5 - 12 ft.	NR	Black cinders	
12 - 13.5 ft.	NR	Black cinders	
13.5 - 14 ft.	NR	Black cinders	
14 - 15 ft.	NR	Brown clay fill	
15 - 16.5 ft.	NR	Brown clay fill	tested OVM near car
16.5 - 18 ft.	NR	Brown clay fill	fuel tank OVM is
18 - 19.5 ft.	NR	Tan sand/gravel	working properly
19.5 - 21 ft.	NR	Tan sand/gravel	
21 - 22.5 ft.	NR	Tan sand/gravel	
22.5 - 24 ft.	NR	Tan sand/gravel	
24 - 25 ft.	NR	Tan sand/gravel	

* NR = No response over background levels

3.6 Soil Boring 6

The location of Soil Boring 6 is illustrated in Figure 1. Continuous split spoon sampling was performed at Boring 6 from the surface to a depth of 25 feet. The field boring log for this location is contained in Appendix 1.

At this location, the following materials were found. From ground level to about 10.5 feet was black fill material consisting of cinders. Mixed in with this fill material was sand, charred wood pieces and bricks. From 10.5 feet to about 12 feet the cinders grade into clay. From 12 feet to 13.5 feet the clay and cinders grade into a red-brown sand with gravel. From 13.5 feet to 25 feet was a tan-brown sand that contained a substantial amount of poorly sorted, well rounded gravel. Groundwater was not encountered in the boring.

The results of scanning the sampled materials from Soil Boring 6 are summarized in Table 7 below.

TABLE 7

Soil Boring 6

Depth Interval	Peak Reading In Split Spoon	Material Description	Comments
0 - 1.5 ft.	NR	Black cinders	
1.5 - 3 ft.	NR	Black cinders	
3 - 4.5 ft.	1 ppm	Black cinders	sample S-6 taken
4.5 - 6 ft.	NR	Black cinders	
6 - 7.5 ft.	NR	Black cinders	
7.5 - 9 ft.	1 ppm	Black cinders	
9 - 10.5 ft.	NR	Black cinders	
10.5 - 12 ft.	NR	Black cinders/clay	
12 - 13.5 ft.	NR	Black cinders/sand	
13.5 - 15 ft.	2 ppm	Tan sand/gravel	
15 - 16.5 ft.	NR	Tan sand/gravel	tested OVM near car
16.5 - 18 ft.	NR	Tan sand/gravel	fuel tank- OVM
18 - 19.5 ft.	NR	Tan sand/gravel	working properly
19.5 - 21 ft.	1 ppm	Tan sand/gravel	
21 - 22.5 ft.	NR	Tan sand/gravel	
22.5 - 24 ft.	NR	Tan sand/gravel	
24 - 25 ft.	NR	Tan sand/gravel	

* NR = No response over background levels

4.0 RESULTS

It was determined that five soil samples would be submitted to the laboratory. This determination was made based upon the observed odors and OVM readings. No sample was sent in from Boring 5 based on the NR on the OVM over the entire 25 feet.

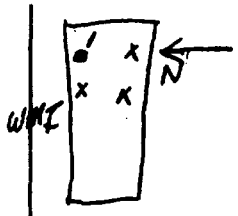
A summary of the laboratory analysis is presented in Appendix 3. The individual laboratory data sheets are also presented in Appendix 3. A review of the summary and data sheets indicates that, for the most part, the concentrations of constituents in all of the samples are at levels which do not pose an environmental concern. Samples S-4 and S-6 did, however, indicate that other volatile organics are present at low concentrations. Sample S-6 also had an elevated level of tetrachloroethene. Soil boring S-1 also exhibited elevated levels of organics, as measured by the OVM.

APPENDIX 1

FIELD SOIL BORING LOGS

FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe, IL



DATUM: GL (MSL) ELEVATION: UK

DRILLING METHOD: hollow stem auger continuous 55 3"
3 1/4 ID augers

SAMPLING METHOD: 3" continuous split spoon

BORING NO.: S-1

SHEET: 1 OF 2

						DRILLING START	DRILLING FINISH
WATER LEVEL						TIME	TIME
TIME						830	1100
DATE						DATE	DATE
CASING DEPTH						1/22/90	1/22/90

DRILL RIG: CME 55

ANGLE: BEARING:

SAMPLE HAMMER TORQUE: 140 lb. FT.-LBS

SURFACE CONDITIONS: Snow on ground, brush + trees

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
									Pebbles = well rounded gravel of varying sizes
	24"		8" top soil / 16" sand						on site 830
1	3-5-7-10		black sand w/pebbles varying sizes						11 got OVM started NR - 0ppm
2	16"		fill sand same as above						NR 2'-4'
3	5-7-10-11		black sand fill, moist						
4	24"		tan-brown sand						
5	4-7-11-13		some large pebbles near top - fairly homogeneous						NR = 0ppm
6	18"		same sand as above took sample S-1 6'-8'						NR
7	7-14-22-27		some pebbles						1140-1200 OVM reset
8	18"		Same sand as above						NR
9	23-21-20-15								
10	18"		Same sand as above much more pebbles						27ppm
11	12-19-27-24		~1" diam - well rounded						
12	21"		same as above						8ppm
13	12-23-22-26								
14	22"		same						3ppm
	18-22-26-25								

DRILLING CONTR

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DATE

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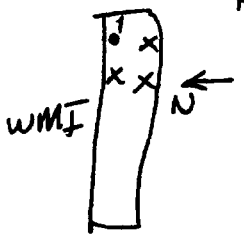
FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe



DATUM GL ELEVATION UK

DRILLING METHOD: 3¼" ID hollow stem

SAMPLING METHOD: 3" od SS Continuous

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

BORING NO. S-1

SHEET 2 OF 2

DRILLING	START	FINISH
TIME	830	1400
DATE	1/22/90	1/22/90

DRILL RIG CME 55

ANGLE BEARING

SAMPLE HAMMER TORQUE 140 lb. FT.-LBS

SURFACE CONDITIONS brush + trees on soil

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
16	20" 7-11-18-24		Brown tan sand, homo few pebbles						3ppm
17									
18	20" 11-21-27-24		Same sand as above						20ppm
19									
20	24" 10-14-19-17		Sand (same)						6ppm
21									
22	24" 13-14-20-27		Same as above						87ppm
23									
24	12" 15-18		Same as above						26ppm
25									

DRILLING CONTR

FS 11236

LOGGED BY

DATE

CHK'D BY

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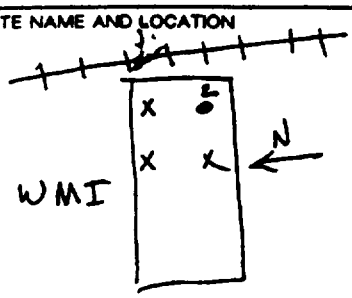
FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION



DATUM GL ELEVATION NK

DRILLING METHOD:	3¼ ID Hollow auger ~~2" SS (18" long)~~
SAMPLING METHOD:	2" od split spoon continuous
BORING NO.	S-2
SHEET	1 OF 2
DRILLING START TIME	1430
DRILLING FINISH TIME	1615
DRILLING START DATE	1/22/90
DRILLING FINISH DATE	1/22/90

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILL RIG CME 55

ANGLE BEARING

SAMPLE HAMMER TORQUE 140 lb. FT.-LBS

SURFACE CONDITIONS brush + trees

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
	14" 2-12-21		6" top soil black sandy fill bricks, pebbles (well rounded gravel)						2ppm
2	13" 9-9-20		same (sample)						22 ppm
	6" 7-10-14		Same as above more sand, black						5ppm poor recovery
4	4" 3-2-2		Same						16ppm
6	6" 2-2-2		black fill material more clay than sand						5ppm
8	14" 2-2-3		same as above cloth noted in spoon veg. material (seeds)						4ppm
10	13" 4-5-5		Same - wood, cloth, brick few pebbles.						
	18" 4-6-7		black clayey fill material						7ppm
12	13" 3-3-3		brown - tan sand w/pebbles						3ppm
14	9" 4-4-3		Same brown sand						3ppm
	0" 4-3-2								

DRILLING CONTR

FS 11237

LOGGED BY

DATE

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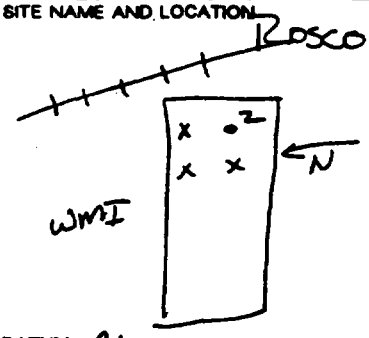
FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe



DATUM: GL ELEVATION: UK

DRILLING METHOD: 3¼ ID Hollow Augur

SAMPLING METHOD: 2" od SS continuous

BORING NO.: S-2

SHEET: 2 OF 2

					DRILLING START	DRILLING FINISH
WATER LEVEL					TIME	TIME
TIME					1430	1615
DATE					DATE	DATE
CASING DEPTH					1/22	1/22

DRILL RIG: CME 55

SURFACE CONDITIONS: brush + trees

ANGLE: BEARING:

SAMPLE HAMMER TORQUE: 140 lb FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
	16								
	17	13" 4-5-7	same brown sand						3ppm
	18	16" 6-7-10	same as above						2ppm
	20	12" 6-6-7	same sand as above						2ppm
	22	13" 5-6-5	same sand						3ppm
		12" 4-6-8	same sand						2ppm
	24	12" 4-5	same sand						2ppm
	25								

DRILL CONTR

LOGGED BY

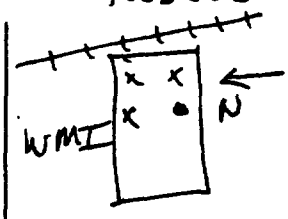
DATE

CHK'D BY

FS 11238

FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe



DATUM: GL. (MSL) ELEVATION: UK

DRILLING METHOD: 3 1/4 ID Hollow Stem Auger

SAMPLING METHOD: 2" od. split spoon continuous

BORING NO.: S-3

SHEET: 1 OF 2

					DRILLING START	DRILLING FINISH
WATER LEVEL						
TIME					TIME 1630	TIME 950
DATE					DATE 1/22/90	DATE 1/23/90
CASING DEPTH						

DRILL RIG: CME 55

SURFACE CONDITIONS: brush + trees

ANGLE: BEARING:

SAMPLE HAMMER TORQUE: 140 lb. FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6" ON SAMPLER (RECOVERY)	SOIL GRAPH.	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
	16" 15-17-10		9" topsoil sandy fill sample						1ppm
2	15" 13-14-5		top 4" black fill brown-tan sand						13ppm start 8:30
4	10" 8-8-9		brown tan sand with many pebbles						3ppm
	10" 6-6-9		same as above						NR
6	10" 6-6-10		same as above						NR
8	11" 6-8-8		same sand						8ppm
10	12" 10-10-9		same sand						4ppm
	13" 5-7-9		same as above						11ppm
12	12" 7-8-		same - less pebbles						3ppm
14	3" 9-10-10		same						3ppm

DRILLING CONTR.

LOGGED BY

DATE

CHK'D BY

FS 11239

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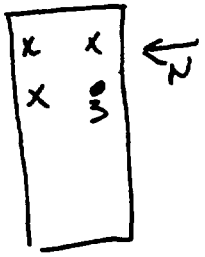
FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe

WMT



DATUM: GL ELEVATION: UK

DRILLING METHOD: Hollow Stem augers ~~24"~~ 3 1/4" ID

SAMPLING METHOD: 2" od SS Continuous

BORING NO.: S-3

SHEET: 2 OF 2

					DRILLING START	DRILLING FINISH
WATER LEVEL						
TIME					TIME 1630	TIME 950
DATE					DATE 1/22/90	DATE 1/23/90
CASING DEPTH						

DRILL RIG: CME 55

SURFACE CONDITIONS: brush + trees

ANGLE: BEARING:

SAMPLE HAMMER TORQUE: 140 lbs FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
15	12" 11-12-11		Same sand more pebbles						2 ppm
16	13" 7-8-11		Same less pebbles						5ppm
18	13" 6-12-15		Same						3ppm
20	13" 8-11-12		Same sand						5ppm
22	14" 8-9-9		Same						3ppm
24	15" 6-6-9		Same sand homogeneous						5ppm
25	12" 7-9		Same sand no pebbles						3ppm

DRILLING CONTR

FS 1240

LOGGED BY

DATE

CHK'D BY

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FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Rifle

WMI

DATUM GL ELEVATION UK

DRILLING METHOD: 3 1/4 ID Hollow Augers

SAMPLING METHOD: 2" od SS continuous

BORING NO. S-4

SHEET 1 OF 2

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

DRILLING	START	FINISH
TIME	1015	1200
DATE	1/23/90	1/23/90

DRILL RIG CME 55

ANGLE BEARING

SAMPLE HAMMER TORQUE 140 lb FT.-LBS

SURFACE CONDITIONS brush + trees

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
	11" 6-8-8		topsoil 7" fill 4"						2ppm
2	12" 7-8-10		2" fill black brown-tan sand gravel + pebbles						2ppm
	9" 9-9-10		sand + pebbles						NR
4	10" 6-9-10		sand + pebbles same as above						1ppm
6	16" 8-9-10		Same as above						1ppm
8	12" 6-8-14		Same as above						3ppm
	12" 10-15-11		Same sand						3ppm
10	14" 8-8-9		same sand						2ppm
12	12" 5-7-10		Sand - no pebbles brown-tan						1ppm
4	18" 10-13-16		Sand - no pebbles						1ppm
	13" 9-16-17		Same - more pebbles slight increase						NR
16									

DRILLING CONTR

FS 11241

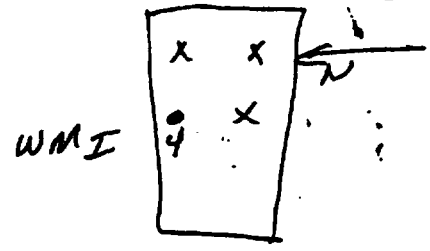
LOGGED BY

DATE

CHK'D BY

FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION ROSCOE



DATUM GL ELEVATION N/K

DRILLING METHOD: 3¼" hollow Auger

SAMPLING METHOD: 2" od SS continuous

BORING NO. S-4

SHEET 2 OF 2

						DRILLING START	DRILLING FINISH
WATER LEVEL						TIME 1015	TIME 1200
TIME							
DATE						DATE 1/23/90	DATE 1/23
CASING DEPTH							

DRILL RIG CME 55

SURFACE CONDITIONS brush + trees

ANGLE BEARING

SAMPLE HAMMER TORQUE 140 lb. FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
17	11" 11-10-13		same sand w/slight amt pebbles						2ppm
18	13" 10-11-13		Same as above						2ppm
20	15" 8-8-11		bottom 13" no pebbles otherwise same sand						3ppm
22	16" 8-10-13		Same - no pebbles						3ppm
24	16" 8-11-8		Same						4ppm
25	12" 7-11		Same						2ppm

LING CONTR

FS 1242

LOGGED BY

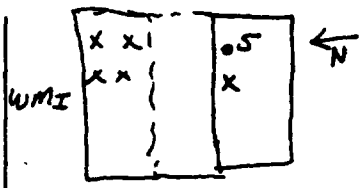
DATE

CHK'D BY

Printed on recycled paper.

FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe



DATUM: GL ELEVATION: 0k

DRILLING METHOD: 3½" ID Hollow Auger

SAMPLING METHOD: 2" od SS 140 lb. weight

continuous

WATER LEVEL				
TIME				
DATE				
CASING DEPTH				

BORING NO. S-5

SHEET 1 OF 2

DRILLING	START	FINISH
TIME	830	930
DATE	1/24/90	1/24/90

DRILL RIG: CME 55

SURFACE CONDITIONS: brush + trees

ANGLE BEARING

SAMPLE HAMMER TORQUE: 140 lb. FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
	14" 7-10-11		black cinders, red bricks						NR (warm NR)
2	5" 3-12-39		same as above						1ppm
4	16" 8-8-8		black cinders						NR No odors noted
	16" 8-7-6		black cinders + red brick						NR
6	16" 7-13-10		black cinders mixed with some sand at 6-12"						NR
8	3" 12-17-8		same black cinders						NR (jar sample)
	11" 6-7-8		black cinders, tree roots						NR
10	10" 5-5-7		black cinders wet						NR (VOA jar)
	9" 4-4-6		black cinders						NR
14	12" 5-9-11		black cinders 0-4" grades to brown clay with pebbles, bricks, sand fill						NR

DRILLING CONTR

FS 11243

LOGGED BY

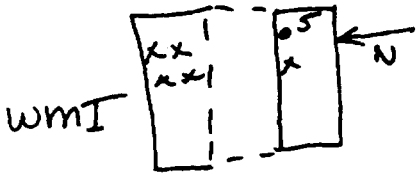
DATE

CHK'D BY

Printed on recycled paper.

FIELD LOG – SOIL BOREHOLE

NAME AND LOCATION: Roscoe



DATUM: GL ELEVATION: UK

DRILLING METHOD: 3 1/4 ID Hollow Stem auger

SAMPLING METHOD: 2" od SS 18" long continuous

BORING NO.: S-5

SHEET 2 OF 2

					DRILLING START	DRILLING FINISH
WATER LEVEL						
TIME					TIME 930	TIME 930
DATE					DATE 1/24/90	DATE 1/24/90
CASING DEPTH						

DRILL RIG: CME 55

SURFACE CONDITIONS: brush + trees

ANGLE: BEARING:

SAMPLE HAMMER TORQUE: 140 lb. FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
16	5" 2-4-5		brown clay, 30% sand, 10% gravel, well rounded						NR Checked OVM near gas tank – yes it is working
	8" 2-2-2		Sand brown-tan w/pebbles 0-3" grades into clay of same color-looks disturbed – like a fill						NR
18	12" 2-3-4		0-2" clay fill 2-12" sand. brown-tan						NR
20	14" 3-6-9		Sand - brown - tan some pebbles						NR
22	11" 5-5-7		same						NR
24	13" 5-7-9		Same sand						NR
25	11" 10-9		Same sand						NR = 0.00 ppm

DRILLING CONTR

FS 11244

LOGGED BY

CHK'D BY

DATE

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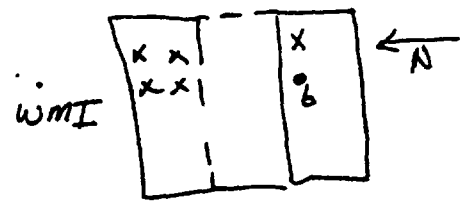
FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe



DATUM GL ELEVATION UK

DRILLING METHOD: 3¼ ID Hollow Auger

SAMPLING METHOD: 2" ID SS

Continuous

BORING NO. S-6

SHEET 1 OF 2

WATER LEVEL					DRILLING START	DRILLING FINISH
TIME					TIME 1000	TIME 1130
DATE					DATE 11/24/90	DATE 11/24/90
CASING DEPTH						

DRILL RIG CME 55

SURFACE CONDITIONS brush + trees

ANGLE BEARING

SAMPLE HAMMER TORQUE 140 lb. FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
	11" 7-8-6		Black cinders + red bricks						NR
2	15" 18-10-4		Same as above						NR
4	15" 8-7-5		Same						1ppm sample
	11" 7-8-12		Same as above						NR
6	12" 3-7-9		0-4" green crystals in black cinders 4-12" black cinders burned wood.						NR
8	12" 10-11-14		black cinders + brick						1ppm
10	6" 5-8-9		wet black cinders						NR
12	7" 5-7-10		0-2" black cinders 2-7" cinders mixed w/clay						NR – put clay in big jar to lab S-6
	9" 4-5-3		clay - brown + sand 0-1" black cinders 1-9" red-brown sand w/pebbles.						NR
14	13" 5-7-12		brown tan sand + pebbles						2ppm

DRILLING CONTR

LOGGED BY

DATE

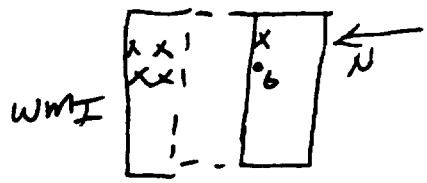
CHK'D BY

FS 11245

Printed on recycled paper.

FIELD LOG – SOIL BOREHOLE

SITE NAME AND LOCATION: Roscoe



DRILLING METHOD: 3 1/4" hollow augers

SAMPLING METHOD: 2" od SS continuous

BORING NO. S-6

SHEET 2 OF 2

					DRILLING START	DRILLING FINISH
WATER LEVEL						
TIME					TIME 1000	TIME 1130
DATE					DATE 1/24/90	DATE 1/24
CASING DEPTH						

DATUM GL ELEVATION UK

DRILL RIG CME 55

SURFACE CONDITIONS brush + trees

ANGLE BEARING

SAMPLE HAMMER TORQUE 140 lb. FT.-LBS

DEPTH IN FEET (ELEVATION)	BLOWS/6 IN ON SAMPLER (RECOVERY)	SOIL GRAPH	SAMPLE NUMBER AND DESCRIPTION OF MATERIAL	SAMPLER AND BIT	CASING TYPE	BLOWS/FOOT ON CASING	DEPTH IN FEET FROM	DEPTH IN FEET TO	DESCRIPTION OF OPERATION AND REMARKS
16	13" 9-13-13		tan-brown sand few pebbles						NR
18	18" 13-16-20		same - dry sand increased pebbles - weathered						NR
	12" 9-5-17		Same sand less pebbles						NR
20	13" 16-15-15		Same						1ppm
22	11" 9-13-12		Same sand						NR
24	9" 5-7-3		Same sand gravel-pebble increase						NR
25	10" 9-8		Same as above						NR

DRILLING CONTR

FS 11246

LOGGED BY

DATE

CHK'D BY

APPENDIX 2

GEOLOGIC DESCRIPTIONS

CAHOKIA ALLUVIUM

Deposits in floodplains and channels of modern rivers and streams; mostly poorly sorted sand, silt, or clay containing local deposits of sandy gravel; in many places overlies well-sorted glacial outwash of the Henry Formation.

HENRY FORMATION

Sand and gravel; generally well sorted; local minor beds of silt; glacial outwash in outwash plains, valley trains, and ice-contact deposits; generally has a thin cover of silt (Richland Loess or Peoria Loess).

Mackinaw Member of the Henry Formation

Sand and gravel; generally well sorted and well bedded; deposits in valleys; mostly glacial outwash in former valley trains and terrace remnants of former valley trains.

FROM: Illinois State Geological Survey, 1979, map: "Quaternary Deposits of Illinois", compiled by Jerry A. Lineback.

APPENDIX 3

LABORATORY ANALYSIS

APPENDIX 3

Parameter		S-1		S-2		S-3		S-4		S-6
% Solids		85.8		89.3		84.3		95.7		88.8
Cyanide, Reactive (mg/kg)	<	0.53	<	0.55	<	0.58		NA	<	0.54
Flash Point (DEG F.)	>	200	>	200	>	200		NA	>	200
pH		7.8		9.3		8.3		NA		9.1
Sulfide, Reactive (mg/kg)	<	5.4	<	5.6	<	5.6		NA	<	5.2
Silver, EP Toxic (mg/l)	<	0.020	<	0.020	<	0.020		NA	<	0.020
Arsenic, EP Toxic (mg/l)	<	0.016	<	0.016	<	0.016		NA	<	0.016
Barium, EP Toxic (mg/l)	<	1.0	<	1.0	<	1.0		NA	<	1.0
Cadmium, EP Toxic (mg/l)		0.018	<	0.010		0.034		NA	<	0.010
Chromium, EP Toxic (mg/l)		0.042	<	0.020		0.040		NA	<	0.020
Mercury, EP Toxic (mg/l)	<	0.0010	<	0.0010	<	0.0010		NA	<	0.0010
Lead, EP Toxic (mg/l)		0.071	<	0.050		0.077		NA	<	0.050
Selenium, EP Toxic (mg/l)	<	0.010	<	0.010	<	0.010		NA	<	0.010
Chloromethane (ug/kg)	<	12	<	11	<	12	<	10	<	11
Bromomethane (ug/kg)	<	12	<	11	<	12	<	10	<	11
Vinyl Chloride (ug/kg)	<	12	<	11	<	12	<	10	<	11
Chloroethane (ug/kg)	<	12	<	11	<	12	<	10	<	11
Methylene Chloride (ug/kg)		17		25		8	<	5		21
Acetone (ug/kg)		22		27		23		12		11
Carbon Disulfide (ug/kg)		6	<	6	<	6	<	5		17
1,1-Dichloroethene (ug/kg)	<	6	<	6	<	6	<	5	<	6
1,1-Dichloroethane (ug/kg)	<	6	<	6	<	6	<	5	<	6
1,2-Dichloroethene (total) (ug/kg)	<	6	<	6	<	6	<	5	<	6
Chloroform (ug/kg)	<	6	<	6	<	6	<	5	<	6
1,2-Dichloroethane (ug/kg)	<	6	<	6	<	6	<	5	<	6
2-Butanone (ug/mg)	<	12		14	<	12	<	10	<	11
1,1,1-Trichloroethane (ug/kg)	<	6	<	6	<	6	<	5	<	6
Carbon Tetrachloride (ug/kg)	<	6	<	6	<	6	<	5	<	6
Vinyl Acetate (ug/kg)	<	12	<	11	<	12	<	10	<	11
Bromodichloromethane (ug/kg)	<	6	<	6	<	6	<	5	<	6
1,2-Dichloropropane (ug/kg)	<	6	<	6	<	6	<	5	<	6
cis-1,3-Dichloropropene (ug/kg)	<	6	<	6	<	6	<	5	<	6
Trichloroethene (ug/kg)	<	6	<	6	<	6	<	5	<	6
Dibromochloromethane (ug/kg)	<	6	<	6	<	6	<	5	<	6
1,1,2-Trichloroethane (ug/kg)	<	6	<	6	<	6	<	5	<	6
Benzene (ug/kg)	<	6	<	6	<	6	<	5	<	6
Trans-1,3-Dichloropropene (ug/kg)	<	6	<	6	<	6	<	5	<	6
Bromoform (ug/kg)	<	6	<	6	<	6	<	5	<	6
4-Methyl-2-pentanone (ug/kg)	<	12	<	11	<	12	<	10	<	11
2-Hexanone (ug/kg)	<	12	<	11	<	12	<	10	<	11
Tetrachloroethene (ug/kg)	<	6	<	6	<	6	<	5		40
1,1,2,2-Tetrachloroethane (ug/kg)	<	6	<	6	<	6	<	5	<	6
Toluene (ug/kg)	<	6	<	6	<	6	<	5	<	6
Chlorobenzene (ug/mg)	<	6	<	6	<	6	<	5	<	6
Ethylbenzene (ug/kg)	<	6	<	6	<	6	<	5	<	6
Styrene (ug/mg)	<	6	<	6	<	6	<	5	<	6
Xylene (total) (ug/kg)		16		6	<	6		9	<	6

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Tuesday February 6th, 1990

RE: Roscoe S-1
Project # 3333-01-01-0000
Lab ID: 9001G305-001
Sample Date: 01/22/90
Date Received: 01/23/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
% Solids	85.8		%	0.10
Cyanide, Reactive	0.53	u	mg/kg	0.53
Flash Point	>200		DEG F	
pH	7.8		pH	+-0.20
Sulfide Reactive	5.4	u	mg/kg	5.4

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-1
Project # 3333-01-01-0000
Lab ID: 9001G305-001
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	12	U
Bromomethane	BDL	12	U
Vinyl Chloride	BDL	12	U
Chloroethane	BDL	12	U
Methylene Chloride	17	6	
Acetone	22	12	
Carbon Disulfide	6	6	
1,1-Dichloroethene	BDL	6	U
1,1-Dichloroethane	BDL	6	U
1,2-Dichloroethene (total)	BDL	6	U
Chloroform	BDL	6	U
1,2-Dichloroethane	BDL	6	U
2-Butanone	8	12	J
1,1,1-Trichloroethane	1	6	J
Carbon Tetrachloride	BDL	6	U
Vinyl Acetate	BDL	12	U
Bromodichloromethane	BDL	6	U

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-1
Project # 3333-01-01-0000
Lab ID: 9001G305-001
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	6	U
cis-1,3-Dichloropropene	BDL	6	U
Trichloroethene	BDL	6	U
Dibromochloromethane	BDL	6	U
1,1,2-Trichloroethane	BDL	6	U
Benzene	BDL	6	U
Trans-1,3-Dichloropropene	BDL	6	U
Bromoform	BDL	6	U
4-Methyl-2-pentanone	BDL	12	U
2-Hexanone	BDL	12	U
Tetrachloroethene	3	6	J
1,1,2,2-Tetrachloroethane	BDL	6	U
Toluene	3	6	J
Chlorobenzene	BDL	6	U
Ethylbenzene	3	6	J
Styrene	BDL	6	U
Xylene (total)	16	6	

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-1
Project # 3333-01-01-0000
Lab ID: 9001G305-001
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 16th, 1990

RE: Roscoe S-1 EPTOX
Project # 3333-01-01-0000
Lab ID: 90016305-002
Sample Date: 01/22/90
Date Received: 01/23/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
Silver, EP Leachate	0.020	u	mg/L	0.020
Arsenic, EP Leachate	0.016	u	mg/L	0.016
Barium, EP Leachate	1.0	u	mg/L	1.0
Cadmium, EP Leachate	0.018		mg/L	0.010
Chromium, EP Leachate	0.042		mg/L	0.020
Mercury, EP Leachate	0.0010	u	mg/L	0.0010
Lead, EP Leachate	0.071		mg/L	0.050
Selenium, EP Leachate	0.010	u	mg/L	0.010

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Tuesday February 6th, 1990

RE: Roscoe S-2
Project # 3333-01-01-0000
Lab ID: 9001G305-003
Sample Date: 01/22/90
Date Received: 01/23/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
% Solids	89.3		%	0.10
Cyanide, Reactive	0.55	u	mg/kg	0.55
Flash Point	>200		DEG F	
pH	9.3		pH	+-0.20
Sulfide Reactive	5.6	u	mg/kg	5.6

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ANALYTICAL REPORT

To: Team, Incorporated
207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-2
Project # 3333-01-01-0000
Lab ID: 9001G305-003
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	11	U
Bromomethane	BDL	11	U
Vinyl Chloride	BDL	11	U
Chloroethane	BDL	11	U
Methylene Chloride	25	6	
Acetone	27	11	
Carbon Disulfide	3	6	J
1,1-Dichloroethene	BDL	6	U
1,1-Dichloroethane	BDL	6	U
1,2-Dichloroethene (total)	BDL	6	U
Chloroform	BDL	6	U
1,2-Dichloroethane	BDL	6	U
2-Butanone	14	11	
1,1,1-Trichloroethane	2	6	J
Carbon Tetrachloride	BDL	6	U
Vinyl Acetate	BDL	11	U
Bromodichloromethane	BDL	6	U

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-2
Project # 3333-01-01-0000
Lab ID: 90016305-003
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	6	U
cis-1,3-Dichloropropene	BDL	6	U
Trichloroethene	1	6	J
Dibromochloromethane	BDL	6	U
1,1,2-Trichloroethane	BDL	6	U
Benzene	BDL	6	U
Trans-1,3-Dichloropropene	BDL	6	U
Bromoform	BDL	6	U
4-Methyl-2-pentanone	4	11	J
2-Hexanone	4	11	J
Tetrachloroethene	5	6	J
1,1,2,2-Tetrachloroethane	1	6	J
Toluene	2	6	J
Chlorobenzene	BDL	6	U
Ethylbenzene	2	6	J
Styrene	BDL	6	U
Xylene (total)	6	6	

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-2
Project # 3333-01-01-0000
Lab ID: 90016305-003
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 16th, 1990

RE: Roscoe S-2 EPTOX
Project # 3333-01-01-0000
Lab ID: 9001G305-004
Sample Date: 01/22/90
Date Received: 01/23/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
Silver, EP Leachate	0.020	u	mg/L	0.020
Arsenic, EP Leachate	0.016	u	mg/L	0.016
Barium, EP Leachate	1.0	u	mg/L	1.0
Cadmium, EP Leachate	0.010	u	mg/L	0.010
Chromium, EP Leachate	0.020	u	mg/L	0.020
Mercury, EP Leachate	0.0010	u	mg/L	0.0010
Lead, EP Leachate	0.050	u	mg/L	0.050
Selenium, EP Leachate	0.010	u	mg/L	0.010

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Tuesday February 6th, 1990

RE: Roscoe S-3
Project # 3333-01-01-0000
Lab ID: 9001G305-005
Sample Date: 01/22/90
Date Received: 01/23/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
% Solids	84.3		%	0.10
Cyanide, Reactive	0.58	u	mg/kg	0.58
Flash Point	>200		DEG F	
pH	8.3		pH	+-0.20
Sulfide Reactive	5.6	u	mg/kg	5.6

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Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-3
Project # 3333-01-01-0000
Lab ID: 90016305-005
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	12	U
Bromomethane	BDL	12	U
Vinyl Chloride	BDL	12	U
Chloroethane	BDL	12	U
Methylene Chloride	8	6	
Acetone	23	12	
Carbon Disulfide	0.7	6	J
1,1-Dichloroethene	BDL	6	U
1,1-Dichloroethane	BDL	6	U
1,2-Dichloroethene (total)	BDL	6	U
Chloroform	BDL	6	U
1,2-Dichloroethane	BDL	6	U
2-Butanone	8	12	J
1,1,1-Trichloroethane	BDL	6	U
Carbon Tetrachloride	BDL	6	U
Vinyl Acetate	BDL	12	U
Bromodichloromethane	BDL	6	U

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ANALYTICAL REPORT

To: Team, Incorporated
207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-3
Project # 3333-01-01-0000
Lab ID: 90016305-005
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	6	U
cis-1,3-Dichloropropene	BDL	6	U
Trichloroethene	BDL	6	U
Dibromochloromethane	BDL	6	U
1,1,2-Trichloroethane	BDL	6	U
Benzene	BDL	6	U
Trans-1,3-Dichloropropene	BDL	6	U
Bromoform	BDL	6	U
4-Methyl-2-pentanone	BDL	12	U
2-Hexanone	BDL	12	U
Tetrachloroethene	1	6	J
1,1,2,2-Tetrachloroethane	BDL	6	U
Toluene	1	6	J
Chlorobenzene	BDL	6	U
Ethylbenzene	2	6	J
Styrene	BDL	6	U
Xylene (total)	4	6	J

WESTON-GULF COAST LABORATORIES, INC.
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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 2nd, 1990

RE: Roscoe S-3
Project # 3333-01-01-0000
Lab ID: 9001G305-005
Sample Date: 01/22/90
Date Received: 01/23/90
Units: UG/KG

Tentatively Identified Compounds

No Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

WESTON
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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 16th, 1990

RE: Roscoe S-3 EPTOX
Project # 3333-01-01-0000
Lab ID: 90016305-006
Sample Date: 01/22/90
Date Received: 01/23/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
Silver, EP Leachate	0.020	u	mg/L	0.020
Arsenic, EP Leachate	0.016	u	mg/L	0.016
Barium, EP Leachate	1.0	u	mg/L	1.0
Cadmium, EP Leachate	0.034		mg/L	0.010
Chromium, EP Leachate	0.040		mg/L	0.020
Mercury, EP Leachate	0.0010	u	mg/L	0.0010
Lead, EP Leachate	0.077		mg/L	0.050
Selenium, EP Leachate	0.010	u	mg/L	0.010

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Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Wednesday February 14th, 1990

RE: Roscoe S-4
Project # 3333-01-01-0000
Lab ID: 90016376-001
Sample Date: 01/23/90
Date Received: 01/25/90

Inorganic Client Data Report

Parameters	Result	Units	Reporting Limit
% Solids	95.7	%	0.10

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WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Thursday February 8th, 1990

RE: Roscoe S-4
Project # 3333-01-01-0000
Lab ID: 90016376-001
Sample Date: 01/23/90
Date Received: 01/25/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	10	U
Bromomethane	BDL	10	U
Vinyl Chloride	BDL	10	U
Chloroethane	BDL	10	U
Methylene Chloride	4	5	J
Acetone	12	10	
Carbon Disulfide	BDL	5	U
1,1-Dichloroethene	BDL	5	U
1,1-Dichloroethane	BDL	5	U
1,2-Dichloroethene (total)	BDL	5	U
Chloroform	BDL	5	U
1,2-Dichloroethane	BDL	5	U
2-Butanone	BDL	10	U
1,1,1-Trichloroethane	BDL	5	U
Carbon Tetrachloride	BDL	5	U
Vinyl Acetate	BDL	10	U
Bromodichloromethane	BDL	5	U

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MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Team, Incorporated
207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Thursday February 8th, 1990

RE: Roscoe S-4
Project # 3333-01-01-0000
Lab ID: 9001G376-001
Sample Date: 01/23/90
Date Received: 01/25/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	5	U
cis-1,3-Dichloropropene	BDL	5	U
Trichloroethene	BDL	5	U
Dibromochloromethane	BDL	5	U
1,1,2-Trichloroethane	BDL	5	U
Benzene	BDL	5	U
Trans-1,3-Dichloropropene	BDL	5	U
Bromoform	BDL	5	U
4-Methyl-2-pentanone	BDL	10	U
2-Hexanone	BDL	10	U
Tetrachloroethene	4	5	J
1,1,2,2-Tetrachloroethane	BDL	5	U
Toluene	BDL	5	U
Chlorobenzene	BDL	5	U
Ethylbenzene	BDL	5	U
Styrene	BDL	5	U
Xylene (total)	9	5	

WESTON
MANAGERS DESIGNERS/CONSULTANTS

WESTON-GULF COAST LABORATORIES, INC.
2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 885-7077 (815) 723-7533

ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Thursday February 8th, 1990

RE: Roscoe S-4
Project # 3333-01-01-0000
Lab ID: 90016376-001
Sample Date: 01/23/90
Date Received: 01/25/90
Units: UG/KG

Tentatively Identified Compounds

7 Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

Volatile Compound	Retention Time	Estimated Concentration
Ethyl-methyl-benzene C9H12	16.90	100 J
Ethyl-methyl-benzene C9H12	22.89	40 J
Unknown benzene C9H10	24.65	10 J
Unknown benzene C10H14	26.41	9 J
Methyl-propyl-benzene C10H14	26.61	20 J
Methyl-propyl-benzene C10H14	27.00	10 J
Methyl-propyl-benzene C10H14	28.13	10 J

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Wednesday February 14th, 1990

RE: Roscoe S-6
Project # 3333-01-01-0000
Lab ID: 90016376-002
Sample Date: 01/24/90
Date Received: 01/25/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
% Solids	88.8		%	0.10
Cyanide, Reactive	0.54	u	mg/kg	0.54
Flash Point	>200		DEG F	
pH	9.1		pH	+-0.20
Sulfide Reactive	5.2	u	mg/kg	5.2

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Thursday February 8th, 1990

RE: Roscoe S-6
Project # 3333-01-01-0000
Lab ID: 9001G376-002
Sample Date: 01/24/90
Date Received: 01/25/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
Chloromethane	BDL	11	U
Bromomethane	BDL	11	U
Vinyl Chloride	BDL	11	U
Chloroethane	BDL	11	U
Methylene Chloride	21	6	
Acetone	11	11	
Carbon Disulfide	17	6	
1,1-Dichloroethene	BDL	6	U
1,1-Dichloroethane	BDL	6	U
1,2-Dichloroethene (total)	BDL	6	U
Chloroform	BDL	6	U
1,2-Dichloroethane	BDL	6	U
2-Butanone	BDL	11	U
1,1,1-Trichloroethane	BDL	6	U
Carbon Tetrachloride	BDL	6	U
Vinyl Acetate	BDL	11	U
Bromodichloromethane	BDL	6	U

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2417 Bond St., University Park, Illinois 60466
Phones: (708) 534-5200 (219) 665-7077 (815) 723-7533

ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Thursday February 8th, 1990

RE: Roscoe S-6
Project # 3333-01-01-0000
Lab ID: 90016376-002
Sample Date: 01/24/90
Date Received: 01/25/90
Units: UG/KG

VOLATILES BY GC/MS, HSL LIST

Volatile Compound	Result	Detection Limit	Flag
1,2-Dichloropropane	BDL	6	U
cis-1,3-Dichloropropene	BDL	6	U
Trichloroethene	BDL	6	U
Dibromochloromethane	BDL	6	U
1,1,2-Trichloroethane	BDL	6	U
Benzene	BDL	6	U
Trans-1,3-Dichloropropene	BDL	6	U
Bromoform	BDL	6	U
4-Methyl-2-pentanone	BDL	11	U
2-Hexanone	BDL	11	U
Tetrachloroethene	40	6	
1,1,2,2-Tetrachloroethane	BDL	6	U
Toluene	BDL	6	U
Chlorobenzene	BDL	6	U
Ethylbenzene	BDL	6	U
Styrene	BDL	6	U
Xylene (total)	BDL	6	U

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Thursday February 8th, 1990

RE: Roscoe S-6
Project # 3333-01-01-0000
Lab ID: 9001G376-002
Sample Date: 01/24/90
Date Received: 01/25/90
Units: UG/KG

Tentatively Identified Compounds

5 Volatile Compounds greater than 10% of the nearest internal standard were tentatively identified by mass spectral library search. This is exclusive of any target compounds, surrogates or internal standards.

Volatile Compound	Retention Time	Estimated Concentration
Trimethyl-benzene C9H12	17.64	6 J
Ethyl-dimethyl-benzene	23.07	20 J
Unknown benzene C10H14	25.30	40 J
Unknown benzene C10H14	25.98	60 J
Unknown	28.62	40 J

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ANALYTICAL REPORT

To: Team, Incorporated

207 East 127th Street
Lemont, IL 60439

Attn: Mr. Patrick Ries

Date: Friday February 16th, 1990

RE: Roscoe S-6 EPTOX
Project # 3333-01-01-0000
Lab ID: 9001G376-003
Sample Date: 01/24/90
Date Received: 01/25/90

Inorganic Client Data Report

Parameters	Result		Units	Reporting Limit
Silver, EP Leachate	0.020	u	mg/L	0.020
Arsenic, EP Leachate	0.016	u	mg/L	0.016
Barium, EP Leachate	1.0	u	mg/L	1.0
Cadmium, EP Leachate	0.010	u	mg/L	0.010
Chromium, EP Leachate	0.020	u	mg/L	0.020
Mercury, EP Leachate	0.0010	u	mg/L	0.0010
Lead, EP Leachate	0.050	u	mg/L	0.050
Selenium, EP Leachate	0.010	u	mg/L	0.010

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DATA QUALIFIERS

u - Indicates an inorganic compound was analyzed for but not detected.

U - Indicates an organic compound was analyzed for but not detected.

J - Indicates an estimated value for either a TIC or an analyte that meets the identification criteria but the result is less than the specified detection limit.

B - Indicates the compound was found in the blank and the sample.

T - Indicates the compound was found in the TCLP extraction blank and the sample.

E - Concentrations exceed calibration range of the instrument.

BS - Indicates matrix analyses were conducted on reagent grade water.

BSD - Blank Spike Duplicate

BDL - Below Detection Limit

MS - Matrix Spike

MSD - Matrix Spike Duplicate

D - Indicates that surrogate/matrix spike recoveries were not obtained because the extract had to be diluted for analysis.

DL - Indicates a secondary dilution

NA - Not Applicable

DF - Dilution factor

NOTES:

Solid, sediment and sludge results are reported on a dry weight basis except when analyzed for Landfill disposal parameters (such as incineration or Illinois Green Sheet parameters). All other mg/kg results are reported on an "as received" basis.

Reporting limits are detection limits adjusted for sample size used, dilutions made, and in the case of dry weight results, the moisture content of the sample.

Revised 02/07/90