



SERCO Laboratories

St Paul Minnesota • Cedar Rapids

1931 West County Road C2, St. Paul, Minnesota 55113 (612) 636-7173

LABORATORY ANALYSIS REPORT NO: 1975 PAGE 1
11/21/88

Foth and Van Dyke
6474 City West Parkway
Eden Prairie, MN 55344

Mr. Craig L. Johanesen

DATE COLLECTED: 11/09/88
DATE RECEIVED: 11/09/88
COLLECTED BY: CLIENT
PICKED UP BY: CLIENT
SAMPLE TYPE: WATER
SOIL

SERCO SAMPLE NO:	60498	60508	60518	60528	60538
SAMPLE DESCRIPTION:	TP 1 SOIL #2 COMP	TP 1 SOIL #1 GRAB	TP 1 GROUND WATER	TP 1 GRAB FOR LEAD	TP 2 SAMP 1 COMP SOIL

ANALYSIS:

FID Scan, mg/kg as Fuel Oil, EPA 8015	<0.50	<0.50	-	-	<0.50
FID Scan mg/kg as Gasoline	<0.05	<0.05	-	-	0.55
Benzene, mg/kg, EPA 602	<0.001	<0.001	-	-	0.002
Toluene, mg/kg, EPA 602	<0.001	<0.001	-	-	0.009
Xylene, mg/kg, EPA 601/602	<0.001	<0.001	-	-	0.075
Ethylbenzene, mg/kg	<0.001	<0.001	-	-	<0.001
FID Scan, mg/L as Gasoline, EPA 8015	-	-	<0.05	-	-
FID Scan, mg/L as Fuel Oil, EPA 8015	-	-	<0.50	-	-
Benzene, mg/L, EPA 602	-	-	<0.001	-	-
Toluene, mg/L, EPA 602	-	-	<0.001	-	-
Xylene, mg/L, EPA 601/602	-	-	<0.001	-	-
Ethyl Benzene, mg/L	-	-	<0.001	-	-
Lead, mg/kg as Pb	-	-	-	13	-

SERCO SAMPLE NO:	60548	60558	60568	60578	60588
SAMPLE DESCRIPTION:	TP 2 SAMP 2 GRAB	TP 2 GROUND WATER	TP 2 COMP FOR LEAD	TP 3 GRAB SOIL	TP 3 GROUND WATER

ANALYSIS:

FID Scan, mg/kg as Fuel Oil, EPA 8015	2200	-	-	<0.50	-
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Approved by: *[Signature]* < means "not detected at this level". 1 mg = 1000 ug. continued



Member



SERCO Laboratories

St. Paul, Minnesota • Central

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SERCO SAMPLE NO:	60548	60558	60568	60578	60588
SAMPLE DESCRIPTION:	TP 2 SAMP 2 GRAB	TP 2 GROUND WATER	TP 2 COMP FOR LEAD	TP 3 GRAB SOIL	TP 3 GROUND WATER

ANALYSIS:

FID Scan mg/kg as Gasoline	**	-	-	<0.05	-
Benzene, mg/kg, EPA 602	0.57	-	-	<0.001	-
Toluene, mg/kg, EPA 602	18	-	-	<0.001	-
Xylene, mg/kg, EPA 601/602	22	-	-	<0.001	-
Ethylbenzene, mg/kg	3.3	-	-	<0.001	-
FID Scan, mg/L as Gasoline, EPA 8015	-	**	-	-	<0.05
FID Scan, mg/L as Fuel Oil, EPA 8015	-	430	-	-	<0.50
Benzene, mg/L, EPA 602	-	0.11	-	-	<0.001
Toluene, mg/L, EPA 602	-	8.5	-	-	<0.001
Xylene, mg/L, EPA 601/602	-	6.2	-	-	<0.001
Ethyl Benzene, mg/L	-	2.0	-	-	<0.001
Lead, mg/kg as Pb	-	-	8.8	-	-

SERCO SAMPLE NO:	60598	60608	60618
SAMPLE DESCRIPTION:	TP 3 COMP FOR LEAD	TP 4 SURFACE WATER	TP 5 COMP FOR LEAD

ANALYSIS:

FID Scan, mg/L as Gasoline, EPA 8015	-	<0.05	-
FID Scan, mg/L as Fuel Oil, EPA 8015	-	<0.50	-

Approved by: < means "not detected at this level". 1 mg = 1000 ug. continued





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SERCO SAMPLE NO:	60598	60608	60618
SAMPLE DESCRIPTION:	TP 3	TP 4	TP 5
	COMP	SURFACE	COMP
	FOR	WATER	FOR
	LEAD		LEAD

ANALYSIS:

Benzene, mg/L, EPA 602	-	<0.001	-
Toluene, mg/L, EPA 602	-	0.002	-
Xylene, mg/L, EPA 601/602	-	<0.001	-
Ethyl Benzene, mg/L	-	<0.001	-
Lead, mg/kg as Pb	4.0	-	17

All analyses were performed using EPA or other accepted methodologies. Samples that may be of an environmentally hazardous nature will be returned to you. Other samples will be stored for 30 days from the date of this report, then disposed of by SERCO Laboratories. Please contact me if other arrangements are needed.

Report submitted by,

Diane J. Anderson
Project Manager

** Unable to quantify due to high concentration of Fuel Oil. Fuel Oil value may include a significant amount of gasoline.

< means "not detected at this level". 1 mg = 1000 ug.





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LABORATORY ANALYSIS REPORT NO: 808 PAGE 1
05/31/88

Waste Management-Savage
12448 Pennsylvania Ave. South
Savage, MN 55378

Mr. Mike Berkopec

DATE RECEIVED: 05/12/88
COLLECTED BY: CLIENT
PICKED UP BY: CLIENT
SAMPLE TYPE: SOLID

SERCO SAMPLE NO: 25208 25218
SAMPLE DESCRIPTION:

Handwritten notes:
#1 *at E. side*
#2 *at E. side*

ANALYSIS:

	25208	25218
FID Scan, ug/kg as Hydrocarbons, EPA 8015	120000	17000
FID Scan, ug/kg as Gasoline, EPA 8015	40	4.0
FID Scan, ug/kg as fuel oil	230	73
Benzene, ug/kg, EPA 8020	27	3.0
Toluene, ug/kg, EPA 8020	1700	190
o,p-Xylene, ug/kg, EPA 8020	3400	9900

All analyses were performed using EPA or other accepted methodologies. Samples that may be of an environmentally hazardous nature will be returned to you. Other samples will be stored for 30 days from the date of this report, then disposed of by SERCO Laboratories. Please contact me if other arrangements are needed.

Report submitted by,

Diane J. Anderson

Diane J. Anderson
Project Manager

< means "not detected at this level". 1 mg = 1000 ug.



REPORT OF: SIEVE ANALYSIS OF COARSE TO FINE AGGREGATES

Contractor:

Report Number: 1

Test Performed In General Accordance Of: ASTM: D1140

General Data:

Sample Location: Random Sample from Stockpile Date Sampled: 5/25/89
 Sample Number: 1 Dated Received: 5/31/89
 Depth of Sample: Stockpile Source of Sample: Savage, MN
 Sampled by: Munsell Color Code: 2.5 Y. 4/4
 Sample Designated For:

Laboratory Data:

Date Tested May 31, 1989 24 Hrs. Turn Around X Yes No
 Test Performed by: KAF Washed Gradation X Yes No

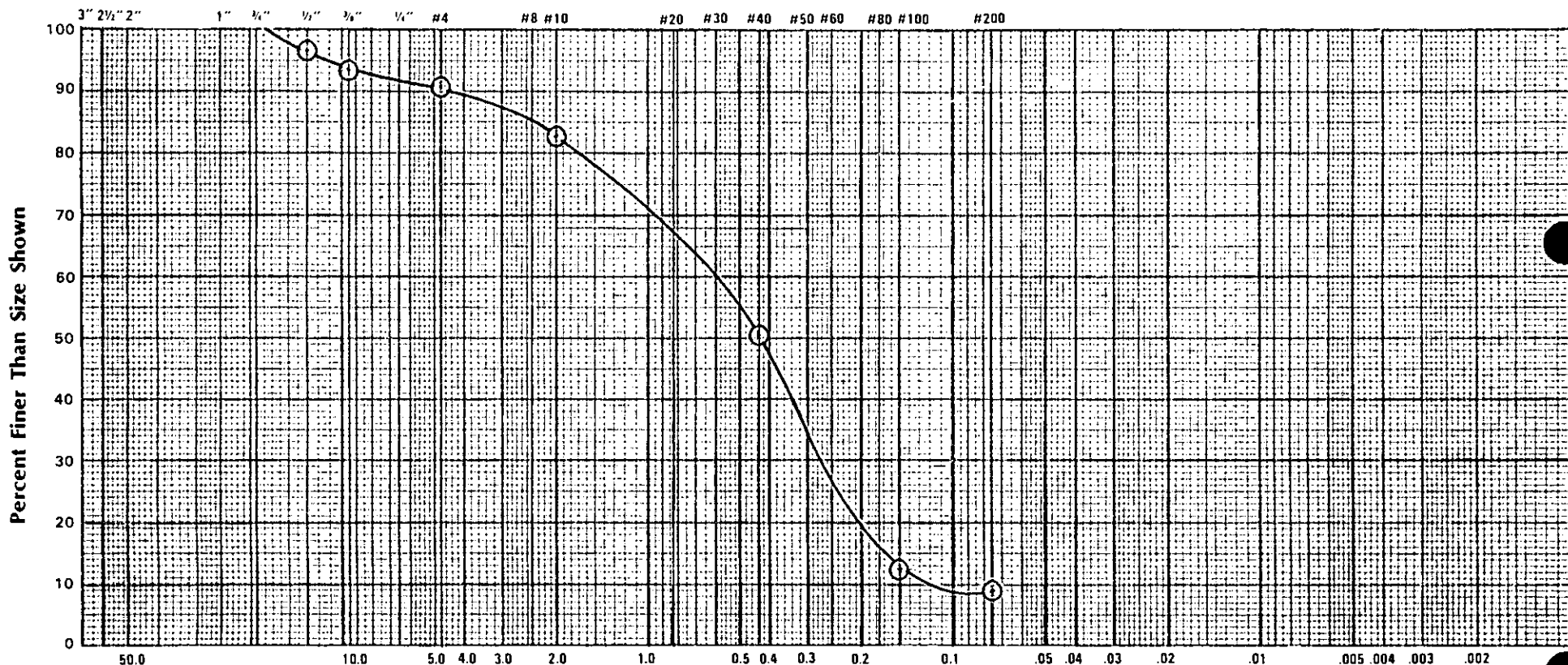
Weight of Test Sample 530.4 Grams.

Sieve Size	Weight Retained (gms)	% Retained	% Passing	Project Specification % Passing By Weight	Source of Specification
3"					
1½"					
1"					
¾"	0	0	100		
½"	17.2	3.2	96.8		
3/8"	17.5	3.3	93.5		
#4	13.8	2.6	90.9		
10	43.7	8.2	82.7		
40	170.9	32.2	50.5		
100	201.4	38.0	12.5		
200	17.7	3.3	9.2		
Pan	47.6	9.0			

Remarks:

GRAIN SIZE DISTRIBUTION CURVE

U.S. Standard Sieve Sizes



Gravel		Sand			Silt	Clay
Coarse	Fine	Coarse	Medium	Fine	% =	% =
%	9.1	8.2	32.2	41.5	9.0	%

Location Sampled: Random Sample from Stockpile Elev. or Depth: _____ Date Sampled: 5/25/89

Sample Source: Savage, MN Sampled Moisture Content (%): 7.5 Report No.: 1

Soil Classification (ASTM: D2487): SAND W/SILT, fine to medium grained, a little gravel, olive brown (SP-SM)

Atterberg Limits: LL _____ PL _____ PI _____

Munsell Color Code: 2.5 Y. 4/4

Date Received: 5/31/89

Coefficients: Cc = _____ Cu = _____

Foth & Van Dyke

Client: Waste Management of MN Scope I.D.: 88W79

Project: Material Check Page: 2

Prepared by: Robert Rouse Date: 6/2/89

Checked by: Perry Repler Date: 6/2/89