CENCSCO-E2

REPORT DATE: 8 November 93

MONTHLY PROGRESS REPORT
FOR
OCTOBER, 1993

SCHMALZ DUMP SUPERFUND SITE
HARRISON, WISCONSIN

EPA PROJECT MANAGER(S):	Colleen Hart	(312) 353-8752
	Wendy Carney	(312) 353-6553
OMAHA DIST. PROJ. MANAGER	John Cataldo	(402) 342-0051
OMAHA DIST. PROJECT MANAGER:	Steve Ott	(402) 221-7670

CONTRACTOR:	Chemical Waste Management
CONSTRUCTION START DATE:	12 October 1992
PERFORMANCE PERIOD:	180 Calendar Days (Winter Work Deferment Period)
ORIGINAL COMPLETION DATE:	9 June 93
REVISED COMPLETION DATE:	27 July 1993

CONTRACT STATUS

A final inspection was held at Schmalz Dump on October 26, 1993. Except for seeding, virtually all work has been completed. Minor deficiencies were found. A closure report, payroll information, as-built drawings and photos are yet to be submitted. The quarterly well monitoring program continues with the second round of testing to be done later this month (November). A memo for record written by Dean Peterson dated 27 October 93 is attached to document the findings of the final inspection team.

PROBLEMS AND ISSUES

The cap will be seeded in the spring. At that time, erosion control will also be completed to help establish turf. Project completion was discussed with EPA and WisDNR representatives, including continued access to the site after contract completion. Temporary access easements set up by the Detroit District do not last beyond the period of active Corps/Contractor involvement on site.

RECEIVED
DEC 10 1993
EMERG & REMEDIAL RESPONSE SECTION
BUR OF SOLID & HAZRD WASTE

Huntingdon
Consulting Engineers Environmental Scientists

Twin City Testing Corporation
737 Pelham Boulevard
St. Paul, Minnesota 55114-1776
(612) 645-3601
Fax: (612) 659-7515

REPORT OF: CHEMICAL ANALYSES

PROJECT: SCHMALTZ DUMP, 8500 92-431

DATE: September 14, 1993

REPORTED TO: Twin City Testing Corporation
Attn: Dan Pelczar
705 Hickory Farm Lane
Appleton, WI 54914-3073

REVISED: October 11, 1993

LABORATORY NO: 4410 03-2224
HPN: 405
WISCONSIN LABORATORY CERTIFICATION NO: 999446910

INTRODUCTION

This report presents the results of the analyses of nineteen samples received on August 18 and 26, 1993, from a representative of Twin City Testing Corporation, Appleton branch. The scope of our services was limited to the parameters listed in the attached tables.

METHODOLOGY

Analyses are performed according to Twin City Testing Standard Operating Procedures. The procedures are based on the references stated in the analytical results tables.

RESULTS

The results are listed in the attached tables.

REMARKS

The samples were collected on August 16, 17, 24, and 25, 1993. If samples are not consumed in the analysis, they are held for two months from the date of sample receipt and then disposed, unless written instructions to the contrary are received.

TWIN CITY TESTING CORPORATION

Todd Mitchell
Project Manager

Jon Berdahl
Laboratory Manager

TM/JB/jd

METAL RESULTS

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID:	MW-1	Equipment Blank After MW-1	Equipment Blank After MW-2			
TCT ID:	3195	3198	3200			
Parameter				**PQL**	**Test Date**	**Test Method**
Arsenic	ND	ND	ND	3.0	8/31/93	206.2
Barium	280	15	ND	10	8/29/93	200.7
Cadmium	ND	ND	ND	10	8/29/93	200.7
Chromium	2.0	ND	ND	1.0	9/3/93	218.2
Lead	ND	ND	ND	50	8/29/93	200.7
Mercury	ND	ND	ND	0.20	9/1/93	245.1
Selenium	ND	ND	ND	3	9/1/93	270.2
Silver	ND	ND	ND	10	8/29/93	200.7

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

METAL RESULTS

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID:	MW-2	MW-4			
TCT ID:	3199	3206			
Parameter			**PQL**	**Test Date**	**Test Method**
Arsenic	ND	ND	3.0	8/31/93	206.2
Barium	240	200	10	8/29/93	200.7
Cadmium	ND	ND	10	8/29/93	200.7
Chromium	19	18	10	8/29/93	200.7
Lead	ND	ND	50	8/29/93	200.7
Mercury	ND	ND	0.20	9/1/93	245.1
Selenium	ND	ND	3	9/1/93	270.2
Silver	ND	ND	10	8/29/93	200.7

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

METAL RESULTS

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID:	MW-3	Duplicate			
TCT ID:	3205	3207			
Parameter			PQL	Test Date	Test Method
Arsenic	ND	ND	3.0	8/31/93	206.2
Barium	240	250	10	8/29/93	200.7
Cadmium	ND	ND	10	8/29/93	200.7
Chromium	3.9	4.1	1.0	9/3/93	218.2
Lead	ND	ND	50	8/29/93	200.7
Mercury	ND	ND	0.20	9/1/93	245.1
Selenium	ND	ND	3	9/1/93	270.2
Silver	ND	ND	10	8/29/93	200.7

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

METAL RESULTS

(All values are in μg/L which is equivalent to parts-per-billion)

Client ID:	MW-6	Equipment Blank After MW-6	Duplicate	MW-5			
TCT ID:	3202	3203	3204	3750			
Parameter					PQL	Test Date	Test Method
Arsenic	ND	ND	ND	ND	3.0	8/31/93	206.2
Barium	310	11	350	350	10	8/29/93	200.7
Cadmium	ND	ND	ND	ND	10	8/29/93	200.7
Chromium	3	ND	3	340	1.0	9/3/93	218.2
Lead	ND	ND	ND	ND	50	8/29/93	200.7
Mercury	ND	ND	ND	ND	0.20	9/1/93	245.1
Selenium	ND	ND	ND	ND	3	9/1/93	270.2
Silver	ND	ND	ND	ND	10	8/29/93	200.7

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

METAL RESULTS

(All values are in percentages)

QC Data:	% RPD	% Spike Recovery	Test Method
Parameter			
Arsenic	NC	71	206.2
Barium	0	102	200.7
Cadmium	NC	93	200.7
Chromium	0	95	200.7
Lead	NC	92	200.7
Mercury	NC	89	245.1
Selenium	NC	66	270.2
Silver	NC	95	200.7

NC = Non-calculable, both sample and duplicate are non-detected.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

METAL RESULTS

(All values are in $\mu g/L$ which is equivalent to parts-per-billion, unless otherwise noted)

QC Data:	Prep Blank	% LCS Recovery	
Parameter			**Test Method**
Arsenic	ND	81%	206.2
Barium	ND	109%	200.7
Cadmium	ND	99%	200.7
Chromium	ND	93%	200.7
Lead	ND	98%	200.7
Mercury	ND	99%	245.1
Selenium	ND	93%	270.2
Silver	ND	103%	200.7

ND = Non-detected.
LCS = Laboratory Control Spike.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

POLYCHLORINATED BIPHENYL RESULTS
EPA METHOD 8080

(All values are in μg/L which is equivalent to parts-per-billion)

Client ID:	Method Blank	MW-1	Equipment Blank After MW-1	
TCT ID:		3195	3198	
Parameter:				**PQL**
PCB 1016	ND	ND	ND	0.50
PCB 1221	ND	ND	ND	0.50
PCB 1232	ND	ND	ND	0.50
PCB 1242	ND	ND	ND	0.50
PCB 1248	ND	ND	ND	0.50
PCB 1254	ND	ND	ND	0.50
PCB 1260	ND	ND	ND	0.50
% Surrogate Recovery:	68%	76%	67%	
Date Extracted:	8/20/93	8/20/93	8/20/93	
Date Analyzed:	9/2/93	9/2/93	9/2/93	

PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = TCMX (2,4,5,6-tetrachloro-m-xylene)

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

POLYCHLORINATED BIPHENYL RESULTS
EPA METHOD 8080

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID:	MW-2	Equipment Blank After MW-2	MW-5	
TCT ID:	3199	3200	3201	
Parameter:				**PQL**
PCB 1016	ND	ND	ND	0.50
PCB 1221	ND	ND	ND	0.50
PCB 1232	ND	ND	ND	0.50
PCB 1242	ND	ND	ND	0.50
PCB 1248	ND	ND	ND	0.50
PCB 1254	ND	ND	ND	0.50
PCB 1260	ND	ND	ND	0.50
% Surrogate Recovery:	55%	76%	37%	
Date Extracted:	8/20/93	8/20/93	8/20/93	
Date Analyzed:	9/2/93	9/2/93	9/2/93	

PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = TCMX (2,4,5,6-tetrachloro-m-xylene)

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

POLYCHLORINATED BIPHENYL RESULTS
EPA METHOD 8080

(All values are in μg/L which is equivalent to parts-per-billion)

Client ID:	MW-3	MW-4	Duplicate	
TCT ID:	3205	3206	3207	
Parameter:				**PQL**
PCB 1016	ND	ND	ND	0.50
PCB 1221	ND	ND	ND	0.50
PCB 1232	ND	ND	ND	0.50
PCB 1242	ND	ND	ND	0.50
PCB 1248	ND	ND	ND	0.50
PCB 1254	ND	ND	ND	0.50
PCB 1260	ND	ND	ND	0.50
% Surrogate Recovery:	56%	64%	60%	
Date Extracted:	8/20/93	8/20/93	8/20/93	
Date Analyzed:	9/3/93	9/3/93	9/3/93	

PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = TCMX (2,4,5,6-tetrachloro-m-xylene)

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

POLYCHLORINATED BIPHENYL RESULTS
EPA METHOD 8080

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID:	MW-6	Equipment Blank After MW-6	Duplicate	
TCT ID:	3202	3203	3204	
Parameter:				**PQL**
PCB 1016	ND	ND	ND	0.50
PCB 1221	ND	ND	ND	0.50
PCB 1232	ND	ND	ND	0.50
PCB 1242	ND	ND	ND	0.50
PCB 1248	ND	ND	ND	0.50
PCB 1254	ND	ND	ND	0.50
PCB 1260	ND	ND	ND	0.50
% Surrogate Recovery:	47%	75%	51%	
Date Extracted:	8/20/93	8/20/93	8/20/93	
Date Analyzed:	9/3/93	9/3/93	9/3/93	

PQL = Practical Quantitation Limit
ND = Not Detected
Surrogate = TCMX (2,4,5,6-tetrachloro-m-xylene)

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

PESTICIDE RESULTS
EPA METHOD 8080

(All values are in μg/L which is equivalent to parts-per-billion)

Client ID:	Matrix Spike	Matrix Spike Duplicate
TCT ID:		
Compounds:		
Aldrin	40[1]	52
4,4'-DDT	32[1]	50
Dieldrin	54	83
Endrin	52	84
Heptachlor	43[1]	52
Lindane (G-BHC)	50	61
DBC (% Recovery)	42%	49%
Date Extracted:	8/20/93	8/20/93
Date Analyzed:	9/2/93	9/2/93

[1]Low recovery

Reference: EPA Test Methods for Evaluating Solid Waste, SW-846, November 1986, 3rd Edition.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: MW-1

TCT ID: 3709

Parameter		PQL	Test Date	Test Method
Fluoride	ND	3.2[2]	8/27/93	300.0
Chloride	13	0.11	8/26/93	300.0
Nitrite as Nitrogen	ND	0.11[1]	8/26/93	300.0
Bromide	ND	0.11	8/26/93	300.0
Nitrate as Nitrogen	ND	0.028	8/26/93	300.0
Sulfate	210	0.34	8/26/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]Higher PQL due to chloride interference.
[2]Higher PQL due to unknown interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: MW-2

TCT ID: 3710

Parameter		PQL	Test Date	Test Method
Fluoride	ND	4.0[1]	8/27/93	300.0
Nitrite as Nitrogen	ND	0.36[1]	8/26/93	300.0
Chloride	71	0.11	8/26/93	300.0
Bromide	0.12	0.11	8/26/93	300.0
Nitrate as Nitrogen	ND	0.028	8/26/93	300.0
Sulfate	920	0.34	8/27/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]High PQL due to chloride interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: MW-3

TCT ID: 3745

Parameter		PQL	Test Date	Test Method
Fluoride	ND	1.6[2]	8/25/93	300.0
Chloride	22	0.11	8/25/93	300.0
Nitrite as Nitrogen	ND	0.18[1]	8/25/93	300.0
Bromide	ND	0.11	8/25/93	300.0
Nitrate as Nitrogen	0.30	0.028	8/25/93	300.0
Sulfate	230	0.34	8/25/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]High PQL due to chloride interference.
[2]High PQL due to an unknown interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: MW-4

TCT ID: 3747

Parameter		PQL	Test Date	Test Method
Fluoride	ND	8.0[2]	8/27/93	300.0
Chloride	48	0.11	8/25/93	300.0
Nitrite as Nitrogen	ND	0.36[1]	8/25/93	300.0
Bromide	0.20	0.11	8/25/93	300.0
Nitrate as Nitrogen	ND	0.028	8/25/93	300.0
Sulfate	1,100	0.34	8/27/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]High PQL due to chloride interference.
[2]High PQL due to unknown interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: MW-5

TCT ID: 3750

Parameter		PQL	Test Date	Test Method
Fluoride	ND	8.0[2]	8/27/93	300.0
Chloride	60	0.11	8/25/93	300.0
Nitrite as Nitrogen	ND	0.36[1]	8/25/93	300.0
Bromide	0.18	0.11	8/25/93	300.0
Nitrate as Nitrogen	ND	0.028	8/25/93	300.0
Sulfate	430	0.34	8/25/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]High PQL due to chloride interference.
[2]High PQL due to unknown interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: MW-6

TCT ID: 3721

Parameter		PQL	Test Date	Test Method
Fluoride	ND	5.2[2]	8/27/93	300.0
Chloride	49	0.11	8/26/93	300.0
Nitrite as Nitrogen	ND	0.36[1]	8/26/93	300.0
Bromide	0.41	0.11	8/26/93	300.0
Nitrate as Nitrogen	0.031	0.028	8/26/93	300.0
Sulfate	240	0.34	8/26/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]Higher PQL due to chloride interference.
[2]Higher PQL due to unknown interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: **Duplicate**

TCT ID: 3753

Parameter		PQL	Test Date	Test Method
Fluoride	ND	1.6[2]	8/25/93	300.0
Chloride	22	0.11	8/25/93	300.0
Nitrite as Nitrogen	ND	0.18[1]	8/25/93	300.0
Bromide	ND	0.11	8/25/93	300.0
Nitrate as Nitrogen	0.27	0.028	8/25/93	300.0
Sulfate	220	0.34	8/25/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]High PQL due to chloride interference.
[2]High PQL due to unknown interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: **Duplicate**

TCT ID: 3722

Parameter		PQL	Test Date	Test Method
Fluoride	ND	5.2[1]	8/27/93	300.0
Chloride	49	0.11	8/26/93	300.0
Nitrite as Nitrogen	ND	0.36[1]	8/26/93	300.0
Bromide	0.39	0.11	8/26/93	300.0
Nitrate as Nitrogen	ND	0.028	8/26/93	300.0
Sulfate	280	0.34	8/26/93	300.0

ND = Not Detected

PQL = Practical Quantitation Limit

[1]Higher PQL due to chloride interference.

Reference: Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are reported as percentages)

Client ID:	Spike	Spike Dup RPD	Sample Dup RPD	
TCT ID:				
Parameter				**Test Date**
Chloride	103	0	0	8/25/93
Nitrite as Nitrogen	108	1.2	AD < DL	8/25/93
Nitrate as Nitrogen	101	2.7	2.6	8/25/93
Bromide	101	2.8	AD < DL	8/25/93
Sulfate	103	0.14	0.83	8/25/93
Fluoride	97	1.9	AD < DL	8/25/93

Client ID:	Spike	Spike Dup RPD	Sample Dup RPD	LCS	
TCT ID:					
Parameter					**Test Date**
Chloride	103	0.62	1.3	NA	8/26/93
Nitrite as Nitrogen	108	1.9	AD < DL	NA	8/26/93
Nitrate as Nitrogen	97	1.8	10	NA	8/26/93
Bromide	93	0.82	13	NA	8/26/93
Sulfate	105	0.24	2.9	NA	8/26/93
Fluoride	102	2.5	AD < DL	NA	8/26/93
Total Suspended Solids	NA	NA	10	94	8/26/93
Phenol	109	NA	AD < DL	107	8/26/93

NA = None Applicable
AD < DL = Absolute Difference Less Than Detection Limit

ANALYTICAL RESULTS

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID:	MW-1	Equipment Blank After MW-1	MW-2			
TCT ID:	3195	3198	3199			
Parameter				**PQL**	**Test Date**	**Test Method**
Total Organic Halides	29.6	148	49.4	5.0	8/20/93	9020A

Client ID:	Equipment Blank After MW-2	MW-5	MW-6			
TCT ID:	3200	3201	3202			
Parameter				**PQL**	**Test Date**	**Test Method**
Total Organic Halides	126	109	230	5.0	8/20-23/93	9020A

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Wastes, SW-846, November 1986, 3rd Edition.

ANALYTICAL RESULTS

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID:	Equipment Blank After MW-6	Duplicate	MW-3			
TCT ID:	3203	3204	3205			
Parameter				**PQL**	**Test Date**	**Test Method**
Total Organic Halides	162	66.0	15.9	5.0	8/23/93	9020A

Client ID:	MW-4	Duplicate			
TCT ID:	3206	3207			
Parameter			**PQL**	**Test Date**	**Test Method**
Total Organic Halides	36.0	18.3	5.0	8/23/93	9020A

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Wastes, SW-846, November 1986, 3rd Edition.

ANALYTICAL RESULTS

(All values are in $\mu g/L$ which is equivalent to parts-per-billion)

Client ID: **Method Blank**

TCT ID:

Parameter		PQL	Test Date	Test Method
Total Organic Halides	ND	5	8/20/93	9020A

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Wastes, SW-846, November 1986, 3rd Edition.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID:	MW-1	Equipment Blank After MW-1	MW-2			
TCT ID:	3195	3198	3199			
Parameter				**PQL**	**Test Date**	**Test Method**
Total Organic Carbon	35.8	11.9	53.0	1.0	8/23/93	9060
Total Suspended Solids	27	ND	4	4	8/20/93	160.2
Phenol	ND	ND	ND	0.020	8/30/93	9066

Client ID:	Equipment Blank After MW-2	MW-5	MW-6			
TCT ID:	3200	3201	3202			
Parameter				**PQL**	**Test Date**	**Test Method**
Total Organic Carbon	13.0	182	61.6	1.0	8/23-25/93	9060
Total Suspended Solids	ND	34	27	4	8/20/93	160.2
Phenol	ND	ND	ND	0.020	8/30/93	9066

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Wastes, SW-846, November 1986, 3rd Edition.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID:	Equipment Blank After MW-6	Duplicate	MW-3			
TCT ID:	3203	3204	3205			
Parameter				**PQL**	**Test Date**	**Test Method**
Total Organic Carbon	5.7	45.9	27.8	1.0	8/23-25/93	9060
Total Suspended Solids	ND	30	30	4	8/20/93	160.2
Phenol	ND	ND	ND	0.020	8/30/93	9066

Client ID:	MW-4	Duplicate			
TCT ID:	3206	3207			
Parameter			**PQL**	**Test Date**	**Test Method**
Total Organic Carbon	112.1	78.0	1.0	8/25/93	9060
Total Suspended Solids	72	32	4	8/20/93	160.2
Phenol	ND	ND	0.020	8/30/93	9066

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Wastes, SW-846, November 1986, 3rd Edition.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March, 1983.

ANALYTICAL RESULTS

(All values are in mg/L which is equivalent to parts-per-million)

Client ID: **Method Blank**

TCT ID:

Parameter		PQL	Test Date	Test Method
Total Organic Carbon	ND	1	8/23/93	9060

ND = Not Detected

PQL = Practical Quantitation Limit

Reference: EPA Test Methods for Evaluating Solid Wastes, SW-846, November 1986, 3rd Edition.

ANALYTICAL RESULTS

(All values are in percentages)

Client ID:	Matrix Spike	Matrix Spike Duplicate	
Parameter			**Test Method**
Total Organic Halides	90%	160%	9020A
Total Organic Carbon	101%	101%	9060

Reference: EPA Test Methods for Evaluating Solid Wastes, SW-846, November 1986, 3rd Edition.

twin city testing corporation

CHAIN-OF-CUSTODY RECORD

TCT NO. 39578

Chemical Waste Management
CLIENT NAME

2250 W. College Drive
CLIENT ADDRESS (STREET NUMBER, SUITE, ETC.)

Palos Heights, ILL 60463
CLIENT ADDRESS (CITY, STATE, ZIP)

(414) 733-8711
CLIENT CONTACT ADDRESS IF DIFFERENT FROM ABOVE — PHONE

Dan Pelczar / Dan Pelczar
SAMPLED BY PRINT NAME/SIGNATURE

Dan Pelczar
TCT CONTACT

Schmalz Dump
PROJECT NAME

8500-92-431
CLIENT PO # / PROJECT NO

T.C.T. - Appleton
BILL TO (CO NAME, ADDRESS)

Dan Pelczar
REPORT TO

Schmalz 1, 3
APP - Stmt

TCT USE ONLY

PROJ MGR: ~~Todd~~ Terry
PRIORITY:
INVOICE #: 4410-03-3224
JOB NAME: HPN 405
CUSTODY SEAL INTACT NUMBER Y/N:
TEMPERATURE OF CONTAINER: on ice
SAMPLE CONDITION:

PREPAY Y/N:
CHECK NO:
CHECK AMOUNT:

ANALYSES REQUESTED

CODE A NONE
B HNO_3
C H_2SO_4
D NaOH
E HCl
F ____

POSSIBLE HAZARD. YES ____ UNKNOWN X (COMMENT BELOW)

SAMPLE DISPOSAL. RETURN TO CLIENT ____ DISPOSAL BY LAB X
(ADDITIONAL CHARGES MAY BE ASSESSED)

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED	8 RCRA Metals	TOC 9060	Cyanide Amenable 335.1	PCB 8080	TOX 9020	Phenolics *			NO. OF CONTAINERS	CONTAINER TYPE	TCT NO
					FILTERED (YES/NO)	N	N	N	N	N	N				
					PRESERVED (CODE)	B	C	A	A	C	C				
					REFRIGERATED (Y/N)	Y	Y	Y	Y	Y	Y				
GB	MW-1	water	08-16-93	10.42	X	X	X	X	X	X			6	PVC/Glass	3195
GB	Equipment Blank After MW-1	water	08-16-93	10:57	X	X	X	X	X	X			6	PVC/Glass	3198
GB	MW-2	water	08-16-93	03:23	X	X	X	X	X	X			6	PVC/Glass	3199
GB	Equipment Blank After MW-2	water	08-16-93	03:42	X	X	X	X	X	X			6	PVC/Glass	3200
GB	MW-5	water	08-16-93	06:29	X	X	X	X	X	X			6	PVC/Glass	3201
GB	MW-6	water	08-16-93	12:48	X	X	X	X	X	X			6	PVC/Glass	3202
GB	Equipment Blank After MW-6	water	08-16-93	1:30	X	X	X	X	X	X			6	PVC/Glass	3203
GB	Duplicate	water	08-16-93	12:48	X	X	X	X	X	X			6	PVC/Glass	3204
9															
10															

1-TOC 1-Metals 1-Cyanide 3-1L glass

Additional Comments

o - 3005/6010, As 7060, Hg 7470, Se 7740
3020, 7191

* - 9065 / 9066 / 9067

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Dan Pelczar	8/17/93	4:30	Airborn Express	8/17/93	
			Dawn Walker / TCT	8/18/93	7:30

twin city testing corporation

CHAIN-OF-CUSTODY RECORD

TCT NO. 39579

CLIENT NAME: Chemical Waste Management

CLIENT ADDRESS (STREET NUMBER, SUITE, ETC.): 2250 W. College Drive

CLIENT ADDRESS (CITY, STATE, ZIP): Palos Heights, ILL 60463

CLIENT CONTACT ADDRESS IF DIFFERENT FROM ABOVE / PHONE: (414) 733-8711

SAMPLED BY PRINT NAME/SIGNATURE: Dan Pelczar / Dan Pelczar

TCT CONTACT: Dan Pelczar

PROJECT NAME: Schmeltz Dump

CLIENT PO # / PROJECT NO: 8500-92-431

BILL TO (CO. NAME, ADDRESS): T.C.T. - Appleton

REPORT TO: Dan Pelczar

POSSIBLE HAZARD. YES ____ UNKNOWN X (COMMENT BELOW)

SAMPLE DISPOSAL RETURN TO CLIENT ____ DISPOSAL BY LAB X
(ADDITIONAL CHARGES MAY BE ASSESSED)

TCT USE ONLY

PROJ MGR: lock!

PRIORITY

INVOICE #

JOB NAME: HPN 405

CUSTODY SEAL INTACT NUMBER Y/N

TEMPERATURE OF CONTAINER

SAMPLE CONDITION

PREPAY Y/N

CHECK NO

CHECK AMOUNT

ANALYSES REQUEST

CODE A NONE, B HNO3, C H_2SO_4, D NaOH, E HCl, F ____

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED	GRCRA Metals	TOC 2160	Cyanide Amins 427	PCB 3510/8080	TOX 9020	Phenolics			NO. OF CONTAINERS	CONTAINER TYPE	TCT NO.
					FILTERED (YES NO)	N	N	N	N	N	N				
					PRESERVED (CODE)	B	C	A	A	C	C				
					REFRIGERATED (Y/N)	Y	Y	Y	Y	Y	Y				
1	MW-3	water	08-17-93	10:10	X	X	X	X	X	X			6	PVC/Glass	3205
2	MW-4	water	08-17-93	09:44	X	X	X	X	X	X			6	PVC/Glass	3206
3	Duplicate	water	08-17-93	10:10	X	X	X	X	X	X			6	PVC/Glass	3207
4															
5															
6															
7															
8															
9															
10															

1-TOC 1-metals
1-cube 1-[illegible]
2-[illegible]

Additional Comments

O - 3005/6010, As 7060, Hg 7470, Se 7740, 3020, 7191

* - 9065/9066/9067

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Dan Pelczar	8/17/93	4:30	Airborne Express	8/17/93	
			[illegible] TCT	8/18/93	9:30

twin city testing corporation

CHAIN-OF-CUSTODY RECORD

TCT NO. [illegible]

CLIENT NAME: Chemical Waste Management
CLIENT ADDRESS (STREET NUMBER, SUITE, ETC): 3250 W. College Drive
CLIENT ADDRESS (CITY, STATE, ZIP): Palos Heights, ILL 60463
CLIENT CONTACT ADDRESS IF DIFFERENT FROM ABOVE / PHONE: (414) 733-8711
SAMPLED BY (PRINT NAME/SIGNATURE): Dan Pelczar / Dan Pelczar

TCT CONTACT: Dan Pelczar
PROJECT NAME: Schmaltz Dump
CLIENT P.O. # / PROJECT NO.: 8500-92-431
BILL TO (CO. NAME, ADDRESS): TCT-Appleton
REPORT TO: Dan Pelczar

POSSIBLE HAZARD: YES ____ UNKNOWN X (COMMENT BELOW)

SAMPLE DISPOSAL: RETURN TO CLIENT ____ DISPOSAL BY LAB X
(ADDITIONAL CHARGES MAY BE ASSESSED)

TCT USE ONLY

PROJ. MGR.: Terry M
PRIORITY:
INVOICE #:
JOB NAME: HPN # 605
CUSTODY SEAL INTACT (NUMBER Y/N): N/A
TEMPERATURE OF CONTAINER: 5°C
SAMPLE CONDITION: OK
PREPAY Y/N:
CHECK NO.:
CHECK AMOUNT:

ANALYSES REQUEST

CODE: A NONE; B HNO_3; C H_2SO_4; D NaOH; E HCl; F ____

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED	Lemon 424	Anions	8-RCRA * metals	NO OF CONTAINERS	CONTAINER TYPE	LAB NO.
	FILTERED (YES/NO)				N	N				
	PRESERVED (CODE)				A	B				
	REFRIGERATED (Y/N)				Y	Y				
1	MW-3	Water	8/24/93	10:15	X			1	1/2 l. plastic	37374
2	MW-4			11:17	X			1	1/2 l. plastic	37477
3	MW-5			2:14	X			1	1/2 l. plastic	37550
4	MW-5			2:14		X		2	500 ml	
5	Duplicate			10:15	X			1	1/2 l. plastic	37523
6										
7										
8										
9										
10										

Additional Comments:
* 3005/6010, As 7060, Hg 7470, Se 7740
Total Chromium 3030/7191

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Dan Pelczar	8/24/93	4:30	Airborn Express / E. Dutty, TCT	8/24/93	8/24/93 16:00

twin city testing corporation

CHAIN-OF-CUSTODY RECORD

TCT NO. 39523

Chemical Waste Management
CLIENT NAME

2250 W. College Drive
CLIENT ADDRESS (STREET NUMBER, SUITE, ETC.)

Palos Heights, ILL 60463
CLIENT ADDRESS (CITY, STATE, ZIP)

(414) 733-8711
CLIENT CONTACT ADDRESS IF DIFFERENT FROM ABOVE — PHONE

Dan Pelczar / Dan Pelczar
SAMPLED BY PRINT NAME SIGNATURE

Dan Pelczar
TCT CONTACT

Schmalte Dump
PROJECT NAME

8500-92-431
CLIENT P.O. # / PROJECT NO.

T.C.T. - Appleton
BILL TO (CO. NAME, ADDRESS)

Dan Pelczar
REPORT TO

TCT USE ONLY

PROJ MGR: Todd
PROJECT #:
INVOICE #:
JOB NAME: HPR # 405
CUSTODY SEAL INTACT NUMBER Y/N: N/A
TEMPERATURE OF CONTAINER: 9°C
SAMPLE CONDITION: OK
PREPAY Y/N:
CHECK NO:
CHECK AMOUNT:

POSSIBLE HAZARD YES ____ UNKNOWN X (COMMENT BELOW)

SAMPLE DISPOSAL RETURN TO CLIENT ____ DISPOSAL BY LAB X
(ADDITIONAL CHARGES MAY BE ASSESSED)

ANALYSES REQUEST

FILTERED (YES/NO): N
PRESERVED (CODE): A
REFRIGERATED (Y/N): Y

CODE A NONE
B HNO3
C H_2SO_4
D NaOH
E HCl
F ____

Common 429 Anions

ITEM NO.	CLIENT SAMPLE ID.	MATRIX	DATE SAMPLED	TIME SAMPLED								NO. OF CONTAINERS	CONTAINER TYPE	TCT NO
1	MW-1	Water	8/25/93	12:07	X							1	Pl. plastic	3709
2	MW-2			2:20	X									3710
3	MW-6			10:10	X									3721
4	Duplicate			10:10	X									3722
5														
6														
7														
8														
9														
10														

Additional Comments

Rob: Has the samples

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Dan Pelczar	8/25/93	4:30	Airborne Express / Latest Facility	8/25/93	[illegible]

Schmalz Dump Superfund Site
Harrison, Wisconsin

Metal Results

Parts Per Billion

Parameter:	MW-1	Equipment Blank After MW-1	MW-2	Equipment Blank After MW-2	MW-3	MW-4	MW-5	MW-6	Equipment Blank After MW-6	Duplicate	Duplicate	Prep Blank	PQL	Test Method
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.0	206.2
Barium	280	15	240	ND	240	200	350	310	11	350	250	ND	10	200.7
Cadium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	200.7
Chromium	2	ND	19	ND	3.9	18	340	3	ND	3	4.1	ND	1.0	218.2
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	200.7
Murcry	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20	245.1
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	270.2
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	200.7
Time Collected:	10:42	10:57	03:23	03:42	10:10	09:44	02:14	12:48	01:30	12:48	10:10	NA		
Date Collected:	8/16/93	8/16/93	8/16/93	8/16/93	8/17/93	8/17/93	8/24/93	8/16/93	8/16/93	8/16/93	8/17/93	NA		

Notes:
PQL = Practical Quantitation Limit
NA = Not Appliticable
ND = Not Detected

For date analyzed see the laboratory reports.

Schmalz Dump Superfund Site
Harrison, Wisconsin

Polychlorinated Biphenyl Results

EPA Method 8080
Parts Per Billion

Parameter:	MW-1	Equipment Blank After MW-1	MW-2	Equipment Blank After MW-2	MW-3	MW-4	MW-5	MW-6	Equipment Blank After MW-6	Duplicate	Duplicate	Method Blank	PQL
PCB 1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0 5
PCB 1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0 5
PCB 1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0 5
PCB 1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0 5
PCB 1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0 5
PCB 1254	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0 5
PCB 1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0 5
Time Collected:	10:42	10:57	03:23	03:42	10:10	09:44	10:10	12:48	01:30	12:48	10:10	NA	
Date Collected:	8/16/93	8/16/93	8/16/93	8/16/93	8/17/93	8/17/93	8/16/93	8/16/93	8/16/93	8/16/93	8/17/93	NA	
Date Extracted:	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	8/20/93	
Date Analyzed:	9/2/93	9/2/93	9/2/93	9/2/93	9/3/93	9/3/93	9/2/93	9/3/93	9/3/93	9/3/93	9/3/93	9/2/93	

Notes:
PQL = Practical Quantitation Limit
NA = Not Appliticable
ND = Not Detected

Schmalz Dump Superfund Site
Harrison, Wisconsin

Common Anion Results

Parts Per Million

Parameter:	MW-1	PQL MW-1	MW-2	PQL MW-2	MW-3	PQL MW-3	MW-4	PQL MW-4	MW-5	PQL MW-5	MW 6	PQL MW 6	Duplicate	PQL Duplicate	Duplicate	PQL Duplicate	Test Method
Floride	ND	3.2	ND	4.0	ND	1.6	ND	8.0	ND	8 0	ND	5.2	ND	1.6	ND	5 2	300 0
Chloride	13	0.11	71	0.36	22	0.11	48	0.11	60	0.11	49	0.11	22	0.11	49	0 11	300 0
Nitrite as Nitrogen	ND	0.11	ND	0.11	ND	0.18	ND	0.36	ND	0.36	ND	0.36	ND	0.18	ND	0.36	300 0
Bromide	ND	0.11	0.12	0.11	ND	0.11	0.20	0.11	0.18	0.11	0.41	0.11	ND	0.11	0.39	0.11	300 0
Nitrate as Nitrogen	ND	0.028	ND	0.028	0.30	0.028	ND	0.028	ND	0.028	0.031	0.028	0.27	0.028	ND	0.028	300.0
Sulfate	210	0.34	920	0.34	230	0.34	1100	0.34	430	0.34	240	0.34	220	0.34	280	0.34	300.0
Time Collected:	12:07		02:20		10:15		11:17		02:14		10:10		10:15		10:10		
Date Collected:	8/25/93		8/25/93		8/24/93		8/24/93		8/24/93		8/25/93		8/24/93		8/25/93		

Notes:
PQL = Practical Quantitation Limit
ND = Not Detected

For date analyzed see the labortory reports.

twin city testing corporation

Schmalz Dump Superfund Site
Harrison, Wisconsin

Analytical Results

Parts Per Million

Parameter:	MW-1	Equipment Blank After MW-1	MW-2	Equipment Blank After MW-2	MW-3	MW-4	MW-5	MW-6	Equipment Blank After MW-6	Duplicate	Duplicate	Method Blank	PQL	Test Method
TOC	35.8	11.9	53	13	27.8	112.1	182	61.6	5 7	45.9	78	ND	1 0	9060
TSS	27	ND	4	ND	30	72	34	27	ND	30	32	---	4	160 2
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	0 02	9066
Time Collected:	10:42	10:57	03:23	03:42	10:10	09:44	02:14	12:48	01:30	12:48	10:10	NA		
Date Collected:	8/16/93	8/16/93	8/16/93	8/16/93	8/17/93	8/17/93	8/16/93	8/16/93	8/16/93	8/16/93	8/17/93	8/23/93		

Notes:
PQL = Practical Quantitation Limit
TSS = Total Suspended Solids
TOC = Total Organic Carbon
--- = No Method Blank
NA = Not Applicable
ND = Not Detected

For date analyzed see the laboratory reports.

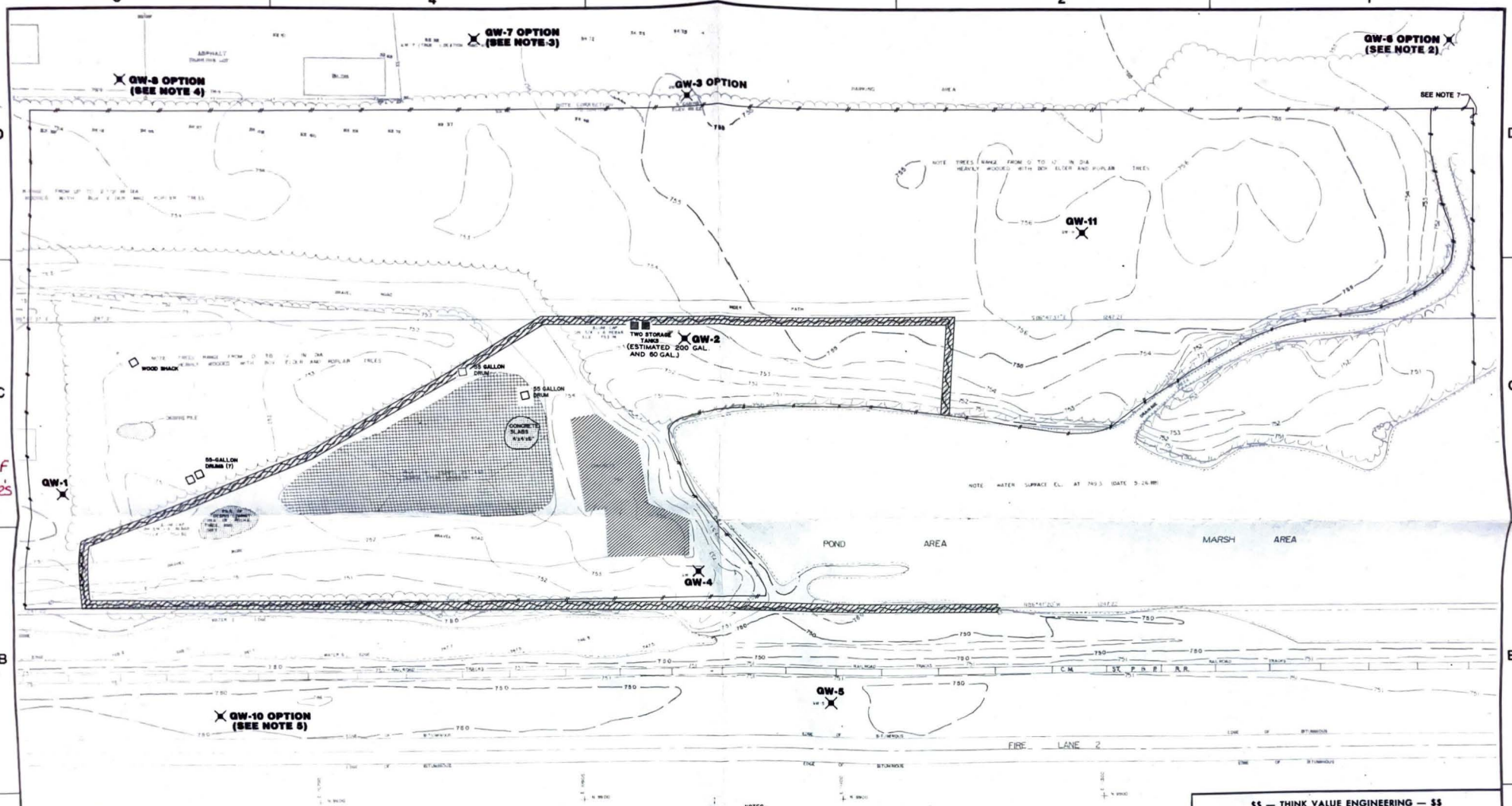
Parts Per Billion

Parameter:	MW-1	Equipment Blank After MW-1	MW-2	Equipment Blank After MW-2	MW-3	MW-4	MW-5	MW-6	Equipment Blank After MW-6	Duplicate	Duplicate	Method Blank	PQL	Test Method
TOX	29.6	148	49.4	126	15.9	36.0	109	230	162	66 0	18.3	ND	5 0	9020A
Time Collected:	10:42	10:57	03:23	03:42	10:10	09:44	02:14	12:48	01:30	12:48	10:10	NA		
Date Collected:	8/16/93	8/16/93	8/16/93	8/16/93	8/17/93	8/17/93	8/16/93	8/16/93	8/16/93	8/16/93	8/17/93	NA		
Date Analyzed:	8/20/93	8/20/93	8/20/93	8/20-23/93	8/23/93	8/23/93	8/20-23/93	8/20-23/93	8/23/93	8/23/93	8/23/93	8/20/93		

Notes:
PQL = Practical Quantitation Limit
TOX = Total Organic Halides
NA = Not Applicable
ND = Not Detected

9 & 9A

ABOUT 30' N OF CONTRACTOR'S TRAILER.



LEGEND

- POWER LINE AND POLE
- TREE LINE
- BITUMINOUS ROAD
- 751 EXISTING CONTOUR
- CLEARING AND GRUBBING LIMITS
- GRAVEL OR DIRT ROAD
- RAILROAD TRACKS
- DEBRIS FROM GRUBBING REMOVAL (TO BE UNIFORMLY DISTRIBUTED OVER THE SUBGRADE OF THE AREA TO BE CAPPED PRIOR TO PLACEMENT OF LOW PERMEABILITY CAP FILL)
- 748.8 EXISTING SPOT ELEVATION
- DEBRIS PILE REMOVAL (TO BE UNIFORMLY DISTRIBUTED OVER THE AREA TO BE CAPPED PRIOR TO PLACEMENT OF LOW PERMEABILITY CAP FILL)
- CONCRETE PAD REMOVAL (BROKEN CONCRETE TO BE UNIFORMLY DISTRIBUTED OVER THE AREA TO BE CAPPED PRIOR TO PLACEMENT OF LOW PERMEABILITY CAP FILL)
- CHAIN LINK FENCE & GATE TO BE REMOVED.
- MONITORING WELL REMOVAL - BASIC BID

NOTES:

1. CAR BODIES, JUNK EQUIPMENT AND OTHER DEBRIS CONSIDERED BY THE CONTRACTING OFFICER TOO LARGE TO EFFECTIVELY PLACE THE CAP OVER SHALL BE TEMPORARILY REMOVED AND PLACED WITHIN THE DEBRIS DISPOSAL AREA SHOWN ON DRAWING CER33-400E2.
2. APPROXIMATE LOCATION 491 FEET NORTH AND 800 FEET EAST. SEE DRAWING CER33-400E2 FOR COORDINATES.
3. APPROXIMATE LOCATION 460 FEET NORTH. SEE DRAWING CER33-400E2 FOR COORDINATES.
4. APPROXIMATE LOCATION 810 FEET WEST AND 204 FEET NORTH. SEE DRAWING CER33-400E2 FOR COORDINATES.
5. APPROXIMATE LOCATION 180 FEET SOUTH. SEE DRAWING CER33-400E2 FOR COORDINATES.
6. ALL EMPTY 55 GALLON DRUMS SHALL BE CRUSHED AND LEFT ON SITE. OVERPACK THE NON-EMPTY DRUMS AND MOVE TO THE OFFSITE DEBRIS DISPOSAL AREA SHOWN ON DRAWING CER33-400E2.
7. CLEARING AND GRUBBING SHALL BE TO THE EXTENT NECESSARY FOR INSTALLATION OF THE NEW PERMANENT CHAIN-LINK FENCE.

RECEIVED
NOV 10 1993
EMERG & REMEDIAL RESPONSE SERVICES
BUR OF SOLID & HAZ

N

SCALE 1 INCH=30 FEET
30' 0 30'

SAFETY DAYS

$$ — THINK VALUE ENGINEERING — $$

Revisions

Symbol	Descriptions	Date	Approved
△	AM #0003 MAJOR REVISIONS	5-20-97	D.P.R.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
OMAHA, NEBRASKA

Designed by: K.F./D.P.H./B.N.J.
Drawn by:
Checked by: D.P.R.
Reviewed by:
Submitted by: Chief F&M Section

SUPERFUND SITE HARRISON, WISCONSIN

SCHMALZ DUMP

REMOVAL PLAN

Scale: As Shown
Date: APRIL 1992
Spec. No.: DACW45-92-B-0029
Contract No.: DACW45-92-C-0081
Drawing Code: CER33-400E4