MRI REPORT

Test Report for Trial Burn No. 1 and No. 2 on the Drake Chemical Superfund Site's Mobile On-site Hazardous Waste Incinerator

Volume 2—Appendices A through B

For OHM Remediation Services Corp. 180 Myrtle Street Lock Haven, PA 17745

> Attn: Mr. Gary Jones Technical Manager

OHM Subcontract No. 292521-02

MRI Project No. 3620-13/23

September 12, 1997

MIDWEST RESEARCH INSTITUTE 425 Volker Boulevard, Kansas City, MO 64110-2299 • (816) 753-7600 A R 3 I 5 4 8 6



Appendices

- A List of Samples Collected
- B Field Sampling Data
- C Process Data and Certificates of Analysis for Spike Materials
- D Modified Method 5 Calculations and Laboratory Particulate Results
- E Calibration Data for Sampling Equipment
- F Galbraith Laboratory Results
- G Report on Chemical Analysis Results for Semivolatile Organics
- H Report on Chemical Analysis Results for PCDDs/PCDFs
- I Not used
- J Report on Chemical Analysis Results for VOCs
- K Report on Chemical Analysis Results for Metals
- L Report on Chemical Analysis Results for Chlorides
- M Report on Chemical Analysis Results for Cr⁺⁶
- N Example Calculations

Appendix A

List of Samples Collected

Condition 1 Condition 2

AR315488

. MRI-Applied/R362013.APP

Condition 1 List of Samples Collected

•

•.

MRI-Applied/R362013.APP

AR315489

APPENNTY A

	Labie A	I-I. Samples	to be Analyz	cu ioi vocs	
		Run 1 Dup	Run 2 Dup	Run 3 Dup	Run 4 Dup
1A.	. Bottom Ash	1127*, 1171	2127,2171	3127,3171	4127,4171
1B.	. Fly Ash	1131*, 1175	2131,2175	3131,3175	4131,4175
10	. Feed	1199	2199	3199	4199
1			•		

Table A1-1. Samples to Be Analyzed for VOCs

* Analyze in duplicate.

NOTE:

Two separate samples of bottom ash and fly ash were collected in each run and both are to be analyzed. One of the samples (from Run 1) are to be analyzed in duplicate as indicated above.



AR315490

.

ADDENNTY

Trial Burn #1-5

2

			_						
		<u>Run 1</u>		Ru	<u>n 2</u>	Ru	<u>13</u>	Ru	<u>14</u>
2A.	Solid Feed (analyze for SVOCs)	1120*		21:	20	312	20	412	20
2X.	Solid Feed (analyze for Fenac)	1200		22	00	32	200	420	00
2B. Solid Feed Spikes (archiveanalyze		1124		(100%) naphthalen	e)				
	only if needed)	1125		(100% 1,4- dichlorober	nzene)				
			Dup		Dup		Dup		Dup
2C.	Bottom Ash (analyze for 2 POHCs and all SVOCs in both samples from each run including Fenac)	1126*	1170	2126	2170	3126	3170	4126	4170
2D.	Fly ash (analyze for 2 POHCs and all SVOCs in both samples from each run including Fenac)	1130*	1174	2130	2174	3130	3174	4130	4174

Table A1-2. Samples to Be Analyzed for Semivolatile Compounds

* Analyze in duplicate

MRI-Applied\M3620-23.wpd

		I able A	1-2 (Conum	ueu)		
2E.	MM5-SV Samples (analyzed for 2 POHCs,	<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>	Blan <u>Trai</u>
	FH Rinse Filter BH Rinse XAD Condensate Toluene Rinse	1108 1109 1110 1111 1112 1113	2108 2109 2110 2111 2112 2113	3108 3109 3110 3111 3112 3113	4108 4109 4110 4111 4112 4113	115 115 115 115 115 115 115
2F.	MM5-SV Reagent Blanks (analyze if necessary)					
	MeOH MeCl ₂ Filter XAD Water Toluene	1143 1144 1146 1147 1148 1145				
2G.	EPA D/F Audit Samples (analyzed for D/F)					
	Samples are in cold room; see Brad Deck EPA #7003 EPA #7197					

1

Note: The amount of POHCs that would be present in the MM5-SV extract, at 99.99% DRE, are:

Naphthalene	60 µg	
1,4-Dichlorobenzene	60 µg	,

MRI-Applied\M3620-23.wpd

AR315492

Trial Burn #1-10

Δ

<u>Run 1</u>	Run 2	Run 3	Run 4
1121	2121	3121	4121

Table A1-3A. Feed Samples to Be Analyzed for Metals (As, Be, Cd, Cr, Pb, Hg)

Table A1-3B.Samples to Be Analyzed for TCLP Metals (Ag, As,
Ba, Cd, Cr, Hg, Pb, and Se)

		, , , , , , , , , , , , , , , , , , , ,						
	Run 1	Dup	Run 2	Dup	Run 3	Dup	Run 4	Dup
3E. Bottom Ash	1128	1172	2128	2172	3128	3172	4128	4172
3B. Fly Ash	1132	1176	2132	2176	3132	3176	4132	4176

	<u>Run 1</u>	Run 2	Run 3	<u>Run 4</u>
4A. M5-PH (Determine particulate w FH Acetone Filter (Filter No.)	t.) 1101 1102 (6)	2101 2102 (5)	3101 3102 (7)	4101 4102 (8)
4B. M5-PH Train Reagent Blanks Acetone Filter (Filter No.) Water	1138 1139 (9) 1140			
4C. M5-PH Train Samples to Be Archived Impingers 1-3 Impingers 4-6	1103 1105	2103 2105	3103 3105	4103 4105
4D. M5-PH Train (Samples to be analyzed for Cl ⁻ per Method 9057 by MRI) H ₂ SO ₄ aliquot	I 1104*	2104	3104	4104
NaOH aliquot H ₂ SO ₄ blank NaOH blank	1106* ⁻ 1141 1142	2106 * Dupli	3106 cate analysis r	4106 equired
4E. Cl ⁻ Knowns (To be analyzed for Cl ⁻ per Method 9057 by MR H ₂ SO ₄ H ₂ SO ₄ NaOH NaOH	l) 1161 1162 1163 1164	Kno	wns to be prep by D. Hooton	ared

Table A1-4. Particulate/HCl Train Samples for MRI

Note: All samples analyzed for Cl⁻ are to be analyzed in duplicate in accordance with Method 9057. Also, matrix spikes are required, to assess recovery efficiency.

Note: None of these samples were included in Federal Express shipment on 1/28/97. Will be sent 1/29/97.

Note: 4A, 4B and 4C shipped back on MRI truck.

MRI-Applied\M3620-23.wpd

APPENNTY A

AR315494

Trial Burn #1-15

ธ

5.0 Samples for Galbraith Labs

		<u>Run 1</u>	<u>Run 2</u>	<u>Run 3</u>	<u>Run 4</u>
5A.	Waste Feed Samples	1122*	2122	3122	4122
	(Analyze for total solids, ash, HHV, total CI, and moisture content)		* ۵	analyze in duplica	ate
5B.	Bottom Ash Samples	1129, 1173	2129, 2173	3129, 3173	4129, 4173
	(Analyze for TOC in quadriplicate per Method 9060)				
5C.	Fly Ash Samples	1133, 1177	2133, 2177	3133, 3177	4133, 4177
	(Analyze for TOC in quadriplicate per Method 9060)				
5D.	Solid Feed Knowns				
	Total CI HHV Ash	1165* 1166* 1167*			

Samples, listed below, are to be analyzed by Galbraith Labs as follows:

* Shipped to Galbraith Labs with samples from Runs 3 and 4.

MRI-Applied\M3620-23.wpd

Trial Burn #1-16

AR315495 Appendix A

ł

6.0 Samples for Corps of Engineers (COE)

		Run 1	Run 2	Run 3	<u>Run 4</u>
6A.	Solid Feed	1135 *	2135 *	3135 **	• 4135 **
6B.	Bottom Ash	1136 *	2136 *	3136 **	4136 **
6C.	Fly Ash	1137 *	2137 *	3137 **	4137 **
60.		110/	210/	3137	410/

Extra samples were taken for the COE, as follows:

* Given to Tony Garcia 1/28/97.

Given to Tony Garcia 2/3/97

MRI-Applied\M3620-23.wpd

AR315496

Trial Burn #1-17

Condition 2 List of Samples Collected

APPENNTY A

AR315497

MRI-Applied/R362013.APP

9

	A2-1. Samples	to be Analyz	Leu IOI VOCS	
	Run 5 Dup	Run 6 Dup	Run 7 Dup	Run 8 Dup
1A. Bottom Ash	5127*, 5171	6127,6171	7127,7171	8127,8171
1B. Fly Ash	5131*, 5175	6131,6175	7131,7175	8131,8175
1C. Feed	5199	6199	7199	8199

 Table A2-1. Samples to Be Analyzed for VOCs

* Analyze in duplicate.

NOTE:

Two separate samples of bottom ash and fly ash were collected in each run and both are to be analyzed. Two of the samples (from Run 5) are to be analyzed in duplicate as indicated above.

Samples were sent to ECC for BNA/Fenac analysis 2/20/97.



MRI-Applied\m3630-13.wpd

		<u>Run 5</u>	· •	Ru	<u>n 6</u>	Ru	<u>n 7</u>	Ru	<u>n 8</u>
2A.	Solid Feed (analyze for SVOCs)	5120*		6120		712	7120		20
2X.	Solid Feed (analyze for Fenac)	5200		62	00	72	200	820	00
2B. Solid Feed Spikes (archive—analyze		5124		(100%) naphthalen	e)				
	only if needed)	5125		(100% 1,4- dichlorober	izene)				
			Dup		Dup		Dup		Dup
2C.	Bottom Ash (analyze for 2 POHCs and all SVOCs in both samples from each run including Fenac)	5126*	5170	6126	6170	7126	7170	8126	8170
2D.	Fly ash (analyze for 2 POHCs and all SVOCs in both samples from each run including Fenac)	5130*	5174	6130	6174	7130	7174	8130	8174

Table A2-2. Samples to Be Analyzed for Semivolatile Compounds

* Analyze in duplicate

MRI-Applied\m3630-13.wpd

APPENDIX A

<u>Run 5</u>	<u>Run 6</u>	<u>Run 7</u>	<u>Run 8</u>	Blank <u>Train</u>
		·		
5108 5109 5110 5111 5112 5113	6108 6109 6110 6111 6112 6113	7108 7109 7110 7111 7112 7113	8108 8109 8110 8111 8112 8113	5154 5155 5156 5157 5158 5159
,				
5143 5144 5146 5147 5148 5145				
	<u>Run 5</u> 5108 5109 5110 5111 5112 5113 5143 5143 5144 5146 5147 5148 5145	Run 5 Run 6 5108 6108 5109 6109 5110 6110 5111 6111 5112 6112 5113 6113 5143 5144 5146 5147 5148 5145	Run 5 Run 6 Run 7 5108 6108 7108 5109 6109 7109 5110 6110 7110 5111 6111 7111 5112 7112 5113 5143 6113 7113 5144 5146 5147 5148 5145 5145	Run 5 Run 6 Run 7 Run 8 5108 6108 7108 8108 5109 6109 7109 8109 5110 6110 7110 8110 5111 6111 7111 8111 5112 7112 8112 5113 6113 7113 8113 5143 5144 5146 5147 5143 5143 5143 5143 5143 5143 5143 5143 5143 5143 5143 5143 5143 5144 5146 5147 5143 5143 5143 5143

Table A2-2 (Continued)

Note: The amount of POHCs that would be present in the MM5-SV extract, at 99.99% DRE, are:

Naphthalene	60 µg
1,4-Dichlorobenzene	60 µg

<

Analyze D/F audit samples from EPA (sent to Greg Jungclaus).

Trial Burn #2 - 10

		Run 5	Run 6	Run 7	Run 8
ЗA.	Solid Feed (Analyze for 22 metals in Table G4-7a of TBP)	5121*	6121	7121	8121
3В.	Metal Spike (archive—analyze only if needed)	5123* (see note below)			
3C.	MM5-MM Train (Analyze for HNO ₃ Rinse Filter Impingers (H ₂ O ₂ /HNO ₃)	22 metals, exc 5115 5116 5117	ept Hg) 6115 6116 6117	7115 7116 7117	8115** 8116** 8117**
ЗD.	MM5-MM Reagent Blanks HNO ₃ Rinse	5149			
	Filter	5150	Metals reques	ted 3 extra blank	(filters
	(H ₂ O ₂ /HNO ₃)	515 1			
3E.	MM5-MM Hg Train (Analyze HNO ₃ Rinse Filter Impingers HNO ₃ /H ₂ O ₂ Impinger #4 Impingers KMnO ₄ /H ₂ SO ₄ HCI Rinses	e for Hg only ex 5178 5179 5180 5181 5182 5183	cept in Run 8) 6178 6179 6180 6181 6182 6183	7178 7179 7180 7181 7182 7183	8178*** 8179*** 8180*** 8181*** 8182*** 8183***
3F.	MM5-MM Hg Train Blanks HNO ₃ Filter HNO ₃ /H ₂ O ₂ KMnO ₄ /H ₂ SO ₄ Type I H ₂ O 8N HCI	5189 5190 5191 5192 5193 5194			

Table A2-3A. Samples to Be Analyzed for Metals

Note: Samples are to be archived. Analyze only if needed. Composition of the metal spike material is expected to be:

As ₂ O ₃	13.7%
BeSO ₄ •4H ₂ O	5.2%
$Cd(NO_3)_2 \cdot 4H_2O$	4.4%
Cr ₂ O ₃	7.7%
PbO	69.0%

Note:

Feed was also spiked with Mn.

* Solid feed from one run to be analyzed in duplicate.

** Analyze for K and Mn only

*** Analyze for all 22 metals including Hg

MRI-Applied\m3630-13.wpd

APPENDIX A

Trial Burn #2 - 13

13

	Run 5	Dup	<u>Run 6</u>	Dup	<u>Run 7</u>	Dup	<u>Run 8</u>	Dup
3G. Bottom Ash	5128	5172	6128	6172	7128	7172	8128	8172
3H. Fly Ash	5132	5176	6132	6176	7132	7176	8132	8176

Table A2-3B. Samples to Be Analyzed for TCLP Metals (Ag, As, Ba,
Cd, Cr, Hg, Pb and Se)

<u> </u>	A2-5C. Samp	les to de Anai	yzed for Cr	
	Run 5	Run 6	Run 7	Run 8
A. MM5-Cr ⁺⁶				
Aliquot for Cr ⁺⁶	5187	6187	7187	8187
Filtrate (to be archived, use if needed)	5186	6186	7186	8186
B. MM5-Cr ⁺⁶ Blanks				
KOH Blank (1N)	5195 .			
KOH Blank (2N)	5197	(Archive, do no	ot analyze)	
Water Blank	5196			

Table A2-3C. Samples to Be Analyzed for Cr⁺⁶



MRI-Applied\m3630-13.wpd

Trial Burn #2 - 14

		Run 5	Run 6	Run 7	Run 8
4A.	M5-PH (Determine particulate wt.) FH Acetone Filter (Filter No.)	5101 5102 (10)	6101 6102 (11)	7101 7102 (12)	8101 8102 (13)
4B.	M5-PH Train Reagent Blanks Acetone Filter (Filter No.) Water	5138 5139 (16) 5140			
4C.	M5-PH Train Samples to Be Archived Impingers 1-3 Impingers 4-6	5103 5105	6103 6105	7103 7105	8103 8105
4D.	M5-PH Train (Samples to be analyzed for Cl ⁻ per Method 9057 by MRI) H ₂ SO ₄ aliquot NaOH aliquot	5104** 5106**	6104 6106	7104 7106	8104 8106
	H₂SO₄ blank NaOH blank	5141 5142	** Duplic	ate analysis r	equired
4E.	CI ⁻ Knowns (To be analyzed for CI ⁻ per Method 9057 by MRI) H ₂ SO ₄ H ₂ SO ₄ NaOH NaOH	5161 5162 5163 5164	Know t	ns to be prepa by D. Hooton	ared

Table A2-4. Particulate/HCl Train Samples for MRI

Note: All samples analyzed for Cl⁻ are to be analyzed in duplicate in accordance with Method 9057. Also, matrix spikes are required, to assess recovery efficiency.

Note: 4A, 4B and 4C shipped back on MRI truck.

.

!

5.0 Samples for Galbraith Labs

٢,

Samples, listed below, are to be analyzed by Galbraith Labs as follows:

		Run 5	Run 6	Run 7	Run 8
5A.	Waste Feed Samples	5122*	6122	7122	8122
	(Analyze for total solids, ash, HHV, total CI, and moisture content)				•
5B.	Bottom Ash Samples	5129, 5173	6129, 6173	7129, 7173	8129,8173
	(Analyze for TOC in quadriplicate per Method 9060)				
				-	
5C.	Fly Ash Samples	5133, 5177	6133, 6177	7133, 7177	8133, 8177
	(Analyze for TOC in quadriplicate per Method 9060)				
5D.	Solid Feed Knowns				
	Total CI HHV Ash	5165** 5166** 5167**	Knowns to b shipped se	e prepared by D parately to Galb	. Hooton and raith Labs.

* Analyze in duplicate-

** Shipped to Galbraith Labs with samples from Runs 3 and 4.

Note: 5A, 5B, and 5C were sent by Federal Express on 2/5/97.



MRI-Applied\m3630-13.wpd

Trial Burn #2 - 17

6.0 Samples for Corps of Engineers (COE)

	- Run 5	Run 6	Run 7	Run 8
6A. Solid Feed	5135 *	6135 *	7135 *	8135 *
6B. Bottom Ash	5136 *	6136 *	7136 *	8136 *
6C. Fly Ash	5137 *	6137 *	7137 *	8137 *

Extra samples were taken for the COE, as follows:

* Given to Tony Garcia 2/5/97.

MRI Applied\m3630-13.wpd

AR315505

Trial Burn #2 - 18

Appendix B

Field Sampling Data

Run 1

Run 2

Run 3

Run 4

Run 5

Run 6

Run 7

Run 8

Field Calibration Data

Velocity Traverse Data and Cyclonic Flow Check Sample Traceability Forms



.

•

MRI-Applied/R362013.APP

.

Run 1 Field Sampling Data

MRI-Applied/R362013.APP

AR315507

APPENDIX B

1



٦

SAMPLING LOCATION <u>Stack coutlet (Louis</u>) PROJECT NO. <u>Scarce 13 - 30</u>

(-435:000

6)

RUN NO. Date ____

d

					-7-	2
	۰E	ЯЗ ,.91	אפו וורא	346	249	318
	•E	8E BE	089 M3T	351	لكلا	256
K.ck	Mb., •F	IPLE TEI	NA2 Xoa	-		
Gu	•۶ ۲۶	וה., ואפו	10	40	414	
ATOR_	,.JA	RUN I .ni	4.5	07	0.1	
OPEI -	S METER Rature	OUTLET	(T _{m eul}), °F	68	67	11-8
	DRY GA Tempe	INLET	(T _{m In}), °F	89	63	73
	STACK	IEMP.	1'1/. °F	5.1	661	180
0	RESSURE	(U ₂ H n)	ACTUAL	1.90	06.0	2.05
3 - 3	DIFFER	(AH),	ESIRED	1.85	177	101

								-	-	-	-	_	_	_		_								_	_					
																														-
			130	0.51	13:5	126	12.6	12.7	12.7	121	12,7	1217	12.7	12.5			12.6	12.5	12.6	12.7	C.2/	2.2	12,7	2.2	12.8	13.2	13.0	5:27		
۰E	яат. ,.9М	31 14	345	249	248	247	Che	348	253	253	248	250	248	244			2360	247	253	253	242	245	33	345	30	248	9%	316		
-F	MP.,	89 37	351	352	256	255	253	1 25	253	27	253	253	253	251			25-1	261	37	258	22	55	33	23	253	252	252	255		
A₽., •F	X TEP	A2 08	-		_	7		4	_		_		_	-	t	W	_												_	-
•E FK	אף., איש	31 WI	<i>%</i>	8	<u>N</u>	19	7	ŝ	90	%	10	3	75	2		_	14	14	2	Ч	2	0	0	5	2	Ŋ			╉	-
	бн	.ni	Y	0	0	5	0	0	ç	7 0	15	5	5	0			5 5	5 5	5	0 4	0	0	0	1	N N	0	04	0	+	
AC	V 9M	uid F	X	<u>.</u> ')	4	Ś	e) I	ف	0	V	2	2	<i>s</i> ,	4			5	12.	ذ	ك	<u>ن</u>	<u>6</u>	ق	2	<u>ى</u> ،	2	~	0	_	-
S METER Rature	OUTLE	(1 m eul).	608	6.7	118	76	71	73	75	16	77	28	66	5 6			78	20	77	7.2	78	78	79	29	79	22	18	81		
DRY GA Tempe	INLET	(T _{m In}), °F	90	63	73	27	81	83	86	88	88	23	50	96	56		5 L.	81	75	83	88	94	89	89	30	90	91	16		
STACK	TEMP. (T.),	÷	کړ ر	129	180	180	179	180	180	180	180	180	180	121	thè		180	180	511	180	180	180	180	180	180	179	180	181		-
RESSURE INTIAL	n H ₂ 0)	ACTUAL	190	06.0	2.05	2.00	2.10	1.95	1.95	2.00	1.95	1.55	1.95	1.80			2.00	2.15	2.25	2.00	2.00	1.90	2.00	2.00	210	2.36	2.20	1.96		
ORIFICE PI DIFFERE	(AH), I	DESIRED	1.85	2.17	2.04	2.00	210	1.91	1.97	1.99	1.93	1.53	1.94	1.80			2.02	2.15	2.23	2.03	1.58	1.75	1.967	1.99	2.04	2.30	2.20	1.91		
VELOCITY	HEAD (△₽"),	In. H ₂ 0	<i>•</i> 34	14.	. 40	, 3 9	139	.38	, 35	e 35	.37	137	. 360	, 36			. 39	. 42	,4/	, 39	, 38	,34	. 36	, 38	140	.42	42	, 38		-
READING	1.1/1	ACTUAL	842,785	848.800	854.560	860.350	866.365	972.00	877.965	883.457	69.415	895. 330	200 935	124-201		9051. 280	9,2, 550	946 246	124.590	530.60	936.450	542,100	947.875	953.760	959.685	965.950	972.100	511.897		-
GAS METER (V _m),	INITIAL - '5.2	DESIRED	847.856	678.818	854.706	860.503	5466.457	872.227	878.024	883, 837	8851.5798	8951331	901.053	906.649			912.1.31	G14. 202	324. 864 4	930.755	936 582	942.096	947.931	953,766	955.757	966.039	972.156	911. 519		-
clock TIME (24-hr.)		ألال	1203.5	12 11.0	1218.5	0.1221	1233.5	14 61	1248.5	1256	12021	1311	5.8121	1326		1850	13515	1405	1412.5	1420	147.5	1435	1442.5	14.20	1457.5	1305	13 12.5	1320		
	TIME, mlr	/。	7.5	15.0	29.62	30.0	37.5	45.0	57.5	60.00	67.5	75	ŕ 2. 5'	90.0		0	20	1.2	22.5	30.0	37.5	45	52.5	140	12.5	75	92.5	90		
	TRAVERSE	NUMBER	w 12	11 (7)	110	49	<i>u</i>)	0.7	3 (1)	·	24	<i>w</i> 3	w 2	101			N 12	N II	N 10	N 9	N 46	1 J	NG	N S	NH	EW.	\$N.2			
																						_	. M.	-			л. Г			

AR315509

19-9 N

з

1140.5 SU Truin Plussed

Surplin al

Ke et

0101

INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

Plant Make OHIN RSC	Project No. 3620-13-20
Sampling Location Stuck Outlot (Lown)	Run No. / Date /-20 57
Sample Type (Multi-Point, Single-Point)	Operator Gulick
Flow Control Device (Microvalve, Critical Orifice)	Bag Type Myla Sample No. 1107
For Sampling From M5 Console No. 116	Method 3 Train No.
Pump Type Dia vhram	Pump Type
Pump I.D. <u>N10</u>	Pump I.D.
Flow Meter Type Rolameter	Flow Meter Type
Flow Meter I.D. NIU	Flow Meter I.D.
Desired Flow Rate (cc/min) 100 cc	
Leak Check Before Sampling 84 Pass	After Sampling Pasa
Total Sampling Time (min) 180 Average Flo	w Meter Reading
Flow Rate (cc/min): Average Highest	_ 100 cc Lowest _ 100 cc
Estimated Actual Volume (liters)	

1 me 24 Hr Clock	Reading	Comments
1140	100	Olc
1140.5		Shut Down
1157	100	Rosturt
1,705	.100	OK
1215	100	OK
1225	100	ok
12.35	100	OK
12.85	100.	ole
1255	100	ok
1310	10C.	ot
1320	100	ole
1326		Port Champs
1350	100	Restant
1400	100	<u> Əle</u>
1410	100	OK
1420	100	OK
1430	100	ok
1450	100	ok
1305	100	ok.
1315	100	olc
1320		End of Run

DRAKE 3620.13 MM5PH ORSAT B TRIAL BURN SAL For disposal Ca. P.GORMAN MIDWEST RESEARCH INSTITUTE

APPENNTY R

OXYGEN AND CARBON DIOXIDE BY ORSAT

PBD IECT NO 36,20, 13, 30 RUN NO. /	ORSAT LEAK CHECK BEFORE	ANALYSIS:
SAMPIENO 1107 DATE 01-25-97	BURETTE CHA	NGE IN 4 MII
PLANT SAMPLING LOCATION SACK- LOWER LEVEL	PIPETTES CHA	NGE IN 4 MII
ANALYSIS TIME (24hr-CLOCK) 1935	ORSAT LEAK CHECK AFTER A	NALYSIS:
SAMPLE TYPE (BAG, GRAB)	BURETTE CHA	NGE IN 4 MI
OPERATOR <u>J. Surgan</u>	PIPETTES No CHA	NGE IN 4 MII

- CHANGE IN 4 MIN. - CHANGE IN 4 MIN.

--- CHANGE IN 4 MIN. - CHANGE IN 4 MIN.

RUN		-		2	£		AVERAGE
GAS	ACTUAL READING	NET	ACTUAL READING	NET	ACTUAL READING	NET	VOLUME
c02	1 <i>S.</i> 7 2 <i>S.</i> 7 3	8.7	1 8.7 2 8.7 3	5:7	1 & 7 2 & 7 3	N 33	S, J
D ₂ (NET IS SECOND READING MINUS ACTUAL CO ₂ READING)	1 20.4 2 20.4 3	L'11	1 20.1 2 20 1 3	11.7	1 201 2 2011 3	0.11	1.17
						91-16 St	EV SURMAN which 05219

Acceptance Criteria

.2% by Volume .3% by Volume $0_2 \ge 15\% < 15\% < 15\%$.3% by Volume .2% by Volume

CO₂ >4% ≤4%

Comments:

APPENDIX B

AR315511

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

TRIAL BURN SAMPLE

DRAKE 3620.13

1107

MMSPH ORSAT BAG

40 CFR 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI₂ TRAIN (MM5PH) FIELD LABORATORY TRAIN SET-UP DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile HWI Source Location: Lock Haven, Pennsylvania Sampling Location: Mobile Hazardous Waste Incinerator (HWI) Stack Run No. _____ Sampling Train No. <u>MM 5 PH - </u>____ Sample Box No. _____ Set-up person(s): _____A, <u>Carender</u>_____ Date: _____Date: _____ Transfer to Sampler: Relinguished By A. Caranda Received By O. Neal Date/Time 1-24-97 9:00 TRAIN COMPONENT COMPONENT NO. LOADING DATA Initial Weights (grams) ** Sampling Nozzle (Quartz) Probe (Liner-Glass) Empty Loaded Female Probe Outlet Blank-Off 90° Bypass _____ Filter Holder Front _____ Filter Type: Whatman QM-A Filter Holder Back with Teflon® Filter Support _____ Filter Number: _____ 45/90° Connector 1021,4 1071.3 1st Impinger (2-Liter, Mod-GBS) _____ 50 mLs ±1 mL 0.1 N H2SO4 1st Impinger Replacement _____ 50 mLs ±1 mL NA NA U-Connector (A) _____ 0.1 N H₂SO₄ 473.8 572.8 2nd Impinger (GBS) _____ 100 mLs ±2 mLs U-Connector (B) _____ 0.1 N H₂SO₄ 73.0 672.2 3rd Impinger (GBS) _____ 100 mLs ±2 mLs U-Connector (C) _____ $0.1 \text{ N H}_2 \text{SO}_4$ 489.1 4th Impinger (Mod-GBS) _____ Empty U-Connector (D) 550.1 648.2 5th Impinger (Mod-GBS) _____ 100 mLs ±2 mLs U-Connector (E) _____ 0.1 N NaOH 486.1 584.6 6th Impinger (Mod-GBS) _____ 100 mLs ±2 mLs U-Connector (F) _____ 0.1 N NaOH 625,6 7th Impinger (Mod-GBS) _____ ~200 g indicating silica gel U-Connector (G) ~200 g indicating silica gel 659.8 8th Impinger (Mod-GBS) Impinger Outlet Connector _____UH-1

* Before and after sampling: Nozzle openings covered with aluminum foil or Teflon[®] tape, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon[®] plug. Bypass inlet covered (not sealed) with aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with aluminum foil, Teflon[®] tape or as described above.

Component Changes After Set-up And Before Recovery And Other Comments:

0050SUCX.WPD June 26, 1996 (rev. 0050SUC3.WPD October 31, 1996)

40 *CFR* 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI₂ TRAIN (MM5PH) FIELD LABORATORY SAMPLE RECOVERY DATA

FIELD LABORATORY SA MRI Project No. 3620 13 30	
Client/Source: OHM Remediation Services Corp., Drake	Chemical Superfund Site, Mobile HWI
Source Location: Lock Haven, Pennsylvania	
Sampling Location: Mobile Hazardous Waste Incinerator (HV	VI) Stack
Bun No. / Sampling Train No. $MM5pH-I$	Sample Box No. 4
TRAIN PURGE WITH A	SCARITE-FILTERED AIR
a the transferration of the HII of	
Condensate in front-half? Fifter miller Vamp	Purged By ////t
Majeture Removed 2 R / / C// / Stop Time	$= \frac{1}{20/4} \text{ forge rate: } [\Delta H = \frac{1}{20/4} \text{ in } H_2 \text{ or } H_2 o$
Transfor for Papavary	
Relinquiched By D. Mer. Beceived By J	M. (Date/Time 1-25-97 1420
Sample box recovery person(s): 7. M. (Date: /-25-97
Probe recovery person(s): P. Grand J. Sum B	- Edwards D. Ney Date: 1-25-97
Weights below are in grams.	
BACK HAL	F RECOVERY
Replacement	
Impinger: 1st 1st 2nd 3rd	4th 5th 6th 7th 8th
Final Wt. 37/29 NA 8252 700.4	8639 651.7 586.3 645.4 670.0
Initial Wt. 1071.3 1 572.8 672.2	- 489.1 648.2 584.6 625.6 609.8
Net Wt. 2641.6 4 262.4 28.2	374,8 3.5 1.7 19,8 10,2
	[Total Condensate Collected: 3342,2
Description ,	· · · · · · · · · · · · · · · · · · ·
and/or color: <u>clear</u> <u>dear</u> <u>dear</u>	- door door door 5 15
Recovery: >>>>> Impingers 1-3	→→ Impingers 4-6 + + + + + + + + % Blue
Sample Number: 1103	1105
Sample Bottle Tare Wt. <u>1297.1</u>	492.9
Sample Bottle Gross Wt. <u>9979.5</u>	<u>/067-6</u> Before Rinses
Components Rinsed*: filter support, filter holder back,	4th-oth impingers,
45/90° connector, 1st-3rd impingers, U-connectors A	-B U-connectors U-E
Not Sample With 2 2 2 2 2 2 2 2 2	//67/ Arter Milses
Sample Mixed Theory for HCl	for CL
Aliquot Sample Number:	$\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow \rightarrow$ 106 for Chloride Analysis
Sample Bottle Tare Wt. 99. 4	99.2
Sample Bottle Gross Wt. 4453.9 209.2	1060.1 199.6 After Aliquoting
Sample Bottle Final Wt.	After SIE Check
Net Sample Wt. 3156,8 109,8	567.2 100.4
FILTER:	
Sample Number: 102 Des	cription/Color: <u>Afunte/intet</u>
Sample Bottle Tare Wt. 268.9	
Components Rinsed **: nozzle, probe liner, byp	ass, filter holder front
Sample Bottle Gross Wt. 315.1 with Acet	one Rinses
Net Acetone Sample Wt. 46.2	
Sample Bottle Final Wt. <u>478.3</u> with adde	d Water Rinses
Net Water Sample Wt 1209-4 163.2	
* Using a total of 100 mLs ± 2 mLs ASTM Type I water g	er sample, rinse components twice. Thoroughly mix each samp
and added rinses before aliquoting.	aivably class. If any residue remains is a component, follow w
$-$ - α cotopo deces with pricebod \prec times of more lintil bor	elvaow clean of any residue remains in a component. 1010W W

** Acetone rinses with brushing 3 times or more until perceivably clean. If any residue remains in a component, follow with ASTM Type I water rinses with brushing until perceivably clean. Do not add any water rinses to the sample bottle until after the bottle is weighed with all of the acetone rinses.

~

COMMENTS:

0050RCCX.WPD October 31, 1996 (rev. 0050RCC3.WPD October 31, 1996)

APPENDIX B

		12				-		<u> </u>	1 5		ALIC UP INAVENSE		FINAL				FINAL									ůl	19.6	2 2	81					940.418			174 BOD	E	Revision 11/18/26
		<u> </u>	<u> </u>					_	/ 				INITIAL ·				INITIAL					1344	2151	1001	-	- 499 -	1012.699	,340		FINAL				TAUTIAL MATINE	INITIAL VULUME	FINAL VOLUME	LEAK CHECK VOLUME	ADJUSTED FINAL VOLUM	
		. 365	ISTURE % 537	6267	CTION	M-11-1	CIENT - 277	PRESSURE 24.0	ELEVATION (IL.) 34	1.P. (0.1 in./100 ft.) 24./0	iure -0,4/		FINAL				FINAL				AL FINAL	1328	311 13/1	t 1001		1	1]		AL INITIAL		2151							
)	FIELD DATA	NOZZLE DIA.	-////dcs assumed moi	METER AH @	METER CORRE	PITOT NO.	PITOT COEFFIC	-H BAROMETRICI	SITE TO BARO	CORRECTED B	STATIC PRESS	LEAK CHECK $\geq 3^{\prime\prime}$ H ₂ O	INITIAL			LEAK CHECK 23" H ₂ 0	INITIAL			LE TRAIN LEAK CHECKS	NAL NITI	1150	~ 21	- 00-		100 JHb	340.521	1, <i>i</i> t <i>g</i> /	LE TRAIN LEAK CHECKS	ITIAL FIN		151		ŗ					
		8-1	STH AND TYPE S hertz	101.7 C/D : ON X	NO. <u>W-'''</u>	TROLLERNO. N-4	A-7	UPLEI.D. NO. 96-6	CORDI.D. NO. N-125	CORD LD. NO.	57-2	10114	FINAL	1524	50-20	P1101	FINAL			SAMP	NITIAL FI	111 028	≥1511 /3	00' -200					SAMP	FINAL IN	11	איר	10						
		PROBENO.	PROBELEN	SAMPLE BO	METER BOX	427 (Lawer JEMP. CON	Z TEMP. MET	THERMOCO	NMBILICAL	N. NMBILICAL	-8- NOZZLENO		INITIAL	0830			INITIAL							`				ICE			51		0,				CE .		
		() () ()	NO 7220-13-30	Val- OHM KS	1-2-47	a LOCATION Stack Can	YPE MM5 - SV -	R arithe	· 1/4	DATA EVERY 7.5 MI	L/SAMPLER HOOKUP			1ME (24 hr)	ass/fail			FIME (24 hr)	PASS/FAIL			TIME (24 hr)	YACUUM, In. H	CFM	VOLUMES	FINAL	INITIAL	DIFFEREN			TIME (24 hr)	VACUUM, In. He	CFM	VOLUMES	FINAL	INITIAL	DIFFEREN		S
•		RUN NO.	PROJECT	PLANT .	DATE	SAMPLINC	SAMPLE 1	OPERATO	FILTERNC	RECORD	UMBILÌCA												,					•											COMMENT

APPENDIX B

8

Ravision 11/18/86

-4	
- C-	
1.01	

-2.7

•E .. AMET

de E

RETLIR

PROBE ,.9MBT X08

Femp., °F

10.6

245

20

10.7

249

142

10.7

250

272 252

10.7

Zin. 642

101

2%

C: 7

E

249

249

10,8

જી

2XB

252

11.6

5

244

120

úд

248

247

11.0)

48

142

1.1

20

250

55 200 249 2.5

246

782

12.9 13.0

E

248

t,

4

R

263

R

248

4

5 Ē

251

245

E

248

2

Ð

147

243

3.2

5

30

249 248

3.4

2<u>4</u>8

251

OPERATOR

Ship Cittet (win) 7-21-212 SAMPLING LOCATION

PROJECT NO.

1-122010

1-25.47

RUN NO.

DATE

319MA2 .. AMAT de. 26 28 37 F 7 13 40 29 7 38 4 200 ç R 50 8 Ş NPINGER Æ 4 ñ 5 4 gH .ni Ч 3 2 4 1 \oslash 4 5 2 3 Ē E $\delta \rho$ 2 11 \sim 4 PUMP VAC., $\tilde{\omega}$ 3 3 5 a 5 (T_{m but}), °F OUTLET DNY GAS METER Temperature 100 1 s; 61 1 831 69 13 じじ 22 1321 200 23 F 3 5 83 3 (T_{m in}), °F INLET 28 32 13 8 8 7 Ľ Ľ 8 87 88 Ż ŝ 59 3 3 8 G \bar{z} 2 ন্দু STACK TEMP. 80 52 Ż 132 ([]) • F Ś 182 180 Ś :31 :5 Ż 181 2000 181 181 131 182 181 8 1.81 í£1 181 ORIFICE PRESSURE DIFFERENTIAL (ΔH) , in H_20) ACTUAL 212 2,2 10.2 2.2 5.2 5.0 6.2 2.2 6, 2.0 2,2 ۵' 1.7 , Ľ ż 1-2 1.8 1.7 5 1.8 5 5 6 ò 5.8.7 60 DESIRED 2.20 2.24 2.24 2,20 2.06 2.13 1.jt 2.13 2.29 21.2 1.84 12.2 661 7 141 <u>(A</u> 53. 176 1. 78 74 1.1 1-71 VELOCITY (∆p1), In. H2O 95 HEAD at. 157. .39 43 32 35 . 39 :47 15 .42 44 ,35 15 Ľ, 42 17 38 न <u>4</u>\$ 5 1 17 12-12-12 1012,999 1073,510 <u>189,85</u> 10 34.76 ACTUAL 97.62 061000 1291 # 1040,23 1042-13 44.92 1061 . 8-5 953.76 971.00 0, HA 100% 74 12.8/01 1024.03 Ē 18.81.01 952.74 946. 44 (1/1), 113 (474), 475 1045. 10,54 GAS METER READING (ISO) * 1078,313 1012.699 In t 1040.34 1024.78 1029.37 0-1-12-01 1662.12 983,08 1018.55 PP. CU01 1.22 1046-53 INITIAL___ 946. 39 952 ,98 958.99 68,886 965.09 971.18 cfy, ch 1006.81 1023.91 1945.71 1000,89 1073.71 DESIRED 5 1248.5 1303.5 H27.9 1442.5 1512,51 1233.5 125 14FD 5 1505 1218.5 2512 450 CLOCK TIME (24-hr.) 1315.5 1350 1420 1435 1520 1405 1141.5 1241 1256 1324 1311 1226 0417 1771 SAMPLING TIME, min 127.5 142.9 112 5 57.51 1515 1/ 125 32.5 67.9 32.5 12.2 180 14 10 135 20 Ē, 2 30 ${}^{\oslash}$ Ļ, 74 2 5 50 RAVERSE NUMBER -11 ビーク 11 11 でし 6-10 5 5 S S POINT 5.7 5 $|\mathcal{D}|$ =,` 9-2 ر ، S ۍ ۲ 5-6 5.5 5-12 9:5 5-11 らし il μ 1

AR315515

9

COMMENTS

Grunged and is Metal (2) Brt Change

2

Down @ +++8 -10 unbilities Kinked Ristort (U 1150.5 1140.5

* New Desired @ Paint 1 946,87

22

S

58 শ্ব

ġ

15

19.6

2

5¥

놼 25

INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

Plan offun RSC	Project No. 3620-13-30 DG
Saturne contion Azek Onthat (Lover)	Run No. 1 Date 1-24-97 (-25-97
Sature (Multi-Point, Single-Point)	Operator <u>Griffn</u>
Flow Control Device (Microvalve, Critical Orifice)////	Bag Type mylar Sample No. 1114
For Sampling From M5 Console No	Method 3 Train No
Pump Type Kingson Retructore in digason	Pump Type
Pump 1.D VIN & N-9	Pump I.D NA
Flow Meter Type Rotometer	Flow Meter TypeNA
Flow Meter I.D	Flow Meter I.D
Desired Flow Rate (cc/min)	A
Leak Check Before Sampling Pass	After Sampling
Total Sampling Time (min) Average Flo	w Meter Reading /-0
Flow Rate (cc/min): Average Highest	loe Lowest loo
Estimated Actual Volume (liters) 18	· · · · · · · · · · · · · · · · · · ·

Time 24 Hr Clock	Flow Meter Reading	Comments
1157	1.0	57227
1212	1.0	
1227	1.0	
1242	1.0	
1257	1.0	
1324	1.0	Dawn for Port Prange
1350	1.0	Restart
1405	1.0	
1420	1.0	
1435	1.0	
1450	1.0	
1505	1.0	
1520	1-0	Down

1114

DRAKE 3620.13 MM5SV ORSAT BAG TRIAL BURN SAMPLE For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

OXYGEN AND CARBON DIOXIDE BY ORSAT

RUN NO	DATE 01-25-97	xx - touch derel	16,20	
PROJECT NO 2620,3,30	SAMPIENO ///+	PI ANT SAMPI ING LOCATION		OPERATOR Surger

DRSAT LEAK CHECK BE	FORE ANALYSIS:
BURETTE 2017	- CHANGE IN 4 MIN.
IPETTES Mo	- CHANGE IN 4 MIN.
DRSAT LEAK CHECK AF	TER ANALYSIS:
BURETTE	. CHANGE IN 4 MIN.
DIPETTES No	- CHANGE IN 4 MIN.

RUN				2	ę		AVERAGE
GAS	ACTUAL READING	NET	ACTUAL READING	NET	ACTUAL READING	NET	VOLUME
c02	1 & 7 2 & 7 3	5.2	1 & 7 2 & 7 3	6.9	1 8.7 3 8.7 3	8,7	8,7
O ₂ (NET IS SECOND READING MINUS ACTUAL CO ₂ READING)	1 20.4 2 20.4 3	11.7	1 20.4 2 20.4 3	11.7	1 20.4 2 20.4 3	271	611
						5 91-16 SI	EV SURMAN WASTA 062191

Acceptance Criteria

.

≥ 15% < 15% 02 .3% by Volume .2% by Volume $CO_2 > 4\% \le 4\%$

.2% by Volume .3% by Volume

Comments:

AR315517

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

1114

TRIAL BURN SAMPLE MM5SV ORSAT BAG DRAKE 3620.13

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY TRAIN SET-UP DATA

MRI Project No. 3620.13.30		· · · · · · · · · · · · · · · · · · ·	
Client/Source: OHM Remediation Services Corp	o., Drake Chemical Superfi	und Site, Mobile Hazar	dous Waste
Incinerator Source Location: Lock Haven, Pennsylvania			
Sampling Location: Incinerator Stack			
	1	`. I	
Run No Sampling Train No	Sample Box N	No. 01200/	
Set-up person(s): <u>A</u> , <u>Carender</u>		Date: _/~	25-97
Transfer to Sampler:		, — r —	
Relinquished By A. Carandar Received E	By D. Man /	Date/Time /-25	97 9:00
TRAIN COMPONENT COMPONENT NO) <u>.</u> ,	LOADING DATA	
Sampling Nozzla (Quartz) SV-7	*	Initial Weight	c (grame) * *
Probe (Liper-Glass)	*	Empty	.s (grains)
Fomèle Probe Outlet Plank Off			LUBUCU
	 *		
Eilter Helder Front	2		•
Filter Holder Back with Taflon®		OM-A	
coated 316 SS Filter Support	riter rype. witatinair	QM-A	
45/90° Connector	-	723	ì
Condenser (Standard)	Thermocouple No. 4	4620	* * *
XAD-2 Besin Cartridge (Standard) #2	~65 grams XAD-2 Re	sin + Surrogates	5170
(Documentation of standards injection is separate);	resin spiked on <u>01-10-9</u>	and maintained	d near 4°C until use.
	۵ ۲	- 10457	
1st Impinger (2-L Mod-GBS)	Empty	/ 070.5	-
1 at low parling on the set is and	Emoty	A. A	
Ist impinger Replacement	Empty		
U-Connector (A)	- 100 ml a	4188 (5870
	ASTM Type II Water		
3rd Impinger (GBS)		477.8	577.0
	ASTM Type II Water		
Ath Impigat (Mod GRS)	Empty	4695	
4th Impiliger (Mod-GBS)			`
5th Impinger (Mod GPS)	$ \sim 200$ a indicating sili	ca nel	:547
	_ 200 g malcading sind	54 90i	
Gth Impinger (Med GPS)			7498
Impinger (Wod-GBS)			//////
impinger Outlet Connector <u>011 C</u>	<u> </u>		ì

* Before and after sampling: Nozzle openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon[®] plug. Bypass inlet covered (not sealed) with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil or as described above.

*** Cartridge weighed with blank-offs in place; then, cartridge covered with aluminum foil to seal out light during storage and sampling.

Component Changes after Set-up and before Recovery and Other Comments:

1023SUCX.WPD April 26, 1996 (rev. 1023SUC3.WPD December 4, 1996)

AR315518

12

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY SAMPLE RECOVERY DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste	
Incinerator	
Source Location: Lock Haven, Pennsylvania Sampling Location: Incinerator Stack	
Run No Sampling Train No. $\frac{21200}{1000}$ Sample Box No. $\frac{01200}{1000}$	
Relinduished By Received By Archrendum Date/Time 7-23-71 /Bits	
Sample box recovery person(s): A. Carandry J. McCar	
Weights below are in grams	
RESIN CARTRIDGE AND IMPINGERS RECOVERY	
Impinger: XAD-2 Replacement	
Cartridge * 1st 1st 2nd 3rd 4th 5th 6th	
Final Wt. 517.3 3704. 4 Nr 824. 787.8 579.3 681.9 759.8	-
Initial Wt. 517_0 (14945_0 1045.3 587.0 577.0 469.5 654.7 249.9	-
Net Wt. 3707. 2 10.59.2 237.7 210.8 109.8 27.2 10.0	_
71-91,7 7458.9 [Total Condensate Collected:	ns].
Description - 3252.7	
Sample Recovery: Cartridge* → 1st-4th Impingers and Replacement 1st Impinger + + + + % Blue	-
Sample Number: 1 111 Sample Bottle Tare Wt. <u>1394,4</u> Transfer impinger contents only (i.e., do not add component rinses to this sample). Sample Bottle Final W(t - (19/1/1.2)	
Net Sample Wt. <u>3409.3</u> Net Sample Wt. <u>3409.3</u> Components Rinsed**: 1st-4th impingers, replacement 1st impinger, U-connectors A-C; combine rins with train back rinses below (sample number XX010)	es
FILTER RECOVERY AND TRAIN RINSES	
FILTER: Sample Number: 109 Description/Color: Intact/M-white	
Sample Number: / 108 / 110	
Sample Rottle Tare Wt $2/24$ $2/67$ 489.4	
Components Rinsed * * *: Front nozzle, probe liner, bypass, filter holder front;	
Back filter support, filter holder back, <u>45/90° connector</u> , <u>condenser</u>	
1059.3	•
Sample Bottle Final Wt. $\frac{7851}{2851}$ $\frac{757.7}{2852}$	
Net Sample Wt. $42/./$ 468.2 569.7	

*** TRAIN FRONT/BACK RINSES: Methanol/methylene chloride (1:1 v/v) rinses with brushing of front components 3 times or more until perceivably clean, and methanol/methylene chloride (1:1 v/v) rinses of back components 3 times, but without brushing, and including 5-minute soaks of underlined components 3 times. QA RINSES: Follow with toluene rinses and soaks, but without brushing, in the same manner as above for the train front.

OA RINSES: Follow with toluene rinses and soaks, but without brushing, in the same manner as above for the train from and back rinses.

COMMENTS:

1023RCCX.WPD June 4, 1996 (rev. 1023RCC3.WPD October 25, 1996)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately 100 grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX120, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX121, stored at near water ice temperature (i.e., 4°C). All samples, XX122, stored at near room temperature or cooler (i.e., 2/6°C). PAUL CAVAUNUE!

Date: 1/25 19 AU Muz Run No. Sampler(s): سر چرخی 150 122 /120 / 121 Composite Sample Number: /199 / 200 METALS Composite Sample Designation: SVOC: GALBT voc FENAC Grab No. ___Time___ Interruptions/Comments Caution: Material may contain β -naphthylamine. (1) 1156 DIRT (2) 11 1311 11 1226 . (4) 11 1741 <u>(</u>5) 11 1256 ____' G, 132 11 135 -na 8 " RUSUMON TELLINING FORT CALA pin Ù 10 11 11 1453 12 DIAT 13 15:08 DIR 15:23 14 15 16 17 18 19 20 Received By M. Chil-cur-Date/Time デース 5ー 97 1655 Relinauished By WSTFEED3.WPD January 24, 1997 AR315520

APPENDTY

SOLID WASTE FEED SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerato Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately 60 grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon®-lined screw cap and wrapped in aluminum foil to seal out light. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

ab	Time	
<u>}</u>		Caution: Material may contain β -naphthylamine.
Į.	1711	
<u>~</u>	1926	11
	1241	11
	1256	
2	13/1	//
ÿ	1326	·····
5	1353	1' - PU RUSSINGS FULLENDE PURT CHANGE
,	1409	prot.
7	1423	//
7	1438	<i>U</i>
)	14:53	PIRT
;	15:08	
,	15.23	
		PA
		·
	< -	
. OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator 0 6 39 0 Ð 5 ታ อ 6 2 n 6 100:001 : 230 07 λ 9 040 101 1128. 840 1054 0 しょう 020 050 0 1050 וותסיי 2011 1130 Q -いい 30. 1142. 1/15 ねこ 1136 134 с С 201 20 11 191 ien. 50 REMARKS v SPIKIN 3791 Recorded By: 2 -; 1.0 Lock Haven, Pennsylvania 1,4-Dichlorobenzene Date: Jun 25-9 LOT NO. 40041 33089 3055 3620.13.30 1001 ĩ 3 Source Location: Client/Source: MRI Project No. 6 Naphthalene LOT NO. 12004 1 : 17 Run No. 1.34 1136 1140 1143 1036 1147 1125 1130 1056 Cho! 1054 105 0401 24 - Hr TIME いろい 10 44 1050 1055 5811 113 1109 1045 1050 117 1046 1107 611 1911 0011 1011 1.5 AR315522

APPENNTY R

3620.13.30 OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator 00 0 2:01 2010 000 B 3 5.0 0,0 י) יי Ň N 3 REMARKS N.W. Kuthankan Й Ø Ц ſ Recorded By: Client/Source: OHM Remediation Services Source Location: Lock Haven, Pennsylvania *У* У 4-Dichlorobenzene ~ . Date: 744 25 LOT NO. ¢ ŋ р 1004 000 0 9 ſ MRI Project No. Naphthalene Ň ∢. ٢ LOT NO. 2/16000 33089 Ċ 7 ٢ 4004 9 ~ Run No. 1150 1154 1154 1155 24 - Hr 1/46 144 TIME AR315523

. . . 3620.13.30 OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Z ler 1 3 REMARKS 2:52 5 Q 350 SPIKING DATA - Condition 1 35 ٥ 5 34)M in 202 Recorded ByZ 7/10 C ۲ J Source Location: Lock Haven, Pennsylvania 1,4-Dichlorobenzene 67 Date: Jan 25 LOT NO. L 3089 ٢ ſ ς r ٢ ٢ L ٢ **۲** MRI Project No. Client/Source: Naphthalepe N LOT NO. S ٢ 17007 ٢ 'n Run No. 1340 24 - Hr TIME AR315524 1 8



	orporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator	orded By: Neil Januar P, CAVANAVCh	REMARKS	0.11 1508:17	1513.09	15/2 05 - 05	1, 1519 54 h	1 1601 JT	1. 1525 43 End of 15/ Run	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1, 1531 30	23 35 PC			90 Zh:SI "	15 55-51 II			11 12:53 39	" S:57 31	1/		$g_1 = \sum_{i=1}^{n} \sum_{i=1}^{n$			16:12 58	// [6,16 49	1/1 1/2: 18 4/1 1/2 1/2 1/2	
-	 o. 3620.13.30 e: OHM Remediation Services C n: Lock Haven, Pennsylvania 	Date: Jun 25-92 Re	LOT NO. 1.4-Dichlorobenzene	1.1/ 1400/											//		//				- <i>n</i>	//					<i>h</i>	 	· · · · ·
	MRI Project Nc Client/Source Source Location	un No.	- Hr LOT NO.	4004112							, Z							······································		<i>"</i>	1		H	"	<i>N</i>		1	11	
		R	24 T								• • .			ß	I R	31	5	50) _			- , ,		- ~5 - 2	ш., те <u>у</u>	+-,	6 9,5 -,	`	

...

SPIKING DATA - Condition 1

.

ниотоосе

20

· · · · · · · · · ·



POHC (NAPHTHALENE) SAMPLING DATA

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: One (1) grab sample collected from a randomly selected POHC spike bag. Grab sample collected with a plastic scoop and placed into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon[®]-lined screw cap and wrapped in aluminum foil to seal out light.

SAMPLING FREQUENCY: One (1) grab sample collected during the trial burn.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Grad	Sample Number:	/124				,		
	Lot Number:	400 41 /	2.1					
			Interru	uptions/Commer	its			
1345	FLAKUS	1 DUST	ø					
,						_87A		
<u>.</u>						<u> </u>		
			$\overline{}$					
· , -							·	
-		· · · ·						<u></u>
		. · ·			.2			
					•••	4		
		· .		٠.		•		,
	D ru		_ ,	10 00			7:5-97	

POHC (1,4-DICHLOROBENZENE) SAMPLING DATA

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: One (1) grab sample collected from a randomly selected POHC spike bag. Grab sample collected with a plastic scoop and placed into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon[®]-lined screw cap and wrapped in aluminum foil to seal out light.

SAMPLING FREQUENCY: One (1) grab sample collected during the trial burn.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

	25 BA
Run No.	$\frac{1}{1} Date: \frac{1 - 14 - 91}{1} Sampler(s): \frac{1}{12} \frac{14 - 372 + 3}{12}$
	Grab Sample Number: /125
	Lot Number: $33039/1.1$
Time	Interruptions/Comments
1410 1310	WHITE CRYSTALLING
	- PM-

Relinquished By <u>IC. Albert</u>	Received By N. atimiz	Date/Time/_25-47_1422.
POCHDCB.WPD October 28, 1996		

AR315529

APPENDIX B

BOTTOM ASH SAMPLING DATA

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum * scoop. Grab samples deposited, combined, and mixed in an aluminum * pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX126 and XX127, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX128, stored at near water ice temperature (i.e., 4°C). All samples, XX129, stored at near room temperature or cooler (i.e., 26°C).

Date: 1-25-97 Sampler(s): D. 1 L Built Run No. Composite Sample Number: 1126 1127 (128 / 129 CLP/METALS Composite Sample Designation: svod VOC GALBT Grab No. ____Interruptions/Comments__ (1) 1205 DARK MOIST, Semo Perks . . 1237 ι. -1 1307 U C) ч 1400 ۰. ь « 11 21 1 1515 8 9 10

BOTMASH3.WPD January 20, 1997

Relinquished By D. albut Received By D. albut

AR315530

~ ~ ~

1823

Date/Time 1-25-97

BOTTOM ASH SAMPLING DATA (DUPLICATE SAMPLES)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum^{*} scoop. Grab samples deposited, combined, and mixed in an aluminum^{*} pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX170 and XX171, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX172, stored at near water ice temperature (i.e., 4°C). All samples, XX173, stored at near room temperature or cooler (i.e., 26°C).

Run No		Date:	5-97	Sampler	r(s): PIALI	30RTT	<u></u>	<u> </u>	
Co Compo	mposite Sam osite Sample	ple Number: Designation:	/170 svoc	(171 (VOC	CLP/METAL	s (173 GALBT			
Grab No		a second as an an or of the system of the	 -	Intern	uptions/Comments	S	17-17-17 18-18-18-18-18-18-18-18-18-18-18-18-18-1		
\mathbf{T}'	1208	/21). <u>c.</u> t-,	MOINT,		21 (1-5	ni shar aktubul. 180 - 1			
$\widehat{2}$	1237	<u>((</u>		• • •	ι ·	مى م	۰۰ ۴۷۰۶ «Manuala" II. (۲۰۰۵) (۲۰۰۵) (۲۰ ۰۰ (۲۰۰۰) (۲۰۰۰))
B	13:7	· .	4 .		۸			-	
<u>(</u> 4)	1401		٤.,	4	مىرىيىتىتىنى بىرىنى <u>بىرىمى بىرىمى بىرىمى</u>	- (6. ARPON
(5)	1436	l •	<i>L</i> `	· ·	٤.		- and a subscription becaused		
6	1515		L/	<u></u>	<u>ر ا</u>	A THEOREM TO 1 TO 10			
7				·			<u>_</u>		
8							DIE		
9				and the second					
10	7		a la francesco para a la constante de la const						,
			-	<u>. t</u>					

Relinquished By D. Albury

Received By D. alburty

Date/Time 1-25-97



EOTMSH3D.WPD January 20, 1997

AR315531

BOTTOM ASH SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon[®]-lined screw cap. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Composite Sample Number: // 186	
Composite Sample Designation:	
Grab No	
(1) 1205 MARTIN ME. ST. SEMIST ROCKS	
(2) 1237	<u> </u>
(3) (307	ملي يه دو ي
(A) <u>1401</u>	
(5) <u>(476</u> "	
<u>G 15,5</u> <u></u>	<u> </u>
7	
8	••• · · · · · · · · · · · · · · · · · ·
9	
10	

Received By D. all D. alberto 132.3 Date/Time 1-25-97 Relinquished By



AR315532

FLY ASH SAMPLING DATA

MRI Project No. 3620.13.30

9

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen [44] spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX130 and XX131, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX132, stored at near water ice temperature (i.e., 4°C). All samples, XX133, stored at near room temperature or cooler (i.e., 26°C).

25 BM 1-- 24-97 Sampler(s): D. ALBURTY Date: 🟒 Run No. Composite Sample Number: /130 1131 1132 1133 Composite Sample Designation: svoc voc P/META ſS GALBT Event No. _Interruptions/Comments ____ Time_ REPAISH MONIST 1641 2 3 4 5 6 7 8 9 10 1

FLYASH3 WPD January 20, 1997

FLY ASH SAMPLING DATA (DUPLICATE SAMPLES)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen 118 spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX174 and XX175, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX176, stored at near water ice temperature (i.e., 4°C). All samples, XX177, stored at near room temperature or cooler (i.e., 26°C).

Run No. _____ Date: ______ Sampler(s): P. A. B. R. Y 175 174 Composite Sample Number: 176 **Composite Sample Designation:** SVOC VOC # TCLP/METALS GALBT Event No. Time Interruptions/Comments 12571, moisa 16.50 1 13A 2 3 5 6 7 8 9 10 Received By Date/Time 1-76-97 1700 Relinquished By FLYASH3D WPD January 20, 1997 AR315534

FLY ASH SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

>

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of egitteent (10) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon³-lined screw cap. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

. .

•

5

Λ

Run No	Date: Sampler(s):
Composite Sam Composite Sample	nple Number: (137) Designation: COE
Event _NoIime	Interruptions/Comments
1 1700	RED, MAIGT
2	1DA
3	
4	
5	
6	
7	
8	
9	
10	
Relinquished By	12 ELLISANT Received By 16 . alland Date/Time 1-25-971700
FLYASH3C WPD January 20	0, 1997

Run 2

Field Sampling Data

ADDENDTY ADDIESOC

MRI-Applied/R362013.APP

		/ERSE	[]		[1		7																0	8/86
		EMATIC-OF TRAV POINT LAYOUT	FINAL		FINAL			LIAL		151						IAL				978.713	1121.371	ле , 4/1	01.UME //20.9 6	Ravision 11/11
		SCH	INITIAL ·		INITIAL			INI								FI				INITIAL VOLUME	EINAL VOLUME		ADJUSTED FINAL VI	•
	т .371 5.97 		FINAL .		FINAL			MAAL	3405	101	-002	Į		•		INITIAL		. 215"	-					
	IA (22115 DIA. (22	STATIC PRESSURE	AL		AL A		CHECKS	INITIAL	1930	. ≥ 15 ¹¹	,004		1237	411	CHECKS	FINAL							0	
) 	FIELD DA FIELD DA 012004 012004 0 012004	PITOT LEAK CHECK		PITOT J FAK CHECK		<u>ب</u>	SAMPLE TRAIN LEAK	FINAL	1922	,, 0)	,002		1048	1601	SAMPLE TRAIN LEAK	INITIAL		≥15"		F				
	TH AND TYPE 8/4 ATH AND TYPE 8/4 NO. 94/4 NO. 94/4 FIOLLER NO. 9/10 ALPLELD. NO. 0/2 CORD LD. NO. 12		FINAL 22074	5588	FINAL			INITIAL	7.20	≥15 ¹¹	007					FINAL								
·	PROBE NO. PROBE LEN. SAMPLE BO METER BOX TEMP. CON THERMOCO	UNBILICAL NOZZLENO	INITIAL 1718		INITIAL				/															
	020 - 13 - 3 (01111 S C 514 (Cutlet Mich 02 8 5	HOOKUP UH-H							TÌME (24 hr)	VACUUM, In. Hg	CFM	VOLUMES	FINAL	DIFFERENCE			TIME (24 hr)	VACUUM, In. Hg	CFM	VOLUMES	FINAL	INITIAL	DIFFERENCE	
	RUN NO. 2 PROJECT NO. 34 PLANT 22 Kes DATE 22 Kes DATE 12 SAMPLING LOCATION SAMPLE TYPE 26 OPERATOR 54	RECORD DATA EVER) UMBILICAL/SAMPLER	TIME (24 hr)	PASS/FAIL		TIME (24 hr)	PASS/FAIL		L				<u> </u>					1	.					COMMENTS
		•							-	_										رم	- 57			

AR315537

31

NILIAL ACTUAL ACTUAL ACTUAL 7575 $7644, 250$ $764, 220$ $354, 220$ $3526, 220$ $375, 570, 250$ $375, 570, 250$ $375, 570, 250$ $375, 570, 270$ $375, 570, 270$ $375, 570, 270$ $375, 570, 270$ $375, 570, 270$ $375, 570, 270, 270$ $375, 570, 270, 270$ $375, 570, 270, 270$ $375, 570, 270, 270$ $375, 570, 270, 270, 270$ $375, 570, 270, 270, 270$ $375, 570, 270, 270, 270, 270$ $375, 570, 270, 270, 270, 270 375, 570, 270, 270, 270, 270 375, 570, 270, 270, 270, 270 375, 570, 270, 270, 270, 270 375, 570, 270, 270, 270 375, 570, 270, 270, 270 375, 570, 270, 270, 270 375, 570, 270, 270, 270 375, 570, 270, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 570, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, 100, 270, 270 375, $	н, поли (201), ш. (201),	NTIAL STA		gas meter Mperature	VAC.,	, •F	•=====================================	, •F	
	200 30	1.85 15	1 67	67.	ين	34	340	252	130
$\begin{array}{c} 8.2.5 & 796. \ \ o20 \\ 8.2.6 \\ 8.2.6 \\ 8.2.5 \\ 10.7.5 \\ 10.$		2.05-18	2 20	やら	20	35	1221	345	13:0
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	45 3,12	2.10 18:	2 25-	65	10.0	36	25	1251	35
827.5 1007.70 2 1007.710 14 842.5 1019.395 1013.550 14 850 1025.357 1025.395 14 850 1025.357 1025.395 14 1575 1031.345 1031.355 14 1225 1042.702 1042.705 14 1225 1042.702 1042.705 14 1225 1047.703 1042.705 14 1225 1047.426 1042.706 14 1225 1046.411 1046.910 14 025 1078.671 1078.935 14 127.1090.646 1078.935 14 127.1090.646 1078.935 14 127.1090.646 1078.935 14 127.1094.577 108.4.630 15 127.1094.577 108.4.630 15 127.1094.577 108.4.630 15 127.1094.577 108.4.630 15 127.1094.577 108.4.630 15 127.1094.577 108.4.630 15 127.1095.135 1103.050 15 127.1096.734 100.715 15 107.1094.577 108.4.630 15 107.1094.577 108.4.630 15 107.1094.577 108.4.630 15 107.1094.577 108.4.630 15 107.1096.1096.100 100.115 15 107.1096.1096.100 100.115 15 107.1096.1096.100 100.115 15 107.1096.1096.100 1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.1000.115 15 107.1096.10000.115 15 107.1096.1000.115 15 107.1096.10000.115 15 107.1096.10000.115 15 107.1096.1000000000000000000000000000000000	12 2.05	2.10 18	66 1	69	0.01	36	26	351	13.4
835 1013.500 1013.550 .4 825. 1019.395 1019.410 .4 850 1025.357 1025.395 .4 8575 1031.345 1031.355 .4 1205 1042.702 1042.700 .4 712.5 1042.702 1042.700 .4 720 1047.426 1042.726 .4 045 1066.640 1044.700 .4 045 1066.640 1074.435 .4 1075 1076.611 1075.435 .4 1075 1076.724 1076.726 .4 1075 1076.724 1076.726 .4 1075 1076.724 1076.726 .4 1075 1076.724 1076.726 .4 1075 1076.611 1076.726 .4 1075 1076.724 1076.726 .4	12 1.59	2.00.183	18 7	77	20	39	125	5 252	133
$\begin{array}{c} 842.5 \\ 842.5 \\ 842.5 \\ 850 \\ 1025.357 \\ 1025.357 \\ 1025.357 \\ 1025.357 \\ 1027.197 \\ 1027.197 \\ 1027.197 \\ 1027.197 \\ 1027.792 \\ 1042.790 \\ 1027.792 \\ 1042.790 \\ 1077.726 \\ 1077.72$	12 2.00	200 18:	2 84	72	30	1	202	- 254	83
850 (025, 357 /025, 395 4 8575 (031, 345 /021, 355 4 105 1037, 199 /031, 355 4 1205 1037, 199 /031, 190 /4 1205 1042, 702 1042, 706 /4 1212, 1047, 702 1042, 726 /4 125 1046, 411 1076, 410 /4 125 1046, 411 1076, 430 /4 127 1096, 671 1076, 430 /4 127 1096, 671 1076, 430 /4 127 1096, 671 1076, 735 /4 127 1096, 771 1084, 630 /4 127 1096, 571 1084, 630 /4 127 1096, 571 1076, 735 /4 127 1096, 724 1076, 726 /4 127 1096, 734 1076, 735 /4 127 1096, 1076, 726 /4 127 1096, 1076, 726 /4 127 1096, 1076, 726 /4 127 1096, 1076, 726 /4 127 1076, 726 1076, 726 /4 127 1076, 726 1076, 726 /4 127 1076, 727 1076, 726 /4 127 1076, 727 1076, 726 /4 127 1076, 727 1076, 726 /4 127 1076, 727 /4 127 1076,	43 2.05	2.05 18	2 85	24	9.0	44	254	52	13.2
2755 1031, 345 1031, 355 .4 2575 1031, 345 1031, 355 .4 712, 1042, 702 1042, 700 .7 720 1047, 473 1042, 700 .7 2305 1040, 460 1044, 410 .4 2375 1046, 410 1044, 910 .4 2375 1046, 401 1044, 910 .7 1075 1078, 671 1078, 630 .4 1075 1078, 671 1078, 735 .4 1075 1078, 671 1078, 735 .4 1075 1078, 671 1078, 735 .4 1075 1078, 571 1078, 735 .4 1075 1078 1000 .4 1076 1078 1000 .4 1077 1000 .4 1000 .4 1000 .4 1000 .4 1000 .4 1	44 2.10	2.10 18:	2 86	24	9.0	46	24	2 250	130
25 1037. 199 1037.190 10 10 10 10 10 10 10 10 10 10 10 10 10	12 2.11	2.10 18	1 88	76	9.0	5	252	248	33
712.5 1042. 702 1042. 715 .3 220 1047. 973 1042. 715 .3 2305 1054. 426 1054. 416 .4 237.5 1066. 660 1054. 416 .4 257.5 1066. 660 1074. 420 .4 107.5 1076. 671 1074. 6735 .4 107.5 1076. 671 1074. 6735 .4 107.5 1076. 771 1064. 620 .4 20 1096. 774 1076. 736 .4 30 1096. 774 1076. 736 .4	10 2.01	2,00 18	1 83	<i>CC</i>	9,0	S	251	249	30
7.20 1047.13 1047.526 8.20 1047.13 1042.526 8.215 1020.660 1024.410 9.25 1020.660 1024.410 1075 1078.671 1026.420 1075 1078.671 1074.630 1075 1078.671 1084.630 1075 1090.646 1090.715 30.5 1090.646 1090.715 30.5 1090.646 1090.715	86.1 10	1. 80, 18	2 89	78	815-	60	22	20	13.2
232 10 10 10 10 10 10 10 10 10 10 10 10 10	34 1163	1, 66 18	2 88	28	J.C	55	246	250	130
230 1054, 426 10 46, 331 10 10 10 10 10 10 10 10 10 10 10 10 10									
23.7.5 10.54,426 1254,410 1 245 1066.660 1254,410 1 25.5 1066.917 1246.910 1 10.5 1076.671 1076.535 1 12.5 1096.577 1084.630 1 20 1096.724 109.415 1 30 1096.724 109.020 1 30 1096.724 109.050 1 30 1096.724 109.050 1						/ -			
275 1020 460 1020 140 1 255 1066 911 1066 490 1 1055 1078, 871 1078, 930 1 115 1098, 871 1078, 935 1 125 1099, 671 108 4, 630 1 30 1096 726 1090, 715 1 30 1096 726 1090, 715 1 30 1096 726 1090, 103, 050 1	45 2.22	2.2018	1 7 3	172	7.0	17	122	, 253	36
25.5 1066.917 1046.910 105 1073.100 1073.130 115 1096.571 1075.935 115 1090.646 1090.715 30 1094.776 1090.715	19 9.32	2.30 182	27	73	7.5	44	268	244	8,0
1015 1075, 100 1273, 130 1015 1075, 5735 130 115 1075, 571 1054, 573 135 123, 530 14 115 1090, 646 1090, 715 1 320 1094, 577 1054, 200 115 1 30.5 1090, 646 1090, 715 1	49 7.33	2,35-19.	2 81	73	7.5	47	533	254	3.0
107.5 1076. 671 1078. 635	47 2.25	2.25 18:	2 88	77	7.5	12	640	1521	Bis
115 1084,577 1084,630 19 12,51090.646 1090.715 1 30 1094.726 1090.715 1 37.51103.135 1103.030 1	41 1.96	1.95 18.	2 87	26	7.0	42	782	242	13.2
325 1090.646 1090.115 1 30 10916-726 1096.700 1 30.5 1103.135 1103.050 1	40 1.92	1.90 18	2 87	17	7.0	%	12	2222	13.0
30 1096-726 1096. 200 1	45 216	2.15 18	2 89	28	7.5	55	23	222	13 0
30.5 1103.135 1103.030 1	45 217	2.15 18	2 90	<i>56</i> .	7.5	46	247	25	135
	50 2.41	2.40 18	2 90	29	8.5-	53	25	252	25
	48 232	2.30 18	26 2	80	8.0	<i>B</i>	252	249	132
27 1115 127 271 271 211 2 11 2 11 2 1 1 2 1 2 1	49 2.25	2.30 18	3 92	80	8,5	(0)	2	1 257	30
200 1/21. 1.02 1.91. 371 .	80.0 64	210 16	26 2	- Ś	0.01	S	348	640	3.3

AR315538

×.

.7 7

INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

PlantA Sampling Locati Sample Type (N Flow Control De For Sampling Fr Pump Type Pump I.D Flow Meter Type Flow Meter I.D. Desired Flow Ri Leak Check Bef Total Sampling Flow Rate (cc/m Estimated Actual	ake <u>RSC</u> ion <u>stack</u> Muti-Point <u>Sing</u> vice (Microvalue om M5 Console <u>Dice Microvalue</u> <u>Dice Microva</u>	$\frac{\mathcal{F}_{cc} + /_{c} f}{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{ _{o} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$ $\frac{\mathcal{P}_{oint} - \mathcal{P}_{oint} }{ _{o} - \mathcal{P}_{oint} } = \frac{1}{ _{o} - \mathcal{P}_{oint} }$	Project No. <u>3620-13-30</u> Run No. <u>2</u> Date <u>1-25-97</u> Operator <u>Gullet</u> Bag Type <u>Mylen</u> Sample No. <u>2/07</u> Method 3 Train No. <u>100</u> Pump Type <u>100</u> Pump I.D. <u>100</u> Flow Meter Type <u>100</u> Meter Reading <u>100</u> Lowest <u>100</u>
Time 24 Hr Clock	Flow Meter Reading		Comments
1750	100	Been Re	n 2
1800	100	DI	
1815	120	OK	
1825	100	OL	
1840	180	OK	
1900	100	OK	
1915	120	, OK	
1920		Port C	han je
2030	100	Rosume	Run
2045	100	Of	
2100	100	oK	
2115	120	OK	
2125	100	OK	·
2140	120	OK	
2155	100	OK	
2200	-	End Ren	12
			DRAKE 3620.13 2107 MM5PH ORSAT BAG TRIAL BURN SAMPLE For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

AR315539

!

OXYGEN AND CARBON DIOXIDE BY ORSAT

RUN NO. 2	DATE 01-25-97	k- L-DWER LEVED	0/		
PROJECT NO. 3620 13, 30	SAMPLE NO. 2707	PLANT SAMPLING LOCATION	ANALYSIS TIME (24hr-CLOCK)	SAMPLE TYPE (BAG, GRABT	OPERATOR <u>J. Surman</u>

HECK BEFORE ANALYSIS:	CHANGE IN 4 MIN.	CHANGE IN 4 MIN.	HECK AFTER ANALYSIS:	CHANGE IN 4 MIN.	CHANGE IN A MIN
ORSAT LEAK CH		PIPETTES	ORSAT LEAK CH	BURETTE	DIDETTER $\dot{\mathcal{M}}$

RUN		_		2		3	AVFRAGE
GAS	ACTUAL READING	NET	ACTUAL READING	NET	ACTUAL READING	NET	NET
c0 ₂	1 & 7 2 & 5,7 3	8.7	1 8,7 2 8,7 3	8:7	1 5 7 3 6 7 7 3 8 7 7	8,7	6:2
O ₂ (NET IS SECOND READING MINUS ACTUAL CO ₂ READING)	1 21.0 2 21.0 3	12.3	1 21.0 2 21.0 3	12.3	1 ×1.0 2 ×1.0 3	5.87	12.3

Ĺ

2107

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

DHAKE 3620.13 MMSPH ORSAT BAG TRIAL BURN SAMPLE

Acceptance Criteria $CO_2 > 4\%$.3% by Volume $O_2 \ge 15\%$ $\le 4\%$.2% by Volume < 15%

.2% by Volume .3% by Volume

Comments:

40 CFR 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI₂ TRAIN (MM5PH) FIELD LABORATORY TRAIN SET-UP DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile HWI Source Location: Lock Haven, Pennsylvania Sampling Location: Mobile Hazardous Waste Incinerator (HWI) Stack

Run No. <u>2</u> Sampling Trai Set-up person(s): <u>5</u> , <u>M</u> C	n No. <u>ММБРН</u> Салл	-2 Sample Box N	lo. <u>012004</u> Date: _/	123/97
Transfer to Sampler:	D. safety I D.	ONI	$D \in (T, T, T, T, T)$	97 11:00
Relinquished By _) _ Mic (. Received By	F. Neal	Date/Time _/ -23 -	17.7600
TRAIN COMPONENT	COMPONENT NO.		LOADING DATA	
_ Sampling Nozzle (Quartz) _ Probe (Liner-Glass)	<u>*</u> *		Initial Weight Empty	s (grams) * * Loaded
Female Probe Outlet Blank-Off		· · ·		
90° Bypass	*			
Filter Holder Front		Filter Type: Whatman (ΔM-A	
Filter Holder Back with		·		
Teflon [®] Filter Support	·	Filter Number: <u>#5</u>		
45/90° Connector	·			,
1st Impinger (2-Liter, Mod-GBS)		$50 \text{ mLs} \pm 1 \text{ mL}$	1021.7	1079.1
	0	0.1 N H₂SO₄		
1st Impinger Replacement	Not USE	50 mLs ±1 mL	NA	NA
U-Connector (A)	<u> </u>	0.1 N H ₂ SO ₄		FOIR
2nd Impinger (GBS)		100 mLs ± 2 mLs	487.7	571
U-Connector (B)	·····	0.1 N H ₂ SO ₄	41900	20-
3rd Impinger (GBS)		100 mLs ± 2 mLs	770.2	545.0
U-Connector (C)		0.1 N H₂SO₄	1/0/1/5	
4th Impinger (Mod-GBS)		Empty	<u> </u>	
U-Connector (D)			1111 5	570 l
5th Impinger (Mod-GBS)	······································	$100 \text{ mLs} \pm 2 \text{ mLs}$	766.5	570.
U-Connector (E)		0.1 N NaOH	11770	6700
6th Impinger (Mod-GBS)	······································	$100 \text{ mLs} \pm 2 \text{ mLs}$	7/10	5/1.0
U-Connector (F)		0.1 N NaOH		1447
7th Impinger (Mod-GBS)		~200 g indicating silic	ca gel	01100
U-Connector (G)	<u></u>			1794
8th Impinger (Mod-GBS)	. 11/ 1/	~200 g indicating sili	ca gel	
Impinger Outlet Connector	<u>UH-7</u>			

* Before and after sampling: Nozzle openings covered with aluminum foil or Teflon[®] tape, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon[®] plug. Bypass inlet covered (not sealed) with aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with aluminum foil, Teflon[®] tape or as described above.

Component Changes After Set-up And Before Recovery And Other Comments:



0050SUCX.WPD June 26, 1996 (rev. 0050SUC3.WPD October 31, 1996)

40 CFR 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI₂ TRAIN (MM5PH) FIELD LABORATORY SAMPLE RECOVERY DATA

MRI Project No. Client/Source: Source Location: Sampling Location:	3620.13. OHM Rem Lock Have Mobile Ha	ediation S n, Pennsy zardous W	ervices Cor Ivania /aste Incine	rp., Drake Ch erator (HWI) S	emical Supe Stack	rfund Site,	A Mobile HWI		(
Run No2	Sampling	Train No.	<u>MM PI</u>	<u>4 - 2</u>	Sample Box	No. <u>015</u>	2004	-	
Condensate in front Date/Start Time:	:-half?/	Uine_		Stop Time _/	<u>v/4</u>	Purged By Purge Rate	<u>_N/κ</u> e: [ΔH = <u>_</u>	UJA	_ in.H ₂ 0]
Moisture Removed? Transfer for Recove Relinquished By <u></u> Sample box recover	ry: . Nan (y person(s): <u> </u>	Received	і ву <u>Ј. М</u>	co-	Date/T	ime <i>IV]A</i>	Date:2	5-87
Probe recover Weights below are	y person(s in grams): <u>P.Gor</u>	man _ , d + ,	Surman, D. I	-twards,	U. Mand		Date:2	5-47
Weights below are	in granio.		BA	ACK HALF RE	COVERY				
	Rep	lacement							
Impinger:	1st 28.1	1st	2nd	3rd	4th	5th	6th	7th	8th
53 Final Wt. <u>467</u> Initial Wt. <u>767</u> Net Wt. <u>22</u>	20-1 2 <u>9.1</u> <u>29.1</u> <u>99.0</u>		<u>838.2</u> <u>571.3</u> 246.9	849.4 595.0 253.4	<u>843.8</u> <u>484.8</u> <u>359.0</u> [T	8/6.4 570./ 246.3 otal Conde	<u>581.6</u> <u>579.0</u> <u>2.6</u> nsate Collec	<u>672 F</u> <u>699.2</u> 2693.5 ted: <u>33</u> 9	<u>691.0</u> <u>679 4</u> <u>11.6</u> 7.4
Description and/or color: Recovery: Sample Notile T Sample Bottle Gr Components F 45/90° conne Sample Bottle Gr Net Sam Sample Bottle T Sample Bottle T Sample Bottle F Sample Bottle F Net Sam	Jumber: are Wt oss Wt tinsed *: fil ector, 1st- oss Wt d, Then: Jumber: are Wt inal Wt ple Wt	ingers 1-3 2 103 / 303 2 / 30 5 8 ter suppor 3 d imping / 3 85 2 3 0 92 0 / 283 7	t, filter hold ers, U-conr for HCl 2104 27.6 	der back, hectors A-B		$\frac{2}{100}$ ers 4-6 + + + + + + + + + + + + + + + + + + +	e Rinses Rinses lass Collecte Cl_2 106 for B.9 5.5 Af Af 26.6		 ue tions nalysis eg
FILTER: Sample I TRAIN RINSES: Sample Compo Sample Net Acet Sample Net Wet W	Number: Sample Nu Bottle Tar nents Rins Bottle Gros tone Sampl Bottle Fina ater Sampl	2 102 mber: 2 e Wt. 2 e Wt. 2 s Wt. 2 e Wt. 2 e Wt. 2 e Wt. 2	2101 263.1 21e, probe 235-6 72.5 706.8 444-71.2	Descript Descript liner, bypass, with Acetone with added W	ion/Color: _	ffuhrla	- fintos	ţ	
* Using a tot	al of 100 m	s + 2 ml s	ASTM Type	e I water per s	ample, rinse	components	twice. The	proughly mix	each sample

 Using a total of 100 mLs ±2 mLs ASTM Type I water <u>per sample</u>, rinse components twice. Thoroughly mix each sample and added rinses before aliquoting.

** Acetone rinses with brushing 3 times or more until perceivably clean. If any residue remains in a component, follow with ASTM Type I water rinses with brushing until perceivably clean. Do not add any water rinses to the sample bottle until after the bottle is weighed with all of the acetone rinses. COMMENTS:

0050RCCX.WPD October 31, 1996 (rev. 0050RCC3.WPD October 31, 1996)

40 CFR 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI₂ TRAIN (MM5PH) FIELD REAGENT BLANK PREPARATION DATA

MRI Project No. 3620.13.30
 Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile HWI
 Source Location: Lock Haven, Pennsylvania
 Sampling Location: Mobile Hazardous Waste Incinerator (HWI) Stack

Blank(s) Prepared By:		<u>. </u>	Date: <u>/- 25</u> -	97
Weights below are in grams.				
Reagent Blank Description	Sample <u>Number</u>	Bottle Tare Weight	Bottle Gross Weight	Net Sample Weight
Acetone for particulate matter Volume needed: 200 ml s			· ·	
Lot Number: <u>BM 743</u>	/ 138		321.6	150.5
Filter for particulate matter Type: Whatman QM-A Filter Number:	1400			
Lot Number: $-75 \times -75 $	/ 139			
ASTM Type I Water for particulate matter Volume needed: 200 mLs				
Lot Number:	140	169.3	369.2	194.9
60 mLs ± 1 mL 0.1 N H ₂ SO ₄ plus 20 mLs ± 0.5 mL ASTM Type I Water for chloride 0.1 N H ₂ SO ₄ Lot Number: $(-2-97)$				
Water Lot Number: _/-23-87	1141	98-9	177-8	78.9
50 mLs \pm 1 mL 0.1 N NaOH, plus 25 mLs \pm 0.5 mL ASTM Type I Water for chloride		•		
Water Lot Number:	(142	<u>97.</u> P	170.9	73.1
NOTE: Lots may be identified above by a manufa of a particular reagent are used, indicate t train(s) loaded and/or recovered with that applicable test run number(s) and sampling	cturer's lot numb he applicable tes reagent are used g location(s) belo	per or by the date of t run number(s) and (i.e., list each reage w).	reagent preparatio sampling location(s nt blank sample nu	n. If different lots b) where the umber with the
Sample Number For Test Run Numb	per(s)	For S	Sampling Location	<u>(s)</u>
· · · · · · · · · · · · · · · · · · ·		,		<u></u>

COMMENTS:

00508LX.WPD June 27, 1996 (rev. 00508L3.WPD October 31, 1996



AR315544

(Jour)

111550-2

9

13-5 13.8 13.6 13.8 53 13.8 13.8 5 14 14.2 14.3 14 Т, N 14.3 10% 14.3 イン 4.6 40 ド \$ ざ Ł Ŧ 40°F 49 z 39 ľ, 7 Ł 5 <u>6</u> 5 58 53 5 \$ \mathcal{X} 3 £ 4 Ч FILTER TEMP., °F 674 248 540 542 540 20 111 540 20 *byz* Z 248 È 33 252 PROBE TEMP., °F 2 248 220 12 123 250 S 248 252 52 6/2 25 149 249 542 G 294 Ľ ĩ ते SAMPLE BOX TEMP., °F Gr. ten χ TEMP., "F 27 20 5 33 30 34 ĥ Æ 34 33 5 36 2 40 2 3 ũ 3 4 3 77 60 ž 12,5 13.5 gH .ni P. _____ Operator _ Ų 5 12 4 4 2 2 Ú 4 2 2 2 17 Ľ DAY 9MU9 لع 5 2 4 Ľ 2 Ŧ (T_{m out}), °F OUTLET DRY GAS METER Temperature 28 8 121 76 60 68 63 23 2288 88888 Ľ 74 Ĺ 50 (T_{m in}), °F INLET 11 3 16 69 22 8 6 000 83 22 23 88 640 583 3 Ľ ભુ 3 Ś STACK TEMP. (Ľ) 52 8 Ł 181 50 (S 8 õ 3 3 Ĕ È <u>'</u>Sr 3 8 8 Ŕ 3 Ø 8 R $\delta_{\mathcal{I}}$ ORIFICE PRESSURE Differential (ΔH) , in H_20) ACTUAL 2.2 4 0 3 2.0 Ó 100 2.3 2.0 0,0 7 3 2.2 N Ś 6.9 2.1 5 6. 2-1 2-1 6.1 6.1 9 0 0 N Str K Outh 134 201 DESIRED 26-77- 22 de 32 2.28 210 2.04 20% þ 92 2.04 .88 1,88 2-17 -24 961 6 ,94 99 م 1.87 191 16% 0 1-2 2 VELOCITY HEAD (△p₃), In. H₂0 149 1.10 ĺΫI .40 いで 10 34. 39 Т Л 3 .43 40 42 44. 38 11 14 200 14. 3 i.I 7 T 1 SAMPLING LOCATION 152,085 14 9.93 174.53 120,90 ACTUAL 157.44 180.24 197.26 85,08 203,00 91,00 20,45 126.75 282 208.90 114,99 137.60 143,04 191.59 12.801 214.90 109.14 PROJECT NO. 12.20 GAS METER READING (V_m), (1³ IITIAL 79, 212 8 さい 220,898 163.25 61-601 120.75 137.79 02-55 148.938 127.66 17.606 INITIAL . 180.51 86.12 191.80 85.01 H6 06 126.46 90.19 114-98 172.41 81. Hl 215,13 DESIRED 109.11 197.41 42.Eg 13.2.5 1875 2.1481 857,5 2122.5 252.51 1912.5 21525 1821.5 29975 21015 209.5 2139.5 4081 1920 2030 2115 2130 CLOCK TIME (24-hr.) 1820 1905 2045 2100 0411 2200 1850 2145 SAMPLING TIME, min 1-25-97 125 142.5 (11.5 15.0 5.55 illi i 225 629 121 1.5 135 180 ŝ 215 825 ŝ 5 90 9 165 \mathscr{R} Ę, 3 Ъ 0 RAVERSE 10 POINT 5-12 5-12 1 . 5-10 1100 ہ س ן ז, 7-4 'n 6, 5 ビー 5-9 ڊ ک RUN ND. Sý I 5-8 Sil ŝ ~ ,4 5 50 ý DATE 5

AR315545

DENNTY

COMMENTS

20

Savision 8-4-66

INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

Plant <u>Drake Offm</u> R3C Sampling Location <u>Flack Outful</u> Sample Type (Multi-Point, Single-Point) <u>MP</u> Flow Control Device (Microvalve, Critical Orifice) <u>MV</u> For Sampling From M5 Console No. <u>N9</u> Pump Type <u>diagonal Encourse</u> <u>N9</u> Pump I.D. <u>N-9</u> Flow Meter Type <u>Retenetty</u> Flow Meter I.D. <u>N544-D N-9</u>	Project No. <u>3620-13-32</u> Run No. <u>Z</u> Date <u>1-25-87</u> Operator <u>Gr. fl</u> Bag Type <u>myta</u> Sample No. <u>ZIIV</u> Method 3 Train No. <u>NA</u> Pump Type <u>Flow Meter Type</u> Flow Meter 1.D.
Desired Flow Rate (cc/min) / 100	
Leak Check Before Sampling	After Sampling Jaes
Total Sampling Time (min) <u>180</u> Average Flo	w Meter Reading
Flow Rate (cc/min): Average/20 Highest	Lowest
Estimated Actual Volume (liters)	

Time 24 Hr Clock	Flow Meter Reading	Comments
1750	1.0	Start
1805	1.0	
1820	1.0	
1835	1.0	
18-50	1.0	
19.05	1.0	
1920	1.0	Down for bet Change
2030	1.0	Restart
2045	1.0	
2100	1.0	
2115	1.0	
2130	1.0	
2145	1.0	
2200	1.0	Stop
		/
	<u></u>	

DRAKE 3620.13 2114 MMSSV ORSAT BAG TRIAL BURN SAMPLE For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

OXYGEN AND CARBON DIOXIDE BY ORSAT

01-25-97 Stack Lower Leven K RUN NO. --DATE --ANALYSIS TIME (24hr-CLOCK) Surman PROJECT NO. 3620, 13, 30 I PLANT SAMPLING LOCATION -SAMPLE TYPE (BAG, GBABT 2114 SAMPLE NO. --OPERATOR ---

EFORE ANALYSIS:	- CHANGE IN 4 MIR	- CHANGE IN 4 MIN	FTER ANALYSIS:	- CHANGE IN 4 MIN	- CHANGE IN 4 MIN
EAK CHECK BI	20	Ň	EAK CHECK AI	N.	No
DRSAT LE	BURETTE	PIPETTES	DRSAT LE	BURETTE	olpettes

RUN		-		2			AVERAGE
GAS	ACTUAL READING	NET	ACTUAL READING	NET	ACTUAL READING	NET	VOLUME
co ₂	1 & 7 2 & 7 3	6:3	1 <i>8,7</i> 2 <i>8,7</i> 3	2 20	1 & 7 2 & 7 3	8.7	8.7
O ₂ (NET IS SECOND READING MINUS ACTUAL CO ₂ READING)	1 21.0 2 21.0 3	12.3	1 21.0 2 21.0 3	12.3	1 21.0 2 21.0 3	12.3	12.3
						91-16 SI	EV SURMAN wikisht 0521

Acceptance Criteria .3% by Volume .2% by Volume

≥ 15% < 15% 02

 $CO_2 > 4\%$ $\leq 4\%$

Comments:

41

.2% by Volume .3% by Volume

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE TRIAL BURN SAMPLE MM5SV ORSAT BAG DRAKE 3620.13

2114

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY TRAIN SET-UP DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corr Incinerator Source Location: Lock Haven, Pennsylvania Sampling Location: Incinerator Stack	o., Drake Chemical Superf	und Site, Mobile Haza	rdous Waste
Run No. 2 Sampling Train No. MM5 S	V-2 Sample Box N	No. 10288	
Set-up person(s): J. Mc Can		Date: //	2-5/97
Transfer to Sampler:	1		
Relinquished By 5. McCann Received E	By D. Neal	Date/Time 1/25/0	97_1600_
TRAIN COMPONENT COMPONENT NO)	LOADING DATA	
Sampling Nozzle (Quartz)	*	Initial Weigh	nts (grams) * *
Probe (Liner-Glass)	*	Empty	Loaded
Female Probe Outlet Blank-Off	_		
90° Bypass	*		,
Filter Holder Front			
Filter Holder Back with Teflon®-	Filter Type: Whatman	QM-A	
coated 316 SS Filter Support	_		
45/90° Connector	<u>_</u>		
Condenser (Standard)	Thermocouple No. XA	2-0:	***
XAD-2 Resin Cartridge (Standard) $(6(\tau))$	~65 grams XAD-2 Re	sin + Surrogates	487.7
(Documentation of standards injection is separate);	resin spiked on <u>1/14/9</u>	and maintaine	ed near 4°C until use. (
1st Impinger (2-L Mod-GBS)	Empty	986.1	-
1st Impinger Replacement	Empty	Not used	-
U-Connector (A)	_		
2nd Impinger (Mod-GBS)	100 mLs	552,9	655.0
U-Connector (B)	ASTM Type II Water		
3rd Impinger (GBS)	100 mLs	479.5	581.9
U-Connector (C)	ASTM Type II Water		
4th Impinger (Mod-GBS)	Empty	474.4	
U-Connector (D)	<u></u>		
5th Impinger (Mod-GBS)	~ 200 g indicating sili	ca gel	664.7
U-Connector (E)	_		1
6th Impinger (Mod-GBS)	200 g indicating sili	ca gel	(55.)
Impinger Outlet Connector <u>UH-35</u>			

* Before and after sampling: Nozzle openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon[®] plug. Bypass inlet covered (not sealed) with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil or as described above.

*** Cartridge weighed with blank-offs in place; then, cartridge covered with aluminum foil to seal out light during storage and sampling.

Component Changes after Set-up and before Recovery and Other Comments:

1023SUCX.WPD April 26, 1996 (rev. 1023SUC3.WPD October 25, 1996)

!

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY SAMPLE RECOVERY DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania Sampling Location: Incinerator Stack Sampling Train No. SV-2 Run No. 2 Sample Box No. 10288 Transfer for Recovery: Relinquished By M. Raile J. Nezl Received By A. Carender Date/Time 1/25/97 223 Sample box recovery person(s): ____ Date: Probe recovery person(s): P. Gorman, R. Howe Date: // Weights below are in grams. RESIN CARTRIDGE AND IMPINGERS RECOVERY Impinger: XAD-2 Replacement 1st 2nd Cartridge 1st 5th 6th NA 3.0 3770 85 Final Wt. 86. Initial Wt. 4 Net Wt. [Total Condensate Collected: 3.2220 aramsi Description desand/or color: Sample Recovery: Cartridge* → 1st-4th Impingers and Replacement 1st Impinger ~ L112 Sample Number: 2 111 Sample Bottle Tare Wt. 1357,0 Transfer impinger contents only (i.e., do not add component rinses to this sample). Sample Bottle Final Wt. _47.53.8 Net Sample Wt. 3396.8 Components Rinsed * *: 1st-4th impingers, replacement 1st impinger, U-connectors A-C; combine rinses with train back rinses below (sample number XX010) FILTER RECOVERY AND TRAIN RINSES FILTER: Description/Color: intact/w 2109 Sample Number: BACK **QA RINSES** FRONT TRAIN RINSES: 2113 2 110 2 108 Sample Number: 267.0 Sample Bottle Tare Wt. 263.2 491.7 Components Rinsed ***: Front -- nozzle, probe liner, bypass, filter holder front; Back -- filter support, filter holder back, 45/90° connector, condenser Sample Bottle Final Wt. <u>464.2</u> Net Sample Wt. <u>201.0</u> 1064.2 Replace blank-offs and remove aluminum foil, then weigh the cartridge; replace aluminum foil to cover the entire cartridge. ** Methanol/methylene chloride (1:1 v/v) rinses 3 times; add rinses to train back rinses (sample number XX010).

** TRAIN FRONT/BACK RINSES: Methanol/methylene chloride (1:1 v/v) rinses with brushing of front components 3 times or more until perceivably clean, and methanol/methylene chloride (1:1 v/v) rinses of back components 3 times, but without brushing, and including 5-minute soaks of underlined components 3 times. QA RINSES: Follow with toluene rinses and soaks, but without brushing, in the same manner as above for the train front

OA RINSES: Follow with toluene rinses and soaks, but without brushing, in the same manner as above for the train front and back rinses.

COMMENTS: Glass noted in bottom of improger

1023RCCX.WPD June 4, 1996 (rev. 1023RCC3.WPD October 25, 1996)

AR315549

APPENDIX B

SW-846, METHOD 0010; 4 MODIFIED SEMIVOLATILE ORGANICS TR FIELD LABORAT FIELD	0 <i>CFR</i> 60, APPENDIX A, ME AIN (MM5SV) FOR POHCs, FORY TRAIN SET-UP DATA D BLANK TRAIN	THOD 23 - PICs AND PCDDs/PCDFs
MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corp., Incinerator Source Location: Lock Haven, Pennsylvania Sampling Location: Incinerator Stack Cond. 1 Run No. <u>Blank</u> Sampling Train No. <u>Blank</u> Set-up person(s): <u>A. Carendor</u> Transfer to Sampler: Relinquished By <u>A. Carendor</u> Received By	Drake Chemical Superfund Site, Sample Box No. <u>01</u> J. McCann Date/T	Mobile Hazardous Waste Date:5/97 ime/_25/97;_00
TRAIN COMPONENT COMPONENT NO.	LOADIN	
Sampling Nozzle (Quartz) <u>///R</u> * Probe (Liner-Glass) * Female Probe Outlet Blank-Off		Initial Weights (grams)** Empty Loaded
Filter Holder Front Filter Holder Back with Teflon®- coated 316 SS Filter Support 45/90° Connector	Filter Type: Whatman QM-A	
Condenser (Standard) XAD-2 Resin Cartridge (Standard) $\underline{\#/(\tau)}$ (Documentation of standards injection is separate); res	Thermocouple No. $92 - 1$ ~65 grams XAD-2 Resin + Su sin spiked on $1/10/97$	and maintained near 4°C until use.
1st Impinger (2-L Mod-GBS)	Empty	2/3.4
1st Impinger Replacement	Empty <u>//</u> 100 mLs <u>9/8</u> ASTM Type II Water 100 mLs <u>4/5</u> ASTM Type II Water Empty <u>4</u>	<u>A</u> <u>,5.0 585.1</u> <u>9.7 559.1</u> 74.4
U-Connector (D) 5th Impinger (Mod-GBS) U-Connector (E) 6th Impinger (Mod-GBS) Impinger Outlet Connector	~200 g indicating silica gel	630.2

* Before and after use: Nozzle openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon[®] plug. Bypass inlet covered (not sealed) with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil or as described above.

*** Cartridge weighed with blank-offs in place; then, cartridge covered with aluminum foil to seal out light during storage and use.

Component Changes after Set-up and before Recovery and Other Comments:

1023SBCX.WPD April 25, 1996 (rev. 1023SBC3.WPD October 25, 1996)

SW-846, METHOD 0010; 40 CFR 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs

FIELD LABORATORY SAMPLE RECOVERY DATA

			FIELD I	BLANK TRA	AIN			
MRI Project No. Client/Source:	3620.13.3 OHM Rem Incinerator	30 ediation Service	es Corp., Dr	ake Chemica	al Superfund	Site, Mobile	Hazardous W	aste
Source Location:	Lock Have	n, Pennsylvania	а		·			
Sampling Location:	Incinerator	r Stack						
Cond.								
Run No. Blank	Sampling	Train NoB/	ank - 2	Sam	ple Box No	012003		
Transfer for Recove	ry:			10	4		·	
Relinquished By <u>J</u>	. McCa	<u>۸.۸</u> Re	ceived By _	A. Care,	<u>nder</u> D	ate/Time <u>//</u>	25/97	14:30
Sample box recover	y person(s)	: A. Cua	render			<i>i</i>	Date: (/	25/97
Probe recover	v nerson(s)	· R. GARM	an' R.	Howe 1	R E.L.NA	rd s	Date: //	125/0-1
Weights below are	n grams			<u> </u>	<u></u>		Date. <u>.//</u>	<u>#2/7 _</u>
Wolghita below are	in grama.	BESIN C		AND IMPING	ERS RECOVE	BY		
Impinger:	XAD-2	1120111-07	Replacement			-131		
inpliigut.	Cartridge*	1st	1st	2nd	3rd	4th	5th	6th
Einal W/+	408.4	10134	A	585.0	5590	474 4	630 \$ -	678 4
	Here W	10101				1-1-16		1001
Initial Wt.	788.1	1915.9		-282,	22/1	9/9.7	630.2	6000
Net Wt.		0	l	(0.1)	<u> </u>	0		0.2
				í (Overall Weig	ht Difference	:0./	grams)
Description						,	_	
and/or color:	white	lerr		clear	_ dear	claur	_95	_25_
Sample Recovery:	Cartridge*	' → 1st-4th Ir	npingers an	d Replaceme	ent 1st Impin	ger i	% B	lue
San Transfer San Cor	nple Bottle impinger o nple Bottle Net Sa nponents R	Tare Wt. <u>/65</u> contents only (i Final Wt. <u>366</u> mple Wt. <u>/95</u> insed**: 1st-4 with	8.5 .e., do not a <u>7.0</u> .5 th impinger	add compone s, replaceme	ent rinses to ent 1st imping (sample num	this sample). ger, U-connec ber XX156)	ctors A-C; co	mbine rinses
			ER RECOVI	ERY AND TR	AIN RINSES			
FILTER:		,		r l (L '			
Sample Number:	155	Description/Co	slor: <u>uhu</u>	a/into	1	<u></u>		
		<u>م</u>						,
TRAIN RINSES:		FRONT		BACK		QA RIN	ISES .	
Sample N	lumber:	1154		156		119	59	
Sample Bottle T	are Wt. 2	.67.1		266.8		494.		
Components Rins	ed * * *: Fr	ont nozzie, p	robe liner, b	ypass, filter	holder front;			
•	Ba	ick filter supp	ort, filter h	older back, 4	5/90° conne	ector, conder	iser	
		426.0		_		. 98	31.9	
Sample Bottle F	inal Wt. 📑	518. 2 ac	/	603.8	_	-910	3-ac	
Net Sam	pple Wt.	158.9		337.0		48-	7.8	
	,	······································						
* Replace blar ** Methanol/m *** TRAIN FROI more in the of back cor	nk-offs and r nethylene cl NT/BACK Ril same mann nponents 3	emove aluminun nloride (1:1 v/v) NSES: Methanol/ er as is being do times, but with	n foil, then w rinses 3 tim methylene c ne for the so out brushing	eigh the cartr es; add rinse hloride (1:1 v urce sampling g, and includi	idge; replace s to train bac //v) rinses wit trains, and m ing 5-minutes	aluminum foil k rinses (sam) h brushing of hethanol/methy soaks of unde	to cover the ple number X front compor ylene chloride rlined compo	entire cartridge. X156). Tents 3 times or (1:1 v/v) rinses nents 3 times.

COMMENTS:

and back rinses.

1023RBCX.WPD June 5, 1996 (rev. 1023RBC3.WPD October 25, 1996)

QA RINSES: Follow with toluene rinses and soaks, but without brushing, in the same manner as above for the train front

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD REAGENT BLANK PREPARATION DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Serv Incinerator	ices Corp., Drake	Chemical Superfur	nd Site, Mobile Haz	ardous Waste
Source Location: Lock Haven, Pennsylva Sampling Location: Incinerator Stack	nia			
Blank(s) Prepared By: <u>A.</u> <u>Caren</u>	der	1	Date: <u>1-27-</u>	97
Weights below are in grams.	Sample	Bottle Tare	Bottle Gross	Net Sample
Reagent Blank Description	Number	Weight	Weight	Weight
Methanol and methylene chloride, 1:1 v/v Volume needed: 450 mLs Methanol Lot Number: <u>BO237</u> Methylene chloride				
Lot Number: <u>40409</u>	143	265.0	695.1	430.1
Methanol and methylene chloride, 1:1 v/v Volume needed: 450 mLs Lot Numbers: same as above) 144	263.9	663.1	399.2
Toluene Volume needed: 900 mLs Lot Number: <u>3172-7</u>	145	492.9	<u>880.0</u>	_387.
Filter Type: Whatman QM-A Lot Number: <u>12/2/96</u>	146			
XAD Cartridge Cartridge Number:	147			
ASTM Type II Water Volume needed: 200 mLs Lot Number: <u>12/3/9(e</u>	148	169.2	367.0	197.8
NOTE: Lots may be identified above by a manufac a particular reagent are used, indicate the loaded and/or recovered with that reagent run number(s) and sampling location(s) b	turer's lot number le applicable test are used (i.e., list e elow).	or by the date of re run number(s) and s each reagent blank sa	agent preparation. ampling location(s) ample number with t	If different lots of where the train(s) the applicable test
Sample Number For Test Run Num	<u>nber(s)</u>	For S	Sampling Location(<u>s)</u>

COMMENTS:

.

10238LCX.WPD June 11, 1996 (rev. 10238LC3.WPD October 25, 1996)

.

SOLID WASTE FEED SAMPLING DATA

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately 100 grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX120, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX121, stored at near water ice temperature (i.e., 4°C). All samples, XX122, stored at near room temperature or cooler (i.e., 26°C).

Sampler(s): IAULA? Muzikit / Sock-ス Date: _/-25-97 Run No. 2121 Z 199 Composite Sample Number: Z120 2122 2 200 C svoc voc METALS GALBT FENAC **Composite Sample Designation:** Grab No. Interruptions/Comments_ Time Caution: Material may contain β -naphthylamine. 1750 (1) _ZIRZ 11 $\widehat{2}$ 11 (3) 11 $(\widehat{4})$ 11 5 ;1 $\hat{6}$ 1 1920 a 1935 Li 8 6 1950 n) 1030 ÎÌ, 2045 6 2100 (F) 2115 a 2130 65 2145 2200 .. ĥб AC 17 18 19 20 2210 Date/Time 1-25-97 2010 AM **Relinguished By** Received By WSTFEED3.WPD January 24, 1997 AR315553



SOLID WASTE FEED SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerato: Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately 60 grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon®-lined screw cap and wrapped in aluminum foil to seal out light. (*As per COE protocol.)

SAMPLING FREQUENCY: #One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Run No. 2 Date: 1-25-97	Sampler(s): <u>FairLN.1116 zy Kr</u>	Shawn in Sockman
Composite Sample Number: (2135) Composite Sample Designation: (COE)		
Grab	Interruptions/Commente	

<u>No.</u>	Time	Interruptions/Comments
$\vec{(1)}$	1750	Caution: Material may contain β -naphthylamine.
Ĩ	1405	DIRT_
3	18:0	11
(4)	18.35	11
5	1350	1/
6	1905	11
Ĵ	1920	11
3	1935	//
9	1950	<i></i>
10	2030	<u>/ 1</u>
11	2045	
12	2100	//
13	2115	<i>11</i>
14	2130	
15	3145	
16	2200	
1.7		
18		
19		
20		
elina	uished By	hours and - Pamaria Beceived By 10 Re Date/Time 1-25-77 Zore
		A summer received by Date/ Time 7.25 The Core of

WSTFED3C.WPD December 4, 1996

OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator RJN 2 m 11111 B cq.in REMARKS 800 ρ 00 Q 0221 4221 2221 Ľ 1204 15.06 1500 1759 507 ý 1802 50 110 , 816 818 しょ 74 814 5 2 ר ר 17. 2 843 804 808 846 \sim "x d 7 S Recorded By: Me 5 0:2 2 2 5 5 Lock Haven, Pennsylvania 1.4-Dichlorobenzene 0 LOT NO. Date: Jan 25 MRI Project No. 3620.13.30 4004 Client/Source: Source Location: Naphthalene LOT NO. 400 HI / 2. . -3 Run No. 24 - Hr TIME AR315555

APPENDTY R

OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator 13 SKIPED ; , h يا REMARKS CAVANAUCH 40 м S JM 5.3 2 ЧЪ 23 ah δ 49 MAN 2 ΰð 2G S ದ ž 30 ŝ 30 a S R 20 00 53 ٤ 9 귕 d 30 0 0 J J 5.26 1937 1939 929 1941 Δ 856 1837 553 20:2 4: 06 22 կ:24 1953 1935 9:08 a:16 00: 1931 545 855 523 4 5 52 1845 54 741 P-Y-S . ى 2. ... CHANGE Recorded By: <u>A</u> 2 2 1 -Port 1:27 2 jî 2 Lock Haven, Pennsylvania 67 1,4-Dichlorobenzene lands. LOT NO. τ 2 1 Ξ 3620.13.30 2 7 -4 긕 1 コ 4004 Date: MRI Project No. Client/Source: Source Location: 1 Naphthalene 2.2 LOT NO. 5 Ξ 40041 -Run No. 24 - Hr TIME AR315556

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

			5 5 7 7	37	34	30	32	18		0%	00	55	51	47 12	4.) 20	3/5		9C	- Se	19		20 20	10		48
1947	95 001	1,361	1956	3000	roor		2008	a010		1014	2018	2019	१८७१	3033	2025	1000	3031	3033	3035	3037	1 4 0 8	3043	ACHE	3040	3050
			= =			:	- =	11	5:	= =		=	11			=	<u> </u>	=	<u> </u>		Ξ		= =		E -
11,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1				8					=		<u> </u>	<u> </u>	1	11		1	M		1	· · · · · · · · · · · · · · · · · · ·	<u> </u>		······ 1]		
 			- 3	Н					u.				41		H		11				. =		=	= =	z
										- ,			•										• • • • •		
			90 199 10 129 10 129 10 129 10 129 10 129 10 129 10 129 10 129 11 11 11 11 11 11 12 11 13 11 14 11 15 12 10 129 11 11 11 11 12 11 13 11 14 11 15 12 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 12 11 <t< td=""><td>$\begin{array}{c ccccccccccccccccccccccccccccccccccc$</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>1 1</td><td>1 1 1</td></t<> <td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 <t< td=""><td></td><td>1 1 1</td></t<><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1<td></td><td>ни ни н</td><td></td><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td></td></t<></td></td></td></td></td></td>	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1 1	1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>1 1 1 1 <t< td=""><td></td><td>1 1 1</td></t<><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1<td></td><td>ни ни н</td><td></td><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td></td></t<></td></td></td></td></td>	1 1 1 1 <t< td=""><td></td><td>1 1 1</td></t<> <td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1<td></td><td>ни ни н</td><td></td><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td></td></t<></td></td></td></td>		1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>1 1 1 1 1 1 1 1<td></td><td>ни ни н</td><td></td><td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td></td></t<></td></td></td>	1 1 1 1 1 1 1 1 <td></td> <td>ни ни н</td> <td></td> <td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td></td></t<></td></td>		ни н		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td></td></t<></td>	1 1 1 1 1 1 1 1 <t< td=""><td></td><td></td><td></td><td></td></t<>				

R

ADDENNTY

. . . .

•

-.
MRI Project No. 3620.13.30

OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Lock Haven, Pennsylvania Source Location: Client/Source:



3620.13.30	OHM Reme
MRI Project No.	Client/Source:

diation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Demositionia t

Run No.		Date: Jan 25, cVI	Recorded By: 🗸	Hack	
24 - Hr	LOT NO.	LOT NO.		REMARKS	
IIME	Vaphthalene	1,4-Dichlorobenzene	Dirt	a201 a3 ', '	
					 .
	-		- ; -		
		· · · · · · · · · · · · · · · · · · ·			
			•		
			,		
			-		
					ļ
•					
				n an and and and and an and a state of the second of the second second second second second second second second	1
					<u>,</u>
		· · ·		and and and and and and a set of a set of the set of th	:
	•				
?			-	are arrested and an and an arrested and a second and a second arrest arrest arrest arrest arrested arr	1
	• • • • • •			And and a second second second and and a contract of the second second second second second second second second	
					1
μ					1 -
I F	•				
83		-			
31	remain an an				
5		· · · · · · · · · · · · · · · · · · ·			
5					<u></u>
5					
9	1		•		
		;			1
	:	· · ·			
	•	· · ·			<u></u>
		- - -			
		· · ·			
-					. • •

-

-

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incine Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX126 and XX127, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX128, stored at near water ice temperature (i.e., 4°C). All samples, XX129, stored at near room temperature or cooler (i.e., 26°C).

Run No. 2 Date: 1 - 2.5 = 97Sampler(s): _ 2126) Z127 Z128 Z129 Composite Sample Number: Composite Sample Designation: VOC **GALB** Grab Interruptions/Comments . Time No. 17ARK MIST 57, MJ BACKS L. 11 1836 11 .. ч v . . 1903 1., ... 20.45 *. 11 . . L. 2117 ** ۰, 5 6. 8 9 10 O. all Received By D. Clay ____ Date/Time 1-25-Relinguished By

APPENDIX B

BOTTOM ASH SAMPLING DATA (DUPLICATE SAMPLES)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX170 and XX171, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX172, stored at near water ice temperature (i.e., 4°C). All samples, XX173, stored at near room temperature or cooler (i.e., 26°C).

Sampler(s): Dr HC Run No. 👗 ______いいて ¬ Date: _ エ 171 <u>~173</u> · Composite Sample Number: 2170-172 Composite Sample Designation: SVO voc CLP/META Grab Time Interruptions/Comments _No_ IYar PARK 1 MOIST PECKS :1.5 .. ٤s L 1836 . . 1903 c 1 .. " 4 204% 21 ١r * ٤~ 4 1.4 11 2117 ۲. 11 ٤٠ ŧ, 144 8 9 .10

, alberty Received By Date/Time _____7_7 2157 Relinquished By

BOTMSH3D.WPD January 20, 1997

BOTTOM ASH SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incine Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop, Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon[®]-lined screw cap. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Date: 1-25 -91 Sampler(s): <u>D. A. S. A.</u> Run No. -Composite Sample Number: 2136 COE

Composite Sample Designation:

Grab No.	Time			Interrup	ntions/Comme	nts	
Ì	15-00	DARK,	TUST,	Semo	Ricks		
A)	1536.	٤(<u>\</u>		٤		
3	K103				и		
Ø	20-15-	i1	<u> </u>	i i	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		
Ø	2117	<u>، در</u>	L(۲	۰ e		
B	2144	••	L 1	٤.	n		
						LOA	
8							
9						·····	
10							
9 10				~			 , .

Relinquished By P	Received By D. alin_	Date/Time 1-25-97
-------------------	----------------------	-------------------

FLY ASH SAMPLING DATA

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen (13) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the of dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX130 and XX131, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX132, stored at near water ice temperature (i.e., 4°C). All samples, XX133, stored at near room temperature or cooler (i.e., 26°C).

Run N	o. <u>2</u>	_ Date: <u>1-25-97</u>	Sampler(s)	: p. AcBURTY
Co Comp	omposite Sam osite Sample	pple Number: Z130 Designation: SVOC	2_131 VOC	CLP/METALS (2133) GALBT
Event	Time		Interrup	tions/Comments
Ø	2028	Noo, wet it	CUNKY	Thurshill
Õ	23 45		ب	FRUCK #2
3				
4		;		DA
5			,	
6			\sim	
7	····		\angle	-~ -
8	•			
9				
10		,		
		-		

COL Date/Time 1-25 - 91 Received B **Relinquished By**

FLY ASH SAMPLING DATA (DUPLICATE SAMPLES)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen (18) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX174 and XX175, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX176, stored at near water ice temperature (i.e., 4°C). All samples, XX177, stored at near room temperature or cooler (i.e., 26°C).

Run No	2	Date:z	5-97	_ Sampler(s): _	O, ALBJE			
Coi Compo	mposite Samp site Sample D	ble Number: Designation:	7-174 SVOC	7 175 VOC	Z-176 CLP/METALS	GALBT		
Event								
_No	Time	<u> </u>		Interruptio	ns/Comments			······································
Ð	2028	<u> </u>	wor st	CHUNKY	TRUCK	LL 1		
Ì	2345	<u> </u>	<u> </u>	د ۲	• •	#2_		
3	\leq				-		NA	
4		<u> </u>					21-	
5			_	·				
6				_				
-				\searrow				
7			·	\geq				
8								· · · · · · · · · · · · · · · · · · ·
9 ح	·····							
10								
10			· · · · · · · · · · · · · · · · · · ·					

Received By LQ. all Date/Time 126-97 239 Relinquished By

AR315564

FLY ASH SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen (18) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon[®]-lined screw cap. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Run No. 2 Date: 1-25-97 Sampler(s): D. ALBURTY 2-137 Composite Sample Number: Composite Sample Designation: COE Event Interruptions/Comments _No. Time TRUCK HI 2830 RED, WOT & CHUNKY 11 2345 (r 42 2 e DA 4 5 6 7 8 9 _ Received By Dr albrenh Relinquished By L. albert ____ Date/Time <u>1~25-97</u> 1355

APPENNTY

FLYASH3C.WPD January 20, 1997

Run 3

Field Sampling Data

MRI-Applied/R362013.APP

AR315566

APPENDIX B

	K							12	IATIC ³ OF TRAVERSE OINT LAYOUT)	FINAL				FINAL																	1767 601		01.04	. 384	NE 241,238
					- W	<u> </u>			SCHEM	•	INITIAL				INITIAL				INITIAL		215"							FINAL					NIIIAL VOLUME	FINAL VOLUME	EAK CHECK VOLUME	ADJULSTED FUNAL VOLUI
	• 、	71	5H T 508	0.985	131	0, 837	74.24 24	(h.) <u>37</u>	· D, XI		NAL				NAL				FINAL	1615	10 "	2001						INITIAL		<u>ڪ</u> ا5 ^ر ا						
	4	ZZLE DIA. 22, 3	SUMED MOISTURE %	TER CORRECTION	OTNO.	OT COEFFICIENT	ROMETRIC PRESSURE	e to Baro. Elevation	ATIC PRESSURE	¹⁴ H ₂ 0				14 H ₂ 0	FI			IECKS	INITIAL	1404	≥ 15 ^{tt}	500.		62	78	84	IECKS	FINAL								
	FIELD DAT/	NON	<u>الم (تولندجة AS</u> ME	WE	0 PIT	PIT	<u>イ</u> BAF		STV STV	ITOT LEAK CHECK \geq 3	INITIAL		_	ITOT LEAK CHECK 23	INITIAL			AMPLE TRAIN LEAK CH	FINAL	358	8.0 "	100		191.30	190.9	. 3	AMPLE TRAIN LEAK CH	INITIAL		≥15 ^u						
		8-4	H AND TYPE & header	NID (DLLER NO. AV	NO N/ C	LEI.D. NO. <u>26</u>	RDI.D. NO. 1012	PH-1	<u>a</u>	FINAL	1/01/4 1/1/252	retit	ā.	FINAL			õ	TIAL	5 1	15"		-				S.	NAL								
•		PROBE NO.	PROBE LENGT	METER BOX NO	上, TEMP. CONTRO	TEMP. METER	THERMOCOUR		NOZZLE NO.		INITIAL	1103		:	INITIAL				INI	071		, Ot						E								-
		RUNNO	PROJECT NO. 36.20 13 - 30	DATE 1-31-47	sampling LOCATION Street Orthat (Low	SAMPLE TYPE SAMPLE TYPE	OPERATOR Gishik	FILTERNO.	HECOHD DATA EVERY 2:2 MIN. UMBILICAL/SAMPLER HOOKUP 24 - 1			TIME (24 hr)	PASS/FAIL			TIME (24 hr)	PASS/FAIL			TIME (24 hr)	VACUUM, In. Hg	CFM	VOLUMES	. FINAL	INITIAL	DIFFERENCE			TIME (24 hr)	VACUUM, In. Hg	CFM ·	AOLUMES	FINAL	INITIAL	DIFFERENCE	

COMMENTS

a -

Revision 11/18/86

1-HSSWal

1-31-97 ∞

RUN NO.

DATE

CLOCK TIME (24-hr.)

SAMPLING TIME, min

TRAYERSE

(Lausa) SAMPLING LOCATION Shick But lat PROJECT NO. 36-20-13-300

P. _____

	APLE	IAZ										
9• 58	NP.,	IMI TET	35	38	1/0	45	42	42	1/1	41	91	44
,.JA	на чь л	PUA In. I	0.2	20	2.0	7.5	7.5	2.5	7. 5	0.6	9.0	7.0
S METER Rature	OUTLET	(T _{m wi}), °F	66	6 S	60	68	69	00	72	566	75	26
DRY GA Tempei	INLET	(T _{m In}), °F	67	りゆ	20	70	.75	82	83	84	66	89
STACK	TEMP.	4 F	180	180	180	1.11	180	181	181	181	181	15/
RESSURE	In H ₂ U)	ACTUAL	2.00	1.85	1.55	1.50	1.55	1.55	3.00	1.55	1.95	1.55
ORIFICE P DIFFERI	(A), I	DESIRED	1.95	1.83	1,54	1.92	1.9.1	1.93	1.99	1.94	1.95	1,96
VELOCITY	HEAD (V II)	In. H ₂ 0	1.2.0	0.36	0.38	0.39	0.38	0.39	0.40	0.39	0.39	0.34
I READING	22.474	ACTUAL	128 850	123. 650	139, 240	145.990	150.600	156.380	162.180	167 9 30	173.650	19 250
GAS METER (V _m).	7 TITIAL	DESIRED	128.075	133 570	120 242	144.902	150.639	156.341	11.2.132	072 671	193.611	102 90

1255

30

4 M

1302.5

37.5

2 27

1247.5

С, У

w 3

1232.5 12400

ر, ب

3

۰٬

7

3

4225

NUMBER POINT

12.88

255

0.0 й У

251

Я

R.

942

250 252 25)

11

22

5

5 5

76

180 180

2:35 2,35 2.35 2.10 1.90

2.33

0.45 0.45

197. 420

197.622

1448.5

5

N 12

1441

θ

203.850

203.594

1456

 $\tilde{\lambda}$

N 01 N

191.362

1

ġ

1081

46

0.0

18

2

10.01

76

84 20 8 200

180 180

2.30

0.44

210.080

à. 10

01.0

216.130

216.105 210.137

リビリ

30

N 9

2.6921

2. 2

2.34

9.50 80 7.5 8.0 8.5

13.0 13.5 13.4

33

252

29 46

.... 27

20

190

0.36 0.34

221,790

773

321.

15 AUS

37.5

N &

25.3

Š

44

56

180

1.95 1,20

1.95

12.37

232.900

232.538 236.661

15335

いく

וציו

100

₹ 5,

227.146

526

や

27 с 5

227.230

11-21

8

3

25] 253 252 252 254

33

43

\$0

18 90

181

1.90 1.90

1257 1.89

0.38

298.570 244 , 315

×

\$, \$ 5

80

81 81

6 6

182

1.95

1.93

0.40 41

250.120

0.39

244.328

1445

67.5

NY N 3 2

5

250.072

556 1603.5

182

3.)

23

isy

Ś

গু

53

1252

r'n

13.0 12.8

0.2

253

252

<u>44</u>

8.0

82

25

181

1,80

1.82

0.36

427

2101

1611

50

2

8.5

62

181

205

1.0.C

0

2520.030

256.033 201.024

82.5

256

53

Ļ 23

12.6

254 252

280

1 49

0.0

80

ģ

2.05 1.95

2.00

0.41

185.299

13425

₹. 2

11 01

179.376

340

25

1325

9

Ø

Ŕ (i)

1337.5

1.15

0 01 0

1310

ŗ,

40

1317.5

225

6.73

90

180

1,90

0.36

190.978

988

150.

1355

20

210

っつ 1 7 2 &

0.34

19.260 185.240

ンン

252

252

10.21 12.5

225

256

12.5

3.2

12.5

252

12, 51

251250

いい

253

252 254

5.2

らべ

248 251 250

252

12.5

251

252

Femp., °F

РЯОВЕ ТЕМР., •F

".9MET XO8

d•

GAS METER

DΠY

FILTER

AR315568



COMMENTS



INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

Plant Anak	OHM ,	RSC Project No. 3626 - 33-30
Sampling Locati	ion stuck O	Putlist (Louise) Run No. 5. Date 1-37.978
Sample Type (N	lulti-Point, Sing	He-Point) Operator <u>Gerkick</u>
Flow Control De	vice Microvalve	e, Critical Orifice) Bag Type Mylen_ Sample No. 3/07
For Sampling Fr	om M5 Console	e No Method 3 Tráin No
Pump Type	Dia dia	Pump Type
Pump I.D.	NIO	Pump I.D
Flow Meter Type	- Rota	Flow Meter I D
Desired Flow R	ate (cc/min)	
Leak Check Bef	ore Sampling	Marss After Sampling Pass
Total Sampling	Time (min)	180 Average Flow Meter Reading 1.0
Flow Rate (cc/m	in): Average	100 Highest 100 Lowest 100
Estimated Actua	al Volume (liter	·s)
Time	Flow Meter	Commente
24 Hr Clock	Reading	Comments
1225	100	Bein Ran 3
1240	100	olice
1255	100	Ok
1310	100	<u> </u>
1325	100	ole
13.40	100	OK
13535		Port Change
		·
1441	1.80	Restant.
145.5-	100	0E.
1510	100	OK
1525	100	ole
1540	100	ot
1555	100	OR
1610	100	ok
1611		End of Ran 3
		0
		· · · · · · · · · · · · · · · · · · ·
	[
L		
		MMEDU ODCAT BAG

APPENNTY R

TRIAL AUR SAMPLES For disposal call: P. GORMAN OXYGEN AND CARBON DIOXIDE BY ORSAT

RUN NO. 3	DATE 01-31-97	k-LowerLevel	95 2		
PRO FCT NO 3620. 13.30	SAMPLEND 3707	DANT SAMPLING I OCATION STAC		SAMPLE IYPE (BAG, LARAD)	OPERATOR

--- CHANGE IN 4 MIN. - CHANGE IN 4 MIN. - CHANGE IN 4 MIN. - CHANGE IN 4 MIN. **ORSAT LEAK CHECK BEFORE ANALYSIS: ORSAT LEAK CHECK AFTER ANALYSIS:** BURETTE No NU PIPETTES ~~ PIPETTES NO BURETTE ---

GAS ACTUAL READING	L NET		-			AVFRAGE
1 9.0		ACTUAL READING	NET	actual. Reading	NET	VOLUME
CO2 2 9.0	0,6	1 <i>9.0</i> 2 <i>9.0</i> 3	9.6	1 90 2 9.0 3	055	3,0
0 ₂ (NET IS SECOND 1 20.7 READING MINUS ACTUAL 2 20.7 CO ₂ READING) 3	11.7	120.7 220.7 3	6-11	1 <i>20.7</i> 2 <i>20.7</i> 3	11.7	11.7

Acceptance Criteria

≥ 15% < 15% 02 .3% by Volume .2% by Volume

.2% by Volume .3% by Volume

3107

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

MM5PH ORSAT BAG TRIAL BURN SAMPLE

DRAKE 3620.13

CO₂ >4% ≤4%

Comments:

MODIFIED	40 CFR 266, API PARTICULATE M	PENDIX IX, METHOD	0050 - 1. TRAIN (MM5PH)	
	FIELD LABORA	TORY TRAIN SET-UP	DATA	
MRI Project No. 3620.13.30 Client/Source: OHM Remedia Source Location: Lock Haven, P Sampling Location: Mobile Hazard	tion Services Corp., ennsylvania ous Waste Incinerat	Drake Chemical Superf or (HWI) Stack	und Site, Mobile HWI	
Run No. <u>3</u> Sampling Trai	n No. MMSF	<u> H-/</u> Sample Box I	NoY	
Set-up person(s): <u>5.M.C</u>	/	• 	Date:	-25-97
Transfer to Sampler:		- 1		
Relinquished By J. Mc Can	<u> </u>	D. Neal	Date/Time <u>1/27/</u>	97_11:10
TRAIN COMPONENT	COMPONENT NO.	. <u> </u>	LOADING DATA	
Sampling Nozzle (Quartz)	PH-1 *	Y Y	Initial Weigh	ts (grams) * *
Probe (Liner-Glass)	*		Empty	Loaded
Female Probe Outlet Blank-Off				·····
90° Bypass	*			
Filter Holder Front		Filter Type: Whatman	QM-A	·
Filter Holder Back with				i.
Teflon [®] Filter Support		Filter Number:		
45/90° Connector		· · · · · · · · · · · · · · · · · · ·		6
1st Impinger (2-Liter, Mod-GBS)	·	50 mLs ±1 mL	1021.4	1072.5
		0.1 N H₂SO₄		,
1st Impinger Replacement	notured	50 mLs ±1 mL		
U-Connector (A)	ہ 	0.1 N H₂SO₄	4	
2nd Impinger (GBS)		100 mLs ± 2 mLs	<u> </u>	574.5
U-Connector (B)	<u></u>	0.1 N H₂SO₄		
3rd Impinger (GBS)		100 mLs ±2 mLs		619.6
U-Connector (C)		0.1 N H₂SO₄		
4th Impinger (Mod-GBS)		Empty	489.0	
U-Connector (D)				4 - 4 -
5th Impinger (Mod-GBS)		$100 \text{ mLs} \pm 2 \text{ mLs}$		650-6
U-Connector (E)		0.1 N NaOH	1101 1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
6th Impinger (Mod-GBS)		$100 \text{ mLs} \pm 2 \text{ mLs}$	756.1	
U-Connector (F)		U.1 N NAUH	, 	01× 00 / 1725
/th Impinger (Mod-GBS)		~ 200 g indicating sili	ca gel	<u></u>
U-Connector (G)				1.93
8th Impinger (Mod-GBS)		~ 200 g indicating sili	ica gei	010.4

* Before and after sampling: Nozzle openings covered with aluminum foil or Teflon[®] tape, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon® plug. Bypass inlet covered (not sealed), with aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with aluminum foil, Teflon® tape or as described above.

Component Changes After Set-up And Before Recovery And Other Comments:

0050SUCX.WPD June 26, 1996 (rev. 0050SUC3.WPD October 31, 1996)

Impinger Outlet Connector _

65

AR315571

40 CFR 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI2 TRAIN (MM5PH)

	FIELD	LABORAT	ORY SAM	IPLE RECOV	/ERY DAT/	4		
MRI Project No. 3620.	13.30							
Client/Source: OHM I	Remediation	Services Cor	p., Drake C	hemical Supe	rfund Site, I	Mobile HW	l	
Source Location: Lock H	laven, Penns	sylvania						
Sampling Location: Mobile	Hazardous	Waste Incine	rator (HWI)	Stack	,	,		
Run No. <u>3</u> Samp	ling Train No	. MMS	PH-1	Sample Box	< No ک	/		
	T	RAÍN PURGE	WITH ASC	ARITE-FILTE	RED AIR			
Opendamonta in frant half?	1 Jan a				Duran d. Du	ATTA		
Deta/Stort Times			Stan Time	11)A	Purged By		ALLA	11.01
Moistura Romovad2	4	·····	stop nine _	10/11	Fulge hate	. [ΔH =	////	IN.H ₂ OJ
Transfer for Becovery:	<u>.</u>							<u> </u>
Belinguished By 0. No.	. 1	Received	BY T M	6	Date/T	ima 1-31	-97 16	30
Sample box recovery perso	$n(s)$ γ	M. (.			Dato, 11	<u>_/</u>	Date: 1-3	1-97
Probe recovery perso	on(s): ປີ	Surman (Non D	Letney		·····	Date: $1-3$	/-97
Weights below are in gram	ns.							<u> </u>
		BA	ACK HALF F	ECOVERY				
,	Replacement						— .	
Impinger: 1st	1st	2nd	3rd	4th	5th	6th	7th	8th
Final W/t 3531.0	NA	840.3	89P.7	870.2	697.5	5896	7094	702.0
Initial Wt 10765	ant	574.5	674.6	489.0	40 6	588.0	6825	6929
Net Wt. 2454.5	- <u>\$</u>	2658	224.1	381.2	46.9	1.6	25.9	8.1
	¥			[7	Total Conder	nsate Colle	cted: 340	8.1
Description							<u> </u>	
and/or color: clear		clear	clear	_ clear	clear	_claar_	_/o	20
Recovery: $\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow$	Impingers 1	-3	\cdot \leftarrow \leftarrow \leftarrow	→ → Imping	ers 4-6 ⊷ ⊷	بە بە بە بە بە	% BI	ue
Sample Number	: _3103			310	05			
Sample Bottle Tare Wt	. 1305.4	_		49	8.2			
Sample Bottle Gross Wt	. <u>4506.1</u>	—			Befor	e Rinses		1
Components Rinsed*	: filter supp	ort, filter hold	der back,	4th-6th	n impingers,			
45/90° connector, 1	st-3rd impin	gers, U-conr	nectors A-B	U-conn	ectors C-E	D ¹		
Sample Bottle Gross Wt	· <u>-75757</u>				Y. Atter	Rinses		•!
Net Sample Wt	. 3281.	/		//			ed Computa	tions
Aliquet Sample Number					101	106 fo	r Chlorida A	nalveie
Sample Bottle Tare Wt		98.9			· · · · · · · · · · · · · · · · · · ·	100 10 7 <i>2</i> 7		1019313
Sample Bottle Gross Wt	4475.0	$\frac{-100}{-2167}$		111	4.3 19	8.8 A	fter Aliquotic	a
Sample Bottle Final Wi			-	<u></u>	<u> </u>	A	fter SIE Chec	sk.
Net Sample Wi	. 3169.1	_ 117.8		61	16.1 10	0.0		
		r r						
FILTER:		FF	UNI HALF	RECOVENT	1	······································	/ 1	
Sample Number	: <u> </u>		Descrip	tion/Color:	light &	nink/int	tact	
TRAIN RINGES - Samala	Number	7101			5 0	/		
Sample Bottle	Taro W/t	3101						
Components F	lineed**: n	zzle probe	liner hynas	s filter holde	r front			
Sample Bottle (Sross Wt	244.4	with Aceton	e Rinses				
Net Acetone Sa	mole Wt	, <u>,,,,,</u> ,	Har Augudi	5 . m 1000				
Sample Bottle	Final Wt.	H88.6 V	vith added \	Nater Rinses				
Net Water Sa	mple Wt. 7	622-1 14	4.2					
	4		- 1					
 Using a total of 10 	0 mLs ±2 ml	s ASTM Type	e I water <u>per</u>	<u>sample</u> , rinse	components	twice. Th	oroughly mix	each sample

and added rinses before aliquoting. ** Acetone rinses with brushing 3 times or more until perceivably clean. If any residue remains in a component, follow with ASTM Type I water rinses with brushing until perceivably clean. Do not add any water rinses to the sample bottle until after the bottle is weighed with all of the acetone rinses.

!

AR315572

COMMENTS:

0050RCCX.WPD October 31, 1996 (rev. 0050RCC3.WPD October 31, 1996)

N SCHEMATIC OF TRAVERSE 260,979 POINT LAYOUT 424 223, 335 FINAL FINAL 361.411 2 Ϋ́Υ INITIAL ≥ 15" FINAL LEAK CHECK VOLUME INITIAL VOLUME FINAL VOLUME INITIAL INITIAL 29.21 1 1 200 INITIAL FINAL 215" Heid 29.24 12: 24 1933 1628 0. 995 527 -0.4 CORRECTED B.P. (0.1 in/100 ft.) 10% 61114 SITE TO BARO. ELEVATION (ft.) FINAL FINAL BAROMETRIC PRESSURE ASSUMED MOISTURE % STATIC PRESSURE __ METER CORRECTION PITOT COEFFICIENT <u>143 |</u> 2151 INITIAL FINAL 100 METER AH @ NOZZLE DIA. PITOT NO. PITOT LEAK CHECK $\geq 3^{\prime\prime}$ H₂O PITOT LEAK CHECK 23" H20 SAMPLE TRAIN LEAK CHECKS SAMPLE TRAIN LEAK CHECKS 292.472 432 292.540 FIELD DATA INITIAL INITIAL PROBE LENGTH AND TYPE 8 1/ 424 PC B INITIAL 2151 FINAL N-75-6 007 1401 i, '' 76-6 A 012-00 6N 6/1 00121 FINAL FINAL <u>'ie iu</u> βN Ϋ́ 5 UMBILICAL CORD LD. NO. THERMOCOUPLE I.D. NO. Lewer) TEMP. CONTROLLER NO. UMBILICAL CORD I.D. NO. 500 TEMP. METER NO. INITIAL ≥ 151 101 FINAL SAMPLE BOX NO. METER BOX NO. _ NOZZLE NO. PROBE NO. INITIAL INITIAL 101 SAMPLINGLOCATION STACK Catlet DIFFERENCE DIFFERENCE Piak offer RSC NW VACUUM, In. Hg VACUUM, In. Hg INITIAL INITIAL UMBILICAL/SAMPLER HOOKUP LAL FINAL TIME (24 hr) FINAL TIME (24 hr) PROJECT NO. 1420 - 20-30 VOLUMES VOLUMES RECORD DATA EVERY 7.5 3 (2.1) Crift'n CFM CFM 1-31-97 ΔA TIME (24 hr) TIME (24 hr) PASS/FAIL PASS/FAIL OPERATOR FILTER NO. RUN NO. PLANT DATE _

AR315573

67

COMMENTS

Ravision 11/18/85

ADJUSTED FINAL VOLUME __

·					671	6.21	12.8	12.9	0-71	8-71	R- 2/	17.10	1/2.7	L'2/	7-71	128			6.2/	12-9	8-71	8-21	12.9	P-71	13.0	12.7	12.7	12.5	13.1	12-8			
) _{(:} ‡_ •E		X 11	19 46	17 14	16 45	19 53	19 42	27 24	12	Ch 02	100	5 2	07 16	50 47			2	49 40	49 43	14 61	2 43	24 0 1	K7 34	8	25 25	18 43	50 45	12 50	-		
		eF	MP.,	3T 113	45 24	17 27	2 64	12 64	12 14	Z Shi	248	× ×	23 6	4	12 1.7-	16 26	-		20 21	10 2	22	<u> </u>	17 27	5 24	12 21	10 21	12 2:	50 24	131 29	10 27			
_	.4	MP., •F	IST XI	A2 08	X	X	X	X	X	X	$\langle \chi \rangle$			X	X	X			X	X	X	X	ĨX	X	X	X	X	X	X	N			
ין פי 	67.11	•E E8		MI 97	3/	32	33	39	36	37	5	36	37	38	Life I	40			32	ž	37	39	5	16	34	41	\$	ş.	Ę.	<u>-</u>			
~	ERATOR_	,.JA	MP V MP V	Na In.	8	6	0	Ø	10	2	0	9	10		1	2			0	2	4	2	2	9	<i>i</i> 0	9	11		17	71			
<u>.</u>	90	S METER Rature	OUTLET	(1m out). '1	ゆゆ	6.5	ú l	4.8	10	72	44	79	17	74	<i>8</i> ;	28			11	7¢,	17	-76	ŝv	81	81	66	ž	84	84	४५			. 365
\sim		DRY GA Tempe	INLET	(1 _{m in}), "F	de	1245	70	75	74	51	53	3.5	35	20	ch2	42			77	75	34	87	39	90	72	92	12	42	i}4	th			kpred
Leur		STACK		÷	181	18.7	180	181	(8)	18;	181	182	181	181	181	1.81			180	1963	1.80	181	181	181	181	181	182	182	181	187			k clur
		ESSURE NTIAL	H ₂ 0)	ACTUAL	1.9	2.1	2-1	2.0	6.1	1.8	1,9	2.0	2-1	7.2	2.1	0.2			.96	2.0	2 - 1	1.9	1.9	1.9	1.9	1,8	1.9	19	2.1	2.0			12/10
1000	13-30	ORIFICE PR DIFFERE	и), In 	DESIRED	661	2-11	2.12	1.ckj	141	687	1.92	1-5%	2.13	2-14	2-10	1.96			1.94 1	2 où	205	192	1.88	1.38	1.93	1.78	1.85	01.1	シビ	00.2			ther F
N 57	7623-7	VELOCITY	HEAD (△P₁), -	in. H ₂ 0	42.	. ناط	14.	64.	141	1.50	14.	<i>- 4</i> ^{'4}	45 4	.45	, 44	14,			77.	, 29	.29	ćŕ.	17.	.37	25.	<i>ت</i> بت ,	, 35	1.5.	l'Ŀ,	96,			y - (]
AMPLING LOCATIO	ROJECT NO.	READING 11 ³	<u>دلار</u>	ACTUAL	224.02	234.74	240: 52	746. 28	261.95	257.35	243,00	268.74	274.64	280.73	286,70	242.540		292-972	243.64	304. 36	310, 23	315.88	321,51	92714	772.75	773, 24	743,83	Auri, 52	1441 8	361.411			p. d chizh
ũ		GAS METER (V _m).	INITIAL 223	DESIRED	228, PS	734.82	240.70	246.41	252.03	267.53	243.15	248.91	22483	280.86	286.80	22.546		Thitial	298.63	304.45	310.30	715.97	321.58	327.20	14.248	338.40	243.98	Aug.64	356.60	361.411		, ,	Nazzle at
<u>тт5</u> 5V-1		CLOCK TIME (24-hr.)	e i	1225	1232.5	1240	5.0421	17.65	5.2141	1310	2.11.61	int	1342.5	0461	13-17-5	1345	Ľ.	-1++++-	12.8441	INFL	5.6051	11/51	1518.5	12:51	15-11-6	IFUI	15116 5	1551	1.9 5	11 611			K. 51/2
, W	31-97	CAMPI II	TIME, I	10	ž	y Y	225	2	32.5	45	52.5	60	67.5	75	825	8		E	515	105	12.5	3	127.5	135	142.5	150	1.2.2	1.15	172.5	1,80			B.u
UN ND	DATE	·	TRAVERSE	NUMBER	5-1	3 -2	5-3	5 -+ 0	5-5	7-5	5-7	3-8	5-9	5 -16	S	21-5			21- 2	1-11	1-10	0	ين. 11	6-1	K - 6	1 v 1 v 1 v	1.1	1.1		אר ה י ר	2		COMMENTS

.

AR315574

11-12 1-12

INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

Ť

. . .

Plant <u>Drake</u> Sampling Locati Sample Type (M Flow Control Der For Sampling Fr Pump Type <u>E</u> Pump I.D. <u>M</u> Flow Meter Type Flow Meter Type Flow Meter I.D. Desired Flow Rate Leak Check Bef Total Sampling Flow Rate (cc/m Estimated Actual	<u>offin</u> <u>Sc</u> ion <u>StackOrc</u> fulti-Point, Sing vice (Microvalve om M5 Console <u>merzer Retars</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u> <u>regener</u>	<u>Herrint</u> (Lown) le Poin t <u>MP</u> e, Gritical Orifice) <u>MV</u> e No. <u>N9</u> <u>Hitran</u> <u>C</u> <u>P</u> <u>N-9</u> <u>Joro</u> <u>Acos</u> <u>177</u> Average F <u>(OC</u> Highers) <u>Apply J8</u>	Project No. $322 - 73 - 30$ Run No. 3 Date Derator G_{C} : H_{12} Bag Type $M_{12}/21$ Bag Type $M_{12}/21$ Sample No. 3114 Method 3 Train No. NA Pump Type $Pump 1.D.$ Flow Meter Type H_{12} Flow Meter Type H_{12} After Sampling $Pase$ $I = 0$ $Lowest (C 0)$
Time 24 Hr Clock	Flow Meter Reading		Comments
1227	1.0	2 min Purge	(Run Started (J. 1225)
1240	1.0		· · · · · · · · · · · · · · · · · · ·
1255	1.0		
1310	1,0		
1325	1.0		
1340	1.0		
1355	1.0	Denn for Port Chan	
1443	1.0	sitte t	
1458	1.0		
1512	1.0		
1527	1.0		
1542	1.0		
1557	1.0		
1611	1.0		
	ļ		
	†		
L	1.,		DBARE 2620 13 (81

DRAKE 3620.13 3114 MM55V ORSAT BAG TRIAL BURN SAMPLE For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE AR315575

. .

OXYGEN AND CARBON DIOXIDE BY ORSAT

RUN NO. 3	DATE 01-31-97	Fix- hower heved	320		
PROJECT NO. 3 620, \$3:30	SAMPLE NO. 3114	PLANT SAMPLING LOCATION	ANALYSIS TIME (24hr-CLOCK)	SAMPLE TVPE (BAG CRART	OPERATOR d' Surman

د

BEFORE ANALYSIS:	CHANGE IN 4 MIN.	CHANGE IN 4 MIN.	AFTER ANALYSIS:	CHANGE IN 4 MIN.	CHANGE IN 4 MIN.	
NK CHECK	an	an	K CHECK	0N	eМ	
ORSAT LEA	BURETTE -	PIPETTES.	ORSAT LEA	BURETTE -	PIPETTES_	

RUN		1		2		3	AVEDACE
GAS	ACTUAL READING	NET	ACTUAL READING	NET	ACTUAL READING	NET	VOLUME
c02	1 899 2 8.9 3	8.9	1 8 8 9 2 8 9 3 8 9	8.9	- 5.9 2	8.8	8,9
O ₂ (NET IS SECOND READING MINUS ACTUAL CO ₂ READING)	1 20.8 2 20.8	11.9	120,5 220.5 3	6.11	1 2018 2 2018 3	11.9	6.11
						91-16 St	EV SURMAN WASH 0521

Acceptance Criteria

.2% by Volume .3% by Volume ≥ 15% < 15% $^{\circ}_{0}$.3% by Volume .2% by Volume CO₂ >4% ≤4%

Comments:

3114 DRAKE 3620.13 MM5SV ORSAT BAG TRIAL BURN SAMPLE

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

AR315576

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY TRAIN SET-UP DATA

MRI Project No. 3620.13.30			
Client/Source: OHM Remediation Services C	Corp., Drake Chemical Superfu	und Site, Mobile Haz	ardous Waste
Incinerator Source Location: Lock Haven, Repressivania			
Sampling Location: Incinerator Stack			
	$C \neq 1$		
Run No. <u>3</u> Sampling Train No. <u>MM5</u>	Sample Box N	10. 012001	-1 alan
Set-up person(s): <u>A. Carender</u>		Date:	1/27/9-
Transfer to Sampler:		·	
Relinquished By <u>D. Carenale</u> Receive	ed By D, IV eq	Date/Time 1/2-7	<u>797 11:15</u>
TRAIN COMPONENT COMPONENT	NO	LOADING DATA	
Sampling Nozzle (Quartz) SVB /PCB-	·) *	Initial Weig	hts (grams) * *
Probe (Liner-Glass)	*	Empty	Loaded
Female Probe Outlet Blank-Off			
90° Bypass	*		
Filter Holder Front			к.
Filter Holder Back with Teflon®-	Filter Type: Whatman (A-MC	
coated 316 SS Filter Support	v dan Ardana matanan argan		
45/90° Connector			
Condenser (Standard)	Thermocouple No. <u></u>	2-3	***
XAD-2 Resin Cartridge (Standard) $\frac{\# 5(T)}{}$	~65 grams XAD-2 Re	sin + Surrogates	<u>481.6</u>
(Documentation of standards injection is separate	el; resin spiked on//14/	91 and maintair	ed near 4°C until use.
1st Impinger (2-L Mod-GBS)	Empty	1091.1	_
1st Impinger Replacement	Empty	_NA	
U-Connector (A)	· · · · ·	1101 00	
2nd Impinger (Mod-GBS)	100 mLs	986.5	586.2
U-Connector (B)	ASTM Type II Water	11750	
3rd Impinger (GBS)	100 mLs	915.8	576,5
U-Connector (C)	ASTM Type II Water	1.0 9 9	
4th Impinger (Mod-GBS)	Empty	468.8	<u> </u>
U-Connector (D)	<u></u>		(209
5th Impinger (Mod-GBS)	~200 g indicating silic	ca gel	6 30, 1
U-Connector (E)			7400
6th Impinger (Mod-GBS)	~200 g indicating silic	ca gel	_170.2
Impinger Outlet Connector <u>UH-8</u>	4 <u></u>		

* Before and after sampling: Nozzle openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon[®] plug. Bypass inlet covered (not sealed) with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil or as described above.

*** Cartridge weighed with blank-offs in place; then, cartridge covered with aluminum foil to seal out light during storage and sampling.

Component Changes after Set-up and before Recovery and Other Comments:

1023SUCX.WPD April 26, 1996 (rev. 1023SUC3.WPD October 25, 1996)

71

AR315577

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY SAMPLE RECOVERY DATA

MRI Project No. Client/Source:	3620.13.30 OHM Reme	0 Idiation Services	Corp., Drake Č	nemical Superfun	nd Site, Mobile	Hazardous Waste
Source Location: Sampling Location:	Lock Haver Incinerator	ı, Pennsylvania Stack				
Run No. <u>3</u>	Sampling]	Frain No. <u>MMS</u>	SW-1	Sample Box No	01200	<u>ı</u>]
Relinquished By _D	. Nea	Recei	ved By <u>A</u>	arcroll	Date/Time _/	131/97 1645
Sample box recover	y person(s):	A.Care	ider :			Date: 1/31/97
Probe recover	y person(s):	J. Surma	, D. Nea	, R. Howe		Date: <u>/</u>
Weights below are	in grams.	RESIN CAR	TRIDGE AND IN	PINGERS RECO	VFRY	, , .
Impinger:	XAD-2	Re	placement		<u> </u>	
	Cartridge*	1st	1st 2	nd 3. 3rd	4th	5th 6th
Final Wt.	485.1	3684.0 1	Jat Jsed 80	782.	7/7.5	698.3 797.3
Initial Wt. Net Wt.	<u>481.6</u> <u>3.5</u>	2642.3	220.	<u>6.2</u> <u>576,3</u> <u>760</u> <u>265,</u> [Total Conde	968.8 1 248.7 nsate Collected	(329 190) 17.4 19.1 33470 grams
Description	T NIA	A		1	- 1	334681
and/or color: Sample Recovery:	MacHole Cartridge*	يم <u>رامہ</u> → 1st-4th Imp	ingers and Rep	acement 1st Imp		<u> </u>
Sample Number:	3 111	3 11	2			_
Sar	nple Bottle T	Tare Wt. <u> 401.</u>	<u> </u>			
Transfe	r impinger co	ontents only (i.e.,	, do not add co	mponent rinses t	to this sample).	
San	nple Bottle F	inal Wt. <u>490</u>	<u>4.1</u>			
Cor	net San nponents Ri	nsed**: 1st-4th with tra	impingers, repl in back rinses l	acement 1st imp below (sample nu	inger, U-conne ımber XX010)	ctors A-C; combine rinses
		FILTEP	RECOVERY A	ND TRAIN RINSE	S	
FILTER:			-,			n'1
Sample Number:	109	Description/Colo	r: <u>intac</u>	f white	h to Mr	hite
TOAIN DINCES.		FRONT	C		L' BU	NCES
Samie I	Number	3108	.7	110	31	13
Sample Bottle]	Fare Wt. 2	63.3	263	3.4	493	.7
Components Rin	sed * * *: Fro	ont nozzle, proł	pe liner, bypass	, filter holder from	nt;	<u></u>
	Ba	ck filter suppor	t, filter holder b	ack, <u>45/90° cor</u>	nnector, <u>conde</u> r	nser
Sample Bottle F	inal W/t 4	133.2	17	370	116	9.10
Net Sar	nnle Wt $/$	69.9	4	73.8	1075	<u>7.0</u>
		<u>y 17 1 .</u>	<i>f</i> i	<u> </u>		<u></u>
 Replace bla ** Methanol/r *** TRAIN FRO more until p brushing, a QA RINSES and back r 	nk-offs and re nethylene ch NT/BACK RIN perceivably ch and including 5: Follow with inses	amove aluminum for loride (1:1 v/v) rin ISES: Methanol/me ean, and methano 5-minute soaks of toluene rinses and	bil, then weigh the nees 3 times; ad athylene chloride l/methylene chlo of underlined co b soaks, but wit	e cartridge; replac d rinses to train b (1:1 v/v) rinses v pride (1:1 v/v) rins mponents 3 times hout brushing, in	ce aluminum foi back rinses (sam with brushing of ses of back com s. the same mann	to cover the entire cartridge. The number XX010). If front components 3 times or The number 3 times, but without ther as above for the train front
COMMENTS: T_	-1-1	the and	lad a c	1 + -	in a to	1 3/10 V
in L	advert	aning und	ea one t	owend re	ins a so	mple 3/10 -
1023RCCX.WPD June 4, 19	20 (rev. 1023RCC)	- impenser (3.WPD October 25, 1996	and filte	1 support !!	lack fil	to, Kalf
			-		ÁR:	315578

 \mathcal{N} Solid waste feed sampling data

CON0. 1

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately 100 grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum * pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX120, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX121, stored at near water ice temperature (i.e., 4°C). All samples, XX122, stored at near room temperature or cooler (i.e., 26°C).

1-31-9 Sampler(s): PAUL 11. 11424/Kit Run No. _3 SA. Date: _7 el H. 3121 3120 3 199 Composite Sample Number: 5122 1 200 BOB 60 Composite Sample Designation: svoc METALS GALBT voc FENAC Grab _No_ Time Interruptions/Comments Caution: Material may contain β-naphthylamine. RIRT 1230 1-245 1Ì ŀ 11 H 134 linco 15:3 11 11 20 ٦j 11 71 ιI ₩6 16 17 18 19 20 4. illut Date/Time / 6/4 1-31-37 Relinquished By Received By WSTFEED3.WPD January 24, 1997 AR315579

RUN 3 COND. 1

SOLID WASTE FEED SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately 60 grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon®-lined screw cap and wrapped in aluminum foil to seal out light. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Run No	3 Date: H-ZH YH DA Sampler(s): Full III Myzy Kik Dan, I Hilly site Sample Number: (3135) Som Filis Bog Comos
Composite S	Sample Designation: COE
Grab <u>No.</u> Ti	imeInterruptions/Comments
P 12	Caution: Material may contain β-naphthylamine.
$\bigcirc \frac{i2}{i3}$	$\frac{45}{102} \left(\frac{11}{201} \right) = 1$
$\begin{array}{c} 3 \\ 4 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\ 3 \\$	DIG (15001 D.N) DIG (17001 D.N)
5 12	530 × 11 DH
	$\frac{75}{100}$
BIF 0	145 START TO SAMPLE TE
Ø 15	<u>cc</u> <u>Brand</u> Drift
	$\frac{15}{3}$
5 17 15	45 ~ BE
K O X	eo " " " DR 30
14 <u> </u>	SASST, BUT DIE TAKE SAMPLUS- DA \$12 \$ 13
16	
17	
19	
20	
Relinquisher	HBV Bal- Jom & J. Beceived BV Ward 1. all Und Date Think 1. 3. 1. 14
WSTFED3C.WPD	December 4, 1996

AR315580





6

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven. Pennsvlvania

NOTE: FEED PRET CLOCK 4 MIN.	Compare 070	37 QALBURTY	34 1-21-47		ر م		07	04	00	57/	46	42		رد 17		1	14	01	00	<i>5.6</i>		43	39.	36	26	24	30 Besirv. Sumpling	C
-	REMARKS	6 11 23	1/45	1011		1.33	12 II		01 11	5h11	1146	8-11	7511	1154		00f1	4011	20 (1	12 O S	1404			5, 4,	6101		シオア	ζ ę θ/	7 6 6 1
rded By: Nail aver	-	D. 1 + Deger Spiken						. (<u>1</u>	14			J ~			2	-	5		, , ,	· · · ·	~ .			11	•		: 2	
Date: $\dot{A^{i}}''$ $3/$ f Reco	LOT NO.				II	· · · · · · · · · · · · · · · · · · ·							11		· · · · · · · · · · · · · · · · ·													· · · · · · · · · · · · · · · · · · ·
Run No.	24 - Hr LOT NO.	11WE Naprillarie		7.									······································															

AR315581

6/2

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator

	1		21.47	The Hold / Contraction	SER NOTE PU 1
	Kun No.		Date: 447 JI	Lecolution by the state of the	Na
	24 - Hr TIMF	LOT NO. Nanhthalana	LOT NO. 1 4-Dichlorobenzene	REMARKS	
		1.1/1/ hook	4004 /11/	0, 15 1, 10	
			· ····································	1,235 02	альный на нала отношения и таки и полити полити и полити и полити и то
				" 123b. 57	
				11 138 2-3	
			· · · · · · · · · · · · · · · · · · ·		
		: : :			
		. 1		11	
			· · · · · · · · · · · · · · · · · · ·	11 1348 33	
			· · · · · · · · · · · · · · · · · · ·	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	
		11	· · · · · · · · · · · · · · · · · · ·	11 1352 24	
				1, 1354 20.	الم والمالية الم المحمد المحم
		1	· · · · · · · · · · · · · · · · · · ·	11 1356 10	and a state of the
			· · · · · · · · · · · · · · · · · · ·	11 . 8571 11	
				11 1300 07	and an and and and the set of the set
				1 1302 05	
	!		N	11 1303 59	
				11 1305 54	الا الله الله الله الله الله الله الله
A			I	11 1307 49.	
R		11		11 1309 45	والمواجعة والمحالية
3				1311 41	
			!	1 [313 27]	
5		1		11 1315 225	
58		· · ·		11 1317 ag	
32				1319 25	
2			· · · · · · · · · · · · · · · · · · ·	18 [134] 21	
		= .		11 1335 17	
		- :		13.36 13	
	•		1	1337. 08	a bai ta mana an ann an taona an taona an taona ann ann ann ann an taona
	· ·		=	1329 04	a mar an inn a sa an
				1331 000	
	•				
				1336 46	
			· · · · · ·		
)		-		





See word PC. 1 to I 1 4 : ,÷ 1 OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator ... 14 11 i ١ 14 de -----; S.Y Ŷa Jue REMARKS \mathcal{V} オ WORK ST = いのもの 5.4 C RJ 5-9 50 5 .755 NG. 45 Ġ J 3 R ナイ 40 ŝ 07 3 0 ò Ь. 'M 3 Ø ットト 157 450 455 459 1550 1550 1550 1505 1452 1540 とん 507 1503 504 1540 454 513 1515 Sol 1533 4451 1521 1534 21 0%51 1538 5-14 5 ጉ Recorded By: DiRT 1 --ェ -Ξ ----Ξ Lock Haven, Pennsylvania 34972 1,4-Dichlorobenzene LOT NO. Date: Jun 11 7 11-= = _ 3620.13.30 7 2 = = Ξ 1 : . 1 Ì ł 4004 Source Location: Client/Source: MRI Project No. 1.10 Naphthalene LOT NO. 120017 Ξ 1 1 = = = 1 1 -_ 1 1 ٢ Run No. 24 - Hr TIME AR315584

DATA - Condition 1	Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator	Jur Hinle, See Norra Paris	REMARKS	15.53 50		1554 38	NG03 30	16 05 35 1607 21			1615 OS Shop Sconpling - Ead Rin 3		16.30 51	1697 46 42	1636 38	1638 34		1639 a.3 17.36 a.0	16.38			2 104(5) 5 Cb 2 Cb		1651 43		1657 31 1659 27		
SPIKING	es Corporation,	Recorded By:		0,1		= =	= -	= =	- :	; =	= =			5 Z	= :		2 -	: =	11	= =	-		Ξ	= =		: ;		
	ct No. 3620.13.30 burce: OHM Remediation Service ation: Lock Haven, Pennsylvania	Date: <u>Jew 31 97</u>	D. LOT NO.	11/14004 1					······································			· · · · · · · · · · · · · · · · · · ·								H							· · · · · · · · · · · · · · · · · · ·	
	MRI Projec Client/Soi Source Loca	Run No. 3	24 - Hr LOT NC TIME Nanhthale	4 DOCH 2	; = :			: :		-	= :	: :	: ت	= =	.	, , ,	· • • • •						: :	. .	::-			
	,	-						·										AF	۲3 ۲3	15	55	85	5			£.4# -		_

• ,

79



BOTTOM ASH SAMPLING DATA

MRI Project No. 3620.13.30

م مسیندی

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE*protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX126 and XX127, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX128, stored at near water ice temperature (i.e., 4°C). All samples, XX129, stored at near room temperature or cooler (i.e., 26°C).

Run No. . Sampler(s): Qr ALBURT Date: 7127 3126 3128 3129 Composite Sample Number: Composite Sample Designation: SVOC voc TCLP/METALS GALBT Grab _No. Time Interruptions/Comments PARK icies ٠. ٠. J ŭ ·V 4 ~ ۰. 40 ч ~1 ~ ~* . 8 9 10 1860 Relinquished By Received B Date/Time

BOTTOM ASH SAMPLING DATA (DUPLICATE SAMPLES)

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX170 and XX171, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX172, stored at near water ice temperature (i.e., 4°C). All samples, XX173, stored at near room temperature or cooler (i.e., 26°C).

Run No	3	Date: _/	31-97	Sample	r(s): <u>Q. /-</u>	LUGURTY		
Co Compo	mposite Sar osite Sample	mple Number: Designation:	3 170 SVOC) (3171 VOC	J TCLP/N	72 3 173 METALS GALBT		
Grab No	Time			Inter	ruptions/Con	ments		
1	1235	CARK,	Moist;	Samo	ELCKS_			
2	1301	<u>ر</u> t	C *	**	 .	(US00 206 5C	(100	
3	1336	<i>ı.</i>	٠.	*•	t.q			
(4)	1448	<u> </u>	И	~	~		······································	
(5)	1524		• •	· ••	د_			
6	1552	Ч	••	54	٤,		-	
L L	·						OrA:	
8								
9								
10								
								_
								2220
		\wedge	,	^				
		N. Reh	-	Γ, Γ	1. Mulu		1-21,97 1755	
Relinqu	uished By		- U Re	eceived By _¥	a. none i	Date/Time	LATI TIN	

SOTMSH3D.WPD January 20, 1997

RUN 3 COND

BOTTOM ASH SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum^{*} scoop. Grab samples deposited, combined, and mixed in an aluminum^{*} pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon[®]-lined screw cap. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Run No	3	Date: 1-31-97 Sampler(s): D, ALBURTY	
Co Compo	mposite San osite Sample	nple Number: J136 Designation: COE	
Grab No.	Time	Interruptions/Comments	
$\widehat{\mathcal{O}}$	1235	DARK, MOST SOME RELES	
(2)	1301		
I I I I I I I I I I I I I I I I I I I	1336	<i></i>	• • •
<u>(</u>	1448	er 31 v ^a v ^a	. بعزمي
(5)	1524		
6	1582		. u e
		DA_	
8			
. 9	<u></u>		
10			
/			
			-
	×.		
Relinau	uished Bv	Ni Albert Received By 1, Alberty Date/Time 1-31-97 1868	
· · - · · · · · · · · · · · · · · · · ·			
вотменз	C.WPD January 2	20, 1997	

RUN 3 CONT.

FLY ASH SAMPLING DATA

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen (18)-spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX130 and XX131, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX132, stored at near water ice temperature (i.e., 4°C). All samples, XX133, stored at near room temperature or cooler (i.e., 26°C).

Sampler(s): PILLIS Date: _ Run No. 3130 3131 3133 Composite Sample Number: 7132 Composite Sample Designation: svoc voc TCLP/META GALB Event Time Interruptions/Comments _No_ 1630 RED MOIST ASU 1 2 3 4 5 6 8 9 10

Relinquished By De alluty Date/Time 1-31-97 1645

FLYASH3.WPD January 20, 1997

RUN 3 CONS 1

FLY ASH SAMPLING DATA (DUPLICATE SAMPLES)

MRI Project No. 3620.13.30

а _£А Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of sighteen (18) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX174 and XX175, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX176, stored at near water ice temperature (i.e., 4°C). All samples, XX177, stored at near room temperature or cooler (i.e., 26°C).

____ Date: <u>1-31-97</u> Run No. 3 _ Sampler(s): 1J, ALBJ,277 3 174 👌 Composite Sample Number: 3 175 7 176 2 177 Composite Sample Designation: svòc voc CLP/METALS GALBT Event No. Time _Interruptions/Comments__ 1122 150 140151 3 5

Relinquished By D. alburg ____ Received By De allung ____ Date/Time 1-31-97_1445

APPENDIX B

FLYASH3D.WPD January 20, 1997

AR315591

RUN 3 COND. 1

FLY ASH SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

9

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen (18) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the of dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum * pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon®-lined screw cap. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Run No. 3	Date: <u>1-21-97</u> Sampler(s): <u>D1 AC13 5 27 7</u>
Composit Composite S	e Sample Number: (2137). ample Designation: COE
Event	
NoTin	eInterruptions/Comments
(1) <u>164</u>	7 ,250, maist, 13H
2	
3	
4	
5	
2	
6	
7	
8	
g	
10	

Willing Received By D. allering Date/Time 1-31-97 1645 Relinguished By

FLYASH3C.WPD January 20, 1997

Run 4

Field Sampling Data

MRI-Applied/R362013.APP

· ·

· · · ·

AR:

AR315593

APPENDTY R
SCHEMATIC OF TRAVERSE ADJUSTED FINAL VOLUME //28.9.77 446 729 3 POINT LAYOUT 42 FINAL FINAL 958. 129. INITIAL ≥15¹¹ FINAL LEAK CHECK VOLUME INITIAL VOLUME FINAL VOLUME 3 **INITIAL** INITIAL совяестер в.Р. (0.1 іл./100 ft.) ___29. 08 2020 2 3 INITIAL FINAL ŝ N N N 29.1 20 39 1120 0.336 371 33 -0.41 124 4 SITE TO BARO. ELEVATION (IL) ... FINAL FINAL BAROMETRIC PRESSURE ASSUMED MOISTURE % **METER CORRECTION** STATIC PRESSURE _ PITOT COEFFICIENT INITIAL 9.45 2 15¹¹ 0.003 FINAL AETER AH @ NOZZLE DIA. PITOT NO. 446 064.716 PITOT LEAK CHECK 23" H₂0 PITOT LEAK CHECK 23" H₂O SAMPLE TRAIN LEAK CHECKS 10 45.162 SAMPLE TRAIN LEAK CHECKS FIELD DATA INITIAL INITIAL PROBE LENGTH AND TYPE 3' ACUTE 0281 INITIAL N P FINAL 9 1-503 5 5.0 1.7 ٢ 96-2 - WW 100 210 Ś 2027 800 FINAL FINAL HIN TEMP. CONTROLLER NO. UMBILICAL CORD I D. NO. UMBILICAL CORD I.D. NO. THERMOCOUPLE I.D. NO. Ряове NO. - - 2- - 2 0,009 215" INITIAL TEMP. METER NO. FINAL SAMPLE BOX NO. METER BOX NO. NOZZLE NO. INITIAL JNITIAL 143 SAMPLING LOCATION STALL Quitlet UMBILICAL/SAMPLER HOOKUP 44-4 RSC 27-20 DIFFERENCE DIFFERENCE SAMPLE TYPE MUN 5- PH - 2 MIN. É VACUUM, In. Hg VACUUM, In. Hg INITIAL INITIAL ういい FINAL FINAL TIME (24 hr) TIME (24 hr) 0Hm - 31- 9 VOLUMES VOLUMES 1.20-1 1' 1' CFM CFM Ŀ RECORD DATA EVERY しいた TIME (24 hr) TIME (24 hr) PASS/FAIL PASS/FAIL PROJECT NO. OPERATOR FILTER NO. COMMENTS RUN NO. PLANT ____ DATE ____

(1)

3

AR315594

APPENNT

88

Revision 11/15/56

														-		
		(24-hr.)	GAS METE (V _m	ER READING	VELOCITY	ORIFICE P Differi	RESSURE	STACK	DRY GA Tempei	s meter Rature	<i>.</i> ,	•۴ ع	₹• ,.¶	•E		
TRAVERSE	TIME, min	/	INITIAL 2	121.36	HEAD	(AH).	In H ₂ O)	TEMP.	INLET	OUTLET	HQ IP V	NP.,	LIEK LIEK 18E	нь., ИР.,		
NUMBER	10	1705	DESIRED	ACTUAL	In. H ₂ 0	DESIRED	ACTUAL	<u>н</u>	(T _{m in}), °F	(T _{m sul}), °F	PUN In. I	LEN	XO8 XO8 NR9	LTILI NEL	NET I	
NIZ	7.5	1717.5	1004.069	1004,040	.41	1.48	1.70	184	73	73	2:17	37		56 25	/ /2.:	
NIL	15	1720	1009.245	1000-1.540	. 44	1.90	1.50	183	13	72	50	30	~	56 23	6 12	-
NIO	23.5	2.02.01	1015 . 361	1015.450	, ۲۲	1.85	1.55	184	76	74	8.5	1/5	8	53 23	4 12	
N 9	30	1735	1020.925	1020.425	, 44	1.81	1.80	154	BL	24	7.50	17	Ŕ	57 22	1 (2.5	
NG	89.5	17-12-5	1026.435	10 26.730	64.	1,77	1.75	181	79	22	2.2	1/1		57 25	2 2	
C 1	45	1750	1031.586	1032.110	,42	1.73	1,70	184	80	75	7.0	43	2	27	3 12.2	-
s N	2.5	1757.5	1037.207	1071. 350	.42	1.05	1,00	185	28	77	0.4	50	4	22	6 12.	
<u>></u> >	9	18.05	10 42.786	1042,750	146	181	1.75	185	33	28	7.0	43		5 25	3 2	
NY	6.5	1412.5	1048.471	1048.380	. 45-	181	1,85	184	84	79	7.51	42	Ř	56 29	3 12.	
N 3	75	1420	1054.155	1054.050	,45	1.6.7	1.65	الانحر	24	66	7.2	47	<u> </u>	22 12	T Z	7
N 2	89.5	1427.5	1059 722	1039.150	.43	1.75	1.80	184	85	86	2.57	43	<u>-</u> 	50 22	2	_
N -	<u>50</u>	1435	1064.694	1064.716	,36	1,42	1.45	195	87	82	6.51	61	<u>×'</u>	52	5 12-5	
	0	1850		1065.163											_	_
1 1	21/2	1857.5	1020.170	, 1070.255	,35	1.45	1.45	184	51.5	ŝI	6-5	47	N	54 25	1 12. 4	
102	15	1905	1075.321	10.75.350	, 39	1.53	155	185	53	18	65	K K	2	52 25	12.5	
6 (1)	22.5	1912.5	1080.762	1080,725	. 1/	121	1.70	184	85	81	8.0	47	Ú.	51 25	12 72	_
101	30	1020	1086.3301	1086,448	Сŀ.	1.79	1.80	184	86	۶/	0%	Sa	Ň	57 25	3 12.0	
105 U	37.5	1027.5	011.1501	1091,925	54.	1.66	1.65	185	87	6	8.0	22	à	200	5.61	_
9 (1)	45	1935	1096.993	1097.126	.43	1.60	1.60	981	98	18	7.5	44	2	59 22	19.5	
1. (7)	2.5	1942.5	1102,458	1102.500	14.	1.22	1.70	184	8.8	83	2.5	13	3	2 25	3 12,	
(1) 8	0"1	1950	1107.789	1107,825	, 39	1.103	1.65	1-84	58	63	7.5	42	r r	52 25	(12.>	
1.09	125	1957.5	1113.188	1113,135	40	1.68	1.65	184	38	63	7.5	45	2	57 75	5 127	_
01011	75	2005	1114.654	1118.590	.41	1.72	1.20	184	88	83	6.0	44	Ň	25 25	112	
11 C 1	82.5	2012.5	124.125	1124.060	.4/	1,72	1.70	184	88	84	6.0	45	N 	8	2 2.	
2121	60	2030	1129 523	1129.423	04.	1.68	1.20	184	88	83	8.0	45	5	23 25	2 12.5	, -
															_	
														_	_	
			,								•••					

~

Strick artist (under)

17104) 11 104)

INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

Plant Drake	OHIM	RSC Project No. 3620-13-30
Sampling Locati	on start (Putlet (upper) Run No. 4/ Date 1-31-97
Sample Type (M	lulti-Point, Sing	e-Point) Operator
Flow Control Dev	vice (Microvalve	, Gritical Orifice) Bag Type male Sample No. 4107
For Sampling Fr	om M5 Console	e No Method 3 Tráin No
Pump Type	Dia chra	Pump Type/
Pump I.D	RI7	Pump I.D
Flow Meter Type	Rotan	Flow Meter Type
Flow Meter I.D.	N7_	Flow Meter I.D.
Desired Flow Ra	ate (cc/min)	100
Leak Check Bef	ore Sampling _	PASS After Sampling PASS
Total Sampling	Time (min)	180 Average Flow Meter Reading 120
Flow Rate (cc/m	in): Average	Highest Lowest
Estimated Actua	al Volume (liters	s) <u> </u>
Time	Flow Meter	Commonto
24 Hr Clock	Reading	Comments
1705	180	Bei, in Ram 4
1720	100	ok
1735	100	ÐK
1750	100	ok
1805	100	OK
1820	100	OK .
18:35		Port Change
1850	100	Rostant

Ó

OK

N

Ole

End King

1920

193<u>5</u>-

1950

20.05

120

100

120

100

4----

4107

90

DRAKE 36 ...12 MM5PH ORSAT BAG TRIAL BURN SAMPLE For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

APPENDIX B

OXYGEN AND CARBON DIOXIDE BY ORSAT

31-92	12000		
PROJECT NO. 3620. \$3.3 P RUN NO	PLANT SAMPLING LOCATION STRUK: - UPP	ANALYSIS TIME (24hr-CLOCK)	OPERATOR J, Surman

3EFORE ANALYSIS:			VFTER ANALYSIS:	- CHANGE IN 4 MIN	- CHANGE IN 4 MIN
ORSAT LEAK CHECK B	BURETTE	PIPETTES ~~~	ORSAT LEAK CHECK A	BURETTE	PIPETTES No

RUN				2			AVFRAGE
GAS	ACTUAL READING	NET	ACTUAL READING	NET	actual Reading	NET	NET VOLUME
c02	1 8.6 2 8.6 3	ßĹ	1 8.7 2 8.7 3	8.7	1 86 2 86 3	8.6	8,6
D ₂ (NET IS SECOND READING MINUS ACTUAL 302 READING)	1 22.4 2 21.4 3	128	1 21.4 2 20.4 3	1.61	1,21,3 2,21,3 3	12.7	12.7
-						51-16 SI	EV SURMAN witch (05219)

Acceptance Criteria

 $0_2 \ge 15\% < 15\% < 15\%$.3% by Volume .2% by Volume

.2% by Volume .3% by Volume 4107

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

DRAKE 3620.13 MM5PH ORSAT BAG TRIAL BURN SAMPLE

Comments:

CO₂ >4% ≤4%

.

91

40 CFR 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI2 TRAIN (MM5PH) FIELD LABORATORY TRAIN SET-UP DATA

MRI Project No.	3620.13.30
Client/Source:	OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile HWI
Source Location:	Lock Haven, Pennsylvania
Sampling Location:	Mobile Hazardous Waste Incinerator (HWI) Stack
Run No. <u>4</u>	Sampling Train No. MM5 PH-2 Sample Box No. 012004
Set-up person(s):	J-Mc Com Date: 1-27-97
Transfer to Sampler	
Relinquished By	McCann Received By R. Howe Date/Time 1/27/97 1304

TRAIN COMPONENT	COMPONENT NO.	L(OADING DATA	· ·
Sampling Nozzle (Quartz)	<u>mm-)</u> *		Initial Weigh	ts (grams)**
Probe (Liner-Glass)	*	· ·	Empty	Loaded
Female Probe Outlet Blank-Off	·	•		
90° Bypass	*			
Filter Holder Front		Filter Type: Whatman QN	1-A	
Filter Holder Back with		. ,		
Teflon [®] Filter Support		Filter Number:		
45/90° Connector				
1st Impinger (2-Liter, Mod-GBS)		50 mLs ±1 mL _		1076.8
		0.1 N H ₂ SO ₄		
1st Impinger Replacement	notused	50 mLs ±1 mL		
U-Connector (A)	·····	0.1 N H ₂ SO ₄		
2nd Impinger (GBS)		100 mLs ±2 mLs	487.7	592.6
U-Connector (B)		0.1 N H ₂ SO ₄	•	
3rd Impinger (GBS)		100 mLs ± 2 mLs _	490.2	593.4
U-Connector (C)		0.1 N H ₂ SO ₄		
4th Impinger (Mod-GBS)		Empty	483.3	, <i>.</i>
U-Connector (D)				
5th Impinger (Mod-GBS)	<u></u>	100 mLs ±2 mLs	466.5	
U-Connector (E)		0.1 N NaOH		· ,
6th Impinger (Mod-GBS)	·	100 mLs ±2 mLs	477.0	577.4
U-Connector (F)		0.1 N NaOH		
7th Impinger (Mod-GBS)		~200 g indicating silica	gel	654.1
U-Connector (G)				119 2
8th Impinger (Mod-GBS)		~200 g indicating silica	gel	667.2
Impinger Outlet Connector	UH-4			

Before and after sampling: Nozzle openings covered with aluminum foil or Teflon[®] tape, and nozzle placed in Ziploc[®] bag. * Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon® plug. Bypass inlet covered (not sealed) with aluminum foil.

Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with aluminum foil, Teflon® tape or as described above.

Component Changes After Set-up And Before Recovery And Other Comments:



0050SUCX.WPD June 26, 1996 (rev. 0050SUC3.WPD October 31, 1996)

AR315598

40 *CFR* 266, APPENDIX IX, METHOD 0050 -MODIFIED PARTICULATE MATTER, HCI, AND CI₂ TRAIN (MM5PH) FIELD LABORATORY SAMPLE RECOVERY DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remediation Source Location: Lock Haven, Penns Sampling Location: Mobile Hazardous Run No Sampling Train No	Services Corp., Drake Chemical Sup sylvania Waste Incinerator (HWI) Stack p. <u>MM5 PH -2</u> Sample Bo RAIN PURGE WITH ASCARITE-FILTE	erfund Site, Mobile HWI ox No ERED AIR
Condensate in front-half? <u>None</u> Date/Start Time: <u>MA</u>	Stop Time/A	Purged By N/A Purge Rate: $[\Delta H = N/A$ in $H_2O]$
Moisture Removed? <u>N/A</u> Transfer for Recovery: Relinquished By <u>L. Have</u> Sample box recovery person(s): <u>T.M</u>	Received By J.M.C.	Date/Time <u>/-3/-97</u> 2/0 ° Date: <u>2-/-97</u>
Weights below are in grams.	BACK HALF RECOVERY	
Replacement Impinger: 1st 1st	2nd 3rd 4th	5th 6th 7th 8th
Final Wt. <u>3227.6</u> Initial Wt. <u>/076.8</u> Net Wt. <u>2150.8</u>	867.2 870.0 813.4 592.6 593.4 493.3 274.6 276.6 330.1	<u>575,7 580.0 (76.3 675,1</u> <u>567.9 577.4 654,7 669,2</u> <u>7.8 2.6 21.6 5.9</u>
Description and/or color:	$\frac{daw}{-3 + + + + + + + + + + + + + + + + + + +$	$\frac{d_{Pa}}{gers 4-6} = \frac{d_{Pa}}{ders 4-6} $
	FRONT HALF RECOVERY	
FILTER: Sample Number: 4102 TRAIN RINSES: Sample Number: Sample Bottle Tare Wt. Components Rinsed**: no Sample Bottle Gross Wt.	Description/Color: 4101 <u>266.8</u> ozzle, probe liner, bypass, filter holde <u>341.4</u> with Acetone Rinses	light pink / intact
Net Acetone Sample Wt. Sample Bottle Final Wt. Net Water Sample Wt.	y 23.0 with added Water Rinses y 23.0 with added Water Rinses y 56.2 81.6 s ASTM Type I water <u>per sample</u> , rinse	s e components twice. Thoroughly mix each sam

** Acetone rinses with brushing 3 times or more until perceivably clean. If any residue remains in a component, follow with ASTM Type I water rinses with brushing until perceivably clean. Do not add any water rinses to the sample bottle until after the bottle is weighed with all of the acetone rinses.

COMMENTS:

.

0050RCCX.WPD October 31, 1996 (rev. 0050RCC3.WPD October 31, 1996)

93

AR315599

÷

		CHEMATIC OF TRAVERSE POINT LAYOUT	FINAL			FINAL			NITIAL	>15"			·1				FINAL				101,851	744.243	101	UME 742 8 39	VULUME
<i>`</i> э		8 -	- INITIAL -			INITIAL										-	AL				INITIAL VOLIUME		FINAL VULUME	LEAK CHECK VOL	AUJUSIEU FINAL
•	, 71) URE % 5.37 URE % 5.37 ION 7.969 MON 7.937 ION 2.9, 1. ESSURE 2.9, 1. ESSURE 2.9, 1. ESSURE 2.9, 1. (0.1 in.100 (t.) 2.9	16 - 0, 41	FINAL			FINAL		· ·	100 E	12 "	100		<u>I</u>	ł			IINI		Ž.						
	DATA DATA NO22LE DIA	STATIC PRESSUF HECK ≥ 3" H ₂ 0	INITIAL		HECK ≥3"H₂D	INITIAL		N LEAK CHECKS	INITIAL ICLEU	137 /	600'		71-505	Fok. (7)	.464	N LEAK CHECKS	FINAL				ł	[[•
	PS FIELD P 8. Kerted GAV N. 5 N. 5 N N. 5 N N N. 5 N N. 5 N N. 5 N N N N N N N N N N N N N N N N	$\frac{DF-I}{PITOT LEAK G}$	FINAL	520	PITOT LEAK C	FINAL		SAMPLE TRA	FINAL	·· ·/	100					SAMPLE TRA	INITIAL		≥15 ¹						
	PROBE NO. PROBE NO. PROBE LENGTH AND TYP SAMPLE BOX NO. TYP METER BOX NO. TYP METER BOX NO. THERMO. TEMP. CONTROLLER NO. THERMOCUPLEI.D. NO UMBILICAL CORD LD. NO UMBILICAL CORD LD. NO	NOZZLE NO.	TIAL	8		ITIAL				>151	200 · 0						FINAL								
·	(5v) 3e 1 XSC 5v-2 5v-2 MIN.	P 4H35	INI	113		N			24 hr)	ca m) M. In. Ha		IES	FINAL .	INITIAL	DIFFERENCE			24 hr)	IM, In. Hg		IES	FINAL	INITIAL	DIFFERENCE	
	HUNNO. <u>4</u> PROJECT NO. <u>26:-13</u> PLANT <u>J:14. CH12</u> PLANT <u>J:14. CH12</u> DATE <u>1-3117</u> DATE <u>1-3117</u> SAMPLE TYPE <u>j:1195</u> OPERATOR <u>C3.04</u> FLITER NO <u>VA</u> HECORD DATA EVERY <u>7</u>	UMBILICAL/SAMPLER HOOKU	,	TIME (24 hr) PASS/FAIL			TIME (24 hr) PASS/FAIL		TIME		CFM	AOLUM.						TIME (VACUU	CFM	ADLUN				COMMENTS
				۱							A	R	3	ł	56	50	0								

.

51-2	$\langle c_{i} \rangle$

たらった・1 RUN NO. DATE .

SAMPLING LOCATION Sack Citlet PROJECT NO. 2220 23-20

p. of of of the 5

12.0 6 11

*

245

2407

34

2 0.

34 7

121

79

150

F

F

3

12.0

52

245

248

5

2

4:2

6.7 5

180

2,2 2.2

2.19 2.19

1/17 '

107.9

107.73

Ś

M12.

12

51/12

17:4 180

(H)

FILTER TEMP.,

PROBE ...

SAMPLE 50X TEMP.,

TEMP., *F

PUMP VAC., In. Hg

(T_{m out}), °F OUTLET

(T_{m In}), °F INLET

(Ľ),

ACTUAL

DESIRED

ACTUAL

DESIRED

1115

 \hat{c}

VELOCITY HEAD $(\Delta p_1),$ in. H_20

⊿,

4.

99

٠Ŀ

DRY GAS METER Temperature

STACK TEMP.

ORIFICE PRESSURE DIFFERENTIAL (ΔH) , in H_20)

GAS METER READING (Vm), 11³ IITIAL

CLOCK TIME (24-hr.)

INITIAL

SAMPLING TIME, mln

> **IRAVERSE** NUMBER

POINT

11-8

ŧ

<u>г</u> 1 250

> 32 66

7

<u>ج</u>

1

20 2

75

2.1

2.0.2 2.11

202 25

Ĺ

119

119. 611

127.5

611

SW-10 9- W2 5 W - 3

172.0

1

3w-11

735

30

37.5

ťŚ

۲

ς. Έ

23

R Ú.E

125.53

10

113.55

24 54 125.42

11.8

3

243 243

12,0

47

245

253

5 F_7

Q

76

34 84

(2)

1.1

充

とた

249

12-1

45

247

248

Į

104

248

251

12 h

Ĩ

25 15

85

179

Ĵ

150

Ĉ

8

ž

5

õ

5

12.0 12.0

248

12.8 12.7

E

147

251

 x_{j}^{\prime} i'

r v

5

542

245

34

2

32

<u>(</u> 1 50 分で

3

245

253

0

25

ومز

Ċ 179 19/ 70

٢

5

12.7

5 42

245

252

R

2 2

74

(J)

33

24§

2

54

28

12.7

246 246

252

3

74

80

179 13

1. 3

140 12 17

218,90

275. 34

225,16

1957.5

167.5

218,75

1990

2

ν S S シビーク

35

212.78

11.212

1942.5

142

いして

0

5.47

シレノ

N

180

2

2,10 2.14 2,15

39

200.90

200.73

1.27.5

127.5

120

112

ží - 3 よえ μ, Υ 52-1

20je 14

1935

ž

2.2

347

12.8

5

54.67

3 וצין

Ŕ

15

N.

12.3 12.9

> Ŧ Ę £

246

250 241 248

6.21

442

264

XIZ С

5

[] 5

66.

56

20

2.4 2,3

エー

· i //

235.03

178

2.35

, 10

CH1 . HL2

244,24

2620

180

シー・シ

277,94

2012.5

5711

231.58

205

105

56-10 52-11

2

79

35

SLI

ŗ

L+.

N

231.74

17

6.11

ş 5

245

247 250

14

9

15

75

178

34 34

Ø

12.0 12.00

43

411

2

9

14

20 F.

الملاط 180

z

247

249

74

Ò.

v T ; ; ;

94

130

6:11

25 250 247

54:

È

262 246

17 0 0-2 2.1 2.7 2.1 5 1 ر مر N N 10.2 51.2 5 2.19 1.72 147 6.0 20 1.48 2.19 1.84 1.14 1.090) N " " 111. 4 5 37 . 38 33 31 3 32 17 15 171.805 64.53 182.87 182.50 148.56 171.464 77.43 142, 85 177.12 54.49 160.32 11.5 48 131. 171-192 94.49 177.36 148.95 165.74) 182.69 イナシ 183.65 194,69 196.081 142.44 160.24 131.11 1742.5 1857.5 1912.5 715 1812.5 15275 1520 1835 5061 120 15 50 150 1505

6.13

3

2

FWH F

5.28

SU SU

90

2

COMMENTS

AR315601

APPENDIX B

5

6

1-70

105

1-35



INTEGRATED GAS SAMPLING DATA FORM FOR U.S. EPA METHOD 3

Plant <u>Profe</u> Sampling Locati Sample Type (N Flow Control De For Sampling Fr Pump Type Pump I.D	ion <u>Stark(2)</u> Iulti-Point, Sing vice (Microvalve om M5 Console <u>Día phrom</u>	\mathcal{K} Project No. $\frac{7}{420}$ $\frac{7}{33}$ $\frac{1}{10}$ 1
Flow Meter I.D. Desired Flow Re Leak Check Bef Total Sampling Flow Rate (cc/m Estimated Actua	ate (cc/min) fore Sampling _ Time (min) nin): Average al Volume (liter	Image: Solution Flow Meter I.D. Image: Provide the image of the image flow Meter Reading Image flow Meter Reading Image: Provide the image flow Meter Reading Image flow Meter Reading Image: Image flow Meter Reading Image flow Meter Reading Image: Image flow Meter Reading Image flow Meter Reading Image: Image flow Meter Reading Image flow Meter Reading Image: Image flow Meter Reading Image flow Meter Reading Image: Image flow Meter Reading Image flow Meter Reading Image: Image flow Meter Reading Image flow Meter Reading Image flow Meter Reading Image
Time 24 Hr Clock	Flow Meter Reading	Comments
1705	1.0	Stat 2/75 / mu pigus
1720	J., et	
1735	1.0	
1750	1.07	
1805	1.0	
1820	1.00	· ·
1835	1.0	Down for NA/ Ching
1.870	10	No totat
1905	10	
1970	1.0	
1935	1.0	
1950	10	· · · · · · · · · · · · · · · · · · ·
7-2075	1.0	
7:270	1.0	121.24
in the des	1-21	
	<u> </u>	
· · · · · · · · · · · · · · · · · · ·		
	<u> </u>	
	ļ	· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·
	<u> </u>	DRAKE 3620.13

DRAKE 3620.13 4114 MM5SV ORSAT BAG TRIAL BURN SAMPLE For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE AR315602

OXYGEN AND CARBON DIOXIDE BY ORSAT

.30 RUN NO. 4	Stack - Upper Level	2030		Ver
PROJECT NO. 3620.43	SAMPLE NO	ANALYSIS TIME (24hr-CLOCK) -	SAMPLE TYPE (BAG, GRAB) -	OPERATOR d, Suxn

DRSAT LEAK CHECK BI	FORE ANALYSIS:
BURETTE	- CHANGE IN 4 MIN.
PIPETTES NO	- CHANGE IN 4 MIN.
DRSAT LEAK CHECK AF	TER ANALYSIS:
BURETTE	- CHANGE IN 4 MIN.
PIPETTES NO	- CHANGE IN 4 MIN.

3 AVFRAGE	NET VOLUME		
	ACTUAL READING	0 0 1	- N M
2	NET		
	ACTUAL READING	3 2	324
	NET		
	ACTUAL READING	1 25 2 7.5 3	1 20.2 2 20.3 3
RUN	GAS	c0 ₂	O ₂ (NET IS SECOND READING MINUS ACTUAL CO ₂ READING)

Acceptance Criteria

.3% by Volume .2% by Volume $CO_2 > 4\%$ $\leq 4\%$

Results from MOSPH train week pere respec

Comments:

Than these results. This beg was leaking

13-18-10

words

.2% by Volume .3% by Volume

≥ 15% < 15%

4114

For disposal call: P.GORMAN MIDWEST RESEARCH INSTITUTE

TRIAL BURN SAMPLE

MM5SV ORSAT BAG DRAKE 3620.13

02

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY TRAIN SET-UP DATA

MRI Project No. 3620.13.30 Client/Source: OHM Remedia Incinerator	ation Services Corp.,	Drake Chemical Superfu	und Site, Mobile Hazar	dous Waste
Source Location: Lock Haven, I Sampling Location: Incinerator St	Pennsylvania ack			
Run No. <u>4</u> Sampling Transfer to Sampler:	ain No. <u>SV-2</u> ender	Sample Box N	lo. <u>/0288</u> Date:[/	27/97
Relinguished By <u>A. Carende</u>	Received By	D. Letney	Date/Time <u>1/27</u> [97 1305
TRAIN COMPONENT	COMPONENT NO.	L	LOADING DATA	
Sampling Nozzle (Quartz) Probe (Liner-Glass)	<u></u> *		Initial Weigh Empty	ts (grams)** Loaded
Female Probe Outlet Blank-Off 90° Bypass Filter Holder Front	*	and the second se		
Filter Holder Back with Teflon®- coated 316 SS Filter Support		Filter Type: Whatman (2M-A	۰
Condenser (Standard) XAD-2 Resin Cartridge (Standard) (Documentation of standards inject	# 3 (T)	Thermocouple No. <u>YA</u> ~65 grams XAD-2 Res	5 - 5 sin + Surrogates 7 and maintaine	<u>487.1</u>
1st Impinger (2-L Mod-GBS)		Empty	981.8	
1st Impinger Replacement U-Connector (A)		Empty	Not used	
2nd Impinger (Mod-GBS)		100 mLs	553.7	654.2
U-Connector (B) 3rd Impinger (GBS)		ASTM Type II Water 100 mLs	479.4	578.9
U-Connector (C)		ASTM Type II Water		· ····································
4th Impinger (Mod-GBS)		Empty	4/3.3	
U-Connector (D) 5th Impinger (Mod-GBS)		~200 a indicatina silia	a del	637.8
U-Connector (E)			u ,	
6th Impinger (Mod-GBS) Impinger Outlet Connector	UH-35	~200 g indicating silic	a gel	<u> </u>

* Before and after sampling: Nozzle openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil, and nozzle placed in Ziploc[®] bag. Probe liner outlet sealed with glass female blank-off, and inlet sealed with Teflon[®] plug. Bypass inlet covered (not sealed) with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil.

** Initial weights of additional components exchanged during the run also entered here. All exchange component openings covered with methanol/methylene chloride/toluene/acetone-rinsed aluminum foil or as described above.

*** Cartridge weighed with blank-offs in place; then, cartridge covered with aluminum foil to seal out light during storage and sampling.

Component Changes after Set-up and before Recovery and Other Comments:

1023SUCX.WPD April 26, 1996 (rev. 1023SUC3.WPD October 25, 1996)

ADDENNTY P

90

SW-846, METHOD 0010; 40 *CFR* 60, APPENDIX A, METHOD 23 -MODIFIED SEMIVOLATILE ORGANICS TRAIN (MM5SV) FOR POHCs, PICs AND PCDDs/PCDFs FIELD LABORATORY SAMPLE RECOVERY DATA

MRI Project No.	3620.13.30)									
Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator											
	Incinerator										
Source Location:	Lock Haven	, Pennsylvania	ł								
Sampling Location:	Incinerator	Stack									
Bus No 4	Complian T		·1-7	C = m	-I- Devi Ne	MARR					
Transfer for Bosov	Sampling I	rain No	va	Sam	DIE BOX NO	10201					
Relinquished By	Letner.	Rec	eived By	A Caras		ate/Time 1~3	1-97	2100			
Sample box recover	v personie:	I Mc (m	A	re-doc		<u> </u>	Data: /	-31-97			
		P G dGM		AL IT			Date: /	1.107			
Moichts helow are	in grams	1. 0-01	o.h, o.	Mearly &	D. LETTE	7	. Date: _/	<u>/ 31/ 4 </u>			
weights below are	in grains.	BESIN CA		AND IMPING	ERS RECOVE	/ RY					
Impinger:	XAD-2		Replacement					····			
	Cartridge*	1st	1st	2nd	3rd	4th	5th	6th			
Final Wt.	497.3	3743.3	NA	893,7	813.1	488.7	657.6	642.9			
Initial Wt.	487.1	981.8	-	654.1	578.9	473.3	637.8	635-1			
Net W/t	/0.2	2781,5		7391	234.2	15 4	198	78			
1461 441.			¥	<u></u>	tal Condena	<u> </u>	3308.4				
Description			n din i t					granisj			
and/or color:	white	dear		dear	clear	dear	0	15			
Sample Recovery:	Cartridge*	→ 1st-4th In	npingers an	d Replaceme	nt 1st Imping	ler + + + +	% B	lue			
Sample Number: Sar Transfe	√111 nple Bottle T r impinger co	- ۲ are Wt. <u>135</u> ontents only (i.	112 <u>'8, (o</u> e., do not a	add compone	ent rinses to t	his sample).					
Sar	nnia Bottla Fi	inal Wt 48	19.2								
001	Not Som	$\frac{1}{34^{-3}}$	70.6								
Co	monents Rir	nsed * * 1 st-4	th impinger	s, renlaceme	nt 1st imning	er U-connect	tors A-C: co	mhine rinses			
		with 1	train back ri	inses below	(sample num)	ber XX010)					
		FILT	ER RECOVE	ERY AND TR	AIN RINSES						
FILTER: Sample Number:	i 4 109	Description/Co	olor: _ uh	tish_							
TRAIN RINSES:		FRONT		, ВАСК		QA RIN	SES				
Sample	Number: ²	7 108		9 110		4 11:	3				
Sample Bottle	Tare Wt 2	63.4		264.3		490.	8				
Components Rin	sed***: Fro	nt nozzle, pr	obe liner, b	ypass, filter	holder front;						
	Bac	ck filter supp	ort, filter h	older back, 4	5/90° conne	<u>ector</u> , <u>condens</u>	ser				
		1138		7/01		1207	<i>u</i>				
Sample Bottle I	inal Wt	630		<u>_/67-9</u>		1001.	<u>, </u>				
Net Sar	nple Wt	200.4		503.	<u> </u>		<u>6</u>				
* Replace bia	nk-offs and re	move aluminum	 I foil, then w	eigh the cartr	idae: replace :	aluminum foil t	to cover the	entire cartridge.			

** Methanol/methylene chloride (1:1 v/v) rinses 3 times; add rinses to train back rinses (sample number XX010).

 *** TRAIN FRONT/BACK RINSES: Methanol/methylene chloride (1:1 v/v) rinses with brushing of front components 3 times or more until perceivably clean, and methanol/methylene chloride (1:1 v/v) rinses of back components 3 times, but without brushing, and including 5-minute soaks of underlined components 3 times.

QA RINSES: Follow with toluene rinses and soaks, but without brushing, in the same manner as above for the train front and back rinses.

COMMENTS:

1023RCCX.WPD June 4, 1996 (rev. 1023RCC3.WPD October 25, 1996)

RUN 4 COND-1 SOLID WASTE FEED SAMPLING DATA

Condition 1

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately for grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX120, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX121, stored at near water ice temperature (i.e., 4°C). All samples, XX122, stored at near room temperature or cooler (i.e., 26°C).

Run No. Sampler(s): Date 4194 Composite Sample Number: **%120** 4122 4121 4200 **Composite Sample Designation:** svo GAL BT 1.00 MUM FENAC

Grab No. ____Time___ Interruptions/Comments Caution: Material may contain β-naphthylamine. $\hat{()}$ 1710 JF Receive Cirt 1725 (2) J.F. 1740 3 175 1510 DH 440 6 Change DH Rro. DH 1.9120 $\triangleright \mu$ /1 11 1914 'n 11 DÅ 11 11 D4 2000 11 コァ 11 Dois 1. e • -15 16 17 18 19 Date/Time 1-31-97 2028 allouin **Relinquished By Received By** WSTFED31.WPD January 20, 1997 AR315606



RUN 4 COND. 1 SOLID WASTE FEED SAMPLING DATA (COE) Condition 1

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerato Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the solid waste feed conveyor to the kiln in the solid waste storage and preparation building.

SAMPLING METHOD: Equal-sized grab samples of approximately 60 grams each collected with an aluminum* scoop from material on the apron conveyor belt. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 6 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 15 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, <u>XX120</u>, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. <u>All samples, XX121, stored at near water ice temperature (i.e., 4°C).</u> <u>All samples, XX122, stored at near</u> recom temperature or cooler (i.e., 20°C).

Ź Run No. Sampler(s): Date: 97422 4135 Composite Sample Number: 420 GALBT Composite Sample Designation: SVOC (COE) Grab Interruptions/Comments _No_ _Time___ Caution: Material may contain β -naphthylamine. 1710 (1) LBROWN DIRTI TF 1725 3 740 755 . • シア 5 1410 Ke? ΠH charge AQ. 115 1014 ø۵ × θĤ 1400 F.d. 1.0 % Ī. it DH 10 11 ų ()A .4 11 1 1 1000 11 20 1 XII 15 16 17 18 19 - .20 Date/Time 1-31-97 2023 Received By D Cilberti, Relinquished By WSTFED31.WPD January 20, 1997

AR315607

SPIKING DATA - Condition 1



	s Waste Incinerator $7/9$	SEE NOTS PC.1 - DA																								· · · · · · · · · · · · · · · · · · ·						
SPIKING DATA - Condition 1	SplKING DATA - Condition 1 3620.13.30 OHM Remediation Services Corporation, Drake Chemical Superfund Site, Mobile Hazard Lock Haven, Pennsylvania Ock Haven, Pennsylvania Date: 100 31 97 Recorded By: 100 March	REMARKS	Dier 1809 55	1811	11	II	1511 - 1514 - 34	11 1803 26	ξ ε 5τ 81	31-2881-11	<u> </u>	1837 05	11 1834 00	1,	11 18,38 51 2	 11	10 10 10 10 10 10 10 10 10 10 10 10 10 1		11 1850 36	11 182 32	11 1821	11 1850 14	$-\frac{1}{100}$ $-\frac{1}{100}$ $-\frac{1}{100}$ $-\frac{1}{100}$	11 1902 -02	11 1905 57		11 1909 44		11 1912 36			
		Lock Haven, Pennsylvania Date: 144 31 97 1	LOT NO. 1.4-Dichlorobenzene	1.1/-11, out					/		1					11				1	11	1	11	· · · · · · · · · · · · · · · · · · ·	,	1	· · · · · · · · · · · · · · · · · · ·		1			•
	MRI Project No. Client/Source:	Source Location:	LOT NO.	40041/2.T	· · · · · · · · · · · · · · · · · · ·				11	•		11					11			1		11	11		1		= =					
		Run No	24 - Hr TIME								2.3 MP		- mili tation		~~		 		Ē	1 R	3	 	56	50	9							

.

۰,



-
ε
- 7
-
-
٤
E
1
1
- (



AP215610 104

SPIKING DATA - Condition 1

aste Incinerator γ'_{γ}	SEE NOTE POIL	1	10 n # 4																	
d Site, Mobile Hazardous W		REMARKS	00 55 30 End of 1			shi ya mana ka								and service and service and the	•					· · · · · · · ·
s Corporation, Drake Chemical Superfun	Recorded By: No. Kurr	•	1.47 2645 2026 2038		······································				 		: .	· • •								
ect No. 3620.13.30 source: OHM Remediation Services cation: Lock Haven, Pennsylvania	Date: 144 31 47	1 1 Diahloroborzene	1/2/1 400 4/ ///	· · · · · · · · · · · · · · · · · · ·							 					· · · · · · · · · · · · · · · · · · ·			: :	
MRI Proje Client/S Source Lo	Run No.	24 - Hr LOT N		 			 	ا ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب	 A C		 -			-	•					
				 , 		 	 	1 مو	 A R	3	56		 		-		-			

ł

BOTTOM ASH SAMPLING DATA

RUN 4 COND. 1

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon[®]-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX126 and XX127, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX128, stored at near water ice temperature (i.e., 4°C). All samples, XX129, stored at near room temperature or cooler (i.e., 26°C).

Ę ALBUDTT Run No. 31-97 Sampler(s): ð. Date: 4127 **4128**) 4129 Composite Sample Number: P126 TCLP/METALS SVOC VOC Composite Sample Designation: GALBT Grab _No. Time Interruptions/Comments DARK, MOIST, SUMO 1713 ROCKS 174 1525 1 1904 ۱. **(**• 11 ŧ. e ۴ 11 1934 ... 64 ... L 200, R 8 9 . · •. 10 Received By D. allert Relinquished By D. albart Date/Time 1-31-97 2010



AR315612

BOTTOM ASH SAMPLING DATA (DUPLICATE SAMPLES)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples, XX170 and XX171, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX172, stored at near water ice temperature (i.e., 4°C). All samples, XX173, stored at near room temperature or cooler (i.e., 26°C).

Run No	<u>4</u>	Date;(-31 -	77_ s	iampler(s): 🖌	D. ALBURT	·>		
Co Compo	mposite Sam osite Sample	nple Number: Designation:	4170 SVOC		171 /oc (4172 CLP/METAUS	4 173) GALBT	•	
Grab No.	Time				Interruptio	ns/Comments	manging provident and and starting to the	▼7 = XET7 - \BE7.	·
\bigcirc	1713	DARK,	MOIST	ASH	Som F	No cics	and a state of the		
Ì	1725		/*	. 1	<u> </u>	ډ.		• • • • • • • • • • • • • • • • • • •	
Ì	1745		r •	1-	••	<u>مد من </u>		• • • • • • • • • • • • • • • • • • •	
Ì	1904	e 1	-1	٤.	\$ *	t •			
6	1934	···	٠	• *	e*	1.			1
6	2054	<u></u>	ť	£ 5		د د			
) K		<u></u>					- MA		
8									
9			\geq	\leq					
10									
	$\overline{}$								
								~	
Poling	vichad Ry	N ann K		Pageived	$\mathbf{P}_{\mathbf{P}} \mathcal{D}$	abut	Data/Time 1-31-97	7210	
nemiq	noneu by	~. <u>-</u>	,	Neceived				-	
вотмяна	D.WPD January 2	20. 1997							

011431130.1470 January 20, 1337

BOTTOM ASH SAMPLING DATA (SAMPLE FOR COE)

RUN 4 COND 1

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: In the bottom ash storage building. Grab samples collected from the front end loader used for transfering ash from the ash pile at the final drop off of the belt conveyor system from the kiln.

SAMPLING METHOD: Equal sized grab samples of about 200 grams each collected with an aluminum* scoop. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon[®]-lined screw cap. (*As per COE protocol.)

SAMPLING FREQUENCY: One (1) grab sample collected every 30 minutes during the run. Sampling conducted continually according to schedule except during stack port changes on the stack and delays incurred during the run as noted below.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Run No	<u>4</u>	Date:	31-97	S	ampler(s): <u></u>	ALBURY	·····	······		212-22
Co Compo	omposite Sam osite Sample	ple Number: Designation:	9 136 COE	3						
Grab No	Time				_Interruptions/	Comments			, 	9
13	1713	DARK,	marset,	Source	Rocies_				·····	····
Ī	1725		, 1		~	,)
3	1745				(*			<u></u>	•	
(4)	1904	ب		15	11		inner da anticipation de la construcción de la construcción de la construcción de la construcción de la constru	<u></u>	<u></u>	
(5)	1934		بر `	٠،	· ·			· •		
ر ک	2006	.(*	Li .	••			مربوب المربوب المحرور	· · · · · · · · · · · · · · · · · · ·	
<u>7</u> 5			<u>1</u>	<u> </u>		F	J3		، 	
8	, <u></u>			>>	\langle		· · · · · · · · · · · · · · · · · · ·			
.9										
10								>		
	Ć.	••••		,						
		· · ·			-					

D. allot Relinguished By

Received By O. albah

Date/Time 1-31-97 2016

POTNEU2C IV

BOTMSH3C.WPD January 20, 1997

RUN 4 GND

FLY ASH SAMPLING DATA

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen (1-8) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the Qrst dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. {*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX130 and XX131, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX132, stored at near water ice temperature (i.e., 4°C). All samples, XX133, stored at near room temperature or cooler (i.e., 26°C).

Date: 1-31-97 Run No. _4 ALBURT Sampler(s): 4130 Composite Sample Number: 4131 4132 4133 **Composite Sample Designation:** SVOC voc CLP/METALS GALBT Event Interruptions/Comments No. _____ CRA33 1St ROD, HARD MA H 0 205Z Δ 5 6 7 8 9 10

Relinquished By D. albury Received By D. albury

Date/Time 02-01-97 0015

FLYASH3.WPD January 20, 1997

FLY ASH SAMPLING DATA (DUPLICATE SAMPLES)

RUN Y COND. 1

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of eighteen (18) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the form truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into 16 oz., wide mouth, precleaned, clear glass bottles. Bottles sealed with Teflon®-lined screw caps. (*As per COE protocol.)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples, XX174 and XX175, stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil. All samples, XX176, stored at near water ice temperature (i.e., 4°C). All samples, XX177, stored at near room temperature or cooler (i.e., 26°C).

Run No. 4 1-51-97 URTY Date: _ Sampler(s): 1-01 4175 4 172 ¢174 svoc 4176 Composite Sample Number: voc CLP/META Composite Sample Designation: GALBI Event Time Interruptions/Comments _No. 155 2047 WOT, HARD RSD AS 6 0010 (2 Δ 5 6 7 8 9 10

Relinquished By D. _ Alberty _

Received By D. albuty.

0015 Date/Time 02-01-97

FLYASH3D.WPD January 20, 1997

AR315616

RUN 4 CONO. i

FLY ASH SAMPLING DATA (SAMPLE FOR COE)

MRI Project No. 3620.13.30

Client/Source: OHM Remediation Services Corp., Drake Chemical Superfund Site, Mobile Hazardous Waste Incinerator Source Location: Lock Haven, Pennsylvania

SAMPLING LOCATION: At the drop off of the fly ash pugmill discharge conveyor from the baghouse and evaporative cooler.

SAMPLING METHOD: Equal sized (approx. 100 grams) grab samples collected with an aluminum* scoop from each of sighteen (18) spacially spaced points over the surface and from a depth of 3 to 6 inches below the surface of the pile in the Hare 9pt dump truck bed located under the end of the conveyor. Grab samples deposited, combined, and mixed in an aluminum* pan; then cut and split into a 16 oz., wide mouth, precleaned, clear glass bottle. Bottle sealed with Teflon®-lined screw cap. (*As per COE protocol,)

SAMPLING FREQUENCY: Grab samples collected immediately after the end of the run.

SAMPLE PRESERVATION: All samples stored at near water ice temperature (i.e., 4°C), and bottles wrapped in aluminum foil.

Run No.	4	Date:	1-31-97	Sampler(s): D. ALBURTY
Con Compos	nposite Samp site Sample D	le Numbe esignatior	r: (4137) n: COE	
Event				Interruptions/Comments
(1)	2040	4007	, ROD ASH	IST TRUCK (9 CRABS)
(2)	2400		ur ur	2nd Truck (T GRAMS, NOT AS)
3				
4				
5			<u> </u>	
6				
7			·	
8				
9				
10				
۲	-			
Relinqu	ished By 🖉	. alla	-t	ived By D. albert Date/Time 02-01-97 0015
			T ,	
ELYASH3C.	WPD January 20.	1997		