APPENDIX D1

MAY, 1988 SOIL SAMPLING

metaTRACE, Inc. 13715 Rider Trail North • Earth City, MO 63045 • (314) 298-8566

July 5, 1988

RECEIVED JUL 1 1 1988

Mr. Dennis Warchol
Trade Waste Incineration
7 Mobile Avenue
Sauget, IL 62201-1069

Dear Mr. Warchol:

Attached are analytical results on the fourteen soil samples submitted by Trade Waste Incineration. The samles were analyzed for 2,3,7,8-TCDD using CLP methodology. The samples were analyzed for PCB's by EPA Method 8080, for volatile organic compounds by EPA Method 624 and for semi-volatile organic compounds by EPA Method 625. All organic and inorganic results are reported on a dry weight basis.

Please note the following in the report: on the LR/GC/MS Final Data Report for 2,3,7,8-TCDD only lab numbers appear on the report. The EPA reporting format does not allow for clients' sample numbers to be entered. All surrogate recoveries are within the acceptable range. The TCDD concentration column has values of 0.300 u NG/GM. This is the method detection limit. The "u" qualifier indicates that the concentration was below the stated detection limit.

In the PCB section of the report, several samples have increased detection limits. This is due to the sample requiring a dilution. The detection limits increase with the dilution factor.

In the volatile organics section of the report, all of the methylene chloride values have alpha qualifiers. The "B" indicates that the methylene chloride was also found in the method blank. The "J" denotes an estimated value. The compound was above the linear range of the instrument. The samples would have been reanalyzed at a higher dilution but the holding times had expired.

If you have any questions or need clarification of the results, please call

Thank you for choosing metaTRACE for this project.

Sincerely,

Larry R. Taake
Environmental Project Manager

TRADE WASTE INCINERATION

Prepared for:

Trade Waste Incineration
7 Mobile Avenue
Sauget, IL 62201-1069
Mr. Dennis Warchol

Prepared by:

metaTRACE, Inc.
13715 Rider Trail North
Earth City, MO 63045

metaTRACE, Inc. 13715 Rider Trail North • Earth City, MO 63045 • (314) 298-8566

CASE: 174- BATCH: 02
INSTRUMENT ID: F
TRANSMISSION: A
DATE: 06/07/88

LR/GC/MS FINAL DATA REPORT

RECEIVED DATE:
TIME:

LE #	EPA SAMPLE #	ANALYSIS DATE	ANALYSIS TIME	RATIO 320/322	RATIO 332/334	SURROGATE ACC	TCDD CONC.	RERUN CODE	VALID CODE	UNITS	COMMENTS
32	AA13332	06/04/88	0423	1.00*	0.76	72.24	0.300 U			NG/GM	
33	AA13333	06/04/88	0438	1.00*	0.82	66.29	0.300 U			NG/GM	
34	AA13334	06/04/88	0453	1.00*	0.80	71.07	0.300 U			NG/GM	
35	AA13335	06/04/88	0507	1.00*	0.78	65.03	0.300 U			NG/GM	
36	AA13336	06/04/88	0522	1.00*	0.82	65.00	0.300 U			NG/GM	
37	AA13337	06/04/88	0537	1.00*	0.79	92.43	0.300 U			NG/GM	
38	AA13338	06/04/88	0552	1.00*	0.87	78.58	0.300 U			NG/GM	
39	AA13339	06/04/88	0607	1.00*	0.77	67.56	0.300 U			NG/GM	
0	AA13340	06/04/88	0622	1.00*	0.75	81.51	0.300 U			NG/GM	
1	AA13341	06/04/88	0636	1.00*	0.78	70.70	0.300 U			NG/GM	
42	AA13342	06/04/88	0651	1.00*	0.80	68.18	0.300 U			NG/GM	
3	AA13343	06/04/88	0706	1.00*	0.77	72.62	0.300 U			NG/GM	
4	AA13344	06/04/88	0721	1.00*	0.80	70.97	0.300 U			NG/GM	
45	AA13345	06/04/88	0735	1.00*	0.86	122.90	0.300 U			NG/GM	
397	BLANK397E	06/04/88	0750	1.00*	0.78	81.86	0.300 U			NG/GM	

IFICATION FLAGS:

20/322 OR 332/334 RATIO OUTSIDE OF ACCEPTABLE RANGE
SURROGATE OUTSIDE OF ACCEPTABLE RANGE
"IGH DETECTION LIMIT
IGNAL TO NOISE RATIO OUT ON SURROGATE OR INTERNAL STD

N CODES:
UTOMATIC RERUN
EQUESTED RERUN

AL INSTRUCTIONS (IF ANY):

6-7-88

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6-7-88

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SAMPLE I.D.	BB-1,0-2	BB-1.2-4	BB-1.8-10	BB-2,0-2	BB-2,2,5-4	BB-2,8-10	BB-3,0-4
metaTRACE I.D.	AA13332	AA13333	AA13334	AA13335	AA13336	AA13337	AA13338
ANALYSIS DATE	06/23/88	06/23/88	06/23/88	06/23/88	06/23/88	06/23/88	06/23/88
DILUTION FACTOR	21.0	1.0	1.0	21.0	1.0	1.0	101
% MOISTURE	5	14	24	5	10	18	6
METHOD	8080	8080	8080	8080	8080	8080	8080
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
PCB's							
Aroclor-1221	< 1680	< 80	< 80	< 1680	< 80	< 80	< 8080
Aroclor-1232	< 1680	< 80	< 80	< 1680	< 80	< 80	< 8080
Aroclor-1242	< 1680	< 80	< 80	< 1680	< 80	< 80	< 8080
Aroclor-1248	< 1680	< 80	< 80	< 1680	< 80	< 80	< 8080
Aroclor-1254	< 3360	< 160	< 160	< 3360	< 160	< 160	< 16160
Aroclor-1260	< 3360	< 160	< 160	< 3360	< 160	< 160	< 16160

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SAMPLE I.D.	BB-3,5,6-8	BB-3,8-10	CC-4,0-2	CC-4,8-10	CC-5,0-2	CC-5,2-4	CC-5,8-10
metaTRACE I.D.	AA13339	AA13340	AA13341	AA13342	AA13343	AA13344	AA13345
ANALYSIS DATE	06/23/88	06/23/88	06/23/88	06/23/88	06/23/88	06/23/88	06/23/88
DILUTION FACTOR	1.0	1.0	1.0	1.0	101	1.0	1.0
% MOISTURE	17	19	3	13	4	11	20
METHOD	8080	PCB	PCB	8080	8080	8080	8080
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
PCB's							
Aroclor-1221	< 80	< 80	< 80	< 80	< 8080	< 80	< 80
Aroclor-1232	< 80	< 80	< 80	< 80	< 8080	< 80	< 80
Aroclor-1242	< 80	< 80	< 80	< 80	< 8080	< 80	< 80
Aroclor-1248	< 80	< 80	< 80	< 80	< 8080	< 80	< 80
Aroclor-1254	< 160	< 160	< 160	< 160	< 16160	< 160	< 160
Aroclor-1260	< 160	< 160	< 160	< 160	< 16160	< 160	< 160

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SAMPLE I.D.	BB-1,2-4	BB-1,8-10	BB-2,2,5-4	BB-2,8-10	BB-3,5,5-8
metaTRACE #	AA13333	AA13334	AA13336	AA13337	AA13339
DATE ANALYZED	05/31/88	05/31/88	05/31/88	05/31/88	05/31/88
DILUTION	1	1	1	1	1
% MOISTURE	16	24	10	18	17
METHOD	624	624	624	624	624
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
VOLATILE ORGANIC COMPOUNDS					
Acetone	< 10	< 10	34	< 10	26
Benzene	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	< 5	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5	< 5
Bromomethane	< 10	< 10	< 10	< 10	< 10
2-Butanone	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5	< 5
Chloroethane	< 10	< 10	< 10	< 10	< 10
2-Chloroethylvinyl Ether	< 10	< 10	< 10	< 10	< 10
Chloroform	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 10	< 10	< 10	< 10	< 10
Dibromochloromethane	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	450B,J	56B	254B,J	103B	81B
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5	< 5
Toluene	< 5	< 5	< 5	< 5	< 5
1,1,1-Trichloroethane	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5	< 5
Trichloroethene	< 5	< 5	< 5	< 5	< 5
Trichloromonofluoromethane	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	< 10	< 10	< 10	< 10	< 10
Xylene (Total)	< 15	< 15	< 15	< 15	< 15
1,2-Dichloroethane-d4*	92	91	91	89	90
Toluene-d8*	90	89	89	93	100
Bromofluorobenzene*	95	88	91	87	80

* - SURROGATES REPORTED AS PERCENT RECOVERIES
B - INDICATES THAT THE ANALYTE IS FOUND IN THE BLANK AS WELL AS THE SAMPLE
J - DENOTES AN ESTIMATED VALUE. COMPOUND IS ABOVE THE LINEAR RANGE OF THE INSTRUMENT.

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SAMPLE I.D.	BB-3,8-10	CC-4,0-2	CC-4,8-10	CC-5,2-4	CC-5,8-10	METHOD
metaTRACE #	AA13340	AA13341	AA13342	AA13344	AA13345	BLANK
DATE ANALYZED	05/31/88	05/31/88	05/31/88	05/31/88	05/31/88	05/31/88
DILUTION	1	1	1	1	1	1
% MOISTURE	19	3	13	11	20	---
METHOD	624	624	624	624	624	624
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
VOLATILE ORGANIC COMPOUNDS						
Acetone	104	21	< 10	< 10	< 10	< 10
Benzene	< 5	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	< 5	< 5	< 5	< 5	< 5	< 5
Bromomethane	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	< 10	< 10	< 10	< 10	< 10	< 10
Carbon Tetrachloride	< 5	< 5	< 5	< 5	< 5	< 5
Chlorobenzene	< 5	< 5	< 5	< 5	< 5	< 5
Chloroethane	< 10	< 10	< 10	< 10	< 10	< 10
2-Chloroethylvinyl Ether	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	< 5	< 5	< 5	< 5	< 5	< 5
Chloromethane	< 10	< 10	< 10	< 10	< 10	< 10
Dibromochloromethane	< 5	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethane	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloroethane	< 5	< 5	< 5	< 5	< 5	< 5
1,1-Dichloroethene	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,2-Dichloroethene	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	< 5	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	522B,J	1,891B,J	870B,J	508B,J	95B	22
1,1,2,2-Tetrachloroethane	< 5	< 5	< 5	< 5	< 5	< 5
Tetrachloroethene	< 5	< 5	< 5	< 5	< 5	< 5
Toluene	< 5	< 5	< 5	< 5	< 5	< 5
1,1,1-Trichloroethane	< 5	< 5	< 5	< 5	< 5	< 5
1,1,2-Trichloroethane	< 5	< 5	< 5	< 5	< 5	< 5
Trichloroethene	< 5	< 5	< 5	< 5	< 5	< 5
Trichloromonofluoromethane	< 5	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	< 10	< 10	< 10	< 10	< 10	< 10
Xylene (Total)	< 15	< 15	< 15	< 15	< 15	< 15
1,2-Dichloroethane-d4*	92	93	87	90	91	89
Toluene-d8*	88	96	89	88	92	88
Bromofluorobenzene*	90	81	92	89	86	94

* - SURROGATES REPORTED AS PERCENT RECOVERIES
B - INDICATES THAT THE ANALYTE IS FOUND IN THE BLANK AS WELL AS THE SAMPLE
J - DENOTES AN ESTIMATED VALUE. COMPOUND IS ABOVE THE LINEAR RANGE OF THE INSTRUMENT.

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SITE ID :	BB-1,2-4	BB-1,8-10	BB-2,2,5-4	BB-2,8-10	BB-3,5,5-8
metaTRACE # :	AA13333	AA13334	AA13336	AA13337	AA13339
DATE ANALYZED	06/11/88	06/11/88	06/11/88	06/11/88	06/11/88
DILUTION	1.0	1.0	1.0	1.0	1.0
% MOISTURE	16	24	10	18	17
METHOD	625	625	625	625	625
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

SEMI-VOLATILES-625

Acenaphthene	< 330	< 330	< 330	< 330	< 330
Acenaphthylene	< 330	< 330	< 330	< 330	< 330
Anthracene	< 330	< 330	< 330	< 330	< 330
Benzidine	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
Benzo(a)Anthracene	< 330	< 330	< 330	201J	< 330
Benzo(b)Fluoranthene	< 330	< 330	< 330	244J	< 330
Benzo(k)Fluoranthene	< 330	< 330	< 330	< 330	< 330
Benzo(a)Pyrene	< 330	< 330	< 330	219J	< 330
Benzo(g,h,i)Perylene	< 330	< 330	< 330	< 330	< 330
Butyl Benzyl Phthalate	< 330	< 330	< 330	< 330	68J
bis(2-Chloroethyl) Ether	< 330	< 330	< 330	< 330	< 330
bis(2-Chloroethoxy) Methane	< 330	< 330	< 330	< 330	< 330
bis(2-Ethylhexyl) Phthalate	< 330	< 330	< 330	54B	< 330
bis(2-Chloroisopropyl) Ether	< 330	< 330	< 330	< 330	< 330
4-Bromophenyl Phenyl Ether	< 330	< 330	< 330	< 330	< 330
2-Chloronaphthalene	< 330	< 330	< 330	< 330	< 330
4-Chlorophenyl Phenyl Ether	< 330	< 330	< 330	< 330	< 330
Chrysene	< 330	< 330	< 330	236J	< 330
Dibenzo(a,h)anthracene	< 330	< 330	< 330	< 330	< 330
Di-n-Butyl Phthalate	< 330	< 330	< 330	< 330	< 330
1,3-Dichlorobenzene	< 330	< 330	< 330	< 330	< 330
1,2-Dichlorobenzene	< 330	< 330	< 330	< 330	< 330
1,4-Dichlorobenzene	< 330	< 330	< 330	< 330	< 330
3,3-Dichlorobenzidine	< 660	< 660	< 660	< 660	< 660
Diethyl Phthalate	< 330	< 330	< 330	< 330	< 330
Dimethyl Phthalate	< 330	< 330	< 330	< 330	< 330
2,4-Dinitrotoluene	< 330	< 330	< 330	< 330	< 330
2,6-Dinitrotoluene	< 330	< 330	< 330	< 330	< 330
Di-n-Octyl Phthalate	< 330	< 330	< 330	< 330	< 330
Fluoranthene	< 330	< 330	< 330	140J	< 330
Fluorene	< 330	< 330	< 330	< 330	< 330
Hexachlorobenzene	< 330	< 330	< 330	< 330	< 330
Hexachlorobutadiene	< 330	< 330	< 330	< 330	< 330
Hexachloroethane	< 330	< 330	< 330	< 330	< 330
Hexachlorocyclopentadiene	< 330	< 330	< 330	< 330	< 330
Indeno(1,2,3,-CD)Pyrene	< 330	< 330	< 330	< 330	< 330

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SITE ID :	BB-1,2-4	BB-1,8-10	BB-2,2,5-4	BB-2,8-10	BB-3,5,5-8
metaTRACE # :	AA13333	AA13334	AA13336	AA13337	AA13335
DATE ANALYZED	06/11/88	06/11/88	06/11/88	06/11/88	06/11/88
DILUTION	1.0	1.0	1.0	1.0	1.0
% MOISTURE	16	24	10	18	17
METHOD	625	625	625	625	625
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

SEMI-VOLATILES-625

Isophorone	< 330	< 330	< 330	< 330	< 330
Naphthylene	< 330	< 330	< 330	< 330	< 330
Nitrobenzene	< 330	< 330	< 330	< 330	< 330
N-Nitroso-di-n-propylamine	< 330	< 330	< 330	< 330	< 330
N-Nitroso-di-methylamine	< 330	< 330	< 330	< 330	< 330
N-Nitroso-di-phenylamine	< 330	< 330	< 330	< 330	< 330
Phenanthrene	< 330	< 330	< 330	< 330	< 330
Pyrene	< 330	< 330	< 330	3390	< 330
1,2,4-Trichlorobenzene	< 330	< 330	< 330	< 330	< 330
4-Chloro-3-Methyl Phenol	< 330	< 330	< 330	< 330	< 330
2-Chlorophenol	< 330	< 330	< 330	< 330	< 330
2,4-Dichlorophenol	< 330	< 330	< 330	< 330	< 330
2,4-Dimethylphenol	< 330	< 330	< 330	< 330	< 330
2,4-Dinitrophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
2-Methyl-4,6-Dinitro Phenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
2-Nitrophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
4-Nitrophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
Pentachlorophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
Phenol	< 330	< 330	< 330	< 330	< 330
2,4,6-Trichlorophenol	< 330	< 330	< 330	< 330	< 330

NITROBENZENE-d5 *	79	62	86	80	76
2-FLUOROBIPHENYL *	81	62	76	72	67
p-TERPHENYL-d14 *	102	75	109	96	98
PHENOL-d6 *	60	46	62	63	59
2-FLUOROPHENOL *	34	24	33	32	30
2,4,6-TRIBROMOPHENOL *	47	62	42	43	37

J - DENOTES AN ESTIMATED VALUE
* - DENOTES SURROGATE COMPOUND AND CORRESPONDING PERCENT RECOVERY
B.D.L. - DENOTES BELOW DETECTION LIMIT

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SITE ID :	BB-3,8-10	CC-4,0-2	CC-4,8-10	CC-5,2-4	CC-5,8-10	METHOD
metaTRACE # :	AA13340	AA13341	AA13342	AA13344	AA13345	BLANK
DATE ANALYZED	06/11/88	06/12/88	06/16/88	06/16/88	06/16/88	06/15/88
DILUTION	1.0	1.0	1.0	1.0	1.0	1.0
% MOISTURE	19	3	13	11	20	---
METHOD	625	625	625	625	625	625
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

SEMI-VOLATILES-625

Acenaphthene	<	330	<	330	<	330	<	330	<	330	<	330
Acenaphthylene	<	330	<	330	<	330	<	330	<	330	<	330
Anthracene	<	330	<	330	<	330	<	330	<	330	<	330
Benzidine	<	1,600	<	1,600	<	1,600	<	1,600	<	1,600	<	1,600
Benzo(a)Anthracene	<	330	<	330	<	330	<	330	<	330	<	330
Benzo(b)Fluoranthene	<	330	<	330	<	330	<	330	<	330	<	330
Benzo(k)Fluoranthene	<	330	<	330	<	330	<	330	<	330	<	330
Benzo(a)Pyrene	<	330	<	330	<	330	<	330	<	330	<	330
Benzo(g,h,i)Perylene	<	330	<	330	<	330	<	330	<	330	<	330
Butyl Benzyl Pathalate	<	330	<	330	<	330	<	330	<	330	<	330
bis(2-Chloroethyl) Ether	<	330	<	330	<	330	<	330	<	330	<	330
bis(2-Chloroethoxy) Methane	<	330	<	330	<	330	<	330	<	330	<	330
bis(2-Ethylhexyl) Phthalate	<	330	<	330		177J	<	330	<	330	<	330
bis(2-Chloroisopropyl) Ether	<	330	<	330	<	330	<	330	<	330	<	330
4-Bromophenyl Phenyl Ether	<	330	<	330	<	330	<	330	<	330	<	330
2-Chloronaphthalene	<	330	<	330	<	330	<	330	<	330	<	330
4-Chlorophenyl Phenyl Ether	<	330	<	330	<	330	<	330	<	330	<	330
Chrysene	<	330	<	330	<	330	<	330	<	330	<	330
Dibenzo(a,h)anthracene	<	330	<	330	<	330	<	330	<	330	<	330
Di-n-Butyl Phthalate	<	330	<	330	<	330	<	330	<	330	<	330
1,3-Dichlorobenzene	<	330	<	330	<	330	<	330	<	330	<	330
1,2-Dichlorobenzene	<	330	<	330	<	330	<	330	<	330	<	330
1,4-Dichlorobenzene	<	330	<	330	<	330	<	330	<	330	<	330
3,3-Dichlorobenzidine	<	660	<	660	<	660	<	660	<	660	<	660
Diethyl Phthalate	<	330	<	330	<	330	<	330	<	330	<	330
Dimethyl Phthalate	<	330	<	330	<	330	<	330	<	330	<	330
2,4-Dinitrotoluene	<	330	<	330	<	330	<	330	<	330	<	330
2,6-Dinitrotoluene	<	330	<	330	<	330	<	330	<	330	<	330
Di-n-Octyl Phthalate	<	330	<	330	<	330	<	330	<	330	<	330
Fluoranthene	<	330	<	330	<	330	<	330	<	330	<	330
Fluorene	<	330	<	330	<	330	<	330	<	330	<	330
Hexachlorobenzene	<	330	<	330	<	330	<	330	<	330	<	330
Hexachlorobutadiene	<	330	<	330	<	330	<	330	<	330	<	330
Hexachloroethane	<	330	<	330	<	330	<	330	<	330	<	330
Hexachlorocyclopentadiene	<	330	<	330	<	330	<	330	<	330	<	330
Indeno(1,2,3,-CD)Pyrene	<	330	<	330	<	330	<	330	<	330	<	330

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SITE ID :	BB-3,8-10	CC-4,0-2	CC-4,8-10	CC-5,2-4	CC-5,8-10	METHOD
metaTRACE # :	AA13340	AA13341	AA13342	AA13344	AA13345	BLANK
DATE ANALYZED	06/11/88	06/12/88	06/16/88	06/16/88	06/16/88	06/16/88
DILUTION	1.0	1.0	1.0	1.0	1.0	1.0
% MOISTURE	19	3	13	11	20	---
METHOD	625	625	625	625	625	625
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG

SEMI-VOLATILES-625

Isophorone	< 330	< 330	< 330	< 330	< 330	< 330
Naphthylene	< 330	< 330	< 330	< 330	< 330	< 330
Nitrobenzene	< 330	< 330	< 330	< 330	< 330	< 330
N-Nitroso-di-n-propylamine	< 330	< 330	< 330	< 330	< 330	< 330
N-Nitroso-di-methylamine	< 330	< 330	< 330	< 330	< 330	< 330
N-Nitroso-di-phenylamine	< 330	< 330	< 330	< 330	< 330	< 330
Phenanthrene	< 330	< 330	< 330	< 330	< 330	< 330
Pyrene	< 330	< 330	< 330	< 330	< 330	< 330
1,2,4-Trichlorobenzene	< 330	< 330	< 330	< 330	< 330	< 330
4-Chloro-3-Methyl Phenol	< 330	< 330	< 330	< 330	< 330	< 330
2-Chlorophenol	< 330	< 330	< 330	< 330	< 330	< 330
2,4-Dichlorophenol	< 330	< 330	< 330	< 330	< 330	< 330
2,4-Dimethylphenol	< 330	< 330	< 330	< 330	< 330	< 330
2,4-Dinitrophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
2-Methyl-4,6-Dinitro Phenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
2-Nitrophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
4-Nitrophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
Pentachlorophenol	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600	< 1,600
Phenol	< 330	< 330	< 330	< 330	< 330	< 330
2,4,6-Trichlorophenol	< 330	< 330	< 330	< 330	< 330	< 330

NITROBENZENE-d5 *	93	88	80	71	64	71
2-FLUOROBIPHENYL *	81	79	66	55	52	72
p-TERPHENYL-d14 *	112	88	103	84	80	89
PHENOL-d6 *	72	61	70	62	60	50
2-FLUOROPHENOL *	35	40	56	47	33	30
2,4,6-TRIBROMOPHENOL *	45	48	58	52	48	40

J - DENOTES AN ESTIMATED VALUE
* - DENOTES SURROGATE COMPOUND AND CORRESPONDING PERCENT RECOVERY
B.D.L. - DENOTES BELOW DETECTION LIMIT

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metaTRACE, INC
13715 RIDER TRAIL NORTH
EARTH CITY, MO 63045

PROJECT: 174-02
CLIENT: TRADE WASTE INCINERATION
DATE: 06/29/88

SAMPLE I.D.	metaTRACE ID:	SAMPLE DATE	PARAMETER	CONCENTRATION	UNITS	DATE ANALYZED
BB-1,2-4'	AA13333	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	171	UG/G	06/23/88
			CADMIUM	1.65	UG/G	06/23/88
			CHROMIUM	10.8	UG/G	06/23/88
			LEAD	10.6	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	< 3.00	UG/G	06/23/88
BB-1,8-10'	AA13334	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	239	UG/G	06/23/88
			CADMIUM	1.87	UG/G	06/23/88
			CHROMIUM	16.2	UG/G	06/23/88
			LEAD	8.77	UG/G	06/23/88
			MERCURY	0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	< 3.00	UG/G	06/23/88
BB-2,2 5-4'	AA13336	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	173	UG/G	06/23/88
			CADMIUM	1.13	UG/G	06/23/88
			CHROMIUM	21.5	UG/G	06/23/88
			LEAD	6.01	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	0.60	UG/G	06/23/88
BB-2,8-10'	AA13337	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	211	UG/G	06/23/88
			CADMIUM	1.83	UG/G	06/23/88
			CHROMIUM	17.5	UG/G	06/23/88
			LEAD	11.2	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	< 3.00	UG/G	06/23/88
B-3,5 5-8'	AA13339	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	206	UG/G	06/23/88

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metaTRACE, INC
13715 RIDER TRAIL NORTH
EARTH CITY, MO 63045

PROJECT: 174-02
CLIENT: TRADE WASTE INCINERATION
DATE: 06/29/88

SAMPLE I.D.	metaTRACE ID:	SAMPLE DATE	PARAMETER	CONCENTRATION	UNITS	DATE ANALYZED
BB-3,8-10'	AA13340	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	69.7	UG/G	06/23/88
			CADMIUM	0.74	UG/G	06/23/88
			CHROMIUM	6.23	UG/G	06/23/88
			LEAD	< 3.60	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	< 3.00	UG/G	06/23/88
CC-4,0-2'	AA13341	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	131	UG/G	06/23/88
			CADMIUM	2.30	UG/G	06/23/88
			CHROMIUM	8.78	UG/G	06/23/88
			LEAD	39.5	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	< 3.00	UG/G	06/23/88
CC-4,8-10'	AA13342	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	177	UG/G	06/23/88
			CADMIUM	0.97	UG/G	06/23/88
			CHROMIUM	8.36	UG/G	06/23/88
			LEAD	< 3.60	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	< 3.00	UG/G	06/23/88
CC-5,2-4'	AA13344	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	183	UG/G	06/23/88
			CADMIUM	1.19	UG/G	06/23/88
			CHROMIUM	10.2	UG/G	06/23/88
			LEAD	4.58	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	< 3.00	UG/G	06/23/88
CC-5,8-10'	AA13345	05/26/88	ARSENIC	< 4.70	UG/G	06/23/88
			BARIUM	234	UG/G	06/23/88
			CADMIUM	2.02	UG/G	06/23/88
			CHROMIUM	18.1	UG/G	06/23/88
			LEAD	8.89	UG/G	06/23/88
			MERCURY	< 0.1	UG/G	06/21/88
			SELENIUM	< 3.00	UG/G	06/23/88
			SILVER	0.50	UG/G	06/23/88

nel ACI Inc.

Chain-of-Custody

Client: TRADE WASTE INCINERATION

Project No: 174-02

Due Date: 6-24-88 Report To: L. TAAKE

Date Received: 5-26-88

Received By: Walter Hatton

Sample Location: COOLER

ANALYSIS

ITEM NO.	SAMPLE NO.	SAMPLE ID/ DESCRIPTION	MATRIX	SAMPLE DATE	CONTAINER/ PRESERVATIVE	TCDD/PCB	VOA	METALS	BNA	% SOLIDS						COMMENTS	DISPOSAL NORM.	DISPOSAL HAZ.
1	AA13332	BB-1, 0-2'	SOIL	5/26/88		✓				auto Inst						SEE ATTACHED		
2	AA13333	BB-1, 2-4'				✓												
3							✓											
4								✓	✓	✓								
5	AA13334	BB-1, 8-10'				✓												
6							✓											
7								✓	✓	✓								
8	AA13335	BB-2, 0-2'				✓												
9	AA13336	BB-2, 2.5-4'				✓												
10							✓											
11								✓	✓	✓								
12	AA13337	BB-2, 8-10'				✓												
13							✓											
14								✓	✓	✓								
15	AA13338	BB-3, 0-4'				✓												
16	AA13339	BB-3, 5.5-8'				✓												
17							✓											
18								✓	✓	✓								

White - Sample Custodian Yellow - Operations Pink - Project Manager

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Chain-of-Custody

CC1

Page 1 of

Client: Trade Waste Incineration

Project No:

Due Date: May 26, 1988 Report To: Dennis Wagenhal / TWI

Date Received: 5/26/88

Received By: Dennis J. Wagenhal

Sample Location: TWI

Item No.	Sample No.	Sample ID	Matrix	Analysis Required	Sample Date	Comments	Preservative
1.	1	BB-1	Soil/Cinders	TCDD/PCB	5/26/88	0-2 ft	ICE
2.	2	BB-1	Soil	TCDD/PCB	"	2-4 ft	
3.	2	"	"	VOC's	"	"	
4.	2	"	"	Metals/BNA	"	"	
5.	3	BB-1	Soil	TCDD/PCB		8-10 ft	
6.				VOC's			
7.				Metals/BNA			
8.	4	BB-2	Soil/Cinders	TCDD/PCB	5/26/88	0-2.5 ft	
9.	5	BB-2	Soil	TCDD/PCB		2.5-4 ft	
10.	5	BB-2		VOC's		2.5-4 ft	
11.	5	BB-2		Metals/BNA		2.5-4 ft	
12.	6	BB-2	Soil	TCDD/PCB		8-10 ft	
13.	6	BB-2		VOC's		8-10 ft	
	6	BB-2		Metals/BNA		8-10 ft	

Items	Date	Signature Received	Analysis	Relinquished By	Returned By	Date	Received By

metaTRACE, Inc.

Chain-of-Custody

CC1

Page 2 of 3

Client: Trade Waste Excavation

Project No:

Due Date: 5/26/88 Report To: Denis Wyrchel/TWI

Date Received: 5/26/88

Received By: Dennis J. Wyrchel

Sample Location: TWI

Item No.	Sample No.	Sample ID	Matrix	Analysis Required	Sample Date	Comments	Preservative
1.	7	BB-3	Soil/Cinders	TCDD/PCB	5/26/88	0-4 ft	ICE
2.	8	BB-3	Soil	TCDD/PCB		5.5 to 8 ft	
3.	8	BB-3		VOC/BNA		5.5 to 8 ft	
4.	8	BB-3		Metals		5.5 to 8 ft	
5.	9	BB-3		TCDD/PCB		8 to 10 ft	
6.	9	BB-3		VOC/BNA		8 to 10 ft	
7.	9	BB-3		Metals		8 to 10 ft	
8.	10	CC-4	Soil	TCDD/PCB	5/26/88	0 to 2 ft	
9.	10	CC-4		VOC/BNA ~~TCDD/PCB~~		0 to 2 ft	
10.	10	CC-4		Metals		0 to 2 ft	
11.	11	CC-4		TCDD/PCB		8 to 10 ft	
12.	11	CC-4		VOC/BNA		8 to 10 ft	
13.	11	CC-4		Metals		8 to 10 ft	

Items	Date	Signature Received	Analysis	Relinquished By	Returned By	Date	Received By

CC1

metaTRACE, Inc.

Chain-of-Custody

Client: Trade Waste Incineration

Project No:

Due Date: 5/26/88

Report To: Dennis Wyrchol/TWI

Date Received: 5/26/88

Received By: [illegible]

Sample Location: TWI

Item No.	Sample No.	Sample ID	Matrix	Analysis Required	Sample Date	Comments	Preservative
1.	12	CC-5	Soil/Cinders	TCDD / PCB	5/26/88	0-2 ft	ICE
2.	13	CC-5	Soil	TCDD/ PCB		2-4 ft	
3.	13	CC-5		VOC/ BNA		2-4 ft	
4.	13	CC-5		Metals		2-4 ft	
5.	14	CC-5		TCDD/ PCB		8-10 ft	
6.	14	CC-5		VOC/ BNA		8-10 ft	
7.	14	CC-5		Metals		8-10 ft	
8.							
9.							
10.							
11.							
12.							
13.							

Items	Date	Signature Received	Analysis	Relinquished By	Returned By	Date	Received By

Dooke

1 of 2

#397

metaTRACE

Extract Chain-of-Custody

Project # 174-02 Analysis TCDD

Sample No	Wt/Vol	Extract Volume	Date	Initials	Conc To	Date	Initials	Clean-up	Date	Initials	Conc To	Date	Initials	Comment
AA13332	10.25	75 ml	5/31/88	KB BB	5 ml	5/31	MAB KB	Hex Hl	5/31	MAB KB	0.5 ml	6/31	MAB KB	
3	10.05													
4	10.76													
5	10.30													
6	10.66													
7	10.23													
8	10.55													
9	10.28													
40	10.09													
1	10.12													
2	10.52													

Spike Compounds	Amounts	Surrogate Compounds	Amounts	From	Date	Received	Date
		Spiking II	100 ml	Mark G. Benedicum	5/31/88	[illegible]	5/31/88

Analysis Date:

Toake 24C #397

metaTRACE

Extract Chain-of-Custody

Project # 174-02 Analysis TCDD

Sample No	Wt/Vol	Extract Volume	Date	Initials	Conc To	Date	Initials	Clean-up	Date	Initials	Conc To	Date	Initials	Comments
AA13343	10.00	75 ml	5/31/88	KB BB	5 ml	5/31/88	MAB KB	from with	5/31	MAB KB	50 ml	5/31	MAB KB	
4	10.23	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
5	10.56	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
BLK 397	10.0	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	

Spike Compounds	Amounts	Surrogate Compounds	Amounts	From	Date	Received	Date
		Spiking II	100 ml	Mark O Bernheimer	5/31/88	[illegible]	5/31-8

Analysis Date:

Tacke

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metaTRACE

Extract Chain-of-Custody

1 of 2

Project # 174-02 Analysis PCB

Sample No	Wt/Vol	Extract Volume	Date	Initials	Conc To	Date	Initials	Clean-up	Date	Initials	Conc To	Date	Initials	Commen
AH13332	30.05	3x100ml	6/4/88	DJH	10 ml	6/7/88	BD MBKD	Conc H_2SO_4	6/7/88	BB MBKB				
33	30.06													
34	30.17													
35	30.27													
36	30.24													
37	30.00													
38	30.11													
39	30.13													
40	30.03				10 ml	6/8/88	LW/NC	Conc H_2SO_4	6/8/88	LW/NC				
41	30.02													
42	30.17													

Spike Compounds	Amounts	Surrogate Compounds	Amounts	From	Date	Received	Date
PCB 1660 #10441-88	1ml			Williams	6/8/88	T. [illegible]	6-8-8

Analysis Date:

Tooke

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Extract Chain-of-Custody

2 of 2

Project # 174-02 Analysis PCB

Sample No	Wt/Vol	Extract Volume	Date	Initials	Conc To	Date	Initials	Clean-up	Date	Initials	Conc To	Date	Initials	Commen
AH1332/3	30.06	3x100ml	6/4/88	DJH	10 ml	6/8/88	LJ/NC	Conc. H_2SO_4	6/8/88	LJ/NC				
44	30.28	↓	↓	↓	↓	↓	↓	↓	↓	↓				
45	30.12	↓	↓	↓	↓	↓	↓	↓	↓	↓				
SPK 285A	30.06	↓	↓	↓	↓	↓	↓	↓	↓	↓				
SPK 285B	30.04	↓	↓	↓	↓	↓	↓	↓	↓	↓				
BIK 285A	30.09	↓	↓	↓	↓	↓	↓	↓	↓	↓				
BIK 285B	30.17	↓	↓	↓	↓	↓	↓	↓	↓	↓				

Spike Compounds	Amounts	Surrogate Compounds	Amounts	From	Date	Received	Date
PCB1660 #10441-88	1ml			Williams	6/9/88	T. [illegible]	6-8-88

Analysis Date:

1 of 2 #264

metaTRACE

Extract Chain-of-Custody

Troy 2 II

Project # 174-02 Analysis BNA

Sample No	Wt/Vol SP	Extract Volume	Date	Initials	Conc To	Date	Initials	Clean-up	Date	Initials	Conc To	Date	Initials	Comme
AA 13333	30.10	3x100 ml	6/3/86	JCR	1 ml	6/6/88	LW/NC							
34	30.10													
36	30.10													
37	30.28													
39	30.01													
40	30.12													
41	30.01													
42	30.08													
44	30.37													
45	30.12													
Spk BN 24A	30.24													

Spike Compounds	Amounts	Surrogate Compounds	Amounts	From	Date	Received	Date
BNA Spike Mix #10443-88	1ml	BNA surrogate #10493-86	1ml	Williams	6/6/88	[illegible]	6/6/88

Analysis Date:

2 of 2 #264

Tray 2 II

metaTRACE

Extract Chain-of-Custody

Project # 174-02 Analysis BNA

Sample No	Wt/Vol	Extract Volume	Date	Initials	Conc To	Date	Initials	Clean-up	Date	Initials	Conc To	Date	Initials	Commen
Spl BLK 264 B	30.24	3x10ml	6/3/86	DCR	1ml	6/6/86	LW/NC							
BLK 264 A	see	chain	of	custody	for		109-14							
BLK 264 B														

Spike Compounds	Amounts	Surrogate Compounds	Amounts	From	Date	Received	Date
BNA Spike mix #10443-86	1ml	BNA surrogate #10493-88	1ml	Williams	6/6/86	KT	6/6/86

Analysis Date: