

CHAIN OF CUSTODY RECORD

Client/Project Name:

Project Location:

Source Area Investigation

Henderson, NV

Project Number:

Field Logbook No.:

04020-023-401

Sampler (Print Name)/(Affiliation):

Client Contact:

Eric Nelson / (ENSR)

Robert Kennedy
2 Technology Park Dr
Westford, MA 01886-3140

Signature:

Send Results/Report to:

TAT:

[Signature]

Robert Kennedy
rkennedy@ensr.aecom.com

STO

Analysis Requested

Container Type	Preservation
P - Plastic	1 - HCl, 4°
A - Amber Glass	2 - H2SO4, 4°
G - Clear Glass	3 - HNO3, 4°
V - VOA Vial	4 - NaOH, 4°
O - Other	5 - NaOH/ZnAc, 4°
E - Encore	6 - Na2S2O3, 4°
	7 - 4°

Matrix Codes:

DW - Drinking Water	S - Soil
WW - Wastewater	SL - Sludge
GW - Groundwater	SD - Sediment
SW - Surface Water	SO - Solid
ST - Storm Water	A - Air
W - Water	L - Liquid
	P - Product

Field Sample No./Identification	Date	Time	C O M P	G R A B	Sample Container (Size/Mat'l)	Matrix	Preserv.	Field Filtered
SA6-0.5	11/14/06	0825		X		Soil		
SA6-0.5D	11/14/06	—		X		Soil		
SA5-0.5	11/14/06	0835		X		Soil		
EB11406	11/14/06	1100		X		Water		
SA4-0.5	11/14/06	1150		X		Soil		

Asbestos EPA/540/R-97/028
 HPLC/MS Dioxin/Furon Screen
 10% Dioxin/Furon EPA 8290

Relinquished by: (Print Name)/(Affiliation)

Date: 11/14/06

Received by: (Print Name)/(Affiliation)

Date: 11/15/06

Analytical Laboratory (Destination):

Eric Nelson / ENSR

Time: 1630

Charla Kolber

Time: 2:30

EMSL Analytical, Inc.
Attn: Sample Receiving
107 TRACON AVENUE
Westmont, NJ 08108

Signature: *[Signature]*

Date:

Signature: *[Signature]*

Date:

800-220-3675

Relinquished by: (Print Name)/(Affiliation)

Date:

Signature:

Time:

Sample Shipped Via:

Temp blank

Signature:

Time:

Received by: (Print Name)/(Affiliation)

Date:

UPS FedEx Courier Other

Yes No

Form 3

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY
Use for Sample and Blank Results

CLIENT ID.

SA6-0.5

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS Method: Screen(2) Lab Sample ID: E0600829-001

Client Name: ENSR Sample Wt/Vol: 10.009 g or mL: g

Matrix (Aqueous/Solid/Leachate): solid Initial Calibration Date: 11/04/04

Sample Receipt Date: 11/15/06 Instrument ID: AutoSpec-Ultima

Ext. Date: 11/17/06 GC Column ID: DB-5

Ext.Vol(ul):20.0 Inj.Vol(ul):1.0 Sample Data Filename: U27399#1

Analysis Date: 21-NOV-06 Time: 19:21:09 Blank Data Filename: U17915#1

Dilution Factor: 1 Cal. Ver. Data Filename: U27393#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 15.39

	DETECTION LIMITS	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	0.077	*	X 1.0	*
1,2,3,7,8-PeCDD	0.059	*	X 1.0	*
1,2,3,4,7,8-HxCDD	0.059	*	X 0.1	*
1,2,3,6,7,8-HxCDD	0.053	0.191	X 0.1	1.91e-02
1,2,3,7,8,9-HxCDD	0.055	0.256	X 0.1	2.56e-02
1,2,3,4,6,7,8-HpCDD	0.074	1.036	X 0.01	1.04e-02
OCDD	0.128	6.287	X 0.0001	6.29e-04
2,3,7,8-TCDF	0.079	1.724	X 0.1	1.72e-01
1,2,3,7,8-PeCDF	0.298	0.886	X 0.05	4.43e-02
2,3,4,7,8-PeCDF	0.279	*	X 0.5	*
1,2,3,4,7,8-HxCDF	0.067	2.392	X 0.1	2.39e-01
1,2,3,6,7,8-HxCDF	0.066	1.665	X 0.1	1.67e-01
1,2,3,7,8,9-HxCDF	0.079	0.259	X 0.1	2.59e-02
2,3,4,6,7,8-HxCDF	0.071	0.795	X 0.1	7.95e-02
1,2,3,4,6,7,8-HpCDF	0.069	7.730	X 0.01	7.73e-02
1,2,3,4,7,8,9-HpCDF	0.089	2.617	X 0.01	2.62e-02
OCDF	0.119	20.727	X 0.0001	2.07e-03

Total: 8.89e-01

(1) World Health Organization (WHO) adopted TEF's, taken from: Van der Berg, et al: Toxic Equivalency Factor (TEFs) for PCBs, PCCDD, PCDFs for Humans and Wildlife (Environ Health Perspect. 106:775-792 (1988)).

(2) This is a high resolution GC/MS screening method for PCDDs/PCDFs.

SCF3w

Form 3

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY
Use for Sample and Blank Results

CLIENT ID.

SA6-0.5D

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS Method: Screen(2) Lab Sample ID: E0600829-002

Client Name: ENSR Sample Wt/Vol: 11.006 g or mL: g

Matrix (Aqueous/Solid/Leachate): solid Initial Calibration Date: 11/04/04

Sample Receipt Date: 11/15/06 Instrument ID: AutoSpec-Ultima

Ext. Date: 11/17/06 GC Column ID: DB-5

Ext.Vol(ul):20.0 Inj.Vol(ul):1.0 Sample Data Filename: U27400#1

Analysis Date: 21-NOV-06 Time: 20:09:18 Blank Data Filename: U17915#1

Dilution Factor: 1 Cal. Ver. Data Filename: U27393#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 7.79

	DETECTION LIMITS	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	0.059	*	X 1.0	*
1,2,3,7,8-PeCDD	0.047	*	X 1.0	*
1,2,3,4,7,8-HxCDD	0.055	*	X 0.1	*
1,2,3,6,7,8-HxCDD	0.049	0.140	X 0.1	1.40e-02
1,2,3,7,8,9-HxCDD	0.051	0.176	X 0.1	1.76e-02
1,2,3,4,6,7,8-HpCDD	0.061	0.461	X 0.01	4.61e-03
OCDD	0.107	2.965	X 0.0001	2.96e-04
2,3,7,8-TCDF	0.064	0.752	X 0.1	7.52e-02
1,2,3,7,8-PeCDF	0.050	0.456	X 0.05	2.28e-02
2,3,4,7,8-PeCDF	0.047	0.195	X 0.5	9.74e-02
1,2,3,4,7,8-HxCDF	0.039	0.864	X 0.1	8.64e-02
1,2,3,6,7,8-HxCDF	0.038	0.552	X 0.1	5.52e-02
1,2,3,7,8,9-HxCDF	0.046	0.145	X 0.1	1.45e-02
2,3,4,6,7,8-HxCDF	0.041	0.262	X 0.1	2.62e-02
1,2,3,4,6,7,8-HpCDF	0.073	2.554	X 0.01	2.55e-02
1,2,3,4,7,8,9-HpCDF	0.095	0.801	X 0.01	8.01e-03
OCDF	0.121	6.640	X 0.0001	6.64e-04

Total: 4.48e-01

(1) World Health Organization (WHO) adopted TEF's, taken from: Van der Berg, et al: Toxic Equivalency Factor (TEFs) for PCBs, PCCDD, PCDFs for Humans and Wildlife (Environ Health Perspect. 106:775-792 (1988)).

(2) This is a high resolution GC/MS screening method for PCDDs/PCDFs.

SCF3w

Form 3

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY
Use for Sample and Blank Results

CLIENT ID.

SA5-0.5

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS Method: Screen(2) Lab Sample ID: E0600829-003

Client Name: ENSR Sample Wt/Vol: 14.322 g or mL: g

Matrix (Aqueous/Solid/Leachate): solid Initial Calibration Date: 11/04/04

Sample Receipt Date: 11/15/06 Instrument ID: AutoSpec-Ultima

Ext. Date: 11/17/06 GC Column ID: DB-5

Ext.Vol(ul):20.0 Inj.Vol(ul):1.0 Sample Data Filename: U27401#1

Analysis Date: 21-NOV-06 Time: 20:57:26 Blank Data Filename: U17915#1

Dilution Factor: 1 Cal. Ver. Data Filename: U27393#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 21.41

	DETECTION LIMITS	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	0.044	0.132	X 1.0	1.32e-01
1,2,3,7,8-PeCDD	0.062	0.846	X 1.0	8.46e-01
1,2,3,4,7,8-HxCDD	0.047	0.652	X 0.1	6.52e-02
1,2,3,6,7,8-HxCDD	0.043	1.273	X 0.1	1.27e-01
1,2,3,7,8,9-HxCDD	0.044	1.340	X 0.1	1.34e-01
1,2,3,4,6,7,8-HpCDD	0.069	5.161	X 0.01	5.16e-02
OCDD	0.187	7.486	X 0.0001	7.49e-04
2,3,7,8-TCDF	0.336	19.343	X 0.1	1.93e+00
1,2,3,7,8-PeCDF	1.023	18.712	X 0.05	9.36e-01
2,3,4,7,8-PeCDF	0.955	8.426	X 0.5	4.21e+00
1,2,3,4,7,8-HxCDF	0.540	37.078	X 0.1	3.71e+00
1,2,3,6,7,8-HxCDF	0.534	20.664	X 0.1	2.07e+00
1,2,3,7,8,9-HxCDF	0.638	5.906	X 0.1	5.91e-01
2,3,4,6,7,8-HxCDF	0.570	10.995	X 0.1	1.10e+00
1,2,3,4,6,7,8-HpCDF	0.138	80.879	X 0.01	8.09e-01
1,2,3,4,7,8,9-HpCDF	0.178	36.815	X 0.01	3.68e-01
OCDF	0.114	237.642	X 0.0001	2.38e-02

Total: 1.71e+01

(1) World Health Organization (WHO) adopted TEF's, taken from: Van der Berg, et al: Toxic Equivalency Factor (TEFs) for PCBs, PCCDD, PCDFs for Humans and Wildlife (Environ Health Perspect. 106:775-792 (1988)).

(2) This is a high resolution GC/MS screening method for PCDDs/PCDFs.

SCF3w

Form 3

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY
Use for Sample and Blank Results

CLIENT ID.

SA4-0.5

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS Method: Screen(2) Lab Sample ID: E0600829-004

Client Name: ENSR Sample Wt/Vol: 10.706 g or mL: g

Matrix (Aqueous/Solid/Leachate): solid Initial Calibration Date: 11/04/04

Sample Receipt Date: 11/15/06 Instrument ID: AutoSpec-Ultima

Ext. Date: 11/17/06 GC Column ID: DB-5

Ext.Vol(ul):20.0 Inj.Vol(ul):1.0 Sample Data Filename: U27402#1

Analysis Date: 21-NOV-06 Time: 21:46:14 Blank Data Filename: U17915#1

Dilution Factor: 1 Cal. Ver. Data Filename: U27393#1

Concentration Units (pg/L or ng/Kg dry weight): ng/Kg % Moisture: 9.11

	DETECTION LIMITS	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	0.053	4.487	X 1.0	4.49e+00
1,2,3,7,8-PeCDD	0.053	3.343	X 1.0	3.34e+00
1,2,3,4,7,8-HxCDD	0.040	0.656	X 0.1	6.56e-02
1,2,3,6,7,8-HxCDD	0.036	1.595	X 0.1	1.60e-01
1,2,3,7,8,9-HxCDD	0.037	1.534	X 0.1	1.53e-01
1,2,3,4,6,7,8-HpCDD	0.068	2.141	X 0.01	2.14e-02
OCDD	0.115	2.582	X 0.0001	2.58e-04
2,3,7,8-TCDF	0.126	201.573	X 0.1	2.02e+01
1,2,3,7,8-PeCDF	0.173	37.501	X 0.05	1.88e+00
2,3,4,7,8-PeCDF	0.161	28.443	X 0.5	1.42e+01
1,2,3,4,7,8-HxCDF	0.085	23.006	X 0.1	2.30e+00
1,2,3,6,7,8-HxCDF	0.084	9.753	X 0.1	9.75e-01
1,2,3,7,8,9-HxCDF	0.100	4.476	X 0.1	4.48e-01
2,3,4,6,7,8-HxCDF	0.089	4.497	X 0.1	4.50e-01
1,2,3,4,6,7,8-HpCDF	0.068	18.965	X 0.01	1.90e-01
1,2,3,4,7,8,9-HpCDF	0.087	8.238	X 0.01	8.24e-02
OCDF	0.110	38.680	X 0.0001	3.87e-03
Total:				4.89e+01

(1) World Health Organization (WHO) adopted TEF's, taken from: Van der Berg, et al: Toxic Equivalency Factor (TEFs) for PCBs, PCCDD, PCDFs for Humans and Wildlife (Environ Health Perspect. 106:775-792 (1988)).

(2) This is a high resolution GC/MS screening method for PCDDs/PCDFs.

SCF3w

Form 3

CLIENT ID.

PCDD/PCDF TOXICITY EQUIVALENCE SUMMARY

Use for Sample and Blank Results

EB111406

Lab Name: Columbia Analytical Services Episode No.:

Lab Code: CAS Method: Screen(2) Lab Sample ID: E0600829-005

Client Name: ENSR Sample Wt/Vol: 1085 g or mL: mL

Matrix (Aqueous/Solid/Leachate): aqueous Initial Calibration Date: 11/04/04

Sample Receipt Date: 11/15/06 Instrument ID: AutoSpec-Ultima

Ext. Date: 11/15/06 GC Column ID: DB-5

Ext.Vol(ul):20.0 Inj.Vol(ul):1.0 Sample Data Filename: U27376#1

Analysis Date: 18-NOV-06 Time: 02:24:42 Blank Data Filename: U27368#1

Dilution Factor: 1 Cal. Ver. Data Filename: U27366#1

Concentration Units (pg/L or ng/Kg dry weight): pg/L % Moisture:

	DETECTION LIMITS	CONCENTRATION	TEF(1)	TEF-ADJUSTED CONCENTRATION
2,3,7,8-TCDD	0.372	*	X 1.0	*
1,2,3,7,8-PeCDD	0.405	*	X 1.0	*
1,2,3,4,7,8-HxCDD	0.427	*	X 0.1	*
1,2,3,6,7,8-HxCDD	0.380	*	X 0.1	*
1,2,3,7,8,9-HxCDD	0.410	*	X 0.1	*
1,2,3,4,6,7,8-HpCDD	0.384	*	X 0.01	*
OCDD	1.143	2.393	X 0.0001	2.39e-04
2,3,7,8-TCDF	0.425	0.985	X 0.1	9.85e-02
1,2,3,7,8-PeCDF	0.332	*	X 0.05	*
2,3,4,7,8-PeCDF	0.329	*	X 0.5	*
1,2,3,4,7,8-HxCDF	0.223	1.144	X 0.1	1.14e-01
1,2,3,6,7,8-HxCDF	0.221	0.659	X 0.1	6.59e-02
1,2,3,7,8,9-HxCDF	0.292	*	X 0.1	*
2,3,4,6,7,8-HxCDF	0.235	*	X 0.1	*
1,2,3,4,6,7,8-HpCDF	0.369	2.337	X 0.01	2.34e-02
1,2,3,4,7,8,9-HpCDF	0.508	*	X 0.01	*
OCDF	1.250	6.242	X 0.0001	6.24e-04

Total: 3.03e-01

(1) World Health Organization (WHO) adopted TEF's, taken from: Van der Berg, et al: Toxic Equivalency Factor (TEFs) for PCBs, PCCDD, PCDFs for Humans and Wildlife (Environ Health Perspect. 106:775-792 (1988)).

(2) This is a high resolution GC/MS screening method for PCDDs/PCDFs.

SCF3w