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February 2014

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LOG OF BORING AREA D B-018

BOREHOLE / WELL LOCATION SKETCH MAP

N

PROJECT NO.	PROJECT NAME: Camp Carroll Area D and Area 41 RI
LOCATION: Camp Carroll, Taegu, Republic of Korea	DATE & TIME STARTED: 4/2/03 10:40
LOGGED BY: [redacted] 66	REVIEWED BY:
	DATE & TIME FINISHED: 4/2/03 14:05
DRILLING CONTRACTOR / DRILLER: Beautiful Environmental Corp	DRILLING METHOD: Direct-Push
COORDINATES:	
SAMPLING METHOD: Geoprobe Sampler	SAMPLE HAMMER TYPE:
SIZE / TYPE OF BIT:	SURFACE ELEVATION: DATUM: mean sea level
WELL INSTALLED? YES NO ☒	CASING MATERIAL / DIAMETER:
SCREEN Type: Material: Length: Diameter: Slot Size:	
ELEVATION OF (msl): WELL COVER: TOP OF WELL CASING: TOP & BOTTOM OF SCREEN: PRODUCT SURFACE: GROUNDWATER SURFACE: DATE:	

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	SURFACE CONDITION: / LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)	WELL CONSTRUCTION DETAILS
			1 / 100					SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~10% fine gravel, ~60% fine to coarse sand, ~30% fines, moist; medium dense to dense; fill soil.		NO WELL INSTALLED
1							1	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~20% fine to coarse gravel, ~55% fine to coarse sand, ~25% fines, moist; very dense.	1	
			1.5 / 70			SS						
2			1.05 / 100	CC018SS01			2				2	
										No recovery.		
3			1.5 / 0				3				3	
4			0.5 / 0				4				4	
								SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~5% fine gravel, ~50% fine to coarse sand, ~45% fines, moist; medium dense.		
5						SS	5				5	
			1.5 / 80									
6			1.2 / 100	CC018BS01			6	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~10% fine gravel, ~50% fine to coarse sand, ~40% fines, moist; increased quartzite gravels.	6	
			1.5 / 50									
7							7	SC		SANDY LEAN CLAY (SC): strong brown (7.5YR 4/6), fine to coarse sand, moist; increased moisture content; fill soil.	7	
8			1.5 / 60			SS	8				8	
			0.9 / 100	CC018BS02								

End of Borehole at 9.0 m

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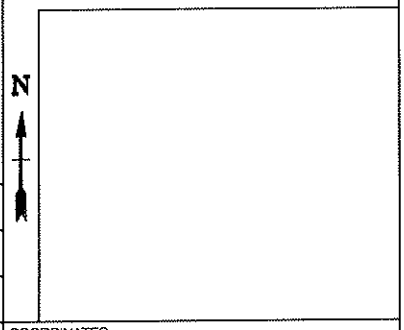
BORING LOG METRIC UNITS CAMP CARROLL AREA D AND AREA 41.GPJ ACE_1836.GDT 16/5/03

1101

LOG OF BORING AREA D B-022

BOREHOLE / WELL LOCATION SKETCH MAP



PROJECT NO.	PROJECT NAME: Camp Carroll Area D and Area 41 RI
LOCATION: Camp Carroll, Taegu, Republic of Korea	DATE & TIME STARTED: 4/2/03 14:10
LOGGED BY: [redacted] b6	REVIEWED BY / DATE & TIME FINISHED: 4/2/03 16:10
DRILLING CONTRACTOR / DRILLER: Beautiful Environmental Corp	DRILLING METHOD: Direct-Push / COORDINATES
SAMPLING METHOD: Geoprobe Sampler / SAMPLE HAMMER TYPE / SIZE / TYPE OF BIT	SURFACE ELEVATION / DATUM: mean sea level
WELL INSTALLED? YES / NO ☒ / CASING MATERIAL / DIAMETER	SCREEN Type: / Material: / Length: / Diameter: / Slot Size:
ELEVATION OF (msl): WELL COVER / TOP OF WELL CASING / TOP & BOTTOM OF SCREEN / PRODUCT SURFACE / GROUNDWATER SURFACE / DATE	

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	SURFACE CONDITION: / LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)	WELL CONSTRUCTION DETAILS
			1 / 80			SS		SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~60% fine to coarse sand, ~40% fines, moist; medium dense, fill soil.		NO WELL INSTALLED
2			1.5 / 80 1.2 / 100	CC022SS01			2				2	
3			1.5 / 65				3				3	
4						SS	4	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~60% fine to coarse sand, ~40% fines, moist; hard, medium dense, fill soil.	4	
5			1.5 / 80 1.2 / 100	CC022BS01			5				5	
6			1.7 / 30				6	CL		SANDY LEAN CLAY (CL): strong brown (7.5YR 5/8), ~45% fine to coarse sand, ~55% fines, low, moist; medium dense, fill soil	6	
7						SS	7				7	
8			1.5 / 80 1.2 / 100	SS022BS02			8	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/8), ~75% fine to coarse sand, ~25% fines, wet; dense.	8	
			1.5 / 65					CL		SANDY LEAN CLAY (CL): strong brown (7.5YR 5/8), ~40% fine to coarse sand, ~60% fines, low to medium, moist to wet.		

BORING LOG METRIC UNITS CAMP CARROLL AREA D AND AREA 41.GPJ ACE_1836.GCT 16/9/03

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1102

LOG OF BORING AREA D B-022

BOREHOLE / WELL LOCATION SKETCH MAP

N

PROJECT NO.	PROJECT NAME	
	Camp Carroll Area D and Area 41 RI	
LOCATION		DATE & TIME STARTED
Camp Carroll, Taegu, Republic of Korea		4/2/03 14:10
LOGGED BY [redacted] b6	REVIEWED BY	DATE & TIME FINISHED 4/2/03 16:10

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	SURFACE CONDITION: LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)	WELL CONSTRUCTION DETAILS
												NO WELL INSTALLED
										End of Borehole at 9.5 m.		
10							10				10	
11							11				11	
12							12				12	
13							13				13	
14							14				14	
15							15				15	
16							16				16	
17							17				17	
18							18				18	
19							19				19	

BORING LOG METRIC UNITS CAMP CARROLL AREA D AND AREA 41.GPJ ACE_1536.GDT 16/9/03

This log is part of the report prepared for the named project and should be read together with that report for complete information. This summary applies only at the location of this boring / well and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.

1103

LOG OF BORING AREA D B-026

BOREHOLE / WELL LOCATION SKETCH MAP

N

PROJECT NO.	PROJECT NAME: Camp Carroll Area D and Area 41 RI
LOCATION: Camp Carroll, Taegu, Republic of Korea	DATE & TIME STARTED: 4/1/03 16:00
LOGGED BY: [redacted] 66	REVIEWED BY / DATE & TIME FINISHED: 4/1/03 17:40
DRILLING CONTRACTOR/DRILLER: Beautiful Environmental Corp	DRILLING METHOD: Direct-Push / COORDINATES
SAMPLING METHOD: Geoprobe Sampler	SAMPLE HAMMER TYPE / SIZE / TYPE OF BIT / SURFACE ELEVATION / DATUM: mean sea level
WELL INSTALLED? YES / NO ☒	CASING MATERIAL / DIAMETER / SCREEN Type: Material: Length: Diameter: Slot Size:
ELEVATION OF (msl)	WELL COVER / TOP OF WELL CASING / TOP & BOTTOM OF SCREEN / PRODUCT SURFACE / GROUNDWATER SURFACE / DATE

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)	WELL CONSTRUCTION DETAILS
										SURFACE CONDITION:		NO WELL INSTALLED
										Preprobe. No recovery.		
1						SS	1	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/6), ~5% gravel, ~65% fine to medium sand, ~30% fines, moist; dense.	1	
			1.5 / 100	CC026SS01								
2							2				2	
	<0.1					SS		SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~10% gravel, ~60% fine to coarse sand, ~30% fines, moist; dense.		
3							3				3	
			1.5 / 100	CC026BS01				SC		SILTY, CLAYEY SAND (SC): olive gray(5Y 4/2), ~10% gravel, 60% fine to coarse sand, ~30% fines, moist; dense		
4							4				4	
										No recovery.		
			1.5 / 0									
5							5				5	
								SC		SILTY, CLAYEY SAND (SC): dark greenish gray(5GY 4/1) 50% mottled with yellowish brown (10YR 5/4), ~60% fine to medium sand, ~40% fines, moist; dense.		
6							6	SC		SILTY, CLAYEY SAND (SC): dark greenish gray(5G 4/1) 50% mottled with greenish gray(5G 5/1), ~60% fine to coarse sand, ~40% fines, moist; dense.	6	
			1.5 / 90									
			0.5 / 100	CC026BS02		SS		CL		SANDY LEAN CLAY (CL): very dark grayish brown(2.5Y 3/2) 50% mottled with dark grayish brown(2.5Y 4/2), ~15% fine to coarse sand, ~85% fines, medium, moist; firm.		
7							7	CH		LEAN CLAY (CH): dark brown (10YR 3/3), ~5% fine to medium sand, ~95% fines, high, wet.	7	
			1.5 / 100									
8							8	CH		LEAN CLAY (CH): dark brown (10YR 3/3), ~3% fine to medium sand, ~97% fines, high, wet.	8	
										End of Borehole at 8.5 m.		

BORING LOG METRIC UNITS_CAMP CARROLL AREA D AND AREA 41.GPJ ACE_1836.GDT 16/9/03

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1104

LOG OF BORING AREA D B-027

BOREHOLE / WELL LOCATION SKETCH MAP

N

PROJECT NO.	PROJECT NAME: Camp Carroll Area D and Area 41 RI		
LOCATION: Camp Carroll, Taegu, Republic of Korea		DATE & TIME STARTED: 4/3/03 07:45	
LOGGED BY: [redacted] bb	REVIEWED BY	DATE & TIME FINISHED: 4/3/03 03:45	
DRILLING CONTRACTOR / DRILLER: Beautiful Environmental Corp		DRILLING METHOD: Direct-Push	COORDINATES
SAMPLING METHOD: Geoprobe Sampler	SAMPLE HAMMER TYPE	SIZE / TYPE OF BIT	SURFACE ELEVATION / DATUM: mean sea level
WELL INSTALLED? YES / NO ☒	CASING MATERIAL / DIAMETER	SCREEN Type: Material: Length: Diameter: Slot Size:	
ELEVATION OF (msl)	WELL COVER	TOP OF WELL CASING	TOP & BOTTOM OF SCREEN / PRODUCT SURFACE / GROUNDWATER SURFACE / DATE

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	SURFACE CONDITION: / LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)	WELL CONSTRUCTION DETAILS
												NO WELL INSTALLED
			1 / 100					SC		SILTY, CLAYEY SAND (SC): dark yellowish brown (10YR 4/6), ~5% fine to coarse gravel, ~75% fine to coarse sand, ~20% fines, moist; medium dense; fill soil.		
1							1	CL		SANDY LEAN CLAY (CL): yellowish red (5YR 5/8), ~45% fine to coarse sand, ~55% fines, low, moist; firm.	1	
			1.5 / 40									
2							2				2	
								CL		SANDY LEAN CLAY (CL): strong brown (7.5YR 4/6), ~40% fine to coarse sand, ~60% fines, low, moist; firm.		
3							3				3	
			1.5 / 60			SS						
			0.9 / 100	CC027BS01				CL		SANDY LEAN CLAY (CL): dark greenish gray(5GY 4/1), ~40% fine to coarse sand, ~60% fines, medium, moist; firm; high biotite and muscovite content.		
4							4	CL		SANDY LEAN CLAY (CL): dark greenish gray(5GY 4/1), ~20% fine sand, ~80% fines, medium to high, moist; firm; micaceous.	4	
			0.5 / 20					CL		SANDY LEAN CLAY (CL): dark greenish gray(5GY 4/1), ~20% fine sand, ~80% fines, medium to high, moist; firm; micaceous.		
			0.5 / 0							No recovery		
5							5	CL		SANDY LEAN CLAY (CL): olive (5Y 4/3) 33% to yellowish brown (10YR 5/8) and 33% and reddish brown(5YR 5/4), fine to medium sand, medium, moist; firm; varigated.	5	
			1.5 / 55			SS						
6			0.825 / 100	CC027BS02			6				6	
								CL		SANDY LEAN CLAY (CL): reddish yellow(7.5YR 6/8) 50% mottled with brownish yellow (10YR 6/8), fine to medium sand, low, moist; firm; varigated; saprolite - angular quartz, feldspars weathering to clay, low mica content, some manganese.		
			0.5 / 50							End of Borehole at 7.0 m.		
7							7				7	
8							8				8	

BORING LOG METRIC UNITS CAMP CARROLL AREA D AND AREA 41 GPJ ACE_1836.GDT 16-9/C3

This log is part of the report prepared for the named project and should be read together with that report for complete information. This summary applies only at the location of this boring / well and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.

1105

PAGE 1 OF 1

LOG OF BORING AREA D B-028

BOREHOLE / WELL LOCATION SKETCH MAP

N

PROJECT NO.	PROJECT NAME: Camp Carroll Area D and Area 41 RI
LOCATION: Camp Carroll, Taegu, Republic of Korea	DATE & TIME STARTED: 4/2/03 16:15
LOGGED BY: [redacted] b6	REVIEWED BY / DATE & TIME FINISHED: 4/2/03 17:30
DRILLING CONTRACTOR / DRILLER: Beautiful Environmental Corp	DRILLING METHOD: Direct-Push
SAMPLING METHOD: Geoprobe Sampler	SAMPLE HAMMER TYPE / SIZE / TYPE OF BIT
WELL INSTALLED? YES / NO ☒	CASING MATERIAL / DIAMETER
SCREEN Type: Material: Length: Diameter: Slot Size:	
ELEVATION OF (msl)	WELL COVER / TOP OF WELL CASING / TOP & BOTTOM OF SCREEN / PRODUCT SURFACE / GROUNDWATER SURFACE / DATE
COORDINATES	SURFACE ELEVATION / DATUM: mean sea level

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	SURFACE CONDITION: / LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)	WELL CONSTRUCTION DETAILS
			1 / 100					SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/6), ~3% fine gravel, ~60% fine to coarse sand, ~37% fines, moist; dense; fill soil.		NO WELL INSTALLED
1							1	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/6), ~15% fine gravel, ~55% fine to coarse sand, ~30% fines, moist; dense; fill soil.	1	
			1.5 / 80									
2							2	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/6), ~3% fine gravel, ~60% fine to coarse sand, ~37% fines, moist; dense; fill soil.	2	
3			1.5 / 90				3	CL		SANDY LEAN CLAY (CL): strong brown (7.5YR 4/6), ~20% fine to coarse sand, ~80% fines, low, moist; firm; fill soil.	3	
4						SS	4	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/6), ~65% fine to coarse sand, ~35% fines, moist; dense; fill soil.	4	
5			1.5 / 90 1.35 / 100	CC028BS01			5	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6), ~55% fine to coarse sand, ~45% fines, moist, dense; fill soil.	5	
6			1.5 / 40				6	SC		SILTY, CLAYEY SAND (SC): dark greenish gray(5GY 4/1), ~5% fine, angular gravel, ~50% fine to coarse sand, ~45% fines, moist; dense; fill soil.	6	
7							7	SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 4/6) 10% mottled with dark greenish gray(5GY 4/1), ~55% fine to coarse sand, ~45% fines, moist; firm.	7	
8			1.5 / 65 0.975 / 100	CC028BS02		SS	8			End of Borehole at 8.5 m.	8	

BORING LOG METRIC UNITS CAMP CARROLL AREA D AND AREA 41.GPJ ACE_~83E.GDT 16/9/03

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1106

LOG OF WELL AREA D MW-001

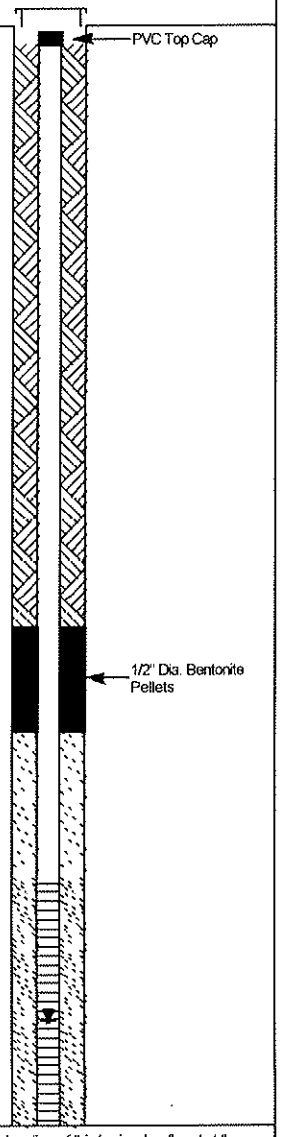
BOREHOLE / WELL LOCATION SKETCH MAP

N

PROJECT NO.	PROJECT NAME: Camp Carroll Area D and Area 41 RI
LOCATION: Camp Carroll, Taegu, Republic of Korea	DATE & TIME STARTED: 4/8/03 15:35
LOGGED BY: [redacted] b6	REVIEWED BY:	DATE & TIME FINISHED: 4/9/03 16:30
DRILLING CONTRACTOR / DRILLER: FED / [redacted] b6	DRILLING METHOD: Hollow-Stem Auger	COORDINATES:
SAMPLING METHOD: Split-Spoon Sampler	SAMPLE HAMMER TYPE: Hydraulic Hammer	SIZE / TYPE OF BIT: 8"	SURFACE ELEVATION:	DATUM: mean sea level
WELL INSTALLED? YES ☒ NO	CASING MATERIAL / DIAMETER: Sch 40 PVC / 2"	SCREEN: Type: Slotted Material: PVC Length: 6.1 m Diameter: 2" Slot Size:
ELEVATION OF (msl):	WELL COVER:	TOP OF WELL CASING:	TOP & BOTTOM OF SCREEN: m / m	PRODUCT SURFACE:	GROUNDWATER SURFACE:	DATE: 4/10/2003

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	SURFACE CONDITION: / LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)
		10/11/11/14	0.6098 / 80					SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/6), ~10% fine to coarse gravel, ~60% medium to fine sand, ~30% fines, moist to dry; fill material.	
1		9/14/16/14	0.6098 / 100				1	SC		SILTY, CLAYEY SAND with Gravel (SC): dark yellowish brown (10YR 4/6), ~20% fine to coarse gravel, ~60% sand, ~20% fines, dry; fill material.	1
		9/11/8/9	0.6098 / 100					SC		SILTY, CLAYEY SAND with Gravel (SC): dark yellowish brown (10YR 4/6), ~30% coarse gravel, ~40% sand, ~30% fines, fill material.	
								SC		SILTY, CLAYEY SAND with Gravel (SC): dark yellowish brown (10YR 4/6), ~40% coarse gravel, ~50% sand, ~40% fines, fill material.	
2		6/10/14	0.6098 / 0				2	SC		SILTY, CLAYEY SAND (SC): yellow (10YR 7/6), ~10% gravel, ~50% sand, ~40% fines, cobbles at 2.3 meters; fill material.	2
		7/9/6/8	0.6098 / 70					SC		SILTY, CLAYEY SAND (SC): reddish yellow(5YR 6/6), ~10% gravel, ~50% sand, ~40% fines, dry; fill material.	
3		5/6/8/11	0.6098 / 80				3	SC		SILTY, CLAYEY SAND (SC): reddish yellow(7.5YR 6/6), ~60% sand, ~40% fines, medium dense; plant roots at 3.4 meters; fill material.	3
		5/6/8/10	0.6098 / 80					SC		SILTY, CLAYEY SAND (SC): strong brown (7.5YR 5/8), ~60% sand, ~40% fines, fill material.	
4							4	SC		SILTY, CLAYEY SAND (SC): yellowish red (5YR 5/8), ~60% sand, ~40% fines, fill material.	4
		2/3/3/4	0.6098 / 40								
5							5				5
6		3/4/7/7	0.6098 / 80 0.4878 / 100	CC-001BS-01	X	SS	6	SC		SILTY, CLAYEY SAND (SC): reddish yellow(7.5YR 7/6), ~50% sand, ~50% fines, native soil.	6
7							7				7
8		2/5/5/8	0.6098 / 60				8	SC		SILTY, CLAYEY SAND (SC): yellow (10YR 7/6), ~50% fine to medium sand, ~50% fines, moist to wet; medium dense; native soil.	8

WELL CONSTRUCTION DETAILS



BORING LOG METRIC UNITS CAMP CARROLL AREA D AND AREA 41.GPJ ACE_1836.GDT 16/9/03

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107

LOG OF WELL AREA D MW-001

BOREHOLE / WELL LOCATION SKETCH MAP

N

PROJECT NO.	PROJECT NAME: Camp Carroll Area D and Area 41 RI
LOCATION: Camp Carroll, Taegu, Republic of Korea	DATE & TIME STARTED: 4/8/03 15:35
LOGGED BY: [redacted] bb	REVIEWED BY
	DATE & TIME FINISHED: 4/9/03 16:30

DEPTH (meters bgs)	PID (ppmv)	BLOWS / DRIVE	DRIVE / RECOVERY (meters / %)	LAB SAMPLE ID	EXTENT	SAMPLE TYPE	DEPTH (meters bgs)	USCS	GRAPHIC LOG	SURFACE CONDITION: / LITHOLOGIC DESCRIPTION	DEPTH (meters bgs)	WELL CONSTRUCTION DETAILS
10		3/5/9/9	0.6098 / 65				10				10	Filter Pack
11		4/8/10/15	0.6098 / 100				11				11	Slotted PVC Casing
12							12	SC		SILTY, CLAYEY SAND (SC): very pale brown (10YR 7/4), ~50% medium to fine sand, ~50% fines, wet; medium dense to dense; native soil.	12	
13		5/9/14/17	0.6098 / 80				13			End of Borehole at 13.1 m.	13	Threaded PVC End Cap
14							14				14	
15							15				15	
16							16				16	
17							17				17	
18							18				18	
19							19				19	

BORING LOG METRIC UNITS CAMP CARROLL AREA D AND AREA 41 GPJ ACE_1836.GDT 16.9.03

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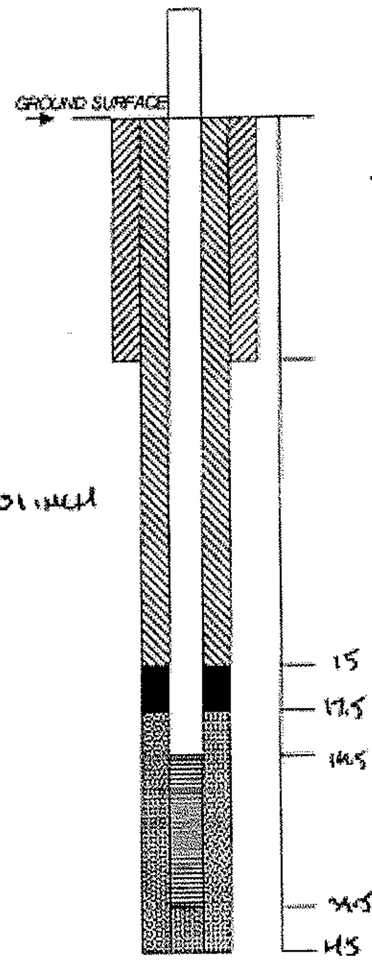
1108

WELL COMPLETION RECORD

JOB NO.: Area D WELL NO. MO-463 #24 HYDROGEOLOGIST: [redacted] 66

CLIENT: [redacted] /FED [redacted] DRILLER: Fed Mc [redacted] 66

WELL LOCATION: 66 24 66 DATE/TIME: 1250 / 4/8/03



Well Head Elevation ________ 4/8/03, ?

Ground Surface Elev. 2.65' from TOC

Well Head Completion Method: Flush mount traffic box

Drilling Method/Rig Type: HSA

Surface Casing: Type N/A, Diameter –, Length –

DETAILS OF CONSTRUCTION

Date Completed: 4/8/03

Borehole Diameter (in.): 8"

Type and Size of Casing (in.): 2" PVC

Type and Size of Screen (in.): 2"

Screen Perforation Diameter (in.): ~~0.010~~ 0.01 inch

Screen Length (ft.): 20'

Centralizer Depths (ft.): –

Completion Technique

1. Type of Filter Pack and Placement Method: 0.4 - 0.8 MM
2. Type of Bentonite and Placement Method: Baroid 1/2" pellets
3. Type of Grout Mixture and Placement Method: Bent / cement

Description of Potential Problems With Well:

MATERIALS

Cement (sks.) ________

Filter Pack Material (ft^3): 4.5 bag (25 kg/bag)

Casing Material (ft.): 40

Bentonite (ft^3): 1.5 buckets 5g

Top of Bentonite Seal: 15 ft.

Top of Filter Pack: 17.5 ft.

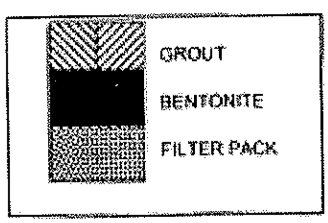
Top of Screen: 19.5 ft.

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

Bottom of Screen: 39.5 ft.

Bottom of Hole: 45 ft.

Development Technique ________



Sand [illegible] 1 1/2

25 kg/bag

Stopped 4/8/03 1445

will grout at later time

1 1/2 bucket (5 gal) bentonite

pellets 1/2 dia

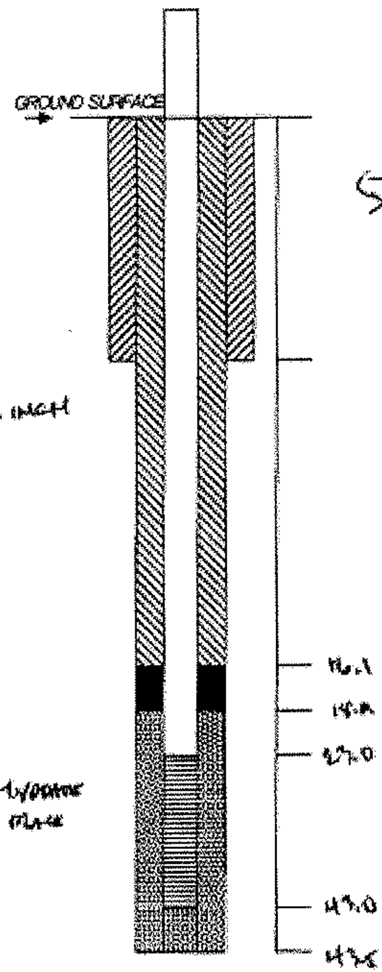
1109

WELL COMPLETION RECORD

JOB NO.: Camp Carroll / Area "D" WELL NO. ~~#24~~ M05-464 HYDROGEOLOGIST: [redacted] 66

CLIENT: FED / [redacted] 66 DRILLER: FED MR [redacted] 66

WELL LOCATION: Area -D, Loc # 24 DATE/TIME: 4/1/03



Well Head Elevation ______

Ground Surface Elev. ______

Well Head Completion Method: Flush Mount / Cap

Drilling Method/Rig Type ______

Surface Casing: Type Flush Mount
Diameter —
Length —

DETAILS OF CONSTRUCTION

Date Completed: 4/1/03

Borehole Diameter (in.): 8"

Type and Size of Casing (in.): 2" PVC

Type and Size of Screen (in.): ~~#10~~ ~~10 SLOT~~ 0.01 INCH

Screen Perforation Diameter (in.): 2"

Screen Length (ft.): 20'

Centralizer Depths (ft.): —

Completion Technique

1. Type of Filter Pack and Placement Method
   0.4 - 0.9 mm
2. Type of Bentonite and Placement Method
   Baroid 1/2" Pellet Placed Dry Hydrated in Place
3. Type of Grout Mixture and Placement Method
   Cement / Bentonite

Description of Potential Problems With Well:

______

Development Technique ______

MATERIALS

Cement (sks.) ______

Filter Pack Material (ft.³): 9 Bags 225 kg

Casing Material (ft.): 20

Bentonite (ft.³): 1 1/2 Bucket

Top of Bentonite Seal: 16.1 ft.

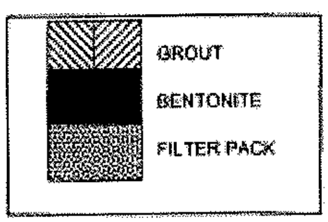
Top of Filter Pack: 18.9 ft. ~~14.6~~ 18.2

Top of Screen: ~~20.9~~ ft. 23.0

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

Bottom of Screen: ~~40.9~~ ~~[illegible]~~ ft. 43.0

Bottom of Hole: ~~[illegible]~~ ft. 43.5



Added 9 [tally]

Sand 1/2 + [tally] 111

Bent. ~~D~~ 1 1/2 Bucket Hydrate w/ 5 Gallons H2O

1110

WELL COMPLETION RECORD

JOB NO.: Area D WELL NO.: ~~#57~~ MOS-445 HYDROGEOLOGIST: [redacted] 66

CLIENT: Ford DRILLER: Mr. [redacted] 66

WELL LOCATION: #37 DATE/TIME: 4/12/03

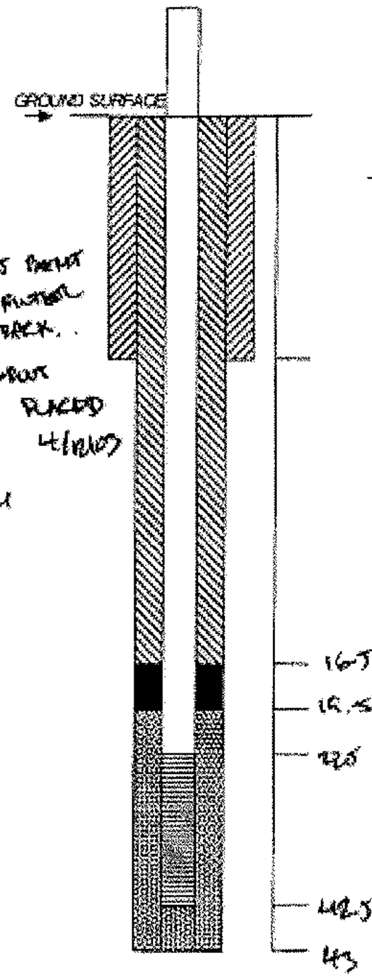
Well Head Elevation ______

Ground Surface Elev. ______

Well Head Completion Method: Flush Mount Traffic Box

Drilling Method/Rig Type: HSA

Surface Casing: Type NA; Diameter –; Length –



DETAILS OF CONSTRUCTION

Date Completed: 4/12/03 (4:45 Bent + filter pack. Grout placed 4/12/03)

Borehole Diameter (in.): 8"

Type and Size of Casing (in.): 2" PVC

Type and Size of Screen (in.): 2" PVC

Screen Perforation Diameter (in.): 0.01 inch

Screen Length (ft.): 20'

Centralizer Depths (ft.): NA

Completion Technique

1. Type of Filter Pack and Placement Method: 0.4 - 0.8 mm Silica
2. Type of Bentonite and Placement Method: 1/2" Baroid Pellets
3. Type of Grout Mixture and Placement Method: ______

Description of Potential Problems With Well: ______

Development Technique: ______

MATERIALS

Cement (sks.) ______

Filter Pack Material (ft.³): 9.5 bag

Casing Material (ft.): 45

Bentonite (ft.³): 1 1/5 bucket

Top of Bentonite Seal: 16.5 ft. ~16.5

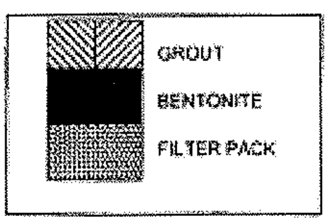
Top of Filter Pack: 19.5 ft. ~19.5

Top of Screen: 22.5 ft.

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

Bottom of Screen: 42.5 ft.

Bottom of Hole: 43 ft.



25 kg/bag

Sand: ||||| |||| + 1/2

Auger: ||||| |

Bent.: 1 1/5

20 Liters H_2O

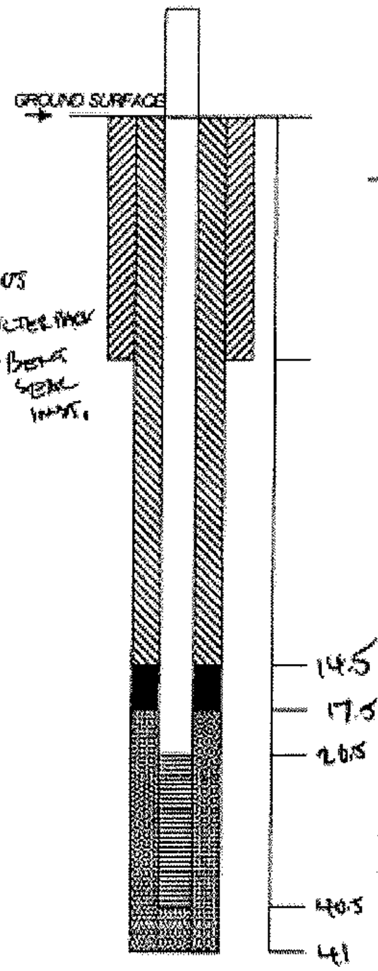
////

WELL COMPLETION RECORD

JOB NO.: Arco D WELL NO. ~~#-75??~~ M03-466 HYDROGEOLOGIST: [redacted] 66

CLIENT: Frp DRILLER: Mr. [redacted] 66

WELL LOCATION: # sm DATE/TIME: 4/12/03, 1615



Well Head Elevation ______

Ground Surface Elev. ______

Well Head Completion Method

FLUSH MOUNT TRAFFIC

Drilling Method/Rig Type HSA CME

Surface Casing: Type NA

Diameter —

Length —

DETAILS OF CONSTRUCTION

Date Completed 4/13/03, 0905

Borehole Diameter (in.) 8"

Type and Size of Casing (in.) 2" PVC

Type and Size of Screen (in.) 2" PVC

Screen Perforation Diameter (in.) 0.01 INCH

Screen Length (ft.) 20'

Centralizer Depths (ft.) NA

Completion Technique

1. Type of Filter Pack and Placement Method

   0.4 - 0.8 mm silica

2. Type of Bentonite and Placement Method

   1/2" Bagged Pellets

3. Type of Grout Mixture and Placement Method

   ______

Description of Potential Problems With Well:

______

Development Technique

______

MATERIALS

Cement (sks.) ______

Filter Pack Material (ft.^{3}) ______

Casing Material (ft.) ______

Bentonite (ft.^{3}) ______

Top of Bentonite Seal 14.5 ft.

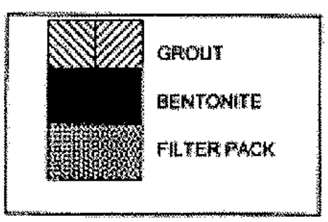
Top of Filter Pack 17.5 ft.

Top of Screen 20.5 ft.

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

Bottom of Screen 40.5 ft.

Bottom of Hole 41 ft.



3?6/bag

Sand = 17 1/1 fill

Auger = 17 1

Bent = 1 1/2

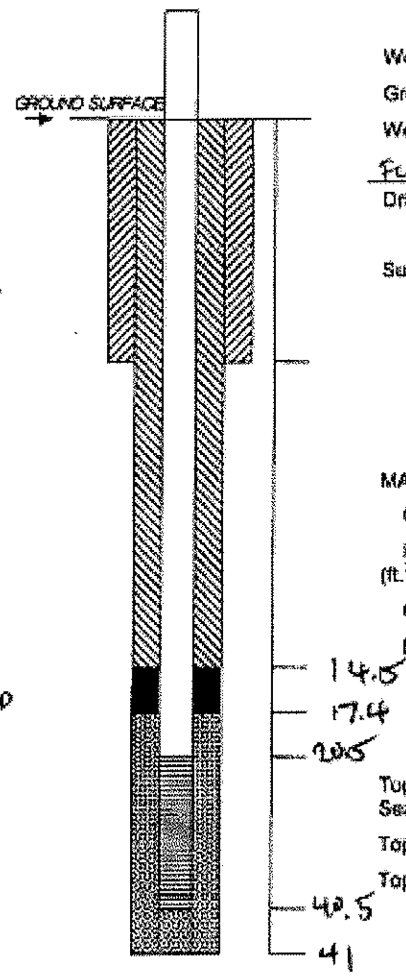
WELL COMPLETION RECORD

MO3-467

JOB NO.: Area D WELL NO. #12 HYDROGEOLOGIST: [redacted] 66

CLIENT: FED DRILLER: [redacted] /FED

WELL LOCATION: #12 DATE/TIME: 4/13/03, 66 1300



Well Head Elevation ______

Ground Surface Elev. ______

Well Head Completion Method

Flush Mount Traffic Box

Drilling Method/Rig Type HSA / CME

Surface Casing: Type NA

Diameter –

Length –

DETAILS OF CONSTRUCTION

Date Completed 4/13/03, 1403

Borehole Diameter (in.) 8"

Type and Size of Casing (in.) 2" PVC

Type and Size of Screen (in.) 2" PVC

Screen Perforation Diameter (in.) 0.01 inch

Screen Length (ft.) 20'

Centralizer Depths (ft.) NA

Completion Technique

1. Type of Filter Pack and Placement Method
   0.4 - 0.8 mm Silica Sand
2. Type of Bentonite and Placement Method
   1/4" Baroid Pellets
3. Type of Grout Mixture and Placement Method
   ______

Description of Potential Problems With Well:

______

Development Technique

______

MATERIALS

Cement (sks.) 4

Filter Pack Material (ft.³) 9 sack

Casing Material (ft.) 20

Bentonite (ft.³) 1 1/5 bucket

Top of Bentonite Seal 14.5 ft.

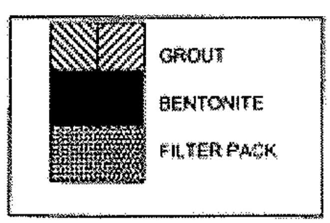
Top of Filter Pack ~~17.5~~ ft. 17.4

Top of Screen 20.5 ft.

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

Bottom of Screen ~~41.5~~ 40.5 ft.

Bottom of Hole 41 ft.



Sand: ЖЖ III

Cement: ЖЖ II

Bent: 1 1/5 bucket

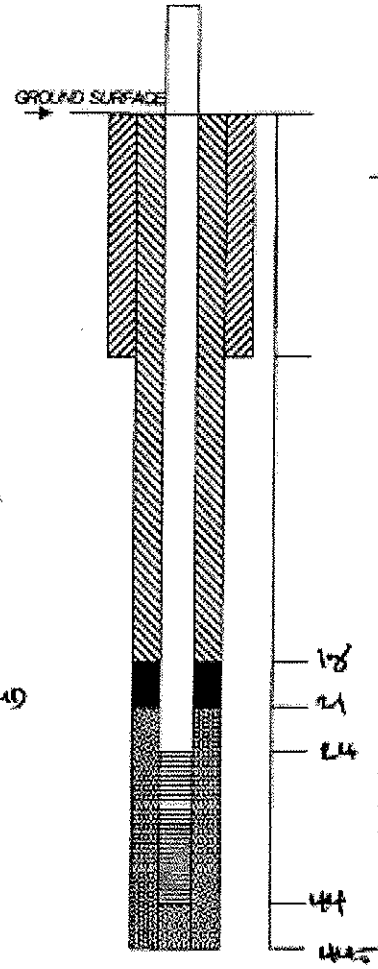
WELL COMPLETION RECORD

NRO-4468

JOB NO.: [illegible] WELL NO. #38 HYDROGEOLOGIST: [redacted] bb

CLIENT: Ford DRILLER: Mr. [redacted] bb

WELL LOCATION: Area D # 38 DATE/TIME: 4/14/03, 1600



Well Head Elevation

Ground Surface Elev.

Well Head Completion Method: Flush mount Traffic Box

Drilling Method/Rig Type: HSA / Geoprobe

DETAILS OF CONSTRUCTION

Date Completed: 4/14/03

Borehole Diameter (in.): 6"

Type and Size of Casing (in.): 2" PVC

Type and Size of Screen (in.): 2" PVC

Screen Perforation Diameter (in.): 0.010 inch

Screen Length (ft.): 20

Centralizer Depths (ft.): —

Completion Technique

1. Type of Filter Pack and Placement Method: 0.4 - 0.8 mm silica sand
2. Type of Bentonite and Placement Method: 1/2" Bentonite Pellets
3. Type of Grout Mixture and Placement Method:

Surface Casing: Type N/A; Diameter —; Length —

MATERIALS

Cement (sks.):

Filter Pack Material (ft.^{3}): 6 Bags - 150 lbs

Casing Material (ft.): 20'

Bentonite (ft.^{3}): 1 Bucket = 5 Gal

Top of Bentonite Seal: 18 ft.

Top of Filter Pack: 21 ft.

Top of Screen: 24 ft.

Bottom of Screen: 44 ft.

Bottom of Hole: 44.5 ft.

Description of Potential Problems With Well:

Development Technique

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

GROUT

BENTONITE

FILTER PACK

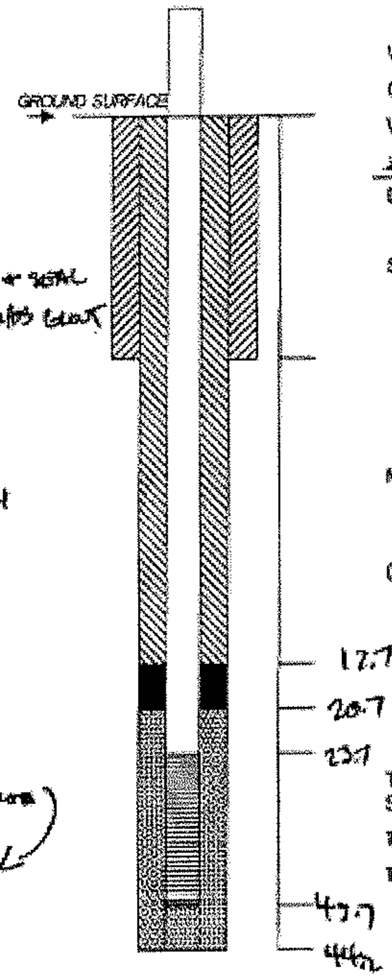
1/1

WELL COMPLETION RECORD

JOB NO.: AREA 41 WELL NO. ~~#54~~ MO3-41D HYDROGEOLOGIST: [redacted] 66

CLIENT: FED DRILLER: Mr. [redacted] 66

WELL LOCATION: AREA 41 LOC #54 DATE/TIME: 4/10/03, 1424



Well Head Elevation ______

Ground Surface Elev. ______

Well Head Completion Method FLUSH MOUNT TRAFFIC MOUNT

HOLLOW - STEM - AUGER DRILL RIG

Drilling Method/Rig Type HSA/CME

Surface Casing: Type N/A

Diameter –

Length –

DETAILS OF CONSTRUCTION

Date Completed 4/10/03 Bent + seal 4/11/03 Grout

Borehole Diameter (in.) 8"

Type and Size of Casing (in.) 2" PVC

Type and Size of Screen (in.) 2" PVC

Screen Perforation Diameter (in.) 0.01 INCH

Screen Length (ft.) 20'

Centralizer Depths (ft.) –

Completion Technique

1. Type of Filter Pack and Placement Method

   0.4-0.8 mm SILICA

2. Type of Bentonite and Placement Method

   PORTLAND CEMENT / BENTONITE

3. Type of Grout Mixture and Placement Method

   BAROID 1/2" PELLETS

Description of Potential Problems With Well:

______

______

______

Development Technique

______

MATERIALS

Cement (sks.) ~~10 SACKS~~ 4

Filter Pack Material (ft.³) 10 SACKS 250 LB

Casing Material (ft.) 45+25'+20'

Bentonite (ft.³) 1 1/5 BUCKET

Top of Bentonite Seal 17.7 ft. ~ 17.7

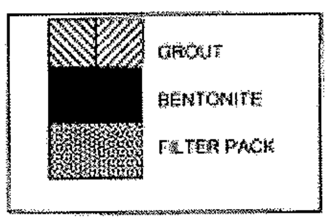
Top of Filter Pack 20.7 ft. ~ 20.7

Top of Screen 23.67 ft.

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

Bottom of Screen 43.67 ft.

Bottom of Hole 44.2 ft.



SAND: 𝍸 𝍸

AUGER: 𝍸 II

BENT.: 1 1/5

4/10/03 15 53, BENT. SEAL PLACED. GROUT TO FOLLOW 4/11

HYDRATE 4 GALLONS TAP H₂O

1115

MO3-491

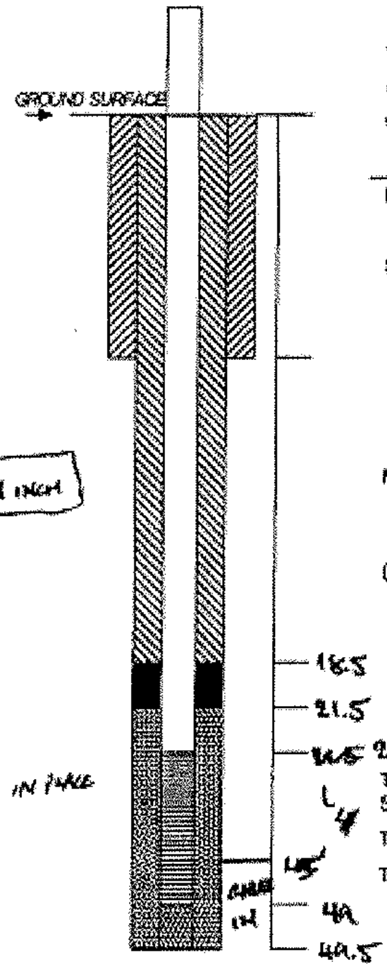
WELL COMPLETION RECORD

JOB NO.: AR06(?)1(?) Camp Carroll WELL NO. #66 HYDROGEOLOGIST: [redacted] 66

CLIENT: R(?) DRILLER: MR. [redacted] 66

WELL LOCATION: AREA 41 Loc: 66 DATE/TIME: 4/11/03 1510

FILTER PACK & BENTONITE INSTALLED 4/11/03 1540



Well Head Elevation ______

Ground Surface Elev. ______

Well Head Completion Method: FLUSH MOUNT

Drilling Method/Rig Type: CME/HSA

Surface Casing: Type N/A

Diameter —

Length —

DETAILS OF CONSTRUCTION

Date Completed: 4/11/03 1630

Borehole Diameter (in.): 6"

Type and Size of Casing (in.): 2"

Type and Size of Screen (in.): 2" PVC

Screen Perforation Diameter (in.): 10 SLOT (0.01 INCH)

Screen Length (ft.): 25'

Centralizer Depths (ft.): —

Completion Technique

1. Type of Filter Pack and Placement Method
   0.4 - 0.8 MM SILICA
2. Type of Bentonite and Placement Method
   BAROID 1/4" PELLETS HYDRATE IN PLACE
3. Type of Grout Mixture and Placement Method
   PORTLAND / BENTONITE

Description of Potential Problems With Well:

PARTIAL CAVE IN 40~45' FILTER PACK NOT HOMOGENEOUS 45'-49'(DEPTH)

Development Technique ______

MATERIALS

Cement (sks.) ______

Filter Pack Material (ft.³): 5 1/2 BAGS = 212 KG

Casing Material (ft.): 50' 25' + 25'

Bentonite (ft.³): 1 BUCKET

Top of Bentonite Seal: 18.5 ft.

Top of Filter Pack: 21.5 ft.

Top of Screen: 24 ft. ~~24.5~~

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

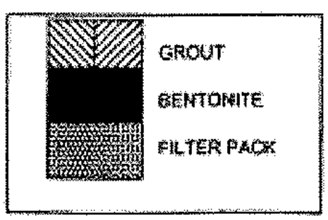
Bottom of Screen: 49 ft.

Bottom of Hole: 49.5 ft.

25

24.5

49



SAND: 11

BENTONITE: 1

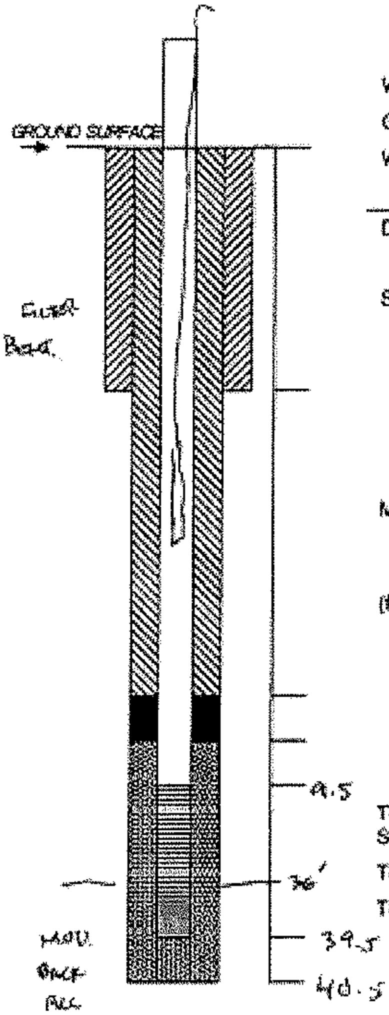
MOB-472

WELL COMPLETION RECORD

JOB NO.: Area 41 WELL NO. #53 HYDROGEOLOGIST: [redacted] b6

CLIENT: PGD DRILLER: [redacted] b6

WELL LOCATION: Area 41 #53 DATE/TIME: 4/15/03, 0930



Well Head Elevation ______

Ground Surface Elev. ______

Well Head Completion Method: flush mount traffic

Drilling Method/Rig Type: HSA

Surface Casing: Type: None; Diameter: —; Length: —

DETAILS OF CONSTRUCTION

Date Completed: 4/15/03 0930

Borehole Diameter (in.): 6"

Type and Size of Casing (in.): 2" PVC

Type and Size of Screen (in.): 2" PVC

Screen Perforation Diameter (in.): 0.01 inch

Screen Length (ft.): 30'

Centralizer Depths (ft.): NA

Completion Technique

1. Type of Filter Pack and Placement Method: 0.4-0.8 mm silica sand
2. Type of Bentonite and Placement Method: 1/4" Bent. poured
3. Type of Grout Mixture and Placement Method: ______

Description of Potential Problems With Well: hard heaving to 36' surge & heavy well development

Development Technique: ______

MATERIALS

Cement (sks.) ______

Filter Pack Material (ft.³): 10 41.5 kg + 250 kg

Casing Material (ft.): 30'

Bentonite (ft.³): 1 bucket

Top of Bentonite Seal: 3.5 ft.

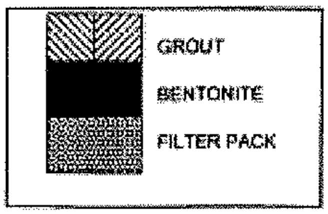
Top of Filter Pack: 6.5 ft.

Top of Screen: 9.5 ft.

NOTE: ALL DEPTHS ARE REFERENCED TO GROUND SURFACE

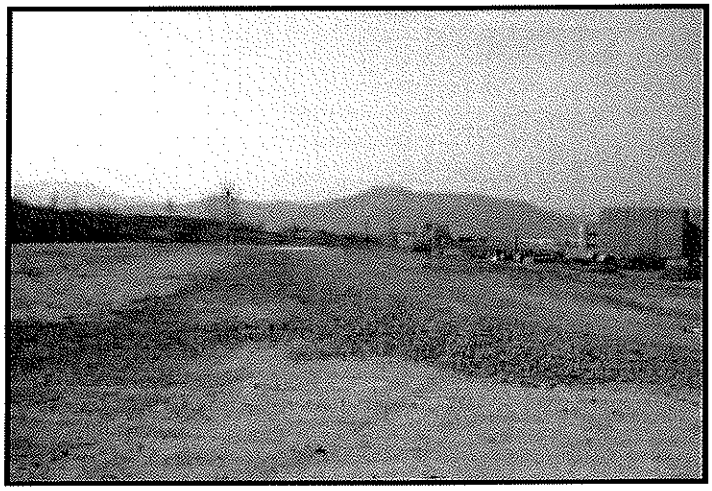
Bottom of Screen: 39.5 ft.

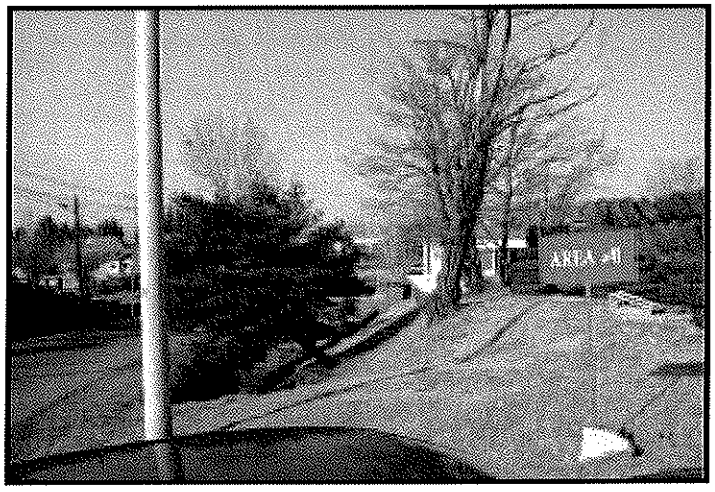
Bottom of Hole: 40 ft.



Appendix D

Photographic Records





Appendix E

Rainfall Records, Water Level Measurements,

and Aquifer Testing Results

Camp Carroll Area D WATER LEVEL

	LOCATION									
	MW-463 (NO. 24)			MW-464 (NO. 01)			MW-465 (NO. 37)			
	North 3983282.49 East 447709.20 Cap 48.75 Casing Top 48.55 GL 48.74			North 3983364.10 East 447705.50 Cap 49.93 Casing Top 49.79 GL 49.92			North 3983361.30 East 447646.40 Cap 51.02 Casing Top 50.98 GL 50.99			
DATE	TIME	WATER	Sealevel	TIME	WATER	Sea	TIME	WATER	Sea	Rainfall
2003-04-07	-			-			-			7.5
2003-04-08	-			-			-			6.5
2003-04-09	9:30	8.077	40.473	9:00			-			-
	-			10:20	8.217	41.073	-			-
2003-04-10	8:35	8.394	40.156	8:35	8.348	41.642	-			-
2003-04-11	16:40	7.990	40.560	16:30	8.299	41.491	-			2.0
	-			-			-			-
2003-04-12	14:20	8.070	40.530	14:10	8.289	41.501	-			-
	-			-			16:30	9.381	41.519	-
2003-04-13	8:00	8.135	40.415	7:54	8.352	41.438	7:46	9.440	41.460	-
	13:30	8.105	40.445	13:20	8.333	41.457	13:12	9.423	41.477	-
2003-04-14	9:45	8.165	40.385	9:34	8.362	41.428	9:24	9.457	41.443	-
2003-04-15	10:14	8.220	40.330	10:35	8.395	41.395	10:30	9.480	41.420	-
2003-04-16	9:20	8.246	40.304	9:03	8.410	41.380	8:57	9.502	41.398	-
2003-04-17	8:57	8.130	40.420	8:00	8.400	41.390	7:43	9.495	41.405	-
2003-04-18	8:33	8.092	40.458	8:22	8.370	41.420	8:14	9.460	41.440	16.5
2003-04-19	-			-			-			11.0
2003-04-20	-			-			-			9.5
2003-04-21	15:00	8.080	40.470	15:05	8.392	41.398	17:10	9.488	41.412	-
2003-04-22	-			9:23	8.542	41.248	10:45	9.525	41.375	-
2003-04-23	-			17:00	8.375	41.415	17:10	9.410	41.490	28.0
2003-04-24	-			-			-			3.0
2003-04-25	14:50	7.790	40.850	9:50	8.295	41.495	8:20	9.370	41.530	47.5
2003-04-26	7:42	7.870	40.680	8:05	8.330	41.460	-			-
2003-04-27	-			8:45	8.320	41.470	-			-
2003-04-28	8:57	7.513	41.037	9:05	8.294	41.496	8:49	9.358	41.542	-
2003-04-29	-			-			-			18.5
2003-05-25	-			-			-			52.5
2003-05-26	-			-			-			4.0
2003-05-27	-			-			-			-
2003-05-28	9:40	7.040	41.510	9:50	7.859	41.931	9:47	8.916	41.984	
2003-05-29	8:29	6.963	41.587	8:37	7.951	41.939	8:43	8.899	42.001	5.5
2003-05-30	-			-			-			111.5
2003-05-31	-			-			-			0.2
2003-06-01	-			-			-			-
2003-06-02	9:18	6.895	41.745	9:32	7.785	42.005	9:43	8.826	42.080	-
2003-06-03	-			-			-			-
2003-06-04				-			-			-
2003-06-05	-			-			-			-
2003-08-18	-			-			-			73.5
2003-08-19	-			-			-			30.5
2003-08-20	12:01	6.134	42.426	12:07	6.788	43.002	11:44	7.792	43.108	5.0
AVERAGE		7.732	40.728		8.223	41.567		9.248	41.652	

1121

Camp Carroll Area D WATER LEVEL

	LOCATION									
	M03-466 (NO. 39)			M03-467 (NO. 12)			M03-468 (NO. 38)			
	North 3983304.60 East 447734.10 Cap 49.74 Casing Top 49.58 GL 49.72			North 3983326.00 East 447718.70 Cap 49.94 Casing Top 49.79 GL 49.93			North 3983390.10 East 447754.30 Cap 51.57 Casing Top 51.41 GL 51.55			
DATE	TIME	WATER	Sea Level	TIME	WATER	Sea level	TIME	WATER	Sea level	Rainfall
2003-04-07	-			-			-			7.5
2003-04-08	-			-			-			6.5
2003-04-09	- -			-			- -			- -
2003-04-10	-			-			-			-
2003-04-11	-			-			-			2.0
2003-04-12	- - -			- - -			- - -			- - -
2003-04-13	7:40 13:35	8.010 7.660	41.570 41.920	-			-			- -
2003-04-14	9:50	7.845	41.735	9:42	8.460	41.330				-
2003-04-15	10:20	7.890	41.690	10:25	8.485	41.305	-			-
2003-04-16	9:13	7.915	41.665	9:08	8.515	41.275	8:45	9.498	41.912	-
2003-04-17	7:54	7.898	41.682	7:52	8.495	41.295	7:45	9.488	41.922	-
2003-04-18	8:29	8.145	41.435	8:26	8.452	41.338	8:12	9.455	41.955	16.5
2003-04-19	-			-			-			11.0
2003-04-20	-			-			-			9.5
2003-04-21	15:48	8.160	41.420	16:30	8.485	41.305	17:15	9.495	41.915	-
2003-04-22	9:30	8.470	41.110	9:28	8.590	41.200	8:52	9.498	41.915	-
2003-04-23	17:05	7.990	41.590	-			17:17	9.445	41.965	28.0
2003-04-24	-			-			-			3.0
2003-04-25	14:40	7.900	41.680	14:44	8.280	41.510	8:50	9.435	41.975	47.5
2003-04-26	7:38	8.095	41.485	7:34	8.370	41.420	8:00	9.490	41.920	
2003-04-27	12:43	7.860	41.720	9:01	8.255	41.535	8:40	9.485	41.925	-
2003-04-28	8:53	7.833	41.747	-			8:45	9.459	41.921	-
2003-04-29	-			-			-			18.5
2003-05-25	-			-			-			52.5
2003-05-26	-			-			-			4.0
2003-05-27	-			-			-			-
2003-05-28	9:37	7.369	42.211	9:44	7.842	41.948	9:34	9.198	42.212	-
2003-05-29	9.01	7.333	42.248	8.33	7.813	41.977	8.40	9.172	42.238	5.5
2003-05-30	-			-						111.5
2003-05-31	-			-						0.2
2003-06-01	-			-						-
2003-06-02	9:10	7.485	42.395	9:23	7.698	42.092	9:38	9.135	42.275	-
2003-06-03	-			-			-			-
2003-06-04	-			-			-			-
2003-06-05	-			-			-			
2003-08-18	-			-			-			73.5
2003-08-19	-			-			-			30.5
2003-08-20	11:54	6.262	43.318	12:03	6.740	43.050	11:45	8.114	43.296	5.0
AVERAGE		7.768	41.812		8.177	41.613		9.314	42.096	

Camp Carroll Area D WATER LEVEL

	LOCATION									
	MW-23									
	North East Cap Casing Top 42.69 GL 42.02			North East Cap Casing Top GL			North East Cap Casing Top GL			
DATE	TIME	WATER	Sea level	TIME	WATER	REMARK	TIME	WATER	REMARK	Rainfall
2003-04-07										2.5
2003-04-08										6.5
2003-04-09										-
										-
2003-04-10										-
2003-04-11										2.0
2003-04-12										-
										-
										-
2003-04-13										-
										-
2003-04-14										-
2003-04-15										-
2003-04-16										-
2003-04-17										-
2003-04-18										16.5
2003-04-19										11.0
2003-04-20										9.5
2003-04-21										-
2003-04-22										-
2003-04-23										28.0
2003-04-24										3.0
2003-04-25										42.5
2003-04-26	11:05	5.127	37.563							-
2003-04-27	8:30	5.130	37.560							-
2003-04-28	-									
2003-04-29	-									18.5
2003-05-25	-									57.5
2003-05-26	-									4.0
2003-05-27	-									-
2003-05-28	-									-
2003-05-29	-									5.5
2003-05-30	-									111.5
2003-05-31	-									0.2
2003-06-01	-									-
2003-06-02	-									-
2003-06-03	-									-
2003-06-04	-									-
2003-06-05	-									-
2003-08-18	-					TOC				73.5
2003-08-19	-					TOC				30.5
2003-08-20	12:13	3.548	39.142			TOC				5.0
AVERAGE		4.602	38.088							

Camp Carroll Area 41 WATER LEVEL

	LOCATION									
	M03-470 (NO. 54)			M03-472 (NO. 66)			M03-471 (NO. 53)			
	North 3982893.30 East 446660.60 Cap 39.41 Casing Top 39.30 GL 39.40			North 3982909.10 East 446653.90 Cap 39.48 Casing Top 39.36 GL 39.42			North 3982915.90 East 446680.10 Cap 39.75 Casing Top 39.61 GL 39.74			
DATE	TIME	WATER LEVEL(M)	Sealevel	TIME	WATER LEVEL(M)	Sea level	TIME	WATER LEVEL(M)	Sea level	Rainfall (mm)
2003-04-03	-			-			-			-
2003-04-07	-			-			-			7.5
2003-04-08	-			-			-			6.5
2003-04-10	-			-			-			-
	13:10	10.668	28.636	-			-			-
2003-04-11	13:30	10.385	28.919				-			2.0
	-						-			-
2003-04-14	10:10	10.330	28.974	10:05	10.458	28.902	-			-
	15:18	10.358	28.946	15:24	10.400	28.960	-			-
2003-04-15	7:36	10.390	28.914	7:37	10.440	28.920	7:33	4.720	34.890	-
	-			-						-
2003-04-17	13:29	10.403	28.901	13:27	10.435	28.925	13:24	4.472	35.138	-
2003-04-18	9:00	10.375	28.929	10:09	10.420	28.940	10:58	4.460	35.150	16.5
2003-04-19	-			-			-			11.0
2003-04-20	-			-			-			9.5
2003-04-23	9:24	10.385	28.919	9:29	10.430	28.930	9:20	4.370	35.240	28.0
2003-04-24	8:11	10.350	28.954	8:05	10.450	28.910	8:25	4.360	35.250	3.0
2003-04-25	-			-			-			47.5
2003-04-28	9:35	10.130	29.174	9:40	10.260	29.100	9:30	4.249	35.370	-
2003-04-29	-			-			-			18.5
2003-05-25	-						-			57.5
2003-05-26	-						-			4.0
2003-05-27	-									-
2003-05-28	-									-
2003-05-29	-						-			5.5
2003-05-30	-						-			111.5
2003-05-31	-						-			0.2
2003-06-01	-						-			-
2003-06-02	-						-			-
2003-06-03	9:25	9.578	29.726	13:20	9.670	29.690	14:00	4.120	35.490	-
2003-06-04	-			12:27	9.760	29.660	-			-
2003-06-05	-			-			-			
2003-08-18	-			-			-			73.5
2003-08-19	-			-			-			30.5
2003-08-20	10:40	7.943	31.361	10:45	8.212	31.148	10:35	3.723	35.887	5.0
AVERAGE		10.108	29.196		10.080	29.280		4.308	35.302	

Camp Carroll Area 41 WATER LEVEL

	LOCATION										
	MW14										
	North East Cap Casing Top 35.50 GL 38.83			North East Cap Casing Top GL			North East Cap Casing Top GL				
DATE	TIME	WATER LEVEL(M)	Sea level	TIME	WATER LEVEL(M)	REMARK	TIME	WATER LEVEL(M)	REMARK	Rainfall (mm)
2003-04-03	10:30	6.472	29.028							7.5
2003-04-07	-									6.5
2003-04-08	-									-
2003-04-10	9:55	6.666	28.834							2.0
2003-04-11	13:15	6.450	29.050							-
2003-04-14	10:15	6.509	28.991							-
	15:30	6.475	29.025							-
2003-04-15	-									-
2003-04-17	7:49	6.522	28.978							16.5
2003-04-18	13:35	6.530	28.970							11.0
2003-04-19	-									9.5
2003-04-20	-									28.0
2003-04-23	9:38	6.370	29.130							3.0
2003-04-24	8:40	6.510	28.990							47.5
2003-04-25	-									-
2003-04-28	9:36	6.880	28.620							18.5
2003-04-29	-									57.5
2003-05-25	-									4.0
2003-05-26	-									-
2003-05-27	-									5.5
2003-05-28	-									111.5
2003-05-29	-									0.2
2003-05-30	-									-
2003-05-31	-									-
2003-06-01	-									-
2003-06-02	-									-
2003-06-03	13:28	6.360	29.240							73.5
2003-06-04	9:42	6.285	29.215							30.5
2003-06-05	-					TOC				5.0
2003-08-18	-					TOC				
2003-08-19	-					TOC				
2003-08-20	10:50	4.613	30.887							
AVERAGE		6.349	29.151							

Appendix F

Laboratory Results and COC Documentation

Laboratory Results

Attached CD
File name: DV_23833.mdb

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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- West Virginia
- Maryland
- New Jersey
- New Orleans

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PAGE 1 OF 3

(1) CLIENT: Samsung / FED / MNA
CONTACT: [redacted] bb PHONE NO: [redacted] bb
PROJECT: MNA 101 IU PWSID#:
REPORTS TO: [redacted] bb 4/1/03
FAX NO: [redacted] bb
INVOICE TO: MNA bb QUOTE#
P.O. NUMBER:

CT&E Reference:

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (AK101M)	TPH-D (AK103M)	SVOC (8270C)	Organochlorine Pesticides (8081A)	PCBs (8082)	Chlorinated Herbicides (8151A)	RCRA 8 metals	Dioxin (1613B)	VOC (8260B)	REMARKS
	CC0105S01	4/1/03	1028	S	8	4/10	✓	✓	✓	✓	✓	✓	✓	✓		No dioxin analysis
	CC00US01		1053		8		✓	✓	✓	✓	✓	✓	✓	✓		
	CC0015S01		1103		8		✓	✓	✓	✓	✓	✓	✓	✓		
	CC007S01		1115		8		✓	✓	✓	✓	✓	✓	✓	✓		
	CC010BS01		1140		8+1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC08S01		1130		7		✓	✓	✓	✓	✓	✓	✓			
	CC009S01		1145		7		✓	✓	✓	✓	✓	✓	✓			
	CC013S01		1200		7		✓	✓	✓	✓	✓	✓	✓			
	CC107S01		1115		8		✓	✓	✓	✓	✓	✓	✓	✓		
	CC010BS02		1220		8	G	✓	✓	✓	✓	✓	✓	✓	✓		

(5)

	Date	Time	Received By:
Collected/Relinquished By: (1) Samsung [redacted] bb	1 April 03	1910	
Relinquished By: (2) bb	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier: DHL
Shipping Ticket No.:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:
Standard TAT

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

0-720

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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① CLIENT: Samsung/FED/MNA
CONTACT: [redacted] PHONE NO: [redacted]
PROJECT: MNA 101(4) PWSID#:
REPORTS TO: [redacted]
FAX NO: [redacted]
INVOICE TO: MNA QUOTE#
P.O. NUMBER:

CT&E Reference:

PAGE 2 OF 3

② ③ Preservatives Used / Analysis Required

Lab No.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G (AK101M)	TPH-D (AK102M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA Metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC015SS01	4/1/03	1426	S	7	C	✓	✓	✓	✓	✓	✓	✓			
	CC003SS01		1440		7		✓	✓	✓	✓	✓	✓	✓			
	CC103SS01		1440		7		✓	✓	✓	✓	✓	✓	✓			
	CC006SS01		1429		7		✓	✓	✓	✓	✓	✓	✓			1429
	CC019SS01		1515		7		✓	✓	✓	✓	✓	✓	✓			1515
	CC006BS01		1500		8		✓	✓	✓	✓	✓	✓	✓	~~✓~~ n.x.	✓	1500 No dioxin
	CC006BS02		1515	Bw	8		✓	✓	✓	✓	✓	✓	✓	✓	✓	1515
	CC026SS01		1615		7	G	✓	✓	✓	✓	✓	✓	✓			
	CC020SS01		1620		7	C	✓	✓	✓	✓	✓	✓	✓			
	CC025SS01		1636		7	C	✓	✓	✓	✓	✓	✓	✓			

⑤

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted]	1 April 03	1910	
Relinquished By: (2)			Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)			Received For Laboratory By:

④ Shipping Carrier: DHL
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:
Standard TAT

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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- Maryland
- New Jersey
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(1)

CLIENT: Stanley / FFDI MNA

CONTACT: [redacted] b6 PHONE NO: [redacted] b6

PROJECT: MNA 10144 PWSID#:

REPORTS TO: [redacted] b6 b6 FAX NO: [redacted] b6

INVOICE TO: MNA QUOTE# P.O. NUMBER:

CT&E Reference:

PAGE 3 OF 3

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	Analysis Required (3) TPH-G (AK101)	TPH-D (AK102)	SVOC (8270C)	PAHs (8270C)	PCBs (8082)	Metals (6010A)	RCRA metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC023SS01	4/1/03	1715	S	7	C		✓	✓	✓	✓	✓	✓	✓			
	CC021SS01	↓	1658	S	7	C		✓	✓	✓	✓	✓	✓	✓			
	CC026BS02		1714	S	9	C		✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC026BS01		1631	S	8	C		✓	✓	✓	✓	✓	✓	✓		✓	

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	1 April 03	1910	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier: by L

Shipper's Tracking No:

Temperature C:

Data Deliverables:

Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

Standard TAT

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

0-720

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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- West Virginia
- Maryland
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(1) CLIENT: Samsung / FEDI MNA
CONTACT: - [redacted] PHONE NO: [redacted]
PROJECT: MNA IDIW4 PWSID#:
REPORTS TO: [redacted] FAX NO: [redacted]
INVOICE TO: MNA QUOTE# P.O. NUMBER:

CT&E Reference #:

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	(3) Preservatives Used / Analysis Required: TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	PAH (8270C)	PCBs (8082A)	Metals (6010B)	RCRA 8 metals	Dioxin (2290)	VOC (8260B)	REMARKS
	CC 001 SS01	4/1/03	1103	S	1	C				✓						
	CC 006 SS01	4/1/03	1429		1			✓								
	CC 107 SS01	4/1/03	1115		1							✓				
	CC 015 SS01	4/1/03	1420		1	↓	✓									
	CC 017 SS01	4/2/03	0843		7	C	✓	✓	✓	✓	✓	✓	✓			
	CC 017 BS01	4/2/03	0915		8	C	✓	✓	✓	✓	✓	✓	✓	✓		
	CC 029 SS01	4/2/03	0925		7	C	✓	✓	✓	✓	✓	✓	✓			
	CC 030 SS01	4/2/03	1030		7	C	✓	✓	✓	✓	✓	✓	✓			
	CC 031 SS01	4/2/03	1047		7	C	✓	✓	✓	✓	✓	✓	✓			
	CC 017 BS02	4/2/03	0935		8	C	✓	✓	✓	✓	✓	✓	✓	✓		

(5)

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted]	4/2/03	1415	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: Driven
Shipping Ticket No:
Temperature C°:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

CHAIN OF CUSTODY RECORD

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Laboratory Division

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(1)

CLIENT: Samsung / EEDI / MNA	
CONTACT: [redacted] b6	PHONE NO: [redacted]
PROJECT: MNA 10144	PWSID#: b6
REPORTS TO: b6 [redacted] b6	[redacted] b6 FAX NO: [redacted] b6
INVOICE TO: MNA	QUOTE#
	P.O. NUMBER:

CT&E Reference:

PAGE 2 OF 3

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC017BS03	4/2/03	~~4~~ 1030	S	9	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC032SS01	4/2/03	1104	S	7	C	✓	✓	✓	✓	✓	✓	✓			
	CC018SS01	4/2/03	1110	S	7	C	✓	✓	✓	✓	✓	✓	✓			
	CC018BS01	4/2/03	1320	S	7	C	✓	✓	✓	✓	✓	✓	✓		✓	
	CC018BS02	4/2/03	1400	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	~~CC015BS~~ CC118BS02	4/2/03	1400	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC014SS01	4/2/03	1400	S	7	C	✓	✓	✓	✓	✓	✓	✓			
	CC114SS01	4/2/03	1400	S	7	C	✓	✓	✓	✓	✓	✓	✓			
	CC022SS01	4/2/03	1430	S	7	C	✓	✓	✓	✓	✓	✓	✓			
	CC035SS01	4/2/03	1500	S	7	C	✓	✓	✓	✓	✓	✓	✓			

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted]	4/2/03	1805	
Relinquished By: (2) b6	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier: DHL

Shipping Ticket No:

Temperature C:

Data Deliverables:

Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1132

CHAIN OF CUSTODY RECORD

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Laboratory Division

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(1) CLIENT: Samsung / EE01 MNA
CONTACT: [redacted] bb PHONE NO: [redacted] bb
PROJECT: MNA 10144 PWSID#:
REPORTS TO: [redacted] bb
FAX NO: [redacted] bb
INVOICE TO: MNA bb QUOTE#: bb
P.O. NUMBER:

CT&E Reference:

PAGE 3 OF 3

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G ([illegible])	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC022BS01	4/2/03	1545	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC023BS01	4/2/03	1653	S	5	C	✓	✓	✓	✓	[illegible]	✓	[illegible]		✓	
	CC 123 BS01	4/2/03	1653	S	5	C	✓	✓	✓	✓	✓	✓	✓		✓	
	CC 029 BS02	4/2/03	1110	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Trip blank	4/2/03	—	W	2	—	✓								✓	

Preservatives Used / Analysis Required (3)

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] bb	4/6/03	1805	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4) Shipping Carrier: DHL
Shipping Ticket No.:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

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① CLIENT: Samsung/FEDI MNA
CONTACT: [redacted] b6 PHONE NO: [redacted] b6
PROJECT: MNA '01UU PWSID#: b6
REPORTS TO: [redacted] b6 FAX NO: ([redacted] b6
INVOICE TO: MNA QUOTE# b6
P.O. NUMBER:

CT&E Reference:
PAGE 1 OF 2

② / ③

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G (AK101M)	TPH-D (AK102M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	Reg'td metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC027BS01	4/3/03	0811	S	5	C	✓	✓	✓	✓	✓	✓	✓		✓	
	CC027BS02	4/3/03	0847	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC052SS01	4/3/03	1340	S	5	C	✓	✓	✓	✓	✓	✓	✓			
	CC061SS01	4/3/03	1430	S	5	C	✓	✓	✓	✓	✓	✓	✓			
	CC061BS01	4/3/03	1440	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC161BS01	4/3/03	1440	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC062SS01	4/3/03	1500	S	5	C	✓	✓	✓	✓	✓	✓	✓			
	CC065SS01	4/3/03	1500	S	3	C		✓	✓	✓			✓			
	CC065BS01	4/3/03	1515	S	5	C	✓	✓	✓	✓	✓	✓	✓		✓	
	CC060SS01	4/3/03	1540	S	5	C	✓	✓	✓	✓	✓	✓	✓			

⑤

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	4/3/03	1730	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④ Shipping Carrier: DHL
Shipping Ticket No.:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

CHAIN OF CUSTODY RECORD

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PAGE 2 OF 2

(1) CLIENT: Samsung/ FED/ MNA [redacted]@aloha.net
CONTACT: [redacted] b6 PHONE NO: [redacted]
PROJECT: MNA 10144 - Cpl. Carroll PWSID#:
REPORTS TO: [redacted] b6 [redacted] b6
FAX NO: [redacted] b6
INVOICE TO: MNA b6 QUOTE# b6
P.O. NUMBER:

CT&E Reference:

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	(3) Preservatives Used / Analysis Required: TPH-G (AK101)	TPH-D (AK102/3)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC060BS01	4/3/03	1550	S	~~5~~ 6	C	✓	✓	✓	✓	✓	✓	✓		✓	
							✓	✓	✓	✓	✓	✓	✓			

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	4/3/03	17:30	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier: DHL
Shipping Ticket No.:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

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① CLIENT: Samsung/FEDI MNA [redacted] b6 @alohanet

CONTACT: [redacted] b6 PHONE NO: [redacted]

PROJECT: MNA 10144-Cp. Carroll PWSID#:

REPORTS TO: [redacted] b6 [redacted] b6

FAX NO: [redacted]

INVOICE TO: MNA b6 QUOTE# b6

P.O. NUMBER:

CT&E Reference:

PAGE 1 OF 2

②

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G (8015m)	TPH-D (8015m)	SVOC (8270c)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	REMARKS
	~~0~~ CC063SS01	4/4/03	0905	S	5	C	✓	✓	✓	✓	✓	✓	✓			
	CC063BS01	4/4/03	0920	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC058SS01	4/4/03	0925	S	3	C		✓	✓	✓		✓	✓			
	CC158SS01	4/4/03	0925	S	3	C		✓	✓	✓		✓	✓			
	CC058BS01	4/4/03	0935	S	5	C	✓	✓	✓	✓	✓	✓	✓		✓	
	CC056SS01	4/4/03	0935	S	5	C	✓	✓	✓	✓	✓	✓	✓			
	CC055SS01	4/4/03	1003	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓		
	CC051SS01	4/4/03	1010	S	6	C	✓	✓	✓	✓	✓	✓	✓	✓		
	CC057SS01	4/4/03	1045	S	4	C	✓	✓	✓	✓	✓	✓	✓			
	CC157SS01	4/4/03	1045	S	4	C	✓	✓	✓	✓	✓	✓	✓			

③ Preservatives Used / Analysis Required

⑤

	Date	Time	
Collected/Relinquished By: (1) [redacted] b6	4/4/03	17:00	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④ Shipping Carrier: DHL

Shipping Ticket No:

Temperature C:

Data Deliverables:

Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

0-720

1136

CHAIN OF CUSTODY RECORD

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CT&E Reference:

PAGE 2 OF 2

1 CLIENT: Samsung/ FED/ MNA [redacted]@alohanet
CONTACT: [redacted] (b6) PHONE NO: [redacted]
PROJECT: MNA 10144 - Cp. Carroll PWSID#:
REPORTS TO: [redacted] (b6)
FAX NO: [redacted] (b6)
INVOICE TO: MNA (b6) QUOTE# (b6)
P.O. NUMBER:

2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	Preservatives Used	Analysis Required (3) TPH-G (AK101m)	TPH-D (AK101m)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC059SS01	4/4/03	1050	S	4	C		✓	✓	✓	✓	✓	✓	✓			
	CC067SS01	4/4/03	1305	S	6	C		✓	✓	✓	✓	✓	✓	✓			
	~~CC068SS01~~ CC069SS01	4/4/03	1400	S	4	C		✓	✓	✓	✓	✓	✓				
	CC070SS01	4/4/03	1446	S	4	C		✓	✓	✓	✓	✓	✓	✓			

5

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted]	4/4/03	17:00	
Relinquished By: (2) (b6)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

4 Shipping Carrier: DHL
Shipping Ticket No.:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

1137

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

CHAIN OF COUSTODY RECORD

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(1) CLIENT: Samsung / FED / MNA [redacted]@aloha.net b6

CONTACT: [redacted] b6 PHONE NO: [redacted]

PROJECT: MNA 101441 - Co. Carroll PWSID#: b6

REPORTS TO: b6 [redacted] b6

[redacted] b6 FAX NO: [redacted] b6

INVOICE TO: MNA QUOTE#

P.O. NUMBER:

CT&E Reference:

PAGE 1 OF 1

(3) Preservatives Used / Analysis Required

(2) LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC024BS01	4/8/03	0950	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC024BS02	4/8/03	1030	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC024BS03	4/8/03	1057	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	

(5)

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted] b6	4/8/03	1535	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4) Shipping Carrier: DHL

Shipping Ticket No:

Temperature °C:

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Data Deliverables:

Level I Level II Level III EDD Type:

Requested Turnaround Time and Special Instructions:

200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1138

CHAIN OF CUSTODY RECORD

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- New Orleans

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CT&E Reference:

PAGE 1 OF 1

(1) CLIENT: Samsung/FEDI MNA [redacted]@aloha.net
CONTACT: [redacted] b6
PHONE NO: [redacted] b6
PROJECT: MNA 10144 - Cp. Carroll PWSID#: b6
REPORTS TO: [redacted] b6
FAX NO: [redacted] b6
INVOICE TO: MNA b6
QUOTE#
P.O. NUMBER:

(2)

LAB NO	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	TPH-G (8015m)	TPH-D (8015m)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC001BS01	4/9/03	0820	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC080BS01	4/9/03	1040	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC180BS01	4/9/03	1040	S	4	C	✓	✓	✓	✓	✓	✓	✓		✓	
	~~CC007SS01~~ Cho 4/9/03 CC054SS01	4/9/03	1340	S	3	C		✓	✓	✓	✓	✓	✓			
	~~CC007BS01~~ Cho 4/9/03 CC054BS01	4/9/03	1540	S	4	C	✓	✓	✓	✓	✓	✓	✓		✓	

(3)

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted] b6	4/9/03	17:00	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier: DHL
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

0-720

CHAIN OF CUSTODY RECORD

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Laboratory Division

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PAGE 1 OF 1

CTE Reference:

(1)
CLIENT: Samsung FED/MNA [redacted] b6 @aloha.net
CONTACT: [redacted] b6
PHONE NO: [redacted]
PROJECT: MNA 10144 - Cp. Carroll
PWSID#: b6
REPORTS TO: [redacted] b6
FAX NO: [redacted] b6
INVOICE TO: MNA b6
QUOTE# b6
P.O. NUMBER:

(2), (3)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA metals	Dioxin (8290)	VOC (8260B)	REMARKS
	CC066SS01	4/11/03	0820	S	5	C	V	V	V	V	V	V	V	V		
	CC066BS01	4/11/03	0905	S	5	C	V	V	V	V	V	V	V	V	V	
	CC066BS02	4/11/03	1135	S	4	C	V	V	V	V	V	V	V		V	

Preservatives Used / Analysis Required

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted]	4/11/03	1415	
Relinquished By: (2) b6	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: [illegible]
Shipping Ticket No.:
Temperature C:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Data Deliverables: Level I Level II Level III EDD Type:
Requested Turnaround Time and Special Instructions:

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① CLIENT: Saingsung/ FED/ MNA [redacted] @aloha.net b6

CONTACT: [redacted] b6 PHONE NO: [redacted] b6

PROJECT: MNA 101164 - Cp. Carroll PWSID#:

REPORTS TO: [redacted] b6 [redacted] b6 FAX NO: ([redacted] b6

INVOICE TO: MNA QUOTE# P.O. NUMBER:

CT&E Reference: PAGE 1 OF 1

② ③ Preservatives Used / Analysis Required

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA metals	Dioxin (8290)	VOC (8260B)	REMARKS
	~~CC037BS01~~	~~0855~~ 04/12/03	~~0855~~		Chn 4/12/03											
	CC037BS01	04/12/03	0855	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC037BS02	04/12/03	0955	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	

⑤

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted]	4/12/03	1350	Received By:
Relinquished By: (2) b6	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④ Shipping Carrier: DHL
Shipping Ticket No:
Temperature C:

Data Deliverables:
Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1141

CHAIN OF CUSTODY RECORD

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(1)
CLIENT: Samson / FEDI MNA [redacted] @alaska.net
CONTACT: [redacted] b6 PHONE NO: [redacted] b6
PROJECT: MNA ... – Cp. Amsell PWSID#:
REPORTS TO: [redacted] b6 b6 b6 FAX NO: [redacted] b6
INVOICE TO: MNA QUOTE#
P.O. NUMBER:

CT&E Reference:
PAGE 1 OF 1

(2) / **(3)**

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G [illegible]	TPH-D [illegible]	SVOC (8270C)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	VOC (8260B)	REMARKS
	CC036BS01	4/14/03	0830	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Preservatives Used:
Analysis Required

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	4/14/03	1140	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: DHL
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1142

CHAIN OF CUSTODY RECORD

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**① **

CLIENT: Sawmill / FEDI MNA [redacted] b6 Dolohanet		CT&E Reference:	PAGE 1 OF 1
CONTACT: [redacted] b6	PHONE NO: [redacted]		
PROJECT: MNA 70144 - Cp. Carroll	PWSID#: b6		
REPORTS TO: [redacted] b6	FAX NO: [redacted]		
INVOICE TO: MNA	b6 QUOTE#: b6		
	P.O. NUMBER:		

② ③

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G (SC8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA Metals	Dioxins (8290)	VOC (8260B)	REMARKS
	CC040SS01	4/15/05	1105	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓		
	CC040BS01	4/15/05	1315	S	5	C	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Preservatives Used / Analysis Required

⑤

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted]	4/15/05	14:00	
Relinquished By: (2) b6	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④

Shipping Carrier: DHL	Temperature C:
Shipping Ticket No:	
Data Deliverables: Level I Level II Level III EDD Type:	Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:	

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1143

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- Michigan
- West Virginia
- Maryland
- New Jersey
- New Orleans

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(1)

CLIENT: Samsung / TEC/MNA [redacted] @alaska.net

CONTACT: [redacted] PHONE NO: [redacted]

PROJECT: MNA 10144 - Cp. Carroll PWS#D#:

REPORTS TO: [redacted]

FAX NO: [redacted]

INVOICE TO: MNA QUOTE#

P.O. NUMBER:

CT&E Reference:

PAGE 1 OF 1

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	(3) Analysis Required: Metals (MNA)	REMARKS
	CC001SS01	5/21/03	1105	Soil	1	C		✓	
	CC001BS01	5/20/03	1215	S	1	C		✓	
	CC004SS01	5/21/03	1155	S	1	C		✓	
	CC010SS01	5/21/03	1420	S	1	C		✓	
	CC013SS01	5/21/03	1446	S	1	C		✓	
	CC010BS01	5/20/03	1520	S	1	C		✓	
	CC010BS02	5/20/03	1546	S	1	C		✓	
	CC025SS01	5/21/03	1002	S	1	C		✓	
	CC019SS01	5/21/03	1059	S	1	C		✓	

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted]	5/21/03	1105	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Receivec For Laboratory By:

(4)

Shipping Carrier: FEDEX — Temperature C:

Shipping Ticket No:

Data Deliverables:

Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

hhll

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

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1145

(1)

CLIENT:	Samsung / TED / MNA [redacted] @ ... .net b6
CONTACT:	[redacted] b6
PHONE NO:	[redacted]
PROJECT:	MNA 10144 Co. Carroll
PWSID#:	b6
REPORTS TO:	b6 [redacted]
FAX NO:	[redacted] b6
INVOICE TO:	MNA b6
QUOTE#	b6
P.O. NUMBER:	

CT&E Reference:

PAGE 1 OF 1

(2) (3)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (8260B)	VOC (8260B)	Pest/PCB (8081A + 8082)	Malathion (8141)	Herbicides (8151A)	SVOC (8270C)	TPH-D (8015B)	Dexin (8290)	[illegible]	REMARKS
	CC03BAWS01	5/20/03	12:30	Water	13	G	✓	✓	✓	✓	✓	✓	✓		✓	
	HCl TB	"	"	HCl	1											

Preservatives Used / Analysis Required

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	5/20/03	18:14	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier: Fedex

Shipping Ticket No:

Temperature C:

Data Deliverables:

Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

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(1)
CLIENT: Samsung / TED / MNA [redacted] b6 @ [illegible]
CONTACT: [redacted] b6 PHONE NO: [redacted] b6
PROJECT: MNA 1944 - Cp. Carroll PWS D#:
REPORTS TO: [redacted] b6 [redacted] b6 FAX NO: [redacted] b6
INVOICE TO: b6 QUOTE#
MNA P.O. NUMBER:

CT&E Reference:
PAGE 1 OF 1

(2) (3)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used / Analysis Required: Methylmercury (EPA)										REMARKS
	CC015SS01	5/28/03	1225	S	1	C	✓										
	CC008SS01	5/28/03	1412	S	1	C	✓										
	CC009SS01	5/28/03	1440	S	1	C	✓										
	CC006SS01	5/28/03	1510	S	1	C	✓										
	CC006BS01	5/28/03	1528	S	1	C	✓										
	CC006BS02	5/28/03	1552	S	1	C	✓										
	CC031SS01	5/28/03	1626	S	1	C	✓										
	TP			W	1												

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	5/28/03	17:30	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: FedEx
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1146

CHAIN OF COUSTODY RECORD

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① CLIENT: Samsung/FED/MNA [redacted] @alcha.net		CT&E Reference:	PAGE 1 OF 1
CONTACT: [redacted] 66	PHONE NO: [redacted]		
PROJECT: MNA 1.144 - Cp. Campbell	PWSID#: 66		
REPORTS TO: [redacted] 66	[redacted] 66		
[redacted]	FAX NO: [redacted] 66		
INVOICE TO: 66	QUOTE# 66		
MNA	P.O. NUMBER:		

Preservatives Used / Analysis Required ③

② LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	TPH-G (8015B)	VOC (8260B)	Pest/PCB (8081+8082)	Multi-Hlip (8141)	Herbicides (8151A)	SVOC (8270C)	TPH-D (8015B)	RCRA 8 metals	Dioxin (8290)	Extract	REMARKS
	CC001WS01	5/28/03	1235	W	14	7	✓	✓	✓	✓	✓	✓	✓	✓		✓	Extra 2EA
	HCl TP	5/28/03		HCl	3												
	CC024WE01	5/28/03	1145	W	15		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Extra 2EA

⑤ Collected/Relinquished By: (1) [redacted] 66	Date 5/28/03	Time 18:30	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④ Shipping Carrier: FedEx	Temperature C:
Shipping Ticket No:	
Data Deliverables: Level I Level II Level III EDD Type:	Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:	

200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

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① CLIENT: Samsung / TED / MNA [redacted] b6 @alaska.net
CONTACT: [redacted] b6 PHONE NO: [redacted]
PROJECT: MNA 10144 - Cp. [illegible] PWSID#: b6
REPORTS TO: [redacted] b6 FAX NO: [redacted] b6
INVOICE TO: MNA b6 QUOTE# b6
P.O. NUMBER:

CT&E Reference:
PAGE 1 OF 2

② / ③ Preservatives Used / Analysis Required: Metals (8141)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Metals (8141)									REMARKS
	CC026SS01	5/29/03	1010	S	1	C	✓									
	CC032SS01	5/29/03	1015	S	1	C	✓									
	CC026BS01	5/29/03	1036	S	1	C	✓									
	CC030SS01	5/29/03	1055	S	1	C	✓									
	~~CC026BS01~~ [illegible]	~~5/29/03~~	~~1105~~	~~S~~	~~1~~	~~C~~	~~✓~~									
	CC026BS02-1	5/29/03	1105	S	1	C	✓									
	CC026BS02-2	5/29/03	1105	S	1	C	✓									
	CC035-~~BS~~ SS01	5/29/03	1130	S	1	C	✓									
	CC040SS01	5/29/03	1148	S	1	C	✓									
	CC040BS01	5/29/03	1322	S	1	C	✓									

⑤

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	5/29/03	18:30	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④ Shipping Carrier: FedEx
Shipping Ticket No:
Temperature C:
Data Deliverables: Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1148

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① CLIENT: Samsung / FED / MNA [redacted] b6 @alaska.net
CONTACT: [redacted] b6 PHONE NO: [redacted] b6
PROJECT: MNA 10/46 – Cp. Carroll PWSID#:
REPORTS TO: [redacted] b6
[redacted] FAX NO: [redacted] b6
INVOICE TO: MNA QUOTE#
P.O. NUMBER:

CT&E Reference:

PAGE 2 OF 2

② ③ Preservatives Used / Analysis Required

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Malathion (8141)									REMARKS
	CC029SS01	5/29/03	1500	S	1	C	✓									
	CC021SS01	5/29/03	1536	S	1	C	✓									
	CC026SS01	5/29/03	1556	S	1	C	✓									
	CC025SS01	5/29/03	1628	S	1	C	✓									
	CC038BS01	5/29/03	1654	S	1	C	✓									
	CC037BS01	5/29/03	1018	S	1	C	✓									
	CC031BS02	5/29/03	1948	S	1	C	✓									
	TP			W	1											

⑤

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted] b6	5/29/03	18:30	
Relinquished By: (2)			Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)			Received For Laboratory By:

④ Shipping Carrier: Fedex
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1149

CHAIN OF CUSTODY RECORD

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(1)
CLIENT: [illegible] [redacted] [illegible] b6
CONTACT: [redacted] b6 PHONE NO: [redacted]
PROJECT: MNA 10144 - [illegible] PWSID#: b6
REPORTS TO: [redacted] b6 FAX NO: [redacted] b6
INVOICE TO: MNA b6 QUOTE# b6
P.O. NUMBER:

CT&E Reference:

PAGE 1 OF 1

(2) (3)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (8015B)	VOC (8260B)	Pest/PCB (8081A/8082)	[illegible] (8141)	Herbicides (8151A)	SVOC (8270C)	TPH-D (8015B)	Dioxins (8290)	RCRA 8 metals	REMARKS
	CC039WS01	5/29/03	1235	W	14		✓	✓	✓	✓	✓	✓	✓		✓	[illegible]
	CC012WS01	5/29/03	1925	W	14		✓	✓	✓	✓	✓	✓	✓		✓	"
	HCl TP	5/29/03			3											

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	5/29/03	19:30	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: FedEx
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

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① CLIENT: Samsung / TtED / MNA [redacted] @ alaska.net b6

CONTACT: [redacted] b6 PHONE NO: [redacted] b6

PROJECT: MNA 10144 - Cp. Corrall PWSID#: b6

REPORTS TO: [redacted] b6 FAX NO: [redacted] b6

INVOICE TO: MNA b6 QUOTE# b6

P.O. NUMBER:

CT&E Reference:

PAGE 1 OF 2

③ Preservatives Used / Analysis Required: Mult. Incr. (AK) ; VOC (8260B)

② LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Mult. Incr. (AK)	VOC (8260B)								REMARKS
	CC0025S01	6/2/03	1031	S	1	C	✓									
	CC0095S01	6/2/03	1059	S	1	C	✓									
	CC0145S01	6/2/03	1122	S	1	C	✓									
	CC028BS01	6/2/03	1200	S	2	C	✓	✓								
	CC128BS01	6/2/03	1200	S	2	C	✓	✓								
	CC028BS02	6/2/03	1231	S	2	C	✓	✓								
	CC1035S01	6/2/03	1031	S	1	C	✓									
	CC1095S01	6/2/03	1059	S	1	C	✓									
	CC1145S01	6/2/03	1122	S	1	C	✓									
	CC0195S01	6/2/03	1305	S	1	C	✓									

⑤

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	6/2/03	20:00	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④ Shipping Carrier: Fedex

Shipping Ticket No:

Temperature C:

Data Deliverables:

Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-3656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

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(1)
CLIENT: Samsung/TED/MNA [redacted] Rolcharent
CONTACT: [redacted] b6
PHONE NO: [redacted]
PROJECT: MNA 1444 - Cp. Carroll
PWSID#: b6
REPORTS TO: [redacted] b6 [redacted] b6
[redacted] b6
FAX NO: [redacted]
INVOICE TO: MNA
QUOTE#: b6
P.O. NUMBER:

CT&E Reference:

PAGE 2 OF 2

(2) (3)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE (C = COMP, G = GRAB)	Munitions ([illegible])	VOC (8260B)								REMARKS
	CC0118S01	6/2/03	1816	S	2	C	✓	✓								
	CC0118S02	6/2/03	1818	S	2	C	✓	✓								
	CC0118S03	6/2/03	[illegible]	S	2	C	✓	✓								
	CC0183S01	6/2/03	1658	S	1	C	✓									
	CC0118S01	6/2/03	1913	S	2	C	✓	✓								
	CC0118S02	6/2/03	1944	S	2	C	✓	✓								
	CC1128S02	6/2/03	1946	S	2	C	✓	✓								
	CC0244S01	6/2/03	1920	S	2	C	✓	✓								
	CC0244S02	6/2/03	1920	S	2	C	✓	✓								
	CC0244S03	6/2/03	1920	S	2	C	✓	✓								

(5)

Collected/Relinquished By: (1) [redacted] b6	Date 6/2/03	Time [illegible]	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: ~~[illegible]~~ FedEx
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

CHAIN OF CUSTODY RECORD

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(1)
CLIENT: Samsung / FED / MNA [redacted] b6 [illegible]
CONTACT: [redacted] b6 PHONE NO: [redacted] b6
PROJECT: MNA [illegible] PWSID#:
REPORTS TO: [redacted] b6 [redacted] b6
FAX NO: [redacted] b6
INVOICE TO: MNA QUOTE#
P.O. NUMBER:

CT&E Reference:
PAGE 1 OF 1

(2) (3)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (8015B)	VOC (8260B)	Pest/PCBs (8081A/8082)	Metals (6141)	Herbicides (8151A)	SVOC (8270C)	TPH-D (8015B)	Dioxin (8290)	RCRA Metals	REMARKS
	CC039WSC1	1/2/03	1230	W	15		✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CC139WS01	1/2/03	1230	W	15		✓	✓	✓	✓	✓	✓	✓	✓	✓	
	CCW3TTS01	1/2/03	1425	W	14		✓	✓	✓	✓	✓	✓	✓		✓	

Preservatives Used / Analysis Required

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	1/2/03	[illegible]	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: FedEx
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1153

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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www.cteesi.com

① CLIENT: [illegible] /RED/ MNA b6 [redacted] @[illegible].net
CONTACT: [redacted] b6 PHONE NO: [redacted]
PROJECT: MNA [illegible] PWSID#: b6
REPORTS TO: [redacted] b6 FAX NO: [redacted] b6
INVOICE TO: MNA QUOTE#
P.O. NUMBER:

CT&E Reference:

PAGE 1 OF 2

③ Preservatives Used / Analysis Required

LAB NO	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	[illegible]	[illegible]								REMARKS
	[illegible]	[illegible]	[illegible]	S	1	[illegible]	✓									
	[illegible]	[illegible]	[illegible]	S	2	C	✓	✓								
	[illegible]	[illegible]	[illegible]	S	1	C	✓									
	[illegible]	[illegible]	[illegible]	S	1	C	✓									
	[illegible]	[illegible]	[illegible]	S	1	C	✓									
	[illegible]	[illegible]	[illegible]	S	1	C	✓									
	[illegible]	[illegible]	[illegible]	S	1	C	✓									
	~~[illegible]~~	~~[illegible]~~														
	[illegible]	[illegible]	[illegible]	S	1	C	✓									
	[illegible]	[illegible]	[illegible]	S	1	C	✓									

⑤

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	[illegible]	[illegible]	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④ Shipping Carrier: [illegible]
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1154

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

- Alaska
- Michigan
- West Virginia
- Maryland
- New Jersey
- New Orleans

www.cteesi.com

(1)

CLIENT: Samsung/TIED/MNA [redacted]@alpha.net

CONTACT: [redacted] b6 PHONE NO: [redacted] b6

PROJECT: MNA 10144 - Gr. Cornell PWSID#:

REPORTS TO: [redacted] b6 b6 FAX NO: [redacted] b6 b6

INVOICE TO: MNA QUOTE#

P.O. NUMBER:

CT&E Reference:

PAGE 2 OF 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	Analysis Required (3)	REMARKS

5511

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted]			
Relinquished By: (2) b6	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier:	Temperature C:
Shipping Ticket No:	
Data Deliverables: Level I Level II Level III EDD Type:	Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:	

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

0-720

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

- Alaska
- Michigan
- West Virginia
- Maryland
- New Jersey
- New Orleans

www.cteesi.com

(1)
CLIENT: [redacted]
CONTACT: [redacted] PHONE NO: [redacted]
PROJECT: [redacted] PWSID#:
REPORTS TO: [redacted]
FAX NO:
INVOICE TO: QUOTE#
P.O. NUMBER:

CT&E Reference:

PAGE 2 OF 3

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	Analysis Required (3)								REMARKS

(5)

Collected/Relinquished By: (1) [redacted]	Date	Time	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)

Shipping Carrier: Fedex	Temperature C:
Shipping Ticket No:	
Data Deliverables: Level I Level II Level III EDD Type:	Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:	

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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www.cteesi.com

① CLIENT: Samsung / TED / MNA [redacted] b6 aloha.net

CONTACT: [redacted] b6 PHONE NO: [redacted] b6

PROJECT: MNA [illegible] PWSID#:

REPORTS TO: b6 [redacted] b6

FAX NO: [redacted] b6

INVOICE TO: MNA QUOTE#

P.O. NUMBER:

CT&E Reference:

PAGE 1 OF 1

②

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	③ Analysis 1	Analysis 2	Analysis 3	Analysis 4	Analysis 5	Analysis 6	Analysis 7	Analysis 8	Analysis 9	REMARKS
	~~[illegible]~~	~~[illegible]~~														
	CC [illegible] TS01	[illegible]	[illegible]	W	14		V	V	V	V	V	V	V		V	
	TP	[illegible]	[illegible]	W	1											

Preservatives Used / Analysis Required: [illegible handwritten analysis headings]

⑤

	Date	Time	Received By:
Collected/Relinquished By: (1) [redacted]	[illegible]	[illegible]	
Relinquished By: (2) b6			Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)			Received For Laboratory By:

④ Shipping Carrier: FedEx

Shipping Ticket No:

Temperature C:

Data Deliverables:

Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1157

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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www.cteesi.com

CLIENT: Samsung / TED / MNA b6 [redacted] @abha.net
CONTACT: [redacted] b6 PHONE NO [redacted]
PROJECT: MNA 1014 - Gp. Carroll PWSID#: b6
REPORTS TO: [redacted] b6 b6 FAX NO: [redacted] b6 b6
INVOICE TO: MNA QUOTE#
P.O. NUMBER:

CT&E Reference:
PAGE 1 OF 2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (8015B)	VOC (8260B)	Pest/PCBs (8081A/8082)	Methathion (8141)	Herbicides (8151A)	SVOC (8270C)	TPH-D (8015B)	Dioxin (8290)	RCRA 8 metals	REMARKS
	CC[illegible]	[illegible]	[illegible]	S	[illegible]	C	✓		✓	✓	✓	✓	✓		✓	
	CC[illegible]	[illegible]	[illegible]	S	7	C	✓		✓	✓	✓	✓	✓		✓	
	CC[illegible]	[illegible]	[illegible]	S	8	C	✓		✓	✓	✓	✓	✓	✓	✓	
	CC[illegible]	[illegible]	[illegible]	S	8	C	✓		✓	✓	✓	✓	✓	✓	✓	
	~~[illegible]~~															
	CC[illegible]	[illegible]	[illegible]	S	8	C	✓		✓	✓	✓	✓	✓	✓	✓	

Preservatives Used
Analysis Required (3)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	[illegible]	[illegible]	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

Shipping Carrier: Fedex
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1158

CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

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(1)
CLIENT: [illegible] [redacted] b6 [illegible]
CONTACT: [redacted] b6 PHONE NO [redacted]
PROJECT: [illegible] [redacted] PWSID#: b6
REPORTS TO [redacted] b6
FAX N [redacted]
INVOICE TO: [illegible] b6 QUOTE# b6
P.O. NUMBER:

CT&E Reference:
PAGE [illegible] OF [illegible]

(2) (3)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Analysis Required: [illegible]	[illegible]	[illegible]	[illegible]						REMARKS
	[illegible]	[illegible]	[illegible]	[illegible]	1	C	✓									
	[illegible]	[illegible]	[illegible]	[illegible]	1	C	✓									
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	✓									
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	✓									
	[illegible]	[illegible]	[illegible]	[illegible]	2	C	✓	✓	✓	✓						
	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]	✓	✓	✓	✓						
	[illegible]	[illegible]	[illegible]	[illegible]	2	C	✓	✓	✓	✓						
	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	✓									
	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]	✓									
	[illegible]	[illegible]	[illegible]	[illegible]	1	C	✓									

(5)

Collected/Relinquished By: (1)	Date	Time	Received By:
[redacted] b6	[illegible]	[illegible]	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

(4)
Shipping Carrier: [illegible]
Shipping Ticket No:
Temperature C:
Data Deliverables:
Level I Level II Level III EDD Type:
Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
Requested Turnaround Time and Special Instructions:

200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax. (907) 474-9585

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

1159

CHAIN OF COUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

• Alaska • Michigan • West Virginia
• Maryland • New Jersey • New Orleans
www.cteesi.com

① CLIENT: Samsung / FED / MNA [redacted] b6

CONTACT: [redacted] b6 **PHONE NO:** [redacted]

PROJECT: MNA [illegible] **PWSID#:** b6

REPORTS TO: b6 [redacted] b6 **FAX NO:** [redacted] b6

INVOICE TO: MNA b6 **QUOTE#** **P.O. NUMBER:**

CT&E Reference:

PAGE 1 **OF** 1

②

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	TPH-G (8015B)	VOC (8260B)	PAH/PCB/8082	Metals (6010)	Herbicides (8151)	SVOC (8270C)	TPH-D (8015B)	Dioxin (8290)	RCRA Metals	REMARKS
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		✓	✓	✓	✓	✓	✓	✓	✓	✓	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		✓	✓	✓	✓	✓	✓	✓		✓	
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		✓	✓	✓	✓	✓	✓	✓	✓	✓	

Preservatives Used / Analysis Required ③

⑤

	Date	Time	
Collected/Relinquished By: (1) [redacted] b6	[illegible]	[illegible]	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:

④

Shipping Carrier:
Shipping Ticket No:
Temperature C:

Data Deliverables:
Level I Level II Level III EDD Type:

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685

White - Retained by Lab (Project File) Yellow - Returned with Report Pink - Retained by Sampler
0-720

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT STL

Client: Samsung/FEDI/MNA	Project Manager: [redacted] b6	Date: 4/1/03	Chain of Custody Number: 01210
Address: 98-099 UAO PLACE #1101	Telephone Number (Area Code)/Fax Number: [redacted] b6	Lab Number:	Page: 1 of 1
City: AIEA / State: HI / Zip Code: 96701	Site Contact: [redacted] b6	Lab Contact: [redacted] b6	
Project Name and Location (State): Taku Camp Carroll, Korea	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	# of Cont.	TPH-G (AK101)	TPH-D (AK102/3)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)
CC207SS01	4/1/03	1115				✓	✓						8	✓	✓	✓	✓	✓	✓	✓	✓	
CC203SS01	4/1/03	1440				✓	✓						6	✓	✓	✓	✓	✓	✓	✓		

Special Instructions/ Conditions of Receipt

Cooler: ☑ Yes ☐ No. Cooler Temp: ____

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☑ 10 Days ☐ 15 Days ☐ Other ____

QC Requirements (Specify):

1. Relinquished By: [redacted] b6	Date: 1 Apr. 2003	Time: 1755	1. Received By:	Date:	Time:
2. Relinquished By:	Date:	Time:	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments:

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT STL

Client: Samsung / FEDI MUA	Project Manager: [redacted] b6	Date: 4/2/03	Chain of Custody Number: 01211
Address: 98-077 Ulao Place # 1101	Telephone Number (Area Code)/Fax Number: [redacted] b6	Lab Number:	Page 1 of 1
City: Aiea / State: HI / Zip Code: 96701	Site Contact: [redacted] b6 / Lab Contact: [redacted] b6	Analysis (Attach list if more space is needed)	
Project Name and Location (State): MUA 10144 Co. Carroll, Korea	Carrier/Waybill Number: DHL		
Contract/Purchase Order/Quote No.			Special Instructions/ Conditions of Receipt

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	# Total	TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151A)	RCRA 8 metals	Dioxins (8290)	VOC (8260B)
CC 214 SS01	4/2/03	1400				✓	✓						7	✓	✓	✓	✓	✓	✓	✓		✓
CC 222 BS01	4/2/03	1545				✓	✓						6	✓	✓	✓	✓	✓	✓	✓	✓	✓
CC 228 BS02	4/2/03	1710				✓	✓						5	✓	✓	✓	✓	✓	✓	✓		✓
Trip Blank	4/2/03	—		✓									1	✓								✓

Cooler: ☑ Yes ☐ No Cooler Temp: ____

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☑ Other standard

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [redacted] b6	4/2/03	1805	1. Received By:		
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

[redacted]

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT **STL**

Client	Samsung / FED / MUA
Address	98-099 Uao Place #1101
City	Aiea
State	HI
Zip Code	96701
Project Name and Location (State)	101 Willie C. Carroll, Korea
Contract/Purchase Order/Quote No.	
Project Manager	[redacted] b6
Telephone Number (Area Code)/Fax Number	[redacted] b6
Site Contact	[redacted] b6
Lab Contact	[redacted] b6
Carrier/Waybill Number	DHL
Date	4/23/03
Lab Number	
Chain of Custody Number	01213
Page	1 of 1

Analysis (Attach list if more space is needed)

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Total #	TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Metals (6010A)	RCRA8 metals	Dioxin (8290)	VOC (8260B)	Special Instructions/ Conditions of Receipt
CC227/BS01	4/3/03	0811				✓	✓						5	✓	✓	✓	✓	✓	✓	✓		✓	
CC261/BS01	4/3/03	1440				✓	✓						6	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Cooler: ☑ Yes ☐ No Cooler Temp: ______

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ______ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☑ Other standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By [redacted] b6	4/3/03	17:30	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

1163

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT STL

Client: Samsung/FED/MNA

Project Manager: [redacted] 66

Date: 4/3/03 (Ch.)

Chain of Custody Number: 01215

Address: 98-099 Hao Place #1101

Telephone Number (Area Code)/Fax Number: [redacted] 66

Lab Number:

Page 1 of 1

City: Aiea | State: HI | Zip Code: 96701

Site Contact: [redacted] | Lab Contact: [redacted] 66

Project Name and Location (State): MNA 101 44 - Co. Carroll, Korea

Carrier/Waybill Number: DHL

Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	# jars	TPH-G (8015m)	TPH-D (8015m)	SVOC (8270C)	Pesticides (8081A)	PCBs (8082)	Herbicides (8151)	RCRA 8 metals	Dioxins (8290)	VOC (8260B)
CC 256 SS01	4/14/03	0935				V	V						5	V	V	V	V	V	V	V		
CC 259 SS01	4/14/03	1050				V	V						4	V	V	V	V	V	V	V		

Cooler: ☑ Yes ☐ No Cooler Temp: ____

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (Business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☑ Other standard

QC Requirements (Specify):

		Date	Time
1. Relinquished By	[redacted] 66	4/14/03	19:00
2. Relinquished By			
3. Relinquished By			

	Date	Time
1. Received By		
2. Received By		
3. Received By		

Comments:

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

[redacted] 66

SEVERN TRENT STL

Client	Project Manager	Date	Chain of Custody Number
Samsung/FED/MNA	[redacted] 66 [redacted] @aloha.net	6/2/03	01217

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of
98-099 Uao Place # 1101	[redacted] 66		

City	State	Zip Code	Site Contact	Lab Contact
Ahea HI		96701	[redacted]	[redacted] 66

Project Name and Location (State): 10144 - Cp. Carroll, Korea

Carrier/Waybill Number: DHL 66

Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed) 66

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	# Jars	TPH-G (8015 M)	TPH-D (8015 M)	SVOC (8270)	Pesticides (8081)	PCBs (8082)	Herbicides (8151)	RCRA 8 metals	Dioxin (8290)	VOCs (8260B)	Mollutilian (8141)	Special Instructions/ Conditions of Receipt
CC 2035501	6/2/03	1031				✓							1										✓	
CC 2005501	6/2/03	1059				✓							1										✓	
CC 214 SS01	6/2/03	1122				✓							1										✓	
CC 228 BS02	6/2/03	1231				✓							1										✓	

Cooler: ☑ Yes ☐ No Cooler Temp: ____

Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☑ Other Standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By [redacted] 66	6/2/03	20:00	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

1165

Chain of Custody Record

STL Seattle
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SEVERN TRENT STL

Client: Samsung/FED/MNA
Address: 98-099 Uao Place #1101
City: Aiea | State: HI | Zip Code: 96701
Project Name and Location (State): 10104 - Co. Carroll, Korea
Contract/Purchase Order/Quote No.:

Project Manager: [redacted] @aloha.net b6
Telephone Number (Area Code)/Fax Number: [redacted] b6
Site Contact: [redacted] b6
Lab Contact: [redacted] b6
Carrier/Waybill Number: FEDEX

Date: 6/2/03
Lab Number:
Chain of Custody Number: 01218
Page 1 of 1

Analysis (Attach list if more space is needed): TPH-G (8015M), TPH-D (8015M), SVOC (8270C), Pesticides (8081), PCBs (8082), Herbicides (8151), RCRA 8 metals, Dioxin (8290), VOCs (8260B), Malathion (8141)

Special Instructions/ Conditions of Receipt

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	# Jars	TPH-G	TPH-D	SVOC	Pesticides	PCBs	Herbicides	RCRA 8 metals	Dioxin	VOCs	Malathion	Special Instructions/ Conditions of Receipt
CC [illegible] S01	06/02/03	[illegible]		✓									16	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TP	06/02/03	[illegible]		✓																				

Cooler: ☑ Yes ☐ No Cooler Temp: ______
Possible Hazard Identification: ☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown
Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☑ Other Standard
QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [redacted] b6	6/2/03	12:00	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments:

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-580 (12/02)

1166

Chain of Custody Record

STL Seattle
5755 8th Street E.
Tacoma, WA 98424
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Fax 253-922-5047
www.stl-inc.com

SEVERN TRENT **STL**

Client: Sansuy/FED MNA	Project Manager: [redacted] b6	Date: 6/3/03	Chain of Custody Number: 01216
Address: 98-199 Uao Place #101	Telephone Number (Area Code)/Fax Number: [redacted] b6	Lab Number:	Page 1 of 1
City: Aiea · State: HI · Zip Code: 96701	Site Contact: [redacted] b6 · Lab Contact: [redacted] b6		
Project Name and Location (State): MNA 101WY - Cp. Carroll Korea	Carrier/Waybill Number: DHL		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed)

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	# of Conts	TPH-G (8015M)	TPH-D (8015M)	SVOC (8270C)	Pesticides (8081)	PCBs (8082)	Herbicides (8151)	RCRA 8 metals	Dioxin (8290)	VOC (8260B)	Metals (6010)		Special Instructions/Conditions of Receipt
~~[illegible] BS01~~	~~[illegible]~~																								
~~[illegible]~~																									
CC 242 BS01	06/03/03	10:20				✓							1										✓		
CC 247 BS01	06/03/03	10:45				✓							1										✓		
CC 259 SS01	06/03/03	10:49				✓							1										✓		
CC 261 BS01	06/03/03	10:58				✓							1										✓		
CC 266 SS01	06/03/03	12:44				✓							1										✓		
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~				~~✓~~							~~1~~										~~✓~~		

Cooler: ☒ Yes ☐ No Cooler Temp: ______

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ______ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required (business days): ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days ☐ 15 Days ☐ Other ______

QC Requirements (Specify)

1. Relinquished By: [redacted] b6	Date: 06/03/03	Time: 18:00	1. Received By	Date	Time
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

STL8274-560 (12/02)

1167

Appendix G

Data Validation Report

DATA ASSESSMENT FOR CAMP CARROLL AREA D AND AREA 41 SITE INVESTIGATIONS **CAMP CARROLL, KOREA**

DACA81-00-D-0049
Task Order #24

Field Sampling: April-June, 2003

Data Review Dates: July-August, 2003

Reviewer: [redacted] b6
Myounghee Noh & Associates, L.L.C.
98-099 Uao Place #1101
Aiea, HI 96701
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b6

TABLE OF CONTENTS

1. INTRODUCTION

This project involved an effort to determine the sources of hazardous and toxic waste contamination at Area 41 and Area D in Camp Carroll, Korea. The overall purpose of this data acquisition is to determine the extent and volumes of surface and subsurface soil contamination within the two former landfills. The sampling was designed to understand the following:

- Sources of contamination and migration pathways
- Extent and amount of surface and subsurface soil contamination at Area 41 and Area D
- Extent of contaminated groundwater at Area D
- Remedial alternatives at Area 41 and Area D

This data assessment was performed on 15 primary sample delivery groups (SDGs) and seven (7) QA SDGs to evaluate data usability.

Table 1. Sample Delivery Groups Reviewed

Laboratory	SDG No.	Laboratory	SDG No.
CT&E/SGS, Alaska	1031851	**STL, Seattle**	113100
	1031972		112983
	1032224		112915
	1032133		112974
	1032164		114073
	1032180		114050
	1033164		112899
	1033073		
	1033105		
	1033166		
	1033211		
	1033200		
	1033224		
	1033197		
	1033071		

2. CONTRACT LABORATORIES

SGS Environmental Services, Inc. (a.k.a. CT&E), was the primary laboratory for the project and performed the following analyses:

- Total petroleum hydrocarbons as gasoline (TPH-G) by EPA method 8015B/8021B

- TPH as diesel & oil (TPH-D&O) by EPA method 8015B
- Semivolatile organic compounds (SVOC) by EPA method 8270
- Pesticides by EPA method 8081A
- Polychlorinated biphenyls (PCBs) by EPA method 8082
- RCRA 8 metals by EPA method 6020 (As, Ba, Cd, Cr, Pb, Se, Ag) and 7470/E245.1 (Hg)
- Volatile organic compounds (VOC) by EPA method 8260B
- Herbicides by EPA method 8151A – by Columbia Analytical Services, Redding, CA
- Malathion by EPA method 8141 – by Columbia Analytical Services, Redding, CA
- Dioxins by EPA method 8290 – by Paradigm Analytical Laboratories, Wilmington, NC

Severn Trent Laboratories (STL) Seattle was the QA laboratory for this project and performed the same analyses. Dioxin analysis was performed by STL Sacramento laboratory.

3. DATA ASSESSMENT

The assessment included data check for technical holding times for extraction & analysis and laboratory quality control (QC) data: method blanks; laboratory control samples (LCS); matrix spike and matrix duplicate samples (MS/MSD); surrogate recoveries. Detailed check of instrument calibration and calculations was not performed.

3.1 Initial Inspection of Data

A total of 17 SGS (primary & QC) and seven STL (QA) sample delivery groups contained 844 and 121 analyses, respectively (Table 2). The initial inspection of data included a review of analyses requested and technical holding times.

Two sample shipments (Ref. # 1032224 & 1032225) were delayed. The sample shipment (Ref. 1032224) arrived in the CT&E Alaska laboratory on day 13 after collection, and another sample shipment (Ref. 1032225) arrived past holding times for all analyses. TPH-G, VOC, and herbicide analyses were cancelled for the 1032224 samples, and all analyses were cancelled for the 1032225 samples. In addition, herbicide analysis for eight samples was not performed due to an oversight (samples not logged in) of Columbia Analytical Services, a subcontract laboratory of SGS (Table 3). The laboratory QC data provided for each analysis are summarized in Table 4.

Table 2. Total Number Analytes in Sample Delivery Groups

SDG	TPH-G	TPH-D & O	SVOC	Pesticides	PCBs	Herbicides	RCRA 8 Metals	Dioxin	VOC	Malathion	Total analytes
CT&E 1031820	25	24	24	24	24	24	24	8	6	0	183
CT&E 1031902	12	12	12	12	12	12	12	3	7	0	94
CT&E 1031851	23	21	20	21	20	21	20	5	12	0	163
CT&E 1031972	3	3	3	3	3	3	3	3	3	0	27
CT&E 1032224	0	3	3	3	3	0	3	2	0	0	17
CT&E 1032133	2	2	2	2	2	2	2	2	2	0	18
CT&E 1032164	1	1	1	1	1	1	1	1	1	0	9
CT&E 1032180	2	2	2	2	2	2	2	2	1	0	17
CT&E 1033164	0	0	0	0	0	0	0	0	12	20	32
CT&E 1033073(CAS)	0	0	0	0	0	0	0	0	0	16	16
CT&E 1033105	3	2	2	2	2	2	2	0	3	19	37
CT&E 1033166	3	3	3	3	3	3	3	2	3	3	29
CT&E 1033211	3	3	3	3	3	3	3	2	3	3	29
CT&E 1033200	1	1	1	1	1	1	1	0	1	1	9
CT&E 1033224	8	5	5	5	5	8	5	3	3	15	62
CT&E 1033197	8	8	8	8	8	0	8	1	7	18	74
CT&E 1033071	3	3	3	3	3	3	3	1	3	3	28
Total	97	93	92	93	92	85	92	35	67	98	**844**
STL 113100	5	5	5	5	5	5	5	2	5	0	42
STL 112983	3	2	2	2	2	2	2	0	0	0	15
STL 112915	4	3	3	3	3	3	3	1	3	0	26
STL 112974	2	2	2	2	2	2	2	1	2	0	17
STL 114073	0	0	0	0	0	0	0	0	0	5	5
STL 114050	2	1	1	1	1	1	1	1	2	5	16
STL 112899	2	2	2	2	2	2	2	1	0	0	15
Total	16	13	13	13	13	13	13	5	12	10	**121**

Table 3. Analyses Not Performed

SDG	Sample No.	Note
1032224	1. CC066SS01 2. CC066BS01 3. CC066BS02	Samples arrived in CT&E Alaska laboratory on day 13 after collection. TPH-G, VOC, & herbicide analyses cancelled.
1032225	1. CC063SS01 2. CC063BS01 3. CC058SS01 4. CC158SS01 5. CC058BS01 6. CC056SS01 7. CC055SS01 8. CC051SS01 9. CC057SS01 10. CC157SS01 11. CC059SS01 12. CC067SS01 13. CC069SS01 14. CC070SS01	Samples arrived in CT&E Alaska laboratory past hold time for all analyses. None of the samples were analyzed.
1033197	1. CC059SS01 2. CC056SS01 3. CC037BS03 4. CC037BS04 5. CC037BS05 6. CC037BS06 7. CC137BS06 8. CC037BS07	Samples arrived in Columbia Analytical Services, Redding, but were not logged in. No herbicide analysis was performed on these 8 samples.

Table 4. List of Laboratory QC Data

	Date of extraction & analysis	Method blank	Surrogate recovery	Laboratory control sample	Matrix spike
TPH-G	x	x	x	x	x
TPH-D & O	x	x	x	x	x
SVOC	x	x	x	x	x
Pesticides	x	x	x	x	x
PCBs	x	x	x	x	x
Herbicides	x	x	x	x	x
RCRA 8 Metals	x	x		x	x
Dioxin	x	x		x	x
VOC	x	x	x	x	x
Malathion	x	x	x	x	x

3.2 Method Blanks

The method blank data were assessed to determine possible laboratory contamination. No method blank problems were encountered for the mercury, TPH-G, pesticides, PCBs, herbicides, and malathion analyses; however, detectable quantities of analytes were found in the following SGS sample delivery groups:

- Chromium and/or barium in metals method blanks for the SDGs 1033166, 1033197, 1033200, 1033211, and 1033224
- TPH-D in method blank samples for the SDGs 1031851, 1031972, 1032164, 1032180, 1032224, 1033071, 1033105, 1033166, 1033197, 1033200, 1033211, and 1033224
- TPH-O in method blank samples for 1032224, 1033071, 1033105, 1033200, and 1033211
- SVOC [bis-(2-ethylhexyl)phthalate] in method blank samples for 1033071, 1033105, 1033166, 1033197, 1033200, 1033211, and 1033224
- VOC (2-butanone and/or methylene chloride) in method blank samples for 1031972, 1032133, 1032164, and 1032180
- Dioxins in method blank samples for 1031851, 1031972, 1032133, 1032164, 1032180, 1033071, 1033166, 1033197, and 1033211

STL's method blank sample results were not reviewed. The final assessment report will include the review results.

3.3 Laboratory Control Samples

The overall LCS results for metals, TPH, pesticides, PCBs, VOC, herbicides, dioxins, and malathion indicated reasonable precision and reproducibility in the sample results; however, a few LCS failures were found in the SDGs as shown below:

- TPH-D in 1033105
- SVOC in 1032133, 1032164, 1032180, 1032224, and 1033166
- Malathion in 1033105

Laboratory control data not provided in the data packages:

- Herbicides in 1032133, 1032164, and 1032180
- Dioxins in 1032164

STL's laboratory control sample data were not reviewed. The final assessment report will include the review results.

3.4 Matrix Spike Samples

The overall matrix spike recovery results for metals, TPH-G, PCBs, VOC, and malathion indicated reasonable precision and reproducibility in the sample results; however, matrix spike failures were found in the SDGs as shown below:

- Metals in 1032224
- TPH-D in 1031972 and 1032224
- TPH-O in 1031972
- Pesticides in 1031851, 1031972, 1032164, 1032180, and 1033224
- SVOC in all SDGs
- VOC in 1031851, 1032133, and 1033164
- Herbicides in 1033166, 1033200, and 1033211

Matrix spike recovery data not provided in the data packages:

- TPH-D in 1033071, 1033105, 1033166, 1033200, and 1033211
- TPH-O in 1032180, 1033071, 1033105, 1033166, 1033200, and 1033211
- TPH-G in 1032180
- Pesticides in 1033071, 1033105, 1033166, 1033200, and 1033211
- PCBs in 1033071, 1033105, 1033166, 1033200, and 1033211
- SVOC in 1033105, 1033166, and 1033211
- VOC in 1031972, 1033166, 1033200, and 1033211
- Herbicides in 1031972, 1032133, 1032164, 1032180, 1033071, and 1033105
- Dioxin in all SDGs

STL's matrix spike results were not reviewed. The final assessment report will include the review results.

3.5 Surrogate Recoveries

Surrogate recovery data indicate the ability of the laboratory to execute a particular method with reasonable proficiency. The overall recovery results were good; however, surrogate failures were found in nine pesticide, one TPH-D&O, and one SVOC analyses.

Surrogate recovery failures:

- Pesticides - CC030SS01, CC031SS01, CC066SS0, CC040SS01, CC051SS01, CC055SS01, CC059SS01, CC056SS01, and CC037BS03
- TPH-D&O - CC066SS01
- SVOC - CC039WS01

STL's surrogate data were not reviewed. The final assessment report will include the review results.

4. OVERALL DATA QUALITY

SGS Laboratory Data: The matrix spike recovery failures were not clearly explained by the laboratory; however, laboratory control sample results indicated reasonable precision and reproducibility in the sample results. The surrogate recovery failures do have negative impact on the sample results; therefore, the following results should be considered not usable.

- Pesticides - CC030SS01, CC031SS01, CC066SS0, CC040SS01, CC051SS01, CC055SS01, CC059SS01, CC056SS01, and CC037BS03
- TPH-D&O - CC066SS01
- SVOC - CC039WS01

STL Laboratory Data: STL's laboratory quality control data were not reviewed for this draft report. The final assessment report will include the review results.

Appendix II

Response to Review Comments

Response to Review Comments
Camp Carroll Area D and Area 41 Site Investigations – Final Draft
Dated September 2003

Item No.	Page No.	Comment	Response
1	General	The report should be separated into two parts: Area D and Area 41 unless those areas have identical environmental situation and/or close enough to consider as one spatial regime.	Each of the areas was discussed separately under specific headings. Spatial regime is one of many considerations for the report organization. We chose our format based on the similarity of objectives, site conditions, and target contaminants, etc.
2	General	Avoid repetition unless it's very important to emphasize on the matter repeatedly.	Comment noted.
3	Executive Summary	The executive summary must be concise and summarize what is the scope and what is the purpose of work and what you got from the investigation, and recommendation. Site background and site history should be removed here in executive summary, those are repeatedly appeared in other sections.	The scope of work has been added to the executive summary as requested. The background material was left intact so the executive summary would stand-alone for readers.
4	ES-4	Conceptual Site Model, 2nd par. line 2: the term "aqueous phase contaminants", does it mean the contaminants are liquid phase? Or dissolved in groundwater? Clarify this.	The term "aqueous phase" refers to compounds dissolved in water. The term "non-aqueous phase liquid" or "NAPL" is generally used for liquid phase contaminants. The term "dissolved" has been substituted for the term "aqueous phase" in the text as requested.
5	1-6	1.2. Scope and Objectives, line 3: Change to read to as "as drum storage yard (Area	Text changed as suggested.

		41) and hazardous waste landfill (Area D), respectively."	
6	1-6 to 1-10	Section 1.2.1 and 1.2.2: these sections should be removed because those are appeared in the field activities again. Introduction section is necessarily to cover the scope of work, historic and existing information, not detail for the field and sampling activities. The activities seem to describe detail in other sections.	Text deleted as suggested.
7	1-11	Figure 1-1. Not legible, and replace with a Base map.	Figure 1-1 has been replaced as suggested.
8	Fig. 2-2 and 2-3	The number in the grid cell is not legible in both graphics. Legend should explain all objectives in the graphics too, ie., red and yellow in both figures.	The figures have been revised as suggested.
9	2-5	2.4. Geophysical survey: Was the survey performed prior to the Site Reconnaissance? Did you have clear information where the land fill locates before? If then, describe how the survey was able to perform beforehand. Also be clear when the field activity was started.	The text has been revised to indicate that the landfill boundary was delineated on the basis of information provided by DPW of Camp Carroll.
10	2-6	section 2.5, 2.6 and 2.7: Those field activities seem to be happened at same time with the preliminary site reconnaissance. Is that correct understanding?	The text has been revised to indicate that the site reconnaissance started before the geophysical survey to establish a grid system and site clearance for field activities.
11	2-6	Section 2.5: what was the purpose of trenching? Was the trenching performed for both areas? On the Figures 2-1 and 2-2, it appears that the trenching was only at Area	The text has been revised to indicate that trenching was performed only for Area D to identify and locate potential remaining buried objects.

		D.	
12	2-7	Section 2.7 Rotary Borehole Drilling, 2nd par.: Clarify the CME drill rig does not use an acrylic sleeve for soil sample, it's just a stainless split spoon.	Text revised as suggested.
13	2-6 and 2-7	Describe why the different two sampling equipments were utilized if there is a reason.	The text has been revised to indicate that direct push technology was used to obtain shallow samples quickly and the CME drill rig was used to obtain deeper samples and to install groundwater monitoring wells.
14	General for Section 2	Present a table that show X-Y-Z coordinate for boreholes and monitoring wells, a top of pipe should be appeared for monitoring wells.	The table provided in the text describes the location of monitoring wells by the grid cell identifier. The surveyed well coordinates are provided in the appendices. The "top of pipe" elevation is provided in Table 2-1 as top of casing (TOC) elevation.
15	General for Section 2	For field sampling activities, was the decontamination process performed during each sampling activity? Was any rinsate or duplicate sample collected for QA/QC purpose? If not, describe the reason.	The text has been revised to indicate that Samsung collected duplicate samples and conducted decontamination for all sampling equipment prior to each sampling event. Rinsate samples were not collected because a liner was used during soil sampling activities.
16	ES-1	Spell it out for "WWC"	The acronym WWC has been defined as "Woodward-Clyde Consultants" in the text.
17	3-1	3.1 Geology and Soils: Please double check the basement rock of Camp Carroll. It's known as a Mesozoic Granite if you consider only the Carroll area. And it's hard to believe that granitic gneiss appears intercalation with sedimentary rocks such as schists and limestones.	Text revised to indicate that the basement rock in the vicinity of Camp Carroll is a Mesozoic granite. Text has been revised to indicate other geologic descriptions were reported in previous site assessment reports provided by the client.

		Please get a correct geologic information for the area, and describe the subsurface geology according to that information.	
18	3-3	Section 3.3.3 Aquifer Testing: This section needs to move to appendix, and provide a summary table for the testing instead of the algorithm.	A summary table of calculated aquifer parameters has been added to the text as requested. The aquifer testing discussion has been retained to document the analytical methods and assumptions used.
19	3-5	Section 3.3.4. Groundwater elevations and gradients: Provide a summary table for the groundwater level measurement and it's variation according to the time.	Summary tables of the groundwater elevations are provided in Appendix E.
20	3-7	Section 3.4. Geophysical Survey: Remove the 1st paragraph, it's mentioned previously (Section 2.4.) already. Avoid repetition!!!	Text revised as suggested.
21	3-9 to 3-14	Improve the figures, the numbers are not legible at all. Put a background drawing in order to see where the wells are located with respect to buildings or any identifiable objects. Use the scaled topo site maps with coordinates system.	The figures have been revised as suggested.
22	4-17 to 4-34	Refer to the comments #21.	Refer to response #21.
23	General for Section 4	Appendix F does not have laboratory data, there is only sample COC. You have to present the lab method detection limit at some place else.	The raw laboratory data was submitted with the draft report. The laboratory detection limits are provided in the companion QAPP document.
24	4-49	Table 4-3: Does the residual range mean "oil range"?	The term "residual" has been changed to "oil".
25	5-5	Summary table: indicate which region's PRG was applied for	The summary table has been modified to indicate that USEPA Region 9 PRGs were used.
26	6-1	Section 6: 4th para: it's not	Text revised to indicate that

		clear which area you mention here. Is it for both area? Or one of those?	discussion refers to Area D.
27	6-1	No action: This could not be a recommendation if you know the contaminants could possibly impact to site workers. It does not make sense in terms of reducing potential human health risk by exposure to contaminants.	The text has been revised to indicate that to prevent exposure to site contaminants, site access would need to restricted to workers wearing appropriate personal protective equipment (PPE) if the no-action alternative was adopted. In addition, the text and recommendations in this section have been revised in accordance with the results of the PRE conducted and discussed in Section 5.
28	General	Table 4-3 to 4-14: The chemical results should be presented with the sample depth, not in the order but actual depth of sample retrieved.	The summary tables have been revised to include the sample depth information.
29	6-3	Removal of Contaminated Soils: Is this section describing only for Area D? or including both areas? Why was dioxin-contaminates soil only considered for remediation or removal?	Text revised to indicate that the discussion refers to Area D only. The section has also been revised in accordance with the results of the PRE conducted and discussed in Section 5.
30	General	In the SOW for this project, it should be included the extent of contamination for each contaminants. It does not seem to meet the one of Scope. In order to clarify the vertical extent of contamination the sample depth should be presented along with the chemical results. Also all the figures presented in the report can not easily be legible, and need to put an index map at each figure to recognize where the project sites are located with respect to	The summary tables have been revised to include the depth that each sample was obtained. The figures have been revised, providing for clearer viewing.

		known objectives.	
31	ES-5	5th par. It is suggested that the title be changed to Capping with Clay Liner. What is the Subtitle C criteria?	Title changed to "Cap with Clay Liner". Text revised to cite "RCRA Title 35 Subtitle C".
32	ES-2	2nd par. Line 3, Correct typo to read as "through".	Text corrected as suggested.
33	ES-2	2nd par. The contaminated areas appear to be in the confined areas only, two locations at Area 41 and Area D respectively. If this is the case, shouldn't the contaminants be widespread out instead of confining in the two areas only. What is the contaminant of concerns here to address? Dioxin?	Text refers to other potential sources of contamination that may exist the sites in question. The text has been revised to note that all detections of these compounds may not nccessarily reflect isolated site conditions and should also be reviewed with respect to local background conditions.
34	ES-2	3rd par. Line 2 referenced the personnel reports. Is the statement here from the results of interviews? Personnel reports sound the personnel records. If Interviews were made, they should be included in this report as a part of report. Who was the eye-witness?	The text has been revised to indicate that the information was provided by interviews with onsite personnel. However, the persons interviewed do not want to be identified by name.
35	ES-5	Aren't the part of surface areas covered with pavement? Do those areas still require liner? The areas recommended for the liner should be either highlighted or located on drawings.	The asphalt paving covering portions of the site was not designed and is not maintained to act as a permanent barrier to the infiltration of water at the ground surface. While these areas may provide some protection, the adequacy of existing structures would need to be evaluated by an engineer during the design process.
36	ES-5	Provide a typical cross section for the capping system.	Typical cross sections have been provided for the two proposed capping systems.
37	ES-6	2nd par., Shipping wastes to the States side is unrealistic and not feasible. Remedial	On-site thermal incineration could be considered but would be a regulatory issue too.

		alternatives must be economically and technically feasible. What about thermal incineration?	
38	ES-6 and 7-4	Although the selection of remedial alternatives are not required for the Area 41, isn't it reasonable to assume almost same recommendations for the Area 41 as well?	The selection of remedial alternatives for Area 41 was not part of the scope of work for this project. The report recommends additional site investigation activities in Area 41 to define the limits of the contaminants. If the findings indicate similar concentrations and distributions of contaminants as in Area D, then the same remedial alternatives may be appropriate. However, it should be noted that the remedial alternatives for Area D were predicated on the nature of this site as a former landfill.
39	6-6	Change title to read as "Cap with Geosynthetic Liner"	Title revised as suggested.
40	6-7	Change title to read as "Cap with Caly Liner"	Title revised as suggested.
Additional Review Comments dated June 4, 2004			
1	5-5 & summary tables	**For the criteria of PRG applying for soils** - before applying the PRG numbers for the data, describe what pathway(s) to human was considered for the contaminants. Based on that you could have different PRG numbers, should clarify in the text why you are considering. Only looking at the number at the summary tables, the PRG numbers seem to be from "the table of direct contact exposure pathways" in PRG Region 9.	This portion of Section 5 has been rewritten and now includes the results of a PRE conducted for the sites. The evaluation criteria has been clarified.
2	5-5 & summary tables	**For the risk factor of 1.0E-04,** - Multiplying the cancer	This portion of Section 5 has been rewritten to include the results of a PRE conducted for

		PRG concentrations by 10 or 100 to set "action levels" for triggering remediation or to set less stringent cleanup levels, this practice could lead one to overlook serious noncancer health threats and it is strongly recommended "**consult with a toxicologist or regional risk assessor before doing this**". - following issues also need to discuss in the text because the Risk Factor 1.0 E-04 gives a lot higher than PRG. For example, the concentration of Arsenic in the Area D exceeds the PRG, but no action was recommended. So it should be clear why this level of Arsenic contents can be discarded in remedial action. 1) Are there potential ecological concerns? 2) Is there potential for land use other than those covered by the PRGs (that is, residential and industrial)? 3) Are there other likely human exposure pathways that were not considered in development of the PRGs (e.g. impact to groundwater, local fish consumption, raising beef, dairy, or other livestock)? 4) Are there unusual site conditions (e.g. large areas of contamination, high fugitive dust levels, potential for indoor air contamination)? 5) If any metals should be considered as a target for remediation, should provide	the sites.

		a site-specific background level.	
3	5-5 & summary tables	**For the PRG number for dioxins** - The table seems not to provide the PRG numbers for whole dioxin compounds. Only for 2,3,7,8-TCDD is provided with the number of 1.6E-05 mg/kg in an industrial soil (in the case of direct contact exposure). We prefer to have a summary table of the PRG numbers for dioxins if available as you did for other contaminants.	This portion of Section 5 has been rewritten to include the results of a PRE conducted for the sites.

PARADIGM ANALYTICAL LABORATORIES, INC.

Case Narrative
Paradigm Project **G552-81**

For Method: 8290

- The samples associated with this project did not require any additional confirmational analyses.
- Data meet QA/QC requirements.

[redacted] b6 4/14/04
Data Reviewer Date

Secondary Review
[redacted] b6 6/14/04
Technical Director Date

Or

[redacted] b6
QA Officer Date

N.C. Certification #481 S.C. Certification #99029

1188

Method 8290

1042930001

SGS Environmental

Analytical Data Summary Sheet

Analyte	Amount (pg/g)	EDL (pg/g)	EMPC (pg/g)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.211				
1,2,3,7,8-PeCDD	ND	0.527				
1,2,3,4,7,8-HxCDD	ND	0.527				
1,2,3,6,7,8-HxCDD	ND	0.527				
1,2,3,7,8,9-HxCDD	0.186			37:02	1.36	A
1,2,3,4,6,7,8-HpCDD	0.755			40:06	0.98	A
OCDD	8.86			44:22	0.91	A
2,3,7,8-TCDF	0.283			30:36	0.87	A
1,2,3,7,8-PeCDF	0.105			33:19	1.41	A
2,3,4,7,8-PeCDF	0.0928			33:56	1.36	A
1,2,3,4,7,8-HxCDF	ND	0.527				
1,2,3,6,7,8-HxCDF	0.148			36:06	1.19	A
2,3,4,6,7,8-HxCDF	ND	0.527				
1,2,3,7,8,9-HxCDF	ND	0.527				
1,2,3,4,6,7,8-HpCDF	0.363			38:50	1.14	A
1,2,3,4,7,8,9-HpCDF	ND	0.527				
OCDF	0.473			44:39	0.99	A
Total TCDDs	ND	0.586				
Total PeCDDs	ND	0.827				
Total HxCDDs	0.186					
Total HpCDDs	1.33					
Total TCDFs	0.920		1.51			
Total PeCDFs	0.198		1.19			
Total HxCDFs	0.245		0.401			
Total HpCDFs	0.654					
ITEF TEQ (ND=0)	0.134		0.134			
ITEF TEQ (ND=½)	0.506		0.506			

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930001

Laboratory Information

Project ID:	G552-81
Sample ID:	G552-81-1B
Collection Date/Time:	17-May-04 09:00
Receipt Date:	29-May-04
Extraction Date:	03-Jun-04
Analysis Date:	05-Jun-04

Sample Information

Report Basis:	Dry Weight
Matrix:	Soil
Weight / Volume:	05.37 g
Solids / Lipids:	88.3 %
Original pH :	NA
Batch ID:	WG10361
Filename:	a31may04a_11-13
Retchk:	a31may04a_10-14
Begin ConCal:	a31may04a_10-14
End ConCal:	a31may04a_11-14
Initial Cal:	m8290-122203b

Method 8290

1042930001

SGS Environmental

Analytical Data Summary Sheet

Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifier
Extraction Standards						
$^{13}C_{12}$-2,3,7,8-TCDD	2.0	1.87	93.5	31:16	0.79	
$^{13}C_{12}$-1,2,3,7,8-PeCDD	2.0	1.79	89.5	34:06	1.56	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	2.0	1.63	81.5	36:46	1.24	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	2.0	1.78	89.0	40:05	1.06	
$^{13}C_{12}$-OCDD	4.0	2.77	69.3	44:21	0.83	
$^{13}C_{12}$-2,3,7,8-TCDF	2.0	1.70	85.0	30:35	0.83	
$^{13}C_{12}$-1,2,3,7,8-PeCDF	2.0	1.71	85.5	33:19	1.62	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	2.0	1.50	75.0	36:05	0.51	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	2.0	1.50	75.0	38:50	0.46	
Cleanup Standards						
$^{37}Cl_4$-2,3,7,8-TCDD	0.4	0.370	92.5	31:16		
$^{13}C_{12}$-2,3,4,7,8-PeCDF	0.4	0.338	84.5	33:55	1.63	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.4	0.385	96.3	36:41	1.24	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	0.4	0.344	86.0	35:59	0.51	
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	0.4	0.324	81.0	40:46	0.45	
Injection Standards						
$^{13}C_{12}$-1,2,3,4-TCDD	2.0			30:45	0.80	
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	2.0			37:01	1.24	

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930001

Laboratory Information

Project ID:	G552-81	
Sample ID:	G552-81-1B	
Collection Date/Time:	17-May-04	09:00
Receipt Date:	29-May-04	
Extraction Date:	03-Jun-04	
Analysis Date:	05-Jun-04	

Sample Information

Report Basis:	Dry Weight	
Matrix:	Soil	
Weight / Volume:	05.37	Grams
Solids / Lipids:	88.3	%
Original pH :	NA	
Batch ID:	WG10361	
Filename:	a31may04a_11-13	
Retchk:	a31may04a_10-14	
Begin ConCal:	a31may04a_10-14	
End ConCal:	a31may04a_11-14	
Initial Cal:	m8290-122203b	

Analyzed by: [redacted] b6

Date: 14Jun04

Reviewed by: [redacted] b6

Date: 6/14/04

1190

Method 8290

1042930002

SGS Environmental

Analytical Data Summary Sheet

Analyte	Amount (pg/g)	EDL (pg/g)	EMPC (pg/g)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.225				
1,2,3,7,8-PeCDD	ND	0.562				
1,2,3,4,7,8-HxCDD	ND	0.562				
1,2,3,6,7,8-HxCDD	ND	0.562				
1,2,3,7,8,9-HxCDD	0.270			37:01	1.32	A
1,2,3,4,6,7,8-HpCDD	0.733			40:06	1.07	A
OCDD	15.1			44:23	0.87	
2,3,7,8-TCDF	EMPC	0.225	0.211	30:36	0.94	A
1,2,3,7,8-PeCDF	0.139			33:19	1.37	A
2,3,4,7,8-PeCDF	ND	0.562				
1,2,3,4,7,8-HxCDF	ND	0.562				
1,2,3,6,7,8-HxCDF	EMPC	0.562	0.108	36:06	1.45	A
2,3,4,6,7,8-HxCDF	ND	0.562				
1,2,3,7,8,9-HxCDF	ND	0.562				
1,2,3,4,6,7,8-HpCDF	0.220			38:51	1.15	A
1,2,3,4,7,8,9-HpCDF	ND	0.562				
OCDF	0.234			44:41	0.99	A
Total TCDDs	ND	0.684				
Total PeCDDs	ND	0.864				
Total HxCDDs	0.270					
Total HpCDDs	1.41					
Total TCDFs	0.274		0.738			
Total PeCDFs	0.139					
Total HxCDFs	ND	0.562	0.108			
Total HpCDFs	0.220					
ITEF TEQ (ND=0)	0.0588		0.0907			
ITEF TEQ (ND=½)	0.635		0.628			

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930002

Laboratory Information

Project ID:	G552-81
Sample ID:	G552-81-2B
Collection Date/Time:	17-May-04 09:20
Receipt Date:	29-May-04
Extraction Date:	03-Jun-04
Analysis Date:	08-Jun-04

Sample Information

Report Basis:	Dry Weight
Matrix:	Soil
Weight / Volume:	05.22 g
Solids / Lipids:	85.2 %
Original pH :	NA
Batch ID:	WG10361
Filename:	a07jun04b_3-6
Retchk:	a07jun04b_2-14
Begin ConCal:	a07jun04b_2-14
End ConCal:	a07jun04b_3-14
Initial Cal:	m8290-122203b

Method 8290

1042930002

SGS Environmental

Analytical Data Summary Sheet

Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifier
Extraction Standards						
$^{13}C_{12}$-2,3,7,8-TCDD	2.0	1.96	98.0	31:16	0.78	
$^{13}C_{12}$-1,2,3,7,8-PeCDD	2.0	1.78	89.0	34:06	1.51	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	2.0	1.72	86.0	36:46	1.23	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	2.0	1.89	94.5	40:05	1.06	
$^{13}C_{12}$-OCDD	4.0	2.90	72.5	44:21	0.84	
$^{13}C_{12}$-2,3,7,8-TCDF	2.0	1.81	90.5	30:35	0.82	
$^{13}C_{12}$-1,2,3,7,8-PeCDF	2.0	1.79	89.5	33:19	1.55	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	2.0	1.62	81.0	36:05	0.51	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	2.0	1.62	81.0	38:50	0.45	
Cleanup Standards						
$^{37}Cl_4$-2,3,7,8-TCDD	0.4	0.394	98.5	31:17		
$^{13}C_{12}$-2,3,4,7,8-PeCDF	0.4	0.348	87.0	33:55	1.54	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.4	0.401	100	36:41	1.22	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	0.4	0.376	94.0	35:59	0.55	
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	0.4	0.345	86.3	40:46	0.46	
Injection Standards						
$^{13}C_{12}$-1,2,3,4-TCDD	2.0			30:45	0.79	
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	2.0			37:01	1.23	

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930002

Laboratory Information

Project ID:	G552-81	
Sample ID:	G552-81-2B	
Collection Date/Time:	17-May-04	09:20
Receipt Date:	29-May-04	
Extraction Date:	03-Jun-04	
Analysis Date:	08-Jun-04	

Sample Information

Report Basis:	Dry Weight	
Matrix:	Soil	
Weight / Volume:	05.22	Grams
Solids / Lipids:	85.2	%
Original pH :	NA	
Batch ID:	WG10361	
Filename:	a07jun04b_3-6	
Retchk:	a07jun04b_2-14	
Begin ConCal:	a07jun04b_2-14	
End ConCal:	a07jun04b_3-14	
Initial Cal:	m8290-122203b	

Analyzed by: [redacted] b6

Date: 06-10-04

Reviewed by: [redacted] b6

Date: 6/11/04

Method 8290

1042930003

SGS Environmental

Analytical Data Summary Sheet

Analyte	Amount (pg/g)	EDL (pg/g)	EMPC (pg/g)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.192				
1,2,3,7,8-PeCDD	ND	0.479				
1,2,3,4,7,8-HxCDD	ND	0.479				
1,2,3,6,7,8-HxCDD	ND	0.479				
1,2,3,7,8,9-HxCDD	ND	0.479				
1,2,3,4,6,7,8-HpCDD	1.03			40:06	0.95	A
OCDD	45.0			44:23	0.86	
2,3,7,8-TCDF	0.153			30:37	0.78	A
1,2,3,7,8-PeCDF	0.142			33:20	1.32	A
2,3,4,7,8-PeCDF	0.115			33:56	1.35	A
1,2,3,4,7,8-HxCDF	ND	0.479				
1,2,3,6,7,8-HxCDF	0.123			36:06	1.24	A
2,3,4,6,7,8-HxCDF	ND	0.479				
1,2,3,7,8,9-HxCDF	ND	0.479				
1,2,3,4,6,7,8-HpCDF	EMPC	0.479	0.230	38:52	0.85	A
1,2,3,4,7,8,9-HpCDF	ND	0.479				
OCDF	ND	0.958				
Total TCDDs	ND	0.513				
Total PeCDDs	ND	0.479				
Total HxCDDs	ND	0.479				
Total HpCDDs	2.61					
Total TCDFs	0.314		0.429			
Total PeCDFs	0.257					
Total HxCDFs	0.123		0.195			
Total HpCDFs	ND	0.479	0.230			
ITEF TEQ (ND=0)	0.147		0.150			
ITEF TEQ (ND=½)	0.512		0.512			

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930003

Laboratory Information

Project ID:	G552-81
Sample ID:	G552-81-3B
Collection Date/Time:	17-May-04 09:45
Receipt Date:	29-May-04
Extraction Date:	03-Jun-04
Analysis Date:	08-Jun-04

Sample Information

Report Basis:	Dry Weight
Matrix:	Soil
Weight / Volume:	05.90 g
Solids / Lipids:	88.5 %
Original pH :	NA
Batch ID:	WG10361
Filename:	a07jun04b_2-2
Retchk:	a07jun04b-15
Begin ConCal:	a07jun04b-15
End ConCal:	a07jun04b_2-14
Initial Cal:	m8290-122203b

Method 8290

1042930003

SGS Environmental

Analytical Data Summary Sheet

Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifier
Extraction Standards						
$^{13}C_{12}$-2,3,7,8-TCDD	2.0	1.37	68.5	31:16	0.79	
$^{13}C_{12}$-1,2,3,7,8-PeCDD	2.0	1.27	63.5	34:07	1.55	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	2.0	1.28	64.0	36:47	1.14	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	2.0	1.36	68.0	40:06	1.01	
$^{13}C_{12}$-OCDD	4.0	1.85	46.3	44:22	0.85	
$^{13}C_{12}$-2,3,7,8-TCDF	2.0	1.29	64.5	30:36	0.81	
$^{13}C_{12}$-1,2,3,7,8-PeCDF	2.0	1.28	64.0	33:19	1.58	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	2.0	1.25	62.5	36:06	0.51	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	2.0	1.22	61.0	38:51	0.47	
Cleanup Standards						
$^{37}Cl_4$-2,3,7,8-TCDD	0.4	0.271	67.8	31:17		
$^{13}C_{12}$-2,3,4,7,8-PeCDF	0.4	0.248	62.0	33:56	1.59	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.4	0.285	71.3	36:42	1.32	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	0.4	0.287	71.8	36:00	0.51	
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	0.4	0.253	63.3	40:47	0.46	
Injection Standards						
$^{13}C_{12}$-1,2,3,4-TCDD	2.0			30:46	0.81	
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	2.0			37:02	1.15	

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930003

Laboratory Information

Project ID:	G552-81	
Sample ID:	G552-81-3B	
Collection Date/Time:	17-May-04	09:45
Receipt Date:	29-May-04	
Extraction Date:	03-Jun-04	
Analysis Date:	08-Jun-04	

Sample Information

Report Basis:	Dry Weight	
Matrix:	Soil	
Weight / Volume:	05.90	Grams
Solids / Lipids:	88.5	%
Original pH :	NA	
Batch ID:	WG10361	
Filename:	a07jun04b_2-2	
Retchk:	a07jun04b-15	
Begin ConCal:	a07jun04b-15	
End ConCal:	a07jun04b_2-14	
Initial Cal:	m8290-122203b	

Analyzed by: [redacted] b6

Date: 06-10-04

Reviewed by: [redacted] b6

Date: 6/10/04

Method 8290

1042930004

SGS Environmental

Analytical Data Summary Sheet

Analyte	Amount (pg/g)	EDL (pg/g)	EMPC (pg/g)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.198				
1,2,3,7,8-PeCDD	EMPC	0.495	0.206	34:07	1.24	A
1,2,3,4,7,8-HxCDD	ND	0.495				
1,2,3,6,7,8-HxCDD	EMPC	0.495	0.281	36:47	1.58	A
1,2,3,7,8,9-HxCDD	0.297			37:02	1.27	A
1,2,3,4,6,7,8-HpCDD	0.570			40:06	0.92	A
OCDD	11.0			44:23	0.94	
2,3,7,8-TCDF	EMPC	0.198	0.210	30:37	0.93	A
1,2,3,7,8-PeCDF	EMPC	0.495	0.158	33:20	1.09	A
2,3,4,7,8-PeCDF	0.154			33:56	1.67	A
1,2,3,4,7,8-HxCDF	ND	0.495				
1,2,3,6,7,8-HxCDF	EMPC	0.495	0.269	36:07	0.96	A
2,3,4,6,7,8-HxCDF	EMPC	0.495	0.146	36:35	1.00	A
1,2,3,7,8,9-HxCDF	ND	0.495				
1,2,3,4,6,7,8-HpCDF	EMPC	0.495	0.313	38:51	0.83	A
1,2,3,4,7,8,9-HpCDF	ND	0.495				
OCDF	0.570			44:41	1.01	A
Total TCDDs	ND	0.590				
Total PeCDDs	ND	0.902	0.206			
Total HxCDDs	0.297		0.578			
Total HpCDDs	1.04					
Total TCDFs	ND	0.198	0.546			
Total PeCDFs	0.154		0.313			
Total HxCDFs	0.158		0.760			
Total HpCDFs	ND	0.495	0.313			
ITEF TEQ (ND=0)	0.124		0.329			
ITEF TEQ (ND=½)	0.522		0.504			

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930004

Laboratory Information

Project ID:	G552-81	
Sample ID:	G552-81-4B	
Collection Date/Time:	17-May-04	09:50
Receipt Date:	29-May-04	
Extraction Date:	03-Jun-04	
Analysis Date:	08-Jun-04	

Sample Information

Report Basis:	Dry Weight	
Matrix:	Soil	
Weight / Volume:	05.83	g
Solids / Lipids:	86.7	%
Original pH :	NA	
Batch ID:	WG10361	
Filename:	a07jun04b_2-3	
Retchk:	a07jun04b-15	
Begin ConCal:	a07jun04b-15	
End ConCal:	a07jun04b_2-14	
Initial Cal:	m8290-122203b	

Method 8290

1042930004

SGS Environmental

Analytical Data Summary Sheet

Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifier
Extraction Standards						
$^{13}C_{12}$-2,3,7,8-TCDD	2.0	1.50	75.0	31:16	0.80	
$^{13}C_{12}$-1,2,3,7,8-PeCDD	2.0	1.43	71.5	34:07	1.54	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	2.0	1.39	69.5	36:47	1.20	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	2.0	1.47	73.5	40:06	1.04	
$^{13}C_{12}$-OCDD	4.0	2.09	52.3	44:22	0.85	
$^{13}C_{12}$-2,3,7,8-TCDF	2.0	1.48	74.0	30:36	0.82	
$^{13}C_{12}$-1,2,3,7,8-PeCDF	2.0	1.43	71.5	33:19	1.57	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	2.0	1.33	66.5	36:05	0.51	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	2.0	1.30	65.0	38:51	0.47	
Cleanup Standards						
$^{37}Cl_4$-2,3,7,8-TCDD	0.4	0.300	75.0	31:17		
$^{13}C_{12}$-2,3,4,7,8-PeCDF	0.4	0.281	70.3	33:56	1.59	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.4	0.302	75.5	36:41	1.20	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	0.4	0.309	77.3	35:59	0.50	
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	0.4	0.269	67.3	40:47	0.47	
Injection Standards						
$^{13}C_{12}$-1,2,3,4-TCDD	2.0			30:45	0.82	
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	2.0			37:02	1.19	

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930004

Laboratory Information

Project ID:	G552-81	
Sample ID:	G552-81-4B	
Collection Date/Time:	17-May-04	09:50
Receipt Date:	29-May-04	
Extraction Date:	03-Jun-04	
Analysis Date:	08-Jun-04	

Sample Information

Report Basis:	Dry Weight	
Matrix:	Soil	
Weight / Volume:	05.83	Grams
Solids / Lipids:	86.7	%
Original pH :	NA	
Batch ID:	WG10361	
Filename:	a07jun04b_2-3	
Retchk:	a07jun04b-15	
Begin ConCal:	a07jun04b-15	
End ConCal:	a07jun04b_2-14	
Initial Cal:	m8290-122203b	

Analyzed by: [redacted] b6

Date: 06-10-04

Reviewed by: [redacted] b6

Date: 6/10/04

Method 8290

1042930007

SGS Environmental

Analytical Data Summary Sheet

Analyte	Amount (pg/g)	EDL (pg/g)	EMPC (pg/g)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.219				
1,2,3,7,8-PeCDD	0.158			34:07	1.38	A
1,2,3,4,7,8-HxCDD	ND	0.549				
1,2,3,6,7,8-HxCDD	ND	0.549				
1,2,3,7,8,9-HxCDD	0.206			37:02	1.13	A
1,2,3,4,6,7,8-HpCDD	1.20			40:07	1.07	A
OCDD	29.8			44:23	0.89	
2,3,7,8-TCDF	0.224			30:37	0.75	A
1,2,3,7,8-PeCDF	ND	0.549				
2,3,4,7,8-PeCDF	ND	0.549				
1,2,3,4,7,8-HxCDF	ND	0.549				
1,2,3,6,7,8-HxCDF	ND	0.549				
2,3,4,6,7,8-HxCDF	ND	0.549				
1,2,3,7,8,9-HxCDF	ND	0.549				
1,2,3,4,6,7,8-HpCDF	0.347			38:51	0.96	A
1,2,3,4,7,8,9-HpCDF	ND	0.549				
OCDF	0.557			44:41	0.98	A
Total TCDDs	ND	0.601				
Total PeCDDs	0.158					
Total HxCDDs	0.364					
Total HpCDDs	2.39					
Total TCDFs	0.224		0.334			
Total PeCDFs	ND	0.549				
Total HxCDFs	0.356		0.483			
Total HpCDFs	0.764					
ITEF TEQ (ND=0)	0.168		0.168			
ITEF TEQ (ND=½)	0.596		0.596			

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930007

Laboratory Information

Project ID:	G552-81
Sample ID:	G552-81-5B
Collection Date/Time:	17-May-04 13:20
Receipt Date:	29-May-04
Extraction Date:	03-Jun-04
Analysis Date:	08-Jun-04

Sample Information

Report Basis:	Dry Weight
Matrix:	Soil
Weight / Volume:	05.11 g
Solids / Lipids:	89.2 %
Original pH :	NA
Batch ID:	WG10361
Filename:	a07jun04b_2-4
Retchk:	a07jun04b-15
Begin ConCal:	a07jun04b-15
End ConCal:	a07jun04b_2-14
Initial Cal:	m8290-122203b

Method 8290

1042930007

SGS Environmental

Analytical Data Summary Sheet

Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifier
Extraction Standards						
$^{13}C_{12}$-2,3,7,8-TCDD	2.0	1.82	91.0	31:16	0.82	
$^{13}C_{12}$-1,2,3,7,8-PeCDD	2.0	1.71	85.5	34:07	1.53	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	2.0	1.65	82.5	36:47	1.20	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	2.0	1.78	89.0	40:06	1.04	
$^{13}C_{12}$-OCDD	4.0	2.59	64.8	44:22	0.85	
$^{13}C_{12}$-2,3,7,8-TCDF	2.0	1.73	86.5	30:36	0.81	
$^{13}C_{12}$-1,2,3,7,8-PeCDF	2.0	1.73	86.5	33:19	1.60	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	2.0	1.58	79.0	36:05	0.52	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	2.0	1.56	78.0	38:51	0.47	
Cleanup Standards						
$^{37}Cl_4$-2,3,7,8-TCDD	0.4	0.354	88.5	31:17		
$^{13}C_{12}$-2,3,4,7,8-PeCDF	0.4	0.333	83.3	33:56	1.61	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.4	0.361	90.3	36:41	1.20	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	0.4	0.365	91.3	35:59	0.51	
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	0.4	0.328	82.0	40:47	0.46	
Injection Standards						
$^{13}C_{12}$-1,2,3,4-TCDD	2.0			30:45	0.82	
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	2.0			37:02	1.20	

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930007

Laboratory Information

Project ID:	G552-81
Sample ID:	G552-81-5B
Collection Date/Time:	17-May-04 13:20
Receipt Date:	29-May-04
Extraction Date:	03-Jun-04
Analysis Date:	08-Jun-04

Analyzed by: [redacted] b6

Date: 06-10-04

Sample Information

Report Basis:	Dry Weight	
Matrix:	Soil	
Weight / Volume:	05.11	Grams
Solids / Lipids:	89.2	%
Original pH :	NA	
Batch ID:	WG10361	
Filename:	a07jun04b_2-4	
Retchk:	a07jun04b-15	
Begin ConCal:	a07jun04b-15	
End ConCal:	a07jun04b_2-14	
Initial Cal:	m8290-122203b	

Reviewed by: [redacted] b6

Date: 6/10/04

Method 8290

1042930008

SGS Environmental

Analytical Data Summary Sheet

Analyte	Amount (pg/g)	EDL (pg/g)	EMPC (pg/g)	RT (min.)	Ratio	Qualifier
2,3,7,8-TCDD	ND	0.227				
1,2,3,7,8-PeCDD	ND	0.567				
1,2,3,4,7,8-HxCDD	ND	0.567				
1,2,3,6,7,8-HxCDD	ND	0.567				
1,2,3,7,8,9-HxCDD	EMPC	0.567	0.168	37:03	0.87	A
1,2,3,4,6,7,8-HpCDD	0.522			40:06	1.09	A
OCDD	6.82			44:23	0.85	A
2,3,7,8-TCDF	0.204			30:37	0.87	A
1,2,3,7,8-PeCDF	0.0953			33:20	1.44	A
2,3,4,7,8-PeCDF	ND	0.567				
1,2,3,4,7,8-HxCDF	ND	0.567				
1,2,3,6,7,8-HxCDF	EMPC	0.567	0.0998	36:07	0.86	A
2,3,4,6,7,8-HxCDF	ND	0.567				
1,2,3,7,8,9-HxCDF	ND	0.567				
1,2,3,4,6,7,8-HpCDF	0.172			38:51	0.96	A
1,2,3,4,7,8,9-HpCDF	ND	0.567				
OCDF	ND	1.13				
Total TCDDs	ND	0.699				
Total PeCDDs	ND	0.880				
Total HxCDDs	ND	1.12	0.168			
Total HpCDDs	0.522		0.980			
Total TCDFs	0.204		0.345			
Total PeCDFs	0.0953					
Total HxCDFs	ND	0.567	0.0998			
Total HpCDFs	0.172					
ITEF TEQ (ND=0)	0.0389		0.0657			
ITEF TEQ (ND=½)	0.638		0.608			

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930008

Laboratory Information

Project ID:	G552-81
Sample ID:	G552-81-6B
Collection Date/Time:	17-May-04 13:35
Receipt Date:	29-May-04
Extraction Date:	03-Jun-04
Analysis Date:	08-Jun-04

Sample Information

Report Basis:	Dry Weight
Matrix:	Soil
Weight / Volume:	05.28 g
Solids / Lipids:	83.5 %
Original pH :	NA
Batch ID:	WG10361
Filename:	a07jun04b_2-5
Retchk:	a07jun04b-15
Begin ConCal:	a07jun04b-15
End ConCal:	a07jun04b_2-14
Initial Cal:	m8290-122203b

Method 8290

1042930008

SGS Environmental

Analytical Data Summary Sheet

Labeled Standard	Expected Amount (ng)	Measured Amount (ng)	Percent Recovery (%)	RT (min.)	Ratio	Qualifier
Extraction Standards						
$^{13}C_{12}$-2,3,7,8-TCDD	2.0	1.77	88.5	31:16	0.81	
$^{13}C_{12}$-1,2,3,7,8-PeCDD	2.0	1.74	87.0	34:07	1.55	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	2.0	1.69	84.5	36:47	1.20	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	2.0	1.81	90.5	40:06	1.05	
$^{13}C_{12}$-OCDD	4.0	2.65	66.3	44:22	0.85	
$^{13}C_{12}$-2,3,7,8-TCDF	2.0	1.75	87.5	30:36	0.79	
$^{13}C_{12}$-1,2,3,7,8-PeCDF	2.0	1.76	88.0	33:19	1.57	
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	2.0	1.61	80.5	36:06	0.51	
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	2.0	1.61	80.5	38:51	0.47	
Cleanup Standards						
$^{37}Cl_4$-2,3,7,8-TCDD	0.4	0.348	87.0	31:17		
$^{13}C_{12}$-2,3,4,7,8-PeCDF	0.4	0.340	85.0	33:56	1.53	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.4	0.368	92.0	36:42	1.21	
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	0.4	0.364	91.0	35:59	0.50	
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	0.4	0.336	84.0	40:47	0.48	
Injection Standards						
$^{13}C_{12}$-1,2,3,4-TCDD	2.0			30:45	0.82	
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	2.0			37:02	1.20	

Client Information

Project Name:	Cp Carroll 03-079e
Sample ID:	1042930008

Laboratory Information

Project ID:	G552-81	
Sample ID:	G552-81-6B	
Collection Date/Time:	17-May-04	13:35
Receipt Date:	29-May-04	
Extraction Date:	03-Jun-04	
Analysis Date:	08-Jun-04	

Analyzed by: [redacted] bb

Date: 06-10-04

Sample Information

Report Basis:	Dry Weight	
Matrix:	Soil	
Weight / Volume:	05.28	Grams
Solids / Lipids:	83.5	%
Original pH :	NA	
Batch ID:	WG10361	
Filename:	a07jun04b_2-5	
Retchk:	a07jun04b-15	
Begin ConCal:	a07jun04b-15	
End ConCal:	a07jun04b_2-14	
Initial Cal:	m8290-122203b	

Reviewed by: [redacted] bb

Date: 6/10/04