



APPENDIX A
Well Construction Logs



LOG OF BORING LC-MW-01S

(Page 1 of 1)

CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/12/02
End Date : 11/12/02
Start Time : 0830
Weather : Raining

Drilling Company : Cascade Drilling, Inc
Drillers : Todd Mecham
: Rowan Miller

Depth in	Well: LC-MW-01S Elev.: 287.16	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		DARK YELLOWISH BROWN SILTY CLAY WITH GRAVEL	WET- LOTS OF RAIN INTO HOLE FOR 2 DAYS	BOREHOLE DEPTH : 21' BORE DIAMETER : 7" WELL LOCATION: NORTH BOUNDARY WELL BY LACAMAS CREEK DRILLING METHOD: TRI-CONE ROLLER BIT ADVANCED THRU 7" CASING WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED HEIGHT OF CASING ABOVE GROUND 3' MONUMENT NO. AHA-359 ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
5		SLIGHTLY SILTY GRAVEL-YELLOWISH BROWN SLIGHTLY SANDY SILTY GRAVEL- MIXED GRAVEL, PULVERIZED		
15		GRAY SILTY PULVERIZED RED GRAVEL WITH SOME SAND (5%)	WET	
25		BOTTOM OF HOLE 21'		



LOG OF BORING LC-MW-01D

CAMP BONNEVILLE, WA
38-EH-004M-03

Geologist : Mary Grez
 Start Date : 11/9/02
 End Date : 11/10/02
 Start Time : 1230
 Weather : Overcast, Showers, Some Sun

Drilling Company : Cascade Drilling Inc.
 Drillers : Todd Mecham
 : Rowan Miller
 : David Gose

Depth in	Well: LC-MW-01D Elev.: 287.58	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		DARK YELLOWISH-BROWN SILTY CLAY WITH 50% GRAVEL-FINE TO MEDIUM SOME PULVERIZED	MOIST	Bore Hole Depth : 39'10" Bore Diameter : 7"
5		VERY DARK BROWN CLAYEY GRAVEL- 90% GRAVEL, SOME SILT POSSIBLE GRAVEL UP TO 1" SIZE, PULVERIZED	MOIST	WELL LOCATION: NORTH WELL LOCATION ALONG LACAMAS CREEK BOUNDARY.
10		GRAVEL HAS CHERT, MORE OF THE SOLID GRAY GRAVEL. PULVERIZED WITH OLIVE-BROWN SILT COATING	BECOMING DRIER AT 8' 40 BLOWS/FT 10'-12' VERY LOOSE ZONE 2 BLOWS/2FT MOIST, PROBABLE WATER TABLE AT 12'-14'	DRILLING METHOD: ROLLER CONE BIT ADVANCED THROUGH 7" CASING.
15		DARK GRAY SILTY SANDY MEDIUM GRAVEL AND COBBLES-BACK TO OLIVE-BROWN AT 12'	CHECK FOR WATER AT 15'. POSSIBLE MOISTURE. 1st MATERIAL IS WET. DRILLING TO 35' AND LET SIT OVERNIGHT	WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC
20				OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED.
25			VERY WET 4-6 BLOWS/FT	HEIGHT OF CASING ABOVE GROUND 2.67'
30		CLEAN PULVERIZED GRAVEL MOSTLY CHERT	MOIST TO WET 14 BLOWS/FT	MONUMENT NO. AHA-358
35		FINE SANDY SILTY GRAYISH BROWN GRAVEL	WET	USED FORMATION WATER TO HYDRATE BENTONITE.
38		CLEAN GRAY GRAVEL WITH SOME SILT AND VERY FINE SAND	STOP AT 35' LET SIT OVER NIGHT 11/10/02 0730 WATER AT 5' BGS. 0800 START BLOW 10 GAL. OF WATER OUT. STOP HERE TO AVOID GETTING EQUIPMENT PLUGGED SO WE DON'T HAVE TO INJECT WATER.	ONE CENTRALIZER PLACED ABOVE WELL SCREEN.
40		38' LIGHT OLIVE YELLOW SILT, VERY SLIGHT CLAY. POSSIBLE CONFINING ZONE OR TOP OF BEDROCK.		ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
40		BOTTOM OF HOLE 39.83'		



LOG OF BORING LC-MW-02S

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CAMP BONNEVILLE, WA. 38-EH-004M-03	GEOLOGIST : Mary Grez	DRILLING COMPANY : Cascade Drilling Inc.
	START DATE : 11/12/02	DRILLERS : Todd Mecham
	END DATE : 11/12/02	: Rowan Miller
	START TIME : 1640	: Andre Bedrik
	WEATHER : Overcast, Some Sun	

Depth in	Well: LC-MW-02S Elev.: 288.49	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		REDDISH BROWN SLIGHTLY SANDY CLAYEY SILT WITH SOME GRAVEL		BORE DEPTH : 16' BORE DIAMETER : 7" WELL LOCATION : 2ND WELL SITE SOUTH OF LACAMAS CREEK ALONG BOUNDARY. DRILLING METHOD : TRI-CONE ROLLER BIT ADVANCED THRU 7" CASING WELL INNER DIAMETER : 2 INCH WELL SLOT SIZE : 0.010 INCH WELL SCREEN MATERIAL : PVC OPEN TRIANGLE : DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE : DEPTH WATER ENCOUNTERED. HEIGHT OF CASING ABOVE GROUND 2.7' MONUMENT NO. AHA- 364 FORMATION WATER USED TO HYDRATE BENTONITE. ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
5				
10		LIGHT REDDISH BROWN CLAYEY SILT, LITTLE BIT OF GRAVEL AT 9'		
15		OLIVE BROWN SANDY SILTY GRAVEL	WET AT 12 FEET	
16		BOTTOM OF HOLE 16'		



LOG OF BORING LC-MW-02D

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/12/02
End Date : 11/12/02
Start Time : 1300
Weather : Overcast, Raining

Drilling Company : Cascade Drilling Inc.
Drillers : Todd Mecham
: Rowan Miller
: David Gose

Depth in	Well: LC-MW-02D Elev.: 288.49	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		REDDISH-BROWN SLIGHTLY SILTY SAND, SOME GRAVEL	PUMPING WATER INTO HOLE AT 3'	Bore Hole Depth : 36' Bore Diameter : 7"
5			10 BLOWS/FT DONE PUMPING WATER USED ABOUT 40 GAL.	WELL LOCATION: 2ND WELL LOCATION SOUTH OF LACAMAS CREEK ALONG BOUNDARY. DRILLING METHOD: TRI-CONE BIT ADVANCED THROUGH 7" CASING WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC
10		GRAVELLY REDDISH-BROWN SANDY SILTY GRAVEL. (PULVERIZED GRAY GRAVEL) GRADUALLY LESS SILT AND SAND, CLEANER GRAVEL	WET	OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED.
15		OLIVE-BROWN SLIGHTLY SANDY SILTY GRAVEL, (ROUNDED PEBBLES AND PULVERIZED ROCK)		HEIGHT OF CASING ABOVE GROUND 3.1' MONUMENT NO. AHA-357
20			WATER BLEW OUT OF HOLE. PRODUCTIVE ZONE.	HOLE HAND-AUGERED TO 6', NO WATER IN 6" BOREHOLE. NO CENTRALIZERS USED.
25		OLIVE-BROWN SLIGHTLY SILTY GRAVEL. (PULVERIZED GRAY ROCK). SOME VERY CLEAN GRAVEL LAYERS INTERSPERSED WITH SILT, SAND, AND GRAVEL LAYERS	WATER COMING UP OUT OF HOLE.	SCREENED 25' TO 35' BECAUSE IT'S A PRODUCTIVE ZONE. USED FORMATION WATER TO HYDRATE BENTONITE.
30				ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
35				
36		BOTTOM OF HOLE 36'		



LOG OF BORING LC-MW-03S

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
 Start Date : 11/13/02
 End Date : 11/13/02
 Start Time : 1400
 Weather : Rainy, Overcast

Drilling Company : Cascade Drilling Inc.
 Drillers : Todd Mecham
 : Rowan Miller
 : Andre Bedrik

Depth in	Well: LC-MW-03S Elev.: 288.56	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		REDDISH BROWN SLIGHTLY SANDY SILT WITH GRAVEL. UP TO 80% GRAVEL AND SMALL AMOUNT OF CLAY		Bore Hole Depth : 19' Bore Diameter : 7" WELL LOCATION: 3RD WELL LOCATION SOUTH OF LACAMAS CREEK ALONG BOUNDARY DRILLING METHOD: TRI-CONE ROLLER BIT ADVANCED THRU 7" CASING WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED. HEIGHT OF CASING ABOVE GROUND 2.35' MONUMENT NO. AHA -362 ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
5			VERY MOIST AT 7-8'	
10		REDDISH BROWN SANDY CLAYEY SILT, VERY LITTLE GRAVEL.	WET GRAVEL	
15		REDDISH BROWN, SANDY SILT, GRAY PULVERIZED GRAVEL	WATER IN HOLE	
20		BOTTOM OF HOLE 19'		
25				



LOG OF BORING LC-MW-03D

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/13/02
End Date : 11/14/02
Start Time : 1600
Weather : Overcast, Rainy

Drilling Company : Cascade Drilling Inc.
Drillers : Todd Mecham
: Rowan Miller
: Andre Bednik

Depth in	Well: LC-MW-03D Elev.: 288.50	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		REDDISH-BROWN SANDY SILT WITH GRAVEL	DRY 9-10 BLOWS/FT	Bore Hole Depth : 37' 2" Bore Diameter : 7" WELL LOCATION: 3RD WELL LOCATION SOUTH OF LACAMAS CREEK BOUNDARY LOCATION. DRILLING METHOD: TRI-CONE BIT ADVANCED THROUGH 7" CASING. WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC HEIGHT OF CASING ABOVE GROUND 2.48' MONUMENT NO. AHA-363 BOREHOLE HAND-AUGERED TO 6'. LEFT CASING IN GROUND OVERNIGHT AT 37'. ENCOUNTERED SILT AND STOPPED 2' SHORT OF GOAL DEPTH TO AVOID INJECTING POTABLE WATER INTO HOLE. ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
5		OLIVE-BROWN SLIGHTLY SANDY SILT WITH SOME GRAVEL	MOIST	
10		OLIVE-BROWN SLIGHTLY SANDY SILTY MIXED GRAVEL. SOME ZONES MOSTLY SILT, SOME MORE GRAVEL.	VERY SOFT ZONE, WET	
15		MOSTLY GRAY PULVERIZED GRAVEL WITH SILT, SOME SAND.	WATER COMING UP	
20		GRAYISH-BROWN CLAYEY SILT	EASY CASING PENETRATION	
25				
30				
35				
37.17				
40				



LOG OF BORING LC-MW-04S

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
 Start Date : 11/17/02
 End Date : 11/17/02
 Start Time : 0815
 Weather : Overcast, Passing Rain

Drilling Company : Cascade Drilling Inc.
 Drillers : Matt Ross
 : Jesse Cannon
 : Matt Slobig

Depth in	Well: LC-MW-04S Elev.: 288.83	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		DARK BROWN GRAVELLY SILT, SOME CLAY AND SAND.		Bore Hole Depth : 14' Bore Diameter : 6" WELL LOCATION: SOUTH WELL LOCATION FROM LACAMAS CREEK ALONG BOUNDARY. DRILLING METHOD: CME 580 WITH 6" AUGER AND WOOD PLUG HAND AUGER TO 5' WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED HEIGHT OF CASING ABOVE GROUND 2.8' MONUMENT NO. AHA-375 ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
5			MOIST AT 5'	
10		GRAYISH BROWN SILTY GRAVEL (UP TO 2" ROUND GRAVEL) WITH SOME SAND AND CLAY.	VERY HARD DRILLING BECAUSE OF GRAVEL AT 10'. WET AT 10' FINISHED HOLE AT 14' BECAUSE OF VERY HARD DRILLING WITH AUGER	
15		BOTTOM OF HOLE 14'		



LOG OF BORING LC-MW-04D

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/13/02
End Date : 11/13/02
Start Time : 0915
Weather : Rainy

Drilling Company : Cascade Drilling Inc.
Drillers : Todd Mecham
: Rowan Miller
: Andre Bednik

Depth in	Well: LC-MW-04D Elev.: 289.16	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0	CONCRETE	REDDISH-BROWN SLIGHTLY SANDY SILTY, MULTICOLORED GRAVEL.	PUSH CASING TO 6' AND USED POTABLE WATER TO CLEAN HOSES. STOPPED RUNNING WATER AT 7'. HARD DRILLING THROUGH GRAVEL, VERY WET AT 9'. WATER IN HOLE	Bore Hole Depth : 34' 8" Bore Diameter : 7" WELL LOCATION: SOUTH WELL PAIR FROM LACAMAS CREEK ALONG BOUNDARY. DRILLING METHOD: TRI-CONE BIT ADVANCED THROUGH 7" CASING. WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC
5	GROUT	OLIVE-BROWN SANDY SILTY PULVERIZED GRAY AND MULTICOLOR GRAVEL.		OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED.
10	RISER	OLIVE-BROWN SANDY SILTY UNIFORM GRAY GRAVEL. CLEAN GRAVEL ZONE AT 17'-18' ALTERNATE CLEAN GRAVEL ZONES WITH SANDY SILT AND FINE GRAVEL TO B.O.H.	WET TO BOTTOM OF HOLE.	HEIGHT OF CASING ABOVE GROUND 2.63' MONUMENT NO. AHA-361
15	BENTONITE			STOPPED DRILLING AT 34' BECAUSE SILT WOULD PLUG HOSES.
20	SAND 20-40			ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
25	SAND 2-12			
30	SCREEN			
35		OLIVE-BROWN SILT AND SANDY SILT AT 34.67'		
40		BOTTOM OF HOLE 34.67'		



LOG OF BORING LC-MW-05S

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/15/02
End Date : 11/15/02
Start Time : 1140
Weather : Sunny, Slightly Cloudy

Drilling Company : Cascade Drilling Inc.
Drillers : Matt Ross
: Jesse Cannon
: Matt Slobig

Depth in	Well: LC-MW-05S Elev.: 306.40	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0	CONCRETE	VERY MOIST SLIGHTLY SANDY SILT. REDDISH BROWN SLIGHTLY SANDY SILT, BIT OF CLAY AND FINE GRAVEL	LC-MW-05S-10 LC-MW-05S-0 1140 10 BLOWS/ 6" MOIST AT 3'	Bore Hole Depth : 37' Bore Diameter : 6"
5		DARK RED BROWN SILT WITH MOTTLES OF GRAY, VEINS OF RED, GRAY, AND PURPLE IN SPLITSPOON	LC-MW-05-2 1200 LC-MW-05S-5 1210 16 BLOWS/ 6"	WELL LOCATION: EAST SIDE OF CRATER AT DA-3 PAIRED WITH LC-MW-05D DRILLING METHOD: CME 580 WITH HOLLOW STEM AUGER AND 140 LBS HAMMER. SAMPLES TAKEN WITH SPLIT SPOON SAMPLED AT 0', 2', 5', 15' DEPTHS SAMPLED FOR EXPLOSIVES, PETN, PERCHLORATE, AND TOTAL METALS. HAMMER USED TO COLLECT SAMPLES.
10	GROUT		GETTING VERY MOIST AT 13'-14'	DUPLICATE LC-MW-05S-10 COLLECTED FROM LC-MW-05S-0.
15	RISER	BRIGHT BLUE-GRAY STIFF SILT	LC-MW-05S-15 1230	WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC
20	SAND 20-40	YELLOWISH-BROWN SLIGHTLY CLAYEY SILT WITH VARIABLE AMOUNTS OF GRAVEL AND INCREASING CLAY WITH DEPTH	STILL MOIST, NOT WET	OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED. HEIGHT OF CASING ABOVE GROUND 3.7'
25		CLAYEY SILT	WET AT 27'	MONUMENT NO. AHA-374 PULLED UP 5' AT 25' AND LET SIT FOR 1 HOUR, NO WATER IN HOLE. GREG JOHNSON, WA. DEPT. OF ECOLOGY SAID TO COMPLETE HOLE AT 37' TO BE 15' ABOVE LC-MW-05D.
30	SAND 10-20			TREMIED BENTONITE GROUT FROM TOP OF 20-40 SAND TO 2' BGS.
35	SCREEN			ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
40				
45				
		BOTTOM OF HOLE 37'		



LOG OF BORING LC-MW-05D

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/7/02
End Date : 11/8/02
Start Time : 1030
Weather : Overcast, Rainy

Drilling Company : Cascade Drilling Inc.
Drillers : Todd Mecham
: Rowan Miller
: David Gose

Depth in Well: LC-MW-05D Elev.: 306.34	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
	<p>BROWN SLIGHTLY SANDY SILT WITH FINE GRAVEL.</p> <p>DARK BROWN SILT WITH 5% FINE GRAVEL.</p> <p>DARK REDDISH-BROWN SILTY CLAY WITH 25% FINE GRAVEL, ANGULAR AND 2% ROUNDED 1/2"-1" GRAVEL.</p> <p>DARK REDDISH-BROWN SILTY CLAYEY GRAVEL. FINE TO 1/4" GRAVEL. ANGULAR TO ROUNDED. COARSENING WITH DEPTH.</p> <p>DARK YELLOWISH-BROWN SLIGHTLY SILTY CLAY WITH FINE GRAVEL.</p> <p>GRAYISH-BROWN SILT AND SLIGHTLY CLAYEY SILT, BARELY ANY GRAVEL.</p> <p>GRAYISH-BROWN SILTY FINE TO MEDIUM GRAVEL</p> <p>FINE GRAVELY GRAYISH BROWN SILT</p>	<p>DRY</p> <p>SOMEWHAT MOIST</p> <p>8 BLOWS/ FT MOIST (10')</p> <p>14 BLOWS/ FT AT 20'.</p> <p>CHECK FOR GROUND WATER AT 24'. LET SIT FOR 20 MINUTES. NO WATER.</p>	<p>Bore Hole Depth : 63.5' Bore Diameter : 7"</p> <p>WELL LOCATION: EAST SIDE OF DA-3 CRATER. WELL PAIR WITH LC-MW-05S</p> <p>DRILLING METHOD: AIR HAMMER DRIVEN THROUGH 7" CASING.</p> <p>WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC</p> <p>OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED.</p> <p>HEIGHT OF CASING ABOVE GROUND N/A MONUMENT NO. AHA-360</p> <p>USE POTABLE WATER AT 20' BECAUSE HOSES ARE PLUGGING WITH SILT.</p> <p>USED ABOUT 20 GALLONS WITH GOOD RECOVERY.</p> <p>POTABLE WATER SOURCE: CITY OF PORTLAND.</p> <p>PVC CASING EXTENDED ON 2/11/03 AND NEW TOP OF CASING MARKED FOR SURVEYING.</p> <p>ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.</p>



LOG OF BORING LC-MW-05D

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/7/02
End Date : 11/8/02
Start Time : 1030
Weather : Overcast, Rainy

Drilling Company : Cascade Drilling Inc.
Drillers : Todd Mecham
: Rowan Miller
: David Gose

Depth in Well: LC-MW-05D Elev.: 306.34	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
	<p>DARK YELLOWISH-BROWN SILTY CLAY AND CLAYEY SILT. VERY TIGHT.</p> <p>SAME WITH SOME FINE TO MEDIUM GRAVEL ANGULAR TO ROUNDED UP TO 1/2" NO GRAVEL, SAME OTHERWISE.</p> <p>BROWN SLIGHTLY CLAYEY SILT.</p> <p>THIN DARKER BROWN LAYER.</p> <p>FINE TO MEDIUM GRAVELLY BROWN SILT.</p> <p>FINE TO MEDIUM GRAVELLY BROWN SILT, GRADING TO OLIVE BROWN SILTY FINE TO MEDIUM PULVERIZED GRAVEL. POSSIBLE TOP OF TROUTDALE.</p> <p>DARK GRAYISH-BROWN SILTY GRAVEL/GRAVELLY SILT. GRAVEL IS PULVERIZED.</p> <p>DARK GRAYISH-BROWN TO GRAY PULVERIZED GRAVEL.</p> <p>RED CLAY ON BOTTOM OF BIT</p> <p>BOTTOM OF HOLE 63.5'</p>	<p>40 BLOWS/ FT NO LONGER RUNNING WATER. SOIL IS MOIST.</p> <p>33 BLOWS/FT</p> <p>UP TO 60 BLOWS/ FT.</p> <p>FAINTLY MOIST</p> <p>CASING PULLED TO 49' WAIT OVERNIGHT. 11/8/02 0745 START DRILLING. WATER AT 52'.</p>	<p>Bore Hole Depth : 63.5' Bore Diameter : 7"</p>



LOG OF BORING LC-MW-06S

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/16/02
End Date : 11/16/02
Start Time : 1515
Weather : Overcast, Passing, Rain

Drilling Company : Cascade Drilling Inc.
Drillers : Matt Ross
: Jesse Cannon
: Matt Slobig

Depth in	Well: LC-MW-06s Elev.: 305.43	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		RED BROWN LOAMY SILT, LOTS OF ROOTS, SOME DECOMPOSED GRAVEL	LC-MW-06S-0 1515 MOIST	Bore Hole Depth : 37' Bore Diameter : 6"
5		PALE BROWN SILT WITH DECOMPOSED GRAVEL, RUST COLORED MOTTLES RETURNS ARE FAINTLY MOIST, RED BROWN SILT WITH DECOMPOSED GRAVEL AND ROOTS	LC-MW-06S-2 1525 DRY	WELL LOCATION: NORTH SIDE OF DA-3 CRATER.
5			LC-MW-06S-5 1530	DRILLING METHOD: CME 580 WITH 6" HOLLOW STEM AUGER AND 140 LBS HAMMER BIT.
5				SAMPLES TAKEN WITH SPLIT SPOON SAMPLED AT 0', 2', 5', DEPTHS SAMPLED FOR EXPLOSIVES, PETN, PERCHLORATE, AND METALS.
5				COULD NOT COLLECT 15' SAMPLE BECAUSE OF SATURATED CONDITIONS
10				WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PV
10				HEIGHT OF CASING ABOVE GROUND 2.84'
10				MONUMENT NO. AHA-372
15				USED FORMATION WATER TO HYDRATE BENTONITE
15				ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
15		BOTTOM OF HOLE 15'	VERY MOIST NOT WET	
15			WET AT 15'	



LOG OF BORING LC-MW-07S

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CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/16/02
End Date : 11/16/02
Start Time : 1100
Weather : Overcast, Passing Rains

Drilling Company : Cascade Drilling Inc.
Drillers : Matt Ross
: Jesse Cannon
: Matt Slobig

Depth in	Well: LC-MW-07S Elev.: 305.12	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		PLATY RED-BROWN DRY SILT WITH SOME FINE GRAVEL	LC-MW-07S-0 1110 + DUPLICATE	Bore Hole Depth : 37' Bore Diameter : 6"
5		DRY PALE YELLOWISH-BROWN SILT, A BIT OF FINE GRAVEL-DECOMPOSED ROCK.	LC-MW-07S-10 1140	WELL LOCATION: WEST SIDE OF DA-3 CRATER.
10		RED-BROWN SILT, BARELY ANY GRAVEL	LC-MW-07S-2 1125 LC-MW-07S-5 1145 GETTING MOIST	DRILLING METHOD: CME 580 WITH 6" HOLLOW STEM AUGER AND 140 LBS HAMMER.
15		GRAY STIFF SILT, LIGHT GRAYISH BROWN SILT CUTTINGS	LC-MW-07S-15 1210	SAMPLES TAKEN WITH SPLIT SPOON SAMPLER AT 0', 2', 5', 15' DEPTHS. SAMPLED FOR EXPLOSIVES, PETN, PERCHLORATE, AND METALS.
20		OLIVE BROWN SILT. SOME CLAY AND GRAVEL	MOIST	LC-MW-07S-10 IS A DUPLICATE OF LC-MW-07S-0
25		YELLOWISH-BROWN GRAVELLY SILT	MOIST ZONE	WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC
30		BOTTOM OF HOLE 37'	VERY MOIST TO WET	OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED.
35				HEIGHT OF CASING ABOVE GROUND 3.8'
40				MONUMENT NO. AHA-371
40				COULDN'T RETRACT THE HAMMER BECAUSE THE CABLE BROKE. DRILLED TO 37" AND PULLED AUGER AND HAMMER THEN INSTALLED WELL SUCCESSFULLY IN OPEN BOREHOLE.
40			USED FORMATION WATER TO HYDRATE BENTONITE.	
40			ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.	



LOG OF BORING LC-MW-08S

(Page 1 of 1)

CAMP BONNEVILLE, WA. 38-EH-004M-03	Geologist : Mary Grez Start Date : 11/16/02 End Date : 11/16/02 Start Time : 0740 Weather : Overcast	Drilling Company : Cascade Drilling Inc. Drillers : Matt Ross : Jesse Cannon : Matt Slobig
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	Depth in	Well: LC-MW-08S Elev.: 306.10	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
	0	CONCRETE	BROWN SILTY LOAM LOTS OF ROOTS, SOME GRAVEL.	LC-MW-08S-0 0740 MOIST	Bore Hole Depth : 37' Bore Diameter : 6"
	5		DRY SILTY GRAVEL, GRAYISH-BROWN DRY SILT WITH RUST COLORED MOTTLES	LC-MW-08S-2 0750 HAD TO MOVE 1' EAST BECAUSE OF ROOT	WELL LOCATION: SOUTH SIDE OF DA-3 CRATER.
	10	GROUT RISER	REDDISH-BROWN CLAYEY SILT WITH DECOMPOSED GRAVEL AND RED MOTTLES	LC-MW-08S-5 0800 FAINTLY MOIST	DRILLING METHOD: CME 580 WITH 6" HOLLOW STEM AUGER AND 140 LBS HAMMER.
	15		STIFF GRAY SILT, BARELY MOIST	LC-MW-08S-15 0815	SAMPLES TAKEN WITH SPLIT SPOON SAMPLER AT 0', 2', 5', 15' DEPTHS. SAMPLED FOR EXPLOSIVES, PETN, PERCHLORATE AND METALS
	20	SAND 20-40	OLIVE-BROWN STIFF SILT AT 17'	POOR RECOVERY DROVE ANOTHER SAMPLE TO COMPOSITE FROM 15'-18'	WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC
	25		MOIST REDDISH-BROWN SILT WITH VARIABLE CLAY AND FINE GRAVEL		HEIGHT OF CASING ABOVE GROUND 3.68'
	30	SAND 2-12 SCREEN		NEVER ENCOUNTERED WET ZONE WE SAW IN LC-MW-05S	MONUMENT NO. AHA-373
	35				NO WATER LEVELS TAKEN PRIOR TO SAMPLING BECAUSE OF SEDIMENT IN WELL.
	40		BOTTOM OF HOLE 37'		ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.



LOG OF BORING LC-MW-09S

(Page 1 of 1)

CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/15/02
End Date : 11/15/02
Start Time : 0737
Weather : Foggy

Drilling Company : Cascade Drilling Inc.
Drillers : Matt Ross
: Jesse Cannon
: Matt Slobig

Depth in Well: LC-MW-09S Elev.: 344.91	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
	<p>DARK REDDISH-BROWN SLIGHTLY GRAVELLY, SLIGHTLY CLAYEY SILT</p> <hr/> <p>CHATTER AT 5' GRAVEL LAYER</p> <hr/> <p>A LITTLE MORE GRAVEL</p> <hr/> <p>COLOR STARTING TO CHANGE TO DARK GRAYISH-BROWN</p> <hr/> <p>BOTTOM OF HOLE 17.5'</p>	<p>MOIST</p> <hr/> <p>WET AT 5'</p>	<p>Bore Hole Depth : 17.6' Bore Diameter : 6"</p> <hr/> <p>WELL LOCATION: SW WELL LOCATION AT DA-2 NEAR CRATER.</p> <p>DRILLING METHOD: CME 580 WITH 6" HOLLOW STEM AUGER WOODEN PLUG.</p> <p>WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC</p> <p>OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED.</p> <p>HEIGHT OF CASING ABOVE GROUND 2.4'</p> <p>MONUMENT NO. AHA-369</p> <p>USED 10' SCREEN BECAUSE WATER WAS ENCOUNTERED AT 5' bgs.</p> <p>ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.</p>



LOG OF BORING LC-MW-10S

(Page 1 of 1)

CAMP BONNEVILLE, WA.
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/14/02
End Date : 11/14/02
Start Time : 1530
Weather : Sunny, Partly Cloudy

Drilling Company : Cascade Drilling Inc.
Drillers : Matt Ross
Jesse Cannon
Matt Slobig

Depth in	Well: LC-MW-10S Elev.: 349.67	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		DARK YELLOWISH-BROWN SLIGHTLY CLAYEY SILT- NO GRAVEL	MOIST, PLASTIC	Bore Hole Depth : 24'3" Bore Diameter : 6" WELL LOCATION: SE WELL NEAR ROAD. DRILLING METHOD: CME 580 WITH 6' HOLLOW STEM AUGER AND WOOD PLUG. WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC OPEN TRIANGLE: DEPTH TO WATER BEFORE DEVELOPING. CLOSED TRIANGLE: DEPTH WATER ENCOUNTERED. HEIGHT OF CASING ABOVE GROUND 1.8' MONUMENT NO. AHA-370 ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
5			MORE MOIST	
10				
15		GRAYISH-BROWN TO DARK REDDISH-BROWN OR MAROON SLIGHTLY FINE GRAVELY SILT.	NO RETURN FROM 14' WATER AT 14'	
20				
25		BOTTOM OF HOLE 24.25'		



LOG OF BORING LC-MW-11S

(Page 1 of 1)

CAMP BONNEVILLE, WA
38-EH-004M-03

Geologist : Mary Grez
Start Date : 11/14/02
End Date : 11/14/02
Start Time : 1430
Weather : Sunny, Partly Cloudy

Drilling Company : Cascade Drilling Inc.
Drillers : Matt Ross
: Matt Slobig
: Jesse Cannon

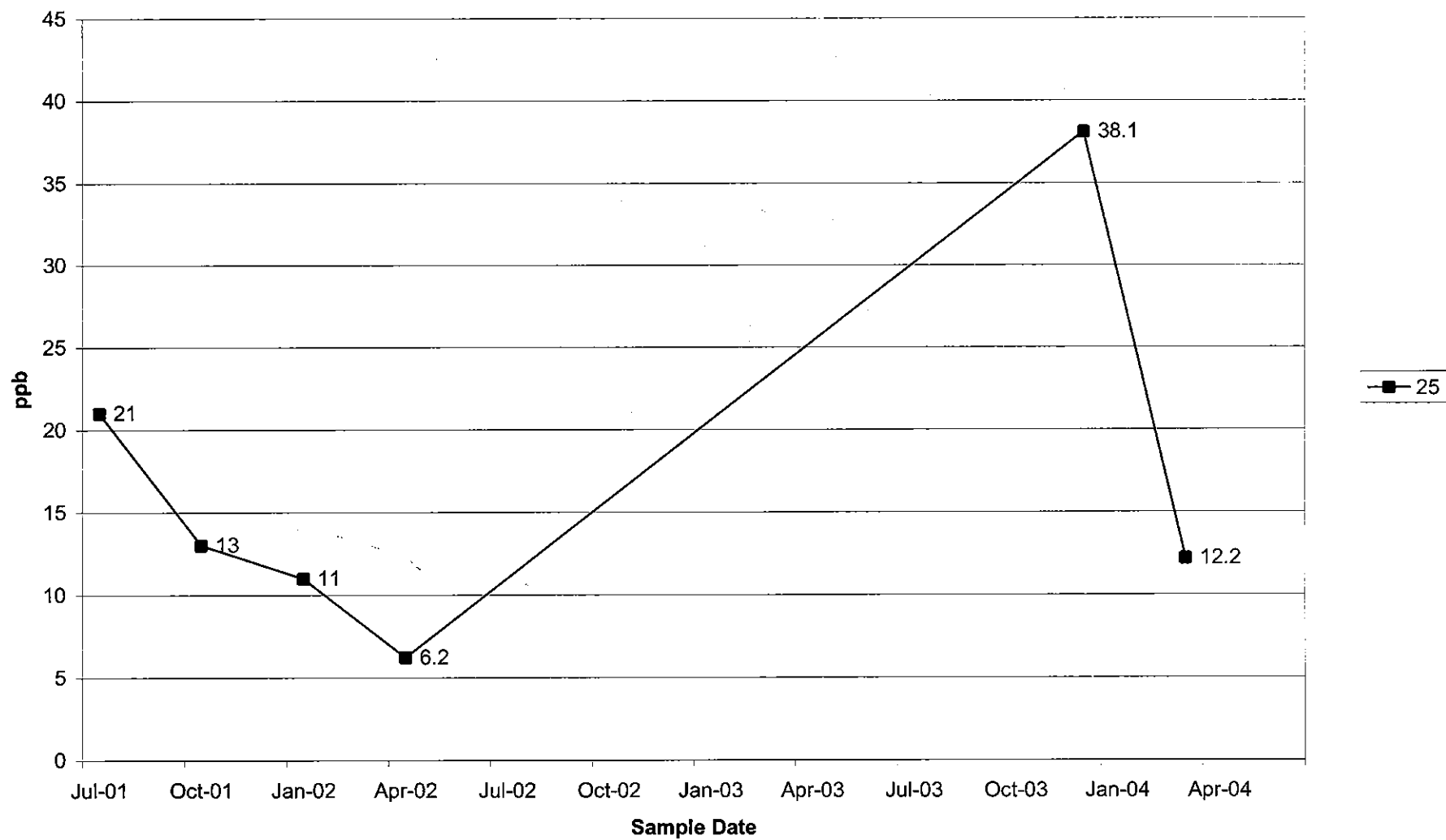
Depth in	Well: LC-MW-11S Elev.: 342.72	DESCRIPTION	REMARKS	BORING AND WELL CONSTRUCTION INFORMATION
0		DARK YELLOWISH-BROWN SILT, SOME GRAVEL, POSSIBLE FILL MATERIAL	WATER AT GROUND SURFACE	Bore Hole Depth : 17' Bore Diameter : 6" WELL LOCATION: NORTH WELL AT DA-2 NE OF POND. DRILLING METHOD: CME 580 WITH 6" HOLLOW STEM AUGER AND WOOD PLUG. WELL INNER DIAMETER: 2 INCH WELL SLOT SIZE: 0.010 INCH WELL SCREEN MATERIAL: PVC WATER IS AT GROUND SURFACE IN UXO AUGER HOLE. HEIGHT OF CASING ABOVE GROUND 3.0' MONUMENT NO. AHA-368 USED 10' SCREEN BECAUSE OF SHALLOW WATER TABLE. USED FORMATION WATER TO HYDRATE BENTONITE. ALL WELLS COMPLETED WITH STEEL SURFACE MONUMENT SET 2' DEEP INTO CONCRETE WITH A CONCRETE PAD AND THREE PROTECTIVE BALLARDS PAINTED YELLOW.
5		GRAYISH-BROWN SLIGHTLY FINE SANDY SILT CAN HEAR SOME GRAVEL IN HOLE	CHATTER AT 10'	
10				
15				
20				
25				
		BOTTOM OF HOLE 17'	WATER IN BOTTOM OF HOLE	

APPENDIX B
Groundwater Analytical Results

TABLE 1
Depths To Water and
Groundwater Elevation Data

Well ID	Casing Height (feet) amsl	Depth to Water (feet)									Water Elevation (feet amsl)										
		Date	Jul-01	Oct-01	Jan-02	Apr-02	Apr-03	Dec-03	Mar-04	Jun-04	Sep-04	Jul-01	Oct-01	Jan-02	Apr-02	Apr-03	Dec-03	Mar-04	Jun-04	Sep-04	
Landfill 4																					
MW1A	531.40	16.60	17.42	14.23	16.18		16.48	15.98	16.45	16.87		514.80	513.98	517.17	515.22		514.92	515.42	514.95	514.53	
MW1B	529.57	13.71	14.97	10.46	12.68		13.38	12.18	13.11	14.02		515.86	514.60	519.11	516.89		516.19	517.39	516.46	515.55	
MW2A	519.93	24.47	29.12	23.38	24.46		24.13	23.64	25.60	27.65		495.46	490.81	496.55	495.47		495.80	496.29	494.33	492.28	
MW2B	518.46	31.60	32.58	27.57	27.98		29.37	29.58	30.54	32.62		486.86	485.88	490.89	490.48		489.09	488.88	487.92	485.84	
MW3A	514.85	29.68	30.30	26.77	28.06		28.20	27.82	27.86	29.46		485.17	484.55	488.08	486.79		486.65	487.03	486.99	485.39	
MW3B	511.47	27.19	27.62	24.26	25.61		25.65	25.10	26.64	26.93		484.28	483.85	487.21	485.86		485.82	486.37	484.83	484.54	
MW4A	511.79	28.21	23.17	25.97	27.25		26.85	27.01	27.50	27.60		483.58	488.62	485.82	484.54		484.94	484.78	484.29	484.19	
MW5A	509.91	24.68	24.29	21.86	23.22		23.34	22.60	23.86	24.20		485.23	485.62	488.05	486.69		486.57	487.31	486.05	485.71	
MW7B	480.42						39.53	38.84	39.60	40.32		480.42	480.42	480.42	480.42		440.89	441.58	440.82	440.10	
MW17	361.48								10.48	10.86									351.00	350.62	
MW18	362.48								11.63	11.88									350.85	350.60	
Demolition Area 3																					
MW5S	310.10						6.48	7.47	6.67	6.95	9.42						303.62	302.63	303.43	303.15	300.68
MW5D	309.94						0.21	0.22	0.18	0.00	0.50						309.73	309.72	309.76	309.94	309.44
MW6S	308.27						4.97	5.20	6.09	7.29	12.40						303.30	303.07	302.18	300.98	295.87
MW7S	308.92						7.00	9.11	7.30	6.89	9.28						301.92	299.81	301.62	302.03	299.64
MW8S	309.78						6.43	5.10	6.82	7.24	9.26						303.35	304.68	302.96	302.54	300.52
Demolition Area 2																					
MW9	347.31						5.18	5.68	5.29	5.45							342.13	341.63	342.02	341.86	
MW10	351.47						9.37	9.24	9.24	10.15							342.10	342.23	342.23	341.32	
MW11	345.72						7.29	7.05	7.10	7.70							338.43	338.67	338.62	338.02	
Boundary Area																					
MW1S	290.16						3.95	4.47	4.90	4.91	6.00						286.21	285.69	285.26	285.25	284.16
MW1D	290.25						4.43	4.44	5.29	5.22	6.50						285.82	285.81	284.96	285.03	283.75
MW2S	291.19						4.73	4.88	5.35	5.45	7.15						286.46	286.31	285.84	285.74	284.04
MW2D	291.59						5.06	5.03	8.21	5.95	7.45						286.53	286.56	283.38	285.64	284.14
MW3S	290.91							4.26	4.80	4.93	5.62						286.65	286.11	285.98	285.29	
MW3D	290.98							4.26	4.80	5.15	6.26						286.72	286.18	285.83	284.72	
MW4S	291.63							4.23	4.68	4.95	5.62						287.40	286.95	286.68	286.01	
MW4D	291.79							4.49	5.50	5.73	6.25						287.30	286.29	286.06	285.54	

Total chromium



**TABLE 2
L4-MW1A**

Analyte (units)	7/24/2001	10/23/2001	1/21/2002	4/23/2002	12/17/2003	3/10/2004	6/18/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)										
2,4-Dinitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
HMX	0.25U	0.25U	0.25U	0.25U	.47U	.49U	.49U		n/a	
RDX	0.25U	0.25U	0.25U	0.25U	.47U	.49U	.49U		n/a	
Perchlorate	5U	5U	6.5	5U	4U	4U	4U		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	2U	2U	2U	2U	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U	1U	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U	1U	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U	1U	1U	1U	1U		n/a	
Acetone	5U	5U	3.9J	5U	5U	5U	5U		800	
Benzene	1U	1U	1U	1U	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U	1U	1U	1U	1U		n/a	
Tetrachloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U	1U	1U	1U	1U			
Metals, Total (ug/L)										
Antimony					0.05	0.34	0.05	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2	0.2U	0.2U	0.32	3.1	0.65	0.92	5	
Barium	4	6	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.14	1.3	0.38	0.37	n/a	32
Cadmium	NA	NA	NA	NA	.04U	0.57	0.66	0.4	5	
Calcium	4,630	3,940	2,400	2,250	NA	NA	NA			
Chromium (total)	25	21	13	11	6.2	38.1	12.2	9.7	50	
Copper	2U	4	2U	2U	11.4	114	32.2	27.8	n/a	592
Iron	200	580	250	160	NA	NA	NA			
Lead	1U	1	1U	1	1.2	10.7	3.5	2.8	15	
Magnesium	1,780	1,650	990	920	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.028	.03U	.03U	ND	2	4.8
Nickel	10	20	10U	10U	4.3	26.5	7.9	6.7	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	0.14	0.3	.04U	1.1	n/a	80
Silver	NA	NA	NA	NA	.04U	0.28	.04U		n/a	80
Sodium	8,550	6,090	4,520	2,680	NA	NA	NA	0.04		
Thallium	NA	NA	NA	NA	.02U	0.25	.02U	0	n/a	1.1
Zinc	7J	12	6U	6U	10.5	95	62.8	32.1	n/a	4800

TABLE 2
L4-MW1A

Analyte (units)	7/24/2001	10/23/2001	1/21/2002	4/23/2002	12/17/2003	3/10/2004	6/18/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	.05U	0.4	.05U	ND	n/a	1.4 - 8
Arsenic	NA	NA	NA	NA	.04U	0.08	.04U	ND	5	
Barium	4	3	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	.02U	0.22	.01U	0	n/a	32
Cadmium	NA	NA	NA	NA	.04U	0.22	.04U	0	5	
Calcium	5,060	4,010	2,440	2,370	NA	NA	NA			
Chromium (total)	12	5U	5U	5U	0.66	1.2	1.2	0.82	50	
Copper	2U	2U	2U	2U	0.11	0.23	0.16	0.34	n/a	592
Iron	110	50U	50U	50U	NA	NA	NA			
Lead	1U	1U	1U	1U	0.13	0.24	0.03	0.04	15	
Magnesium	1,910	1,620	1,000	980	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.029	.007U	.007U	ND	2	4.8
Nickel	40	10U	10U	10U	1.6	2.6	1.6	0.78	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	0.1	0.15	0.28	ND	n/a	80
Silver	NA	NA	NA	NA	.04U	0.2	.04U		n/a	80
Sodium	9,010	6,440	4,680	2,910	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	.02U	0.22	.02U	ND	n/a	1.1
Zinc	6U	6U	6U	6U	4.2	4.7	3.7	4.9	n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO3)	15	13	10	8.3	NA	NA	NA			
Bicarbonate (as CaCO3)	15	13	10	8.3	NA	NA	NA			
Hardness (calculated)	18.9	16.7	10.1	9.41	NA	NA	NA			
Total Suspended Solids	2.6	4.2	3.6	2.3	NA	NA	NA			
Chloride	1.7	1.3	2.2	1.5	NA	NA	NA			
Nitrate as N	0.1U	0.1U	0.029	0.056	NA	NA	NA			
Sulfate	19.5	13.2	8.3	6.9	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 3
L4-MW1B**

Analyte (units)	7/24/2001	10/24/2001	1/22/2002	4/23/2002	12/17/2003	3/10/2004	6/18/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)										
2,4-Dinitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
HMX	0.25U	0.25U	0.25U	0.25U	.47U	.49U	.49U		n/a	
RDX	0.25U	0.25U	0.25U	0.25U	.47U	.49U	.49U		n/a	
Perchlorate	5U	5U	5U	5U	4U	4U	4U		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	2U	2U	2U	2U	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U	1U	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U	1U	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U	1U	1U	1U	1U		n/a	
Acetone	8.3B	5U	5U	5U	5U	5U	5U		800	
Benzene	1U	1U	1U	1U	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U	1U	1U	1U	1U		n/a	
Tetrachloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U	1U	1U	1U	1U			
Metals, Total (ug/L)										
Antimony	NA	NA	NA	NA	0.15	0.05	.04U	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	0.15	0.1	.04U	0.13	5	
Barium	3U	3U	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.08	0.05	0.2	0.03	n/a	32
Cadmium	NA	NA	NA	NA	.04U	.04U	0.48	0.06	5	
Calcium	2,040	1,990	1,960	2,020	NA	NA	NA			
Chromium (total)	7J	10	1U	1U	2.8	4	2.5	1.8	50	
Copper	2U	2U	2U	2U	0.33	2.8	0.53	0.93	n/a	592
Iron	70	80	50U	50U	NA	NA	NA			
Lead	1U	1U	1U	1U	0.1	0.32	0.07	0.14	15	
Magnesium	1,090	1,100	1,090	1,090	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.024	.03U	.03U	ND	2	4.8
Nickel	10U	10U	10U	10U	1.6	2.1	0.85	0.72	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	0.05	.04U	0.16	0.44	n/a	80
Silver	NA	NA	NA	NA	0.09	0.07	.04U		n/a	80
Sodium	1,240	1,290	1,290	1,260	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	0.05	.02U	.02U	0	n/a	1.1
Zinc	6U	7	6U	6U	1.4	3.4	2.7	1.6	n/a	4800

**TABLE 3
L4-MW1B**

Analyte (units)	7/24/2001	10/24/2001	1/22/2002	4/23/2002	12/17/2003	3/10/2004	6/18/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	0.13	0.13	.05U	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	.04U	.04U	.04U	ND	5	
Barium	3U	3U	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.04	0.07	0.01	0	n/a	32
Cadmium	NA	NA	NA	NA	.04U	0.07	.04U	0	5	
Calcium	2,210	1,970	2,050	2,090	NA	NA	NA			
Chromium (total)	5U	5U	5U	5U	0.85	1.1	1.3	1.1	50	
Copper	2U	2U	2U	2U	0.09	0.16	0.09	0.11	n/a	592
Iron	40	50U	50U	50U	NA	NA	NA			
Lead	1U	1U	1U	1U	0.08	0.08	0.01	0.02	15	
Magnesium	1,150	1,140	1,150	1,130	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.024	.007U	.007U	ND	2	4.8
Nickel	10U	10U	10U	10U	0.66	1.3	0.61	0.31	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	.04U	0.04	.04U	ND	n/a	80
Silver	NA	NA	NA	NA	0.06	0.07	.04U		n/a	80
Sodium	1,310	1,340	1,400	1,320	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	.02U	0.06	.02U	ND	n/a	1.1
Zinc	6U	6U	6U	6U	1.3	0.9	1.4	1.5	n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO3)	11	12	11	10	NA	NA	NA			
Bicarbonate (as CaCO3)	11	12	11	10	NA	NA	NA			
Hardness (calculated)	9.58	9.61	9.38	9.53	NA	NA	NA			
Total Suspended Solids	1.1U	1U	1U	1U	NA	NA	NA			
Chloride	1.3	1.1	2.5	1.4	NA	NA	NA			
Nitrate as N	0.1U	0.1U	0.1U	0.071	NA	NA	NA			
Sulfate	0.5	0.4	2.5U	2.5U	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 4
L4-MW2A**

Analyte (units)	7/24/2001	10/24/2001	1/22/2002	4/24/2002	12/17/2003	3/10/2004	6/18/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants Total (ug/L)	*			*						
2,4-Dinitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
HMX	2.5D	2.4	2.1	1.95D	3	2.3	3.2		n/a	
RDX	40D	36D	25D	25D	27	19	26		n/a	
Perchlorate	159.5	193	138	117	190	71	230		n/a	
Explosives and Propellants Dissolved (ug/L)										
2,4-Dinitrotoluene	NA	0.25U	NA	NA	NA	NA	NA		n/a	
HMX	NA	2.4	NA	NA	NA	NA	NA		n/a	
RDX	NA	36D	NA	NA	NA	NA	NA		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	2U	2U	2U	2U	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U	1U	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U	1U	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U	1U	1U	1U	1U		n/a	
Acetone	7.75B	5U	3.3J	5U	5U	5U	5U		800	
Benzene	1U	1U	1U	1U	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U	1U	1U	1U	1U		n/a	
Tetrachloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U	1U	1U	1U	1U			
Metals, Total (ug/L)										
Antimony	NA	NA	NA	NA	.05U	0.35	.05U	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	0.46	3	0.23	0.35	5	
Barium	3U	3U	4	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.19	1	0.18	0.11	n/a	32
Cadmium	NA	NA	NA	NA	0.07	0.65	0.43	0.56	5	
Calcium	1,345	980	1,400	1,260	NA	NA	NA			
Chromium (total)	8J	41	26	21	12.2	33.4	7.8	2.8	50	
Copper	2U	3	2U	2.5	18.5	90.9	12.4	5.5	n/a	592
Iron	115	700	280	660	NA	NA	NA			
Lead	1U	1U	1U	1U	0.8	4.5	0.49	0.28	15	
Magnesium	445	380	450	390	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.026	.03U	.03U	ND	2	4.8
Nickel	10U	30	20	10	10.4	28.3	5.4	2	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.6	0.5U	0.6	0.55	0.17	0.91	0.27	0.1	n/a	80
Silver	NA	NA	NA	NA	.04U	0.22	.04U		n/a	80
Sodium	6,890	4,000	10,100	7,905	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	.02U	0.16	.02U	0.18	n/a	1.1
Zinc	6U	6U	8	49	21.8	144	14.4	10.5	n/a	4800

**TABLE 4
L4-MW2A**

Analyte (units)	7/24/2001	10/24/2001	1/22/2002	4/24/2002	12/17/2003	3/10/2004	6/18/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	.05U	.05U	.05U	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	.04U	.04U	.04U	ND	5	
Barium	3U	3U	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.04	0.07	0.06	0.05	n/a	32
Cadmium	NA	NA	NA	NA	.04U	0.44	0.04U	0.25	5	
Calcium	1,265	960	1,370	1,305	NA	NA	NA			
Chromium (total)	5U	10	12	7.5	0.9	1.1	1.9	0.85	50	
Copper	5U	10	12	7.5	0.15	0.29	0.15	0.19	n/a	592
Iron	50U	80	110	90	NA	NA	NA			
Lead	1U	1U	1U	1U	.05U	0.01	0.01	0.06	15	
Magnesium	415	360	460	395	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.027	.007U	.007U	ND	2	4.8
Nickel	10U	20	20	15	1.9	2.2	2	0.69	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.6	0.5U	0.5U	0.55	0.09	0.66	0.41	ND	n/a	80
Silver	NA	NA	NA	NA	.04U	0.03	.04U		n/a	80
Sodium	5,855	3,910	10,200	8,035	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	.02U	.02U	.02U	ND	n/a	1.1
Zinc	6U	6U	8	6U	2.5	3.4	2.1	2.4	n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO ₃)	4	3.7	4.3	2.1	NA	NA	NA			
Bicarbonate (as CaCO ₃)	4	3.7	4.3	2.1	NA	NA	NA			
Hardness (calculated)	5.19	4.01	5.35	4.755	NA	NA	NA			
Total Suspended Solids	2.6	8.4	2.2	7.45	NA	NA	NA			
Chloride	2.05	1	2.7	1.75	NA	NA	NA			
Nitrate as N	0.3	0.3	0.36	0.365	NA	NA	NA			
Sulfate	12.9	5.3	19	18	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 5
L4-MW2B

Analyte (units)	7/25/2001	10/24/2001	1/23/2002	4/24/2002	12/17/2003	3/10/2004	6/18/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)		*	*		*					
2,4-Dinitrotoluene	0.3	0.47	0.48J	0.41	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.26	0.25U	0.25U	ND	ND	ND		n/a	
HMX	1.7	2.2	2.59	2.6	3.55	ND	4.1		n/a	
RDX	120D	120D	110D	110D	103.5	120	56		n/a	
Perchlorate	199	205.6	226.5	241	270	300	380		n/a	
Nitroglycerine	ND	ND	ND	ND	4U	4U	8.4		2.4	
Explosives and Propellants Dissolved (ug/L)										
2,4-Dinitrotoluene	NA	0.47J	NA	NA	NA	NA	NA		n/a	
HMX	NA	0.23	NA	NA	NA	NA	NA		n/a	
RDX	NA	120D	NA	NA	NA	NA	NA		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	91	82	84.5	69	1U	1U	1U		n/a	
1,1,1-Trichloroethane	290	205D	225	210	165	170	150		200	
1,1-Dichloroethane	29	32	31	29	37	41	36		n/a	
1,1-Dichloroethene	36	34.5	34	28	27	30	27		n/a	
Acetone	11B	5U	5U	5U	5U	5U	59		800	
Benzene	0.7J	1U	1U	1U	1U	1U	1U		5	
Dichlorodifluoromethane	120J	120J	100J	100	180	190	170		n/a	
Tetrachloroethene	1.1	0.8J	1U	0.8J	0.65	0.7J	0.7J		5	
Trichloroethene	0.5J	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	0.8J	1U	1U	1U	1U	0.8J	0.6J		5	
Methylene Chloride	1U	1U	1U	1U	0.55	1U	1U		5	
Metals, Total (ug/L)										
Antimony					.05U	0.19	.05U	ND	n/a	1.4 - 8
Arsenic	2.5	0.2U	0.2U	0.3	0.165	0.43	1.2	2.3	5	
Barium	93	6.5	4	15	NA	NA	NA		n/a	560
Beryllium					0.58	0.15	0.33	0.21	n/a	32
Cadmium					0.04	0.16	0.74	0.86	5	
Calcium	9,020	2,360	2,015	2,460	NA	NA	NA			
Chromium (total)	18J	17.5	19.5	33	3.7	3.8	8	3.3	50	
Copper	16	3	2U	9	2.4	5.4	8.9	2.3	n/a	592
Iron	10,400	280	160	4,970	NA	NA	NA			
Lead	12	1U	1U	1	0.715	1.6	2.1	0.46	15	
Magnesium	6,410	1,130	995	1,850	NA	NA	NA			
Mercury					0.0265	.03U	.03U	ND	2	4.8
Nickel	10U	10	10	20	3.6	2.5	4	4.1	n/a	320
Potassium	4,230	795	500U	1,000	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	.04U	0.05	0.33	0.05	n/a	80
Silver					.04U	0.07	.04U		n/a	80
Sodium	13000	4150	2890	2250	NA	NA	NA	ND		
Thallium					.02U	0.04	.02U	1/0/1900	n/a	1.1
Zinc	41J	7.5	6U	18	5.45	7.7	14.9	1/9/1900	n/a	4800

**TABLE 5
L4-MW2B**

Analyte (units)	7/25/2001	10/24/2001	1/23/2002	4/24/2002	12/17/2003	3/10/2004	6/18/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	.05U	.05U	.05U	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2	0.2U	0.2U	.04U	.04U	0.97	1	5	
Barium	8	6	4	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.045	0.04	0.24	0.22	n/a	32
Cadmium	NA	NA	NA	NA	0.06	0.22	0.13	0.17	5	
Calcium	1,460	2,330	2,095	1,920	NA	NA	NA			
Chromium (total)	5U	5U	5U	5U	0.44	0.61	3.5	2.3	50	
Copper	2U	2U	2U	2U	0.32	0.33	0.15	0.74	n/a	592
Iron	20U	50U	70	110	NA	NA	NA			
Lead	1U	1U	1U	1U	0.09	0.04	0.05	0.1	15	
Magnesium	540	1,095	1,040	900	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.0265	.007U	.007U	0.034	2	4.8
Nickel	10U	10U	10	20	1.35	0.9	1.9	2.7	n/a	320
Potassium	2,670	805	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	ND	0.11	0.23	3.9	n/a	80
Silver	NA	NA	NA	NA	ND	.04U	.04U		n/a	80
Sodium	11,500	3,710	3,050	2,340	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	ND	.02U	.02U	ND	n/a	1.1
Zinc	6U	6U	7	6U	4.4	4.5	9.4	7.1	n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO3)	15	5.55	3.9	3.5	NA	NA	NA			
Bicarbonate (as CaCO3)	15	5.55	3.9	3.5	NA	NA	NA			
Hardness (calculated)	48.9	10.55	9.13	13.8	NA	NA	NA			
Total Suspended Solids	970	5.75	2.1	89	NA	NA	NA			
Chloride	17.3	6.95	4.6	3.4	NA	NA	NA			
Nitrate as N	0.5	0.7	0.81	0.82	NA	NA	NA			
Sulfate	16.9	2.3	2.85	2.5	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 6
L4-MW3A**

Analyte (units)	7/26/2001	10/25/2001	1/24/2002	4/25/2002	12/18/2003	3/11/2004	6/17/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)							*			
2,4-Dinitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
HMX	0.25U	0.25U	0.25U	0.25U	.47U	.49U	.49U		n/a	
RDX	6.6	6.6	6.7	7.4	9.8	9.8	9.4		n/a	
Perchlorate	91.5	94.3	102	106	100	100	120		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	2U	2U	2U	2U	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U	1U	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U	1U	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U	1U	1U	1U	1U		n/a	
Acetone	7.1B	5U	5U	5U	5U	5U	5U		800	
Benzene	1U	1U	1U	1U	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U	1U	1U	1U	1U		n/a	
Tetrachloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U	1U	1U	1U	1U			
Metals, Total (ug/L)										
Antimony	NA	NA	NA	NA	0.05	0.05	0.205	0.75	n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	.04U	0.04	0.13	0.71	5	
Barium	3U	3U	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.03	0.04	0.095	0.06	n/a	32
Cadmium	NA	NA	NA	NA	.04U	.04U	0.21	1.1	5	
Calcium	1,670	1,590	1,570	1,470	NA	NA	NA			
Chromium (total)	5U	18	18	9	4.3	2.2	2.7	1.6	50	
Copper	2U	3	2U	2U	0.63	2.8	1.55	1.7	n/a	592
Iron	210	100	2,180	130	NA	NA	NA			
Lead	1U	1U	1U	1U	0.11	0.25	0.215	0.26	15	
Magnesium	670	720	740	650	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.027	.03U	.03U	ND	2	4.8
Nickel	10U	10	10	10U	3.3	1.3	1.25	1.2	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	0.05	.04U	0.275	ND	n/a	80
Silver	NA	NA	NA	NA	.04U	.04U	0.47		n/a	80
Sodium	1,530	1,450	1,480	1,250	NA	NA	NA	0.06		
Thallium	NA	NA	NA	NA	.02U	.02U	0.06	0	n/a	1.1
Zinc	7J	6U	6U	6U	3.7	3	2.4	2.9	n/a	4800

**TABLE 6
L4-MW3A**

Analyte (units)	7/26/2001	10/25/2001	1/24/2002	4/25/2002	12/18/2003	3/11/2004	6/17/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	.05U	.05U	.05U		n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	.04U	.04U	.04U		5	
Barium	3U	3U	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	.02U	0.02	0.02		n/a	32
Cadmium	NA	NA	NA	NA	.04U	0.09	.04U		5	
Calcium	1,800	1,550	1,610	1,650	NA	NA	NA			
Chromium (total)	5U	8	5U	5U	1.4	0.94	1.1		50	
Copper	2U	2U	2U	2U	0.21	0.22	0.095		n/a	592
Iron	20U	50	20U	20U	NA	NA	NA			
Lead	1U	3	1U	1U	0.23	0.02	0.01		15	
Magnesium	700	710	760	740	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.037	.007U	.007U		2	4.8
Nickel	10U	10	10U	10U	1.5	0.83	1.1		n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	.04U	0.18	0.145		n/a	80
Silver	NA	NA	NA	NA	.04U	.04U	.04U		n/a	80
Sodium	1,700	1,430	1,570	1,420	NA	NA	NA			
Thallium	NA	NA	NA	NA	.02U	.02U	.02U		n/a	1.1
Zinc	6U	6U	6U	6U	4.9	0.76	1.4		n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO ₃)	9.9	7.4	8.1	6.6	NA	NA	44			
Bicarbonate (as CaCO ₃)	9.9	7.4	8.1	6.6	NA	NA	44			
Hardness (calculated)	6.93	6.94	6.97	6.35	NA	NA	NA			
Total Suspended Solids	8.4	1U	1.1	1.7	NA	NA	2U			
Chloride	1.4	1.2	1U	1.3	NA	NA	NA			
Nitrate as N	0.1	0.1	0.14	0.13	NA	NA	NA			
Sulfate	0.3	0.2	2.5U	2.5U	NA	NA	NA			
Total Organic Carbon					NA	NA	1U			
Dissolved Organic carbon					NA	NA	1U			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 7
L4-MW3B**

Analyte (units)	7/26/2001	10/25/2001	1/24/2002	4/25/2002	12/18/2003	3/11/2004	6/23/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)										
2,4-Dinitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
HMX	0.25U	0.25U	0.25U	0.25U	.47U	.49U	0.46		n/a	
RDX	0.6J	1.2	1.8	2.7	2.9	4.7	3.1		n/a	
Perchlorate	15.5	16.9	22.1	29.3	37	36	38		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	2U	2U	2U	2U	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U	1U	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U	1U	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U	1U	1U	1U	1U		n/a	
Acetone	13B	5U	5U	5U	5U	5U	5U		800	
Benzene	1U	1U	1U	1U	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U	1U	1U	1U	1U		n/a	
Tetrachloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U	1U	1U	1U	1U			
Metals, Total (ug/L)										
Antimony	NA	NA	NA	NA	.05U	0.16	0.25	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2	0.3	0.2U	0.27	0.52	1.2	0.54	5	
Barium	15	8	9	12	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.1	0.13	0.57	0.12	n/a	32
Cadmium	NA	NA	NA	NA	0.09	0.14	0.12	0.67	5	
Calcium	5,450	3,970	3,800	3,470	NA	NA	NA			
Chromium (total)	5U	33	65	62	2.7	4.8	5.7	3.5	50	
Copper	2U	4	4	4	1.8	3.7	6.6	4.5	n/a	592
Iron	230	450	1,100	1,580	NA	NA	NA			
Lead	1U	1U	1U	1	1.4	1.8	12.8	2	15	
Magnesium	1,990	1,790	1,810	1,640	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.03	0.037	0.037	ND	2	4.8
Nickel	10U	20	40	40	2.4	2.8	4.6	2.3	n/a	320
Potassium	9,350	3,090	2,100	1,700	NA	NA	NA			
Selenium	0.5U	0.5U	0.6	0.5U	0.11	0.17	0.41	0.11	n/a	80
Silver	NA	NA	NA	NA	.04U	0.06	0.03		n/a	80
Sodium	26,500	10,400	8,320	5,700	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	.02U	0.06	.02U	0	n/a	1.1
Zinc	9J	10	6U	16	8.4	13.9	21.6	11.4	n/a	4800

TABLE 7
L4-MW3B

Analyte (units)	7/26/2001	10/25/2001	1/24/2002	4/25/2002	12/18/2003	3/11/2004	6/23/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	.05U	.05U	0.13		n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	.04U	.04U	0.05		5	
Barium	15	7	7	5	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	.02U	0.02	0.04		n/a	32
Cadmium	NA	NA	NA	NA	0.35	0.26	.04U		5	
Calcium	6,400	4,190	4,160	3,570	NA	NA	NA			
Chromium (total)	5U	5	7	7	0.7	1.2	1.5		50	
Copper	2U	2U	2U	2U	0.43	1.1	0.28		n/a	592
Iron	20U	50	90	70	NA	NA	NA			
Lead	1U	1U	1U	1U	0.19	0.2	0.04		15	
Magnesium	2,250	1,820	1,930	1,580	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.025	.007U	.007U		2	4.8
Nickel	10U	10U	20	20	1.7	1.7	4.7		n/a	320
Potassium	10,600	3,270	2,210	1,500	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	0.08	0.23	0.33		n/a	80
Silver	NA	NA	NA	NA	.04U	.04U	.04U		n/a	80
Sodium	28,200	11,100	9,010	6,740	NA	NA	NA			
Thallium	NA	NA	NA	NA	.02U	.02U	.02U		n/a	1.1
Zinc	6U	6U	6U	6	7.7	4.7	3.7		n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO ₃)	45	13	13	11	NA	NA	NA			
Bicarbonate (as CaCO ₃)	45	13	13	11	NA	NA	NA			
Hardness (calculated)	21.8	17.3	16.9	15.4	NA	NA	NA			
Total Suspended Solids	4.3	8.2	17	10	NA	NA	NA			
Chloride	26.5	12.1	9.5	8	NA	NA	NA			
Nitrate as N	0.1U	1:1	0.77	0.54	NA	NA	NA			
Sulfate	24.8	7.6	7.8	6.1	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 8
L4-MW4A**

Analyte (units)	7/25/2001	10/26/2001	1/23/2002	4/25/2002	12/17/2003	3/10/2004	6/18/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)										
2,4-Dinitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
HMX	0.25U	0.25U	0.25U	0.25U	47U	49U	49U		n/a	
RDX	0.82	0.78	0.63	0.54	0.52	0.72	0.82		n/a	
Perchlorate	13.2	14.7	14	15.8	14	14	14		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	2U	2U	2U	2U	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U	1U	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U	1U	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U	1U	1U	1U	1U		n/a	
Acetone	1U	1U	1U	1U	5U	5U	5U		800	
Benzene	5U	5U	5U	5U	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U	1U	1U	1U	1U		n/a	
Tetrachloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U	1U	1U	1U	1U			
	1U	1U	1U	1U	ND	ND	ND			
Metals, Total (ug/L)										
Antimony	NA	NA	NA	NA	.05U	0.04	0.48	ND	n/a	1.4 - 8
Arsenic	0.2	0.2	0.2U	0.2U	0.37	0.38	0.49	0.82	5	
Barium	10	8	5	11	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.13	0.11	0.25	0.19	n/a	32
Cadmium	NA	NA	NA	NA	0.1	0.07	0.42	2.1	5	
Calcium	2,700	1,940	1,630	1,740	NA	NA	NA			
Chromium (total)	18J	34	47	23	12.2	5.7	14.6	11.6	50	
Copper	7	9	4	9	23.8	21.1	41.6	36.4	n/a	592
Iron	2,730	2,350	1,440	3,430	NA	NA	NA			
Lead	1U	1U	1U	1	0.72	0.54	1.6	2.1	15	
Magnesium	1,330	960	760	1,020	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.029	.03U	.03U	ND	2	4.8
Nickel	10U	20	30	10	8.4	2.6	7.9	7	n/a	320
Potassium	720	800	550	900	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	0.06	0.27	0.13	0.14	n/a	80
Silver	NA	NA	NA	NA	.04U	0.02	0.18		n/a	80
Sodium	2,230	2,050	1,710	1,420	NA	NA	NA	0.08		
Thallium	NA	NA	NA	NA	.02U	0.03	.02U	0	n/a	1.1
Zinc	12J	8	6U	11	17.1	19.3	55.8	32.7	n/a	4800

**TABLE 8
L4-MW4A**

Analyte (units)	7/25/2001	10/26/2001	1/23/2002	4/25/2002	12/17/2003	3/10/2004	6/18/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	.05U	.05U	.05U		n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	.04U	.04U	.04U		5	
Barium	3U	3U	3U	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	.02U	.01U	0.02		n/a	32
Cadmium	NA	NA	NA	NA	0.15	0.07	0.06		5	
Calcium	2,800	1,730	1,560	1,610	NA	NA	NA			
Chromium (total)	5U	5U	5U	5U	1.1	1.2	1.2		50	
Copper	5U	5U	5U	5U	0.26	0.14	0.17		n/a	592
Iron	20U	50U	60	50U	NA	NA	NA			
Lead	1U	1U	1U	1U	0.17	0.18	0.11		15	
Magnesium	920	610	590	570	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.028	.007U	.007U		2	4.8
Nickel	10U	10U	10	10U	3.3	1.2	3.7		n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	0.06	0.17	0.2		n/a	80
Silver	NA	NA	NA	NA	.04U	.04U	.04U		n/a	80
Sodium	2,620	2,050	1,780	1,580	NA	NA	NA			
Thallium	NA	NA	NA	NA	.02U	.02U	.02U		n/a	1.1
Zinc	6U	6U	6U	6U	7.4	2.6	3		n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO3)	9.7	9.1	8.3	7.1	NA	NA	NA			
Bicarbonate (as CaCO3)	9.7	9.1	8.3	7.1	NA	NA	NA			
Hardness (calculated)	12.2	8.8	7.2	8.55	NA	NA	NA			
Total Suspended Solids	58	75	22	11	NA	NA	NA			
Chloride	1.2	1	1U	1.3	NA	NA	NA			
Nitrate as N	0.2	0.1U	0.059	0.047	NA	NA	NA			
Sulfate	1.6	1.3	2.5U	2.5U	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 9
L4-MW5A**

Analyte (units)	7/26/2001	10/26/2001	1/25/2002	4/25/2002	12/18/2003	3/11/2004	6/18/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)										
2,4-Dinitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
2-Nitrotoluene	0.25U	0.25U	0.25U	0.25U	ND	ND	ND		n/a	
HMX	0.28	0.31	0.39	0.27	.47U	.49U	0.75		n/a	
RDX	5.2	5	4.6	4.4	3.3	4.1	4.8		n/a	
Perchlorate	63.8	57.9	57.4	54.7	41	39	43		n/a	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloro-1,2,2-trifluoroethane	2U	2U	2U	2U	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U	1U	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U	1U	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U	1U	1U	1U	1U		n/a	
Acetone	5.8B	5U	5U	5U	5U	5U	5U		800	
Benzene	1U	1U	1U	1U	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U	1U	1U	1U	1U		n/a	
Tetrachloroethene	0.87J	0.6J	0.6J	1U	0.7	0.9J	0.8J		5	
Trichloroethene	1U	1U	1U	1U	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U	1U	1U	1U	1U			
Metals, Total (ug/L)										
Antimony	NA	NA	NA	NA	.05U	0.145	0.15	ND	n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	0.37	4.15	0.52	0.38	5	
Barium	3	4	3	4	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	0.15	1.65	0.29	0.15	n/a	32
Cadmium	NA	NA	NA	NA	0.98	0.79	0.43	0.29	5	
Calcium	3,170	2,700	2,210	2,260	NA	NA	NA			
Chromium (total)	11J	27	29	16	10.4	42.3	10	4	50	
Copper	2U	12	2U	2	10.8	131	20.9	10	n/a	592
Iron	320	400	160	380	NA	NA	NA			
Lead	1U	1U	1U	1U	0.82	8.95	1.8	0.7	15	
Magnesium	990	980	950	880	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.035	.03U	.03U	ND	2	4.8
Nickel	10U	20	20	10	7	30.55	5.6	2.7	n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	.04U	0.145	0.14	0.89	n/a	80
Silver	NA	NA	NA	NA	.04U	0.115	0.05		n/a	80
Sodium	1,790	1,710	1,790	1,670	NA	NA	NA	ND		
Thallium	NA	NA	NA	NA	.02U	0.075	.02U	0	n/a	1.1
Zinc	12J	40	7	18	17.6	234	24.4	14.6	n/a	4800

**TABLE 9
L4-MW5A**

Analyte (units)	7/26/2001	10/26/2001	1/25/2002	4/25/2002	12/18/2003	3/11/2004	6/18/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)										
Antimony	NA	NA	NA	NA	.05U	.05U	.05U		n/a	1.4 - 8
Arsenic	0.2U	0.2U	0.2U	0.2U	.04U	.04U	.04U		5	
Barium	3U	3U	4	3U	NA	NA	NA		n/a	560
Beryllium	NA	NA	NA	NA	.02U	0.01	0.02		n/a	32
Cadmium	NA	NA	NA	NA	.04U	0.35	.04U		5	
Calcium	2,750	2,490	2,290	2,190	NA	NA	NA			
Chromium (total)	5U	5U	5U	5U	0.74	0.65	1.2		50	
Copper	2U	2U	2U	2U	0.19	0.14	0.17		n/a	592
Iron	20U	50U	50U	50U	NA	NA	NA			
Lead	10U	1U	1U	1U	0.18	0.015	0.01		15	
Magnesium	1,000	960	970	940	NA	NA	NA			
Mercury	NA	NA	NA	NA	0.028	.007U	.007U		2	4.8
Nickel	10U	10U	10U	10U	1.8	1.5	2.2		n/a	320
Potassium	500U	500U	500U	500U	NA	NA	NA			
Selenium	0.5U	0.5U	0.5U	0.5U	.04U	0.155	0.21		n/a	80
Silver	NA	NA	NA	NA	.04U	.04U	.04U		n/a	80
Sodium	1,770	1,680	1,900	1,740	NA	NA	NA			
Thallium	NA	NA	NA	NA	.02U	.02U	.02U		n/a	1.1
Zinc	6U	6U	7	6U	3.1	2.85	2.7		n/a	4800
Water Quality Parameters (mg/L)										
Alkalinity (as CaCO ₃)	13	11	11	9.3	NA	NA	NA			
Bicarbonate (as CaCO ₃)	13	11	11	9.3	NA	NA	NA			
Hardness (calculated)	12	10.8	9.43	9.27	NA	NA	NA			
Total Suspended Solids	4.7	9.2	1.7	1.9	NA	NA	NA			
Chloride	1.5	1.3	1U	1.4	NA	NA	NA			
Nitrate as N	0.1	0.2	0.22	0.2	NA	NA	NA			
Sulfate	0.3	0.2	3.1	2.5U	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 10
L4-MW7B**

Analyte (units)	12/18/2003	3/10/2004	6/21/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	ND	ND	ND		n/a	
2-Nitrotoluene	ND	ND	ND		n/a	
HMX	.47U	.49U	.49U		n/a	
RDX	.47U	.49U	.49U		n/a	
Perchlorate	4U	4	4U		n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U		n/a	
1,1,1-Trichloroethane	1U	1U	1U		200	
1,1-Dichloroethane	1U	1U	1U		n/a	
1,1-Dichloroethene	1U	1U	1U		n/a	
Acetone	5U	5U	5U		800	
Benzene	1U	1U	1U		5	
Dichlorodifluoromethane	1U	1U	1U		n/a	
Tetrachloroethene	1U	1U	1U		5	
Trichloroethene	1U	1U	1U		5	
Trichlorofluoroethane	1U	1U	1U			
	ND	ND	ND			
Metals, Total (ug/L)						
Antimony	.05U	0.04	.05U	ND	n/a	1.4 - 8
Arsenic	0.16	0.13	0.2	0.8	5	
Barium	NA	NA	NA		n/a	560
Beryllium	.02U	.02U	.02U	ND	n/a	32
Cadmium	0.06	.04U	0.04	0.07	5	
Calcium	NA	NA	NA			
Chromium (total)	2.3	2.6	1.7	0.77	50	
Copper	0.68	0.24	0.18	0.52	n/a	592
Iron	NA	NA	NA			
Lead	0.09	0.03	0.02	0.09	15	
Magnesium	NA	NA	NA			
Mercury	0.028	.03U	.03U	ND	2	4.8
Nickel	1.9	1.9	1.4	0.97	n/a	320
Potassium	NA	NA	NA			
Selenium	.04U	0.1	0.23	0.56	n/a	80
Silver	.04U	.04U	.04U		n/a	80
Sodium	NA	NA	NA	ND		
Thallium	.02U	.02U	.02U	0	n/a	1.1
Zinc	3.1	0.38	0.95	2.7	n/a	4800

**TABLE 10
L4-MW7B**

Analyte (units)	12/18/2003	3/10/2004	6/21/2004		MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	.05U	.05U	.05U		n/a	1.4 - 8
Arsenic	0.14	0.12	0.21		5	
Barium	NA	NA	NA		n/a	560
Beryllium	.02U	.01U	.01U		n/a	32
Cadmium	.04U	0.15	.04U		5	
Calcium	NA	NA	NA			
Chromium (total)	1	1.3	1.4		50	
Copper	0.51	0.27	0.09		n/a	592
Iron	NA	NA	NA			
Lead	.05U	0.04	.05U		15	
Magnesium	NA	NA	NA			
Mercury	0.026	.007U	.007U		2	4.8
Nickel	1.5	1.8	1.8		n/a	320
Potassium	NA	NA	NA			
Selenium	.04U	0.18	0.21		n/a	80
Silver	.04U	.04U	.04U		n/a	80
Sodium	NA	NA	NA			
Thallium	.02U	.02U	.02U		n/a	1.1
Zinc	2.2	1.6	0.92		n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	NA	NA			
Bicarbonate (as CaCO3)	NA	NA	NA			
Hardness (calculated)	NA	NA	NA			
Total Suspended Solids	NA	NA	NA			
Chloride	NA	NA	NA			
Nitrate as N	NA	NA	NA			
Sulfate	NA	NA	NA			

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 11
L4-MW17

Analyte (units)	6/21/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)				
2,4-Dinitrotoluene	ND		n/a	
2-Nitrotoluene	ND		n/a	
HMX	.47U		n/a	
RDX	.49U		n/a	
Perchlorate	4U		n/a	
Volatile Organic Compounds (ug/L)				
1,1,2-Trichloro-1,2,2-trifluoroethane	1U		n/a	
1,1,1-Trichloroethane	1U		200	
1,1-Dichloroethane	1U		n/a	
1,1-Dichloroethene	1U		n/a	
Acetone	1.3		800	
Benzene	1U		5	
Dichlorodifluoromethane	1U		n/a	
Tetrachloroethene	1U		5	
Trichloroethene	1U		5	
Trichlorofluoroethane	1U			
Metals, Total (ug/L)				
Antimony	0.16	ND	n/a	1.4 - 8
Arsenic	0.39	0.77	5	
Barium	NA		n/a	560
Beryllium	0.14	ND	n/a	32
Cadmium	0.15	0.07	5	
Calcium	NA			
Chromium (total)	2.3	0.78	50	
Copper	4.5	0.42	n/a	592
Iron	NA			
Lead	1.6	0.29	15	
Magnesium	NA			
Mercury	0.03U	ND	2	4.8
Nickel	2.9	0.99	n/a	320
Potassium	NA			
Selenium	0.49	0.41	n/a	80
Silver	.04U		n/a	80
Sodium	NA	ND		
Thallium	.02U	0	n/a	1.1
Zinc	5.4	1.1	n/a	4800

**TABLE 11
L4-MW17**

Analyte (units)	6/21/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)			
Antimony	0.13	n/a	1.4 - 8
Arsenic	0.25	5	
Barium	NA	n/a	560
Beryllium	.01U	n/a	32
Cadmium	.04U	5	
Calcium	NA		
Chromium (total)	0.91	50	
Copper	1.2	n/a	592
Iron	NA		
Lead	0.05	15	
Magnesium	NA		
Mercury	.007U	2	4.8
Nickel	1.7	n/a	320
Potassium	NA		
Selenium	0.59	n/a	80
Silver	.04U	n/a	80
Sodium	NA		
Thallium	.02U	n/a	1.1
Zinc	0.85	n/a	4800
Water Quality Parameters (mg/L)			
Alkalinity (as CaCO ₃)	NA		
Bicarbonate (as CaCO ₃)	NA		
Hardness (calculated)	NA		
Total Suspended Solids	NA		
Chloride	NA		
Nitrate as N	NA		
Sulfate	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 12
L4-MW18

Analyte (units)	6/21/2004	12/8/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)				
2,4-Dinitrotoluene	ND		n/a	
2-Nitrotoluene	ND		n/a	
HMX	.47U		n/a	
RDX	.49U		n/a	
Perchlorate	4U		n/a	
Volatile Organic Compounds (ug/L)				
1,1,2-Trichloro-1,2,2-trifluoroethane	1U		n/a	
1,1,1-Trichloroethane	1U		200	
1,1-Dichloroethane	1U		n/a	
1,1-Dichloroethene	1U		n/a	
Acetone	1.8		800	
Benzene	1U		5	
Dichlorodifluoromethane	1U		n/a	
Tetrachloroethene	1U		5	
Trichloroethene	1U		5	
Trichlorofluoroethane	1U			
Metals, Total (ug/L)				
Antimony	.05U	ND	n/a	1.4 - 8
Arsenic	2.5	ND	5	
Barium	NA		n/a	560
Beryllium	1.3	ND	n/a	32
Cadmium	1.2	0.13	5	
Calcium	NA			
Chromium (total)	85.6	0.68	50	
Copper	138	0.62	n/a	592
Iron	NA			
Lead	9.4	0.15	15	
Magnesium	NA			
Mercury	.03U	ND	2	4.8
Nickel	52.1	0.33	n/a	320
Potassium	NA			
Selenium	0.11	0.27	n/a	80
Silver	0.07		n/a	80
Sodium	NA	ND		
Thallium	0.02	0	n/a	1.1
Zinc	130	2.6	n/a	4800

**TABLE 12
L4-MW18**

Analyte (units)	6/21/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)			
Antimony	.05U	n/a	1.4 - 8
Arsenic	0.06	5	
Barium	NA	n/a	560
Beryllium	.01U	n/a	32
Cadmium	.04U	5	
Calcium	NA		
Chromium (total)	1.2	50	
Copper	0.09	n/a	592
Iron	NA		
Lead	0.03	15	
Magnesium	NA		
Mercury	.007U	2	4.8
Nickel	2.6	n/a	320
Potassium	NA		
Selenium	0.11	n/a	80
Silver	.04U	n/a	80
Sodium	NA		
Thallium	.02U	n/a	1.1
Zinc	1	n/a	4800
Water Quality Parameters (mg/L)			
Alkalinity (as CaCO3)	NA		
Bicarbonate (as CaCO3)	NA		
Hardness (calculated)	NA		
Total Suspended Solids	NA		
Chloride	NA		
Nitrate as N	NA		
Sulfate	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, then the result reflects the single quantitative result.

TABLE 13
Demolition Area 3
MW5S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)				*		
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.06	0.04	.05U	n/a	1.4 - 8
Arsenic	NA	2.1	2	1.65	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.02U	.02U	n/a	32
Cadmium	NA	0.17	0.04	0.345	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	2.7	1.8	1.8	50	
Copper	NA	0.82	0.8	0.51	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.55	0.22	0.395	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.03U	.03U	2	4.8
Nickel	NA	2.2	0.97	1.3	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.14	0.1	0.255	n/a	80
Silver	NA	.04U	.04U	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	.02U	.02U	n/a	1.1
Zinc	NA	5.7	2.4	3	n/a	4800

TABLE 13
Demolition Area 3
MW5S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.16	.05U	.05U	n/a	1.4 - 8
Arsenic	NA	2	1.9	2.1	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.08	.01U	.01U	n/a	32
Cadmium	NA	0.28	0.1	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	1.6	0.86	1.4	50	
Copper	NA	0.44	0.3	0.25	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.22	0.03	0.01	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.007U	.007U	2	4.8
Nickel	NA	2.1	1.1	1.3	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.15	0.28	0.31	n/a	80
Silver	NA	0.1	.04U	0.15	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	0.09	.02U	.02U	n/a	1.1
Zinc	NA	3.7	.77U	1.5	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	NA	NA	NA		
Bicarbonate (as CaCO3)	NA	NA	NA	NA		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	NA	NA	NA		
Chloride	NA	NA	NA	NA		
Nitrate as N	1.1	NA	NA	NA		
Sulfate	NA	NA	NA	NA		
Total Organic Carbon	NA	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 14
Demolition Area 3
MW5D

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.19	0.16	.05U	n/a	1.4 - 8
Arsenic	NA	1.2	0.99	0.89	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.04	0.02	0.01	n/a	32
Cadmium	NA	0.11	0.08	0.34	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	7	1.9	1.8	50	
Copper	NA	1	1.1	0.63	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.8	0.78	0.39	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.03U	.03U	2	4.8
Nickel	NA	6.2	1.1	1.3	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.27	0.21	0.28	n/a	80
Silver	NA	.04U	0.03	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	.02U	.02U	n/a	1.1
Zinc	NA	4.1	3.7	0.32	n/a	4800

TABLE 14
Demolition Area 3
MW5D

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.14	0.09	0.14	n/a	1.4 - 8
Arsenic	NA	1	0.8	0.84	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.01U	.01U	n/a	32
Cadmium	NA	0.09	0.07	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	1.7	0.55	0.87	50	
Copper	NA	0.15	0.33	0.27	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.07	0.03	0.01	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.007U	.007U	2	4.8
Nickel	NA	2.7	1.1	0.99	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.18	0.28	0.34	n/a	80
Silver	NA	.04U	.04U	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	.02U	.02U	n/a	1.1
Zinc	NA	2.6	2.6	2.3	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	NA	NA	NA		
Bicarbonate (as CaCO3)	NA	NA	NA	NA		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	NA	NA	NA		
Chloride	NA	NA	NA	NA		
Nitrate as N	1.16	NA	NA	NA		
Sulfate	NA	NA	NA	NA		
Total Organic Carbon	NA	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 15
Demolition Area 3
MW6S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.2	0.11	.02U	n/a	1.4 - 8
Arsenic	NA	2.4	2	1.2	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	1	0.13	0.09	n/a	32
Cadmium	NA	0.27	0.2	0.11	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	4.7	8.7	2.9	50	
Copper	NA	6.1	17.6	5.9	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	8.2	2.3	1.3	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.03U	.03U	2	4.8
Nickel	NA	4.7	5.3	2.9	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.35	0.16	0.56	n/a	80
Silver	NA	.04U	0.02	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	0.03	.02U	.02U	n/a	1.1
Zinc	NA	19.3	53.4	12.4	n/a	4800

TABLE 15
Demolition Area 3
MW6S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.06	.05U	.05U	n/a	1.4 - 8
Arsenic	NA	1.1	0.67	0.76	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.01U	.01U	n/a	32
Cadmium	NA	.04U	0.26	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	1.2	0.6	0.9	50	
Copper	NA	0.79	0.93	0.62	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.2	0.02	0.02	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.007U	.007U	2	4.8
Nickel	NA	2.9	2.5	2.5	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.37	0.44	0.43	n/a	80
Silver	NA	.04U	.04U	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	.02U	.02U	n/a	1.1
Zinc	NA	3	4.1	4.5	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	NA	NA	NA		
Bicarbonate (as CaCO3)	NA	NA	NA	NA		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	NA	NA	NA		
Chloride	NA	NA	NA	NA		
Nitrate as N	.61U	NA	NA	NA		
Sulfate	NA	NA	NA	NA		
Total Organic Carbon	NA	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 16
Demolition Area 3
MW7S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.26	0.22	.05U	n/a	1.4 - 8
Arsenic	NA	3.5	3.7	1.7	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.05	0.03	.02U	n/a	32
Cadmium	NA	2.3	0.22	0.28	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	16.3	2.2	1.5	50	
Copper	NA	3	0.97	0.62	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	1.1	0.32	0.27	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.03U	.03U	2	4.8
Nickel	NA	9.6	1.4	1.4	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.2	0.2	0.25	n/a	80
Silver	NA	.04U	0.04	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	0.03	.02U	n/a	1.1
Zinc	NA	7	7.1	3.6	n/a	4800

TABLE 16
Demolition Area 3
MW7S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.17	.05U	.05U	n/a	1.4 - 8
Arsenic	NA	3.5	3.4	1.8	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.01U	.01U	n/a	32
Cadmium	NA	0.32	0.32	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	1.6	1	1.1	50	
Copper	NA	0.3	0.6	0.54	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.14	0.06	0.04	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.007U	.007U	2	4.8
Nickel	NA	2.7	2.1	1.1	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.17	0.59	0.32	n/a	80
Silver	NA	.04U	.04U	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	0.01	.02U	n/a	1.1
Zinc	NA	3	5.4	2	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	NA	NA	NA		
Bicarbonate (as CaCO3)	NA	NA	NA	NA		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	NA	NA	NA		
Chloride	NA	NA	NA	NA		
Nitrate as N	0.59	NA	NA	NA		
Sulfate	NA	NA	NA	NA		
Total Organic Carbon	NA	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, then the result reflects the single quantitative result.

TABLE 17
Demolition Area 3
MW8S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.17	0.09	.05U	n/a	1.4 - 8
Arsenic	NA	1.3	2.1	3.7	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.02U	.02U	n/a	32
Cadmium	NA	0.38	0.05	0.23	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	18.7	6	1.8	50	
Copper	NA	3.5	3.1	0.59	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	1.2	0.75	0.1	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.03U	.03U	2	4.8
Nickel	NA	12.8	3.4	1.4	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.35	0.14	1	n/a	80
Silver	NA	0.11	0.04	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	0.03	.02U	.02U	n/a	1.1
Zinc	NA	8.8	4.3	2	n/a	4800

TABLE 17
Demolition Area 3
MW8S

Analyte (units)	4/15/2003	12/15/2003	3/15/2004	6/22/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.15	.05U	.05U	n/a	1.4 - 8
Arsenic	NA	1.4	1.7	3.2		5
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.01U	.01U	n/a	32
Cadmium	NA	0.32	0.16	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	1.5	1	1.4	50	
Copper	NA	0.7	0.61	0.43	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.23	0.22	0.03	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.007U	.007U	2	4.8
Nickel	NA	3.4	3.2	1.4	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.28	0.3	0.66	n/a	80
Silver	NA	0.04	.04U	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	0.02	.02U	n/a	1.1
Zinc	NA	4.3	2	1.5	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	NA	NA	NA		
Bicarbonate (as CaCO3)	NA	NA	NA	NA		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	NA	NA	NA		
Chloride	NA	NA	NA	NA		
Nitrate as N	2.23	NA	NA	NA		
Sulfate	NA	NA	NA	NA		
Total Organic Carbon	NA	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 18
Demolition Area 2
MW9

Analyte (units)	12/11/2003	3/11/2004	6/16/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)					
2,4-Dinitrotoluene	ND	ND	ND	n/a	
2-Nitrotoluene	ND	ND	ND	n/a	
HMX	.47U	.49U	.49U	n/a	
RDX	.47U	.49U	.49U	n/a	
Perchlorate	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U	n/a	
1,1,1-Trichloroethane	1U	1U	1U	200	
1,1-Dichloroethane	1U	1U	1U	n/a	
1,1-Dichloroethene	1U	1U	1U	n/a	
Acetone	5U	5U	5U	800	
Benzene	1U	1U	1U	5	
Dichlorodifluoromethane	1U	1U	1U	n/a	
Tetrachloroethene	1U	1U	1U	5	
Trichloroethene	1U	1U	1U	5	
Trichlorofluoroethane	1U	1U	1U		
Metals, Total (ug/L)					
Antimony	.05U	0.1	0.03	n/a	1.4 - 8
Arsenic	1.2	3.2	1.3	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.12	0.25	0.16	n/a	32
Cadmium	0.1	0.16	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	7.3	16.3	6	50	
Copper	13.7	39.3	10.9	n/a	592
Iron	NA	NA	NA		
Lead	1.5	3.6	2.2	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.03U	.03U	2	4.8
Nickel	4.7	8.6	2.4	n/a	320
Potassium	NA	NA	NA		
Selenium	.04U	0.06	.04U	n/a	80
Silver	.04U	0.03	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	.02U	0.02	.02U	n/a	1.1
Zinc	9.2	33.4	9	n/a	4800

TABLE 18
Demolition Area 2
MW9

Analyte (units)	12/11/2003	3/11/2004	6/16/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)					
Antimony	0.07	.05U	.05U	n/a	1.4 - 8
Arsenic	0.11	0.2	0.15	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.04	.01U	.01U	n/a	32
Cadmium	0.04	0.16	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	0.41	1.3	1.2	50	
Copper	0.23	2.1	2.1	n/a	592
Iron	NA	NA	NA		
Lead	0.1	0.17	0.13	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.007U	.007U	2	4.8
Nickel	0.99	1.1	0.51	n/a	320
Potassium	NA	NA	NA		
Selenium	.04U	0.17	.04U	n/a	80
Silver	0.05	0.02	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	0.04	0.01	.02U	n/a	1.1
Zinc	1.6	4.1	1.7	n/a	4800
Water Quality Parameters (mg/L)					
Alkalinity (as CaCO3)	NA	NA	NA		
Bicarbonate (as CaCO3)	NA	NA	NA		
Hardness (calculated)	NA	NA	NA		
Total Suspended Solids	NA	NA	NA		
Chloride	NA	NA	NA		
Nitrate as N	NA	NA	NA		
Sulfate	NA	NA	NA		
Total Organic Carbon	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, then the result reflects the single quantitative result.

TABLE 19
Demolition Area 2
MW10

Analyte (units)	12/11/2003	3/15/2004	6/16/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)					
2,4-Dinitrotoluene	ND	ND	ND	n/a	
2-Nitrotoluene	ND	ND	ND	n/a	
HMX	.47U	.49U	.49U	n/a	
RDX	.47U	.49U	.49U	n/a	
Perchlorate	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U	n/a	
1,1,1-Trichloroethane	1U	1U	1U	200	
1,1-Dichloroethane	1U	1U	1U	n/a	
1,1-Dichloroethene	1U	1U	1U	n/a	
Acetone	5U	5U	5U	800	
Benzene	1U	1U	1U	5	
Dichlorodifluoromethane	1U	1U	1U	n/a	
Tetrachloroethene	1U	1U	1U	5	
Trichloroethene	1U	1U	1U	5	
Trichlorofluoroethane	1U	1U	1U		
Metals, Total (ug/L)					
Antimony	0.07	0.07	0.18	n/a	1.4 - 8
Arsenic	1.3	1.1	0.85	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.26	0.27	0.3	n/a	32
Cadmium	0.06	0.09	0.2	5	
Calcium	NA	NA	NA		
Chromium (total)	6.4	5.8	6.4	50	
Copper	14.6	19.3	13.7	n/a	592
Iron	NA	NA	NA		
Lead	3.1	4.3	4.1	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.03U	.03U	2	4.8
Nickel	6.5	4.1	4.1	n/a	320
Potassium	NA	NA	NA		
Selenium	0.07	0.26	0.29	n/a	80
Silver	.04U	0.03	0.03	n/a	80
Sodium	NA	NA	NA		
Thallium	.02U	0.03	.02U	n/a	1.1
Zinc	15.8	40.9	56.5	n/a	4800

TABLE 19
Demolition Area 2
MW10

Analyte (units)	12/11/2003	3/15/2004	6/16/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)					
Antimony	.05U	.05U	0.09	n/a	1.4 - 8
Arsenic	0.23	0.15	.04U	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.05	0.06	0.04	n/a	32
Cadmium	0.04U	0.14	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	0.42	1.3	0.8	50	
Copper	0.27	2.7	0.25	n/a	592
Iron	NA	NA	NA		
Lead	0.08	0.71	.05U	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.007U	.007U	2	4.8
Nickel	1.4	1.1	0.61	n/a	320
Potassium	NA	NA	NA		
Selenium	0.05	0.17	0.05	n/a	80
Silver	.04U	.04U	0.04	n/a	80
Sodium	NA	NA	NA		
Thallium	.02U	.02U	.02U	n/a	1.1
Zinc	2.5	3.4	2.5	n/a	4800
Water Quality Parameters (mg/L)					
Alkalinity (as CaCO ₃)	NA	NA	NA		
Bicarbonate (as CaCO ₃)	NA	NA	NA		
Hardness (calculated)	NA	NA	NA		
Total Suspended Solids	NA	NA	NA		
Chloride	NA	NA	NA		
Nitrate as N	NA	NA	NA		
Sulfate	NA	NA	NA		
Total Organic Carbon	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 20
Demolition Area 2
MW11

Analyte (units)	12/11/2003	3/15/2004	6/17/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)					
2,4-Dinitrotoluene	ND	ND	ND	n/a	
2-Nitrotoluene	ND	ND	ND	n/a	
HMX	.47U	.49U	.49U	n/a	
RDX	.47U	.49U	.49U	n/a	
Perchlorate	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U	n/a	
1,1,1-Trichloroethane	1U	1U	1U	200	
1,1-Dichloroethane	1U	1U	1U	n/a	
1,1-Dichloroethene	1U	1U	1U	n/a	
Acetone	5U	5U	5U	800	
Benzene	1U	1U	1U	5	
Dichlorodifluoromethane	1U	1U	1U	n/a	
Tetrachloroethene	1U	1U	1U	5	
Trichloroethene	1U	1U	1U	5	
Trichlorofluoroethane	1U	1U	1U		
Metals, Total (ug/L)					
Antimony	.05U	.05U	.05U	n/a	1.4 - 8
Arsenic	3.7	3.7	3.7	5	
Barium	NA	NA	NA	n/a	560
Beryllium	.02U	.02U	.02U	n/a	32
Cadmium	.04U	0.04	0.78	5	
Calcium	NA	NA	NA		
Chromium (total)	0.84	1.7	1.3	50	
Copper	0.71	0.63	1	n/a	592
Iron	NA	NA	NA		
Lead	0.16	0.17	0.16	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.03U	.03U	2	4.8
Nickel	1.3	1.1	1.9	n/a	320
Potassium	NA	NA	NA		
Selenium	0.07	0.09	0.29	n/a	80
Silver	.04U	.04U	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	.02U	.02U	.02U	n/a	1.1
Zinc	3.1	2.2	3.4	n/a	4800

TABLE 20
Demolition Area 2
MW11

Analyte (units)	12/11/2003	3/15/2004	6/17/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)					
Antimony	0.07	.05U	.05U	n/a	1.4 - 8
Arsenic	3.7	3.2	3.6	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.03	.01U	.01U	n/a	32
Cadmium	0.06	0.58	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	0.52	0.61	0.88	50	
Copper	0.1	0.41	0.14	n/a	592
Iron	NA	NA	NA		
Lead	0.06	0.03	0.01	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.007U	.007U	2	4.8
Nickel	1.1	2.2	1.8	n/a	320
Potassium	NA	NA	NA		
Selenium	0.07	0.35	0.29	n/a	80
Silver	0.05	0.04	ND	n/a	80
Sodium	NA	NA	NA		
Thallium	0.03	.02U	.02U	n/a	1.1
Zinc	2.5	1.6	2.2	n/a	4800
Water Quality Parameters (mg/L)					
Alkalinity (as CaCO ₃)	NA	NA	NA		
Bicarbonate (as CaCO ₃)	NA	NA	NA		
Hardness (calculated)	NA	NA	NA		
Total Suspended Solids	NA	NA	NA		
Chloride	NA	NA	NA		
Nitrate as N	NA	NA	NA		
Sulfate	NA	NA	NA		
Total Organic Carbon	NA	NA	NA		
Dissolved Organic Carbon	NA	NA	NA		
Total Petroleum Hydrocarbons	NA	NA	NA		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 21
MW1S**

Analyte (units)	4/15/2003	12/10/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.16	.05U	.05U	n/a	1.4 - 8
Arsenic	NA	0.32	0.2	0.25	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.03	.02U	.02U	n/a	32
Cadmium	NA	0.1	0.02	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	3.3	0.77	1	50	
Copper	NA	0.46	0.26	0.04	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.23	0.04	0.3	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.03U	.03U	2	4.8
Nickel	NA	2.8	1.1	0.43	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.25	.04U	.04U	n/a	80
Silver	NA	0.07	.04U	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	0.04	.02U	.02U	n/a	1.1
Zinc	NA	8.1	2.4	.77U	n/a	4800

**TABLE 21
MW1S**

Analyte (units)	4/15/2003	12/10/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.16	.05U	0.03	n/a	1.4 - 8
Arsenic	NA	0.35	0.22	0.25	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.05	.01U	.01U	n/a	32
Cadmium	NA	0.07	0.02	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	3.6	0.47	0.94	50	
Copper	NA	0.23	0.23	0.1	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.18	0.03	0.05	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.007U	.007U	2	4.8
Nickel	NA	3.5	1	0.5	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.24	.04U	.04U	n/a	80
Silver	NA	0.06	.04U	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	0.06	.02U	.02U	n/a	1.1
Zinc	NA	19.9	1.4	.77U	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	46	44	44		
Bicarbonate (as CaCO3)	NA	46	44	44		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	2U	2U	4		
Chloride	NA	2	2	1		
Nitrate as N	.61U	ND	ND	ND		
Sulfate	NA	ND	1	ND		
Total Organic Carbon	NA	1U	1U	1U		
Dissolved Organic Carbon	NA	1U	1U	1U		
Total Petroleum Hydrocarbons	NA	ND	ND	ND		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 22
MW1D**

Analyte (units)	4/15/2003	12/16/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.1	.05U	0.63	n/a	1.4 - 8
Arsenic	NA	0.51	0.43	0.64	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.02U	0.19	n/a	32
Cadmium	NA	0.07	0.44	0.1	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	3.4	1.2	1.5	50	
Copper	NA	0.31	0.37	0.42	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.14	0.11	0.31	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	0.029	.03U	.03U	2	4.8
Nickel	NA	4.1	2.7	1.2	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.16	0.17	0.18	n/a	80
Silver	NA	0.04	.04U	0.19	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	0.01	0.19	n/a	1.1
Zinc	NA	2.7	6.1	1	n/a	4800

**TABLE 22
MW1D**

Analyte (units)	4/15/2003	12/16/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.09	.05U	0.58	n/a	1.4 - 8
Arsenic	NA	0.51	0.5	0.64	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.01U	0.15	n/a	32
Cadmium	NA	0.18	0.03	0.08	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	1.1	0.56	1.1	50	
Copper	NA	0.6	0.25	0.12	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.18	0.03	0.18	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	0.036	0.036	.007U	2	4.8
Nickel	NA	3.4	2.3	0.87	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.17	0.18	0.22	n/a	80
Silver	NA	0.04	.04U	0.16	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	0.01	0.18	n/a	1.1
Zinc	NA	23.4	2.7	.77U	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO ₃)	NA	47	45	44		
Bicarbonate (as CaCO ₃)	NA	47	45	44		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	2U	2U	3		
Chloride	NA	5	7	6		
Nitrate as N	.61U	ND	ND	ND		
Sulfate	NA	8	8	6		
Total Organic Carbon	NA	1U	1U	1U		
Dissolved Organic Carbon	NA	1U	1U	1U		
Total Petroleum Hydrocarbons	NA	ND	ND	ND		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 23
MW2S**

Analyte (units)	4/15/2003	12/10/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)				*		
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.34	.05U	.05U	n/a	1.4 - 8
Arsenic	NA	0.83	0.68	0.65	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.2	.02U	.02U	n/a	32
Cadmium	NA	0.25	0.69	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	1.3	0.68	1	50	
Copper	NA	0.19	0.21	0.42	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.32	0.03	.01U	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.03U	.03U	2	4.8
Nickel	NA	1.1	0.73	0.275	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.08	0.08	.04U	n/a	80
Silver	NA	0.25	0.03	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	0.24	.02U	.02U	n/a	1.1
Zinc	NA	2.4	1.3	.77U	n/a	4800

**TABLE 23
MW2S**

Analyte (units)	4/15/2003	12/10/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.31	.05U	.05U	n/a	1.4 - 8
Arsenic	NA	0.96	0.67	0.68	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.21	.01U	.01U	n/a	32
Cadmium	NA	0.19	0.01	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	0.85	0.47	0.52	50	
Copper	NA	0.25	0.19	0.19	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.39	0.03	.05U	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	.007U	.007U	.007U	2	4.8
Nickel	NA	1.2	0.84	0.42	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	0.26	.04U	.04U	n/a	80
Silver	NA	0.24	0.03	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	0.22	.02U	.02U	n/a	1.1
Zinc	NA	2.3	3.3	0.35	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	46	46	44.5		
Bicarbonate (as CaCO3)	NA	46	46	44.5		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	2U	2U	3		
Chloride	NA	2	2	4		
Nitrate as N	.61U	ND	ND	ND		
Sulfate	NA	ND	ND	ND		
Total Organic Carbon	NA	1U	1U	1U		
Dissolved Organic Carbon	NA	1U	1U	1U		
Total Petroleum Hydrocarbons	NA	ND	ND	ND		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 24
MW2D**

Analyte (units)	4/15/2003	12/16/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)						
2,4-Dinitrotoluene	NA	ND	ND	ND	n/a	
2-Nitrotoluene	NA	ND	ND	ND	n/a	
HMX	NA	.47U	.49U	.49U	n/a	
RDX	NA	.47U	.49U	.49U	n/a	
Perchlorate	2U/1U	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)						
1,1,2-Trichloro-1,2,2-trifluoroethane	NA	1U	1U	1U	n/a	
1,1,1-Trichloroethane	NA	1U	1U	1U	200	
1,1-Dichloroethane	NA	1U	1U	1U	n/a	
1,1-Dichloroethene	NA	1U	1U	1U	n/a	
Acetone	NA	5U	5U	5U	800	
Benzene	NA	1U	1U	1U	5	
Dichlorodifluoromethane	NA	1U	1U	1U	n/a	
Tetrachloroethene	NA	1U	1U	1U	5	
Trichloroethene	NA	1U	1U	1U	5	
Trichlorofluoroethane	NA	1U	1U	1U		
Metals, Total (ug/L)						
Antimony	NA	0.07	0.15	0.15	n/a	1.4 - 8
Arsenic	NA	0.78	0.66	0.7	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	.02U	.02U	.02U	n/a	32
Cadmium	NA	.04U	0.76	0.28	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	2.3	0.88	1.3	50	
Copper	NA	0.25	0.29	0.15	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.17	0.11	0.07	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	0.033	.03U	.03U	2	4.8
Nickel	NA	2.1	1.3	0.8	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	.04U	.04U	.04U	n/a	80
Silver	NA	.04U	0.08	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	0.02	.02U	n/a	1.1
Zinc	NA	4.1	0.96	1.5	n/a	4800

**TABLE 24
MW2D**

Analyte (units)	4/15/2003	12/16/2003	3/16/2004	6/15/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)						
Antimony	NA	0.09	0.19	0.1	n/a	1.4 - 8
Arsenic	NA	0.85	0.67	0.78	5	
Barium	NA	NA	NA	NA	n/a	560
Beryllium	NA	0.03	.01U	.01U	n/a	32
Cadmium	NA	.04U	0.05	.04U	5	
Calcium	NA	NA	NA	NA		
Chromium (total)	NA	0.74	0.4	0.96	50	
Copper	NA	0.21	0.2	.08U	n/a	592
Iron	NA	NA	NA	NA		
Lead	NA	0.15	0.03	0.02	15	
Magnesium	NA	NA	NA	NA		
Mercury	NA	0.036	.007U	.007U	2	4.8
Nickel	NA	1.7	1.3	0.85	n/a	320
Potassium	NA	NA	NA	NA		
Selenium	NA	.04U	0.1	.04U	n/a	80
Silver	NA	.04U	0.14	.04U	n/a	80
Sodium	NA	NA	NA	NA		
Thallium	NA	.02U	0.03	.02U	n/a	1.1
Zinc	NA	2.2	1.2	.77U	n/a	4800
Water Quality Parameters (mg/L)						
Alkalinity (as CaCO3)	NA	46	46	44		
Bicarbonate (as CaCO3)	NA	46	46	44		
Hardness (calculated)	NA	NA	NA	NA		
Total Suspended Solids	NA	2U	2U	6		
Chloride	NA	2	2	2		
Nitrate as N	.61U	0.3	ND	0.2		
Sulfate	NA	2	1	1		
Total Organic Carbon	NA	1U	1U	1U		
Dissolved Organic Carbon	NA	1U	1U	1U		
Total Petroleum Hydrocarbons	NA	ND	ND	ND		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 25
MW3S**

Analyte (units)	12/10/2003	3/17/2004	6/16/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)		*			
2,4-Dinitrotoluene	ND	ND	ND	n/a	
2-Nitrotoluene	ND	ND	ND	n/a	
HMX	.47U	.49U	.49U	n/a	
RDX	.47U	.49U	.49U	n/a	
Perchlorate	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U	n/a	
1,1,1-Trichloroethane	1U	1U	1U	200	
1,1-Dichloroethane	1U	1U	1U	n/a	
1,1-Dichloroethene	1U	1U	1U	n/a	
Acetone	5U	5U	5U	800	
Benzene	1U	1U	1U	5	
Dichlorodifluoromethane	1U	1U	1U	n/a	
Tetrachloroethene	1U	1U	1U	5	
Trichloroethene	1U	1U	1U	5	
Trichlorofluoroethane	1U	1U	1U		
Metals, Total (ug/L)					
Antimony	0.09	0.12	.05U	n/a	1.4 - 8
Arsenic	0.6	0.48	0.49	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.02	.02U	.02U	n/a	32
Cadmium	0.15	0.14	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	8.3	0.525	0.89	50	
Copper	0.98	0.195	.08U	n/a	592
Iron	NA	NA	NA		
Lead	0.41	0.03	.01U	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.03U	.03U	2	4.8
Nickel	6.4	0.71	0.18	n/a	320
Potassium	NA	NA	NA		
Selenium	.04U	0.1	ND	n/a	80
Silver	0.04	0.11	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	.02U	0.02	.02U	n/a	1.1
Zinc	4	1.015	.77U	n/a	4800

**TABLE 25
MW3S**

Analyte (units)	12/10/2003	3/17/2004	6/16/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)					
Antimony	0.24	0.16	.05U	n/a	1.4 - 8
Arsenic	0.6	0.425	0.49	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.19	.01U	.01U	n/a	32
Cadmium	0.35	0.035	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	3.6	0.31	0.8	50	
Copper	0.34	0.165	.08U	n/a	592
Iron	NA	NA	NA		
Lead	0.42	0.03	.05U	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.007U	0.3	2	4.8
Nickel	2.4	0.715	.04U	n/a	320
Potassium	NA	NA	NA		
Selenium	0.12	0.07	.04U	n/a	80
Silver	0.21	0.085	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	0.21	0.02	.02U	n/a	1.1
Zinc	2.8	3.65	.77U	n/a	4800
Water Quality Parameters (mg/L)					
Alkalinity (as CaCO ₃)	46	44	42		
Bicarbonate (as CaCO ₃)	46	44	42		
Hardness (calculated)	NA	NA	NA		
Total Suspended Solids	2U	2U	7		
Chloride	2	2	1		
Nitrate as N	0.3	0.3	0.3		
Sulfate	ND	ND	ND		
Total Organic Carbon	1U	1U	1U		
Dissolved Organic Carbon	1U	1U	1U		
Total Petroleum Hydrocarbons	ND	ND	ND		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 26
MW3D**

Analyte (units)	12/16/2003	3/17/2004	6/16/2004
Explosives and Propellants (ug/L)			
2,4-Dinitrotoluene	ND	ND	ND
2-Nitrotoluene	ND	ND	ND
HMX	.47U	.49U	.49U
RDX	.47U	.49U	.49U
Perchlorate	4U	4U	4U
Volatile Organic Compounds (ug/L)			
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U
1,1,1-Trichloroethane	1U	1U	1U
1,1-Dichloroethane	1U	1U	1U
1,1-Dichloroethene	1U	1U	1U
Acetone	5U	5U	5U
Benzene	1U	1U	1U
Dichlorodifluoromethane	1U	1U	1U
Tetrachloroethene	1U	1U	1U
Trichloroethene	1U	1U	1U
Trichlorofluoroethane	1U	1U	1U
Metals, Total (ug/L)			
Antimony	0.11	.05U	0.12
Arsenic	1.2	0.93	1.1
Barium	NA	NA	NA
Beryllium	0.09	.02U	.02U
Cadmium	0.07	0.02	.04U
Calcium	NA	NA	NA
Chromium (total)	3	0.73	1.1
Copper	0.35	0.41	0.09
Iron	NA	NA	NA
Lead	0.21	0.13	0.08
Magnesium	NA	NA	NA
Mercury	0.023	0.023	.03U
Nickel	2	1.1	0.4
Potassium	NA	NA	NA
Selenium	.04U	0.14	.04U
Silver	0.06	.04U	.04U
Sodium	NA	NA	NA
Thallium	0.08	.02U	.02U
Zinc	5.6	3.4	0.59

TABLE 26
MW3D

Analyte (units)	12/16/2003	3/17/2004	6/16/2004
Metals, Dissolved (ug/L)			
Antimony	0.05	.05U	0.13
Arsenic	1	0.88	1
Barium	NA	NA	NA
Beryllium	.02U	.01U	.01U
Cadmium	.04U	0.01	.04U
Calcium	NA	NA	NA
Chromium (total)	0.55	0.38	0.91
Copper	0.23	0.21	.08U
Iron	NA	NA	NA
Lead	0.16	0.04	0.11
Magnesium	NA	NA	NA
Mercury	0.041	.007U	.007U
Nickel	1.1	0.9	0.41
Potassium	NA	NA	NA
Selenium	.04U	0.12	0.04
Silver	.04U	.04U	.04U
Sodium	NA	NA	NA
Thallium	.02U	.02U	.02U
Zinc	4.9	0.84	.77U
Water Quality Parameters (mg/L)			
Alkalinity (as CaCO ₃)	52	50	50
Bicarbonate (as CaCO ₃)	52	50	50
Hardness (calculated)	NA	NA	NA
Total Suspended Solids	2U	3	2
Chloride	2	2	2
Nitrate as N	0.4	0.3	0.3
Sulfate	2	2	2
Total Organic Carbon	1U	1U	1U
Dissolved Organic Carbon	1U	1U	1U
Total Petroleum Hydrocarbons	ND	ND	ND

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 27
MW4S**

Analyte (units)	12/10/2003	3/16/2004	6/16/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)					
2,4-Dinitrotoluene	ND	ND	ND	n/a	
2-Nitrotoluene	ND	ND	ND	n/a	
HMX	.47U	.49U	.49U	n/a	
RDX	.47U	.49U	.49U	n/a	
Perchlorate	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U	n/a	
1,1,1-Trichloroethane	1U	1U	1U	200	
1,1-Dichloroethane	1U	1U	1U	n/a	
1,1-Dichloroethene	1U	1U	1U	n/a	
Acetone	5U	5U	5U	800	
Benzene	1U	1U	1U	5	
Dichlorodifluoromethane	1U	1U	1U	n/a	
Tetrachloroethene	1U	1U	1U	5	
Trichloroethene	1U	1U	1U	5	
Trichlorofluoroethane	1U	1U	1U		
Metals, Total (ug/L)					
Antimony	.05U	.05U	.05U	n/a	1.4 - 8
Arsenic	0.27	0.13	0.51	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.06	0.04	0.16	n/a	32
Cadmium	0.04	0.04	0.05	5	
Calcium	NA	NA	NA		
Chromium (total)	2.7	1.7	8	50	
Copper	2.1	1.1	6.1	n/a	592
Iron	NA	NA	NA		
Lead	0.54	0.29	1.5	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.03U	.03U	2	4.8
Nickel	2.1	1.4	5.4	n/a	320
Potassium	NA	NA	NA		
Selenium	.04U	0.15	.04U	n/a	80
Silver	.04U	.04U	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	.02U	0.01	.02U	n/a	1.1
Zinc	5.8	4	16	n/a	4800

**TABLE 27
MW4S**

Analyte (units)	12/10/2003	3/16/2004	6/16/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)					
Antimony	0.18	.05U	.05U	n/a	1.4 - 8
Arsenic	0.16	0.1	0.09	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.14	.01U	.01U	n/a	32
Cadmium	0.24	0.04	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	0.58	0.43	0.94	50	
Copper	0.34	0.15	0.14	n/a	592
Iron	NA	NA	NA		
Lead	0.18	0.02	.05U	15	
Magnesium	NA	NA	NA		
Mercury	.007U	.007U	.007U	2	4.8
Nickel	1.2	0.68	0.33	n/a	320
Potassium	NA	NA	NA		
Selenium	0.05	0.13	.04U	n/a	80
Silver	0.15	0.03	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	0.14	.02U	.02U	n/a	1.1
Zinc	5.4	1.5	0.38	n/a	4800
Water Quality Parameters (mg/L)					
Alkalinity (as CaCO3)	38	38	38		
Bicarbonate (as CaCO3)	38	38	38		
Hardness (calculated)	NA	NA	NA		
Total Suspended Solids	9	14	190		
Chloride	2	2	3		
Nitrate as N	0.8	0.9	1		
Sulfate	ND	ND	ND		
Total Organic Carbon	1U	1U	1U		
Dissolved Organic Carbon	1U	1U	1U		
Total Petroleum Hydrocarbons	ND	ND	ND		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

**TABLE 28
MW4D**

Analyte (units)	12/16/2003	3/16/2004	6/16/2004	MTCA Level A	MTCA Level B
Explosives and Propellants (ug/L)	*				
2,4-Dinitrotoluene	ND	ND	ND	n/a	
2-Nitrotoluene	ND	ND	ND	n/a	
HMX	.47U	.49U	.49U	n/a	
RDX	.47U	.49U	.49U	n/a	
Perchlorate	4U	4U	4U	n/a	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloro-1,2,2-trifluoroethane	1U	1U	1U	n/a	
1,1,1-Trichloroethane	1U	1U	1U	200	
1,1-Dichloroethane	1U	1U	1U	n/a	
1,1-Dichloroethene	1U	1U	1U	n/a	
Acetone	5U	5U	5U	800	
Benzene	1U	1U	1U	5	
Dichlorodifluoromethane	1U	1U	1U	n/a	
Tetrachloroethene	1U	1U	1U	5	
Trichloroethene	1U	1U	1U	5	
Trichlorofluoroethane	1U	1U	1U		
Metals, Total (ug/L)					
Antimony	0.13	0.08	0.14	n/a	1.4 - 8
Arsenic	2	1.5	3	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.04	.02U	0.29	n/a	32
Cadmium	.04U	0.11	0.36	5	
Calcium	NA	NA	NA		
Chromium (total)	2.85	1	26.1	50	
Copper	0.53	0.45	16.4	n/a	592
Iron	NA	NA	NA		
Lead	0.16	0.11	3.5	15	
Magnesium	NA	NA	NA		
Mercury	0.0285	.03U	.03U	2	4.8
Nickel	2.2	1.2	15.6	n/a	320
Potassium	NA	NA	NA		
Selenium	0.065	0.08	0.05	n/a	80
Silver	0.1	.04U	0.04	n/a	80
Sodium	NA	NA	NA		
Thallium	0.035	.02U	0.04	n/a	1.1
Zinc	4	5.6	26.7	n/a	4800

**TABLE 28
MW4D**

Analyte (units)	12/16/2003	3/16/2004	6/16/2004	MTCA Level A	MTCA Level B
Metals, Dissolved (ug/L)					
Antimony	0.155	.05U	0.04	n/a	1.4 - 8
Arsenic	1.7	1.5	1.6	5	
Barium	NA	NA	NA	n/a	560
Beryllium	0.08	.01U	.01U	n/a	32
Cadmium	.04U	0.01	.04U	5	
Calcium	NA	NA	NA		
Chromium (total)	0.875	0.6	1.1	50	
Copper	0.355	0.27	.08U	n/a	592
Iron	NA	NA	NA		
Lead	0.09	0.03	.05U	15	
Magnesium	NA	NA	NA		
Mercury	0.0255	.007U	.007U	2	4.8
Nickel	1.35	1.1	1.1	n/a	320
Potassium	NA	NA	NA		
Selenium	0.11	0.1	.04U	n/a	80
Silver	0.11	.04U	.04U	n/a	80
Sodium	NA	NA	NA		
Thallium	0.09	.02U	.02U	n/a	1.1
Zinc	7.1	2.2	1.5	n/a	4800
Water Quality Parameters (mg/L)					
Alkalinity (as CaCO ₃)	63	59	54		
Bicarbonate (as CaCO ₃)	63	59	54		
Hardness (calculated)	NA	NA	NA		
Total Suspended Solids	2.5	2	400		
Chloride	4	3	4		
Nitrate as N	0.25	0.3	0.4		
Sulfate	6.5	4	6		
Total Organic Carbon	1U	1U	1U		
Dissolved Organic Carbon	1U	1U	1U		
Total Petroleum Hydrocarbons	ND	ND	ND		

Notes:

n/a - Method A not available

Detected compounds/analytes are bold. Detected compounds/analytes above screening criteria are bold and shaded.

B - The analyte was detected in the associated method blank.

D - The reported analyte concentration is from a dilution of the sample.

J - The analyte was positively identified; the associated numerical value is below the reporting limit and is therefore estimated.

J - Data validation qualifier indicating that the analyte was positively identified but the associated numerical value is estimated.

NA - Not analyzed

ND - Not detected, see laboratory sheets for detection limit

U - The analyte was undetected above the reporting limit.

* Indicates duplicates were taken. Results are reported as average of two values if detectable results were obtained. If one sample was below detection limits, than the result reflects the single quantitative result.

TABLE 1. CONSTITUENTS DETECTED IN GROUNDWATER SAMPLES - 1st QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	Total Metals (ug/L)													VOCs	SVOCs	Petroleum Hydrocarbons			Ordnance Explosives Compounds (ug/L)		NG (ug/L)	PETN (ug/L)	Picric Acid (ug/L)	Perchlorate (ug/L)	TOC (mg/L)	DOC (mg/L)	TSS (mg/L)	Alkalinity (HCO3) (mg/L)	Ions (results above detection limits shown)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury			NWTPH-Dx	Oil Range	NWTPH-Gx	HMX	RDX									
02LC-MW01SW	3/16/2004	Lacamas Cr.	ND	0.2	ND	0.02	0.77	0.26	0.04	1.1	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	44	chloride, 2 mg/L; sulfate, 1 mg/L
02LC-MW06DW	3/16/2004	Lacamas Cr.	ND	0.43	ND	0.44	1.2	0.37	0.11	2.7	0.17	ND	0.01	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	45	chloride, 7 mg/L; sulfate, 8 mg/L
02LC-MW02SW	3/16/2004	Lacamas Cr.	ND	0.68	ND	0.69	0.68	0.21	0.03	0.73	0.08	0.03	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	46	chloride, 2 mg/L	
02LC-MW07DW	3/16/2004	Lacamas Cr.	0.15	0.66	ND	0.76	0.88	0.29	0.11	1.3	ND	0.08	0.02	0.96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	46	chloride, 2 mg/L; sulfate, 1 mg/L	
02LC-MW03SW	3/17/2004	Lacamas Cr.	0.12	0.49	ND	0.27	0.66	0.19	0.03	0.73	0.1	0.11	0.02	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	44	chloride, 2 mg/L; nitrate, 0.3 mg/L	
02LC-MW08DW	3/17/2004	Lacamas Cr.	ND	0.93	ND	0.02	0.73	0.41	0.13	1.1	0.14	ND	ND	3.4	0.023	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	3	50	chloride, 2 mg/L; nitrate, 0.3 mg/L; sulfate, 2 mg/L	
02LC-MW04SW	3/16/2004	Lacamas Cr.	ND	0.13	0.04	0.04	1.7	1.1	0.29	1.4	0.15	ND	0.01	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	14	38	chloride, 2 mg/L; nitrate, 0.9 mg/L	
02LC-MW09DW	3/16/2004	Lacamas Cr.	0.08	1.5	ND	0.11	1.0	0.45	0.11	1.2	0.08	ND	ND	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	2	59	chloride, 3 mg/L; nitrate, 0.3 mg/L; sulfate, 4 mg/L	
02LC-MW05SW	3/15/2004	Demo Area 3	0.04	2	ND	0.04	1.8	0.8	0.22	0.97	0.1	ND	ND	2.4	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02LC-MW10DW	3/15/2004	Demo Area 3	0.16	0.99	0.02	0.08	1.9	1.1	0.78	1.1	0.21	0.03	ND	3.7	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02LC-MW11SW	3/15/2004	Demo Area 3	0.11	2	0.13	0.2	8.7	17.6	2.3	5.3	0.16	0.02	ND	53.4	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02LC-MW12SW	3/15/2004	Demo Area 3	0.22	3.7	0.03	0.22	2.2	0.97	0.32	1.4	0.20	0.04	0.03	7.1	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02LC-MW13SW	3/15/2004	Demo Area 3	0.09	2.1	ND	0.05	6	3.1	0.75	3.4	0.14	0.04	ND	4.3	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02LC-MW14W	3/11/2004	Demo Area 2	0.1	3.2	0.25	0.16	16.3	39.3	3.6	8.6	0.06	0.03	0.02	33.4	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02LC-MW15W	3/15/2004	Demo Area 2	0.07	1.1	0.27	0.09	5.8	19.3	4.3	4.1	0.26	0.03	0.03	40.9	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02LC-MW16W	3/15/2004	Demo Area 2	ND	3.7	ND	0.04	1.7	0.63	0.17	1.1	0.09	ND	ND	2.2	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02L4-MW01AW	3/10/2004	Landfill 4	0.34	3.1	1.3	0.57	38.1	114	10.7	26.5	0.3	0.28	0.25	95	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	5	nt	nt	nt	nt	nt	
02L4-MW01BW	3/10/2004	Landfill 4	0.05	0.1	0.05	ND	4.0	2.8	0.32	2.1	ND	0.07	ND	3.4	ND	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
02L4-MW02AW	3/10/2004	Landfill 4	0.35	3.0	1.0	0.65	33.4	90.9	4.5	28.3	0.91	0.22	0.16	144	ND	nt	nt	nt	nt	2.3	19	nt	nt	nt	71	nt	nt	nt	nt	nt	
02L4-MW02BW	3/10/2004	Landfill 4	0.19	0.43	0.15	0.16	3.8	5.4	1.6	2.5	0.05	0.07	0.04	7.7	ND	Detect: See VOC Table	nt	nt	nt	nt	ND	ND	ND	ND	300	nt	nt	nt	nt	nt	
02L4-MW03AW	3/11/2004	Landfill 4	0.05	0.04	0.04	ND	2.2	2.8	0.25	1.3	ND	ND	ND	3	ND	ND	nt	nt	nt	9.8	nt	nt	nt	100	nt	nt	nt	nt	nt	nt	
02L4-MW03BW	3/11/2004	Landfill 4	0.16	0.52	0.13	0.14	4.8	3.7	1.8	2.8	0.17	0.06	0.06	13.9	0.037	ND	nt	nt	nt	4.7	nt	nt	nt	36	nt	nt	nt	nt	nt	nt	
02L4-MW04AW	3/10/2004	Landfill 4	0.04	0.38	0.11	0.07	5.7	21.1	0.54	2.6	0.27	0.02	0.03	19.3	ND	ND	nt	nt	nt	0.72	nt	nt	nt	14	nt	nt	nt	nt	nt	nt	
02L4-MW05AW	3/11/2004	Landfill 4	0.13	3.7	1.4	0.62	36.6	113	7.5	26.4	0.14	0.09	0.06	177	ND	Detect: See VOC Table	nt	nt	nt	4.2	nt	nt	nt	39	nt	nt	nt	nt	nt	laboratory-measured pH: 5.4;	
02L4-MW07BW	3/10/2004	Landfill 4	0.04	0.13	ND	ND	2.6	0.24	0.03	1.9	0.10	ND	ND	0.38	ND	ND	nt	nt	nt	ND	ND	ND	ND	4	nt	nt	nt	nt	nt	nt	
02L4MW200W (field duplicate of 02L4-MW05AW)	3/11/2004	Landfill 4	0.16	4.6	1.9	0.96	48.4	149	10.4	34.7	0.15	0.14	0.09	291	ND	Detect: See VOC Table	nt	nt	nt	4.0	nt	nt	nt	39	nt	nt	nt	nt	nt	laboratory-measured pH: 5.9;	
02LCMW220W (field duplicate of 02LC-MW03SW)	3/17/2004	Lacamas Creek / Base Boundary	ND	0.47	ND	0.01	0.39	0.2	0.03	0.69	ND	ND	ND	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	44	chloride, 2 mg/L; nitrate, 0.3 mg/L		
02LCMW210W (field rinsate; deionized water)	3/15/2004	Demo Area 3	ND	ND	ND	ND	0.66	0.18	0.02	0.32	ND	ND	ND	2.5	ND	Detect: See VOC Table	ND	ND	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
Trip Blank TB-1	3/11/2004	Landfill 4	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	Detect: See VOC Table	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
Trip Blank TB-2	3/16/2004	Lacamas Creek	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
Lab detection limit			0.05	0.04	0.02	0.04	0.04	0.08	0.05	0.04	0.04	0.04	0.02	0.77	0.03	varies	varies	0.20 mg/L	0.80 mg/L	25 ug/L	0.49 ug/L	0.49 ug/L	2.5 ug/L	1.2 ug/L	0.96 ug/L	4 ug/L	1.0 mg/L	1.0 mg/L	2.0 mg/L	4 mg/L	see lab data report for limits
WA MTCA Method A Cleanup Levels (ug/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2			500	500	1000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
WA MTCA Method B Levels (ug/L)			1.4 - 8		0.02			592		320	80	80	1.1	4800	4800																

Notes:
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
ug/L - micrograms per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
DETECT - VOC compound detected; see separate VOC table
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

TABLE 1. CONSTITUENTS DETECTED IN GROUNDWATER SAMPLES - 1st QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	Total Metals (µg/L)													VOCs (µg/L)	SVOCs (µg/L)	Petroleum Hydrocarbons (mg/L)			Ordinance Explosives Compounds (µg/L)		NG (µg/L)	PETN (µg/L)	Picric Acid (µg/L)	Perchlorate (µg/L)	TOC (mg/L)	DOC (mg/L)	TSS (mg/L)	Alkalinity (HCO ₃) (mg/L)	Ions (results above detection limits shown)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury			NWTPH-Dx	Oil Range	NWTPH-Gx	HMX	RDX									
06LCMW01SW	3/23/2005	Lacamas Cr.	ND	ND	ND	0.5	0.94	0.24	0.15	0.58	0.18	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	44	chloride, 1 mg/L	
06LCMW01DW	3/23/2005	Lacamas Cr.	ND	ND	ND	0.02	1.4	0.25	0.045	1.1	0.17	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	44	chloride, 3 mg/L; sulfate, 4 mg/L	
06LCMW02SW	3/23/2005	Lacamas Cr.	ND	0.14	ND	0.2	0.96	0.2	0.051	0.62	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	1	45	chloride, 2 mg/L		
06LCMW02DW	3/23/2005	Lacamas Cr.	ND	0.26	ND	0.6	1.5	0.46	0.214	1.3	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	1.6	2	44	chloride, 2 mg/L		
06LCMW03SW	3/23/2005	Lacamas Cr.	ND	ND	ND	ND	1.5	0.13	0.029	0.55	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	44	chloride, 2 mg/L; nitrate, 0.2 mg/L		
06LCMW03DW	3/23/2005	Lacamas Cr.	ND	0.21	ND	0.06	1.1	0.31	0.119	0.81	0.24	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	< 2	49	sulfate, 2 mg/L; nitrate, 0.2 mg/L;		
06LCMW04SW	3/24/2005	Lacamas Cr.	ND	ND	ND	0.09	2.2	0.97	0.236	1.4	0.25	ND	ND	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	13	39	chloride, 2 mg/L; nitrate, 0.9 mg/L;		
06LCMW04DW	3/24/2005	Lacamas Cr.	ND	0.76	ND	0.15	2.1	0.58	0.129	1.5	0.23	ND	ND	3.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	7	52	chloride, 2 mg/L; nitrate, 0.2 mg/L;		
06LCMW05SW	3/22/2005	Demo Area 3	ND	1	ND	ND	2.3	1.4	0.31	1.6	0.29	ND	ND	7.3	ND	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06LCMW05DW	3/22/2005	Demo Area 3	0.3	0.38	0.14	0.42	2.7	3.2	1.9	2.6	0.34	0.03	0.01	14.8	ND	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06LCMW06SW	3/22/2005	Demo Area 3	ND	1.1	0.11	0.23	3.4	5.4	1.9	3.3	0.66	ND	0.01	12.8	ND	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06LCMW07SW	3/22/2005	Demo Area 3	0.75	3.2	ND	1.2	2.9	1.3	0.503	1.8	0.66	0.1	ND	4.1	ND	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06LCMW08SW	3/22/2005	Demo Area 3	0.12	0.99	ND	0.29	1.6	0.52	0.116	1.4	0.3	0.03	ND	2.2	ND	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06LCMW09SW	3/22/2005	Demo Area 2	ND	20.3	2.1	2.5	171	461	20.4	93	ND	0.26	0.12	262	0.13	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06LCMW10SW	3/22/2005	Demo Area 2	ND	0.3	0.19	0.57	6.1	13.8	3.1	3.4	0.15	0.06	0.02	19	ND	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06LCMW11SW	3/22/2005	Demo Area 2	ND	3.3	ND	0.1	1.3	1.7	0.277	2.3	0.47	ND	ND	2.7	ND	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	
06L4MW01AW	3/28/2005	Landfill 4	ND	0.79	0.52	0.67	15.1	41.3	4.7	11.1	ND	0.05	0.06	55.6	ND	nt	nt	nt	ND	ND	ND	ND	ND	2	nt	nt	nt	nt	nt	nt	
06L4MW01BW	3/28/2005	Landfill 4	ND	ND	ND	0.06	2.9	0.65	0.106	0.99	0.23	ND	ND	1.8	ND	nt	nt	nt	ND	ND	ND	ND	ND	2	nt	nt	nt	nt	nt	nt	
06L4MW02AW	3/28/2005	Landfill 4	ND	ND	0.23	0.3	8.4	18.2	0.843	6.4	ND	ND	ND	26.7	ND	nt	nt	nt	2.2	19	ND	ND	100	nt	nt	nt	nt	nt	nt	nt	
06L4MW02BW	3/28/2005	Landfill 4	ND	1.2	0.04	0.64	2.2	2.2	0.744	1.4	3.5	ND	ND	4.5	ND	Detect: See VOC Table	nt	nt	nt	2.5	67	ND	ND	nt	nt	nt	nt	nt	nt	nt	
06L4MW03AW	3/25/2005	Landfill 4	ND	ND	0.1	0.52	3.5	8.6	0.945	2	0.32	ND	0.02	21.4	ND	nt	nt	nt	ND	8	ND	ND	nt	94	nt	nt	nt	nt	nt	nt	
06L4MW03BW	3/25/2005	Landfill 4	ND	0.26	0.14	1.1	7.9	8.5	2.6	4.4	0.3	ND	0.03	27.3	ND	nt	nt	nt	ND	4.8	ND	ND	nt	43	nt	nt	nt	nt	nt	nt	
06L4MW04AW	3/25/2005	Landfill 4	ND	0.19	0.45	10.1	33.3	1.4	5.6	0.13	0.03	0.05	32	ND	ND	nt	nt	nt	ND	0.9	ND	ND	nt	14	nt	nt	nt	nt	nt	nt	
06L4MW05AW	3/25/2005	Landfill 4	ND	ND	0.04	0.22	3.8	2.6	0.222	1.9	0.12	ND	ND	4.3	ND	Detect: See VOC Table	nt	nt	nt	ND	4.2	ND	ND	nt	35	nt	nt	nt	nt	nt	
06L4MW07BW	3/24/2005	Landfill 4	0.23	ND	ND	0.04	1.7	0.11	0.006	1.2	0.19	0.03	ND	2.2	ND	nt	nt	nt	ND	ND	ND	ND	3	nt	nt	nt	nt	nt	nt	nt	
06L4MW17W	3/24/2005	Landfill 4	ND	0.3	0.02	0.1	1.4	1.9	0.438	2.4	0.49	ND	0.01	3.7	ND	Detect: See VOC Table	nt	nt	nt	ND	ND	ND	nt	3	nt	nt	nt	nt	nt	nt	
06L4MW18W	3/24/2005	Landfill 4	ND	0.08	0.15	0.31	7.1	12.3	3.1	4.7	ND	ND	0.04	27.1	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	nt	
06LCMW240W (field duplicate of 06LCMW01DW)	3/23/2005	Lacamas Cr.	ND	ND	ND	0.04	1.3	0.23	0.06	1	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	1.5	< 2	45	chloride, 3 mg/L; sulfate, 4 mg/L		
06L4MW250W (field duplicate of 06L4MW07BW)	3/24/2005	Landfill 4	ND	ND	ND	0.06	1.8	0.08	0.006	1.2	0.27	ND	ND	1.4	ND	nt	nt	nt	ND	ND	ND	nt	3	nt	nt	nt	nt	nt	nt	nt	
06LCM245W (field duplicate of 06LCMW05DW)	3/22/2005	Lacamas Cr.	0.1	0.39	0.1	0.52	2	2.6	1.6	1.8	0.24	ND	0.01	11.8	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt	nt	
06LCMW255W (field rinsate; deionized water)	3/24/2005		0.21	ND	ND	0.26	0.78	0.34	0.058	0.22	ND	ND	ND	2.1	ND	Detect: See VOC Table	Detect: See SVOC Table	ND	ND	ND	ND	ND	ND	< 1.0	17	< 2	< 2	none above detection limits			
Trip Blank TB-1	3/23/2005		nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	
Trip Blank TB-2	3/28/2005		nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.04	0.02	0.01	0.02	0.03	varies	varies	0.20 mg/L	0.82 mg/L	0.025 mg/L	0.48-0.60 µg/L	0.48-0.60 µg/L	2.5 µg/L	1.2 µg/L	0.94-1 µg/L	1.0-2.0 µg/L	1.0 mg/L	1.0 mg/L	2.0 mg/L	4 mg/L	see lab data report for limits
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	varies	varies	500	500	1,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800																

Notes:
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
µg/L - micrograms per liter
mg/L - milligrams per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
Detect - VOC compound detected; see separate VOC table
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.
BOLD print indicates concentration exceeding WA MTCA Method A Cleanup Level

TABLE 1. CONSTITUENTS DETECTED IN GROUNDWATER SAMPLES - 3rd QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	Total Metals (µg/L)													VOCs (µg/L)	SVOCs (µg/L)	Petroleum Hydrocarbons (mg/L)			Ordnance Explosives Compounds (µg/L)		NG (µg/L)	PETN (µg/L)	Picric Acid (µg/L)	Perchlorate (µg/L)	TOC (mg/L)	DOC (mg/L)	TSS (mg/L)	Alkalinity (HCO3) (mg/L)	Ions (results above detection limits shown)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury			NWTPH-Dx	Oil Range	NWTPH-Gx	HMX	RDX									
08LCMW01SW	9/15/2005	Lacamas Cr.	ND	ND	ND	ND	0.36	ND	ND	0.19	ND	ND	ND	2.4	ND	ND	Detect: See SVOC Table	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1	<2	46	chloride, 1 mg/L
08LCMW01DW	9/15/2005	Lacamas Cr.	ND	ND	ND	0.23	0.69	ND	0.08	0.58	ND	ND	ND	2	ND	ND	Detect: See SVOC Table	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1	<2	48	chloride, 2 mg/L; sulfate, 2 mg/L
08LCMW02SW	9/16/2005	Lacamas Cr.	ND	0.14	ND	0.1	0.16	ND	ND	0.04	ND	ND	ND	1.3	ND	ND	Detect: See SVOC Table	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	2.3	2	48	chloride, 1 mg/L	
08LCMW02DW	9/16/2005	Lacamas Cr.	ND	0.18	ND	ND	0.68	ND	ND	0.48	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1	<2	48	chloride, 2 mg/L	
08LCMW03SW	9/16/2005	Lacamas Cr.	ND	0.05	ND	ND	0.89	ND	0.03	0.56	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1	2	44	chloride, 1 mg/L; nitrate 0.2 mg/L	
08LCMW03DW	9/16/2005	Lacamas Cr.	0.26	0.87	ND	ND	0.71	ND	ND	0.34	ND	0.14	ND	0.88	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	6.6	2	48	chloride, 2 mg/L; nitrate, 0.3 mg/L; sulfate, 1 mg/L	
08LCMW04SW	9/19/2005	Lacamas Cr.	0.44	0.07	0.03	0.23	2.9	1.4	0.305	2.1	ND	0.09	ND	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	16	39	chloride, 2 mg/L; nitrate, 0.8 mg/L	
08LCMW04DW	9/19/2005	Lacamas Cr.	0.64	1	ND	0.13	2.7	0.74	0.149	1.8	ND	0.09	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	10	50	chloride, 2 mg/L; nitrate, 0.2 mg/L; sulfate, 2 mg/L	
08LCMW05SW	9/14/2005	Demo Area 3	0.26	0.87	ND	0.66	2.4	0.81	0.44	1.8	ND	ND	ND	4.2	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW05DW	9/14/2005	Demo Area 3	0.06	0.81	0.03	0.07	3.7	1.1	2.4	2.1	0.05	ND	ND	6.2	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW06SW	9/14/2005	Demo Area 3	0.51	2.8	0.018	0.061	16.3	37.3	5.1	10.1	ND	0.029	ND	88.4	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW07SW	9/14/2005	Demo Area 3	ND	2.9	ND	0.19	2.2	1.3	0.23	1.2	ND	0.08	ND	6	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW08SW	9/14/2005	Demo Area 3	ND	0.96	ND	0.19	1.3	0.37	0.2	0.56	ND	ND	ND	1.6	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW09SW	9/15/2005	Demo Area 2	ND	1.8	0.23	0.04	12.2	26.6	5.5	4.7	ND	ND	ND	37	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW10SW	9/15/2005	Demo Area 2	ND	2.1	0.68	0.56	18.1	39	22.6	9	ND	ND	0.09	51.5	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW11SW	9/15/2005	Demo Area 2	ND	4.6	ND	0.09	1.6	5.2	0.81	1.5	ND	ND	ND	4.7	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08L4MW01AW	9/20/2005	Landfill 4	ND	0.14	0.17	0.19	8.1	9.8	0.773	5.4	ND	0.05	ND	15.7	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	2	nt	nt	nt	nt	nt	
08L4MW01BW	9/20/2005	Landfill 4	ND	ND	0.02	0.17	3.9	0.94	0.102	1.9	ND	ND	ND	1.3	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	
08L4MW02AW	9/21/2005	Landfill 4	ND	0.85	0.6	0.52	22.4	54.2	2	19	ND	0.05	ND	74.1	ND	nt	nt	nt	nt	3.2	25	ND	ND	nt	200	nt	nt	nt	nt	nt	
08L4MW02BW	9/21/2005	Landfill 4	ND	0.48	0.03	0.44	2.4	2.9	0.506	1.6	1.6	ND	ND	2.9	ND	Detect: See VOC Table	nt	nt	nt	nt	3	82	ND	ND	nt	200	nt	nt	nt	nt	
08L4MW03AW	9/21/2005	Landfill 4	0.27	ND	0.05	0.13	5.4	1.3	0.146	3.7	0.15	0.05	ND	0.69	ND	nt	nt	nt	nt	ND	8.9	ND	ND	nt	110	nt	nt	nt	nt	nt	
08L4MW03BW	9/21/2005	Landfill 4	ND	0.24	0.1	0.34	10.3	6.4	1.7	5.9	0.3	0.05	ND	41.7	ND	nt	nt	nt	nt	ND	6.1	ND	ND	nt	50	nt	nt	nt	nt	nt	
08L4MW04AW	9/21/2005	Landfill 4	ND	0.2	0.11	0.25	7.2	18.9	0.52	3.4	ND	0.03	ND	29.2	ND	nt	nt	nt	nt	ND	0.61	ND	ND	nt	14	nt	nt	nt	nt	nt	
08L4MW05AW	9/20/2005	Landfill 4	ND	ND	0.06	0.22	5	3.1	0.217	3.2	ND	ND	ND	3.8	ND	Detect: See VOC Table	nt	nt	nt	nt	ND	4	ND	ND	nt	36	nt	nt	nt	nt	nt
08L4MW07BW	9/20/2005	Landfill 4	0.22	0.28	0.05	0.13	8.4	8.8	0.317	5.9	ND	0.06	ND	41.1	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	2	nt	nt	nt	nt	nt	
08L4MW17W	9/20/2005	Landfill 4	ND	0.57	0.03	0.06	2.5	3.5	0.641	2.8	0.2	ND	ND	38.3	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	
08L4MW18W	9/20/2005	Landfill 4	ND	2	0.47	0.72	56.7	117	10	43.6	ND	0.2	0.09	106	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	
08LCMW280W (field duplicate of 08LCMW08SW)	9/14/2005	Demo Area 3	0.03	0.91	ND	0.56	1.3	0.52	0.32	0.82	ND	ND	ND	2.4	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	
08LCMW285W (field duplicate of 08LCMW01DW)	9/15/2005	Lacamas Cr.	ND	0.06	ND	0.2	0.63	ND	0.17	0.55	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<2	46	chloride, 2 mg/L; sulfate, 2 mg/L	
08L4M290W (field duplicate of 08L4MW03AW)	9/21/2005	Landfill 4	ND	ND	0.03	0.16	7.1	3.2	0.278	4	ND	0.05	ND	2.4	ND	ND	nt	nt	nt	ND	9.6	ND	ND	nt	110	nt	nt	nt	nt	nt	
08LCMW295W (field rinsate; deionized water)	9/19/2005	Field Office	ND	0.1	ND	0.07	0.78	0.15	0.019	0.21	0.21	ND	ND	0.96	ND	Detect: See VOC Table	Detect: See VOC Table	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	6.3	<2	2	none above detection limits	
Trip Blank TB-1	9/15/2005		nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	
Trip Blank TB-2	9/21/2005		nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.04	0.02	0.01	0.02	0.052	varies	varies	0.10 mg/L	0.40 mg/L	0.025 mg/L	0.48-0.60 µg/L	0.48-0.60 µg/L	2.5 µg/L	1.2 µg/L	0.94-1 µg/L	1.0 µg/L	1.0 mg/L	1.0 mg/L	2.0 mg/L	4 mg/L	see lab data report for limits
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	2	varies	varies	500	500	1,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800																

Notes:
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
µg/L - micrograms per liter
mg/L - milligrams per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
Detect - VOC compound detected; see separate VOC table
J = value estimated
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

TABLE 1. CONSTITUENTS DETECTED IN GROUNDWATER SAMPLES - 4th QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	Total Metals (µg/L)													VOCs (µg/L)	SVOCs (µg/L)	Petroleum Hydrocarbons (mg/L)			Ordnance Explosives Compounds (µg/L)		NG (µg/L)	PETN (µg/L)	Picric Acid (µg/L)	Perchlorate (µg/L)	TOC (mg/L)	DOC (mg/L)	TSS (mg/L)	Alkalinity (HCO3) (mg/L)	Ions (results above detection limits shown)		
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury			NWTPH-Dx	Oil Range	NWTPH-Gx	HMX	RDX											
09LCMW01SW	1/26/2006	Lacamas Cr.	ND	0.23	ND	0.16	0.98	0.39	0.09	0.92	ND	ND	ND	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1	2	44	chloride, 1 mg/L	
09LCMW01DW	1/26/2006	Lacamas Cr.	0.17	0.38	ND	1.7	2.2	0.77	0.681	1.9	ND	ND	0.01	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1	< 2	45	chloride, 2 mg/L; sulfate, 2 mg/L		
09LCMW02SW	1/27/2006	Lacamas Cr.	0.19	0.62	ND	0.11	0.9	0.25	0.062	0.68	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1	< 2	44	chloride, 2 mg/L		
09LCMW02DW	1/27/2006	Lacamas Cr.	0.1	0.48	ND	0.18	1.2	0.33	0.151	1.5	ND	ND	ND	2.7	ND	ND	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1	< 2	44	chloride, 2 mg/L; sulfate, 1 mg/L		
09LCMW03SW	1/26/2006	Lacamas Cr.	ND	0.34	ND	0.04	0.75	0.41	0.387	0.66	ND	ND	ND	3.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1	3	41	chloride, 2 mg/L; nitrate, 0.2 mg/L		
09LCMW03DW	1/26/2006	Lacamas Cr.	ND	0.68	ND	0.02	1.1	0.26	0.046	0.87	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1	2	45	chloride, 2 mg/L; nitrate, 0.3 mg/L		
09LCMW04SW	1/26/2006	Lacamas Cr.	ND	0.12	0.03	0.03	1.3	0.58	0.198	0.95	ND	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	13	38	chloride, 2 mg/L; nitrate, 0.8 mg/L			
09LCMW04DW	1/26/2006	Lacamas Cr.	0.14	1.1	ND	0.08	2.6	0.67	0.159	1.7	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1.0	10	50	chloride, 2 mg/L; nitrate, 0.2 mg/L; sulfate, 2 mg/L			
09LCMW05SW	1/24/2006	Demo Area 3	0.52	1.2	ND	1.5	6	2.2	0.958	3.9	0.11	0.03	ND	8	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW05DW	1/24/2006	Demo Area 3	0.34	0.99	0.08	0.21	5.7	3.6	1.5	4	0.16	0.07	0.02	13.4	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW06SW	1/24/2006	Demo Area 3	0.33	0.64	0.05	0.14	2.3	5.6	0.77	1.7	ND	0.03	0.01	30.1	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW07SW	1/24/2006	Demo Area 3	0.3	3.3	ND	0.24	3.7	1.4	0.446	2.5	0.13	0.04	0.02	6.3	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW08SW	1/24/2006	Demo Area 3	0.33	1.2	ND	0.76	4.6	1.1	0.506	3.2	0.12	0.03	0.01	5	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW09SW	1/23/2006	Demo Area 2	0.28	0.94	0.27	0.19	5.6	14.4	3.3	3	ND	0.04	0.02	25.5	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW10SW	1/23/2006	Demo Area 2	0.39	0.45	0.16	0.83	4.6	11.6	1.9	3.5	ND	0.4	0.2	44	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW11SW	1/23/2006	Demo Area 2	0.24	5	ND	0.48	1.7	6	0.656	2.2	ND	0.03	ND	11.9	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09L4MW01AW	1/30/2006	Landfill 4	0.19	0.39	0.22	0.51	10	22.9	2	5.9	0.18	0.14	0.08	27.8	ND	nt	nt	nt	nt	ND	0.68	ND	ND	nt	nt	17	nt	nt	nt	nt	nt		
09L4MW01BW	1/30/2006	Landfill 4	ND	0.08	0.09	0.1	4.8	3	0.382	2.5	0.15	0.06	0.01	4.1	ND	nt	nt	nt	nt	ND	ND	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt		
09L4MW02AW	1/30/2006	Landfill 4	ND	0.23	0.27	0.46	12.7	11.1	0.461	7.8	0.34	0.04	ND	14.6	ND	nt	nt	nt	nt	3.3	20	ND	ND	nt	95	nt	nt	nt	nt	nt	nt		
09L4MW02BW	1/30/2006	Landfill 4	0.12	0.25	0.09	0.58	2	2.6	0.367	1.6	0.61	ND	ND	7	ND	nt	nt	nt	nt	3.5	98	ND	ND	nt	400	nt	nt	nt	nt	nt	nt		
09L4MW03AW	1/30/2006	Landfill 4	ND	0.05	0.09	0.07	6.2	1.3	0.163	3.6	ND	0.03	ND	3.2	ND	nt	nt	nt	nt	ND	11	ND	ND	nt	110	nt	nt	nt	nt	nt	nt		
09L4MW03BW	1/30/2006	Landfill 4	ND	0.16	0.09	0.13	14.6	4.5	0.925	8.4	0.17	0.04	ND	14.7	ND	nt	nt	nt	nt	ND	4.2	ND	ND	nt	53	nt	nt	nt	nt	nt	nt		
09L4MW04AW	1/30/2006	Landfill 4	0.1	0.31	0.18	0.4	10.2	24.6	0.968	5	0.13	0.04	0.02	27.2	ND	nt	nt	nt	nt	ND	1.1	ND	ND	nt	17	nt	nt	nt	nt	nt	nt		
09L4MW05AW	1/30/2006	Landfill 4	ND	ND	0.05	2.6	5.6	1.2	0.041	3.5	0.16	ND	ND	4.2	ND	nt	nt	nt	nt	ND	3.4	ND	ND	nt	35	nt	nt	nt	nt	nt	nt		
09L4MW07BW	1/27/2006	Landfill 4	ND	0.18	0.07	0.06	3.5	1.1	0.073	2.7	0.12	0.03	ND	3.9	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	2	nt	nt	nt	nt	nt	nt		
09L4MW17W	1/27/2006	Landfill 4	0.34	0.37	0.1	0.7	1.7	1.5	0.654	2.8	0.29	0.03	ND	4.1	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	nt		
09L4MW18W	1/27/2006	Landfill 4	0.09	0.17	0.17	0.19	8.1	10.2	1	6.8	0.13	0.03	ND	9.9	ND	nt	nt	nt	nt	ND	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	nt		
09LCMW300W (field duplicate of 09LCMW05DW)	1/24/2006	Demo Area 3	0.03	1.1	0.13	0.26	6.7	6.5	2	4	0.15	0.06	0.04	21.5	ND	nt	nt	nt	nt	ND	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
09LCMW305W (field duplicate of 09LCMW02DW)	1/27/2006	Lacamas Cr.	0.14	0.5	ND	0.1	1.3	0.44	0.381	1.4	ND	ND	ND	3.2	ND	ND	0.073	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	5	44	chloride, 2 mg/L			
09L4M310W (field duplicate of 09L4MW05AW)	1/30/2006	Landfill 4	ND	ND	0.08	0.27	5.1	1.1	0.026	3.2	0.13	ND	ND	4.2	ND	Detect: See VOC Table	nt	nt	nt	nt	3.5	ND	ND	nt	36	nt	nt	nt	nt	nt	nt		
09LCMW315W (field rinseate; deionized water)	1/30/2006	Field Office	ND	0.03	0.06	0.06	0.91	0.62	0.057	0.36	0.1	ND	ND	5.1	ND	Detect: See VOC Table	Detect: See SVOC Table	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	< 1.0	<2	2	none above detection limits			
Trip Blank TB-1	1/26/2006		nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt		
Trip Blank TB-2	1/27/2006		nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.01	0.02	0.01	0.02	varies	varies	varies	varies	varies	0.10 mg/L	0.40 mg/L	0.025 mg/L	0.48-0.60 µg/L	0.48-0.60 µg/L	2.5 µg/L	1.2 µg/L	0.94-1 µg/L	1.0 µg/L	1.0 mg/L	1.0 mg/L	2.0 mg/L	4 mg/L	see lab data report for limits
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	2	varies	varies	varies	varies	varies	500	500	1,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800																		

Notes:

Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
µg/L - micrograms per liter
mg/L - milligrams per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
Detect - VOC compound detected; see separate VOC table
J = value estimated
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.
BOLD print indicates concentration exceeding WA MTCA Method A Cleanup Level

TABLE 1. CONSTITUENTS DETECTED IN GROUNDWATER SAMPLES - 2nd QUARTER 2006
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	Total Metals (µg/L)													VOCs (µg/L)	SVOCs (µg/L)	Petroleum Hydrocarbons (mg/L)			Ordnance Explosives Compounds (µg/L)		NG (µg/L)	PETN (µg/L)	Picric Acid (µg/L)	Perchlorate (µg/L)	TOC (mg/L)	DOC (mg/L)	TSS (mg/L)	Alkalinity (HCO ₃) (mg/L)	Alkalinity (CO ₃) (mg/L)	Ions (results above detection limits shown)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc			NWTPH-Dx	Oil Range	NWTPH-Gx	HMX	RDX										
11LCMW01SW	6/26/2006	Lacamas Cr.	ND	0.32	0.02	0.06	1.11	1.11	0.066(E)	ND	1.05(E)	0.29	0.04	ND	7.24(E)	nt	nt	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	42	ND	chloride 1.5 mg/L		
11LCMW01DW	6/26/2006	Lacamas Cr.	ND	0.57	ND	0.15	1.57	1.57	0.17(E)	ND	1.67(E)	0.45	0.07	ND	3.8(E)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	47	ND	sulfate as SO ₄ 1.5 mg/L; chloride 1.6 mg/L		
11LCMW02SW	6/26/2006	Lacamas Cr.	0.55	0.66	ND	0.11	0.71	0.71	0.047(E)	ND	0.85(E)	0.35	0.04	ND	1.63(E)	nt	nt	ND	ND	ND	ND	ND	ND	ND	ND	ND	42	ND	chloride 1.4 mg/L			
11LCMW02DW	6/26/2006	Lacamas Cr.	ND	0.58	ND	0.07	1.37	1.37	0.072(E)	ND	1.91(E)	0.29	0.07	ND	5.57(E)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	44	ND	nitrate as N 0.22 mg/L; sulfate as SO ₄ 1.1 mg/L; chloride 1.9 mg/L			
11LCMW03SW	6/27/2006	Lacamas Cr.	ND	0.24	ND	0.02	0.49	0.49	0.02	ND	0.58	ND	ND	ND	0.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	41	ND	nitrate as N 0.22 mg/L; chloride 1.3 mg/L			
11LCMW03DW	6/27/2006	Lacamas Cr.	0.39	0.63	ND	0.04	0.65	0.65	0.03	ND	0.72	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	46	ND	nitrate as N 0.31 mg/L; sulfate as SO ₄ 1.1 mg/L; chloride 1.7 mg/L			
11LCMW04SW	6/26/2006	Lacamas Cr.	0.09	0.36	0.09	0.22	3.65	3.65	0.89(E)	ND	3.4(E)	0.27	0.06	0.03	7.35(E)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	39	ND	nitrate as N 0.9 mg/L; chloride 2.4 mg/L			
11LCMW04DW	6/26/2006	Lacamas Cr.	ND	1.28	0.07	0.47	4.31	4.31	1.06(E)	ND	4.39(E)	0.21	0.11	0.02	7.65(E)	ND	nt	ND	ND	ND	ND	ND	ND	ND	ND	37	50	ND	nitrate as N 0.25 mg/L; sulfate as SO ₄ 2.4 mg/L; chloride 2.2 mg/L			
11LCMW05SW	6/21/2006	Demo Area 3	0.34	0.86	ND	1.41	4.06	4.06	0.79	ND	3.49	ND	0.08	ND	8.38(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11LCMW05DW	6/21/2006	Demo Area 3	0.21	0.83	0.09	0.37	3.66	3.66	2.09	ND	3.87	ND	0.05	0.01	5.17(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11LCMW06SW	6/21/2006	Demo Area 3	ND	2.46	ND	0.09	1.07	1.07	0.40	ND	2.39	ND	ND	ND	4.3(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11LCMW07SW	6/21/2006	Demo Area 3	0.14	3.01	ND	0.22	2.44	2.44	0.32	ND	2.4	ND	0.03	ND	7.66(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11LCMW08SW	6/21/2006	Demo Area 3	0.09	0.94	ND	0.48	2.94	2.94	0.83	0.04	2.8	ND	0.03	ND	7.46(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11LCMW09SW	6/21/2006	Demo Area 2	ND	0.30	0.04	0.40	3.48	3.48	2.38	ND	2.58	ND	0.03	ND	10.4(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11LCMW10SW	6/21/2006	Demo Area 2	ND	0.63	0.22	0.62	6.05	6.05	3.51	ND	5.75	ND	0.04	0.02	17.8(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11LCMW11SW	6/21/2006	Demo Area 2	ND	5.89	0.06	0.37	4.56	4.56	1.78	ND	3.92	ND	0.05	ND	9.62(E)	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11L4MW01AW	6/23/2006	Landfill 4	ND	0.51	0.09	0.31	6.78	6.78	1.11(E)	ND	6.37(E)	0.74	0.11	0.02	23.1(E)	ND	nt	nt	nt	ND	ND	ND	ND	nt	2.2	nt	nt	nt	nt	nt		
11L4MW01BW	6/23/2006	Landfill 4	ND	0.32	0.02	0.07	5.28	5.28	0.32(E)	ND	3.38(E)	0.59	0.10	0.01	3.27(E)	ND	ND	nt	nt	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	nt		
11L4MW02AW	6/22/2006	Landfill 4	0.11	ND	0.07	0.65	8.9	8.9	0.30	ND	6.33	0.23	0.03	ND	7.72(E)	ND	nt	nt	nt	3.1	21	ND	ND	nt	180	nt	nt	nt	nt	nt		
11L4MW02BW	6/22/2006	Landfill 4	ND	0.04	0.06	0.37	3.65	3.65	1.06	ND	3.25	0.26	ND	ND	5.53(E)	Detect: see VOC table	nt	nt	nt	nt	3.7	92(E)	ND	ND	nt	400	nt	nt	nt	nt	nt	
11L4MW03AW	6/22/2006	Landfill 4	ND	ND	0.04	0.12	6.23	6.23	2.68	ND	4.11	ND	0.09	ND	7.95(E)	ND	nt	nt	nt	ND	10	ND	ND	nt	97	nt	nt	nt	nt	nt		
11L4MW03BW	6/22/2006	Landfill 4	ND	ND	0.07	0.36	10.8	10.8	0.81	ND	6.99	ND	0.07	ND	6.18(E)	ND	nt	nt	nt	ND	2.9	ND	ND	nt	51	nt	nt	nt	nt	nt		
11L4MW04AW	6/22/2006	Landfill 4	ND	ND	0.06	0.21	7.37	7.37	0.26	ND	21.9	ND	0.06	0.01	8.81(E)	ND	nt	nt	nt	ND	1.5	ND	ND	nt	20	nt	nt	nt	nt	nt		
11L4MW05AW	6/22/2006	Landfill 4	0.08	0.50	0.22	0.48	8.48	8.48	2.46	ND	7.76	ND	0.11	0.02	32.8(E)	Detect: see VOC table	nt	nt	nt	ND	3.4	ND	ND	nt	29	nt	nt	nt	nt	nt		
11L4MW07BW	6/23/2006	Landfill 4	0.15	0.77	0.03	0.64	6.29	6.29	0.36(E)	ND	5.43(E)	0.92	0.20	0.02	7.35(E)	ND	nt	nt	nt	ND	0.64	ND	ND	nt	2.3	nt	nt	nt	nt	nt		
11L4MW17W	6/23/2006	Landfill 4	0.48	0.77	0.02	0.03	2.34	2.34	0.52(E)	ND	3.38(E)	ND	ND	0.01	2.97(E)	Detect: see VOC table	nt	nt	nt	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	nt		
11L4MW18W	6/23/2006	Landfill 4	0.80	1.88	0.38	1.23	24	24	8.78(E)	ND	40.8(E)	ND	0.44	0.13	74.8(E)	ND	nt	nt	nt	ND	ND	ND	nt	ND	nt	nt	nt	nt	nt	nt		
11LCMW340W (field duplicate of 11LCMW07SW)	6/21/2006	Demo Area 3	0.16	3.22	ND	0.60	3.84	3.84	0.79	0.05	3.06	ND	0.04	ND	5.74E	ND	nt	nt	nt	ND	ND	ND	ND	ND	nt	nt	nt	nt	nt	nt		
11L4MW345W (field duplicate of 11L4MW02BW)	6/22/2006	Landfill 4	ND	0.06	0.06	0.41	4.39	4.39	2.3	0.06	3.46	0.24	0.06	0.01	9.3(E)	Detect: see VOC table	nt	nt	nt	3.7	90(E)	ND	ND	nt	390	nt	nt	nt	nt	nt		
11LCM355W (field duplicate of 11LCMW03SW)	6/27/2006	Lacamas Cr.	ND	0.25	ND	ND	1.26	1.26	0.01	ND	0.57	ND	ND	ND	ND	nt	nt	ND	ND	ND	ND	ND	ND	ND	3	42	ND	nitrate as N 0.22 mg/L; chloride 1.5 mg/L				
11LCMW360W (field rinsate; deionized water)	6/27/2006	Field Office	0.45	ND	ND	ND	0.47	0.47	0.02	ND	0.10	ND	ND	ND	ND	Detect: see VOC table	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	none above detection limits		
Trip Blank TB-1	6/22/2006		nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	ND	ND	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt		
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.013	0.04	0.01	0.02	0.01	0.02	varies	varies	0.10 mg/L	0.40 mg/L	0.025 mg/L	0.48-0.60 µg/L	0.48-0.60 µg/L	2.5 µg/L	1.2 µg/L	0.94-1 µg/L	1.0 µg/L	1.0 mg/L	1.0 mg/L	2.0 mg/L	4 mg/L	see lab data report for limits	
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	2	n/a	n/a	n/a	n/a	n/a	varies	varies	500	500	1,000	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		4,800	320	80	80	1.1	4,800																	

Notes:
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
µg/L - micrograms per liter
mg/L - milligrams per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
Detect - VOC compound detected; see separate VOC table
J or E = value estimated
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.
BOLD Print indicates concentration exceeding WA MTCA Method A Cleanup Level

**TABLE 2. DISSOLVED METALS AND TOC - 1st QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (ug/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury	
02LC-MW01SW	3/16/2004	Lacamas Cr.	ND	0.22	ND	0.02	0.47	0.23	0.03	1.0	ND	ND	ND	1.4	ND	<1.0
02LC-MW06DW	3/16/2004	Lacamas Cr.	ND	0.5	ND	0.03	0.56	0.25	0.03	2.3	0.18	ND	0.01	2.7	0.036	<1.0
02LC-MW02SW	3/16/2004	Lacamas Cr.	ND	0.67	ND	0.01	0.47	0.19	0.03	0.84	ND	0.03	ND	3.3	ND	<1.0
02LC-MW07DW	3/16/2004	Lacamas Cr.	0.19	0.67	ND	0.05	0.4	0.2	0.03	1.3	0.1	0.14	0.03	1.2	ND	<1.0
02LC-MW03SW	3/17/2004	Lacamas Cr.	0.16	0.42	ND	0.04	0.33	0.17	0.04	0.74	0.07	0.14	0.02	6.0	ND	<1.0
02LC-MW08DW	3/17/2004	Lacamas Cr.	ND	0.88	ND	0.01	0.38	0.21	0.04	0.9	0.12	ND	ND	0.84	ND	<1.0
02LC-MW04SW	3/16/2004	Lacamas Cr.	ND	0.1	ND	0.04	0.43	0.15	0.02	0.68	0.13	0.03	ND	1.5	ND	<1.0
02LC-MW09DW	3/16/2004	Lacamas Cr.	ND	1.5	ND	0.01	0.6	0.27	0.03	1.1	0.1	ND	ND	2.2	ND	<1.0
02LC-MW05SW	3/15/2004	Demo Area 3	ND	1.9	ND	0.1	0.86	0.3	0.03	1.1	0.28	ND	ND	ND	ND	nt
02LC-MW10DW	3/15/2004	Demo Area 3	0.09	0.8	ND	0.07	0.55	0.33	0.03	1.1	0.28	ND	ND	2.6	ND	nt
02LC-MW11SW	3/15/2004	Demo Area 3	ND	0.67	ND	0.26	0.6	0.93	0.02	2.5	0.44	ND	ND	4.1	ND	nt
02LC-MW12SW	3/15/2004	Demo Area 3	ND	3.4	ND	0.32	1.0	0.60	0.06	2.1	0.59	ND	0.01	5.4	ND	nt
02LC-MW13SW	3/15/2004	Demo Area 3	ND	1.7	ND	0.16	1.0	0.61	0.22	3.2	0.3	ND	0.02	2.0	ND	nt
02LC-MW14W	3/11/2004	Demo Area 2	ND	0.2	ND	0.16	1.3	2.1	0.17	1.1	0.17	0.02	0.01	4.1	ND	nt
02LC-MW15W	3/15/2004	Demo Area 2	ND	0.15	0.06	0.14	1.3	2.7	0.71	1.1	0.17	ND	ND	3.4	ND	nt
02LC-MW16W	3/15/2004	Demo Area 2	ND	3.2	ND	0.58	0.61	0.41	0.03	2.2	0.35	0.04	ND	1.6	ND	nt
02L4-MW01AW	3/10/2004	Landfill 4	0.4	0.08	0.22	0.22	1.2	0.23	0.24	2.6	0.15	0.2	0.22	4.7	ND	nt
02L4-MW01BW	3/10/2004	Landfill 4	0.13	0.03	0.07	0.07	1.1	0.16	0.08	1.3	0.04	0.07	0.06	0.9	ND	nt
02L4-MW02AW	3/10/2004	Landfill 4	ND	ND	0.07	0.44	1.1	0.29	0.01	2.2	0.66	0.03	ND	3.4	ND	nt
02L4-MW02BW	3/10/2004	Landfill 4	ND	ND	0.04	0.22	0.61	0.33	0.04	0.9	0.11	ND	ND	4.5	ND	nt
02L4-MW03AW	3/11/2004	Landfill 4	ND	ND	0.02	0.09	0.94	0.22	0.02	0.83	0.18	ND	ND	0.76	ND	nt
02L4-MW03BW	3/11/2004	Landfill 4	ND	ND	0.02	0.26	1.20	1.1	0.2	1.7	0.23	ND	ND	4.7	ND	nt
02L4-MW04AW	3/10/2004	Landfill 4	ND	ND	ND	0.07	1.2	0.14	0.18	1.2	0.17	ND	ND	2.6	ND	nt
02L4-MW05AW	3/11/2004	Landfill 4	ND	ND	0.01	0.14	0.7	0.15	0.02	1.4	0.16	ND	ND	3.7	ND	nt
02L4-MW07BW	3/10/2004	Landfill 4	ND	0.12	ND	0.15	1.3	0.27	0.04	1.8	0.18	ND	ND	1.6	ND	nt
02L4MW200W (field duplicate of 02L4-MW05AW)	3/10/2004	Landfill 4	ND	ND	0.01	0.56	0.60	0.13	0.01	1.6	0.15	ND	ND	2.0	ND	nt
02LCMW220W (field duplicate of 02LC-MW03SW)	3/17/2004	Lacamas Creek / Base Boundary	ND	0.43	ND	0.03	0.29	0.16	0.02	0.69	ND	0.03	ND	1.3	ND	<1.0
02LCMW210W (field rinsate; deionized water)	3/15/2004	Demo Area 3	ND	ND	ND	0.13	0.41	0.08	0.01	0.05	0.07	ND	ND	0.7	ND	nt
Lab detection limit			0.05	0.04	0.01	0.04	0.04	0.08	0.05	0.04	0.04	0.04	0.02	0.77	0.007	1.0
WA MTCA Method A Cleanup Levels (ug/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a
WA MTCA Method B Levels (ug/L)			1.4 - 8		0.02			592		320	80	80	1.1	4800	4800	

Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
ug/L - micrograms per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

DRAFT

**TABLE 5. DISSOLVED METALS AND TOC - 2nd QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (ug/L)													DOC (mg/L)	
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury		
03LCMW01SW	6/15/04	Lacamas Cr.	0.03	0.25	ND	ND	0.94	0.1	0.05	0.5	ND	ND	ND	ND	ND	ND	<1.0
03LCMW06DW	6/15/04	Lacamas Cr.	0.58	0.64	0.15	0.08	1.1	0.12	0.18	0.87	0.22	0.16	0.18	ND	ND	ND	<1.0
03LCMW02SW	6/15/04	Lacamas Cr.	ND	0.64	ND	ND	1.2	0.21	ND	0.61	ND	ND	ND	ND	ND	ND	<1.0
03LCMW07DW	6/15/04	Lacamas Cr.	0.1	0.78	ND	ND	0.96	ND	0.02	0.85	ND	ND	ND	ND	ND	ND	<1.0
03LCMW03SW	6/16/04	Lacamas Cr.	ND	0.49	ND	ND	0.8	ND	ND	0.3	ND	ND	ND	ND	ND	ND	<1.0
03LCMW08DW	6/16/04	Lacamas Cr.	0.13	1.0	ND	ND	0.91	ND	0.11	0.41	0.04	ND	ND	ND	ND	ND	<1.0
03LCMW04SW	6/16/04	Lacamas Cr.	ND	0.09	ND	ND	0.94	0.14	ND	0.33	ND	ND	ND	0.38	ND	ND	<1.0
03LCMW09DW	6/16/04	Lacamas Cr.	0.04	1.6	ND	ND	1.1	ND	ND	1.1	ND	ND	ND	1.5	ND	ND	<1.0
03LCMW05SW	6/22/04	Demo Area 3	ND	2.1	ND	ND	1.3	0.26	0.01	1.1	0.26	ND	ND	1.2	ND	nt	
03LCMW10DW	6/22/04	Demo Area 3	0.14	0.84	ND	ND	0.87	0.27	0.01	0.99	0.34	ND	ND	2.3	ND	nt	
03LCMW11SW	6/22/04	Demo Area 3	ND	0.76	ND	ND	0.9	0.62	0.02	2.5	0.43	ND	ND	4.5	ND	nt	
03LCMW12SW	6/22/04	Demo Area 3	ND	1.8	ND	ND	1.1	0.54	0.04	1.1	0.32	ND	ND	2.0	ND	nt	
03LCMW13SW	6/22/04	Demo Area 3	ND	3.2	ND	ND	1.4	0.43	0.03	1.4	0.66	ND	ND	1.5	ND	nt	
03LCMW14W	6/16/04	Demo Area 2	ND	0.15	ND	ND	1.2	2.1	0.13	0.51	ND	ND	ND	1.7	ND	nt	
03LCMW15W	6/16/04	Demo Area 2	0.09	ND	0.04	ND	0.8	0.25	ND	0.61	0.05	0.04	ND	2.5	ND	nt	
03LCMW16W	6/17/04	Demo Area 2	ND	3.6	ND	ND	0.88	0.14	0.01	1.8	0.29	ND	ND	2.2	ND	nt	
03L4MW01AW	6/18/04	Landfill 4	ND	ND	ND	ND	1.2	0.16	0.03	1.6	0.28	ND	ND	3.7	ND	nt	
03L4MW01BW	6/18/04	Landfill 4	ND	ND	0.01	ND	1.3	0.09	0.01	0.61	ND	ND	ND	1.4	ND	nt	
03L4MW02AW	6/18/04	Landfill 4	ND	ND	0.06	ND	1.9	0.15	0.01	2.0	0.41	ND	ND	2.1	ND	nt	
03L4MW02BW	6/18/04	Landfill 4	ND	0.97	0.24	0.13	3.5	0.15	0.05	1.9	0.23	ND	ND	9.4	ND	nt	
03L4MW03AW	6/17/04	Landfill 4	ND	ND	0.02	ND	1.1	0.08	0.01	1.2	0.13	ND	ND	1.6	ND	nt	
03L4MW03BW	6/23/04	Landfill 4	0.13	0.05	0.04	ND	1.5	0.28	0.04	4.7	0.33	ND	ND	3.7	ND	nt	
03L4MW04AW	6/18/04	Landfill 4	ND	ND	0.02	0.06	1.2	0.17	0.11	3.7	0.2	ND	ND	3.0	ND	nt	
03L4MW05AW	6/18/04	Landfill 4	ND	ND	0.02	ND	1.2	0.17	0.01	2.2	0.21	ND	ND	2.7	ND	nt	
03L4MW07BW	6/21/04	Landfill 4	ND	0.21	ND	ND	1.4	0.09	ND	1.8	0.21	ND	ND	0.92	ND	nt	
03L4MW17W	6/21/04	Landfill 4	0.13	0.25	ND	ND	0.91	1.2	0.05	1.7	0.59	ND	ND	0.85	ND	nt	
03L4MW18W	6/21/04	Landfill 4	ND	0.06	ND	ND	1.2	0.09	0.03	2.6	0.11	ND	ND	1.0	ND	nt	
03LCMW110W (field duplicate of 03LCMW02SW)	6/15/2004	Lacamas Creek / Base Boundary	ND	0.72	ND	ND	0.84	0.17	ND	0.23	ND	ND	ND	0.35	ND	ND	<1.0
03L4MW115SW (field duplicate of 03L4MW03AW)	6/17/2004	Landfill 4	ND	ND	0.02	ND	1.1	0.11	ND	1.0	0.16	ND	ND	1.2	ND	ND	<1.0
03LCMW120SW (field duplicate of 03LCMW05SW)	6/22/2004	Demo Area 3	0.54	2.0	ND	ND	1.5	0.24	0.01	1.5	0.36	0.15	ND	1.8	ND	ND	nt
03LCMW220W (field rinsate; deionized water)	6/22/2004	Demo Area 3	ND	ND	ND	ND	0.68	0.12	0.01	0.10	0.08	ND	ND	1.3	ND	ND	<1.0
Lab detection limit			0.05	0.04	0.01	0.04	0.04	0.08	0.05	0.04	0.04	0.04	0.02	0.77	0.007	1.0	
WA MTCA Method A Cleanup Levels (ug/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a	
WA MTCA Method B Levels (ug/L)			1.4 - 8		0.02			592		320	80	80	1.1	4800	4800		

Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
 nt - Sample not tested
 ug/L - micrograms per liter
 ND - Not detected to the limit of laboratory detection indicated
 n/a - Not applicable. MTCA Method A Cleanup Level not provided.
 WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

**TABLE 2. DISSOLVED METALS AND TOC - 3rd QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (ug/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury	
04LCMW01SW	9/15/04	Lacamas Cr.	ND	0.21	ND	0.05	0.51	0.18	0.05	0.7	ND	ND	ND	1.7	ND	<1.0
04LCMW01DW	9/15/04	Lacamas Cr.	ND	0.37	ND	0.06	0.64	0.34	0.16	1.3	ND	ND	0.02	2.0	ND	<1.0
04LCMW02SW	9/15/04	Lacamas Cr.	ND	0.5	ND	0.13	0.44	0.18	0.07	0.56	ND	0.03	ND	1.4	ND	<1.0
04LCMW02DW	9/15/04	Lacamas Cr.	ND	0.72	ND	0.1	1.2	0.19	0.06	2.4	ND	ND	ND	1.0	ND	<1.0
04LCMW03SW	9/20/04	Lacamas Cr.	ND	0.45	ND	0.48	0.88	0.16	0.05	0.73	ND	ND	ND	3.1	ND	<1.0
04LCMW03DW	9/20/04	Lacamas Cr.	ND	0.9	ND	0.14	0.87	0.16	0.03	0.84	0.11	ND	ND	1.4	ND	<1.0
04LCMW04SW	9/20/04	Lacamas Cr.	0.09	0.12	ND	0.09	0.89	0.17	0.03	0.59	ND	0.05	ND	2.5	ND	<1.0
04LCMW04DW	9/20/04	Lacamas Cr.	0.63	1.4	0.02	0.04	0.9	0.29	0.05	1.2	ND	0.18	0.02	3.2	ND	<1.0
04LCMW05SW	9/14/04	Demo Area 3	0.37	1.7	ND	0.07	1.0	0.31	0.07	1.3	ND	0.09	0.01	1.3	ND	nt
04LCMW05DW	9/14/04	Demo Area 3	0.3	0.77	ND	0.17	0.92	0.42	0.08	1.6	0.25	0.07	0.02	12.1	ND	nt
04LCMW06SW	9/14/04	Demo Area 3	0.84	0.66	ND	0.08	0.56	0.77	0.08	1.6	0.25	0.22	0.03	3.3	ND	nt
04LCMW07SW	9/14/04	Demo Area 3	0.24	4.0	ND	0.07	1.3	0.39	0.06	1.1	0.25	0.08	0.01	1.2	ND	nt
04LCMW08SW	9/14/04	Demo Area 3	0.7	1.5	ND	0.08	0.8	0.41	0.06	0.97	ND	0.21	0.04	1.2	ND	nt
04LCMW09SW	9/15/04	Demo Area 2	0.25	0.05	ND	0.11	0.56	0.66	0.07	0.77	ND	0.07	ND	3.9	ND	nt
04LCMW10SW	9/15/04	Demo Area 2	0.08	0.22	0.03	0.31	1.0	1.7	0.32	0.8	ND	0.04	ND	3.5	ND	nt
04LCMW11SW	9/15/04	Demo Area 2	ND	3.8	ND	0.06	0.73	0.37	0.07	2.0	0.18	ND	ND	3.3	ND	nt
04LMW01AW	9/21/04	Landfill 4	ND	ND	0.03	0.22	1.0	0.18	0.06	1.6	ND	ND	ND	3.2	ND	nt
04LMW01BW	9/21/04	Landfill 4	ND	ND	ND	0.17	4.9	0.29	0.03	0.83	ND	ND	ND	3.1	ND	nt
04LMW02AW	9/21/04	Landfill 4	ND	ND	0.04	0.18	1.4	0.35	0.08	1.7	0.11	ND	ND	3.2	ND	nt
04LMW02BW	9/21/04	Landfill 4	ND	0.6	0.28	0.28	1.6	0.39	0.16	2.2	2.0	ND	ND	14.0	ND	nt
04LMW03AW	9/21/04	Landfill 4	ND	ND	0.03	0.04	1.3	0.2	0.12	1.2	ND	ND	ND	3.0	ND	nt
04LMW03BW	9/21/04	Landfill 4	ND	ND	ND	0.19	2.1	0.41	0.15	2.3	ND	ND	0.01	3.7	ND	nt
04LMW04AW	9/21/04	Landfill 4	0.27	ND	ND	0.1	2.0	5.0	0.15	2	ND	0.07	ND	3.6	ND	nt
04LMW05AW	9/21/04	Landfill 4	ND	ND	0.02	0.11	1.6	0.25	0.04	1.2	ND	0.03	0.01	4.3	ND	nt
04LMW07BW	9/16/04	Landfill 4	ND	0.11	ND	0.12	1.3	0.26	0.06	2.1	ND	ND	ND	0.86	ND	nt
04LMW17W	9/16/04	Landfill 4	ND	0.88	ND	0.08	0.72	0.46	0.14	2.3	0.18	ND	ND	1.3	ND	nt
04LMW18W	9/16/04	Landfill 4	ND	0.05	ND	0.07	1.4	0.19	0.04	1.9	ND	ND	ND	0.8	ND	nt
04LCMW125SW (field duplicate of 04LCMW02DW)	9/16/04	Lacamas Cr.	ND	0.65	ND	0.15	1.1	0.23	0.07	1.9	ND	ND	ND	1.80	ND	<1.0
04LCMW130SW (field duplicate of 04LCMW05DW)	9/14/04	Demo Area 3	0.17	0.82	ND	0.18	0.82	0.54	0.1	1.2	0.3	0.03	0.01	11.50	ND	nt
04LMW135SW (field duplicate of 04LMW07BW)	9/16/04	Landfill 4	ND	0.16	ND	0.1	1.1	0.19	0.11	1.8	ND	ND	ND	0.91	ND	nt
04LCMW03DW (MS/MSD) (duplicate of 04LCMW03DW)	9/20/04	Lacamas Cr.	ND	0.88	ND	0.14	0.87	0.16	0.03	0.84	0.11	ND	ND	1.38	ND	<1.0
04LMW230W (field rinse; deionized water)	9/21/04	Landfill 4	ND	ND	ND	0.07	0.83	0.19	0.14	0.36	ND	ND	ND	4.2	ND	<1.0
Lab detection limit			0.05	0.04	0.01	0.04	0.04	0.08	0.05	0.04	0.04	0.04	0.02	0.77	0.03	1.0
WA MTCA Method A Cleanup Levels (ug/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a
WA MTCA Method B Levels (ug/L)			1.4 - 8		0.02			592		320	80	80	1.1	4800	4800	

Only detected analytes are shown; see laboratory reports for complete listing of compounds tested

nt - Sample not tested

ug/L - micrograms per liter

ND - Not detected to the limit of laboratory detection indicated

n/a - Not applicable. MTCA Method A Cleanup Level not provided.

**TABLE 2. DISSOLVED METALS AND TOC - 4th QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (µg/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury	
05LCMW01SW	12/8/2004	Lacamas Cr.	0.87	0.26	0.15	0.09	0.63	0.19	0.03	0.7	ND	0.17	0.03	1.6	ND	<1.0
05LCMW01DW	12/8/2004	Lacamas Cr.	ND	0.45	ND	0.04	0.61	0.33	0.05	1.1	0.22	ND	0.02	2.9	ND	<1.0
05LCMW02SW	12/8/2004	Lacamas Cr.	ND	0.52	ND	0.04	0.72	0.64	0.04	0.67	ND	ND	ND	2.9	ND	<1.0
05LCMW02DW	12/8/2004	Lacamas Cr.	ND	0.55	ND	0.13	0.94	0.23	0.13	1.2	ND	ND	ND	1.5	ND	<1.0
05LCMW03SW	12/3/2004	Lacamas Cr.	ND	0.40	ND	0.03	0.6	0.26	0.05	0.8	ND	ND	ND	2.9	ND	<1.0
05LCMW03DW	12/3/2004	Lacamas Cr.	ND	0.9	ND	0.03	0.68	0.22	0.04	0.87	ND	ND	ND	3.9	ND	<1.0
05LCMW04SW	12/3/2004	Lacamas Cr.	ND	0.06	ND	0.21	0.69	0.21	0.02	0.67	ND	ND	ND	2.9	ND	<1.0
05LCMW04DW	12/3/2004	Lacamas Cr.	ND	1.3	ND	0.03	1.0	0.44	0.05	1.5	ND	ND	ND	2.3	ND	<1.0
05LCMW05SW	12/2/2004	Demo Area 3	ND	1.4	ND	0.21	1.1	0.51	0.12	1.5	ND	ND	ND	3.9	ND	nt
05LCMW05DW	12/2/2004	Demo Area 3	0.94	0.83	ND	0.03	0.68	0.39	0.12	1.3	ND	0.13	0.02	3.2	ND	nt
05LCMW06SW	12/2/2004	Demo Area 3	ND	0.92	ND	0.04	0.83	1.1	0.13	2.2	0.12	ND	0.01	3.7	ND	nt
05LCMW07SW	12/2/2004	Demo Area 3	ND	3.5	ND	0.03	1.2	0.50	0.04	1.5	ND	ND	0.02	1.4	ND	nt
05LCMW08SW	12/2/2004	Demo Area 3	ND	1.4	ND	0.16	0.7	0.54	0.05	1.4	ND	ND	0.08	1.9	ND	nt
05LCMW09SW	12/2/2004	Demo Area 2	ND	0.11	ND	0.04	0.66	0.2	0.08	0.77	ND	ND	0.02	1.0	ND	nt
05LCMW10SW	12/2/2004	Demo Area 2	0.15	ND	ND	0.08	0.7	0.44	0.03	0.71	ND	ND	ND	5.4	ND	nt
05LCMW11SW	12/3/2004	Demo Area 2	ND	3.6	ND	0.03	0.57	0.28	0.05	2.2	ND	ND	ND	2.9	ND	nt
05L4MW01AW	12/7/2004	Landfill 4	ND	ND	0.15	0.15	0.8	0.34	0.04	0.78	ND	ND	ND	4.9	ND	nt
05L4MW01BW	12/7/2004	Landfill 4	ND	ND	0.03	0.02	1.1	0.11	0.02	0.31	ND	ND	ND	1.5	ND	nt
05L4MW02AW	12/6/2004	Landfill 4	ND	ND	0.05	0.25	0.9	0.19	0.06	0.7	ND	ND	ND	2.4	ND	nt
05L4MW02BW	12/6/2004	Landfill 4	ND	1.1	0.22	0.17	2.3	0.74	0.10	2.7	3.9	ND	ND	7.1	0.034	nt
05L4MW03AW	12/6/2004	Landfill 4	ND	ND	0.03	0.31	0.89	0.61	0.03	0.62	ND	ND	ND	2.4	ND	nt
05L4MW03BW	12/6/2004	Landfill 4	ND	ND	0.03	0.16	0.9	0.32	0.09	1.2	ND	ND	0.01	5.5	ND	nt
05L4MW04AW	12/6/2004	Landfill 4	ND	0.04	0.04	0.48	2.3	2.6	0.21	2.4	0.23	ND	ND	4.2	ND	nt
05L4MW05AW	12/6/2004	Landfill 4	ND	ND	0.03	0.10	0.75	0.21	0.03	0.5	ND	ND	ND	3.0	ND	nt
05L4MW07BW	12/7/2004	Landfill 4	ND	0.08	0.02	0.14	2.0	0.37	0.05	1.7	ND	ND	ND	1.8	ND	nt
05L4MW17W	12/7/2004	Landfill 4	ND	1.3	0.04	0.02	0.72	0.55	0.11	2.9	0.26	ND	0.01	1.8	ND	nt
05L4MW18W	12/7/2004	Landfill 4	ND	0.04	0.03	0.02	1.5	0.28	0.05	1.3	ND	ND	ND	1.4	ND	nt
05LCMW150W (field duplicate of 05LCMW07SW)	12/2/2004	Lacamas Cr.	ND	3.5	ND	0.02	1.3	0.47	0.03	1.4	0.13	ND	0.03	0.89	ND	nt
05L4MW155W (field duplicate of 05L4MW02BW)	12/6/2004	Landfill 4	ND	1.4	0.2	0.16	2.90	0.98	0.06	2.9	4.9	ND	ND	8.2	ND	nt
05LCMW145W (field duplicate of 05LCMW02SW)	12/8/2004	Lacamas Cr.	ND	0.53	0.05	0.05	0.71	0.32	0.03	0.7	ND	ND	ND	1.4	ND	<1.0
05LCMW235W (field rinsate; deionized water)	12/8/2004		ND	ND	ND	ND	0.64	0.17	0.09	0.29	ND	ND	ND	1.3	ND	<1.0
Lab detection limit			0.05	0.04	0.01	0.04	0.04	0.08	0.05	0.04	0.04	0.04	0.02	0.77	0.03	1.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800	
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested nt - Sample not tested ug/L - micrograms per liter ND - Not detected to the limit of laboratory detection indicated n/a - Not applicable. MTCA Method A Cleanup Level not provided. WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.																

**TABLE 2. DISSOLVED METALS AND DOC - 1st QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (µg/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury	
06LCMW01SW	3/23/2005	Lacamas Cr.	ND	ND	ND	0.02	0.89	0.17	0.022	0.69	0.49	ND	0.02	1.2	ND	<1.0
06LCMW01DW	3/23/2005	Lacamas Cr.	ND	0.21	ND	ND	0.88	0.19	ND	0.86	0.19	ND	ND	0.85	ND	<1.0
06LCMW02SW	3/23/2005	Lacamas Cr.	ND	0.05	ND	ND	1.1	0.14	0.012	0.76	0.019	ND	ND	1.3	ND	<1.0
06LCMW02DW	3/23/2005	Lacamas Cr.	ND	ND	ND	0.03	0.99	0.16	0.007	1.3	0.11	ND	ND	1.9	ND	1.6
06LCMW03SW	3/23/2005	Lacamas Cr.	0.13	ND	ND	ND	1.2	0.15	ND	0.94	0.22	0.03	ND	1	ND	<1.0
06LCMW03DW	3/23/2005	Lacamas Cr.	ND	0.13	ND	ND	0.9	0.14	0.005	0.85	0.31	ND	ND	0.9	ND	<1.0
06LCMW04SW	3/24/2005	Lacamas Cr.	ND	ND	ND	ND	0.95	0.15	0.021	0.64	0.21	ND	ND	1.3	ND	<1.0
06LCMW04DW	3/24/2005	Lacamas Cr.	ND	0.72	ND	ND	1.6	0.21	0.003	1.2	0.27	ND	ND	0.87	ND	<1.0
06LCMW05SW	3/22/2005	Demo Area 3	ND	1	ND	ND	1.2	0.38	0.122	1	0.36	ND	0.05	1.9	ND	nt
06LCMW05DW	3/22/2005	Demo Area 3	ND	0.21	ND	0.23	1.1	0.53	0.12	1.4	0.22	ND	ND	2.2	ND	nt
06LCMW06SW	3/22/2005	Demo Area 3	ND	0.45	ND	0.02	0.82	0.71	0.021	1.5	0.71	ND	ND	1.7	ND	nt
06LCMW07SW	3/22/2005	Demo Area 3	0.26	2.7	ND	0.27	1.7	0.53	0.096	1.9	0.63	0.03	ND	1.5	ND	nt
06LCMW08SW	3/22/2005	Demo Area 3	ND	0.88	ND	0.05	1.4	0.46	0.075	1.5	0.28	ND	ND	1.3	ND	nt
06LCMW09SW	3/22/2005	Demo Area 2	ND	ND	ND	ND	1.2	0.72	0.151	0.61	0.29	ND	ND	10.6	ND	nt
06LCMW10SW	3/22/2005	Demo Area 2	ND	ND	ND	0.15	1.1	0.53	0.022	0.74	0.28	ND	ND	2.3	ND	nt
06LCMW11SW	3/22/2005	Demo Area 2	ND	3.1	ND	0.03	0.93	0.22	0.033	2	0.46	ND	ND	2.9	ND	nt
06L4MW01AW	3/28/2005	Landfill 4	ND	ND	0.04	0.13	1.5	0.24	0.031	1.6	0.42	ND	ND	1.6	ND	nt
06L4MW01BW	3/28/2005	Landfill 4	ND	ND	ND	0.02	1.4	0.05	0.015	0.6	0.14	ND	ND	0.92	ND	nt
06L4MW02AW	3/28/2005	Landfill 4	ND	ND	0.06	0.04	1.7	0.3	0.428	1.3	0.51	ND	ND	1.9	ND	nt
06L4MW02BW	3/28/2005	Landfill 4	ND	0.84	ND	0.04	1.9	1.5	0.264	1.5	4.3	ND	0.06	10.5	ND	nt
06L4MW03AW	3/25/2005	Landfill 4	0.61	ND	0.02	0.09	1.3	0.27	0.042	0.75	0.33	ND	ND	2	ND	nt
06L4MW03BW	3/25/2005	Landfill 4	0.19	ND	0.02	0.29	1.5	0.44	0.123	2.3	0.15	ND	ND	3.7	ND	nt
06L4MW04AW	3/25/2005	Landfill 4	0.1	0.04	0.02	0.08	1.9	1.4	0.34	2	0.48	ND	0.06	11.1	ND	nt
06L4MW05AW	3/25/2005	Landfill 4	ND	ND	0.02	0.08	1.3	0.13	0.037	1.7	0.2	ND	ND	2.2	ND	nt
06L4MW07BW	3/24/2005	Landfill 4	ND	ND	ND	0.02	1.6	0.11	0.128	1.6	0.16	ND	ND	1.5	ND	nt
06L4MW17W	3/24/2005	Landfill 4	ND	ND	ND	0.02	1	0.43	0.149	3.3	0.44	ND	ND	1.4	ND	nt
06L4MW18W	3/24/2005	Landfill 4	0.16	ND	ND	0.02	2.4	0.16	0.127	1.7	0.36	ND	ND	3.7	ND	nt
06LCMW240W (field duplicate of 06LCMW01DW)	3/23/2005	Lacamas Cr.	ND	0.13	ND	ND	1.1	0.15	0.005	1.1	0.35	ND	ND	1.1	ND	1.5
06L4MW250W (field duplicate of 06L4MW07BW)	3/24/2005	Landfill 4	0.43	ND	ND	0.03	1.7	0.07	0.002	1.4	0.23	ND	ND	1.3	ND	nt
06LCM245W (field duplicate of 06LCMW05DW)	3/22/2005	Lacamas Cr.	0.13	0.61	0.04	0.32	1.9	0.86	0.4	1.8	0.25	ND	ND	2.7	ND	<1.0
06LCMW255W (field rinsate; deionized water)	3/24/2005		ND	ND	ND	0.02	0.98	0.16	0.025	0.18	ND	ND	ND	1.8	ND	17
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.04	0.02	0.01	0.02	0.03	1.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800	

Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
ug/L - micrograms per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

**TABLE 2. DISSOLVED METALS AND DOC - 2nd QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (µg/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury	
07LCMW01SW	6/24/2005	Lacamas Cr.	0.07	0.28	ND	0.06	0.62	0.56	0.03	0.72	0.06	0.03	0.03	3.1	ND	19
07LCMW01DW	6/24/2005	Lacamas Cr.	0.06	0.4	ND	0.05	0.78	0.6	0.04	0.97	0.07	0.03	0.03	0.99	ND	1.0
07LCMW02SW	6/24/2005	Lacamas Cr.	ND	0.58	ND	ND	0.79	0.54	0.02	0.98	0.03	0.02	0.02	0.56	ND	<1.0
07LCMW02DW	6/24/2005	Lacamas Cr.	ND	0.54	ND	0.05	0.82	0.47	ND	1.5	0.04	ND	0.03	0.66	ND	25
07LCMW03SW	6/28/2005	Lacamas Cr.	ND	0.34	ND	ND	0.48	0.53	0.05	0.69	0.04	ND	0.07	1.0	0.07	1.7
07LCMW03DW	6/28/2005	Lacamas Cr.	0.25	0.91	ND	0.03	1.7	0.57	0.02	1.3	0.04	0.05	0.09	3.5	0.082	<1.0
07LCMW04SW	6/28/2005	Lacamas Cr.	ND	0.09	ND	ND	0.64	0.61	0.06	0.37	0.04	ND	0.16	1.6	0.11	1.7
07LCMW04DW	6/28/2005	Lacamas Cr.	0.03	1.0	ND	ND	0.65	2.0	0.07	0.57	0.05	ND	0.07	5.8	0.066	<1.0
07LCMW05SW	6/23/2005	Demo Area 3	0.25	1.3	ND	0.07	0.97	0.67	0.03	0.61	0.11	0.06	0.06	5.8	ND	nt
07LCMW05DW	6/23/2005	Demo Area 3	0.12	0.71	ND	0.1	0.63	0.52	0.08	1.0	0.06	ND	0.04	1.8	ND	nt
07LCMW06SW	6/23/2005	Demo Area 3	0.14	1.4	ND	ND	0.59	0.63	0.03	1.2	ND	ND	0.11	1.6	ND	nt
07LCMW07SW	6/23/2005	Demo Area 3	0.26	3.2	ND	0.1	1.1	0.59	0.06	0.74	0.11	0.03	0.1	1.4	ND	nt
07LCMW08SW	6/23/2005	Demo Area 3	0.04	1.3	ND	0.34	0.56	0.48	ND	0.43	0.07	ND	0.08	2.9	ND	nt
07LCMW09SW	6/27/2005	Demo Area 2	0.11	0.11	ND	0.09	0.53	0.64	0.05	0.5	ND	ND	0.05	1.5	ND	nt
07LCMW10SW	6/27/2005	Demo Area 2	0.04	0.28	0.02	0.15	0.59	1.1	0.16	1.1	ND	ND	0.03	2.7	ND	nt
07LCMW11SW	6/27/2005	Demo Area 2	ND	3.5	ND	0.05	0.58	0.56	0.04	1.0	0.05	ND	0.03	1.6	ND	nt
07L4MW01AW	6/28/2005	Landfill 4	0.23	0.31	0.08	0.08	13.3	5.5	0.43	17.2	0.08	0.1	0.22	7.0	0.064	nt
07L4MW01BW	6/28/2005	Landfill 4	ND	ND	ND	ND	1.4	0.62	0.07	1.4	ND	ND	0.07	12.7	0.12	nt
07L4MW02AW	6/29/2005	Landfill 4	0.16	0.05	0.06	0.2	3.2	1.9	0.21	5.5	0.28	1.2	0.21	6.1	ND	nt
07L4MW02BW	6/29/2005	Landfill 4	0.15	0.15	0.02	0.26	4.5	0.65	0.23	1.3	ND	0.06	0.29	5.6	ND	nt
07L4MW03AW	6/29/2005	Landfill 4	ND	ND	0.02	0.09	0.93	1.1	0.13	1.4	ND	ND	0.06	1.7	0.09	nt
07L4MW03BW	6/29/2005	Landfill 4	ND	ND	0.02	0.29	1.8	0.75	0.08	2.5	0.08	ND	0.11	4.2	0.083	nt
07L4MW04AW	6/29/2005	Landfill 4	ND	ND	ND	0.04	9.7	1.0	0.06	1.6	0.04	ND	0.06	5.3	ND	nt
07L4MW05AW	6/29/2005	Landfill 4	ND	ND	0.02	0.08	2.2	0.71	0.04	3.1	0.05	ND	0.06	3.5	ND	nt
07L4MW07BW	6/28/2005	Landfill 4	0.09	0.18	ND	0.07	1.8	0.61	0.04	2.2	ND	0.02	0.21	4.4	0.099	nt
07L4MW17W	6/29/2005	Landfill 4	0.13	0.26	ND	ND	1.1	0.83	0.13	2.2	0.16	ND	0.08	0.93	0.069	nt
07L4MW18W	6/29/2005	Landfill 4	ND	0.04	ND	ND	2.0	0.59	0.11	1.7	ND	ND	0.12	2.7	0.08	nt
07LCMW260W (field duplicate of 07LCMW02DW)	6/24/2005	Lacamas Cr.	ND	0.59	ND	0.07	1.0	0.55	ND	1.8	0.03	0.02	0.02	2.0	ND	1.1
07LCMW265W (field duplicate of 07LCMW06SW)	6/23/2005	Landfill 4	ND	1.5	ND	ND	0.56	0.68	0.08	1.3	ND	ND	0.07	2.7	ND	nt
07L4M270W (field duplicate of 07L4MW01AW)	6/28/2005	Lacamas Cr.	0.03	0.03	0.03	0.05	0.97	0.68	0.09	4.7	0.07	0.02	0.15	14.4	0.098	nt
07LCMW275W (field rinsate; deionized water)	6/24/2005		ND	ND	ND	ND	0.3	0.6	0.03	0.04	ND	ND	ND	1.9	ND	1.8
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.04	0.02	0.01	0.02	0.052	1.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800	

BOLD print indicates concentration exceeding WA MTCA Method A Cleanup Level
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
ug/L - micrograms per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

**TABLE 2. DISSOLVED METALS AND DOC - 3rd QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (µg/L)													DOC (mg/L)	
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury		
08LCMW01SW	9/15/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	0.59	ND	<1
08LCMW01DW	9/15/2005	Lacamas Cr.	ND	0.08	ND	ND	0.02	ND	ND	0.27	ND	ND	ND	0.4	ND	<1	
08LCMW02SW	9/16/2005	Lacamas Cr.	ND	0.13	ND	ND	0.27	0.25	ND	0.27	ND	ND	ND	1.4	ND	2.3	
08LCMW02DW	9/16/2005	Lacamas Cr.	ND	0.19	ND	ND	0.06	ND	ND	0.38	ND	ND	ND	0.81	ND	<1	
08LCMW03SW	9/16/2005	Lacamas Cr.	ND	0.05	ND	ND	0.04	ND	ND	0.29	ND	ND	ND	0.7	ND	<1	
08LCMW03DW	9/16/2005	Lacamas Cr.	0.32	0.56	ND	ND	0.07	0.3	ND	0.35	ND	0.13	ND	ND	ND	6.6	
08LCMW04SW	9/19/2005	Lacamas Cr.	ND	0.06	ND	0.04	0.95	0.28	0.015	1.2	ND	0.05	ND	0.27	ND	<1	
08LCMW04DW	9/19/2005	Lacamas Cr.	ND	1.1	ND	0.06	1.1	0.5	0.048	1.9	ND	0.09	ND	1.7	ND	<1	
08LCMW05SW	9/14/2005	Demo Area 3	ND	1.6	ND	0.16	0.37	ND	ND	0.74	ND	ND	ND	0.77	ND	nt	
08LCMW05DW	9/14/2005	Demo Area 3	ND	0.42	ND	ND	0.39	ND	ND	1.2	ND	ND	ND	0.79	ND	nt	
08LCMW06SW	9/14/2005	Demo Area 3	0.18	0.4	ND	ND	0.03	ND	0.13	1.3	ND	0.04	ND	4.6	ND	nt	
08LCMW07SW	9/14/2005	Demo Area 3	ND	2.6	ND	0.05	0.54	ND	ND	0.54	ND	ND	ND	1.1	ND	nt	
08LCMW08SW	9/14/2005	Demo Area 3	ND	0.94	ND	0.06	0.14	ND	ND	0.21	0.07	ND	ND	0.67	ND	nt	
08LCMW09SW	9/15/2005	Demo Area 2	ND	ND	ND	ND	ND	ND	0.44	0.1	ND	ND	ND	ND	ND	nt	
08LCMW10SW	9/15/2005	Demo Area 2	ND	ND	ND	ND	ND	ND	0.03	0.49	ND	ND	ND	5.2	ND	nt	
08LCMW11SW	9/15/2005	Demo Area 2	ND	ND	ND	ND	ND	ND	0.04	0.58	ND	ND	ND	2.1	ND	nt	
08L4MW01AW	9/20/2005	Landfill 4	ND	ND	0.05	0.09	1.5	0.16	0.166	2	0.26	ND	ND	1.9	ND	nt	
08L4MW01BW	9/20/2005	Landfill 4	ND	ND	ND	0.1	1.4	1.1	0.103	1.2	0.26	ND	ND	21.9	ND	nt	
08L4MW02AW	9/21/2005	Landfill 4	ND	ND	0.05	0.07	1.3	0.19	0.012	2.6	0.31	ND	ND	0.77	ND	nt	
08L4MW02BW	9/21/2005	Landfill 4	ND	0.33	0.03	0.16	1.1	0.08	0.028	1	1.1	ND	ND	1.3	ND	nt	
08L4MW03AW	9/21/2005	Landfill 4	0.24	ND	ND	0.07	2.1	0.16	0.008	3.6	0.2	0.03	ND	0.51	ND	nt	
08L4MW03BW	9/21/2005	Landfill 4	ND	ND	0.02	0.19	2.3	2	0.346	2.7	ND	ND	ND	35.7	ND	nt	
08L4MW04AW	9/21/2005	Landfill 4	ND	ND	0.02	0.23	1.7	0.21	0.23	1.9	0.21	ND	ND	1.4	ND	nt	
08L4MW05AW	9/20/2005	Landfill 4	ND	ND	ND	0.13	1.4	0.1	0.029	1.8	ND	ND	ND	1.4	ND	nt	
08L4MW07BW	9/20/2005	Landfill 4	ND	0.17	ND	0.07	1.3	0.17	0.136	2.3	ND	0.04	ND	0.37	ND	nt	
08L4MW17W	9/20/2005	Landfill 4	ND	0.68	ND	0.04	0.92	0.69	0.048	2	0.42	ND	ND	0.37	ND	nt	
08L4MW18W	9/20/2005	Landfill 4	ND	ND	ND	0.06	2	1.2	0.118	2.7	0.12	ND	ND	1.1	ND	nt	
08LCMW280W (field duplicate of 08LCMW08SW)	9/14/2005	Demo Area 3	ND	0.94	ND	0.21	0.1	ND	0.13	0.38	0.06	ND	ND	5.0	ND	nt	
08LCMW285W (field duplicate of 08LCMW01DW)	9/15/2005	Lacamas Cr.	ND	0.05	ND	ND	ND	ND	0.07	0.17	ND	ND	ND	2.1	ND	<1	
08L4M290W (field duplicate of 08L4MW03AW)	9/21/2005	Landfill 4	ND	ND	0.03	0.08	2.6	0.18	0.03	5.1	ND	ND	ND	1.9	ND	nt	
08LCMW295W (field rinsate; deionized water)	9/19/2005	Field Office	ND	ND	ND	0.06	0.98	0.1	0.21	0.88	ND	ND	ND	1.1	ND	6.3	
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.04	0.02	0.01	0.02	0.052	1.0	
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a	
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800		
BOLD print indicates concentration exceeding WA MTCA Method A Cleanup Level																	
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested																	
nt - Sample not tested																	
ug/L - micrograms per liter																	
ND - Not detected to the limit of laboratory detection indicated																	
n/a - Not applicable. MTCA Method A Cleanup Level not provided.																	
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.																	

**TABLE 2. DISSOLVED METALS AND DOC - 4th QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (µg/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury	
09LCMW01SW	1/26/2006	Lacamas Cr.	7.5	0.35	ND	0.1	0.68	0.47	0.18	0.76	3.3	0.03	0.12	2.6	ND	<1
09LCMW01DW	1/26/2006	Lacamas Cr.	0.1	0.37	ND	0.17	1.2	0.44	0.133	1.4	ND	0.07	0.01	2.6	ND	<1
09LCMW02SW	1/27/2006	Lacamas Cr.	ND	0.59	ND	0.05	0.61	0.34	0.064	0.73	ND	2	0.01	2.2	ND	<1
09LCMW02DW	1/27/2006	Lacamas Cr.	ND	0.48	ND	0.08	0.62	0.3	0.073	1.2	ND	0.03	ND	2.4	ND	<1
09LCMW03SW	1/26/2006	Lacamas Cr.	0.23	0.32	ND	0.05	0.39	0.49	0.098	0.8	ND	ND	ND	2.1	ND	<1
09LCMW03DW	1/26/2006	Lacamas Cr.	0.13	0.64	ND	0.08	0.56	0.62	0.098	0.88	ND	ND	ND	2.1	ND	<1
09LCMW04SW	1/26/2006	Lacamas Cr.	0.49	0.1	ND	0.06	0.6	0.3	0.079	0.69	ND	0.03	ND	2.6	ND	<1
09LCMW04DW	1/26/2006	Lacamas Cr.	6.2	1.4	ND	0.1	1.2	0.91	0.483	1.4	3.4	0.13	0.14	2.8	ND	<1
09LCMW05SW	1/24/2006	Demo Area 3	ND	1.1	ND	0.46	1.3	0.78	0.131	1.8	0.16	0.03	0.01	5.3	ND	nt
09LCMW05DW	1/24/2006	Demo Area 3	0.25	0.72	ND	0.15	1.3	0.38	0.07	3.8	0.17	0.1	0.04	3.5	ND	nt
09LCMW06SW	1/24/2006	Demo Area 3	0.18	0.37	ND	0.07	1.8	0.75	0.042	1.1	ND	0.14	0.05	2.9	ND	nt
09LCMW07SW	1/24/2006	Demo Area 3	0.17	3.2	ND	0.14	1.4	0.79	0.09	2.4	0.13	3.8	0.01	3.1	ND	nt
09LCMW08SW	1/24/2006	Demo Area 3	0.19	1.2	ND	0.33	2.1	0.64	0.133	2.9	0.15	0.09	0.03	3.8	ND	nt
09LCMW09SW	1/23/2006	Demo Area 2	0.75	0.62	ND	0.05	0.68	0.51	0.207	0.58	ND	ND	ND	3.7	ND	nt
09LCMW10SW	1/23/2006	Demo Area 2	ND	0.03	0.02	0.18	1.5	0.88	0.447	0.87	ND	0.61	ND	2.6	ND	nt
09LCMW11SW	1/23/2006	Demo Area 2	ND	3.7	ND	0.1	0.53	0.52	0.111	1.50	0.32	0.1	0.02	5.1	ND	nt
09L4MW01AW	1/30/2006	Landfill 4	0.04	ND	0.03	0.13	0.86	0.16	ND	1.3	0.19	0.05	ND	4.9	ND	nt
09L4MW01BW	1/30/2006	Landfill 4	ND	ND	0.04	0.02	1	0.08	ND	0.87	ND	0.03	ND	2.3	ND	nt
09L4MW02AW	1/30/2006	Landfill 4	ND	ND	0.09	0.24	2.3	0.23	0.007	3.2	0.41	ND	ND	4.6	ND	nt
09L4MW02BW	1/30/2006	Landfill 4	ND	0.16	0.05	0.52	1.1	0.25	ND	1.6	0.44	ND	ND	4.4	ND	nt
09L4MW03AW	1/30/2006	Landfill 4	ND	ND	0.07	0.04	1.7	0.25	0.024	2.8	0.14	ND	ND	3.8	ND	nt
09L4MW03BW	1/30/2006	Landfill 4	ND	ND	0.02	0.11	1.3	0.13	0.009	2.2	0.14	ND	ND	4.5	ND	nt
09L4MW04AW	1/30/2006	Landfill 4	ND	ND	0.09	0.13	1.6	0.26	0.017	1.5	0.13	ND	ND	6	ND	nt
09L4MW05AW	1/30/2006	Landfill 4	0.03	ND	0.04	0.21	2.5	0.26	0.019	2.7	ND	ND	ND	4.2	ND	nt
09L4MW07BW	1/27/2006	Landfill 4	ND	0.17	0.12	0.02	1.5	0.23	0.002	2.7	0.12	ND	ND	3	ND	nt
09L4MW17W	1/27/2006	Landfill 4	0.1	0.33	0.07	0.03	0.62	0.44	0.009	2.5	0.31	ND	ND	3	ND	nt
09L4MW18W	1/27/2006	Landfill 4	ND	0.08	0.07	0.05	2.4	0.24	ND	2.1	0.15	0.03	ND	6	ND	nt
09LCMW300W (field duplicate of 09LCMW05DW)	1/24/2006	Demo Area 3	0.33	0.72	ND	0.15	2.0	0.48	0.098	3.6	0.18	0.04	0.06	4.0	ND	nt
09LCMW305W (field duplicate of 09LCMW02DW)	1/27/2006	Lacamas Cr.	0.25	0.56	ND	0.1	1.1	0.53	0.206	1.9	ND	0.07	0.01	2.7	ND	<1
09L4M310W (field duplicate of 09L4MW05AW)	1/30/2006	Landfill 4	ND	ND	0.08	0.16	2.7	0.17	ND	4.8	ND	0.03	ND	3.3	ND	nt
09LCMW315W (field rinseate; deionized water)	1/30/2006	Field Office	ND	ND	0.08	ND	0.34	0.17	ND	0.05	ND	ND	ND	2.3	ND	<1
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.01	0.02	0.01	0.02	0.052	1.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800	

BOLD print indicates concentration exceeding WA MTCA Method A Cleanup Level
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
µg/L - micrograms per liter
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

TABLE 2. DISSOLVED METALS AND DOC - 1st QUARTER 2006
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (µg/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Nickel	Selenium	Silver	Thallium	Zinc	Mercury	
10LCMW01SW	3/23/2006	Lacamas Cr.	0.16	0.22	ND	0.03	0.27	0.18	0.03	0.56	ND	ND	ND	3.15	ND	<1
10LCMW01DW	3/23/2006	Lacamas Cr.	0.10	0.39	ND	0.17	0.93	0.19	0.02	1.21	ND	ND	ND	2.87	ND	<1
10LCMW02SW	3/23/2006	Lacamas Cr.	ND	0.57	ND	0.03	0.52	0.17	0.04	0.89	ND	ND	ND	2.26	ND	<1
10LCMW02DW	3/23/2006	Lacamas Cr.	ND	0.51	ND	0.03	0.39	0.14	0.02	1.06	ND	0.04	ND	1.96	ND	<1
10LCMW03SW	3/22/2006	Lacamas Cr.	ND	0.25	ND	0.01	0.56	0.20	0.06	0.83	0.09	ND	ND	3.43	ND	<1
10LCMW03DW	3/22/2006	Lacamas Cr.	ND	0.62	ND	0.02	0.62	0.17	0.03	1.07	0.08	ND	ND	2.11	ND	<1
10LCMW04SW	3/22/2006	Lacamas Cr.	ND	0.09	ND	0.02	0.94	0.14	0.02	1.88	0.11	ND	ND	1.64	ND	<1
10LCMW04DW	3/22/2006	Lacamas Cr.	ND	1.08	ND	0.02	1.00	0.23	0.02	1.20	ND	ND	ND	1.19	ND	<1
10LCMW05SW	3/21/2006	Demo Area 3	ND	0.99	ND	0.23	1.27	0.27	0.04	1.48	ND	ND	ND	2.15	ND	nt
10LCMW05DW	3/21/2006	Demo Area 3	ND	0.78	ND	0.04	0.73	0.31	0.04	1.49	0.18	0.04	0.01	2.39	ND	nt
10LCMW06SW	3/21/2006	Demo Area 3	0.89	0.43	ND	0.04	1.30	0.50	0.03	1.39	0.08	ND	ND	2.71	ND	nt
10LCMW07SW	3/21/2006	Demo Area 3	0.22	2.92	ND	0.11	1.40	0.45	0.06	1.89	0.19	ND	ND	1.82	ND	nt
10LCMW08SW	3/21/2006	Demo Area 3	ND	1.09	ND	0.26	1.52	0.38	0.59	1.80	0.10	ND	ND	3.04	ND	nt
10LCMW09SW	3/22/2006	Demo Area 2	ND	0.07	ND	0.05	0.55	0.45	0.04	0.68	ND	ND	ND	2.22	ND	nt
10LCMW10SW	3/22/2006	Demo Area 2	ND	ND	ND	0.10	0.61	0.41	0.02	0.71	ND	ND	ND	2.54	ND	nt
10LCMW11SW	3/22/2006	Demo Area 2	0.62	3.69	ND	0.02	0.62	0.22	0.05	1.86	0.27	ND	ND	2.17	ND	nt
10L4MW01AW	3/27/2006	Landfill 4	0.07	ND	0.04	0.07	0.71	0.32	0.04	1.32	ND	ND	ND	3.99	ND	nt
10L4MW01BW	3/27/2006	Landfill 4	ND	ND	0.01	0.03	0.86	0.11	0.04	0.91	ND	ND	ND	2.20	ND	nt
10L4MW02AW	3/27/2006	Landfill 4	ND	0.04	0.06	0.17	1.16	0.23	0.03	1.74	0.39	ND	ND	5.64	ND	nt
10L4MW02BW	3/27/2006	Landfill 4	0.36	0.21	0.04	0.25	1.80	0.21	0.04	2.05	0.50	ND	ND	6.04	ND	nt
10L4MW03AW	3/24/2006	Landfill 4	ND	ND	0.01	0.10	1.06	0.16	0.02	1.05	ND	ND	ND	4.73	ND	nt
10L4MW03BW	3/24/2006	Landfill 4	ND	ND	ND	0.21	1.13	0.26	0.04	2.34	0.10	ND	ND	5.04	ND	nt
10L4MW04AW	3/27/2006	Landfill 4	0.13	ND	0.03	0.05	1.38	0.15	0.02	3.10	ND	ND	ND	2.83	ND	nt
10L4MW05AW	3/27/2006	Landfill 4	ND	ND	0.02	0.24	0.79	0.23	0.06	1.19	ND	ND	ND	4.94	ND	nt
10L4MW07BW	3/24/2006	Landfill 4	ND	0.12	ND	0.07	1.31	0.15	0.08	1.92	ND	ND	ND	2.80	ND	nt
10L4MW17W	3/24/2006	Landfill 4	ND	0.24	ND	0.02	0.70	0.56	0.05	2.38	0.12	ND	ND	1.95	ND	nt
10L4MW18W	3/24/2006	Landfill 4	ND	0.07	ND	0.04	2.01	0.11	0.02	2.68	0.12	ND	ND	1.64	ND	nt
10LCMW320W (field duplicate of 10LCMW04DW)	3/22/2006	Lacamas Cr.	ND	1.26	ND	ND	0.95	0.17	0.01	1.28	ND	ND	ND	1.28	ND	<1
10LCMW325W (field duplicate of 10LCMW01SW)	3/23/2006	Lacamas Cr.	0.36	0.27	ND	0.02	0.36	0.30	0.01	0.71	0.13	ND	ND	1.60	ND	<1
10L4M330W (field duplicate of 10L4MW03BW)	3/24/2006	Landfill 4	ND	ND	0.02	0.21	1.04	0.23	0.03	2.24	0.12	ND	ND	5.15	ND	nt
10LCMW335W (field rinsate; deionized water)	3/27/2006	Field Office	ND	ND	ND	ND	0.91	0.09	0.04	0.20	ND	ND	ND	1.22	ND	<1
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.04	0.01	0.02	0.01	0.02	0.013	1.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	n/a	n/a	n/a	n/a	n/a	2	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		320	80	80	1.1	4,800	4,800	
BOLD print indicates concentration exceeding WA MTCA Method A Cleanup Level																
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested																
nt - Sample not tested																
ug/L - micrograms per liter																
ND - Not detected to the limit of laboratory detection indicated																
n/a - Not applicable. MTCA Method A Cleanup Level not provided.																
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.																

**TABLE 2. DISSOLVED METALS AND DOC - 2nd QUARTER 2006
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	Dissolved Metals - field filtered (µg/L)													DOC (mg/L)
			Antimony	Arsenic	Beryllium	Cadmium	Chromium (total)	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc	
11LCMW01SW	6/26/2006	Lacamas Cr.	ND	0.21	ND	0.15	0.23	0.14(E)	0.005(E)	ND	0.69(E)	0.13	ND	ND	3.13(E)	ND
11LCMW01DW	6/26/2006	Lacamas Cr.	ND	0.42	ND	0.34	0.18	0.19(E)	0.01(E)	ND	0.95(E)	0.14	ND	ND	5.64(E)	ND
11LCMW02SW	6/26/2006	Lacamas Cr.	ND	0.45	ND	0.16	0.17	0.15(E)	0.014(E)	ND	0.68(E)	ND	ND	ND	3.94(E)	ND
11LCMW02DW	6/26/2006	Lacamas Cr.	ND	0.42	ND	0.40	0.60	0.19(E)	0.021(E)	ND	1.27(E)	ND	ND	ND	4.08(E)	ND
11LCMW03SW	6/27/2006	Lacamas Cr.	ND	0.23	ND	0.02	0.20	ND	0.02	ND	0.75	ND	ND	ND	0.03	ND
11LCMW03DW	6/27/2006	Lacamas Cr.	0.29	0.63	ND	ND	0.25	ND	0.03	ND	0.69	ND	ND	ND	0.41	ND
11LCMW04SW	6/26/2006	Lacamas Cr.	ND	0.08	ND	0.08	0.34	0.19(E)	0.03(E)	ND	0.62(E)	ND	ND	ND	4.00(E)	ND
11LCMW04DW	6/26/2006	Lacamas Cr.	ND	0.94	ND	0.16	0.36	0.18(E)	ND	ND	1.61(E)	ND	ND	ND	2.87(E)	ND
11LCMW05SW	6/21/2006	Demo Area 3	ND	0.72	ND	0.26	0.68	0.44	0.07	ND	1.17	0.27	ND	ND	4.12(E)	nt
11LCMW05DW	6/21/2006	Demo Area 3	0.09	0.61	ND	0.10	0.93	0.29	0.05	ND	2.78	0.17	ND	ND	5.02(E)	nt
11LCMW06SW	6/21/2006	Demo Area 3	0.12	2.28	ND	0.37	0.45	0.75	0.08	ND	2.08	ND	ND	ND	4.74(E)	nt
11LCMW07SW	6/21/2006	Demo Area 3	ND	2.8	ND	0.30	1.54	0.36	0.01	ND	2.51	0.16	ND	ND	2.54(E)	nt
11LCMW08SW	6/21/2006	Demo Area 3	ND	0.89	ND	0.61	1.20	0.49	0.03	ND	1.46	0.26	ND	ND	5.53(E)	nt
11LCMW09SW	6/21/2006	Demo Area 2	ND	ND	ND	0.25	0.88	0.67	0.07	ND	1.4	ND	ND	ND	3.71(E)	nt
11LCMW10SW	6/21/2006	Demo Area 2	0.31	ND	0.02	0.42	0.52	1.22	0.06	ND	1.15	ND	ND	ND	5.68(E)	nt
11LCMW11SW	6/21/2006	Demo Area 2	0.16	3.86	ND	0.04	0.37	0.37	0.04	ND	1.57	0.17	ND	ND	3.34(E)	nt
11L4MW01AW	6/23/2006	Landfill 4	ND	ND	0.04	0.39	0.95	0.22(E)	0.017(E)	ND	2.13(E)	0.14	ND	ND	5.58(E)	nt
11L4MW01BW	6/23/2006	Landfill 4	ND	ND	0.03	0.35	0.95	0.15(E)	0.014(E)	ND	1.63(E)	ND	ND	ND	3.29(E)	nt
11L4MW02AW	6/22/2006	Landfill 4	ND	ND	0.06	0.39	2.58	0.34	0.06	ND	3.29	0.23	ND	ND	4.66(E)	nt
11L4MW02BW	6/22/2006	Landfill 4	ND	ND	0.05	0.22	2.91	0.90	0.02	ND	3.66	0.28	ND	ND	4.85(E)	nt
11L4MW03AW	6/22/2006	Landfill 4	ND	ND	0.02	0.35	0.82	0.36	0.02	ND	1.99	ND	ND	ND	6.31(E)	nt
11L4MW03BW	6/22/2006	Landfill 4	ND	ND	ND	0.10	1.87	0.28	0.06	ND	4.11	0.21	ND	ND	5.58(E)	nt
11L4MW04AW	6/22/2006	Landfill 4	ND	ND	ND	0.12	1.48	0.22	0.02	ND	1.82	0.15	ND	ND	3.53(E)	nt
11L4MW05AW	6/22/2006	Landfill 4	ND	ND	0.03	0.12	1.07	0.40	1.47	ND	2.2	ND	ND	0.01	6.40(E)	nt
11L4MW07BW	6/23/2006	Landfill 4	0.20	0.18	ND	0.06	0.98	0.31(E)	0.041(E)	ND	2.61(E)	0.15	ND	ND	4.58(E)	nt
11L4MW17W	6/23/2006	Landfill 4	ND	0.81	ND	0.03	0.69	0.53(E)	0.02(E)	ND	1.83(E)	0.25	ND	ND	5.33(E)	nt
11L4MW18W	6/23/2006	Landfill 4	0.74	0.10	ND	0.33	1.30	0.22(E)	0.014(E)	ND	1.56(E)	0.23	ND	ND	3.95(E)	nt
11LCMW340W (field duplicate of 11LCMW07SW)	6/21/2006	Demo Area 3	ND	2.84	ND	0.40	1.22	0.51	0.029	ND	1.88	0.17	ND	ND	4.01(E)	nt
11L4MW345W (field duplicate of 11L4MW02BW)	6/22/2006	Landfill 4	ND	0.07	0.03	0.32	4.43	0.39	0.014	ND	5.11	0.49	ND	ND	4.1(E)	nt
11LCM355W (field duplicate of 11LCMW03SW)	6/27/2006	Lacamas Cr.	ND	0.27	ND	ND	0.15	ND	0.021	ND	0.64	ND	ND	ND	ND	ND
11LCMW360W (field rinseate; deionized water)	6/27/2006	Field Office	0.37	ND	ND	ND	0.31	ND	0.016	ND	0.10	ND	ND	ND	ND	ND
Lab detection limit			0.08	0.03	0.02	0.02	0.04	0.08	0.002	0.013	0.04	0.01	0.02	0.01	0.02	1.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	n/a	5	50	n/a	15	2	n/a	n/a	n/a	n/a	n/a	n/a
WA MTCA Method B Levels (µg/L)			1.4 - 8		0.02			592		4,800	320	80	80	1.1	4,800	

BOLD print indicates concentration exceeding WA MTCA Method A Cleanup Level
Only detected analytes are shown; see laboratory reports for complete listing of compounds tested
nt - Sample not tested
ug/L - micrograms per liter
J or E = value estimated
ND - Not detected to the limit of laboratory detection indicated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
WA MTCA Method B Levels from "Multi-Sites Investigation Report", Shannon & Wilson, 1999.

**TABLE 3. VOLATILE ORGANIC COMPOUNDS - 1st QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	VOCs (ug/L)							
			1,1-Dichloroethene	Methylene chloride (see Note)	1,1-Dichloroethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Tetrachloroethene	Trichlorofluoromethane	Chloroform
02L4-MW02BW	3/10/2004	Landfill 4	30	ND	41	170	190	0.7 J	0.8 J	ND
02L4-MW05AW	3/11/2004	Landfill 4	ND	ND	ND	ND	ND	0.9 J	ND	ND
02L4MW200W (field duplicate of 02L4-MW05AW)	3/10/2004	Landfill 4	ND	ND	ND	ND	ND	0.8 J		ND
Trip Blank TB-1	3/11/2004	Landfill 4	ND	2.3	ND	ND	ND	ND	ND	ND
02LCMW210W (field rinsate; deionized water)	3/15/2004	Demo Area 3	ND	ND	ND	ND	ND	ND	ND	4.6
Lab detection limit			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
WA MTCA Method A Cleanup Levels (ug/L)			n/a	5	n/a	200	n/a	n/a		n/a
<p>Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested. nt - Sample not tested ND - Not detected to the limit of laboratory detection indicated ug/L - micrograms per liter J = value estimated n/a - Not applicable. MTCA Method A Cleanup Level not provided. Methylene chloride is a common laboratory solvent and may indicate laboratory contamination.</p>										

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**TABLE 6. VOLATILE ORGANIC COMPOUNDS - 2nd QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	VOCs (ug/L)									
			1,1-Dichloroethene	Methylene chloride (see Note)	1,1-Dichloroethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Tetrachloroethene	Trichlorofluoromethane	2-Butanone	Acetone (see Note)	Chloroform
02L4-MW02BW	6/18/2004	Landfill 4	27	ND	36	150	170	0.7 J	0.6 J	ND	59	ND
02L4-MW05AW	6/18/2004	Landfill 4	ND	ND	ND	ND	ND	0.8 J	ND	ND	ND	ND
02L4-MW17W	6/21/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND
02L4-MW18W	6/21/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND
03LCMW220W (field rinsate; deionized water)	6/22/2004	Demo Area 3	ND	ND	ND	ND	ND	0.8 J	ND	0.8 J	2.3	10
Trip Blank TB-1	6/15/2004	Base Boundary	ND	0.9J	ND	ND	ND	ND	ND	ND	ND	ND
Trip Blank TB-2	6/21/2004	Landfill 4	ND	2.2	ND	ND	ND	ND	ND	ND	4.2	ND
Lab detection limit			1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	5.0	1.0
WA MTCA Method A Cleanup Levels (ug/L)			n/a	5	n/a	200	n/a	n/a	n/a	n/a	n/a	n/a
<p>Note: Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested. nt - Sample not tested ND - Not detected to the limit of laboratory detection indicated ug/L - micrograms per liter J = value estimated n/a - Not applicable. MTCA Method A Cleanup Level not provided. Methylene chloride and acetone are common laboratory solvents and may indicate laboratory contamination.</p>												

**TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 3rd QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	VOC S (ug/L)														SVOC (ug/l)
			Chloromethane	Methylene chloride (see Note)	1,1-Dichloroethene	1,1-Dichloroethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Benzene	Tetrachloroethene	Trichlorofluoromethane	2-Butanone	Carbon Disulfide	Bromomethane	Acetone (see Note)	Chloroform	bis(2-Ethylhexyl)phthalate
04L4MW02BW	9/21/2004	Landfill 4	1.8	ND	30	41	140	160	0.6 (J)	1.1	0.6 (J)	3.4 (J)	ND	7.7	11	ND	ND
04L4MW05AW	9/21/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND
04L4MW17W	9/16/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0	ND	3.4 (J)	ND	ND
04LCMW04DW	9/20/2004	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0 (J)
04L4MW230W (field rinsate; deionized water)	9/21/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1 (J)	1.3	1.3
Trip Blank TB-1	9/15/2004	Base Boundary	ND	0.9 (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trip Blank TB-2	9/16/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0 (J)	ND	ND
Lab detection limit			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	ND	ND	5.0	1.0	1.0
WA MTCA Method A Cleanup Levels (ug/L)			5	5	n/a	n/a	200	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note:
Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested.
nt - Sample not tested
ND - Not detected to the limit of laboratory detection indicated
ug/L - micrograms per liter
J = value estimated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
Methylene chloride and acetone are common laboratory solvents and may indicate laboratory contamination.

TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 4th QUARTER 2004
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	VOCs (µg/L)																SVOC (µg/l)
			1,1-Dichloroethene	Chloromethane	Methylene chloride (see Note)	1,1-Dichloroethane	Bromodichloromethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Benzene	Tetrachloroethene (PCE)	4-Methyl-2-pentanone (MIBK)	Trichlorofluoromethane	2-Butanone	Carbon Disulfide	Bromomethane	Acetone (see Note)	Chloroform	bis(2-Ethylhexyl)phthalate
05L4MW02BW	12/6/2004	Landfill 4	24	ND	ND	37	ND	110	160	0.5 (J)	0.8 (J)	0.7 (J)	ND	4.9 (J)	0.8 (J)	ND	20	ND	ND
05L4MW05AW	12/6/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND
05L4MW17W	12/7/2004	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.2 (J)	ND	ND	6.6	ND	ND
05LCMW01DW	12/8/2004	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0 (J)
05LCMW04DW	12/3/2004	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0 (J)
05L4MW155W (field duplicate of 05L4MW02BW)	12/6/2004	Landfill 4	21	ND	ND	34	ND	100	130	0.5 (J)	0.7 (J)	0.6 (J)	4.8 (J)	ND	0.7 (J)	ND	20	ND	ND
05L4MW235W (field rinseate; deionized water)	12/8/2004	Landfill 4	ND	ND	ND	ND	0.6 (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1 (J)	1.3	2.0 (J)
Trip Blank TB-1	12/3/2004		ND	ND	0.9 (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trip Blank TB-2	12/6/2004		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0 (J)	ND	ND
Lab detection limit			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	ND	ND	5.0	1.0	2.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	5	n/a	n/a	200	n/a	5	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note:
 Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested.
 nt - Sample not tested
 ND - Not detected to the limit of laboratory detection indicated
 µg/L - micrograms per liter
 J = value estimated
 n/a - Not applicable. MTCA Method A Cleanup Level not provided.
 Methylene chloride and acetone are common laboratory solvents and may indicate laboratory contamination.

TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 1st QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	VOCs (µg/L)																SVOC (µg/l)	
			1,1-Dichloroethene	Chloromethane	Methylene chloride (see Note)	1,1-Dichloroethane	Bromodichloromethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Benzene	Tetrachloroethene (PCE)	4-Methyl-2-pentanone (MIBK)	Trichlorofluoromethane	2-Butanone	Carbon Disulfide	Bromomethane	Acetone (see Note)	Chloroform	bis(2-Ethylhexyl)phthalate	
06L4MW02BW	3/28/2005	Landfill 4	27	ND	ND	37	ND	ND	120	140	ND	0.8 (J)	ND	ND	ND	ND	ND	ND	ND	nt
06L4MW05AW	3/25/2005	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7 (J)	ND	ND	ND	ND	ND	ND	ND	nt
06L4MW17W	3/24/2005	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9 (J)	ND	nt
06LCMW255W (field rinsate; deionized water)	3/24/2005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.3	2.0 (J)
Lab detection limit			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	ND	ND	5.0	1.0	2.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	5	n/a	n/a	200	n/a	5	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note:
Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested.
nt - Sample not tested
ND - Not detected to the limit of laboratory detection indicated
µg/L - micrograms per liter
J = value estimated
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
Methylene chloride and acetone are common laboratory solvents and may indicate laboratory contamination.

TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 2nd QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	VOCs (µg/L)															SVOC (µg/l)	
			1,1-Dichloroethene	Chloromethane	Methylene chloride (see Note)	1,1-Dichloroethane	Bromodichloromethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Benzene	Tetrachloroethene (PCE)	4-Methyl-2-pentanone (MIBK)	Trichlorofluoromethane	2-Butanone	Carbon Disulfide	Bromomethane	Acetone (see Note)	Chloroform	bis(2-Ethylhexyl)phthalate
07LCMW01DW	6/24/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2 (J)
07LCMW02DW	6/24/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 (J)	1 (J)
07LCMW03SW	6/28/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3 (J)
07LCMW03DW	6/28/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4 (J)
07L4MW02BW	6/29/2005	Landfill 4	30	ND	ND	48	ND	130	130	0.5 (J)	0.7 (J)	ND	ND	3.6 (J)	ND	ND	7.2	ND	nt
06L4MW05AW	6/29/2005	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	0.7 (J)	ND	ND	ND	ND	ND	ND	ND	nt
07LCMW275W (field rinsate; deionized water)	6/24/2005		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2 (J)	0.9 (J)	ND
Lab detection limit			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	ND	ND	5.0	1.0	2.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	5	n/a	n/a	200	n/a	5	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Note:																			
Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested.																			
nt - Sample not tested																			
ND - Not detected to the limit of laboratory detection indicated																			
µg/L - micrograms per liter																			
J = value estimated																			
n/a - Not applicable. MTCA Method A Cleanup Level not provided.																			
Methylene chloride and acetone are common laboratory solvents and may indicate laboratory contamination.																			

TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 3rd QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	VOCs (µg/L)																SVOC (µg/l)
			1,1-Dichloroethene	Chloromethane	Methylene chloride (see Note)	1,1-Dichloroethane	Bromodichloromethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Benzene	Tetrachloroethene (PCE)	4-Methyl-2-pentanone (MIBK)	Trichlorofluoromethane	2-Butanone	Carbon Disulfide	Bromomethane	Acetone (see Note)	Chloroform	bis(2-Ethylhexyl)phthalate
08LCMW01SW	9/15/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 (J, B)
08LCMW01DW	9/15/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 (J, B)
08LCMW02SW	9/16/2005	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1 (J, B)
08L4MW02BW	9/21/2005	Landfill 4	23	ND	ND	40	ND	100	160	0.4 (J)	0.8 (J)	ND	ND	ND	ND	ND	ND	nt	
08L4MW05AW	9/20/2005	Landfill 4	ND	ND	ND	ND	ND	ND	ND	ND	0.7 (J)	ND	ND	ND	ND	ND	ND	nt	
08LCMW295W (field rinsate; deionized water)	9/19/2005	Field Office	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4	2 (J, B)	
Lab detection limit			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	ND	ND	5.0	1.0	2.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	5	5	n/a	n/a	200	n/a	5	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Note:
Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested.
nt - Sample not tested
ND - Not detected to the limit of laboratory detection indicated
µg/L - micrograms per liter
J = value estimated
B = also detected in the method blank associated with the sample
n/a - Not applicable. MTCA Method A Cleanup Level not provided.
Methylene chloride and acetone are common laboratory solvents and may indicate laboratory contamination.

**TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 4th QUARTER 2005
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	VOCs (µg/L)							SVOC (µg/l)
			1,1-Dichloroethene	1,1-Dichloroethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Tetrachloroethene (PCE)	Acetone (see Note)	Chloroform	bis(2-Ethylhexyl)phthalate
08LCMW01DW	1/26/2006	Lacamas Cr.	ND	ND	ND	ND	ND	ND	ND	1 (J)
09L4MW02BW	1/30/2006	Landfill 4	28	41	110	140	0.8 (J)	ND	ND	nt
09L4MW05AW	1/30/2006	Landfill 4	ND	ND	ND	ND	1.0 (J)	ND	ND	nt
09L4MW07BW	1/27/2006	Landfill 4	ND	ND	ND	ND	ND	2.6 (J)	ND	nt
09L4M310W (field duplicate of 09L4MW05AW)	1/30/2006	Landfill 4	ND	ND	ND	ND	0.9 (J)	ND	ND	nt
09LCMW315W (field rinsate; deionized water)	1/30/2006	Field Office	ND	ND	ND	ND	ND	3.1 (J)	1.1	5
Lab detection limit			1.0	1.0	1.0	1.0	1.0	5.0	1.0	2.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	n/a	200	n/a	5	n/a	n/a	n/a
Note: Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested. nt - Sample not tested ND - Not detected to the limit of laboratory detection indicated µg/L - micrograms per liter J = value estimated B = also detected in the method blank associated with the sample n/a - Not applicable. MTCA Method A Cleanup Level not provided. Methylene chloride and acetone are common laboratory solvents and may indicate laboratory contamination.										

TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 1st QUARTER 2006
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Sample No.	Sample Date	Sample Location	VOCs (µg/L)								SVOC (µg/l)
			1,1-Dichloroethene	1,1-Dichloroethane	1,1,1-Trichloroethane	Dichlorodifluoromethane	Tetrachloroethene (PCE)	Acetone (see Note)	Trichlorofluoromethane	Chloroform	bis(2-Ethylhexyl)phthalate
10LCMW01SW	3/23/2006	Lacamas Cr.	ND	ND	ND	ND	ND	1.4 (J)	ND	ND	ND
10LCMW02DW	3/23/2006	Lacamas Cr.	ND	ND	ND	ND	ND	3.2 (J)	ND	ND	ND
10LCMW03SW	3/22/2006	Lacamas Cr.	ND	ND	ND	ND	ND	2.3 (J)	ND	ND	ND
10LCMW03DW	3/22/2007	Lacamas Cr.	ND	ND	ND	ND	ND	1.2 (J)	ND	ND	ND
10LCMW04DW	3/22/2006	Lacamas Cr.	ND	ND	ND	ND	ND	1.0 (J)	ND	ND	ND
10L4MW02BW	3/27/2006	Landfill 4	29	45	110	180	0.7 (J)	ND	0.7 (J)	ND	nt
10L4MW03AW	3/24/2006	Landfill 4	ND	ND	ND	ND	ND	1.5 (J)	ND	ND	ND
10L4MW05AW	3/27/2006	Landfill 4	ND	ND	ND	ND	0.8 (J)	ND	ND	ND	nt
10L4MW07BW	3/24/2006	Landfill 4	ND	ND	ND	ND	ND	0.7 (J)	ND	ND	nt
10L4MW18W	3/24/2006	Landfill 4	ND	ND	ND	ND	ND	2.6 (J)	ND	ND	nt
10LCMW335W (field rinsate; deionized water)	3/27/2006	Field Office	ND	ND	ND	ND	ND	17.0 (J)	ND	6.2	ND
Lab detection limit			1.0	1.0	1.0	1.0	1.0	5.0	1.0	1.0	2.0
WA MTCA Method A Cleanup Levels (µg/L)			n/a	n/a	200	n/a	5	n/a	n/a	n/a	n/a
Note: Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested. nt - Sample not tested ND - Not detected to the limit of laboratory detection indicated µg/L - micrograms per liter J = value estimated B = also detected in the method blank associated with the sample n/a - Not applicable. MTCA Method A Cleanup Level not provided. Acetone is a common laboratory solvents and may indicate laboratory contamination.											

**TABLE 3. VOLATILE AND SEMI-VOLATILE ORGANIC COMPOUNDS - 2nd QUARTER 2006
SUMMARY OF GROUNDWATER LABORATORY ANALYSIS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON**

Sample No.	Sample Date	Sample Location	VOCs (µg/L)							SVOC (µg/l)
			Acetone	Benzene	Trichlorofluoromethane	Tetrachloroethene (PCE)	1,1,2,2-Tetrachloroethane	Trichloroethene (TCE)	Chloroform	
11L4MW02BW	6/22/2006	Landfill 4	1.8(J)	0.3(J)	0.7(J)	0.8(J)	ND	ND	ND	nt
11L4MW05AW	6/22/2006	Landfill 4	ND	ND	ND	0.6(J)	ND	ND	ND	nt
11L4MW17W	6/23/2006	Landfill 4	1.5(J)	ND	ND	ND	ND	ND	ND	nt
11L4MW345W (field duplicate of 11L4MW02BW)	6/22/2006	Landfill 4	1.9(J)	0.3(J)	0.7(J)	0.8(J)	0.2(J)	0.2(J)	ND	nt
11LCMW360W (field rinsate; deionized water)	6/27/2006	Field Office	2.9(J)	ND	ND	ND	ND	ND	0.8(J)	ND
Lab detection limit			5.0	1.0	1.0	1.0	1.0	5.0	1.0	2.0
Method A Cleanup Levels (µg/L)			n/a	n/a	200	n/a	5	n/a	n/a	n/a
Note: Only analytes detected in at least one sample are shown; see lab reports for complete listing of compounds tested. nt - Sample not tested ND - Not detected to the limit of laboratory detection indicated µg/L - micrograms per liter J = value estimated B = also detected in the method blank associated with the sample n/a - Not applicable. MTCA Method A Cleanup Level not provided. Acetone is a common laboratory solvent and may indicate laboratory contamination.										

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 1st QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling									
Sample No.	Date	Time	Depth to Water in Feet*	Temp (degrees C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Color and Relative Turbidity	Notes
02LC-MW01SW	3/16/04	1033	4.90	10.51	0.093	6.4	8.39	clear	
02LC-MW06DW	3/16/04	1035	5.29	11.38	0.118	7.1	8.70	clear	
02LC-MW02SW	3/16/04	1236	5.35	10.70	0.101	6.4	9.26	clear	
02LC-MW07DW	3/16/04	1138	8.21	11.36	0.101	7.0	9.33	clear	
02LC-MW03SW	3/17/04	1025	4.80	10.67	0.095	8.0	8.93	clear	
02LC-MW08DW	3/17/04	1026	4.80	11.01	0.115	6.9	8.46	clear	
02LC-MW04SW	3/16/04	1436	4.68	9.67	0.092	6.4	9.11	clear	
02LC-MW09DW	3/16/04	1515	5.50	10.51	0.124	6.9	8.52	clear	
02LC-MW05SW	3/15/04	1325	6.67	10.61	0.198	5.4	9.55	clear	
02LC-MW10DW	3/15/04	1357	0.18	11.08	0.164	5.4	8.83	clear	See Notes
02LC-MW11SW	3/15/04	1240	6.09	9.72	0.428	4.0	9.34	clear	
02LC-MW12SW	3/15/04	1445	7.30	10.62	0.367	5.1	9.75	clear	
02LC-MW13SW	3/15/04	1441	6.82	11.15	0.451	4.3	9.61	clear	
020LC-MW14W	3/11/04	1401	5.68	8.93	0.046	5.1	8.03	clear	
020LC-MW15W	3/15/04	1002	9.24	9.63	0.031	5.8	8.32	cloudy	
020LC-MW16W	3/15/04	1048	7.05	10.44	0.476	3.9	10.01	cloudy	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 1st QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling									
Sample No.	Date	Time	Depth to Water in Feet*	Temp (degrees C)	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Color and Relative Turbidity	Notes
02L4-MW01AW	3/10/04	1111	15.98	10.39	0.048	5.8	7.86	slightly cloudy	
02L4-MW01BW	3/10/04	1110	12.18	10.08	0.028	7.4	8.09	slightly cloudy	
02L4-MW02AW	3/10/04	1455	23.64	11.25	0.084	6.9	7.60	red-brown	
02L4-MW02BW	3/10/04	1457	29.58	11.70	0.028	3.0	7.50	red-brown, cloudy	
02L4-MW03AW	3/11/04	1030	27.82	11.00	0.027	7.2	7.42	clear	
02L4-MW03BW	3/11/04	1102	25.10	11.15	0.041	6.4	7.76	clear	
02L4-MW04AW	3/10/04	1340	27.01	11.39	0.021	6.0	8.01	clear	very slow recovery
02L4-MW05AW	3/11/04	1145	22.60	10.58	0.028	6.6	7.57	slightly red-brown	
02L4-MW07BW	3/10/04	1020	38.84	9.92	0.042	6.0	8.16	clear	
Notes:									
* = depth in feet measured from top of well PVC casing.									
Water level in monitoring well LC-MW10D at top rim of steel casing when opened on 3/15/04.									
Field parameters of temperature, conductivity, dissolved oxygen and pH measured with a YSI Model 5563 meter.									

DRAFT TABLE 7
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 2nd QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling									
Sample No.	Date	Time	Depth to Water in Feet*	Temp (degrees C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	pH	Color and Relative Turbidity	Notes
03LCMW01SW	6/15/04	1115	4.91	12.0	81	-	6.81	clear	
03LCMW06DW	6/15/04	1220	5.22	12.8	116	-	6.82	clear	
03LCMW02SW	6/15/04	1437	5.45	12.0	84	-	6.90	clear	
03LCMW07DW	6/15/04	1435	5.95	13.4	88	-	6.87	clear	
03LCMW03SW	6/16/04	1015	4.93	12.2	81	-	7.48	clear	
03LCMW08DW	6/16/04	1016	5.15	11.9	96	-	7.46	clear	
03LCMW04SW	6/16/04	1338	4.95	12.1	83	-	7.46	sl.cloudy	
03LCMW09DW	6/16/04	1405	5.73	12.7	118	-	7.48	clear	
03LCMW05SW	6/22/04	1332	6.95	12.1	155	-	-	clear	
03LCMW10DW	6/22/04	1400	0	12.1	138	-	-	clear	See Notes
03LCMW11SW	6/22/04	1255	7.29	11.3	315	-	-	sl.cloudy	Pumped dry during sampling
03LCMW12SW	6/22/04	1440	6.89	12.5	255	-	-	clear	
03LCMW13SW	6/22/04	1313	7.24	11.9	273	-	-	clear	
03LCMW14W	6/16/04	1520	5.29	11.8	33	-	7.09	cloudy	
03LCMW15W	6/17/04	1044	9.24	11.6	18	-	7.10	cloudy	
03LCMW16W	6/17/04	1120	7.10	12.0	357	-	7.09	clear	

DRAFT TABLE 7
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 2nd QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling									
Sample No.	Date	Time	Depth to Water in Feet*	Temp (degrees C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	pH	Color and Relative Turbidity	Notes
03L4MW01AW	6/18/04	1019	16.45	11.8	69	-	-	cloudy, brown	
03L4MW01BW	6/18/04	1020	13.11	11.1	16	-	-	clear	
03L4MW02AW	6/18/04	1152	25.60	12.9	32	-	-	sl. cloudy	
03L4MW02BW	6/18/04	1150	30.54	13.0	62	-	-	cloudy	
03L4MW03AW	6/17/04	1406	27.86	12.5	14	-	-	sl. cloudy	
03L4MW03BW	6/23/04	1145	26.64	12.3	37	-	-	cloudy	Pumped dry during sampling
03L4MW04AW	6/18/04	1438	27.50	15.3	13	-	-	sl. cloudy	Very slow recovery
03L4MW05AW	6/18/04	1410	23.86	11.6	16	-	-	slightly red-brown	
03L4MW07BW	6/21/04	1115	39.60	11.3	25	-	-	clear	
03L4MW17W	6/21/04	1240	10.48	15.0	205	-	-	clear	
03L4MW18W	6/21/04	1205	11.63	12.3	119	-	-	silty, brown	

Notes: * = depth in feet measured from top of well PVC casing.
 - = parameter not measured in field
 Water level in monitoring well LC-MW10D at top rim of steel casing when opened on 6/22/04.
 Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 3rd QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling									
Sample No.	Date	Time	Depth to Water in Feet*	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
04LCMW01SW	9/15/2004	1320	6.00	13.3	84	42	7.02	clear	
04LCMW01DW	9/15/2004	1340	6.50	12.8	111	56	7.07	clear	
04LCMW02SW	9/15/2004	1420	7.15	12.5	81	41	6.96	clear	
04LCMW02DW	9/16/2004	1510	7.45	12.5	86	43	7.08	clear	
04LCMW03SW	9/20/2004	1200	5.62	12.5	81	41	6.90	clear	
04LCMW03DW	9/20/2004	1220	6.26	11.6	93	47	6.96	clear	
04LCMW04SW	9/20/2004	1325	5.62	12.2	82	41	6.4	red-brown	
04LCMW04DW	9/20/2004	1305	6.25	11.9	109	55	7.21	red-brown	
04LCMW05SW	9/14/2004	1405	9.42	13.2	160	82	7.65	clear	
04LCMW05DW	9/14/2004	1340	0.50	12.1	142	71	7.38	clear	artesian
04LCMW06SW	9/14/2004	1430	12.40	12.6	270	138	6.94	clear	
04LCMW07SW	9/14/2004	1240	9.28	11.5	219	111	7.88	clear	
04LCMW08SW	9/14/2004	1315	9.26	12.7	222	112	7.08	clear	
04LCMW09SW	9/15/2004	1015	5.45	13.9	34	17	6.07	slightly brown	
04LCMW10SW	9/15/2004	1050	10.15	12.1	22	11	5.56	slightly brown	
04LCMW11SW	9/15/2004	1115	7.70	12.5	408	208	6.77	slightly gray	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 3rd QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling									
Sample No.	Date	Time	Depth to Water in Feet*	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
04L4MW01AW	9/21/2004	1455	16.87	11.2	37	18	7.07	clear	
04L4MW01BW	9/21/2004	1435	14.02	10.8	19	9	6.19	clear	
04L4MW02AW	9/21/2004	1210	27.65	10.7	26	12	7.08	red-brown	
04L4MW02BW	9/21/2004	1140	32.62	11.9	145	73	7.08	clear	
04L4MW03AW	9/21/2004	1410	29.46	11.5	14	7	5.54	red-brown	
04L4MW03BW	9/21/2004	1340	26.93	11.0	30	14	7.08	slightly brown	
04L4MW04AW	9/21/2004	1240	27.60	11.0	15	7	7.08	clear	slow recharge
04L4MW05AW	9/21/2004	1315	24.20	10.3	17	9	7.08	clear	
04L4MW07BW	9/16/2004	1250	40.32	11.1	30	15	7.08	slightly brown	
04L4MW17W	9/16/2004	1135	10.86	14.9	259	132	7.07	slightly brown	
04L4MW18W	9/16/2004	1215	11.88	12.5	121	60	7.07	red-brown	

Notes: * = depth in feet measured from top of well PVC casing.
 - = parameter not measured in field
Water level in monitoring well LC-MW05D was 0.5 inches below top rim of steel casing when opened on 9/14/2004.
Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 4th QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
05LCMW01SW	12/8/2004	0955	3.79	286.37	10.3	84	42	6.67	clear	
05LCMW01DW	12/8/2004	1030	3.20	287.05	9.6	103	52	7.07	clear	
05LCMW02SW	12/8/2004	1130	4.40	286.79	11.7	82	45	7.08	clear	pH malfunction
05LCMW02DW	12/8/2004	1155	4.98	286.61	11.4	88	44	6.96	clear	
05LCMW03SW	12/3/2004	1150	4.46	286.45	11.9	82	41	6.89	clear	
05LCMW03DW	12/3/2004	1215	4.62	286.36	11.1	96	48	6.91	clear	
05LCMW04SW	12/3/2004	1040	4.44	287.19	11.3	81	41	6.34	slightly cloudy	
05LCMW04DW	12/3/2004	1115	3.08	288.71	11.3	101	51	7.25	clear	
05LCMW05SW	12/2/2004	1125	6.54	303.56	11.4	163	82	7.68	clear	
05LCMW05DW	12/2/2004	1145	0.00	309.94	10.9	143	72	7.38	clear	artesian
05LCMW06SW	12/2/2004	1100	5.70	302.57	12	264	134	6.64	clear	
05LCMW07SW	12/2/2004	1240	6.76	302.16	11.4	213	107	7.44	clear	
05LCMW08SW	12/2/2004	1215	6.26	303.52	11.5	217	110	7.44	clear	
05LCMW09SW	12/2/2004	1415	5.01	342.30	10	42	21	6.14	cloudy	
05LCMW10SW	12/2/2004	1345	8.52	342.95	11.3	23	10	5.55	cloudy	
05LCMW11SW	12/3/2004	1310	7.10	338.62	11.5	388	197	6.69	clear	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 4th QUARTER 2004
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
05L4MW01AW	12/7/2004	0935	16.48	514.92	10	60	30	7.08	cloudy	pH malfunction
05L4MW01BW	12/7/2004	1010	13.30	516.27	10	17	8	5.83	clear	
05L4MW02AW	12/6/2004	1210	26.18	493.75	11.1	18	9	5.26	cloudy	
05L4MW02BW	12/6/2004	1315	31.42	487.04	12.2	163	83	6.67	clear	
05L4MW03AW	12/6/2004	1015	28.64	486.21	11.1	15	7	5.5	clear	
05L4MW03BW	12/6/2004	1110	26.44	485.03	11.1	30	14	5.69	clear	
05L4MW04AW	12/6/2004	1410	26.98	484.81	11.1	15	7	5.92	clear	slow recharge
05L4MW05AW	12/6/2004	1145	22.94	486.97	10.6	19	9	5.64	cloudy	
05L4MW07BW	12/7/2004	1040	39.40	441.02	9.9	26	13	5.95	clear	
05L4MW17W	12/7/2004	1125	10.20	351.28	11.7	280	142	7.08	clear	slow recharge, pH malfunction
05L4MW18W	12/7/2004	1250	11.20	351.64	11.6	134	64	7.08	cloudy	pH malfunction

Notes: * = depth in feet measured from top of well PVC casing.
 ** = water level in feet above mean sea level, relative to top of casing elevation survey (see elevations, Table 8)
 - = parameter not measured in field
Water level in monitoring well LC-MW05D was at the top of the rim of steel casing when opened on 12/2/2004.
Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 1st QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
06LCMW01SW	3/23/2005	1100	5.22	284.94	10.3	84	42	6.67	clear	
06LCMW01DW	3/23/2005	1030	5.68	284.57	9.6	103	52	7.07	clear	
06LCMW02SW	3/23/2005	1130	5.60	285.59	11.7	82	45	7.08	clear	pH malfunction
06LCMW02DW	3/23/2005	1145	6.19	285.40	11.4	88	44	6.96	clear	
06LCMW03SW	3/23/2005	1345	5.08	285.83	11.9	82	41	6.89	clear	
06LCMW03DW	3/23/2005	1315	5.24	285.74	11.1	96	48	6.91	clear	
06LCMW04SW	3/24/2005	0945	5.09	286.54	11.3	81	41	6.34	slightly cloudy	
06LCMW04DW	3/24/2005	1020	5.78	286.01	11.3	101	51	7.25	clear	
06LCMW05SW	3/22/2005	1150	6.75	303.35	11.4	163	82	7.68	clear	
06LCMW05DW	3/22/2005	1130	0.00	309.94	10.9	143	72	7.38	clear	artesian
06LCMW06SW	3/22/2005	1215	6.56	301.71	12	264	134	6.64	clear	
06LCMW07SW	3/22/2005	1325	6.63	302.29	11.4	213	107	7.44	clear	
06LCMW08SW	3/22/2005	1305	6.94	302.84	11.5	217	110	7.44	clear	
06LCMW09SW	3/22/2005	0930	6.72	340.59	10	42	21	6.14	cloudy	
06LCMW10SW	3/22/2005	1030	9.48	341.99	11.3	23	10	5.55	cloudy	
06LCMW11SW	3/22/2005	1006	7.26	338.46	11.5	388	197	6.69	clear	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 1st QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
06L4MW01AW	3/28/2005	1020	15.45	515.95	10	60	30	7.08	cloudy	pH malfunction
06L4MW01BW	3/28/2005	1040	10.80	518.77	10	17	8	5.83	clear	
06L4MW02AW	3/28/2005	1115	25.20	494.73	11.1	18	9	5.26	cloudy	
06L4MW02BW	3/28/2005	1140	30.48	487.98	12.2	163	83	6.67	clear	
06L4MW03AW	3/25/2005	1050	30.70	484.15	11.1	15	7	5.5	clear	
06L4MW03BW	3/25/2005	1110	28.18	483.29	11.1	30	14	5.69	clear	
06L4MW04AW	3/25/2005	1250	27.82	483.97	11.1	15	7	5.92	clear	slow recharge
06L4MW05AW	3/25/2005	1140	23.51	486.40	10.6	19	9	5.64	cloudy	
06L4MW07BW	3/24/2005	1325	40.02	440.40	9.9	26	13	5.95	clear	
06L4MW17W	3/24/2005	1235	10.66	350.82	11.7	280	142	7.08	clear	slow recharge, pH malfunction
06L4MW18W	3/24/2005	1210	11.70	351.14	11.6	134	64	7.08	cloudy	pH malfunction

Notes:

* = depth in feet measured from top of well PVC casing.

** = water level in feet above mean sea level, relative to top of casing elevation survey (see elevations, Table 8)

- = parameter not measured in field

Water level in monitoring well LC-MW05D was at the top of the rim of steel casing when opened on 12/2/2004.

Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 2nd QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
07LCMW01SW	6/24/2005	1015	5.89	284.27	12.0	80	40	6.76	clear	
07LCMW01DW	6/24/2005	1045	5.30	284.95	12.1	89	45	6.58	clear	
07LCMW02SW	6/24/2005	1130	5.69	285.50	12.1	82	41	6.65	clear	
07LCMW02DW	6/24/2005	1150	6.22	285.37	13	87	44	6.58	clear	Ants in purge water. Duplicate sample taken
07LCMW03SW	6/28/2005	1040	4.93	285.98	11.6	78	41	6.43	clear	
07LCMW03DW	6/28/2005	1010	5.12	285.86	11.5	98	49	6.51	clear	MS/MSD sample @ 1020
07LCMW04SW	6/28/2005	1115	4.94	286.69	11.6	86	43	7.08	slightly cloudy	pH meter malfunction
07LCMW04DW	6/28/2005	1130	5.70	286.09	11.5	107	54	7.08	clear	pH meter malfunction
07LCMW05SW	6/23/2005	1220	6.42	303.68	12.8	156	79	7.21	clear	
07LCMW05DW	6/23/2005	1200	0.00	309.94	12.6	140	71	6.95	clear	artesian
07LCMW06SW	6/23/2005	1245	6.45	301.82	12.7	200	104	7.08	clear	Duplicate sample taken
07LCMW07SW	6/23/2005	1345	6.71	302.21	12.7	235	119	7.58	clear	
07LCMW08SW	6/23/2005	1320	6.31	303.47	13.4	186	95	7.39	clear	
07LCMW09SW	6/27/2005	1325	5.28	342.03	11.3	30	15	5.9	cloudy	
07LCMW10SW	6/27/2005	1420	9.21	342.26	11.7	25	13	7.08	cloudy	pH meter malfunction
07LCMW11SW	6/27/2005	1355	7.20	338.52	11.9	371	189	7.08	clear	pH meter malfunction

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 2nd QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
07L4MW01AW	6/28/2005	1300	16.38	515.02	11.5	39	19	7.08	cloudy	pH meter malfunction. Duplicate sample taken.
07L4MW01BW	6/28/2005	1315	12.96	516.61	11.1	18	9	5.29	clear	
07L4MW02AW	6/29/2005	1245	25.46	494.47	12.9	55	28	7.07	cloudy	
07L4MW02BW	6/29/2005	1300	31.18	487.28	12.9	38	19	7.07	clear	
07L4MW03AW	6/29/2005	1120	29.16	485.69	12.0	16	8	7.08	cloudy	pH meter malfunction
07L4MW03BW	6/29/2005	1135	26.64	484.83	12.0	29	14	7.05	clear	
07L4MW04AW	6/29/2005	1320	27.45	484.34	13.3	12	6	7.07	clear	
07L4MW05AW	6/29/2005	1150	23.80	486.11	11.8	22	10	7.07	slightly cloudy	
07L4MW07BW	6/28/2005	1410	39.55	440.87	10.9	28	14	7.08	clear	pH meter malfunction
07L4MW17W	6/29/2005	1000	10.37	351.11	14.0	300	153	7.34	cloudy	purged dry; slow recharge
07L4MW18W	6/29/2005	1040	10.45	352.39	12.0	135	69	6.99	cloudy	

Notes: * = depth in feet measured from top of well PVC casing.
 ** = water level in feet above mean sea level, relative to top of casing elevation survey (see elevations, Table 8)
 - = parameter not measured in field
Water level in monitoring well LC-MW05D was at the top of the rim of steel casing when opened on 12/2/2004.
Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 3rd QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
08LCMW01SW	9/15/2005	1000	6.69	283.47	12.8	97	48	6.66	clear	
08LCMW01DW	9/15/2005	1030	6.91	283.34	12.5	99	49	6.64	clear	collected duplicate
08LCMW02SW	9/16/2005	1140	7.78	283.41	12.1	79	40	6.58	clear	
08LCMW02DW	9/16/2005	1110	8.28	283.31	12.3	86	43	6.51	clear	MS/MSD collected
08LCMW03SW	9/16/2005	1010	7.26	283.65	12.2	82	40	6.35	clear	
08LCMW03DW	9/16/2005	1040	7.38	283.60	11.5	93	41	6.53	clear	
08LCMW04SW	9/19/2005	1300	7.30	284.33	12.7	83	42	5.93	clear	
08LCMW04DW	9/19/2005	1320	7.76	284.03	12.1	99	50	6.67	clear	
08LCMW05SW	9/14/2005	1010	9.14	300.96	12.4	183	92	7.54	clear	
08LCMW05DW	9/14/2005	1030	0.30	309.64	12.3	149	76	7.08	clear	
08LCMW06SW	9/14/2005	1105	12.00	296.27	12.6	259	128	7.0	clear	purged dry; slow recharge
08LCMW07SW	9/14/2005	1140	8.81	300.11	12	241	118	7.51	clear	
08LCMW08SW	9/14/2005	1200	8.90	300.88	12.9	186	94	7.31	clear	
08LCMW09SW	9/15/2005	1140	6.23	341.08	13.7	31	15	5.81	clear	
08LCMW10SW	9/15/2005	1210	10.96	340.51	12	32	16	5.48	cloudy	
08LCMW11SW	9/15/2005	1230	8.19	337.53	12.5	379	193	6.48	cloudy	
08L4MW01AW	9/20/2005	1100	16.90	514.50	11.6	40	21	5.17	cloudy	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 3rd QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
08L4MW01BW	9/20/2005	1130	14.04	515.53	11.1	17	9	5.31	clear	
08L4MW02AW	9/21/2005	1130	28.63	491.30	13.1	29	14	4.95	slightly cloudy	
08L4MW02BW	9/21/2005	1100	33.24	485.22	12.7	38	19	5.53	clear	
08L4MW03AW	9/21/2005	1220	30.96	483.89	12.6	16	8	5.05	clear	
08L4MW03BW	9/21/2005	1200	27.97	483.50	12.2	27	13	5.36	slightly cloudy	
08L4MW04AW	9/21/2005	1030	28.59	483.20	11.6	7	4	5.08	clear	
08L4MW05AW	9/20/2005	1030	25.13	484.78	11	19	9	5.4	clear	
08L4MW07BW	9/20/2005	1200	40.72	439.70	11.2	28	14	5.49	slightly cloudy	
08L4MW17W	9/20/2005	1300	11.25	350.23	15.0	250	127	7.04	clear	
08L4MW18W	9/20/2005	1320	12.10	350.74	13.4	116	59	6.3	cloudy	

Notes: * = depth in feet measured from top of well PVC casing.
 ** = water level in feet above mean sea level, relative to top of casing elevation survey (see elevations, Table 8)
 - = parameter not measured in field
 Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 4th QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
09LCMW01SW	1/26/2006	1300	4.29	285.87	10.8	80	40	6.58	clear	
09LCMW01DW	1/26/2006	1320	4.66	285.59	11.2	86	43	6.88	clear	
09LCMW02SW	1/27/2006	1050	4.60	286.59	10.9	85	42	6.78	clear	
09LCMW02DW	1/27/2006	1130	5.14	286.45	11.5	88	44	6.67	clear	collected duplicate
09LCMW03SW	1/26/2006	1200	4.06	286.85	10.9	79	41	6.41	clear	
09LCMW03DW	1/26/2006	1220	4.23	286.75	10.9	89	44	6.55	clear	
09LCMW04SW	1/26/2006	1120	4.15	287.48	10.2	79	40	6.0	clear	
09LCMW04DW	1/26/2006	1050	4.60	287.19	10.5	100	51	6.95	clear	
09LCMW05SW	1/24/2006	1130	6.05	304.05	11.5	148	75	7.23	clear	
09LCMW05DW	1/24/2006	1050	0.00	309.94	11.0	138	69	7.14	clear	collected duplicate
09LCMW06SW	1/24/2006	1230	5.62	302.65	10.3	86	43	6.42	slightly cloudy	
09LCMW07SW	1/24/2006	1300	6.53	302.39	11.4	247	125	7.52	clear	
09LCMW08SW	1/24/2006	1320	6.12	303.66	11.8	177	90	7.19	clear	
09LCMW09SW	1/23/2006	1325	4.91	342.40	9.7	36	18	5.4	clear	
09LCMW10SW	1/23/2006	1350	8.34	343.13	10.5	21	10	4.94	cloudy	
09LCMW11SW	1/23/2006	1420	6.41	339.31	11.3	367	187	6.4	cloudy	
09L4MW01AW	1/30/2006	1400	11.18	520.22	10.7	23	11	6.98	slightly cloudy	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 4th QUARTER 2005
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
09L4MW01BW	1/30/2006	1420	7.39	522.18	10.4	19	9	7.0	clear	
09L4MW02AW	1/30/2006	1230	22.55	497.38	11.3	54	27	4.86	slightly cloudy	
09L4MW02BW	1/30/2006	1250	28.71	489.75	11.1	52	20	5.76	clear	MS/MSD collected
09L4MW03AW	1/30/2006	1140	26.21	488.64	11.2	15	7	5.05	clear	
09L4MW03BW	1/30/2006	1120	23.50	487.97	10.7	23	11	5.21	clear	
09L4MW04AW	1/30/2006	1330	24.72	487.07	10.5	13	6	5.02	clear	
09L4MW05AW	1/30/2006	1050	19.22	490.69	10.4	19	9	5.24	clear	collected duplicate
09L4MW07BW	1/27/2006	1340	38.36	442.06	10.2	26	13	5.79	clear	
09L4MW17W	1/27/2006	1250	9.20	352.28	10.5	210	104	7.26	clear	
09L4MW18W	1/27/2006	1310	10.56	352.28	11.0	128	65	6.28	slightly cloudy	

Notes: * = depth in feet measured from top of well PVC casing.
 ** = water level in feet above mean sea level, relative to top of casing elevation survey (see elevations, Table 8)
 Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 1st QUARTER 2006
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
10LCMW01SW	3/23/2006	1300	4.70	285.46	11.1	78	39	6.32	clear	collected duplicate
10LCMW01DW	3/23/2006	1330	5.12	285.13	11.7	83	42	6.53	clear	
10LCMW02SW	3/23/2006	1120	5.00	286.19	11.4	84	43	6.59	clear	
10LCMW02DW	3/23/2006	1155	5.56	286.03	12.0	86	44	6.22	clear	
10LCMW03SW	3/22/2006	1145	4.38	286.53	11.5	86	44	6.61	clear	
10LCMW03DW	3/22/2006	1210	4.58	286.40	10.8	80	40	6.21	clear	
10LCMW04SW	3/22/2006	1015	4.31	287.32	9.8	75	38	6.1	clear	
10LCMW04DW	3/22/2006	1050	5.00	286.79	10.8	100	51	6.8	clear	collected duplicate
10LCMW05SW	3/21/2006	1325	6.23	303.88	10.8	143	73	7.3	clear	
10LCMW05DW	3/21/2006	1320	0.00	310.94	10.6	139	70	7.12	clear	
10LCMW06SW	3/21/2006	1200	5.96	302.31	9.7	165	84	6.48	clear	
10LCMW07SW	3/21/2006	1225	6.55	302.37	10.4	225	114	7.29	clear	
10LCMW08SW	3/21/2006	1250	6.00	304.78	10.7	164	84	7.13	clear	
10LCMW09SW	3/22/2006	1430	5.22	342.09	9.4	28	14	5.45	slightly cloudy	
10LCMW10SW	3/22/2006	1405	8.74	342.73	10.3	19	9	5.04	silty	
10LCMW11SW	3/22/2006	1325	6.75	338.97	10.9	351	178	6.41	cloudy	
10L4MW01AW	3/27/2006	1300	16.12	515.28	11.5	20	10	5.19	slightly cloudy	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 1st QUARTER 2006
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
10L4MW01BW	3/27/2006	1320	12.12	517.45	11.2	14	8	5.1	clear	
10L4MW02AW	3/27/2006	1120	25.18	494.75	12.3	52	25	4.72	slightly cloudy	
10L4MW02BW	3/27/2006	1145	31.30	487.16	12.0	82	42	5.59	clear	
10L4MW03AW	3/24/2006	1140	28.52	486.33	11.9	16	8	4.95	clear	
10L4MW03BW	3/24/2006	1100	26.02	485.45	11.7	29	14	5.39	slightly cloudy	collected duplicate
10L4MW04AW	3/27/2006	1220	27.22	484.57	11.5	12	6	5.28	clear	
10L4MW05AW	3/27/2006	1045	23.35	487.56	10.7	18	8	5.38	clear	
10L4MW07BW	3/24/2006	1230	38.90	441.52	10.5	25	12	5.53	clear	
10L4MW17W	3/24/2006	1330	9.86	351.62	10.3	238	121	7.04	clear	
10L4MW18W	3/24/2006	1300	11.06	351.78	10.9	144	74	5.81	slightly cloudy	

Notes: * = depth in feet measured from top of well PVC casing.
 ** = water level in feet above mean sea level, relative to top of casing elevation survey (see elevations, Table 8)
 Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 2nd QUARTER 2006
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
11LCMW01SW	6/26/06	1230	5.85	284.31	11.1	78	39	6.32	clear	
11LCMW01DW	6/26/06	1300	6.13	284.12	11.7	83	42	6.53	clear	
11LCMW02SW	6/26/06	1120	6.68	284.51	11.4	84	43	6.59	clear	
11LCMW02DW	6/26/06	1140	7.24	284.35	12.0	86	44	6.22	clear	collected duplicate
11LCMW03SW	6/27/06	1150	6.30	284.61	11.5	86	44	6.61	clear	
11LCMW03DW	6/27/06	1230	6.44	284.54	10.8	80	40	6.21	clear	MS/MSD
11LCMW04SW	6/26/06	1050	6.14	285.49	9.8	75	38	6.1	clear	
11LCMW04DW	6/26/06	1030	8.94	282.85	10.8	100	51	6.8	clear	
11LCMW05SW	6/21/2006	1310	7.15	302.96	10.8	143	73	7.3	clear	
11LCMW05DW	6/21/2006	1250	0.00	310.94	10.6	139	70	7.12	clear	
11LCMW06SW	6/21/2006	1120	7.82	300.45	9.7	165	84	6.48	clear	
11LCMW07SW	6/21/2006	1200	7.16	301.76	10.4	225	114	7.29	clear	collected duplicate
11LCMW08SW	6/21/2006	1225	6.97	303.81	10.7	164	84	7.13	clear	
11LCMW09SW	6/21/2006	1450	5.84	341.47	9.4	28	14	5.45	slightly cloudy	
11LCMW10SW	6/21/2006	1425	9.61	341.86	10.3	19	9	5.04	silty	
11LCMW11SW	6/21/2006	1405	7.37	338.35	10.9	351	178	6.41	cloudy	
11L4MW01AW	6/23/2006	1310	16.64	514.76	11.5	20	10	5.19	slightly cloudy	
11L4MW01BW	6/23/2006	1330	13.34	516.23	11.2	14	8	5.1	clear	

TABLE 4
FIELD PARAMETERS FOR GROUNDWATER SAMPLES - 2nd QUARTER 2006
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Field Parameters at Time of Sampling										
Sample No.	Date	Time	Depth to Water in Feet*	Water Elevation in feet amsl **	Temp (degrees C)	Conductivity (µS/cm)	Total Dissolved Solids (ppm)	pH	Color and Relative Turbidity	Notes
11L4MW02AW	6/23/2006	1200	27.22	492.71	12.3	52	25	4.72	slightly cloudy	
11L4MW02BW	6/23/2006	1220	32.77	485.69	12.0	82	42	5.59	clear	collected duplicate
11L4MW03AW	6/23/2006	1405	29.65	485.20	11.9	16	8	4.95	clear	
11L4MW03BW	6/23/2006	1430	27.10	484.37	11.7	29	14	5.39	slightly cloudy	
11L4MW04AW	6/22/2006	1120	27.88	483.91	11.5	12	6	5.28	clear	
11L4MW05AW	6/22/2006	1330	24.22	486.69	10.7	18	8	5.38	clear	
11L4MW07BW	6/23/2006	1230	39.76	440.66	10.5	25	12	5.53	clear	
11L4MW17W	6/23/2006	1135	10.56	350.92	10.3	238	121	7.04	clear	
11L4MW18W	6/23/2006	1200	11.64	351.20	10.9	144	74	5.81	slightly cloudy	

Notes: * = depth in feet measured from top of well PVC casing.
 ** = water level in feet above mean sea level, relative to top of casing elevation survey (see elevations, Table 8)
 Field parameters of temperature, conductivity, and pH measured with a Hanna Model HI 991300 meter.

TABLE 5
WELL NUMBER AND CONSTRUCTION DETAILS
CAMP BONNEVILLE, VANCOUVER, WASHINGTON

Well Number in PBS Work Contract	WADOE Well Tag Number	Well Location	Total Depth (ft)*	Screened Interval (ft)**	Top of PVC Casing Elevation (feet above mean sea level)	Well Number on Steel Casings/Caps (CHPPM No.)
LC-MW01S	AHA-359	Lacamas Cr.	22.73	15-20	290.16	LC-MW01S
LC-MW06D	AHA-358	Lacamas Cr.	42.20	30-40	290.25	LC-MW01D
LC-MW02S	AHA-364	Lacamas Cr.	17.50	12.5-17.5	291.19	LC-MW02S
LC-MW07D	AHA-357	Lacamas Cr.	37.85	25-35	291.59	LC-MW02D
LC-MW03S	AHA-363	Lacamas Cr.	20.10	13-18	290.91	LC-MW03S
LC-MW08D	AHA-362	Lacamas Cr.	39.40	27-37	290.98	LC-MW03D
LC-MW04S	AHA-375	Lacamas Cr.	16.54	7-17	291.63	LC-MW04S
LC-MW09D	AHA-361	Lacamas Cr.	37.00	25-35	291.79	LC-MW04D
LC-MW05S	AHA-374	Demo Area 3	40.40	22-37	310.10	LC-MW05S
LC-MW10D	AHA-360	Demo Area 3	65.20	53-63	309.94	LC-MW05D
LC-MW11S	AHA-372	Demo Area 3	17.54	12-15	308.27	LC-MW06S
LC-MW12S	AHA-371	Demo Area 3	40.44	22-37	308.92	LC-MW07S
LC-MW13S	AHA-373	Demo Area 3	40.10	22-37	309.78	LC-MW08S
LC-MW14	AHA-369	Demo Area 2	19.64	7-17	347.31	LC-MW09S
LC-MW15	AHA-370	Demo Area 2	26.16	9-24	351.47	LC-MW10S
LC-MW16	AHA-368	Demo Area 2	19.50	7-17	345.72	LC-MW11S
L4-MW01A	N/A	Landfill 4	30.40	N/A	531.40	L4-MW01A
L4-MW01B	AGL-482	Landfill 4	55.40	43-53	529.57	L4-MW01B
L4-MW02A	N/A	Landfill 4	40.20	N/A	519.93	L4-MW02A
L4-MW02B	AGL-483	Landfill 4	74.60	62-72	518.46	L4-MW02B
L4-MW03A	AGL-466	Landfill 4	48.90	41-46	514.85	L4-MW03A
L4-MW03B	AGL-484	Landfill 4	62.90	49-59	511.47	L4-MW03B
L4-MW04A	AGL-465	Landfill 4	43.40	33-43	511.79	L4-MW04A
L4-MW05A	AGL-467	Landfill 4	36.60	30-35	509.91	L4-MW05A
L4-MW07B	N/A	Landfill 4	58.60	N/A	480.42	L4-MW07B
L4-MW17	ALB-252	Landfill 4	15.00	5-15	361.48	LA-MW17
L4-MW18	ALB-251	Landfill 4	20.00	10-20	362.84	LA-MW18

Notes:

* = depth in feet measured from top of well PVC casing

** = screened interval reported on well completion logs

N/A = not available

APPENDIX C
***CHPPM Analytical Methods, Detection
Limits, and QA/QC Summaries***

ANALYTICAL METHODS AND DETECTION LIMITS

Table A-1. Water Quality Parameters and Reporting Limits (in mg/L).

Sample Number	Chloride	Sulfate	Total Alkalinity	DOC	Nitrite/Nitrate as N	TOC	TSS
Analytical Method →	EPA 300.0	EPA 300.0	SM 2320	SM 5310	EPA 353.2	EPA 415.1	EPA 160.2
LC-MW-01S	1	1	2.00	0.500	0.500	0.500	5.00
LC-MW-01M	1	1	2.00	0.500	0.500	0.500	3.00
LC-MW-01D							
LC-MW-04S							
LC-MW-04D							
LC-MW-02S	1	1	2.00	0.500	0.250	0.500	3.00
LC-MW-02D							
LC-MW-03S	1	1	2.00	0.500	1.00	0.500	3.00
LC-MW-03D							
LC-MW-05S	50	50	2.00	0.500	0.500	0.500	3.00
LC-MW-05D	4	4	2.00	0.500	0.500	0.500	17.0
LC-MW-06S	25	5	2.00	0.500	5.00	0.500	36.0
LC-MW-06D							
LC-MW-07S	10	10	2.00	0.500	0.500	0.500	3.00
LC-MW-07D							
LC-MW-08S	100	100	2.00	0.500	1.00	0.500	3.00
LC-MW-08D							
LC-MW-09S	1	1	2.00	0.500	2.50	0.500	6.00
LC-MW-09D							
LC-MW-10S	1	1	2.00	0.500	0.500	0.500	50.0
LC-MW-10D							
LC-MW-10D	1	1	2.00	0.500	2.50	0.500	50.0
LC-MW-10D							
LC-MW-11S	1	1	2.00	0.500	2.50	0.500	N/A

NOTES:

Alkalinity, dissolved organic carbon (DOC), nitrite/nitrate as N, total organic carbon (TOC), and total suspended solids (TSS) analyses were performed under contract by TriMatrix Laboratories, Inc. The chloride and sulfate analyses were performed in-house by USACHPPM's Chromatographic Analysis Division. The one-liter TSS container for LC-MW-11S was preserved in the field with nitric acid instead of being non-preserved as specified in the method, and could not be analyzed. TSS samples LC-MW-01S, LC-MW-01D, and LC-MW-01M were received after the USEPA established hold time had expired. Non-detect results for these samples must be considered approximate. The detection limit for TSS sample LC-MW-01S was elevated due to insufficient sample volume. The reporting limits for nitrite/nitrate and TSS analysis of LC-MW-06S were raised due to dilution of the sample. The dilution was necessary in order that the analyte concentrations were within the calibration range of the analysis. Both analytes have reportable values, therefore the increased reporting limits are not significant. All quality control data were within acceptable limits.

Additional QA/QC data are provided on the following 36 pages.

SECTION - B

QUALITY CONTROL SUMMARIES

INORGANICS DATA

QUALITY CONTROL REPORT
INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
USEPA CLP FORM 2A

SDG No.	36222 -1	Parameter	Alkalinity, Total
Batch No.	196417	Ref. Cit.	310.1/SM 2320 B
Instrument ID	187	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	7.00	6.99	100	85 - 115	01/23/03	VAS
CCV 1	7.00	6.97	100	85 - 115	01/23/03	VAS

QUALITY CONTROL REPORT
INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
USEPA CLP FORM 2A

SDG No.	36222 -1	Parameter	Carbon, Total Organic
Batch No.	196566	Ref. Cit.	EPA-415.1/9060
Instrument ID	198	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	10	10.2	102	85 - 115	01/29/03	GEH
CCV 1	10	10.1	101	85 - 115	01/29/03	GEH
CCV 2	10	10.1	101	85 - 115	01/29/03	GEH
CCV 3	10	10.2	102	85 - 115	01/29/03	GEH

QUALITY CONTROL REPORT
INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
USEPA CLP FORM 2A

SDG No.	36222 -1	Parameter	Carbon, Total Organic
Batch No.	196589	Ref. Cit.	EPA-415.1/9060
Instrument ID	198	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	10	10.1	101	85 - 115	01/30/03	GEH
CCV 1	10	9.9	99	85 - 115	01/30/03	GEH
CCV 2	10	9.8	98	85 - 115	01/30/03	GEH
CCV 3	10	9.9	99	85 - 115	01/30/03	GEH
CCV 4	10	10.0	100	85 - 115	01/30/03	GEH

QUALITY CONTROL REPORT
INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
USEPA CLP FORM 2A

SDG No.	36222 -1	Parameter	Nitrogen, Nitrate
Batch No.	196639	Ref. Cit.	353.2/4500 NO3F
Instrument ID	189	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	0.50	0.49	98	85 - 115	01/30/03	HLB
CCV 1	0.50	0.49	98	85 - 115	01/30/03	HLB
CCV 2	0.50	0.48	96	85 - 115	01/30/03	HLB
CCV 3	0.50	0.50	100	85 - 115	01/30/03	HLB
CCV 4	0.50	0.47	94	85 - 115	01/30/03	HLB
CCV 5	0.50	0.51	102	85 - 115	01/30/03	HLB
CCV 6	0.50	0.51	102	85 - 115	01/30/03	HLB

QUALITY CONTROL REPORT
CRDL STANDARD
USEPA CLP FORM 2B

SDG No. 36222 -1 Matrix Units WATER mg/L

Analyte	Analytical Batch	True Value	Amount Found	% Recovery
Nitrogen, Nitrate	196639	0.05	0.047	94
Carbon, Total Organic	196566	0.5	0.44	88
Carbon, Dissolved Organic	196589	0.5	0.60	120
Carbon, Total Organic	196589	0.5	0.41	82

QUALITY CONTROL REPORT
BLANKS
USEPA CLP FORM 3

SDG No.	36222 -1	Parameter	Alkalinity, Total
Instrument ID	187	Ref. Cit.	310.1/SM 2320 B
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196417	Instrument	1	<2.0

QUALITY CONTROL REPORT
BLANKS
USEPA CLP FORM 3

SDG No.	36222 -1	Parameter	Carbon, Dissolved Organic
Instrument ID	198	Ref. Cit.	SDM 5310 D
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196589	Instrument	1	<0.5

QUALITY CONTROL REPORT
 BLANKS
 USEPA CLP FORM 3

SDG No.	36222 -1	Parameter	Carbon, Total Organic
Instrument ID	198	Ref. Cit.	EPA-415.1/9060
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196566	Initial Calibration	1	<0.5
196566	Continuing Calibration	1	<0.5
196566	Continuing Calibration	2	<0.5
196566	Continuing Calibration	3	<0.5
196566	Instrument	1	<0.5
196589	Initial Calibration	1	<0.5
196589	Continuing Calibration	1	<0.5
196589	Continuing Calibration	2	<0.5
196589	Continuing Calibration	3	<0.5
196589	Continuing Calibration	4	<0.5
196589	Instrument	1	<0.5

QUALITY CONTROL REPORT
 BLANKS
 USEPA CLP FORM 3

SDG No.	36222 -1	Parameter	Nitrogen, Nitrate
Instrument ID	189	Ref. Cit.	353.2/4500 NO3F
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196639	Initial Calibration	1	<0.05
196639	Continuing Calibration	1	<0.05
196639	Continuing Calibration	2	<0.05
196639	Continuing Calibration	3	<0.05
196639	Continuing Calibration	4	<0.05
196639	Continuing Calibration	5	<0.05
196639	Continuing Calibration	6	<0.05
196639	Instrument	1	<0.05

QUALITY CONTROL REPORT
BLANKS
USEPA CLP FORM 3

SDG No.	36222 -1	Parameter	Residue, Suspended
Instrument ID	210	Ref. Cit.	160.2/SM 2540 D
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196432	Instrument	1	<2.5

A-13a

000032

QUALITY CONTROL REPORT
SPIKE SAMPLE RECOVERY
USEPA CLP FORM 5A

SDG No.	36222 -1	Matrix	WATER
Sample ID.	7267001LC-MW-01S	Lab Sample No.	324000
		Units	mg/L

Analyte	Control Limit %R	Spiked Sample Result	Sample Result		Spike Added	%R	M
Carbon, Dissolved Orga	80 - 120	9.7	<0.5	U	10	97	
Nitrogen, Nitrate+Nitr	76 - 126	11	8.6		2.0	120	AC

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QUALITY CONTROL REPORT
SPIKE SAMPLE RECOVERY
USEPA CLP FORM 5A

SDG No.	36222 -1	Matrix	WATER
Sample ID.	7267002LC-MW-01D	Lab Sample No.	324001
		Units	mg/L

Analyte	Control Limit %R	Spiked Sample Result	Sample Result	Spike Added	%R	M
Alkalinity, Total	82 - 110	301	52	238	105	

QUALITY CONTROL REPORT
SPIKE SAMPLE RECOVERY
USEPA CLP FORM 5A

SDG No.	36222 -1	Matrix	WATER
Sample ID.	7267007LC-MW-02D	Lab Sample No.	324006
		Units	mg/L

Analyte	Control Limit %R	Spiked Sample Result	Sample Result	Spike Added	%R	M
Carbon, Total Organic	85 - 111	10	<0.5	U 10	100	

QUALITY CONTROL REPORT
 SAMPLE DUPLICATE
 USEPA CLP FORM 6

SDG No.	36222 -1	Matrix	WATER
Sample ID.	7267001LC-MW-01S	Lab Sample No.	324000
		Units	mg/L

Analyte	Control Limit	Sample Result	Duplicate Result	RPD	M
Alkalinity, Total	0 - 20	52	49		6
Carbon, Dissolved Organic	0 - 20	<0.5	U	<0.5	U 0
Nitrogen, Nitrate+Nitrite	0 - 20	8.6		8.9	3 AC
Residue, Suspended	0 - 20	<5	U	<5	U 0 G

QUALITY CONTROL REPORT
SAMPLE DUPLICATE
USEPA CLP FORM 6

SDG No. 36222 -1 Matrix WATER
Sample ID. 7267007LC-MW-02D Lab Sample No. 324006
Units mg/L

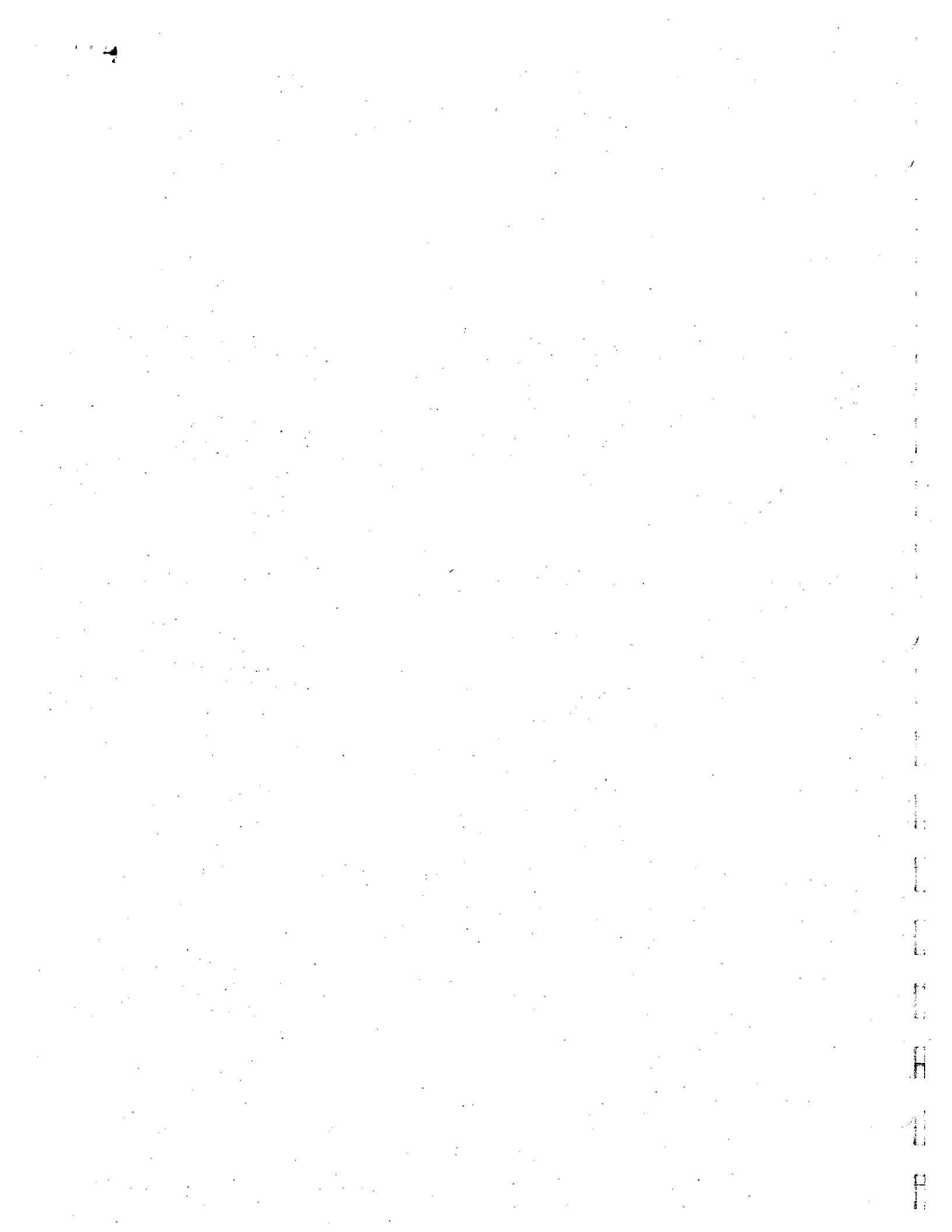
Analyte	Control Limit	Sample Result		Duplicate Result		RPD	M
Carbon, Total Organic	0 - 20	<0.5	U	<0.5	U	0	

A-17

000044

QUALITY CONTROL REPORT
LABORATORY CONTROL SAMPLE
USEPA CLP FORM 7

SDG No.	36222 -1	Units	mg/L		
Analyte	Batch	True Value	Amount Found	Control Limit	%R
Alkalinity, Total	196417	238	243	95 - 103	102
Carbon, Dissolved Organic	196589	25	24	80 - 120	96
Carbon, Total Organic	196566	25	25	86 - 117	100
Carbon, Total Organic	196589	25	24	86 - 117	96
Nitrogen, Nitrate	196639	6.93	6.47	90 - 110	93
Nitrogen, Nitrate	196639	0.693	0.690	90 - 110	100
Residue, Suspended	196432	93.1	93	89 - 106	100



SECTION - B

QUALITY CONTROL SUMMARIES

INORGANICS DATA

QUALITY CONTROL REPORT
INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
USEPA CLP FORM 2A

SDG No.	36222-2	Parameter	Alkalinity, Total
Batch No.	196598	Ref. Cit.	310.1/SM 2320 B
Instrument ID	187	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	7.00	6.98	100	85 - 115	01/30/03	VAS
CCV 1	7.00	7.04	101	85 - 115	01/30/03	VAS
CCV 2	7.00	7.03	100	85 - 115	01/30/03	VAS

QUALITY CONTROL REPORT
INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
USEPA CLP FORM 2A

SDG No.	36222 -2	Parameter	Carbon, Total Organic
Batch No.	196566	Ref. Cit.	EPA-415.1/9060
Instrument ID	198	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	10	10.2	102	85 - 115	01/29/03	GEH
CCV 1	10	10.1	101	85 - 115	01/29/03	GEH
CCV 2	10	10.1	101	85 - 115	01/29/03	GEH
CCV 3	10	10.2	102	85 - 115	01/29/03	GEH

QUALITY CONTROL REPORT
 INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
 USEPA CLP FORM 2A

SDG No.	36222 -2	Parameter	Carbon, Total Organic
Batch No.	196589	Ref. Cit.	EPA-415.1/9060
Instrument ID	198	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	10	10.1	101	85 - 115	01/30/03	GEH
CCV 1	10	9.9	99	85 - 115	01/30/03	GEH
CCV 2	10	9.8	98	85 - 115	01/30/03	GEH
CCV 3	10	9.9	99	85 - 115	01/30/03	GEH
CCV 4	10	10.0	100	85 - 115	01/30/03	GEH

QUALITY CONTROL REPORT
INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV-CCV)
USEPA CLP FORM 2A

SDG No.	36222 -2	Parameter	Nitrogen, Nitrate
Batch No.	196646	Ref. Cit.	353.2/4500 NO3F
Instrument ID	189	Matrix	WATER
		Units	mg/L

Verification QC Type	True Value	Amount Found	% Recovery	Acceptance Window-%	Date	Analyst
ICV 1	0.50	0.49	98	85 - 115	01/31/03	HLB
CCV 1	0.50	0.49	98	85 - 115	01/31/03	HLB
CCV 2	0.50	0.49	98	85 - 115	01/31/03	HLB
CCV 3	0.50	0.49	98	85 - 115	01/31/03	HLB
CCV 4	0.50	0.50	100	85 - 115	01/31/03	HLB

QUALITY CONTROL REPORT
CRDL STANDARD
USEPA CLP FORM 2B

SDG No.

36222 -2

 Matrix
 Units

 WATER
 mg/L

Analyte	Analytical Batch	True Value	Amount Found	% Recovery
Nitrogen, Nitrate	196646	0.05	0.042	84
Carbon, Total Organic	196566	0.5	0.44	88
Carbon, Dissolved Organic	196589	0.5	0.60	120
Carbon, Total Organic	196589	0.5	0.41	82

QUALITY CONTROL REPORT
BLANKS
USEPA CLP FORM 3

SDG No.	36222 -2	Parameter	Alkalinity, Total
Instrument ID	187	Ref. Cit.	310.1/SM 2320 B
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196598	Instrument	1	<2.0

QUALITY CONTROL REPORT
BLANKS
USEPA CLP FORM 3

SDG No.	36222-2	Parameter	Carbon, Dissolved Organic
Instrument ID	198	Ref. Cit.	SDM 5310 D
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196589	Instrument	1	<0.5

QUALITY CONTROL REPORT
 BLANKS
 USEPA CLP FORM 3

SDG No.	36222 -2	Parameter	Carbon, Total Organic
Instrument ID	198	Ref. Cit.	EPA-415.1/9060
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196566	Initial Calibration	1	<0.5
196566	Continuing Calibration	1	<0.5
196566	Continuing Calibration	2	<0.5
196566	Continuing Calibration	3	<0.5
196566	Instrument	1	<0.5
196589	Initial Calibration	1	<0.5
196589	Continuing Calibration	1	<0.5
196589	Continuing Calibration	2	<0.5
196589	Continuing Calibration	3	<0.5
196589	Continuing Calibration	4	<0.5
196589	Instrument	1	<0.5

QUALITY CONTROL REPORT
BLANKS
USEPA CLP FORM 3

SDG No.	36222 -2	Parameter	Nitrogen, Nitrate
Instrument ID	189	Ref. Cit.	353.2/4500 NO3F
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196646	Initial Calibration	1	<0.05
196646	Continuing Calibration	1	<0.05
196646	Continuing Calibration	2	<0.05
196646	Continuing Calibration	3	<0.05
196646	Continuing Calibration	4	<0.05
196646	Instrument	1	<0.05

QUALITY CONTROL REPORT
BLANKS
USEPA CLP FORM 3

SDG No.	36222 -2	Parameter	Residue, Suspended
Instrument ID	210	Ref. Cit.	160.2/SM 2540 D
		Matrix	WATER
		Units	mg/L

Batch	Blank QC Type	Sequence No.	Amount Found
196494	Instrument	1	<2.5

QUALITY CONTROL REPORT
 SPIKE SAMPLE RECOVERY
 USEPA CLP FORM 5A

SDG No.	36222 -2	Matrix	WATER
Sample ID.	7274001LC-MW-5D	Lab Sample No.	324097
		Units	mg/L

Analyte	Control Limit %R	Spiked Sample Result	Sample Result	Spike Added	%R	M
Nitrogen, Nitrate+Nitr	76 - 126	11	9.8	1.0	120	AC

QUALITY CONTROL REPORT
 SPIKE SAMPLE RECOVERY
 USEPA CLP FORM 5A

SDG No.	36222 -2	Matrix	WATER
Sample ID.	7274002LC-MW-03S	Lab Sample No.	324098
		Units	mg/L

Analyte	Control Limit %R	Spiked Sample Result	Sample Result	Spike Added	%R	M
Alkalinity, Total	82 - 110	277	63	238	90	
Carbon, Dissolved Orga	80 - 120	11	<0.5	U 10	110	

QUALITY CONTROL REPORT
 SPIKE SAMPLE RECOVERY
 USEPA CLP FORM 5A

SDG No.	36222 -2	Matrix	WATER
Sample ID.	7274011LC-MW-07S	Lab Sample No.	324107
		Units	mg/L

Analyte	Control Limit %R	Spiked Sample Result	Sample Result	Spike Added	%R	M
Carbon, Total Organic	85 - 111	11	1.5	10	95	

QUALITY CONTROL REPORT
SAMPLE DUPLICATE
USEPA CLP FORM 6

SDG No.	36222 -2	Matrix	WATER
Sample ID.	7274001LC-MW-5D	Lab Sample No.	324097
		Units	mg/L

Analyte	Control Limit	Sample Result	Duplicate Result	RPD	M
Alkalinity, Total	0 - 20	74	75	1	
Nitrogen, Nitrate+Nitrite	0 - 20	9.8	9.7	1	AC
Residue, Suspended	0 - 20	29	30	3	G

QUALITY CONTROL REPORT
SAMPLE DUPLICATE
USEPA CLP FORM 6

SDG No.	36222 -2	Matrix	WATER
Sample ID.	7274002LC-MW-03S	Lab Sample No.	324098
		Units	mg/L

Analyte	Control Limit	Sample Result		Duplicate Result		RPD	M
Carbon, Dissolved Organic	0 - 20	<0.5	U	<0.5	U		0

QUALITY CONTROL REPORT
SAMPLE DUPLICATE
USEPA CLP FORM 6

SDG No.	36222 -2	Matrix	WATER
Sample ID.	7274011LC-MW-07S	Lab Sample No.	324107
		Units	mg/L

Analyte	Control Limit	Sample Result	Duplicate Result	RPD	M
Carbon, Total Organic	0 - 20	1.5	1.4	7	

QUALITY CONTROL REPORT
LABORATORY CONTROL SAMPLE
USEPA CLP FORM 7

SDG No.	36222 -2	Units	mg/L		
Analyte	Batch	True Value	Amount Found	Control Limit	%R
Alkalinity, Total	196598	238	238	95 - 103	100
Carbon, Dissolved Organic	196589	25	24	80 - 120	96
Carbon, Total Organic	196566	25	25	86 - 117	100
Carbon, Total Organic	196589	25	24	86 - 117	96
Nitrogen, Nitrate	196646	6.93	6.60	90 - 110	95
Nitrogen, Nitrate	196646	0.693	0.706	90 - 110	102
Residue, Suspended	196494	93.1	93	89 - 106	100

Table A-2. Total Petroleum Hydrocarbon (TPH) Parameters and Reporting Limits in Water (in mg/L).

Sample Number	TPH Reporting Limit	TPH-DRO Limit of Quantitation	TPH-GRO Limit of Quantitation
LC-MW-01S LC-MW-01M LC-MW-02S LC-MW-03D LC-MW-05D	0.19	0.096	0.05
LC-MW-01D LC-MW-03S LC-MW-04S LC-MW-04D LC-MW-05S	0.19	0.095	0.050
LC-MW-02D	0.19	0.097	0.050

NOTES:

TPH Analysis: Eleven ground-water samples were received on 17 January and 21 January 2003. The samples were collected 14-19 January 2003, extracted on 29 and 30 January 2003, and were analyzed on 4 and 5 February 2003. The samples were analyzed under EPA Method 418.1. A matrix spike and matrix spike duplicate were performed with sample LC-WM-01S, yielding 99% and 101%, respectively.

TPH-GRO and TPH-DRO: The samples were analyzed at Lancaster Laboratories, Inc. Eleven ground-water samples were received on Wednesday, January 22, 2003. The samples were analyzed using EPA Method SW-846 8015B-Modified. No problems were encountered during analysis. There was no client-submitted QC, so Lancaster Laboratories batch QC was referenced. Sufficient sample was not available to perform a MSD for this analysis, therefore an LCS-LDS was performed to demonstrate precision and accuracy at a batch level. All QC was within specifications.

Additional QA/QC data are provided on the following 8 pages.

Surrogate Recovery
 Volatiles by GC - Water

LL Sample#	Sample Code	Dilution Factor	TFT-F Water-FID % Recovery	TOT OUT
3982241	274-1	1.0	93	
3982242	274-2	1.0	96	
3982243	274-3	1.0	94	
3982244	274-4	1.0	93	
BLK5162	METHOD BLANK	1.0	92	
3982240		1.0	93	
3982240MS		1.0	96	
LCS5162	LAB CONTROL	1.0	97	
LDS5162	LAB CON DUP	1.0	95	

* = Values outside quality control limits.

D = Surrogates diluted - not counted towards total out.

TOT OUT = Total # of surrogates with recovery outside control limits.

TFT-F = Trifluorotoluene (Water - FID)

Control Limits	
Lower	Upper
57	146

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MS)
 FIELD ID: LC-MW-01M
 COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
 ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/L)

	2,4,6-TNT	RDY	4AM26DNT	2AM46DNT	Tetryl	HMX
AVG.						
RESULTS	< 0.030	< 0.10	< 0.10	< 0.10	< 0.50	< 3.0

MATRIX SPIKE

AMT	2,4,6-TNT	RDY	4AM26DNT	2AM46DNT	Tetryl	HMX
ADDED	0.24	0.96	1.2	1.2	1.2	19.2
AVG.						
RESULTS	0.24	0.93	1.2	1.2	1.3	19.0
%						
VERY	100	97	100	100	108	99

ANALYSTS: CGO
 REVIEWED: MH
 REVIEWED: RMM

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MS)
 FIELD ID: LC-MW-01M
 COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
 ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/L)

	NB	2-NT	3-NT	4-NT	NG	1,3-DNB	2,6-DNT	2,4-DNT	1,3,5-TNB
AVG.									
RESULTS	< 0.030	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.010	< 0.020	< 0.030

MATRIX SPIKE

AMT									
ADDED	0.24	0.72	0.72	0.72	0.72	0.72	0.080	0.16	0.24
AVG.									
RESULTS	0.24	0.69	0.73	0.73	0.77	0.71	0.079	0.16	0.24
%									
RECOVERY	100	96	101	101	107	99	99	100	100

ANALYSTS: CGO

REVIEWED: MH

REVIEWED: *[Signature]*

Table A-3. Explosives and Perchlorate Parameters and Reporting Limits in Water (in ug/L)

Parameter	Reporting Limit (ug/L)
Picric Acid	40
Nitrobenzene (NB)	0.030
2-Nitrotoluene (2-NT)	0.090
3-Nitrotoluene (3-NT)	0.090
4-Nitrotoluene (4-NT)	0.090
Nitroglycerin (NG)	0.090
1,3-Dinitrobenzene (1,3-DNB)	0.090
2,6-Dinitrotoluene (2,6-DNT)	0.010
2,4-Dinitrotoluene (2,4-DNT)	0.020
1,3,5-Trinitrobenzene (TNB)	0.030
2,4,6-Trinitrotoluene (TNT)	0.030
RDX	0.10
4-Amino-2,6-dinitrotoluene (4AM26DNT)	0.10
2-Amino-4,6-dinitrotoluene (2AM46DNT)	0.10
Tetryl	0.50
HMX	3.0
PETN	0.40
Nitroguanidine (NQ)	50
Perchlorate	0.114

NOTES:

Explosives: Eighteen ground-water samples were collected on 14-20 January 2003. The samples were extracted on 21 and 23 January 2003. All samples were extracted within the required analytical holding times. Note that the aliquots analyzed for Nitroguanidine did not require extraction. The samples were analyzed between 21 and 31 January 2003 using GC/ECD for CAD 13.2 (modified for PETN) and HPLC for CAD 45.1. All analytes for the ground water samples were below the reporting limits. Results for blind control samples, matrix spikes, matrix spike duplicates, and surrogate recoveries were within specified limits.

Picric Acid: Seventeen ground-water samples were received by the laboratory on 24 January for the determination of picric acid. The samples were analyzed on 27 and 28 January using CAD SOP 63.1. There were no deviations from the SOP. There were no detections of picric acid at or above 40 ppb. Matrix spikes were performed on LC-MW-01S, LC-MW-05D, and LC-MW-07S and the recoveries were 107%, 117%, and 112%, respectively.

Perchlorate: Eighteen ground-water samples were analyzed by Data Chem Laboratories for perchlorate using EPA Method 314.0. All samples were analyzed within the 28-day holding time. No dilutions were necessary. Method QC, MS/MSD analysis, and instrument QC were within acceptable parameters. Additional spiking of samples LC-MW-01D, LC-MW-05D and LC-MW-07S was done to confirm the presence of perchlorate in the field samples. The spike results seem to indicate that those recoveries, though small, were accurate.

Additional QA/QC data are presented on the following 28 pages.

Lab Control/Lab Control Duplicate
 Volatiles by GC - Water

Batch Number.....: 03023A51A
 Date.....: 01/23/03
 Matrix.....: Water
 Instrument.....: 5890-51
 Calibration Date.....: 12/02/02 - 12/03/02 (FID)

This LCS/LDS applies to the
 following samples:
 3982234 3982235 3982236 3982237
 3982238 3982239 3982240

Compound	Spike Added (UG/L)	LCS Conc (UG/L)	LDS Conc (UG/L)	LCS % Recov	LDS % Recov	LCS Limits Recov	RPD	LCS Limits RPD
GRO	1100	1190	1150	109	104	74-116	4	30

LCS=Lab Control Sample; LDS=Lab Control Sample Duplicate; RPD=Relative Percent Difference

* = Value outside quality control limits.

Quality Control Summary
 SDG# PSJ89

Matrix Spike
 Volatiles by GC - Water

Spiked Sample Number.....: 3982240
 Unspiked Sample Number.....: 3982240MS
 Batch Number.....: 03023A51A
 Date.....: 01/23/03
 Matrix.....: Water
 Instrument.....: 5890-51

This MS applies to the following samples:
 3982234 3982235 3982236 3982237
 3982238 3982239 3982240

Compound	Spike	Sample	MS	MS	QC
	Added	Conc	Conc	%	Limits
	(UG/L)	(UG/L)	(UG/L)	Recov	Recov
GRO	1100	0.00	1210	110	74-132

MS=Matrix Spike; ND=None Detected

* = Recovery outside quality control limits.

Method Blank
 Volatiles by GC - Water

Blank ID.....: BLK5162
 Date.....: 01/23/03
 Instrument.....: 5890-51

Batch Number.....: O3023A51A
 Time.....: 15:19
 Matrix.....: Water

Sample Information				
LL Sample#	Sample Code	Analysis		
		Date	Time	
LCS5162	LAB CONTROL	01/23/03	16:25	
LDS5162	LAB CON DUP	01/23/03	16:57	
3982235	267-2	01/23/03	17:50	
3982236	267-3	01/23/03	18:22	
3982237	267-4	01/23/03	18:55	
3982238	267-5	01/23/03	19:28	
3982239	267-6	01/23/03	20:00	
3982240	267-7	01/23/03	20:33	
3982234	267-1	01/24/03	00:21	
3982240MS	267-7	01/24/03	00:54	

Method Blank Results				
CAS Number	Compound	Blank	LOQ	MDL
		Conc. (UG/L)	(UG/L)	(UG/L)
0000-00-0	GRO	ND	50	20

LOQ = Limit of Quantitation; MDL = Method Detection Limit
 ND = None Detected; * = Above Limit of Quantitation

Surrogate Recovery
 Volatiles by GC - Water

LL Sample#	Sample Code	Dilution Factor	TFT-F Water-FID % Recovery	TOT OUT
3982234	267-1	1.0	93	
3982235	267-2	1.0	94	
3982236	267-3	1.0	93	
3982237	267-4	1.0	94	
3982238	267-5	1.0	94	
3982239	267-6	1.0	95	
3982240	267-7	1.0	93	
3982240MS	267-7	1.0	96	
BLK5162	METHOD BLANK	1.0	92	
LCS5162	LAB CONTROL	1.0	97	
LDS5162	LAB CON DUP	1.0	95	

* = Values outside quality control limits.

D = Surrogates diluted - not counted towards total out.

TOT OUT = Total # of surrogates with recovery outside control limits.

TFT-F = Trifluorotoluene (Water - FID)

Control Limits
 Lower Upper
 57 146

Lab Control/Lab Control Duplicate
 Volatiles by GC - Water

Batch Number.....: 03023A51A
 Date.....: 01/23/03
 Matrix.....: Water
 Instrument.....: 5890-51
 Calibration Date.....: 12/02/02 - 12/03/02 (FID)

This LCS/LDS applies to the
 following samples:
 3982241 3982242 3982243 3982244

Compound	Spike Added (UG/L)	LCS Conc (UG/L)	LDS Conc (UG/L)	LCS % Recov	LDS % Recov	LCS Limits Recov	RPD	LCS Limits RPD
GRO	1100	1190	1150	109	104	74-116	4	30

LCS=Lab Control Sample; LDS=Lab Control Sample Duplicate; RPD=Relative Percent Difference

* = Value outside quality control limits.

Quality Control Summary
 SDG# PSJ90

Matrix Spike
 Volatiles by GC - Water

Unspiked Sample Number.....: 3982240
 Spiked Sample Number.....: 3982240MS
 Batch Number.....: 03023A51A
 Date.....: 01/23/03
 Matrix.....: Water
 Instrument.....: 5890-51

This MS applies to the
 following samples:
 3982241 3982242 3982243 3982244

Compound	Spike	Sample	MS	MS	QC
	Added	Conc	Conc	%	Limits
	(UG/L)	(UG/L)	(UG/L)	Recov	Recov
GRO	1100	0.00	1210	110	74-132

MS=Matrix Spike; ND=None Detected

* = Recovery outside quality control limits.

01-23-03

Quality Control Summary
 SDG# PSJ90

Method Blank
 Volatiles by GC - Water

Blank ID.....: BLK5162
 Date.....: 01/23/03
 Instrument.....: 5890-51

Batch Number.....: 03023A51A
 Time.....: 15:19
 Matrix.....: Water

Sample Information			
LL Sample#	Sample Code	Analysis	
		Date	Time
LCS5162	LAB CONTROL	01/23/03	16:25
LDS5162	LAB CON DUP	01/23/03	16:57
3982240		01/23/03	20:33
3982241	274-1	01/23/03	21:05
3982242	274-2	01/23/03	21:38
3982243	274-3	01/23/03	22:11
3982244	274-4	01/23/03	22:43
3982240MS		01/24/03	00:54

Method Blank Results				
CAS Number	Compound	Blank	LOQ	MDL
		Conc. (UG/L)	(UG/L)	(UG/L)
0000-00-0	GRO	ND	50	20

LOQ = Limit of Quantitation; MDL = Method Detection Limit
 ND = None Detected; * = Above Limit of Quantitation

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MSD)
 FIELD ID: LC-MW-01M
 COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
 ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/L).

	NB	2-NT	3-NT	4-NT	NG	1,3-DNB	2,6-DNT	2,4-DNT	1,3,5-TNB
AVG.									
RESULTS	< 0.030	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.010	< 0.020	< 0.030

MATRIX SPIKE

AMT									
ADDED	0.24	0.72	0.72	0.72	0.72	0.72	0.080	0.16	0.24
AVG.									
RESULTS	0.24	0.68	0.73	0.73	0.82	0.71	0.078	0.16	0.24
%									
RECOVERY	100	94	101	101	114	99	98	100	100
% RPD	0	1.5	0	0	6.3	0	1.3	0	0

ANALYSTS: CGD

REVIEWED: mH

REVIEWED: *[Signature]*

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MSD)
 FIELD ID: LC-MW-01M
 COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
 ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/L)

	2,4,6-TNT	RDX	4AM26DNT	2AM46DNT	Tetryl	HMX
AVG.						
RESULTS	< 0.030	< 0.10	< 0.10	< 0.10	< 0.50	< 3.0

MATRIX SPIKE

AMT	2,4,6-TNT	RDX	4AM26DNT	2AM46DNT	Tetryl	HMX
ADDED	0.24	0.96	1.2	1.2	1.2	19.2
AVG.						
RESULTS	0.24	0.94	1.2	1.2	1.2	19.5
%						
RECOVERY	100	98	100	100	100	102
% RPD	0	1.1	0	0	8.0	2.6

ANALYSTS: CGO

VIEWED: MH

VIEWED: *[Signature]*

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MS)
FIELD ID: LC-MW-01M
COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2 (modified)

PRIMARY COLUMN ANALYSIS:

(Result reported as ug/L)

<u>PETN</u>	
AVG.	
RESULTS	< 0.40

MATRIX SPIKE

AMT	
ADDED	8.0
AVG.	
RESULTS	8.8
%	
RECOVERY	110

ANALYSTS: mh

REVIEWED: CGO

REVIEWED: *[Signature]*

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MSD)
FIELD ID: LC-MW-01M
COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2 (modified)

PRIMARY COLUMN ANALYSIS:

(Result reported as ug/L)

PETN

AVG.
RESULTS < 0.40

MATRIX SPIKE

AMT
ADDED 8.0
AVG.
RESULTS 9.8
%
RECOVERY 123
% RPD 11

ANALYSTS: MH
REVIEWED: CGO
REVIEWED: RMM

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MS)
FIELD ID: LC-MW-01M
COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: N/A
ANALYSIS DATE: 21 JAN 03

Analyzed by CAD SOP 45.1

PRIMARY COLUMN ANALYSIS:

(Result reported as ug/L)

NO	
AVG.	
RESULTS	< 50

MATRIX SPIKE

AMT	
ADDED	500
AVG.	
RESULTS	510
%	
RECOVERY	102

ANALYSTS: *Paul*
REVIEWED: *GO*
REVIEWED: *Ryman*

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 7267003 (MSD)
FIELD ID: LC-MW-01M
COLLECTION DATE: 14 JAN 03

ANALYSIS INFORMATION:

EXTRACTION DATE: N/A
ANALYSIS DATE: 21 JAN 03

Analyzed by CAD SOP 45.1

PRIMARY COLUMN ANALYSIS:

(Result reported as ug/L)

NO

AVG.
RESULTS < 50

MATRIX SPIKE

AMT
ADDED 500
AVG.
RESULTS 410

%
RECOVERY 82

% RPD 22

ANALYSTS: *Reis*
REVIEWED: *CGO*
REVIEWED: *RMM*

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

CAD QC NUMBER: 03CAD2-5
FIELD ID: INTERNAL QC CHECK
COLLECTION DATE: N/A


ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2

(All results reported as ug/L)

Sample Results:	Theoretical Amt. Added:	Percent Recovery: (%)
NB	0.25	0.24
2-NT	0.70	0.72
3-NT	0.75	0.72
4-NT	0.75	0.72
NG	0.69	0.72
1,3-DNB	0.78	0.72
2,6-DNT	0.082	0.080
2,4-DNT	0.17	0.16
3,4-DNT	0.13	0.12
1,3,5-TNB	0.25	0.24
2,4,6-TNT	0.23	0.24
RDX	0.84	0.96
4AM26DNT	0.77	0.80
2AM46DNT	0.81	0.80
Tetryl	1.2	1.2
HMX	18.4	19.2

ANALYSTS: CGO
REVIEWED: MH
REVIEWED: 

ANALYSIS OF EXPLOSIVES IN WATER FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

CAD QC NUMBER: 03CAD2-6
FIELD ID: INTERNAL QC CHECK
COLLECTION DATE: N/A

ANALYSIS INFORMATION:

EXTRACTION DATE: 21 JAN 03
ANALYSIS DATE: 27 JAN 03

Analyzed by CAD SOP 13.2 (modified)

(Result reported as ug/L)

Sample Results:	Theoretical Amt. Added:	Percent Recovery: (%)
PETN 9.0	8.0	113

SAMPLE INFORMATION:

CAD QC NUMBER: 03CAD2-7
FIELD ID: INTERNAL QC CHECK
COLLECTION DATE: N/A

ANALYSIS INFORMATION:

EXTRACTION DATE: N/A
ANALYSIS DATE: 21 JAN 03

Analyzed by CAD SOP 45.1

(Result reported as ug/L)

Sample Results:	Theoretical Amt. Added:	Percent Recovery: (%)
NQ 440	500	88

ANALYSTS: *Rob, MH*
REVIEWED: *CGD*
REVIEWED: *AMM*

From Page No. _____

Jan 03

Analysis of water samples for picric acid, the LC conditions can be found on page 35 with the following change.

eluent: 65% H₂O : 32% MeOH : 3% 0.5% Ammonium Acetate
inj vol 25 µl

The MSD was not used to acquire data.

See page 8 for standard preparation. A matrix spike was prepared by spiking 10 ml of sample with 2 µl of 1.06 µg/µl Picric acid stock 100% yield 212 PPB sample was injected as received. All std prepared in DI water.

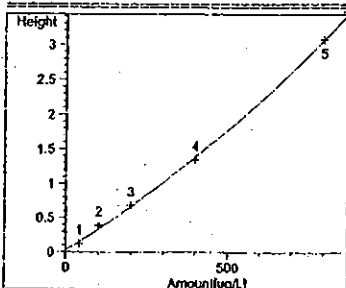
File	Sample ID	MS#	Area Height	Result (PPB)
Picric15	40 PPB STD	————	1.29E-1	33.3
Picric16	100 PPB STD	————	3.93E-1	118
Picric17	200 PPB STD	————	6.82E-1	206
Picric18	400 PPB STD	————	1.34	390
Picric19	800 PPB STD	————	3.08	802
Picric20	200 PP BLANK	————	————	< 40
Picric21	* 200 PPB LCS	————	6.99E-1	211 (99.5%)
Picric22	LC-MW-01B	7267001-25 727	————	< 40
Picric23	LC-MW-01D	7267002-24	————	< 40
Picric24	LC-MW-01M	7267003-24	————	< 40
Picric25	LC-MW-04S	7267004-24	————	< 40
Picric26	LC-MW-04D	7267005-24	————	< 40
Picric27	LC-MW-02S	7267006-24	————	< 40
Picric28	LC-MW-02D	7267007-24	————	< 40
Picric29	LC-MW-01S MS	7267001-25 MS	7.53E-1	227 (107%)
Picric3-	200 PPB STD	————	7.16E-1	216 (108%)

RetTime [min]	Lvl Sig	Amount [ug/L]	Height	Amt/Height	Ref Grp Name
3.255	1	1 40.00000	1.28501e-1	311.28278	picric acid
		2 100.00000	3.92964e-1	254.47635	
		3 200.00000	6.81882e-1	293.30590	
		4 400.00000	1.34002	298.50326	
		5 800.00000	3.07596	260.08143	

Peak Sum Table

No Entries in table

Calibration Curves



picric acid at exp. RT: 3.255
 DAD1 A, Sig=360,2 Ref=400,8
 Correlation: 0.99950
 Residual Std. Dev.: 0.04072
 Formula: $y = ax^2 + bx + c$
 a: 1.07005e-6
 b: 2.94332e-3
 c: 2.92259e-2
 x: Amount [ug/L]
 y: Height

A-57

* LCS was prepared by spiking 2 µl of 1.06 µg/µl stock in 10 ml H₂O

Witnessed

To Page No.

Date

1. 2. 23

Page No. _____

JAN 03

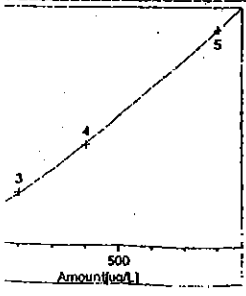
Continue with analysis of water samples for Picric acid. See page for analytical scheme. Change notes at bottom of page. All standards prepared in water.

IC	Sample ID	MS#	Height	Result (PPB)
IC31	40 PPB	_____	2.08e-1	44.3
IC32	100 PPB	_____	4.45e-1	103
IC33	200 PPB	_____	8.59e-1	204
IC34	400 PPB	_____	1.67	394
IC35	800 PPB	_____	3.55	800
IC36	200 PPB CHK	_____	9.05e-1	215 (108%)
IC37	LAB Blank	_____	_____	< 40
IC38	200 PPB LCS	_____	9.46e-1	225 (106%)
IC39	LC-MW-05D	7274001-20	_____	< 40
IC40	LC-MW-05D MS	7274001-20 MS	1.05	248 (117)
IC41	LC-MW-03S	7274002-23	_____	< 40
IC42	LC-MW-03D	7274003-23	_____	< 40
IC43	LC-MW-05S	7274004-23	_____	< 40
IC44	LC-MW-10S	7274005-12	_____	< 40
IC45	LC-MW-10D	7274006-12	_____	< 40
IC46	LC-MW-11S	7274007-12	_____	< 40
IC47	LC-MW-08S	7274008-12	_____	< 40
IC48	LC-MW-09S	7274009-12	_____	< 40
IC49	LC-MW-06S	7274010-12	_____	< 40
50	LC-MW-07S	7274011-12	_____	< 40
CS1	LC-MW-07S MS	7274011-12 MS	1.00	238 (112%)
v1	Amount [ug/L]	Height	Amt/Height Ref Grp Name	
				9.77e-1
1	40.00000	2.08827e-1	191.54638	picric acid
2	100.00000	4.43089e-1	225.68814	
3	200.00000	8.69607e-1	229.98902	
4	400.00000	1.66994	239.53015	
5	800.00000	3.55177	225.23989	

Peak Sum Table

es in table***

Calibration Curves



picric acid at exp. RT: 2.520
 DAD1 A, Sig=360,2 Ref=400,8
 Correlation: 0.99983
 Residual Std. Dev.: 0.02769
 Formula: $y = ax^2 + bx + c$
 a: 5.70156e-7
 b: 3.93628e-3
 c: 3.26349e-2
 x: Amount[ug/L]
 y: Height

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To Page No. _____

Invented by	Date
	21-03



FORM A (TYPE I)
SINGLE METHOD ANALYSES

Form RLIMS63A-V1.3
01300312063886
Page 14

SAMPLE ANALYSIS DATA SHEET



S030W02R

Date Printed.....: 30-JAN-03 12:06
Client Name.....: USACHPPM
Client Ref Number.....: JPG# 02-P-0962/7274/038D01
Sampling Site.....: Not Applicable
Release Number.....: CPB003
Date Received.....: Not Applicable

Client Sample Name: BL-203875-1
DCL Sample Name....: BL-203875-1
DCL Report Group...: 03C-0014-01
Matrix.....: WATER
Date Sampled.....: Not Applicable
Reporting Units...: µg/L

DCL Preparation Group: Not Applicable
Date Prepared.....: Not Applicable
Preparation Method...: Not Applicable
Aliquot Weight/Volume: Not Applicable
Net Weight/Volume....: Not Required

DCL Analysis Group: G030W00L
Analysis Method...: EPA 314.0
Instrument Type...: IC
Instrument ID.....: IC-5
Column Type.....: Dionex AS16
 Primary
 Confirmation

Analytical Results

Analyte	Date Analyzed	MDL	Result	Comment	Qual.	Dilution	CRDL
Perchlorate	28-JAN-03 11:53	0.114	ND		U	1	1.0



FORM B (TYPE I)
SINGLE METHOD ANALYSES

Form RLIMS63B-V1.3
01300312063886
Page 15

QUALITY CONTROL DATA SHEET
LABORATORY CONTROL SAMPLE (LCS)



Client Name.....: USACHPPM
Release Number.....: CPB003

Matrix.....: WATER
Reporting Units.....: ug/L

DCL Preparation Group: Not Applicable
Date Prepared.....: Not Applicable
Preparation Method...: Not Applicable

DCL Sample Name....: QC-203875-1
Date Printed.....: 30-JAN-03 12:06

DCL Analysis Group: G030W00L
Analysis Method....: 314.0
Instrument Type....: IC
Instrument ID.....: IC-5
Column Type.....: Dionex AS16
 Primary
 Confirmation

QC Limit Type.....: Method

Analytical Results

Analyte	Date Analyzed	Target	Result	Percent Recovery	QC Limits	QC Flag
Perchlorate	28-JAN-03 12:31	25.0	25.2	101.	80.3/115.	

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FORM F (TYPE I)
SINGLE METHOD ANALYSES

Form RLIMS63F-V1.3
01300312063886
Page 16

QUALITY CONTROL DATA SHEET
MATRIX SPIKE SAMPLE
MATRIX SPIKE DUPLICATE SAMPLE



Client Name.....: USACHPPM
Release Number.....: CPB003

DCL Sample Name....: 03C00121MS
Date Printed.....: 30-JAN-03 12:06

Matrix.....: WATER
Reporting Units.....: ug/L

DCL Analysis Group: G030W00L
Analysis Method....: 314.0
Instrument Type....: IC
Instrument ID.....: IC-5
Column Type.....: Dionex AS16
 Primary
 Confirmation

DCL Preparation Group: Not Applicable
Date Prepared.....: Not Applicable
Preparation Method...: Not Applicable

QC Limit Type.....: Method

Analytical Results

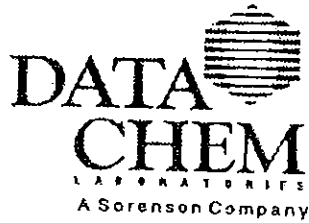
Analyte	Date Analyzed	Sample Result	Spiked Result	Spike Added	Percent Recovery	QC Limits	QC Flag
Perchlorate	28-JAN-03 13:27	ND	53.3	50.0	107.	80.0/120.	



DCL Sample Name....: 03C00121MSD

Analytical Results

Analyte	Date Analyzed	Duplicate Result	Percent Recovery	Mean	Range	RPD	QC Limits	QC Flag
Perchlorate	28-JAN-03 13:46	50.0	99.9	51.6	3.29	6.4	0.00/15.0	



Initial Calibration Verification Form

Initial Calibration Date: 11/11/2002 Sample Name: QCS (200 ug/L)
Instrument ID: IC-5 Date and Time Analyzed: 11/11/2002 23:26

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	199.6	200.0	0.2%	Pass

Control limit = $\pm 10\%$

Comments: None.



Instrument Performance Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: IPC (25.0 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 11:35

Conductivity					
Target Source	Measured Amount	Target Amount	Percent Difference	Pass/Fail	Criteria
MCT	3430	3370	1.8%	Pass	+ 10%
Original IPC	3430	3470	1.2%	Pass	± 10%

Recovery					
Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail	Criteria
Perchlorate	23.80	25.00	4.8%	Pass	± 20%

Peak Area					
Compound	IPC A/H Ratio	LFB A/H Ratio	Percent Difference	Pass/Fail	Criteria
Perchlorate	16.19	15.58	3.9%	Pass	± 25%

Retention Time					
Compound	Retention Time	Observed Retention Time	Percent Difference	Pass/Fail	Criteria
Calibration Curve	10.34	10.81	4.3%	Pass	± 20%
Previous IPC	10.84	10.81	0.3%	Pass	± 5%

Comments: None.



Initial Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: ICCS (1.00 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 12:12

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	1.1804	1.0000	18.0%	Pass

Control limit = $\pm 25\%$

Comments: None.



Continuing Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: CCCS (50 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 16:34

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	50.94	50.00	1.9%	Pass

Control limit = $\pm 15\%$

Comments: None.



Ending Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: ECCS (500 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 20:04

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	518.3	500.0	3.7%	Pass

Control limit = $\pm 15\%$

Comments: None.

DataChem Laboratories
LIMS - Sample Master System
Analysis Group Report

Date: 28-JAN-2003 12:26
User: MCKAY

Page: 1
RLIMS15-V1.2

Analysis Run Name: G030W00L

Group ID: G030W00L

Samples: 22

Pos	Laboratory Sample Name	Field Sample Name 1	Field Sample Name 2	Laboratory Sample ID	Laboratory Group Name	Acct. Number
1	BL-203875-1	BL-203875-1		S030W02R	03C-0014-01	08001
2	QC-203875-1	QC-203875-1		S030W02S	03C-0014-01	08001
3	03C00120	LC-MW-02D	7267007	S030POLG	03C-0014-01	08001
4	03C00121	LC-MW-02S	7267006	S030POLH	03C-0014-01	08001
5	03C00121MS	LC-MW-02S	7267007	S030W04P	03C-0014-01	08001
6	03C00121MSD	LC-MW-02S	7267007	S030W04Q	03C-0014-01	08001
7	03C00122	LC-MW-01D	7267002	S030POLJ	03C-0014-01	08001
8	03C00123	LC-MW-01M	7267003	S030POLK	03C-0014-01	08001
9	03C00124	LC-MW-01S	7267001	S030POLL	03C-0014-01	08001
10	03C00125	LC-MW-04D	7267005	S030POLM	03C-0014-01	08001
11	03C00126	LC-MW-04S	7267004	S030POLN	03C-0014-01	08001
12	03C00127	LC-MW-5D	7274001	S030Q072	03C-0015-01	08001
13	03C00128	LC-MW-03D	7274003	S030Q073	03C-0015-01	08001
14	03C00129	LC-MW-11S	7274007	S030Q074	03C-0015-01	08001
15	03C00130	LC-MW-10S	7274005	S030Q075	03C-0015-01	08001
16	03C00131	LC-MW-10D	7274006	S030Q076	03C-0015-01	08001
17	03C00132	LC-MW-05S	7274004	S030Q077	03C-0015-01	08001
18	03C00133	LC-MW-06S	7274010	S030Q078	03C-0015-01	08001
19	03C00134	LC-MW-07S	7274011	S030Q079	03C-0015-01	08001
20	03C00135	LC-MW-03S	7274002	S030Q07B	03C-0015-01	08001
21	03C00136	LC-MW-08S	7274008	S030Q07C	03C-0015-01	08001
22	03C00137	LC-MW-09S	7274009	S030Q07D	03C-0015-01	08001

----- END OF LISTING -----



FORM B (TYPE I)
SINGLE METHOD ANALYSES

Form RLIMS63B-V1.3
01300312061101
Page 11

QUALITY CONTROL DATA SHEET
LABORATORY CONTROL SAMPLE (LCS)



Client Name.....: USACHPPM
Release Number.....: CPB002

DCL Sample Name....: QC-203875-1
Date Printed.....: 30-JAN-03 12:06

Matrix.....: WATER
Reporting Units.....: ug/L

DCL Analysis Group: G030W00L
Analysis Method....: 314.0
Instrument Type....: IC
Instrument ID.....: IC-5
Column Type.....: Dionex AS16

Primary
 Confirmation

DCL Preparation Group: Not Applicable
Date Prepared.....: Not Applicable
Preparation Method...: Not Applicable

QC Limit Type.....: Method

Analytical Results

Analyte	Date Analyzed	Target	Result	Percent Recovery	QC Limits	QC Flag
Perchlorate	28-JAN-03 12:31	25.0	25.2	101.	80.3/115.	

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FORM F (TYPE I)
SINGLE METHOD ANALYSES

QUALITY CONTROL DATA SHEET
MATRIX SPIKE SAMPLE
MATRIX SPIKE DUPLICATE SAMPLE

Form RLIMS63F-V1.3
01300312061101
Page 12



Client Name.....: USACHPPM
Release Number.....: CPB002

DCL Sample Name....: 03C00121MS
Date Printed.....: 30-JAN-03 12:06

Matrix.....: WATER
Reporting Units.....: ug/L

DCL Analysis Group: G030W00L
Analysis Method....: 314.0
Instrument Type....: IC
Instrument ID.....: IC-5
Column Type.....: Dionex AS16
 Primary
 Confirmation

DCL Preparation Group: Not Applicable
Date Prepared.....: Not Applicable
Preparation Method...: Not Applicable

QC Limit Type.....: Method

Analytical Results

Analyte	Date Analyzed	Sample Result	Spiked Result	Spike Added	Percent Recovery	QC Limits	QC Flag
Perchlorate	28-JAN-03 13:27	ND	53.3	50.0	107.	80.0/120.	



DCL Sample Name....: 03C00121MSD

Analytical Results

analyte	Date Analyzed	Duplicate Result	Percent Recovery	Mean	Range	RPD	QC Limits	QC Flag
Perchlorate	28-JAN-03 13:46	50.0	99.9	51.6	3.29	6.4	0.00/15.0	



Initial Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: QCS (200 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 11/11/2002 23:26

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	199.6	200.0	0.2%	Pass

Control limit = $\pm 10\%$

Comments: None.



Instrument Performance Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: IPC (25.0 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 11:35

Conductivity					
Target Source	Measured Amount	Target Amount	Percent Difference	Pass/Fail	Criteria
MCT	3430	3370	1.8%	Pass	± 10%
Original IPC	3430	3470	1.2%	Pass	± 10%

Recovery					
Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail	Criteria
Perchlorate	23.80	25.00	4.8%	Pass	± 20%

Peak Area					
Compound	IPC A/H Ratio	LFB A/H Ratio	Percent Difference	Pass/Fail	Criteria
Perchlorate	16.19	15.58	3.9%	Pass	± 25%

Retention Time					
Compound	Retention Time	Observed Retention Time	Percent Difference	Pass/Fail	Criteria
Calibration Curve	10.34	10.81	4.3%	Pass	± 20%
Previous IPC	10.84	10.81	0.3%	Pass	± 5%

Comments: None.



Initial Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: ICCS (1.00 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 12:12

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	1.1804	1.0000	18.0%	Pass

Control limit = +25%

Comments: None.



Continuing Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: CCCS (50 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 16:34

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	50.94	50.00	1.9%	Pass

Control limit = $\pm 15\%$

Comments: None.



Ending Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: ECCS (500 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 1/28/2003 20:04

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	518.3	500.0	3.7%	Pass

Control limit = $\pm 15\%$

Comments: None.

Table A-4. Explosives Parameters and Reporting Limits for Soils (in ug/g)

Analyte	Soil Reporting Limit (ug/g)
Nitrobenzene (NB)	0.050
2-Nitrotoluene (2-NT)	0.050
3-Nitrotoluene (3-NT)	0.050
4-Nitrotoluene (4-NT)	0.050
Nitroglycerin (NG)	0.050
1,3-Dinitrobenzene (1,3-DNB)	0.050
2,6-Dinitrotoluene (2,6-DNT)	0.050
2,4-Dinitrotoluene (2,4-DNT)	0.050
1,3,5-Trinitrobenzene (TNB)	0.050
2,4,6-Trinitrotoluene (TNT)	0.050
RDX	0.050
4-Amino-2,6-dinitrotoluene (4AM26DNT)	0.050
2-Amino-4,6-dinitrotoluene (2AM46DNT)	0.050
Tetryl	0.050
HMX	0.10
PETN	0.050
Nitroguanidine	1.2

Table A-5. Perchlorate Reporting Limits for Soils (mg/Kg)

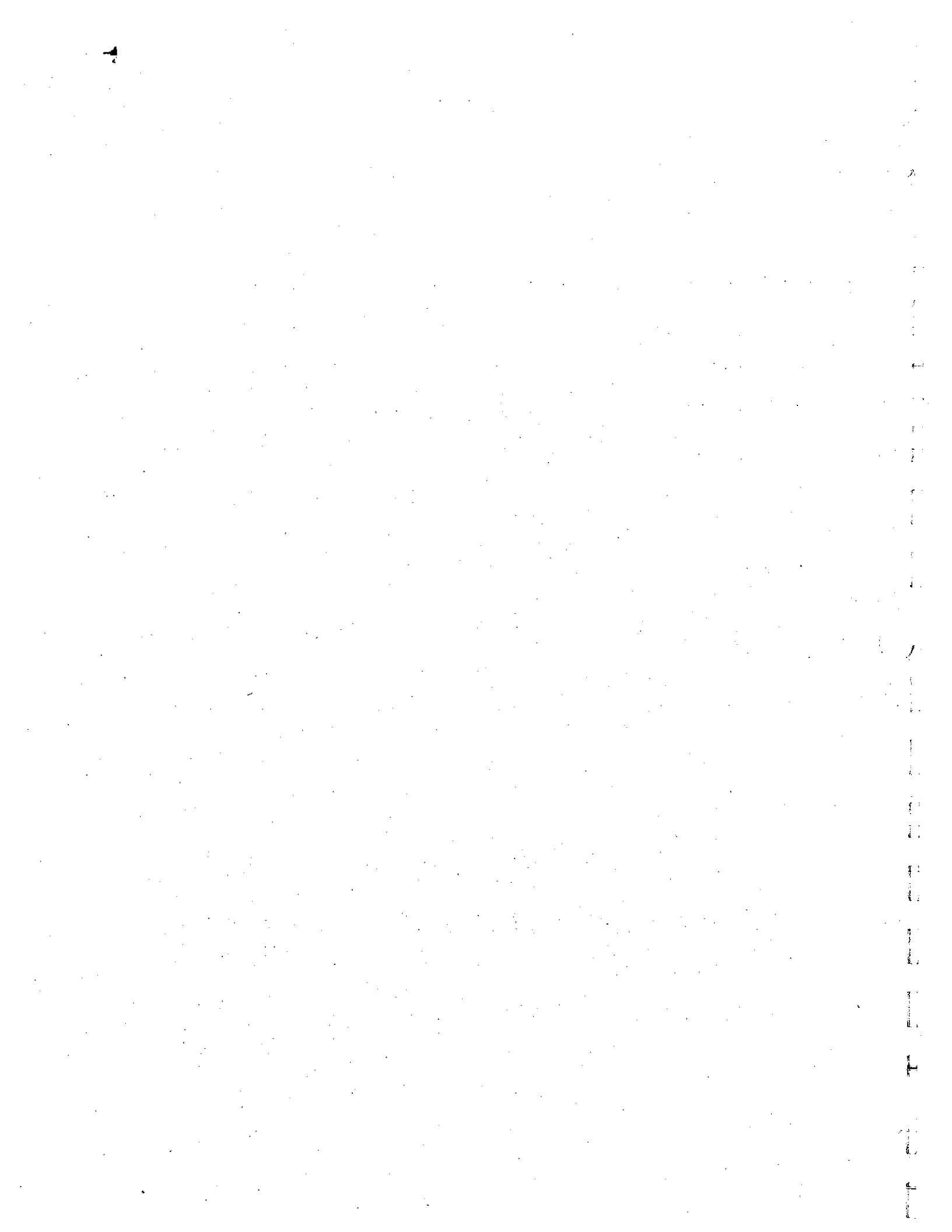
Sample ID	Method Detection Limit in Soil (mg/Kg)
LC-MW-05S-0	0.0040
LC-MW-05S-10	
LC-MW-05S-2, -5	0.0043
LC-MW-06S-2	
LC-MW-07S-2, -10	
LC-MW-08S-0	
LC-MW-05S-15	0.0052
LC-MW-07S-15	
LC-MW-07S-0	0.0042
LC-MW-07S-5	0.0046
LC-MW-06S-0, -5	0.0044
LC-MW-08S-2	
LC-MW-08S-5	0.0047
LC-MW-08S-15	0.0048

NOTES:

Explosives: Seventeen soil samples were submitted for explosives analysis. The samples were collected on 15 and 16 November 2002, and were extracted on 25 November 2002 using CAD 55.2 (explosives and PETN) and CAD 45.1 (Nitroguanidine). All samples were extracted within the required analytical holding times. The soil extracts were analyzed between 26 November and 07 December 2002 using GC/ECD for CAD 55.2, GC/MSD for CAD 55.2 modified (PETN) and HPLC for CAD 45.1 modified (Nitroguanidine). Several of the soil samples had positive results for some of the analytes. Note that there are also several estimated results reported for RDX that were below the reporting limit but above the detection limit. All other analytes for the soil samples were below the reporting limits. Results are reported on a dry weight basis. All QA/QC results were within expected limits.

Perchlorate: Seventeen soil samples were analyzed for perchlorate using EPA Method 314.0, modified to analyze soil samples. All samples were analyzed within the 28-day holding time, and no dilutions were necessary. Method blank recovery, MS/MSD recovery and RPD, and instrument calibrations were within acceptable parameters. Low-level (5 ug/L) spiking of sample LC-MW-05S-0 was done to show that matrix interference was not masking any perchlorate that may have been present.

Additional QA/QC data are provided on the following 17 pages.



ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MS
 FIELD ID: LC-MW-06S-2
 COLLECTION DATE: 16 NOV 02

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
 ANALYSIS DATE: 02 DEC 02

Sample Wt: 2.0 grams

Analyzed by CAD SOP 55.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/g)

	NB	2-NT	3-NT	4-NT	NG	1,3-DNB	2,6-DNT	2,4-DNT	1,3,5-TNB
AVG. RESULTS	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

MATRIX SPIKE

AMT ADDED	NB	2-NT	3-NT	4-NT	NG	1,3-DNB	2,6-DNT	2,4-DNT	1,3,5-TNB
VG. RESULTS	2.25	2.26	2.36	2.37	2.39	2.42	2.46	2.39	2.40
% RECOVERY	90	90	94	95	96	97	98	96	96

ANALYSTS: CGD

REVIEWED: MH

REVIEWED: RJV

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MS
 FIELD ID: LC-MW-06S-2
 COLLECTION DATE: 16 NOV 02

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
 ANALYSIS DATE: 02 DEC 02

Sample Wt: 2.0 grams

Analyzed by CAD SOP 55.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/g)

	2,4,6-TNT	RDX	4AM26DNT	2AM46DNT	Tetryl	HMX
AVG. RESULTS	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10

MATRIX SPIKE

	2,4,6-TNT	RDX	4AM26DNT	2AM46DNT	Tetryl	HMX
AMT ADDED	2.50	2.50	2.50	2.50	2.50	2.50
AVG. RESULTS	2.47	2.21	2.21	2.42	2.66	2.33
% RECOVERY	99	88	88	97	106	93

ANALYSTS: *CB*
 REVIEWED: *MH*
 REVIEWED: *RJV*

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MSD
 FIELD ID: LC-MW-06S-2
 COLLECTION DATE: 16 NOV 02

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
 ANALYSIS DATE: 02 DEC 02

Sample Wt: 2.0 grams

Analyzed by CAD SOP 55.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/g)

	NB	2-NT	3-NT	4-NT	NG	1,3-DNB	2,6-DNT	2,4-DNT	1,3,5-TNB
AVG. RESULTS	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

MATRIX SPIKE

AMT									
DEDED	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
AVG. RESULTS	2.28	2.32	2.42	2.40	2.40	2.46	2.52	2.44	2.42
% RECOVERY	91	93	97	96	96	98	101	98	97
% RPD	1.3	2.6	2.5	1.3	0.42	1.6	2.4	2.1	0.83

ANALYSTS: *GD*
 REVIEWED: *MN*
 REVIEWED: *RV*

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MSD
 FIELD ID: LC-MW-06S-2
 COLLECTION DATE: 16 NOV 02

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
 ANALYSIS DATE: 02 DEC 02

Sample Wt: 2.0 grams

Analyzed by CAD SOP 55.2

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/g)

	2,4,6-TNT	RDX	4AM26DNT	2AM46DNT	Tetryl	HMX
AVG. RESULTS	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10

MATRIX SPIKE

	2,4,6-TNT	RDX	4AM26DNT	2AM46DNT	Tetryl	HMX
AMT ADDED	2.50	2.50	2.50	2.50	2.50	2.50
AVG. RESULTS	2.52	2.29	2.41	2.50	2.73	2.48
% RECOVERY	101	92	96	100	109	99
% RPD	2.0	3.6	8.7	3.3	2.6	6.2

ANALYSTS: (GO
 REVIEWED: MH
 REVIEWED: RTV

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MS
FIELD ID: LC-MW-06S-2
COLLECTION DATE: 16 NOV 02

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
ANALYSIS DATE: 02 DEC 02

Analyzed by CAD SOP 55.2 (modified)

Sample Wt: 2.0 grams

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/g)

PETN

AVG.
RESULTS < 0.050

MATRIX SPIKE

AMT
ADDED 2.50
AVG.
RESULTS 2.32
%
RECOVERY 93

ANALYSTS: RWB

REVIEWED: MH

REVIEWED: RTV

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MSD
FIELD ID: LC-MW-06S-2
COLLECTION DATE: 16 NOV 02

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
ANALYSIS DATE: 02 DEC 02

Sample Wt: 2.0 grams

Analyzed by CAD SOP 55.2 (modified)

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/g)

PETN

AVG.
RESULTS < 0.050

MATRIX SPIKE

AMT	
ADDED	2.50
AVG.	
RESULTS	2.18
%	
RECOVERY	87
% RPD	6.2

ANALYSTS: RWB

VIEWED: MH

VIEWED: RTV

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MS
FIELD ID: LC-MW-06S-2
COLLECTION DATE: 16 NOV 02

Analyzed by CAD SOP 45.1 (modified)

PRIMARY COLUMN ANALYSIS:

NITROGUANIDINE

AVG.
RESULTS < 1.2

MATRIX SPIKE

AMT
ADDED 2.50
AVG.
RESULTS 2.82
%
RECOVERY 113

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
ANALYSIS DATE: 26 NOV 02

Sample Wt: 2.0 grams

(All results reported as ug/g)

ANALYSTS: RUB

REVIEWED: MH

REVIEWED: RVV

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

SAMPLE NUMBER: 6867007 MSD
FIELD ID: LC-MW-06S-2
COLLECTION DATE: 16 NOV 02

Analyzed by CAD SOP 45.1 (modified)

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
ANALYSIS DATE: 26 NOV 02

Sample Wt: 2.0 grams

PRIMARY COLUMN ANALYSIS:

(All results reported as ug/g)

NITROGUANIDINE

AVG.
RESULTS < 1.2

MATRIX SPIKE

AMT
ADDED 2.50
AVG.
RESULTS 2.64
%
RECOVERY 106
% RPD 6.6

ANALYSTS: RWB

REVIEWED: MH

REVIEWED: RTV

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

CAD QC NUMBER: 03CAD1-37
FIELD ID: INTERNAL QC CHECK
COLLECTION DATE: N/A

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
ANALYSIS DATE: 02 DEC 02

Analyzed by CAD SOP 55.2

Sample Wt: 2.0 grams

(All results reported as ug/g)

Sample Results:	Theoretical Amt. Added:	Percent Recovery:	
NB	2.20	2.50	88
2-NT	2.22	2.50	89
3-NT	2.30	2.50	92
4-NT	2.19	2.50	88
NG	2.27	2.50	91
1,3-DNB	2.42	2.50	97
2,6-DNT	2.41	2.50	96
2,4-DNT	2.33	2.50	93
3,4-DNT	2.28	2.50	91
1,3,5-TNB	2.18	2.50	87
2,4,6-TNT	2.37	2.50	95
RDX	1.89	2.50	76
4AM26DNT	2.44	2.50	98
2AM46DNT	2.33	2.50	93
Tetryl	2.47	2.50	99
HMX	1.27	2.50	51

ANALYSTS: C60

REVIEWED: m n

APPROVED: RTV

ANALYSIS OF EXPLOSIVES IN SOIL FROM CAMP BONNEVILLE

SAMPLE INFORMATION:

CAD QC NUMBER: 03CAD1-38
FIELD ID: INTERNAL QC CHECK
COLLECTION DATE: N/A

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
ANALYSIS DATE: 02 DEC 02

Analyzed by CAD SOP 55.2 (modified)

Sample Wt: 2.0 grams

(All results reported as ug/g)

Sample Results:	Theoretical Amt. Added:	Percent Recovery:
PETN 1.70	2.50	68

SAMPLE INFORMATION:

CAD QC NUMBER: 03CAD1-39
FIELD ID: INTERNAL QC CHECK
COLLECTION DATE: N/A

ANALYSIS INFORMATION:

EXTRACTION DATE: 25 NOV 02
ANALYSIS DATE: 26 NOV 02

Analyzed by CAD SOP 45.1 (modified)

Sample Wt: 2.0 grams

(All results reported as ug/g)

Sample Results:	Theoretical Amt. Added:	Percent Recovery:
ITROGUANIDINE 3.16	3.00	105

ANALYSTS: RWB

REVIEWED: MW

REVIEWED: RW



FORM B (TYPE I)
SINGLE METHOD ANALYSES

Form RLIMS63B-V1.3
12060213314449
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S02C4005

QUALITY CONTROL DATA SHEET
LABORATORY CONTROL SAMPLE (LCS)

Client Name.....: USACHPPM
Release Number.....: CFB001

Matrix.....: SOIL
Reporting Units.....: mg/Kg

DCL Sample Name....: QC-202300-1
Date Printed.....: 06-DEC-02 13:31

DCL Analysis Group: G02C4005
Analysis Method....: 314.0
Instrument Type....: IC
Instrument ID.....: IC-5
Column Type.....: Dionex AS16
 Primary
 Confirmation

DCL Preparation Group: Not Applicable
Date Prepared.....: 05-DEC-02 00:00
Preparation Method....: 314.0mod

QC Limit Type.....: Method

Analytical Results

Analyte	Date Analyzed	Target	Result	Percent Recovery	QC Limits	QC Flag
Perchlorate	05-DEC-02 12:58	0.250	0.236	94.6	85.0/115.	

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FORM F (TYPE I)
SINGLE METHOD ANALYSES

Form RLIMS63F-V1.3
12060213314440
Page 22

QUALITY CONTROL DATA SHEET
MATRIX SPIKE SAMPLE
MATRIX SPIKE DUPLICATE SAMPLE



Client Name.....: USACHPPM
Release Number.....: CPB001

DCL Sample Name....: 02C02431MS
Date Printed.....: 06-DEC-02 13:31

Matrix.....: SOIL
Reporting Units.....: mg/Kg

DCL Analysis Group: G02C4005
Analysis Method....: 314.0
Instrument Type....: IC
Instrument ID.....: IC-5
Column Type.....: Dionex AS16
 Primary
 Confirmation

DCL Preparation Group: Not Applicable
Date Prepared.....: 05-DEC-02 00:00
Preparation Method....: 314.0mod

QC Limit Type.....: Method

Analytical Results

Analyte	Date Analyzed	Sample Result	Spiked Result	Spike Added	Percent Recovery	QC Limits	QC Flag
Perchlorate	05-DEC-02 17:19	ND	0.474	0.500	94.7	80.0/120.	



DCL Sample Name....: 02C02431MSD

Analytical Results

Analyte	Date Analyzed	Duplicate Result	Percent Recovery	Mean	Range	RPD	QC Limits	QC Flag
Perchlorate	05-DEC-02 17:37	0.463	92.6	0.468	0.0103	2.2	0.00/15.0	

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Initial Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: QCS (200 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 11/11/2002 23:26

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	199.6	200.0	0.2%	Pass

Control limit = $\pm 10\%$

Comments: None.



Instrument Performance Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: IPC (25.0 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 12/5/2002 11:35

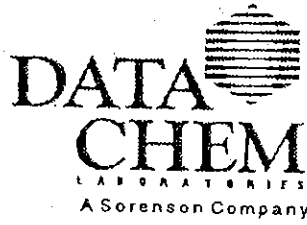
Conductivity					
Target Source	Measured Amount	Target Amount	Percent Difference	Pass/Fail	Criteria
MCT	2570	2580	0.4%	Pass	± 10%
Original IPC	2570	2570	0.0%	Pass	± 10%

Recovery					
Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail	Criteria
Perchlorate	24.54	25.00	1.8%	Pass	± 20%

Peak Area					
Compound	IPC A/H Ratio	LFB A/H Ratio	Percent Difference	Pass/Fail	Criteria
Perchlorate	16.79	15.77	6.4%	Pass	± 25%

Retention Time					
Compound	Retention Time	Observed Retention Time	Percent Difference	Pass/Fail	Criteria
Calibration Curve	10.34	10.57	2.2%	Pass	± 20%
Previous IPC	10.39	10.57	1.7%	Pass	± 5%

Comments: None.



Initial Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: ICCS (1.00 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 12/5/2002 12:12

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	1.1331	1.0000	13.3%	Pass

Control limit = $\pm 25\%$

Comments: None.



Continuing Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: CCCS (50 ug/L)

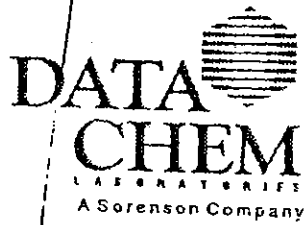
Instrument ID: IC-5

Date and Time Analyzed: 12/5/2002 16:42

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	48.36	50.00	3.3%	Pass

Control limit = $\pm 15\%$

Comments: None.



Ending Calibration Verification Form

Initial Calibration Date: 11/11/2002

Sample Name: ECCS (500 ug/L)

Instrument ID: IC-5

Date and Time Analyzed: 12/5/2002 19:48

Compound	Calculated Amount	Nominal Amount	Percent Difference	Pass/Fail
Perchlorate	468.3	500.0	6.3%	Pass

Control limit = $\pm 15\%$

Comments: None.

Table A-6. Metals Parameters and Reporting Limits in Water (in ug/L)

Metal	Reporting Limit (ug/L)
Antimony	5.00
Arsenic	4.00
Beryllium	2.00
Cadmium	2.00
Chromium	4.00
Copper	5.00
Lead	4.00
Mercury	0.200
Nickel	10.0
Selenium	4.00
Silver	2.00
Thallium	4.00
Zinc	5.00

NOTES:

Thirty-six ground-water samples were submitted to the laboratory for metals analysis. The samples were collected on 14 through 20 January 2003 and were received on 17 and 21 January 2003. All but two samples (LC-MW-11S and LC-MW-04S) had a pH below 2. The method preservation requirement for these two samples was not met, so the reported results for those samples may have an additional degree of uncertainty.

Eighteen of the samples were digested on 23 through 28 January 2003 by EPA Methods 3010 (Sb) and 3020 (all other metals except for Hg). The remaining eighteen samples did not require digestion. All holding times were met.

Hg was determined in all samples in accordance with EPA Method 7470A on 23 January 2003, and analytical holding times were met. The other metals requested were measured using EPA Method 6020 on 04 through 06 February 2003 for each of the samples. There were no deviations from the analytical methods.

All QC criteria was met with the exception of the laboratory reagent blank criteria. Zinc was found in the laboratory reagent blank slightly above the reporting limit of 5 ug/L.

Additional QA/QC data are provided on the following eight pages.

Report ID: HMA0189v1

Work Order No: 7267

Installation: Cp Bonneville

Officer: GREZ, MARY

Profile: 004M



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Date Report Generated: 2/13/2003 1:07:03 PM

Report Generated By: MARTINEZL

US Army Center for Health Promotion and Preventive Medicine
Directorate Of Laboratory Sciences (DLS)
Analytical Spectrometry Division-Metals Team
Instrument Spike Sample Report

Target	Date	Sample Number	Matrix	Initial Result	Sample Volume	Spike Solution Conc	Spike Volume	Spike Result	Spiked Volume	Units	Recovery	Analyst	Method	Reviewed By
Mercury	1/23/2003	7267001 IS	GW	< 0.2	ug/L	100	9.8	2.01	2.01	ug/L	100.5	GEHRINGDG	EPA 7470 MET19	MARTINEZL
Antimony	2/6/2003	7267001 PS	GW	< 5	ug/L	10000	10	49.67181	0.05	ug/L	99.8	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Arsenic	2/5/2003	7267001 PS	GW	< 4	ug/L	10000	10	50.697481	0.05	ug/L	101.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Beryllium	2/5/2003	7267001 PS	GW	< 2	ug/L	10000	10	45.461189	0.05	ug/L	91.4	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Cadmium	2/5/2003	7267001 PS	GW	< 2	ug/L	10000	10	48.24192	0.05	ug/L	97.0	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Chromium	2/5/2003	7267001 PS	GW	< 4	ug/L	10000	10	53.177306	0.05	ug/L	106.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Copper	2/5/2003	7267001 PS	GW	< 5	ug/L	10000	10	51.353411	0.05	ug/L	103.2	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Lead	2/5/2003	7267001 PS	GW	< 4	ug/L	10000	10	51.302332	0.05	ug/L	103.1	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Nickel	2/5/2003	7267001 PS	GW	< 10	ug/L	10000	10	50.900772	0.05	ug/L	102.3	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Selenium	2/5/2003	7267001 PS	GW	< 4	ug/L	10000	10	48.711388	0.05	ug/L	97.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Silver	2/5/2003	7267001 PS	GW	< 2	ug/L	10000	10	49.582866	0.05	ug/L	99.7	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Thallium	2/5/2003	7267001 PS	GW	< 4	ug/L	10000	10	50.690653	0.05	ug/L	101.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Zinc	2/5/2003	7267001 PS	GW	22.63953	ug/L	10000	10	71.259096	0.05	ug/L	98.0	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Antimony	2/4/2003	7267016 PS	GW	< 5	ug/L	10000	10	49.091414	0.05	ug/L	96.7	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Arsenic	2/4/2003	7267016 PS	GW	< 4	ug/L	10000	10	52.327736	0.05	ug/L	105.2	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Beryllium	2/4/2003	7267016 PS	GW	< 2	ug/L	10000	10	47.2324	0.05	ug/L	94.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Cadmium	2/4/2003	7267016 PS	GW	< 2	ug/L	10000	10	49.33941	0.05	ug/L	98.2	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Chromium	2/4/2003	7267016 PS	GW	< 4	ug/L	10000	10	53.161639	0.05	ug/L	106.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Copper	2/4/2003	7267016 PS	GW	< 5	ug/L	10000	10	50.841989	0.05	ug/L	102.2	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Lead	2/4/2003	7267016 PS	GW	< 4	ug/L	10000	10	49.861501	0.05	ug/L	100.3	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Nickel	2/4/2003	7267016 PS	GW	< 10	ug/L	10000	10	50.007372	0.05	ug/L	100.5	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Selenium	2/4/2003	7267016 PS	GW	< 4	ug/L	10000	10	53.870285	0.05	ug/L	106.3	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Silver	2/4/2003	7267016 PS	GW	< 2	ug/L	10000	10	48.063175	0.05	ug/L	96.6	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Thallium	2/4/2003	7267016 PS	GW	< 4	ug/L	10000	10	50.089518	0.05	ug/L	100.7	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Zinc	2/4/2003	7267016 PS	GW	< 5	ug/L	10000	10	56.298546	0.05	ug/L	113.2	GEHRINGDG	EPA 6020 MET9	MARTINEZL

Report ID: HMA0189v1
 Work Order No: 7267
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M



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 Date Report Generated: 2/13/2003 1:07:04 PM
 Report Generated By: MARTINEZL

US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team

Laboratory Control Sample Report

Target	Date	Sample Number	Matrix	Observed	Units	Theoretical	Units	% Recovery	Analyst	Method	Reviewed By
Mercury	1/23/2003	03HGL1-4	GW	4.77	ug/L	5	ug/L	95.4	GEHRINGDG	EPA 7470 MET9	MARTINEZL
Antimony	2/6/2003	03LCS1-13 10X	GW	98.813677	ug/L	100	ug/L	98.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Arsenic	2/5/2003	03LCS1-14	GW	53.018608	ug/L	50	ug/L	106.0	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Beryllium	2/5/2003	03LCS1-14	GW	51.345202	ug/L	50	ug/L	102.7	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Cadmium	2/5/2003	03LCS1-14	GW	51.620706	ug/L	50	ug/L	103.2	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Chromium	2/5/2003	03LCS1-14	GW	56.350563	ug/L	50	ug/L	112.7	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Copper	2/5/2003	03LCS1-14	GW	56.140387	ug/L	50	ug/L	112.3	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Lead	2/5/2003	03LCS1-14	GW	53.454352	ug/L	50	ug/L	106.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Nickel	2/5/2003	03LCS1-14	GW	53.715357	ug/L	50	ug/L	107.4	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Selenium	2/5/2003	03LCS1-14	GW	50.382507	ug/L	50	ug/L	100.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Silver	2/5/2003	03LCS1-14	GW	54.172756	ug/L	50	ug/L	108.3	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Thallium	2/5/2003	03LCS1-14	GW	53.154602	ug/L	50	ug/L	108.3	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Zinc	2/5/2003	03LCS1-14	GW	58.305648	ug/L	50	ug/L	116.6	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Antimony	2/4/2003	03LFB1-6	GW	49.739186	ug/L	50	ug/L	99.5	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Arsenic	2/4/2003	03LFB1-6	GW	49.687119	ug/L	50	ug/L	99.4	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Beryllium	2/4/2003	03LFB1-6	GW	48.610042	ug/L	50	ug/L	97.2	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Cadmium	2/4/2003	03LFB1-6	GW	48.899744	ug/L	50	ug/L	97.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Chromium	2/4/2003	03LFB1-6	GW	53.023559	ug/L	50	ug/L	106.0	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Copper	2/4/2003	03LFB1-6	GW	50.524813	ug/L	50	ug/L	101.0	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Lead	2/4/2003	03LFB1-6	GW	50.05621	ug/L	50	ug/L	100.1	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Nickel	2/4/2003	03LFB1-6	GW	49.792077	ug/L	50	ug/L	99.6	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Selenium	2/4/2003	03LFB1-6	GW	48.881897	ug/L	50	ug/L	98.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Silver	2/4/2003	03LFB1-6	GW	50.054438	ug/L	50	ug/L	100.1	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Thallium	2/4/2003	03LFB1-6	GW	50.379021	ug/L	50	ug/L	100.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Zinc	2/4/2003	03LFB1-6	GW	49.40493	ug/L	50	ug/L	98.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL

Report ID: ...MA0189v1
 Work Order No: 7267
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M

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US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team

Matrix (Pre-digested) Spike Sample Report

Target	Date	Sample Number	Matrix	Initial Result	Spiked Result	Theoretical Spike Amount	Units	Recovery %	Analyst	Method	Reviewed By
Mercury	1/23/2003	7267001 MS	GW	<	0.2	5.2	ug/L	104.0	GEHRINGDG	EPA 7470 MET18	MARTINEZL

Report ID: HMA0189v1
 Work Order No: 7267
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M

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US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team

Duplicate Report

Target	Date	Sample Number	Matrix	Initial Result	Units	Duplicate Result	Units	RPD	Analyst	Method	Reviewed_By
Mercury	1/23/2003	7267001 MSD	GW	5.2	ug/L	5.26	ug/L	1.15	GEHRINGDG	EPA 7470 MET19	MARTINEZL

Report ID: HMA0189V1
 Work Order No: 7274
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M



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 Date Report Generated: 2/19/2003 9:01:41 AM
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US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team
 Laboratory Control Sample Report

Target	Date	Sample Number	Matrix	Observed Units	Theoretical Units	% Recovery	Analyst	Method	Reviewed By
Mercury	1/23/2003	03HGL1-5	GW	4.81	5	96.2	BOWMANDL	EPA 7470 MET19	MARTINEZL
Mercury	1/23/2003	03HGL1-6	GW	4.61	5	92.2	BOWMANDL	EPA 7470 MET19	MARTINEZL
Antimony	2/6/2003	03LCS1-13 10X	GW	98.813677	100	98.8	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Arsenic	2/5/2003	03LCS1-14	GW	53.018608	50	106.0	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Beryllium	2/5/2003	03LCS1-14	GW	51.345202	50	102.7	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Cadmium	2/5/2003	03LCS1-14	GW	51.821	50	103.2	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Chromium	2/5/2003	03LCS1-14	GW	58.350563	50	112.7	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Copper	2/5/2003	03LCS1-14	GW	56.140387	50	112.3	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Lead	2/5/2003	03LCS1-14	GW	53.454	50	106.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Nickel	2/5/2003	03LCS1-14	GW	53.715357	50	107.4	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Selenium	2/5/2003	03LCS1-14	GW	49.935	50	99.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Silver	2/5/2003	03LCS1-14	GW	54.173	50	108.3	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Thallium	2/5/2003	03LCS1-14	GW	53.155	50	106.3	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Zinc	2/5/2003	03LCS1-14	GW	56.305648	50	116.6	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Antimony	2/4/2003	03LFB1-6	GW	49.739186	50	99.5	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Arsenic	2/4/2003	03LFB1-6	GW	49.687119	50	99.4	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Beryllium	2/4/2003	03LFB1-6	GW	48.610042	50	97.2	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Cadmium	2/4/2003	03LFB1-6	GW	48.899744	50	97.8	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Chromium	2/4/2003	03LFB1-6	GW	53.023559	50	106.0	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Copper	2/4/2003	03LFB1-6	GW	50.524813	50	101.0	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Lead	2/4/2003	03LFB1-6	GW	50.05621	50	100.1	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Nickel	2/4/2003	03LFB1-6	GW	48.792077	50	99.6	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Selenium	2/4/2003	03LFB1-6	GW	48.971693	50	97.9	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Silver	2/4/2003	03LFB1-6	GW	50.054438	50	100.1	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Thallium	2/4/2003	03LFB1-6	GW	50.379021	50	100.8	GEHRINGDG	EPA 6020 MET9	MARTINEZL
Zinc	2/4/2003	03LFB1-6	GW	49.40493	50	98.8	GEHRINGDG	EPA 6020 MET9	MARTINEZL

Report ID: HMA0189v1
 Work Order No: 7274
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M

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 Date Report Generated: 2/19/2003 9:00:57 AM
 Report Generated By: MARTINEZL



US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team
 Instrument Spike Sample Report

Target	Date	Sample Number	Matrix	Initial Result	Units	Sample Volume	Spike Solution Conc	Spike Volume	Spiked Result	Units	Recovery	Analyst	Method	Reviewed By
Mercury	1/23/2003	7274001 PS	GW	< 0.2	ug/L	9.8	100	2	49.313589	ug/L	100.0	BOWMANDL	EPA 7470 MET19	MARTINEZL
Antimony	2/5/2003	7274002 PS	GW	< 5	ug/L	10	10000	0.05	49.313589	ug/L	99.1	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Arsenic	2/5/2003	7274002 PS	GW	< 4	ug/L	10	10000	0.05	51.537853	ug/L	103.6	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Beryllium	2/5/2003	7274002 PS	GW	< 2	ug/L	10	10000	0.05	43.983767	ug/L	88.4	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Cadmium	2/5/2003	7274002 PS	GW	< 2	ug/L	10	10000	0.05	48.786186	ug/L	98.1	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Chromium	2/5/2003	7274002 PS	GW	< 4	ug/L	10	10000	0.05	53.071872	ug/L	106.7	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Copper	2/5/2003	7274002 PS	GW	< 5	ug/L	10	10000	0.05	51.445481	ug/L	103.4	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Lead	2/5/2003	7274002 PS	GW	< 4	ug/L	10	10000	0.05	50.008978	ug/L	100.5	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Nickel	2/5/2003	7274002 PS	GW	< 10	ug/L	10	10000	0.05	50.70019	ug/L	101.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Selenium	2/5/2003	7274002 PS	GW	< 4	ug/L	10	10000	0.05	49.595281	ug/L	99.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Silver	2/5/2003	7274002 PS	GW	< 2	ug/L	10	10000	0.05	49.071892	ug/L	98.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Thallium	2/5/2003	7274002 PS	GW	< 4	ug/L	10	10000	0.05	49.862258	ug/L	100.2	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Zinc	2/5/2003	7274002 PS	GW	5.704885	ug/L	10	10000	0.05	56.392516	ug/L	101.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Antimony	2/4/2003	7274007 PS	GW	< 5	ug/L	10	10000	0.05	50.198444	ug/L	100.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Arsenic	2/4/2003	7274007 PS	GW	< 4	ug/L	10	10000	0.05	61.998712	ug/L	124.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Beryllium	2/4/2003	7274007 PS	GW	< 2	ug/L	10	10000	0.05	48.636102	ug/L	97.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Cadmium	2/4/2003	7274007 PS	GW	< 2	ug/L	10	10000	0.05	48.720073	ug/L	97.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Chromium	2/4/2003	7274007 PS	GW	< 4	ug/L	10	10000	0.05	55.663198	ug/L	111.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Copper	2/4/2003	7274007 PS	GW	< 5	ug/L	10	10000	0.05	48.414222	ug/L	97.3	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Lead	2/4/2003	7274007 PS	GW	< 4	ug/L	10	10000	0.05	49.971843	ug/L	100.4	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Nickel	2/4/2003	7274007 PS	GW	< 10	ug/L	10	10000	0.05	49.781594	ug/L	100.1	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Selenium	2/4/2003	7274007 PS	GW	< 4	ug/L	10	10000	0.05	62.688815	ug/L	126.0	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Silver	2/4/2003	7274007 PS	GW	< 2	ug/L	10	10000	0.05	41.389084	ug/L	83.2	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Thallium	2/4/2003	7274007 PS	GW	< 4	ug/L	10	10000	0.05	50.490007	ug/L	101.5	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Zinc	2/4/2003	7274007 PS	GW	< 5	ug/L	10	10000	0.05	53.199483	ug/L	106.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL

Report ID: HMA0189v1
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 Officer: GREZ, MARY
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 Date Report Generated: 2/19/2003 9:01:00 AM
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US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team

Matrix (Pre-digested) Spike Sample Report

Target	Date	Sample Number	Matrix	Initial Result	Units	Spiked Result	Units	Theoretical Spike Amount	Units	% Recovery	Analyst	Method	Reviewed By
Mercury	1/23/2003	7274001 MS	GW	<	0.2	ug/L	5.24	ug/L	5	104.8	BOWMANDL	EPA 7470 MET18	MARTINEZL
Arsenic	2/5/2003	7274002 MS	GW	<	4	ug/L	51.427654	ug/L	50	102.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Beryllium	2/5/2003	7274002 MS	GW	<	2	ug/L	43.573345	ug/L	50	87.1	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Cadmium	2/5/2003	7274002 MS	GW	<	2	ug/L	49.380372	ug/L	50	98.8	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Chromium	2/5/2003	7274002 MS	GW	<	4	ug/L	52.130667	ug/L	50	104.3	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Copper	2/5/2003	7274002 MS	GW	<	5	ug/L	51.288735	ug/L	50	102.6	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Lead	2/5/2003	7274002 MS	GW	<	4	ug/L	49.607566	ug/L	50	99.2	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Nickel	2/5/2003	7274002 MS	GW	<	10	ug/L	50.362687	ug/L	50	100.7	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Selenium	2/5/2003	7274002 MS	GW	<	4	ug/L	50.30337	ug/L	50	100.6	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Silver	2/5/2003	7274002 MS	GW	<	2	ug/L	49.638681	ug/L	50	99.3	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Thallium	2/5/2003	7274002 MS	GW	<	4	ug/L	49.019413	ug/L	50	98.0	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Zinc	2/5/2003	7274002 MS	GW	<	5.704885	ug/L	58.641547	ug/L	50	105.9	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Antimony	2/6/2003	7274002 MS 10X	GW	<	5	ug/L	89.568663	ug/L	100	89.6	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Mercury	1/23/2003	7274021 MS	GW	<	0.2	ug/L	4.84	ug/L	5	98.8	BOWMANDL	EPA 7470 MET19	MARTINEZL

Report ID: HMA0189V1
 Work Order No: 7274
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 Date Report Generated: 2/19/2003 9:00:59 AM
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US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team

Duplicate Report

Target	Date	Sample Number	Matrix	Initial Result	Units	Duplicate Result	Units	RPD	Analyst	Method	Reviewed_By
Mercury	1/23/2003	7274001 MSD	GW	5.24	ug/L	5.17	ug/L	1.34	BOWMANDL	EPA 7470 MET19	MARTINEZL
Arsenic	2/5/2003	7274002 MSD	GW	51.427654	ug/L	51.464568	ug/L	0.07	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Beryllium	2/5/2003	7274002 MSD	GW	43.573345	ug/L	43.807523	ug/L	0.52	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Cadmium	2/5/2003	7274002 MSD	GW	49.380372	ug/L	49.046953	ug/L	0.68	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Chromium	2/5/2003	7274002 MSD	GW	52.130667	ug/L	53.131558	ug/L	1.90	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Copper	2/5/2003	7274002 MSD	GW	51.286735	ug/L	53.239827	ug/L	3.74	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Lead	2/5/2003	7274002 MSD	GW	49.807566	ug/L	50.696784	ug/L	2.17	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Nickel	2/5/2003	7274002 MSD	GW	50.362887	ug/L	50.732089	ug/L	0.73	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Selenium	2/5/2003	7274002 MSD	GW	50.39337	ug/L	49.618252	ug/L	1.37	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Silver	2/5/2003	7274002 MSD	GW	49.639661	ug/L	50.055658	ug/L	0.84	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Thallium	2/5/2003	7274002 MSD	GW	49.018413	ug/L	49.65718	ug/L	1.29	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Zinc	2/5/2003	7274002 MSD	GW	58.641547	ug/L	58.288009	ug/L	0.60	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Antimony	2/6/2003	7274002 MSD 10X	GW	89.568663	ug/L	95.44266	ug/L	6.35	GEHRINGDG	EPA 8020 MET9	MARTINEZL
Mercury	1/23/2003	7274021 MSD	GW	4.94	ug/L	4.88	ug/L	1.22	BOWMANDL	EPA 7470 MET19	MARTINEZL

Table A-7. Analytes and Reporting Limits (in mg/Kg) for Metals in Soils

Analyte	LC-MW-05S-0	LC-MW-05S-10	LC-MW-05S-2	LC-MW-05S-5	LC-MW-05S-15	LC-MW-06S-0
Antimony	1.18	1.18	1.15	1.10	1.50	1.23
Arsenic	1.18	1.18	1.15	1.10	1.50	1.23
Beryllium	1.18	1.18	1.15	1.10	1.50	1.23
Cadmium	1.18	1.18	1.15	1.10	1.50	1.23
Chromium	1.18	1.18	1.15	1.10	1.50	1.23
Copper	1.18	1.18	1.15	1.10	1.50	1.23
Lead	1.18	1.18	1.15	1.10	1.50	1.23
Mercury	0.0478	0.0462	0.0483	0.0479	0.0594	0.0475
Nickel	1.18	1.18	1.15	1.10	1.50	1.23
Selenium	2.36	2.35	2.30	2.20	3.00	2.46
Silver	1.18	1.18	1.15	1.10	1.50	1.23
Thallium	1.18	1.18	1.15	1.10	1.50	1.23
Zinc	3.54	3.53	3.45	3.30	4.51	3.69

Analyte	LC-MW-06S-2	LC-MW-06S-5	LC-MW-07S-0	LC-MW-07S-10	LC-MW-07S-2	LC-MW-07S-5
Antimony	1.07	1.31	1.20	1.07	1.26	1.25
Arsenic	1.07	1.31	1.20	1.07	1.26	1.25
Beryllium	1.07	1.31	1.20	1.07	1.26	1.25
Cadmium	1.07	1.31	1.20	1.07	1.26	1.25
Chromium	1.07	1.31	1.20	1.07	1.26	1.25
Copper	1.07	1.31	1.20	1.07	1.26	1.25
Lead	1.07	1.31	1.20	1.07	1.26	1.25
Mercury	0.0434	0.0497	0.0461	0.0454	0.0509	0.0510
Nickel	1.07	1.31	1.20	1.07	1.26	1.25
Selenium	2.13	2.63	2.41	2.14	2.53	2.50
Silver	1.07	1.31	1.20	1.07	1.26	1.25
Thallium	1.07	1.31	1.20	1.07	1.26	1.25
Zinc	3.20	3.94	3.61	3.21	3.79	3.75

Analyte	LC-MW-07S-15	LC-MW-08S-0	LC-MW-08S-2	LC-MW-08S-5	LC-MW-08S-15
Antimony	1.57	1.12	1.16	1.32	1.37
Arsenic	1.57	1.12	1.16	1.32	1.37
Beryllium	1.57	1.12	1.16	1.32	1.37
Cadmium	1.57	1.12	1.16	1.32	1.37
Chromium	1.57	1.12	1.16	1.32	1.37
Copper	1.57	1.12	1.16	1.32	1.37
Lead	1.57	1.12	1.16	1.32	1.37
Mercury	0.0566	0.0501	0.0485	0.0486	0.0540
Nickel	1.57	1.12	1.16	1.32	1.37
Selenium	3.14	2.24	1.16	1.32	1.37
Silver	1.57	1.12	1.16	1.32	1.37
Thallium	1.57	1.12	1.16	1.32	1.37
Zinc	4.71	3.36	3.47	3.96	4.12

NOTES: Seventeen soil samples were collected on 15 and 16 November 2002, and were received on 21 November 2002. The samples were analyzed for Hg on 11 December 2002 by EPA Method 7471B. The samples were digested for other metals analysis on 29 November 2002 using EPA Method 3050B. The metals were determined on 10, 12, and 16 December 2002 for all of the samples using EPA Method 6020. All holding times were met. All reporting units are in mg/Kg calculated on a dry weight basis.

The reporting limit for Se was raised to 2 mg/Kg for all of the samples except LC-MW-08S-2, -5, and -15. The reporting limit of 3 mg/Kg for Zn could not be met for samples LC-MW-05S-0, -2, -5, and -10. However, the data was accepted and reported for these samples because all other QC results were successful, Zn concentrations for those samples were well above the reporting limits, and the Zn results obtained were duplicated fairly well with those generated on 10 December 2002. All laboratory QC data were within acceptable limits except for low Sb recovery in the LCS and MS. It is possible that Sb in these samples had a negative bias.

Additional QA/QC data are provided on the following 4 pages.

Report ID: HMA0189V1

Work Order No: 8867

Installation: Cp Bonneville

Officer: GREZ, MARY

Profile: 004M

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Date Report Generated: 12/18/2002 11:16:48 AM

Report Generated By: HENINAA



US Army Center for Health Promotion and Preventive Medicine
Directorate Of Laboratory Sciences (DLS)
Analytical Spectrometry Division-Metals Team

Laboratory Control Sample Report

Target	Date	Sample Number	Matrix	Observed Units	Theoretical Units	% Recovery	Analyst	Method	Reviewed By
Antimony	12/12/2002	02LCS4-91	SO	42.61 ug/L	80.3 ug/L	53.1	MARTINEZL	EPA 6020 MET9	
Arsenic	12/12/2002	02LCS4-91	SO	228.5 ug/L	200.5 ug/L	113.0	MARTINEZL	EPA 6020 MET9	
Beryllium	12/12/2002	02LCS4-91	SO	84.09 ug/L	77.1 ug/L	109.1	MARTINEZL	EPA 6020 MET9	
Cadmium	12/12/2002	02LCS4-91	SO	88.01 ug/L	70.3 ug/L	122.3	MARTINEZL	EPA 6020 MET9	
Chromium	12/12/2002	02LCS4-91	SO	96.42 ug/L	84.1 ug/L	114.6	MARTINEZL	EPA 6020 MET9	
Copper	12/12/2002	02LCS4-91	SO	152.5 ug/L	129.3 ug/L	117.9	MARTINEZL	EPA 6020 MET9	
Lead	12/12/2002	02LCS4-91	SO	111.2 ug/L	96.7 ug/L	115.0	MARTINEZL	EPA 6020 MET9	
Nickel	12/12/2002	02LCS4-91	SO	104.9 ug/L	87.2 ug/L	120.3	MARTINEZL	EPA 6020 MET9	
Selenium	12/12/2002	02LCS4-91	SO	134 ug/L	119.1 ug/L	112.5	MARTINEZL	EPA 6020 MET9	
Silver	12/12/2002	02LCS4-91	SO	175.4 ug/L	143.5 ug/L	122.2	MARTINEZL	EPA 6020 MET9	
Thallium	12/12/2002	02LCS4-91	SO	116.6 ug/L	104.9 ug/L	111.2	MARTINEZL	EPA 6020 MET9	
Zinc	12/12/2002	02LCS4-91	SO	309 ug/L	280 ug/L	110.4	MARTINEZL	EPA 6020 MET9	
Mercury	12/11/2002	04HGLA-14	SO	65.3 ug/L	53.167 ug/L	122.8	GORDONEF	EPA 7471 MET20	

Report ID: HMA0189V1
 Work Order No: 8867
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M



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 Date Report Generated: 12/18/2002 11:16:46 AM
 Report Generated By: HENINAA

US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team
 Instrument Spike Sample Report

Target	Date	Sample Number	Matrix	Initial Result	Units	Sample Volume	Spike Conc	Spike Volume	Spiked Result	Units	Recovery %	Analyst	Method	Reviewed By
Antimony	12/12/2002	8867001 IS	SO	<	10	10	10000	0.1	118.3	ug/L	119.5	MARTINEZL	EPA 6020 MET9	
Arsenic	12/12/2002	8867001 IS	SO	<	10	10	10000	0.1	120.4	ug/L	121.6	MARTINEZL	EPA 6020 MET9	
Beryllium	12/12/2002	8867001 IS	SO	<	10	10	10000	0.1	104.8	ug/L	105.8	MARTINEZL	EPA 6020 MET9	
Cadmium	12/12/2002	8867001 IS	SO	<	10	10	10000	0.1	119.4	ug/L	120.6	MARTINEZL	EPA 6020 MET9	
Chromium	12/12/2002	8867001 IS	SO	14.38	ug/L	10	10000	0.1	122.7	ug/L	109.5	MARTINEZL	EPA 6020 MET9	
Copper	12/12/2002	8867001 IS	SO	25.92	ug/L	10	10000	0.1	133.2	ug/L	108.6	MARTINEZL	EPA 6020 MET9	
Lead	12/12/2002	8867001 IS	SO	10.88	ug/L	10	10000	0.1	131.1	ug/L	121.7	MARTINEZL	EPA 6020 MET9	
Mercury	12/12/2002	8867001 IS	SO	0.228	ug/L	9	10	1	1.23	ug/L	102.5	GORDONEF	EPA 7471 MET20	
Nickel	12/12/2002	8867001 IS	SO	<	10	10	10000	0.1	117.9	ug/L	119.1	MARTINEZL	EPA 6020 MET9	
Selenium	12/12/2002	8867001 IS	SO	<	20	10	10000	0.1	111.4	ug/L	112.5	MARTINEZL	EPA 6020 MET9	
Silver	12/12/2002	8867001 IS	SO	<	10	10	10000	0.1	118.2	ug/L	119.4	MARTINEZL	EPA 6020 MET9	
Thallium	12/12/2002	8867001 IS	SO	<	10	10	10000	0.1	116.2	ug/L	117.4	MARTINEZL	EPA 6020 MET9	
Zinc	12/12/2002	8867001 IS	SO	61.21	ug/L	10	10000	0.1	165.9	ug/L	106.3	MARTINEZL	EPA 6020 MET9	

Report ID: HMA0189V1
 Work Order No: 6867
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M



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 Report Generated By: HENINAA

US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team

Matrix (Pre-digested) Spike Sample Report

Target	Date	Sample Number	Matrix	Initial		Spiked		Theoretical Spike		Recovery %	Analyst	Method	Reviewed By
				Result	Units	Result	Units	Amount	Units				
Antimony	12/12/2002	6867001 MS	SO	<	10	ug/L	27.86	ug/L	100	27.9	MARTINEZL	EPA 6020 MET9	
Arsenic	12/12/2002	6867001 MS	SO	<	10	ug/L	102.5	ug/L	100	102.5	MARTINEZL	EPA 6020 MET9	
Beryllium	12/12/2002	6867001 MS	SO	<	10	ug/L	96.28	ug/L	100	96.3	MARTINEZL	EPA 6020 MET9	
Cadmium	12/12/2002	6867001 MS	SO	<	10	ug/L	112.8	ug/L	100	112.8	MARTINEZL	EPA 6020 MET9	
Chromium	12/12/2002	6867001 MS	SO		14.9	ug/L	110.7	ug/L	100	95.8	MARTINEZL	EPA 6020 MET9	
Copper	12/12/2002	6867001 MS	SO		27.76	ug/L	128	ug/L	100	100.2	MARTINEZL	EPA 6020 MET9	
Lead	12/12/2002	6867001 MS	SO		11.06	ug/L	124	ug/L	100	112.9	MARTINEZL	EPA 6020 MET9	
Mercury	12/11/2002	6867001 MS	SO		0.228	ug/L	5.32	ug/L	5	101.8	GORDONEF	EPA 7471 MET20	
Nickel	12/12/2002	6867001 MS	SO	<	10	ug/L	108.2	ug/L	100	108.2	MARTINEZL	EPA 6020 MET9	
Selenium	12/12/2002	6867001 MS	SO	<	20	ug/L	107.7	ug/L	100	107.7	MARTINEZL	EPA 6020 MET9	
Silver	12/12/2002	6867001 MS	SO	<	10	ug/L	104.8	ug/L	100	104.8	MARTINEZL	EPA 6020 MET9	
Thallium	12/12/2002	6867001 MS	SO	<	10	ug/L	110	ug/L	100	110.0	MARTINEZL	EPA 6020 MET9	
Zinc	12/12/2002	6867001 MS	SO		62.36	ug/L	158.8	ug/L	100	96.4	MARTINEZL	EPA 6020 MET9	

Report ID: HMA0189V1
 Work Order No: 6867
 Installation: Cp Bonneville
 Officer: GREZ, MARY
 Profile: 004M

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 Date Report Generated: 12/18/2002 11:16:51 A
 Report Generated By: HENINAA



US Army Center for Health Promotion and Preventive Medicine
 Directorate Of Laboratory Sciences (DLS)
 Analytical Spectrometry Division-Metals Team

Duplicate Report

Target	Date	Sample Number	Matrix	Initial		Duplicate		RPD	Analyst	Method	Reviewed_By
				Result	Units	Result	Units				
Antimony	12/12/2002	6867001 MSD	SO	27.86	ug/L	28.51	ug/L	2.31	MARTINEZL	EPA 6020 MET9	
Arsenic	12/12/2002	6867001 MSD	SO	102.5	ug/L	110	ug/L	7.06	MARTINEZL	EPA 6020 MET9	
Beryllium	12/12/2002	6867001 MSD	SO	96.28	ug/L	98.76	ug/L	3.55	MARTINEZL	EPA 6020 MET9	
Cadmium	12/12/2002	6867001 MSD	SO	112.8	ug/L	118.6	ug/L	5.01	MARTINEZL	EPA 6020 MET9	
Chromium	12/12/2002	6867001 MSD	SO	110.7	ug/L	117.2	ug/L	5.70	MARTINEZL	EPA 6020 MET9	
Copper	12/12/2002	6867001 MSD	SO	128	ug/L	131.2	ug/L	2.47	MARTINEZL	EPA 6020 MET9	
Lead	12/12/2002	6867001 MSD	SO	124	ug/L	131.5	ug/L	5.87	MARTINEZL	EPA 6020 MET9	
Mercury	12/11/2002	6867001 MSD	SO	5.32	ug/L	5.2	ug/L	2.28	GORDONEF	EPA 7471 MET20	
Nickel	12/12/2002	6867001 MSD	SO	108.2	ug/L	112.6	ug/L	3.98	MARTINEZL	EPA 6020 MET9	
Selenium	12/12/2002	6867001 MSD	SO	107.7	ug/L	104.7	ug/L	2.82	MARTINEZL	EPA 6020 MET9	
Silver	12/12/2002	6867001 MSD	SO	104.8	ug/L	106.3	ug/L	1.42	MARTINEZL	EPA 6020 MET9	
Thallium	12/12/2002	6867001 MSD	SO	110	ug/L	117	ug/L	6.17	MARTINEZL	EPA 6020 MET9	
Zinc	12/12/2002	6867001 MSD	SO	158.8	ug/L	167	ug/L	5.03	MARTINEZL	EPA 6020 MET9	

Table A-5. SVOCs and Reporting Limits in Water (ug/L)

Analyte	Reporting Limit	Analyte	Reporting Limit
n-nitrosodimethylamine	10	2,6-dinitrotoluene	10
bis(2-chloroethyl)ether	10	acenaphthene	10
phenol	10	3-nitroaniline	10
2-chlorophenol	10	2,4-dinitrophenol	10
1,3-dichlorobenzene	10	dibenzofuran	10
1,4-dichlorobenzene	10	2,4-dinitrotoluene	10
1,2-dichlorobenzene	10	4-nitrophenol	10
benzyl alcohol	10	fluorene	10
bis(2-chloroisopropyl)ether	10	4-chlorophenyl-phenylether	10
2-methylphenol	10	diethylphthalate	10
hexachloroethane	10	4-nitroaniline	10
n-nitroso-di-n-propylamine	10	4,6-dinitro-2-methylphenol	10
4-methylphenol	10	n-nitrosodiphenylamine	10
nitrobenzene	10	4-bromophenyl-phenylether	10
isophorone	10	hexachlorobenzene	10
2-nitrophenol	10	pentachlorophenol	10
2,4-dimethylphenol	10	phenanthrene	10
bis(2-chloroethoxy)methane	10	anthracene	10
2,4-dichlorophenol	10	di-n-butylphthalate	10
1,2,4-trichlorobenzene	10	fluoranthene	10
naphthalene	10	pyrene	10
4-chloroaniline	10	butylbenzylphthalate	10
hexachlorobutadiene	10	benzo(a)anthracene	10
4-chloro-3-methylphenol	10	chrysene	10
2-methylnaphthalene	10	bis(2-ethylhexyl)phthalate	10
hexachlorocyclopentadiene	10	di-n-octylphthalate	10
2,4,6-trichlorophenol	10	benzo(b)fluoranthene	10
2,4,5-trichlorophenol	10	benzo(k)fluoranthene	10
2-chloronaphthalene	10	benzo(a)pyrene	10
2-nitroaniline	10	indeno(1,2,3-cd)pyrene	10
acenaphthylene	10	dibenz(a,h)anthracene	10
dimethylphthalate	10	benzo(g,h,i)perylene	10

NOTES:

Eleven ground-water samples were collected on 14-16 and 18-19 January 2003 and were received on 17 and 21 January 2003. EPA Method 3510 extractions were performed on 21 and 22 January 2003, with all extraction holding times being met. Sample analysis was completed using EPA Method 8270C using ASD SOP #72.7 on 28 January 2003, with all analytical holding times being met. No target compounds were detected in any of the samples or in the laboratory blank. Four laboratory control spikes (LCS) were analyzed with most recoveries meeting quality control limits. A matrix spike and matrix spike duplicate were analyzed resulting in acceptable recoveries for most compounds spiked. MS/MSD failures are thought to have a minimal effect on the quality of the results since compound recoveries were within method criteria for the check standard. Surrogate recoveries were within quality control limits for most compound spiked. The failure observed in sample LC-MW-03D is slight and not thought to have an adverse effect on the quality of the results. All internal standard area counts and retention times complied with method QC.

Additional QA/QC data are provided on the following 43 pages.

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: USACHPPM/DLS/ASD/GCMS

POC: Grez

BLANK0121

Profile: 27564-004

Site: Cp Bonn

Code: E8270 Units: ug/L

Matrix: (soil/water) WATER

Lab Sample ID: blank012103

Sample wt/vol: 1000 (g/ml) ML

Lab File ID: B4W81209.D

Level: (low/med) LOW

Date Collected: 1/21/2003

% Moisture: _____ decanted:(Y/N) N

Date Extracted: 1/21/2003

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 1/27/2003

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-75-9	N-Nitrosodimethylamine	10	U	
111-44-4	bis(2-Chloroethyl)ether	10	U	
108-95-2	Phenol	10	U	
95-57-8	2-Chlorophenol	10	U	
541-73-1	1,3-Dichlorobenzene	10	U	
106-46-7	1,4-Dichlorobenzene	10	U	
95-50-1	1,2-Dichlorobenzene	10	U	
100-51-6	Benzyl alcohol	10	U	
39638-32-9	bis(2-chloroisopropyl)ether	10	U	
95-48-7	2-Methylphenol	10	U	
67-72-1	Hexachloroethane	10	U	
621-64-7	N-Nitroso-di-n-propylamine	10	U	
106-44-5	4-Methylphenol	10	U	
98-95-3	Nitrobenzene	10	U	
78-59-1	Isophorone	10	U	
88-75-5	2-Nitrophenol	10	U	
105-67-9	2,4-Dimethylphenol	10	U	
111-91-1	bis(2-Chloroethoxy)methane	10	U	
120-83-2	2,4-Dichlorophenol	10	U	
120-82-1	1,2,4-Trichlorobenzene	10	U	
91-20-3	Naphthalene	10	U	
106-47-8	4-Chloroaniline	10	U	
87-68-3	Hexachlorobutadiene	10	U	
59-50-7	4-Chloro-3-methylphenol	10	U	
91-57-6	2-Methylnaphthalene	10	U	
77-47-4	Hexachlorocyclopentadiene	10	U	
88-06-2	2,4,6-Trichlorophenol	10	U	
95-95-4	2,4,5-Trichlorophenol	10	U	
91-58-7	2-Chloronaphthalene	10	U	
88-74-4	2-Nitroaniline	10	U	
208-96-8	Acenaphthylene	10	U	
131-11-3	Dimethylphthalate	10	U	
606-20-2	2,6-Dinitrotoluene	10	U	
83-32-9	Acenaphthene	10	U	
99-09-2	3-Nitroaniline	10	U	
51-28-5	2,4-Dinitrophenol	10	U	
132-64-9	Dibenzofuran	10	U	

A-108

1C

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BLANK0121

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: blank012103
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: B4W81209.D
 Level: (low/med) LOW Date Collected: 1/21/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene	10	U	
100-02-7	4-Nitrophenol	10	U	
86-73-7	Fluorene	10	U	
7005-72-3	4-Chlorophenyl-phenylether	10	U	
84-66-2	Diethylphthalate	10	U	
100-01-6	4-Nitroaniline	10	U	
534-52-1	4,6-Dinitro-2-methylphenol	10	U	
86-30-6	n-Nitrosodiphenylamine	10	U	
101-55-3	4-Bromophenyl-phenylether	10	U	
118-74-1	Hexachlorobenzene	10	U	
87-86-5	Pentachlorophenol	10	U	
85-01-8	Phenanthrene	10	U	
120-12-7	Anthracene	10	U	
84-74-2	Di-n-butylphthalate	10	U	
206-44-0	Fluoranthene	10	U	
129-00-0	Pyrene	10	U	
85-68-7	Butylbenzylphthalate	10	U	
56-55-3	Benzo[a]anthracene	10	U	
218-01-9	Chrysene	10	U	
117-81-7	bis(2-Ethylhexyl)phthalate	10	U	
117-84-0	Di-n-octylphthalate	10	U	
205-99-2	Benzo[b]fluoranthene	10	U	
207-08-9	Benzo[k]fluoranthene	10	U	
50-32-8	Benzo[a]pyrene	10	U	
193-39-5	Indeno[1,2,3-cd]pyrene	10	U	
53-70-3	Dibenz[a,h]anthracene	10	U	
191-24-2	Benzo[g,h,i]perylene	10	U	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Number:

BLANK0121

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
Matrix: (soil/water) WATER Lab Sample ID: blank012103
Sample wt/vol: 1000 (g/ml) ML Lab File ID: B4W81209.D
Level: (low/med) LOW Date Received: 1/21/2003
% Moisture: _____ decanted: (Y/N) N Date Extracted: 1/21/2003
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 6

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unk olefin	9.71	8.9	J
2.	unk hydrocarbon	10.31	6.5	J
3. 000124-07-2	Octanoic Acid	13.92	6.1	JN
4. 000112-05-0	Nonanoic acid	15.41	8.1	JN
5. 003622-84-2	Benzenesulfonamide, N-butyl-	22.25	14	JN
6. 000112-79-8	9-Octadecenoic acid, (E)-	25.66	12	JN

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez BLANK0122
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: BLK0122
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: B4W81224.D
 Level: (low/med) LOW Date Collected: 1/22/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/22/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-75-9	N-Nitrosodimethylamine		10	U
111-44-4	bis(2-Chloroethyl)ether		10	U
108-95-2	Phenol		10	U
95-57-8	2-Chlorophenol		10	U
541-73-1	1,3-Dichlorobenzene		10	U
106-46-7	1,4-Dichlorobenzene		10	U
95-50-1	1,2-Dichlorobenzene		10	U
100-51-6	Benzyl alcohol		10	U
39638-32-9	bis(2-chloroisopropyl)ether		10	U
95-48-7	2-Methylphenol		10	U
67-72-1	Hexachloroethane		10	U
621-64-7	N-Nitroso-di-n-propylamine		10	U
106-44-5	4-Methylphenol		10	U
98-95-3	Nitrobenzene		10	U
78-59-1	Isophorone		10	U
88-75-5	2-Nitrophenol		10	U
105-67-9	2,4-Dimethylphenol		10	U
111-91-1	bis(2-Chloroethoxy)methane		10	U
120-83-2	2,4-Dichlorophenol		10	U
120-82-1	1,2,4-Trichlorobenzene		10	U
91-20-3	Naphthalene		10	U
106-47-8	4-Chloroaniline		10	U
87-68-3	Hexachlorobutadiene		10	U
59-50-7	4-Chloro-3-methylphenol		10	U
91-57-6	2-Methylnaphthalene		10	U
77-47-4	Hexachlorocyclopentadiene		10	U
88-06-2	2,4,6-Trichlorophenol		10	U
95-95-4	2,4,5-Trichlorophenol		10	U
91-58-7	2-Chloronaphthalene		10	U
88-74-4	2-Nitroaniline		10	U
208-96-8	Acenaphthylene		10	U
131-11-3	Dimethylphthalate		10	U
606-20-2	2,6-Dinitrotoluene		10	U
83-32-9	Acenaphthene		10	U
99-09-2	3-Nitroaniline		10	U
51-28-5	2,4-Dinitrophenol		10	U
132-64-9	Dibenzofuran		10	U

A-111

1C

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BLANK0122

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: BLK0122
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: B4W81224.D
 Level: (low/med) LOW Date Collected: 1/22/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/22/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene	10		U
100-02-7	4-Nitrophenol	10		U
86-73-7	Fluorene	10		U
7005-72-3	4-Chlorophenyl-phenylether	10		U
84-66-2	Diethylphthalate	10		U
100-01-6	4-Nitroaniline	10		U
534-52-1	4,6-Dinitro-2-methylphenol	10		U
86-30-6	n-Nitrosodiphenylamine	10		U
101-55-3	4-Bromophenyl-phenylether	10		U
118-74-1	Hexachlorobenzene	10		U
87-86-5	Pentachlorophenol	10		U
85-01-8	Phenanthrene	10		U
120-12-7	Anthracene	10		U
84-74-2	Di-n-butylphthalate	10		U
206-44-0	Fluoranthene	10		U
129-00-0	Pyrene	10		U
85-68-7	Butylbenzylphthalate	10		U
56-55-3	Benzo[a]anthracene	10		U
218-01-9	Chrysene	10		U
117-81-7	bis(2-Ethylhexyl)phthalate	10		U
117-84-0	Di-n-octylphthalate	10		U
205-99-2	Benzo[b]fluoranthene	10		U
207-08-9	Benzo[k]fluoranthene	10		U
50-32-8	Benzo[a]pyrene	10		U
193-39-5	Indeno[1,2,3-cd]pyrene	10		U
53-70-3	Dibenz[a,h]anthracene	10		U
191-24-2	Benzo[g,h,i]perylene	10		U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Sample Number:

BLANK0122

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
Matrix: (soil/water) WATER Lab Sample ID: BLK0122
Sample wt/vol: 1000 (g/ml) ML Lab File ID: B4W81224.D
Level: (low/med) LOW Date Received: 1/22/2003
% Moisture: _____ decanted: (Y/N) N Date Extracted: 1/22/2003
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

Number TICs found: 3 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unk olefin	9.71	9.4	J
2.	unk hydrocarbon	10.30	6.3	J
3. 003622-84-2	Benzenesulfonamide, N-butyl-	22.25	8.3	JN

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCS0121

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: LCS012103
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81210.D
 Level: (low/med) LOW Date Collected: 1/21/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

62-75-9	N-Nitrosodimethylamine	72	
111-44-4	bis(2-Chloroethyl)ether	100	
108-95-2	Phenol	59	
95-57-8	2-Chlorophenol	88	
541-73-1	1,3-Dichlorobenzene	87	
106-46-7	1,4-Dichlorobenzene	91	
95-50-1	1,2-Dichlorobenzene	82	
100-51-6	Benzyl alcohol	76	
39638-32-9	bis(2-chloroisopropyl)ether	100	
95-48-7	2-Methylphenol	98	
67-72-1	Hexachloroethane	83	
621-64-7	N-Nitroso-di-n-propylamine	110	
106-44-5	4-Methylphenol	73	
98-95-3	Nitrobenzene	93	
78-59-1	Isophorone	77	
88-75-5	2-Nitrophenol	95	
105-67-9	2,4-Dimethylphenol	39	
111-91-1	bis(2-Chloroethoxy)methane	110	
120-83-2	2,4-Dichlorophenol	92	
120-82-1	1,2,4-Trichlorobenzene	100	
91-20-3	Naphthalene	100	
106-47-8	4-Chloroaniline	66	
87-68-3	Hexachlorobutadiene	97	
59-50-7	4-Chloro-3-methylphenol	93	
91-57-6	2-Methylnaphthalene	100	
77-47-4	Hexachlorocyclopentadiene	110	
88-06-2	2,4,6-Trichlorophenol	93	
95-95-4	2,4,5-Trichlorophenol	100	
91-58-7	2-Chloronaphthalene	110	
88-74-4	2-Nitroaniline	100	
208-96-8	Acenaphthylene	110	
131-11-3	Dimethylphthalate	75	
606-20-2	2,6-Dinitrotoluene	100	
83-32-9	Acenaphthene	110	
99-09-2	3-Nitroaniline	95	
51-28-5	2,4-Dinitrophenol	92	
132-64-9	Dibenzofuran	100	

A-114

1C

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCS0121

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: LCS012103
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81210.D
 Level: (low/med) LOW Date Collected: 1/21/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene	110		
100-02-7	4-Nitrophenol	45		
86-73-7	Fluorene	110		
7005-72-3	4-Chlorophenyl-phenylether	97		
84-66-2	Diethylphthalate	110		
100-01-6	4-Nitroaniline	100		
534-52-1	4,6-Dinitro-2-methylphenol	98		
86-30-6	n-Nitrosodiphenylamine	110		
101-55-3	4-Bromophenyl-phenylether	110		
118-74-1	Hexachlorobenzene	110		
87-86-5	Pentachlorophenol	100		
85-01-8	Phenanthrene	110		
120-12-7	Anthracene	100		
84-74-2	Di-n-butylphthalate	110		
206-44-0	Fluoranthene	110		
129-00-0	Pyrene	89		
85-68-7	Butylbenzylphthalate	95		
56-55-3	Benzo[a]anthracene	100		
218-01-9	Chrysene	99		
117-81-7	bis(2-Ethylhexyl)phthalate	93		
117-84-0	Di-n-octylphthalate	95		
205-99-2	Benzo[b]fluoranthene	100		
207-08-9	Benzo[k]fluoranthene	96		
50-32-8	Benzo[a]pyrene	96		
193-39-5	Indeno[1,2,3-cd]pyrene	100		
53-70-3	Dibenz[a,h]anthracene	110		
191-24-2	Benzo[g,h,i]perylene	93		

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCS0122

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: LCS0122
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81225.D
 Level: (low/med) LOW Date Collected: 1/22/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/22/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/28/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-75-9	N-Nitrosodimethylamine		60	
111-44-4	bis(2-Chloroethyl)ether		99	
108-95-2	Phenol		52	
95-57-8	2-Chlorophenol		80	
541-73-1	1,3-Dichlorobenzene		94	
106-46-7	1,4-Dichlorobenzene		97	
95-50-1	1,2-Dichlorobenzene		85	
100-51-6	Benzyl alcohol		77	
39638-32-9	bis(2-chloroisopropyl)ether		93	
95-48-7	2-Methylphenol		89	
67-72-1	Hexachloroethane		95	
621-64-7	N-Nitroso-di-n-propylamine		110	
106-44-5	4-Methylphenol		63	
98-95-3	Nitrobenzene		94	
78-59-1	Isophorone		71	
88-75-5	2-Nitrophenol		87	
105-67-9	2,4-Dimethylphenol		41	
111-91-1	bis(2-Chloroethoxy)methane		110	
120-83-2	2,4-Dichlorophenol		90	
120-82-1	1,2,4-Trichlorobenzene		100	
91-20-3	Naphthalene		100	
106-47-8	4-Chloroaniline		62	
87-68-3	Hexachlorobutadiene		100	
59-50-7	4-Chloro-3-methylphenol		92	
91-57-6	2-Methylnaphthalene		99	
77-47-4	Hexachlorocyclopentadiene		110	
88-06-2	2,4,6-Trichlorophenol		93	
95-95-4	2,4,5-Trichlorophenol		100	
91-58-7	2-Chloronaphthalene		110	
88-74-4	2-Nitroaniline		100	
208-96-8	Acenaphthylene		100	
131-11-3	Dimethylphthalate		91	
606-20-2	2,6-Dinitrotoluene		98	
83-32-9	Acenaphthene		100	
99-09-2	3-Nitroaniline		87	
51-28-5	2,4-Dinitrophenol		86	
132-64-9	Dibenzofuran		96	

A-116

1C

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCS0122

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Gre
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water): WATER Lab Sample ID: LCS0122
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81225.D
 Level: (low/med) LOW Date Collected: 1/22/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/22/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/28/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		110	
100-02-7	4-Nitrophenol		46	
86-73-7	Fluorene		100	
7005-72-3	4-Chlorophenyl-phenylether		95	
84-66-2	Diethylphthalate		110	
100-01-6	4-Nitroaniline		88	
534-52-1	4,6-Dinitro-2-methylphenol		97	
86-30-6	n-Nitrosodiphenylamine		100	
101-55-3	4-Bromophenyl-phenylether		110	
118-74-1	Hexachlorobenzene		110	
87-86-5	Pentachlorophenol		100	
85-01-8	Phenanthrene		110	
120-12-7	Anthracene		99	
84-74-2	Di-n-butylphthalate		100	
206-44-0	Fluoranthene		100	
129-00-0	Pyrene		88	
85-68-7	Butylbenzylphthalate		95	
56-55-3	Benzo[a]anthracene		98	
218-01-9	Chrysene		96	
117-81-7	bis(2-Ethylhexyl)phthalate		93	
117-84-0	Di-n-octylphthalate		110	
205-99-2	Benzo[b]fluoranthene		99	
207-08-9	Benzo[k]fluoranthene		100	
50-32-8	Benzo[a]pyrene		89	
193-39-5	Indeno[1,2,3-cd]pyrene		110	
53-70-3	Dibenz[a,h]anthracene		100	
191-24-2	Benzo[g,h,i]perylene		95	

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCSDUP0121

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: LCSDUP012103
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81211.D
 Level: (low/med) LOW Date Collected: 1/21/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-75-9	N-Nitrosodimethylamine		66	
111-44-4	bis(2-Chloroethyl)ether		110	
108-95-2	Phenol		58	
95-57-8	2-Chlorophenol		87	
541-73-1	1,3-Dichlorobenzene		100	
106-46-7	1,4-Dichlorobenzene		100	
95-50-1	1,2-Dichlorobenzene		95	
100-51-6	Benzyl alcohol		81	
39638-32-9	bis(2-chloroisopropyl)ether		110	
95-48-7	2-Methylphenol		100	
67-72-1	Hexachloroethane		98	
621-64-7	N-Nitroso-di-n-propylamine		120	
106-44-5	4-Methylphenol		71	
98-95-3	Nitrobenzene		96	
78-59-1	Isophorone		77	
88-75-5	2-Nitrophenol		95	
105-67-9	2,4-Dimethylphenol		39	
111-91-1	bis(2-Chloroethoxy)methane		110	
120-83-2	2,4-Dichlorophenol		92	
120-82-1	1,2,4-Trichlorobenzene		110	
91-20-3	Naphthalene		110	
106-47-8	4-Chloroaniline		65	
87-68-3	Hexachlorobutadiene		100	
59-50-7	4-Chloro-3-methylphenol		91	
91-57-6	2-Methylnaphthalene		100	
77-47-4	Hexachlorocyclopentadiene		110	
88-06-2	2,4,6-Trichlorophenol		93	
95-95-4	2,4,5-Trichlorophenol		100	
91-58-7	2-Chloronaphthalene		110	
88-74-4	2-Nitroaniline		99	
208-96-8	Acenaphthylene		110	
131-11-3	Dimethylphthalate		76	
606-20-2	2,6-Dinitrotoluene		98	
83-32-9	Acenaphthene		110	
99-09-2	3-Nitroaniline		92	
51-28-5	2,4-Dinitrophenol		85	
132-64-9	Dibenzofuran		100	

A-118

1C

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCSDUP0121

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: LCSDUP012103
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81211.D
 Level: (low/med) LOW Date Collected: 1/21/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene	110		
100-02-7	4-Nitrophenol	43		
86-73-7	Fluorene	110		
7005-72-3	4-Chlorophenyl-phenylether	100		
84-66-2	Diethylphthalate	110		
100-01-6	4-Nitroaniline	94		
534-52-1	4,6-Dinitro-2-methylphenol	96		
86-30-6	n-Nitrosodiphenylamine	110		
101-55-3	4-Bromophenyl-phenylether	110		
118-74-1	Hexachlorobenzene	110		
87-86-5	Pentachlorophenol	99		
85-01-8	Phenanthrene	110		
120-12-7	Anthracene	100		
84-74-2	Di-n-butylphthalate	110		
206-44-0	Fluoranthene	110		
129-00-0	Pyrene	86		
85-68-7	Butylbenzylphthalate	93		
56-55-3	Benzo[a]anthracene	100		
218-01-9	Chrysene	95		
117-81-7	bis(2-Ethylhexyl)phthalate	92		
117-84-0	Di-n-octylphthalate	95		
205-99-2	Benzo[b]fluoranthene	96		
207-08-9	Benzo[k]fluoranthene	96		
50-32-8	Benzo[a]pyrene	91		
193-39-5	Indeno[1,2,3-cd]pyrene	110		
53-70-3	Dibenz[a,h]anthracene	110		
191-24-2	Benzo[g,h,i]perylene	100		

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCSDUP0122

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: LCSDUP0122
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81226.D
 Level: (low/med) LOW Date Collected: 1/22/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/22/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/28/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-75-9	N-Nitrosodimethylamine		49	
111-44-4	bis(2-Chloroethyl)ether		100	
108-95-2	Phenol		51	
95-57-8	2-Chlorophenol		83	
541-73-1	1,3-Dichlorobenzene		98	
106-46-7	1,4-Dichlorobenzene		100	
95-50-1	1,2-Dichlorobenzene		92	
100-51-6	Benzyl alcohol		78	
39638-32-9	bis(2-chloroisopropyl)ether		97	
95-48-7	2-Methylphenol		92	
67-72-1	Hexachloroethane		96	
621-64-7	N-Nitroso-di-n-propylamine		110	
106-44-5	4-Methylphenol		65	
98-95-3	Nitrobenzene		94	
78-59-1	Isophorone		71	
88-75-5	2-Nitrophenol		88	
105-67-9	2,4-Dimethylphenol		47	
111-91-1	bis(2-Chloroethoxy)methane		110	
120-83-2	2,4-Dichlorophenol		91	
120-82-1	1,2,4-Trichlorobenzene		110	
91-20-3	Naphthalene		110	
106-47-8	4-Chloroaniline		59	
87-68-3	Hexachlorobutadiene		110	
59-50-7	4-Chloro-3-methylphenol		94	
91-57-6	2-Methylnaphthalene		110	
77-47-4	Hexachlorocyclopentadiene		96	
88-06-2	2,4,6-Trichlorophenol		96	
95-95-4	2,4,5-Trichlorophenol		110	
91-58-7	2-Chloronaphthalene		120	
88-74-4	2-Nitroaniline		100	
208-96-8	Acenaphthylene		110	
131-11-3	Dimethylphthalate		92	
606-20-2	2,6-Dinitrotoluene		100	
83-32-9	Acenaphthene		110	
99-09-2	3-Nitroaniline		86	
51-28-5	2,4-Dinitrophenol		73	
132-64-9	Dibenzofuran		110	

A-120

1C

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LCSDUP0122

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: LCSDUP0122
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: L4W81226.D
 Level: (low/med) LOW Date Collected: 1/22/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/22/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/28/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		130	
100-02-7	4-Nitrophenol		41	
86-73-7	Fluorene		120	
7005-72-3	4-Chlorophenyl-phenylether		120	
84-66-2	Diethylphthalate		120	
100-01-6	4-Nitroaniline		85	
534-52-1	4,6-Dinitro-2-methylphenol		85	
86-30-6	n-Nitrosodiphenylamine		110	
101-55-3	4-Bromophenyl-phenylether		110	
118-74-1	Hexachlorobenzene		110	
87-86-5	Pentachlorophenol		100	
85-01-8	Phenanthrene		110	
120-12-7	Anthracene		100	
84-74-2	Di-n-butylphthalate		120	
206-44-0	Fluoranthene		110	
129-00-0	Pyrene		97	
85-68-7	Butylbenzylphthalate		100	
56-55-3	Benzo[a]anthracene		97	
218-01-9	Chrysene		95	
117-81-7	bis(2-Ethylhexyl)phthalate		100	
117-84-0	Di-n-octylphthalate		110	
205-99-2	Benzo[b]fluoranthene		98	
207-08-9	Benzo[k]fluoranthene		100	
50-32-8	Benzo[a]pyrene		90	
193-39-5	Indeno[1,2,3-cd]pyrene		100	
53-70-3	Dibenz[a,h]anthracene		110	
191-24-2	Benzo[g,h,i]perylene		100	

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LC-MW-01SMS

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: 7267008
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: M4W81213.D
 Level: (low/med) LOW Date Collected: 1/14/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-75-9	N-Nitrosodimethylamine		55	
111-44-4	bis(2-Chloroethyl)ether		100	
108-95-2	Phenol		39	
95-57-8	2-Chlorophenol		58	
541-73-1	1,3-Dichlorobenzene		93	
106-46-7	1,4-Dichlorobenzene		97	
95-50-1	1,2-Dichlorobenzene		85	
100-51-6	Benzyl alcohol		64	
39638-32-9	bis(2-chloroisopropyl)ether		98	
95-48-7	2-Methylphenol		65	
67-72-1	Hexachloroethane		90	
621-64-7	N-Nitroso-di-n-propylamine		110	
106-44-5	4-Methylphenol		41	
98-95-3	Nitrobenzene		94	
78-59-1	Isophorone		73	
88-75-5	2-Nitrophenol		83	
105-67-9	2,4-Dimethylphenol		39	
111-91-1	bis(2-Chloroethoxy)methane		110	
120-83-2	2,4-Dichlorophenol		71	
120-82-1	1,2,4-Trichlorobenzene		100	
91-20-3	Naphthalene		100	
106-47-8	4-Chloroaniline		56	
87-68-3	Hexachlorobutadiene		100	
59-50-7	4-Chloro-3-methylphenol		65	
91-57-6	2-Methylnaphthalene		100	
77-47-4	Hexachlorocyclopentadiene		100	
88-06-2	2,4,6-Trichlorophenol		84	
95-95-4	2,4,5-Trichlorophenol		91	
91-58-7	2-Chloronaphthalene		110	
88-74-4	2-Nitroaniline		96	
208-96-8	Acenaphthylene		110	
131-11-3	Dimethylphthalate		78	
606-20-2	2,6-Dinitrotoluene		98	
83-32-9	Acenaphthene		110	
99-09-2	3-Nitroaniline		82	
51-28-5	2,4-Dinitrophenol		76	
132-64-9	Dibenzofuran		99	

A-122

1C

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LC-MW-01SMS

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: 7267008
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: M4W81213.D
 Level: (low/med) LOW Date Collected: 1/14/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		110	
100-02-7	4-Nitrophenol		29	
86-73-7	Fluorene		110	
7005-72-3	4-Chlorophenyl-phenylether		98	
84-66-2	Diethylphthalate		110	
100-01-6	4-Nitroaniline		84	
534-52-1	4,6-Dinitro-2-methylphenol		92	
86-30-6	n-Nitrosodiphenylamine		100	
101-55-3	4-Bromophenyl-phenylether		110	
118-74-1	Hexachlorobenzene		110	
87-86-5	Pentachlorophenol		98	
85-01-8	Phenanthrene		110	
120-12-7	Anthracene		100	
84-74-2	Di-n-butylphthalate		100	
206-44-0	Fluoranthene		100	
129-00-0	Pyrene		91	
85-68-7	Butylbenzylphthalate		94	
56-55-3	Benzo[a]anthracene		97	
218-01-9	Chrysene		94	
117-81-7	bis(2-Ethylhexyl)phthalate		91	
117-84-0	Di-n-octylphthalate		96	
205-99-2	Benzo[b]fluoranthene		100	
207-08-9	Benzo[k]fluoranthene		100	
50-32-8	Benzo[a]pyrene		89	
193-39-5	Indeno[1,2,3-cd]pyrene		100	
53-70-3	Dibenz[a,h]anthracene		100	
191-24-2	Benzo[g,h,i]perylene		98	

1B

Sample Number:

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

LC-MW-01SMSD

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: 7267009
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: M4W81214.D
 Level: (low/med) LOW Date Collected: 1/14/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-75-9	N-Nitrosodimethylamine		55	
111-44-4	bis(2-Chloroethyl)ether		100	
108-95-2	Phenol		43	
95-57-8	2-Chlorophenol		65	
541-73-1	1,3-Dichlorobenzene		96	
106-46-7	1,4-Dichlorobenzene		99	
95-50-1	1,2-Dichlorobenzene		87	
100-51-6	Benzyl alcohol		68	
39638-32-9	bis(2-chloroisopropyl)ether		99	
95-48-7	2-Methylphenol		71	
67-72-1	Hexachloroethane		92	
621-64-7	N-Nitroso-di-n-propylamine		110	
106-44-5	4-Methylphenol		47	
98-95-3	Nitrobenzene		95	
78-59-1	Isophorone		74	
88-75-5	2-Nitrophenol		87	
105-67-9	2,4-Dimethylphenol		39	
111-91-1	bis(2-Chloroethoxy)methane		110	
120-83-2	2,4-Dichlorophenol		77	
120-82-1	1,2,4-Trichlorobenzene		110	
91-20-3	Naphthalene		110	
106-47-8	4-Chloroaniline		55	
87-68-3	Hexachlorobutadiene		100	
59-50-7	4-Chloro-3-methylphenol		70	
91-57-6	2-Methylnaphthalene		100	
77-47-4	Hexachlorocyclopentadiene		100	
88-06-2	2,4,6-Trichlorophenol		89	
95-95-4	2,4,5-Trichlorophenol		94	
91-58-7	2-Chloronaphthalene		110	
88-74-4	2-Nitroaniline		98	
208-96-8	Acenaphthylene		110	
131-11-3	Dimethylphthalate		77	
606-20-2	2,6-Dinitrotoluene		100	
83-32-9	Acenaphthene		110	
99-09-2	3-Nitroaniline		81	
51-28-5	2,4-Dinitrophenol		69	
132-64-9	Dibenzofuran		110	

A-124

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Sample Number:

LC-MW-01SMSD

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix: (soil/water) WATER Lab Sample ID: 7267009
 Sample wt/vol: 1000 (g/ml) ML Lab File ID: M4W81214.D
 Level: (low/med) LOW Date Collected: 1/14/2003
 % Moisture: _____ decanted:(Y/N) N Date Extracted: 1/21/2003
 Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/2003
 Injection Volume: 1.0 (uL) Dilution Factor: 1.0
 GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
121-14-2	2,4-Dinitrotoluene		120	
100-02-7	4-Nitrophenol		31	
86-73-7	Fluorene		110	
7005-72-3	4-Chlorophenyl-phenylether		110	
84-66-2	Diethylphthalate		110	
100-01-6	4-Nitroaniline		84	
534-52-1	4,6-Dinitro-2-methylphenol		84	
86-30-6	n-Nitrosodiphenylamine		110	
101-55-3	4-Bromophenyl-phenylether		110	
118-74-1	Hexachlorobenzene		110	
87-86-5	Pentachlorophenol		98	
85-01-8	Phenanthrene		110	
120-12-7	Anthracene		100	
84-74-2	Di-n-butylphthalate		110	
206-44-0	Fluoranthene		110	
129-00-0	Pyrene		86	
85-68-7	Butylbenzylphthalate		91	
56-55-3	Benzo[a]anthracene		97	
218-01-9	Chrysene		93	
117-81-7	bis(2-Ethylhexyl)phthalate		93	
117-84-0	Di-n-octylphthalate		100	
205-99-2	Benzo[b]fluoranthene		100	
207-08-9	Benzo[k]fluoranthene		110	
50-32-8	Benzo[a]pyrene		91	
193-39-5	Indeno[1,2,3-cd]pyrene		92	
53-70-3	Dibenz[a,h]anthracene		97	
191-24-2	Benzo[g,h,i]perylene		86	

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L

	Sample Number:	S1 (2FP) #	S2 (PHL) #	S3 (NBZ) #	S4 (FBP) #	S5 (TBP) #	S6 (TPH) #	TOT OUT
01	BLANK0121	67	44	100	122	101	92	0
02	LCS0121	68	46	98	131	104	98	0
03	LCSDUP0121	66	45	97	127	102	95	0
04	LC-MW-01S	62	42	98	116	102	89	0
05	LC-MW-01SMS	39	31	96	129	102	80	0
06	LC-MW-01SMS	45	34	100	135	105	76	0
07	LC-MW-01D	52	36	99	114	100	78	0
08	LC-MW-04S	42	31	87	109	90	72	0
09	LC-MW-04D	43	31	96	109	92	64	0
10	LC-MW-02S	46	33	92	116	96	81	0
11	LC-MW-02D	34	26	99	118	82	73	0
12	LC-MW-01M	51	34	93	118	92	85	0
13	BLANK0122	61	41	100	116	106	89	0
14	LCS0122	62	41	96	130	110	98	0
15	LCSDUP0122	60	40	95	134	110	104	0
16	LC-MW-5D	52	36	99	116	105	78	0
17	LC-MW-03S	54	36	101	120	105	82	0
18	LC-MW-03D	43	30	97	114	107	46*	1
19	LC-MW-05S	54	37	100	116	108	78	0

QC LIMITS

- S1 (2FP) = 2-FLUOROPHENOL (24-79)
- S2 (PHL) = PHENOL-d5 (11-58)
- S3 (NBZ) = NITROBENZENE-d5 (50-122)
- S4 (FBP) = 2-FLUOROBIPHENYL (40-138)
- S5 (TBP) = 2,4,6-TRIBROMOPHENOL (32-117)
- S6 (TPH) = TERPHENYL-d14 (48-131)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogate diluted out

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix Spike - Sample Number LC-MW-01S

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
N-Nitrosodimethylamine	100	0.0	55	55	17 - 95
bis(2-Chloroethyl)ether	100	0.0	100	100	54 - 103
Phenol	100	0.0	39	39	1 - 83
2-Chlorophenol	100	0.0	58	58	6 - 138
1,3-Dichlorobenzene	100	0.0	93	93	32 - 107
1,4-Dichlorobenzene	100	0.0	97	97	35 - 108
1,2-Dichlorobenzene	100	0.0	85	85	38 - 105
Benzyl alcohol	100	0.0	64	64	50 - 102
bis(2-chloroisopropyl)ether	100	0.0	98	98	15 - 122
2-Methylphenol	100	0.0	65	65	9 - 112
Hexachloroethane	100	0.0	90	90	25 - 108
N-Nitroso-di-n-propylamine	100	0.0	110	110 *	58 - 101
4-Methylphenol	100	0.0	41	41	1 - 109
Nitrobenzene	100	0.0	94	94	35 - 153
Isophorone	100	0.0	73	73	64 - 116
2-Nitrophenol	100	0.0	83	83	60 - 114
2,4-Dimethylphenol	100	0.0	39	39	1 - 101
bis(2-Chloroethoxy)methane	100	0.0	110	110 *	66 - 106
2,4-Dichlorophenol	100	0.0	71	71	8 - 143
1,2,4-Trichlorobenzene	100	0.0	100	100	41 - 113
Naphthalene	100	0.0	100	100	47 - 126
4-Chloroaniline	100	0.0	56	56	1 - 61
Hexachlorobutadiene	100	0.0	100	100	29 - 114
4-Chloro-3-methylphenol	100	0.0	65	65	29 - 120
2-Methylnaphthalene	100	0.0	100	100	55 - 115
Hexachlorocyclopentadiene	100	0.0	100	100	13 - 150
2,4,6-Trichlorophenol	100	0.0	84	84	6 - 142
2,4,5-Trichlorophenol	100	0.0	91	91	10 - 150
2-Chloronaphthalene	100	0.0	110	110	56 - 118

Column to be used to flag recovery and RPD values with an asteris

* Values outside of QC limits

RPD: 0 out of 32 outside limits

Spike Recovery: 3 out of 63 outside limits

COMMENTS:

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix Spike - Sample Number LC-MW-01S

2-Nitroaniline	100	0.0	96	96	18 - 139
Acenaphthylene	100	0.0	110	110	67 - 123
Dimethylphthalate	100	0.0	78	78	1 - 143
2,6-Dinitrotoluene	100	0.0	98	98	66 - 111
Acenaphthene	100	0.0	110	110	56 - 122
3-Nitroaniline	100	0.0	82	82	1 - 155
2,4-Dinitrophenol	100	0.0	76	76	44 - 124
Dibenzofuran	100	0.0	99	99	46 - 136
2,4-Dinitrotoluene	100	0.0	110	110	64 - 129
4-Nitrophenol	100	0.0	29	29	19 - 76
Fluorene	100	0.0	110	110 *	64 - 110
4-Chlorophenyl-phenylether	100	0.0	98	98	54 - 125
Diethylphthalate	100	0.0	110	110	41 - 130
4-Nitroaniline	100	0.0	84	84	1 - 161
4,6-Dinitro-2-methylphenol	100	0.0	92	92	59 - 135
n-Nitrosodiphenylamine	100	0.0	100	100	37 - 107
4-Bromophenyl-phenylether	100	0.0	110	110	60 - 124
Hexachlorobenzene	100	0.0	110	110	58 - 125
Pentachlorophenol	100	0.0	98	98	16 - 140
Phenanthrene	100	0.0	110	110	53 - 126
Anthracene	100	0.0	100	100	57 - 113
Di-n-butylphthalate	100	0.0	100	100	64 - 120
Pyrene	100	0.0	91	91	56 - 117
Butylbenzylphthalate	100	0.0	94	94	52 - 119
Benzo[a]anthracene	100	0.0	97	97	61 - 114
Chrysene	100	0.0	94	94	57 - 120
bis(2-Ethylhexyl)phthalate	100	0.0	91	91	58 - 119
Di-n-octylphthalate	100	0.0	96	96	50 - 118
Benzo[b]fluoranthene	100	0.0	100	100	48 - 145
Benzo[k]fluoranthene	100	0.0	100	100	41 - 135
Benzo[a]pyrene	100	0.0	89	89	51 - 111
Indeno[1,2,3-cd]pyrene	100	0.0	100	100	56 - 130

Column to be used to flag recovery and RPD values with an asteris

* Values outside of QC limits

RPD: 0 out of 33 outside limits

Spike Recovery: 2 out of 65 outside limits

COMMENTS:

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L

Matrix Spike - Sample Number LC-MW-01S

Dibenz[a,h]anthracene	100	0.0	100	100	62 - 136
Benzo[g,h,i]perylene	100	0.0	98	98	51 - 138

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS	
					RPD	REC.
N-Nitrosodimethylamine	100	55	55	0	20	17 - 95
bis(2-Chloroethyl)ether	100	100	100	0	22	54 - 103
Phenol	100	43	43	10	10	1 - 83
2-Chlorophenol	100	65	65	11	14	6 - 138
1,3-Dichlorobenzene	100	96	96	3	28	32 - 107
1,4-Dichlorobenzene	100	99	99	2	28	35 - 108
1,2-Dichlorobenzene	100	87	87	2	28	38 - 105
Benzyl alcohol	100	68	68	6	17	50 - 102
bis(2-chloroisopropyl)ether	100	99	99	1	29	15 - 122
2-Methylphenol	100	71	71	9	19	9 - 112
Hexachloroethane	100	92	92	2	25	25 - 108
N-Nitroso-di-n-propylamine	100	110	110 *	0	19	58 - 101
4-Methylphenol	100	47	47	14	17	1 - 109
Nitrobenzene	100	95	95	1	17	35 - 153
Isophorone	100	74	74	1	37	64 - 116
2-Nitrophenol	100	87	87	5	16	60 - 114
2,4-Dimethylphenol	100	39	39	0	49	1 - 101
bis(2-Chloroethoxy)methane	100	110	110 *	0	18	66 - 106
2,4-Dichlorophenol	100	77	77	8	15	8 - 143
1,2,4-Trichlorobenzene	100	110	110	10	23	41 - 113
Naphthalene	100	110	110	10	23	47 - 126
4-Chloroaniline	100	55	55	2	45	1 - 61
Hexachlorobutadiene	100	100	100	0	20	29 - 114
4-Chloro-3-methylphenol	100	70	70	7	26	29 - 120
2-Methylnaphthalene	100	100	100	0	24	55 - 115
Hexachlorocyclopentadiene	100	100	100	0	68	13 - 150

Column to be used to flag recovery and RPD values with an asteris

* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 2 out of 3 outside limits

COMMENTS:

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Matrix Spike - Sample Number LC-MW-01S

2,4,6-Trichlorophenol	100	89	89	6	13	6 - 142
2,4,5-Trichlorophenol	100	94	94	3	13	10 - 150
2-Chloronaphthalene	100	110	110	0	22	56 - 118
2-Nitroaniline	100	98	98	2	20	18 - 139
Acenaphthylene	100	110	110	0	23	67 - 123
Dimethylphthalate	100	77	77	1	37	1 - 143
2,6-Dinitrotoluene	100	100	100	2	23	66 - 111
Acenaphthene	100	110	110	0	23	56 - 122
3-Nitroaniline	100	81	81	1	20	1 - 155
2,4-Dinitrophenol	100	69	69	10	22	44 - 124
Dibenzofuran	100	110	110	11	21	46 - 136
2,4-Dinitrotoluene	100	120	120	9	24	64 - 129
4-Nitrophenol	100	31	31	7	13	19 - 76
Fluorene	100	110	110	0	23	64 - 110
4-Chlorophenyl-phenylether	100	110	110	12	50	54 - 125
Diethylphthalate	100	110	110	0	27	41 - 130
4-Nitroaniline	100	84	84	0	39	1 - 161
4,6-Dinitro-2-methylphenol	100	84	84	9	22	59 - 135
n-Nitrosodiphenylamine	100	110	110 *	10	31	37 - 107
4-Bromophenyl-phenylether	100	110	110	0	27	60 - 124
Hexachlorobenzene	100	110	110	0	27	58 - 125
Pentachlorophenol	100	98	98	0	20	16 - 140
Phenanthrene	100	110	110	0	24	53 - 126
Anthracene	100	100	100	0	25	57 - 113
Di-n-butylphthalate	100	110	110	10	23	64 - 120
Pyrene	100	86	86	6	30	56 - 117
Butylbenzylphthalate	100	91	91	3	30	52 - 119
Benzo[a]anthracene	100	97	97	0	30	61 - 114
Chrysene	100	93	93	1	28	57 - 120
bis(2-Ethylhexyl)phthalate	100	93	93	2	27	58 - 119
Di-n-octylphthalate	100	100	100	4	32	50 - 118
Benzo[b]fluoranthene	100	100	100	0	40	48 - 145

Column to be used to flag recovery and RPD values with an asteris

* Values outside of QC limits.

RPD: 0 out of 0 outside limits

Spike Recovery: 1 out of 0 outside limits

COMMENTS:

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L

Matrix Spike - Sample Number LC-MW-01S

Benzo[k]fluoranthene	100	110	110	10	28	41 - 135
Benzo[a]pyrene	100	91	91	2	34	51 - 111
Indeno[1,2,3-cd]pyrene	100	92	92	8	44	56 - 130
Dibenz[a,h]anthracene	100	97	97	3	39	62 - 136
Benzo[g,h,i]perylene	100	86	86	13	36	51 - 138

Column to be used to flag recovery and RPD values with an asteris

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 0 outside limits

COMMENTS:

8270C WATER LABORATORY CONTROL SPIKE REPORT

Dale Acquired: 1/27/2003 11:49 Data File Name: L4W81210.D
 Sample Name: LCS012103 Analyst: 0189JT
 Misc Info: Water LCS012103,COL:1/21/03,EX:1/2 Instrument: ABN4
 Method: 8270C_25 Data File Path: G:\ABN4\DATA\1_27_03\

CAS No.	Compound Name	Conc. (ug/L)	Percent Recovery (%)	Range		In Spec (Yes/No)
				Lower	Upper	
62-75-9	N-Nitrosodimethylamine	72	72	27	90	Yes
111-44-4	bis(2-Chloroethyl)ether	104	104	54	104	Yes
108-95-2	Phenol	59	59	24	50	No
95-57-8	2-Chlorophenol	88	88	58	101	Yes
541-73-1	1,3-Dichlorobenzene	87	87	13	103	Yes
106-46-7	1,4-Dichlorobenzene	91	91	16	105	Yes
95-50-1	1,2-Dichlorobenzene	82	82	18	103	Yes
100-51-6	Benzyl alcohol	76	76	52	102	Yes
39638-32-9	bis(2-chloroisopropyl)ether	103	103	22	110	Yes
95-48-7	2-Methylphenol	98	98	41	104	Yes
67-72-1	Hexachloroethane	83	83	1	106	Yes
621-64-7	N-Nitroso-di-n-propylamine	114	114	50	112	No
106-44-5	4-Methylphenol	73	73	46	87	Yes
98-95-3	Nitrobenzene	93	93	57	110	Yes
78-5-	Isophorone	77	77	61	119	Yes
8-75-5	2-Nitrophenol	95	95	63	107	Yes
105-67-9	2,4-Dimethylphenol	39	39	24	96	Yes
111-91-1	bis(2-Chloroethoxy)methane	109	109	58	110	Yes
120-83-2	2,4-Dichlorophenol	92	92	66	107	Yes
120-82-1	1,2,4-Trichlorobenzene	102	102	23	109	Yes
91-20-3	Naphthalene	102	102	36	113	Yes
106-47-8	4-Chloroaniline	66	66	1	91	Yes
87-68-3	Hexachlorobutadiene	97	97	1	113	Yes
59-50-7	4-Chloro-3-methylphenol	93	93	61	110	Yes
91-57-6	2-Methylnaphthalene	102	102	34	115	Yes
77-47-4	Hexachlorocyclopentadiene	110	110	1	125	Yes
88-06-2	2,4,6-Trichlorophenol	93	93	58	109	Yes
95-95-4	2,4,5-Trichlorophenol	105	105	64	112	Yes
91-58-7	2-Chloronaphthalene	113	113	33	124	Yes
88-74-4	2-Nitroaniline	102	102	55	117	Yes
208-96-8	Acenaphthylene	110	110	50	134	Yes
131-11-3	Dimethylphthalate	75	75	1	132	Yes
606-20-2	2,6-Dinitrotoluene	101	101	59	113	Yes
83-32-9	Acenaphthene	108	108	43	124	Yes
99-09-2	3-Nitroaniline	95	95	56	106	Yes
51-28-5	2,4-Dinitrophenol	92	92	44	114	Yes
132-64-9	Dibenzofuran	102	102	32	133	Yes
121-14-2	2,4-Dinitrotoluene	115	115	52	130	Yes
100-02-7	4-Nitrophenol	45	45	20	61	Yes
86-73-7	Fluorene	107	107	44	119	Yes
7005-72-3	4-Chlorophenyl-phenylether	97	97	37	133	Yes
84-66-2	Diethylphthalate	107	107	7	137	Yes
100-01-6	4-Nitroaniline	100	100	36	123	Yes
534-52-1	4,6-Dinitro-2-methylphenol	98	98	47	148	Yes
86-30-6	n-Nitrosodiphenylamine	108	108	22	117	Yes
101-55-3	4-Bromophenyl-phenylether	108	108	39	127	Yes
117-74-1	Hexachlorobenzene	109	109	40	125	Yes
87-86-5	Pentachlorophenol	100	100	52	112	Yes
85-01-8	Phenanthrene	109	109	39	127	Yes
120-12-7	Anthracene	105	105	47	122	Yes
84-74-2	Di-n-butylphthalate	109	109	36	129	Yes
206-44-0	Fluoranthene	107	107	40	126	Yes
129-00-0	Pyrene	89	89	44	121	Yes
85-68-7	Butylbenzylphthalate	95	95	22	131	Yes
56-55-3	Benzo[a]anthracene	102	102	45	122	Yes
210-01-9	Chrysene	99	99	41	125	Yes
117-81-7	bis(2-Ethylhexyl)phthalate	93	93	47	119	Yes
117-84-0	Di-n-octylphthalate	95	95	37	124	Yes
205-99-2	Benzo[b]fluoranthene	104	104	38	146	Yes
207-08-9	Benzo[k]fluoranthene	96	96	21	157	Yes
50-32-8	Benzo[a]pyrene	96	96	42	125	Yes
193-39-5	Indeno[1,2,3-cd]pyrene	104	104	45	133	Yes
53-70-3	Dibenz[a,h]anthracene	106	106	49	141	Yes
191-24-2	Benzo[g,h,i]perylene	93	93	42	141	Yes

8270C WATER LABORATORY CONTROL SPIKE REPORT

Date Acquired: 1/28/2003 0:04 Data File Name: L4W81225.D
 Sample Name: LCS0122 Analyst: 0189JT
 Misc Info: WATER,LCS0122,COL:1/22/03,EX:1/22 Instrument: ABN4
 Method: 8270C_25 Data File Path: G:\ABN4\DATA\1_27_03\

CAS No.	Compound Name	Conc. (ug/L)	Percent Recovery (%)	Range		In Spec (Yes/No)
				Lower	Upper	
62-75-9	N-Nitrosodimethylamine	60	60	27	90	Yes
111-44-4	bis(2-Chloroethyl)ether	99	99	54	104	Yes
108-95-2	Phenol	52	52	24	50	No
95-57-8	2-Chlorophenol	80	80	58	101	Yes
541-73-1	1,3-Dichlorobenzene	94	94	13	103	Yes
106-46-7	1,4-Dichlorobenzene	97	97	16	105	Yes
95-50-1	1,2-Dichlorobenzene	85	85	18	103	Yes
100-51-6	Benzyl alcohol	77	77	52	102	Yes
39638-32-9	bis(2-chloroisopropyl)ether	93	93	22	110	Yes
95-48-7	2-Methylphenol	89	89	41	104	Yes
67-72-1	Hexachloroethane	95	95	1	106	Yes
621-64-7	N-Nitroso-di-n-propylamine	106	106	50	112	Yes
106-44-5	4-Methylphenol	63	63	46	87	Yes
98-95-3	Nitrobenzene	94	94	57	110	Yes
78-5	Isophorone	71	71	61	119	Yes
8-75-5	2-Nitrophenol	87	87	63	107	Yes
105-67-9	2,4-Dimethylphenol	41	41	24	96	Yes
111-91-1	bis(2-Chloroethoxy)methane	106	106	58	110	Yes
120-83-2	2,4-Dichlorophenol	90	90	66	107	Yes
120-82-1	1,2,4-Trichlorobenzene	104	104	23	109	Yes
91-20-3	Naphthalene	101	101	36	113	Yes
106-47-8	4-Chloroaniline	62	62	1	91	Yes
87-68-3	Hexachlorobutadiene	105	105	1	113	Yes
59-50-7	4-Chloro-3-methylphenol	92	92	61	110	Yes
91-57-6	2-Methylnaphthalene	99	99	34	115	Yes
77-47-4	Hexachlorocyclopentadiene	111	111	1	125	Yes
88-06-2	2,4,6-Trichlorophenol	93	93	58	109	Yes
95-95-4	2,4,5-Trichlorophenol	103	103	64	112	Yes
91-58-7	2-Chloronaphthalene	108	108	33	124	Yes
88-74-4	2-Nitroaniline	100	100	55	117	Yes
208-96-8	Acenaphthylene	104	104	50	134	Yes
131-11-3	Dimethylphthalate	91	91	1	132	Yes
606-20-2	2,6-Dinitrotoluene	98	98	59	113	Yes
83-32-9	Acenaphthene	102	102	43	124	Yes
99-09-2	3-Nitroaniline	87	87	56	106	Yes
51-28-5	2,4-Dinitrophenol	86	86	44	114	Yes
132-64-9	Dibenzofuran	96	96	32	133	Yes
121-14-2	2,4-Dinitrotoluene	107	107	52	130	Yes
100-02-7	4-Nitrophenol	46	46	20	61	Yes
86-73-7	Fluorene	104	104	44	119	Yes
7005-72-3	4-Chlorophenyl-phenylether	95	95	37	133	Yes
84-66-2	Diethylphthalate	108	108	7	137	Yes
100-01-6	4-Nitroaniline	88	88	36	123	Yes
534-52-1	4,6-Dinitro-2-methylphenol	97	97	47	148	Yes
86-30-6	n-Nitrosodiphenylamine	104	104	22	117	Yes
101-55-3	4-Bromophenyl-phenylether	106	106	39	127	Yes
117-74-1	Hexachlorobenzene	106	106	40	125	Yes
87-86-5	Pentachlorophenol	103	103	52	112	Yes
85-01-8	Phenanthrene	106	106	39	127	Yes
120-12-7	Anthracene	99	99	47	122	Yes
84-74-2	Di-n-butylphthalate	102	102	36	129	Yes
206-44-0	Fluoranthene	100	100	40	126	Yes
129-00-0	Pyrene	88	88	44	121	Yes
85-68-7	Butylbenzylphthalate	95	95	22	131	Yes
56-55-3	Benzo[a]anthracene	98	98	45	122	Yes
210-01-9	Chrysene	96	96	41	125	Yes
117-81-7	bis(2-Ethylhexyl)phthalate	93	93	47	119	Yes
117-84-0	Di-n-octylphthalate	106	106	37	124	Yes
205-99-2	Benzo[b]fluoranthene	99	99	36	146	Yes
207-08-9	Benzo[k]fluoranthene	101	101	21	157	Yes
50-32-8	Benzo[a]pyrene	89	89	42	125	Yes
183-39-5	Indeno[1,2,3-cd]pyrene	114	114	45	133	Yes
53-70-3	Dibenz[a,h]anthracene	104	104	49	141	Yes
191-24-2	Benzo[g,h,i]perylene	95	95	42	141	Yes

8270C WATER LABORATORY CONTROL SPIKE REPORT

Dale Acquired: 1/28/2003 0:57 Data File Name: L4W81226.D
 Sample Name: LCSDUP0122 Analyst: 0189JT
 Misc Info: WATER,LCSD0122,COL:1/22/03,EX:1/ Instrument: ABN4
 Method: 8270C_25 Data File Path: G:\ABN4\DATA\1_27_03\

CAS No.	Compound Name	Conc. (ug/L)	Percent Recovery (%)	Range		In Spec (Yes/No)
				Lower	Upper	
62-75-9	N-Nitrosodimethylamine	49	49	27	90	Yes
111-44-4	bis(2-Chloroethyl)ether	104	104	54	104	Yes
108-95-2	Phenol	51	51	24	50	No
95-57-8	2-Chlorophenol	83	83	58	101	Yes
541-73-1	1,3-Dichlorobenzene	99	99	13	103	Yes
106-46-7	1,4-Dichlorobenzene	103	103	16	105	Yes
95-50-1	1,2-Dichlorobenzene	92	92	18	103	Yes
100-51-6	Benzyl alcohol	78	78	52	102	Yes
39638-32-9	bis(2-chloroisopropyl)ether	97	97	22	110	Yes
95-48-7	2-Methylphenol	92	92	41	104	Yes
67-72-1	Hexachloroethane	96	96	1	106	Yes
621-64-7	N-Nitroso-di-n-propylamine	110	110	50	112	Yes
106-44-5	4-Methylphenol	65	65	46	87	Yes
98-95-3	Nitrobenzene	94	94	57	110	Yes
78-5-	Isophorone	71	71	61	119	Yes
8-75-5	2-Nitrophenol	88	88	63	107	Yes
105-67-9	2,4-Dimethylphenol	47	47	24	96	Yes
111-91-1	bis(2-Chloroethoxy)methane	108	108	58	110	Yes
120-83-2	2,4-Dichlorophenol	91	91	66	107	Yes
120-82-1	1,2,4-Trichlorobenzene	108	108	23	109	Yes
91-20-3	Naphthalene	109	109	36	113	Yes
106-47-8	4-Chloroaniline	59	59	1	91	Yes
87-68-3	Hexachlorobutadiene	109	109	1	113	Yes
59-50-7	4-Chloro-3-methylphenol	94	94	61	110	Yes
91-57-6	2-Methylnaphthalene	107	107	34	115	Yes
77-47-4	Hexachlorocyclopentadiene	96	96	1	125	Yes
88-06-2	2,4,6-Trichlorophenol	96	96	58	109	Yes
95-95-4	2,4,5-Trichlorophenol	105	105	64	112	Yes
91-58-7	2-Chloronaphthalene	118	118	33	124	Yes
88-74-4	2-Nitroaniline	101	101	55	117	Yes
208-96-8	Acenaphthylene	110	110	50	134	Yes
131-11-3	Dimethylphthalate	92	92	1	132	Yes
606-20-2	2,6-Dinitrotoluene	100	100	59	113	Yes
83-32-9	Acenaphthene	113	113	43	124	Yes
99-09-2	3-Nitroaniline	86	86	56	106	Yes
51-28-5	2,4-Dinitrophenol	73	73	44	114	Yes
132-64-9	Dibenzofuran	115	115	32	133	Yes
121-14-2	2,4-Dinitrotoluene	126	126	52	130	Yes
100-02-7	4-Nitrophenol	41	41	20	61	Yes
86-73-7	Fluorene	117	117	44	119	Yes
7005-72-3	4-Chlorophenyl-phenylether	120	120	37	133	Yes
84-66-2	Diethylphthalate	116	116	7	137	Yes
100-01-6	4-Nitroaniline	85	85	36	123	Yes
534-52-1	4,6-Dinitro-2-methylphenol	85	85	47	148	Yes
86-30-6	n-Nitrosodiphenylamine	107	107	22	117	Yes
101-55-3	4-Bromophenyl-phenylether	112	112	39	127	Yes
117-74-1	Hexachlorobenzene	113	113	40	125	Yes
87-86-5	Pentachlorophenol	102	102	52	112	Yes
85-01-8	Phenanthrene	113	113	39	127	Yes
120-12-7	Anthracene	105	105	47	122	Yes
84-74-2	Di-n-butylphthalate	116	116	36	129	Yes
206-44-0	Fluoranthene	108	108	40	126	Yes
129-00-0	Pyrene	97	97	44	121	Yes
85-68-7	Butylbenzylphthalate	104	104	22	131	Yes
56-55-3	Benzo[a]anthracene	97	97	45	122	Yes
210-01-9	Chrysene	95	95	41	125	Yes
117-81-7	bis(2-Ethylhexyl)phthalate	103	103	47	119	Yes
117-84-0	Di-n-octylphthalate	110	110	37	124	Yes
205-99-2	Benzo[b]fluoranthene	98	98	36	146	Yes
207-08-9	Benzo[k]fluoranthene	101	101	21	157	Yes
50-32-8	Benzo[a]pyrene	90	90	42	125	Yes
193-39-5	Indeno[1,2,3-cd]pyrene	105	105	45	133	Yes
53-70-3	Dibenz[a,h]anthracene	107	107	49	141	Yes
191-24-2	Benzo[g,h,i]perylene	101	101	42	141	Yes

8270C WATER LABORATORY CONTROL SPIKE REPORT

Date Acquired: 1/27/2003 12:43 Data File Name: L4W81211.D
 Sample Name: LCSDUP012103 Analyst: 0189JT
 Misc Info: Water LCSDUP121,COL:1/21/03,EX:1/2 Instrument: ABN4
 Method: 8270C_25 Data File Path: G:\ABN4\DATA\1_27_03\

CAS No.	Compound Name	Conc. (ug/L)	Percent Recovery (%)	Range		In Spec (Yes/No)
				Lower	Upper	
62-75-9	N-Nitrosodimethylamine	66	66	27	90	Yes
111-44-4	bis(2-Chloroethyl)ether	109	109	54	104	No
108-95-2	Phenol	58	58	24	50	No
95-57-8	2-Chlorophenol	87	87	58	101	Yes
541-73-1	1,3-Dichlorobenzene	102	102	13	103	Yes
106-46-7	1,4-Dichlorobenzene	104	104	16	105	Yes
95-50-1	1,2-Dichlorobenzene	95	95	18	103	Yes
100-51-6	Benzyl alcohol	81	81	52	102	Yes
39638-32-9	bis(2-chloroisopropyl)ether	109	109	22	110	Yes
95-48-7	2-Methylphenol	101	101	41	104	Yes
67-72-1	Hexachloroethane	98	98	1	106	Yes
621-64-7	N-Nitroso-di-n-propylamine	117	117	50	112	No
106-44-5	4-Methylphenol	71	71	46	87	Yes
98-95-3	Nitrobenzene	96	96	57	110	Yes
78-5-	Isophorone	77	77	61	119	Yes
8-75-5	2-Nitrophenol	95	95	63	107	Yes
105-67-9	2,4-Dimethylphenol	39	39	24	96	Yes
111-91-1	bis(2-Chloroethoxy)methane	112	112	58	110	No
120-83-2	2,4-Dichlorophenol	92	92	66	107	Yes
120-82-1	1,2,4-Trichlorobenzene	106	106	23	109	Yes
91-20-3	Naphthalene	107	107	36	113	Yes
106-47-8	4-Chloroaniline	65	65	1	91	Yes
87-68-3	Hexachlorobutadiene	105	105	1	113	Yes
59-50-7	4-Chloro-3-methylphenol	91	91	61	110	Yes
91-57-6	2-Methylnaphthalene	105	105	34	115	Yes
77-47-4	Hexachlorocyclopentadiene	115	115	1	125	Yes
88-06-2	2,4,6-Trichlorophenol	93	93	58	109	Yes
95-95-4	2,4,5-Trichlorophenol	100	100	64	112	Yes
91-58-7	2-Chloronaphthalene	112	112	33	124	Yes
88-74-4	2-Nitroaniline	99	99	55	117	Yes
208-96-8	Acenaphthylene	107	107	50	134	Yes
131-11-3	Dimethylphthalate	76	76	1	132	Yes
606-20-2	2,6-Dinitrotoluene	98	98	59	113	Yes
83-32-9	Acenaphthene	107	107	43	124	Yes
99-09-2	3-Nitroaniline	92	92	56	106	Yes
51-28-5	2,4-Dinitrophenol	85	85	44	114	Yes
132-64-9	Dibenzofuran	102	102	32	133	Yes
121-14-2	2,4-Dinitrotoluene	115	115	52	130	Yes
100-02-7	4-Nitrophenol	43	43	20	61	Yes
86-73-7	Fluorene	107	107	44	119	Yes
7005-72-3	4-Chlorophenyl-phenylether	102	102	37	133	Yes
84-66-2	Diethylphthalate	106	106	7	137	Yes
100-01-6	4-Nitroaniline	94	94	36	123	Yes
534-52-1	4,6-Dinitro-2-methylphenol	96	96	47	148	Yes
86-30-6	n-Nitrosodiphenylamine	107	107	22	117	Yes
101-55-3	4-Bromophenyl-phenylether	108	108	39	127	Yes
117-74-1	Hexachlorobenzene	107	107	40	125	Yes
87-86-5	Pentachlorophenol	99	99	52	112	Yes
85-01-8	Phenanthrene	108	108	39	127	Yes
120-12-7	Anthracene	105	105	47	122	Yes
84-74-2	Di-n-butylphthalate	109	109	36	129	Yes
206-44-0	Fluoranthene	108	108	40	126	Yes
129-00-0	Pyrene	86	86	44	121	Yes
85-68-7	Butylbenzylphthalate	93	93	22	131	Yes
56-55-3	Benzo[a]anthracene	100	100	45	122	Yes
210-01-9	Chrysene	95	95	41	125	Yes
117-81-7	bis(2-Ethylhexyl)phthalate	92	92	47	119	Yes
117-84-0	Di-n-octylphthalate	95	95	37	124	Yes
205-99-2	Benzo[b]fluoranthene	96	96	36	146	Yes
207-08-9	Benzo[k]fluoranthene	96	96	21	157	Yes
50-32-8	Benzo[a]pyrene	91	91	42	125	Yes
193-39-5	Indeno[1,2,3-cd]pyrene	109	109	45	133	Yes
53-70-3	Dibenz[a,h]anthracene	110	110	49	141	Yes
191-24-2	Benzo[g,h,i]perylene	101	101	42	141	Yes

4B

Sample Number:

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK0121

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
Lab File ID: B4W81209.D Lab Sample ID: blank012103
Instrument ID: ABN4 Date Extracted: 1/21/2003
Matrix: (soil/water) WATER Date Analyzed: 1/27/2003
Level: (low/med) LOW Time Analyzed: 10:57

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	Sample Number:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS0121	LCS012103	L4W81210.D	1/27/2003
02	LCSDUP0121	LCSDUP012103	L4W81211.D	1/27/2003
03	LC-MW-01S	7267001	S4W81212.D	1/27/2003
04	LC-MW-01SMS	7267008	M4W81213.D	1/27/2003
05	LC-MW-01SMSD	7267009	M4W81214.D	1/27/2003
06	LC-MW-01D	7267002	S4W81215.D	1/27/2003
07	LC-MW-04S	7267004	S4W81216.D	1/27/2003
08	LC-MW-04D	7267005	S4W81217.D	1/27/2003
09	LC-MW-02S	7267006	S4W81218.D	1/27/2003
10	LC-MW-02D	7267007	S4W81219.D	1/27/2003
11	LC-MW-01M	7267003	S4W81220.D	1/27/2003

COMMENTS:

4B

Sample Number:

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK0122

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
Lab File ID: B4W81224.D Lab Sample ID: BLK0122
Instrument ID: ABN4 Date Extracted: 1/22/2003
Matrix: (soil/water) WATER Date Analyzed: 1/27/2003
Level: (low/med) LOW Time Analyzed: 23:11

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	Sample Number:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS0122	LCS0122	L4W81225.D	1/28/2003
02	LCSDUP0122	LCSDUP0122	L4W81226.D	1/28/2003
03	LC-MW-5D	7274001	S4W81227.D	1/28/2003
04	LC-MW-03S	7274002	S4W81228.D	1/28/2003
05	LC-MW-03D	7274003	S4W81229.D	1/28/2003
06	LC-MW-05S	7274004	S4W81230.D	1/28/2003

COMMENTS:

A-137

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
Lab File ID: T4S81194.D DFTPP Injection Date: 1/24/2003
Instrument ID: ABN4 DFTPP Injection Time: 12:49

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198 (10-80%)	59.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundanc	66.2
70	Less than 2.0% of mass 69	0.3 (0.5)1
127	40.0 - 60.0% of mass 198 (10-80%)	54.9
197	Less than 1.0% of mass 198 (<2%)	0.0
198	Base Peak, 100% relative abundance (50-100% of 442)	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198 (10-60%)	25.1
365	Greater than 1% but less 100% of mass 198	4.1
441	Present, but less than mass 443	13.5
442	40.0 - 100.0% of mass 198 (50-200%)	88.3
443	17.0 - 23.0% of mass 442 (15-24%)	17.3 (19.6)2

1-Value is % mass 69 2-Value is % mass 442 Criteria in () is EPA 525.2 Criteria

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

Sample Number:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD160	160 PPB STD	C4S81195.D	1/24/2003 13:42
02	SSTD120	120 PPB STD	C4S81197.D	1/24/2003 15:28
03	SSTD80	80 PPB STD	C4S81199.D	1/24/2003 17:14
04	SSTD50	50 PPB STD	C4S81201.D	1/24/2003 19:00
05	SSTD20	20 PPB STD	C4S81204.D	1/24/2003 21:39
06	SSTD10	10 PPB STD	C4S81205.D	1/24/2003 22:32

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
 DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Lab File ID: T4W81207.D DFTPP Injection Date: 1/27/2003
 Instrument ID: ABN4 DFTPP Injection Time: 9:38

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198 (10-80%)	57.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundanc	65.0
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198 (10-80%)	54.4
197	Less than 1.0% of mass 198 (<2%)	0.0
198	Base Peak, 100% relative abundance (50-100% of 442)	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198 (10-60%)	24.1
365	Greater than 1% but less 100% of mass 198	3.8
441	Present, but less than mass 443	13.8
442	40.0 - 100.0% of mass 198 (50-200%)	89.4
443	17.0 - 23.0% of mass 442 (15-24%)	16.9 (19.0)2

1-Value is % mass 69 2-Value is % mass 442 Criteria in () is EPA 525.2 Criteria

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

Sample Number:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCCHK0127A	50 CKSTD	K4W81208.D	1/27/2003 10:03
02	BLANK0121	BLANK012103	B4W81209.D	1/27/2003 10:57
03	LCS0121	LCS012103	L4W81210.D	1/27/2003 11:49
04	LCSDUP0121	LCSDUP012103	L4W81211.D	1/27/2003 12:43
05	LC-MW-01S	7267001	S4W81212.D	1/27/2003 13:36
06	LC-MW-01SMS	7267008	M4W81213.D	1/27/2003 14:28
07	LC-MW-01SMSD	7267009	M4W81214.D	1/27/2003 15:21
08	LC-MW-01D	7267002	S4W81215.D	1/27/2003 16:13
09	LC-MW-04S	7267004	S4W81216.D	1/27/2003 17:06
10	LC-MW-04D	7267005	S4W81217.D	1/27/2003 17:59
11	LC-MW-02S	7267006	S4W81218.D	1/27/2003 18:52
12	LC-MW-02D	7267007	S4W81219.D	1/27/2003 19:46
13	LC-MW-01M	7267003	S4W81220.D	1/27/2003 20:39

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
 DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grej
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Lab File ID: T4W81222.D DFTPP Injection Date: 1/27/2003
 Instrument ID: ABN4 DFTPP Injection Time: 21:52

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198 (10-80%)	57.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundanc	63.1
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	40.0 - 60.0% of mass 198 (10-80%)	53.9
197	Less than 1.0% of mass 198 (<2%)	0.0
198	Base Peak, 100% relative abundance (50-100% of 442)	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198 (10-60%)	24.4
365	Greater than 1% but less 100% of mass 198	3.6
441	Present, but less than mass 443	10.8
442	40.0 - 100.0% of mass 198 (50-200%)	68.2
443	17.0 - 23.0% of mass 442 (15-24%)	13.2 (19.3)2

1-Value is % mass 69 2-Value is % mass 442 Criteria in () is EPA 525.2 Criteria

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	Sample Number:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CCCHK0127B	50 CKSTD	K4W81223.D	1/27/2003	22:17
02	BLANK0122	BLK0122	B4W81224.D	1/27/2003	23:11
03	LCS0122	LCS0122	L4W81225.D	1/28/2003	0:04
04	LCSDUP0122	LCSDUP0122	L4W81226.D	1/28/2003	0:57
05	LC-MW-5D	7274001	S4W81227.D	1/28/2003	1:51
06	LC-MW-03S	7274002	S4W81228.D	1/28/2003	2:44
07	LC-MW-03D	7274003	S4W81229.D	1/28/2003	3:37
08	LC-MW-05S	7274004	S4W81230.D	1/28/2003	4:30

Method : G:\ABN4\METHODS\8270C_25.M (RTE Integrator)
 Title : CLP BNA Calibration
 Last Update : Mon Jan 27 08:41:47 2003
 Response via : Initial Calibration

Calibration Files

120 =C4S81197.D 80 =C4S81199.D 50 =C4S81201.D
 20 =C4S81204.D 10 =C4S81205.D 160 =C4S81195.D

Compound	120	80	50	20	10	160	Avg	%RSD

1) I 1,4-DICHLOROBENZENE-d	----- ISTD -----							
2) MT N-Nitrosodimeth	0.627	0.642	0.584	0.677	0.797	0.813	0.690	13.67
3) S 2-FLUOROPHENOL	1.112	1.199	1.213	1.296	1.557	1.154	1.255	12.77
4) MT bis(2-Chloroeth	1.025	1.154	1.189	1.286	1.595	1.016	1.211	17.71
5) S PHENOL-d5	1.398	1.551	1.525	1.635	1.984	1.390	1.581	13.84
6) CMT Phenol	1.318	1.488	1.536	1.663	2.032	1.292	1.555	17.48
7) MT 2-Chlorophenol	1.088	1.212	1.243	1.334	1.620	1.136	1.272	15.00
8) MT 1,3-Dichloroben	1.073	1.217	1.305	1.435	1.790	1.032	1.309	21.28
9) CMT 1,4-Dichloroben	1.036	1.207	1.326	1.481	1.848	1.005	1.317	23.96
10) MT 1,2-Dichloroben	0.958	1.121	1.211	1.332	1.663	0.881	1.194	23.64
11) MT Benzyl alcohol	0.728	0.812	0.791	0.818	0.940	0.704	0.799	10.41
12) MT bis(2-chloroiso	1.760	1.980	2.045	2.214	2.786	1.746	2.088	18.42
13) MT 2-Methylphenol	0.867	0.976	1.012	1.089	1.333	0.867	1.024	16.97
14) MT Hexachloroethan	0.441	0.498	0.527	0.570	0.685	0.427	0.525	18.15
15) PMT N-Nitroso-di-n-	0.765	0.834	0.842	0.910	1.116	0.755	0.870	15.27
16) MT 4-Methylphenol	1.094	1.179	1.114	1.147	1.407	1.125	1.178	9.85

17) I NAPHTHALENE-d8	----- ISTD -----							
18) S NITROBENZENE-d5	0.384	0.414	0.399	0.418	0.490	0.370	0.412	10.21
19) MT Nitrobenzene	0.330	0.361	0.365	0.391	0.465	0.317	0.371	14.22
20) MT Isophorone	0.703	0.738	0.716	0.762	0.906	0.704	0.755	10.27
21) MCT 2-Nitrophenol	0.186	0.196	0.192	0.196	0.216	0.183	0.195	6.01
22) MT 2,4-Dimethylphe	0.269	0.298	0.278	0.312	0.369	0.256	0.297	13.60
23) MT bis(2-Chloroeth	0.322	0.360	0.377	0.424	0.516	0.307	0.384	19.99
24) MCT 2,4-Dichlorophe	0.222	0.245	0.248	0.263	0.306	0.217	0.250	12.90
25) MT 1,2,4-Trichloro	0.205	0.229	0.247	0.270	0.327	0.191	0.245	20.19
26) MT Naphthalene	0.654	0.746	0.835	0.962	1.194	0.623	0.836	25.69
27) MT 4-Chloroaniline	0.330	0.360	0.380	0.412	0.470	0.328	0.380	14.32
28) CMT Hexachlorobuta	0.108	0.122	0.129	0.138	0.163	0.102	0.127	17.37
29) CMT 4-Chloro-3-meth	0.287	0.310	0.306	0.320	0.345	0.275	0.307	8.13
30) MT 2-Methylnaphtha	0.385	0.434	0.491	0.559	0.699	0.362	0.488	25.78

1) I ACENAPHTHENE-d10	----- ISTD -----							
2) PMT Hexachlorocyclo	0.238	0.256	0.236	0.239	0.245	0.243	0.243	2.98
3) CMT 2,4,6-Trichloro	0.329	0.366	0.355	0.366	0.420	0.325	0.360	9.50
4) MT 2,4,5-Trichloro	0.348	0.384	0.378	0.393	0.443	0.342	0.381	9.50
5) S 2-FLUOROBIPHENY	1.051	1.193	1.273	1.418	1.771	0.995	1.284	22.07
6) MT 2-Chloronaphtha	0.942	1.077	1.136	1.244	1.541	0.905	1.141	20.38
7) MT 2-Nitroaniline	0.459	0.495	0.468	0.473	0.568	0.462	0.488	8.44
8) MT Acenaphthylene	1.612	1.859	1.986	2.188	2.785	1.595	2.004	22.16
9) MT Dimethylphthala	1.359	1.516	1.465	1.562	1.913	1.377	1.532	13.20
0) MT 2,6-Dinitrotolu	0.352	0.386	0.374	0.386	0.453	0.349	0.383	9.88
1) CMT Acenaphthene	0.897	1.022	1.100	1.229	1.546	0.877	1.112	22.45
2) TM 3-Nitroaniline	0.410	0.441	0.416	0.419	0.455	0.417	0.426	4.17
3) PMT 2,4-Dinitrophen	0.179	0.181	0.129	0.099	0.050	0.183	0.137	39.98
4) MT Dibenzofuran	1.121	1.342	1.568	1.793	2.263	1.066	1.526	29.69
5) MT 2,4-Dinitrotolu	0.327	0.390	0.442	0.463	0.526	0.313	0.410	20.09
5) PMT 4-Nitrophenol	0.198	0.204	0.164	0.132	0.106	0.203	0.168	24.58
7) MT Fluorene	0.726	0.851	0.968	1.210	1.591	0.696	1.007	33.92
8) MT 4-Chlorophenyl-	0.297	0.360	0.425	0.534	0.705	0.276	0.433	37.66
9) MT Diethylphthalat	1.297	1.469	1.548	1.653	2.073	1.273	1.552	18.92
9) MT 4-Nitroaniline	0.350	0.381	0.348	0.354	0.347	0.364	0.357	3.71

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= Out of Range

Method : G:\ABN4\METHODS\8270C_25.M (RTE Integrator)
 Title : CLP BNA Calibration
 Last Update : Mon Jan 27 08:41:47 2003
 Response via : Initial Calibration

Calibration Files

120 =C4S81197.D 80 =C4S81199.D 50 =C4S81201.D
 20 =C4S81204.D 10 =C4S81205.D 160 =C4S81195.D

Compound	120	80	50	20	10	160	Avg	%RSD
-----ISTD-----								
51) I PHENANTHRENE-d10								
52) MT 4,6-Dinitro-2-m	0.135	0.142	0.115	0.103	0.073	0.135	0.117	22.16
53) CMT n-Nitrosodiphen	0.449	0.513	0.534	0.582	0.724	0.449	0.542	19.02
54) S 2,4,6-TRIBROMOP	0.102	0.113	0.106	0.096	0.102	0.105	0.104	5.43
55) MT 4-Bromophenyl-p	0.157	0.179	0.187	0.203	0.254	0.161	0.190	18.84
56) MT Hexachlorobenze	0.190	0.211	0.216	0.228	0.284	0.193	0.220	15.56
57) CM Pentachlorophen	0.134	0.145	0.130	0.107	0.093	0.136	0.124	16.05
58) MT Phenanthrene	0.780	0.884	0.945	1.051	1.332	0.770	0.960	21.88
59) MT Anthracene	0.776	0.888	0.938	1.049	1.318	0.766	0.956	21.60
60) MT Di-n-butylphtha	1.185	1.360	1.519	1.733	2.170	1.154	1.520	25.31
61) CMT Fluoranthene	0.793	0.898	0.988	1.115	1.411	0.786	0.999	23.79
-----ISTD-----								
62) I CHRYSENE-d12								
63) M Pyrene	1.668	1.791	1.743	1.751	2.294	1.720	1.828	12.69
64) S TERPHENYL-d14	1.043	1.132	1.093	1.092	1.391	1.047	1.133	11.53
65) MT Butylbenzylphth	1.099	1.185	1.216	1.163	1.429	1.083	1.196	10.45
66) MT Benzo[a]anthrac	1.270	1.344	1.273	1.310	1.606	1.289	1.349	9.58
67) MT Chrysene	1.031	1.041	0.988	1.049	1.322	1.073	1.084	11.04
68) MT bis(2-Ethylhexy	1.154	1.279	1.345	1.343	1.654	1.118	1.315	14.54
-----ISTD-----								
I PERYLENE-d12								
1) CMT Di-n-octylphtha	3.238	3.841	4.324	3.241	3.995	3.360	3.667	12.38
1) MT Benzo[b]fluoran	1.723	1.805	1.702	1.499	1.910	1.943	1.764	9.16
2) MT Benzo[k]fluoran	1.402	1.550	1.516	1.400	1.757	1.494	1.520	8.63
73) CMT Benzo[a]pyrene	1.432	1.484	1.385	1.295	1.574	1.509	1.447	6.80
74) MT Indeno[1,2,3-cd	1.274	1.328	1.130	1.126	1.229	1.352	1.240	7.78
75) MT Dibenz[a,h]anth	1.110	1.119	0.967	0.990	1.116	1.130	1.072	6.81
76) MT Benzo[g,h,i]per	1.156	1.204	1.065	1.121	1.241	1.161	1.158	5.32

Data File : G:\ABN4\DATA\1_27_03\K4W81208.D

Acq On : 27 Jan 2003 10:03

Sample : 50 CKStd

Misc : PREPARED 12/30/02

MS Integration Params: rteint.p

Vial: 2

Operator: 0189JT

Inst : ABN4

Multiplr: 1.00

Method : G:\ABN4\METHODS\8270C_25.M (RTE Integrator)

Title : CLP BNA Calibration

Last Update : Mon Jan 27 08:41:47 2003

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1 I 1,4-DICHLOROBENZENE-d4	1.000	1.000	0.0	117	0.00
2 MT N-Nitrosodimethylamine	0.690	0.868	-25.8#	174	-0.03
3 S 2-FLUOROPHENOL	1.255	1.295	-3.2	125	-0.01
4 MT bis(2-Chloroethyl)ether	1.211	1.242	-2.6	122	-0.01
5 S PHENOL-d5	1.581	1.617	-2.3	124	-0.01
6 CMT Phenol	1.555	1.610	-3.5	123	0.00
7 MT 2-Chlorophenol	1.272	1.273	-0.1	120	0.00
8 MT 1,3-Dichlorobenzene	1.309	1.317	-0.6	118	0.00
9 CMT 1,4-Dichlorobenzene	1.317	1.306	0.8	115	0.00
0 MT 1,2-Dichlorobenzene	1.194	1.228	-2.8	119	0.00
1 MT Benzyl alcohol	0.799	0.807	-1.0	119	0.00
2 MT bis(2-chloroisopropyl)ether	2.088	2.187	-4.7	125	0.00
3 MT 2-Methylphenol	1.024	1.019	0.5	118	0.00
4 MT Hexachloroethane	0.525	0.532	-1.3	118	0.00
5 PMT N-Nitroso-di-n-propylamine	0.870	0.886	-1.8	123	0.00
5 MT 4-Methylphenol	1.178	1.125	4.5	118	0.00
7 I NAPHTHALENE-d8	1.000	1.000	0.0	115	0.00
8 S NITROBENZENE-d5	0.412	0.404	1.9	117	0.00
9 MT Nitrobenzene	0.371	0.373	-0.5	118	0.00
0 MT Isophorone	0.755	0.739	2.1	119	0.03
1 MCT 2-Nitrophenol	0.195	0.200	-2.6	120	-0.01
2 MT 2,4-Dimethylphenol	0.297	0.278	6.4	115	0.00
3 MT bis(2-Chloroethoxy)methane	0.384	0.384	0.0	117	-0.01
4 MCT 2,4-Dichlorophenol	0.250	0.253	-1.2	117	0.00
5 MT 1,2,4-Trichlorobenzene	0.245	0.242	1.2	113	0.00
6 MT Naphthalene	0.836	0.845	-1.1	117	0.00
7 MT 4-Chloroaniline	0.380	0.369	2.9	112	-0.01
8 CMT Hexachlorobutadiene	0.127	0.125	1.6	112	0.00
9 CMT 4-Chloro-3-methylphenol	0.307	0.305	0.7	115	0.00
0 MT 2-Methylnaphthalene	0.488	0.490	-0.4	115	0.00
1 I ACENAPHTHENE-d10	1.000	1.000	0.0	111	-0.01
2 PMT Hexachlorocyclopentadiene	0.243	0.235	3.3	111	0.00
3 CMT 2,4,6-Trichlorophenol	0.360	0.361	-0.3	113	-0.01
4 MT 2,4,5-Trichlorophenol	0.381	0.376	1.3	110	0.00
5 S 2-FLUOROBIPHENYL	1.284	1.253	2.4	109	0.00
6 MT 2-Chloronaphthalene	1.141	1.138	0.3	111	-0.01
7 MT 2-Nitroaniline	0.488	0.480	1.6	114	0.00
8 MT Acenaphthylene	2.004	1.980	1.2	111	0.00
9 MT Dimethylphthalate	1.532	1.451	5.3	110	0.00
0 MT 2,6-Dinitrotoluene	0.383	0.371	3.1	110	0.00
1 CMT Acenaphthene	1.112	1.132	-1.8	114	0.00
2 TM 3-Nitroaniline	0.426	0.413	3.1	110	0.00
3 PMT 2,4-Dinitrophenol	0.137	0.120	12.4	103	-0.01
4 MT Dibenzofuran	1.526	1.570	-2.9	111	0.00
5 MT 2,4-Dinitrotoluene	0.410	0.435	-6.1	109	0.00
6 PMT 4-Nitrophenol	0.168	0.164	2.4	111	0.00
7 MT Fluorene	1.007	0.953	5.4	109	0.00
8 MT 4-Chlorophenyl-phenylether	0.433	0.423	2.3	110	-0.01

) = Out of Range

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W81208.D 8270C_25.M

Thu Feb 06 10:18:14 2003

JT

Page 1

Page 75 of 82 Pages
 Data File : G:\ABN4\DATA\1_27_03\K4W81208.D
 Acq On : 27 Jan 2003 10:03
 Sample : 50 CKStd
 Misc : PREPARED 12/30/02
 MS Integration Params: rteint.p

Vial: 2
 Operator: 0189JT
 Inst : ABN4
 Multiplr: 1.00

Method : G:\ABN4\METHODS\8270C_25.M (RTE Integrator)
 Title : CLP BNA Calibration
 Last Update : Mon Jan 27 08:41:47 2003
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
49 MT	Diethylphthalate	1.552	1.524	1.8	109	0.00
50 MT	4-Nitroaniline	0.357	0.346	3.1	111	0.00
51 I	PHENANTHRENE-d10	1.000	1.000	0.0	109	-0.01
52 MT	4,6-Dinitro-2-methylphenol	0.117	0.115	1.7	108	0.00
53 CMT	n-Nitrosodiphenylamine	0.542	0.526	3.0	107	0.00
54 S	2,4,6-TRIBROMOPHENOL	0.104	0.107	-2.9	110	0.00
55 MT	4-Bromophenyl-phenylether	0.190	0.186	2.1	108	0.00
56 MT	Hexachlorobenzene	0.220	0.216	1.8	109	0.00
57 CM	Pentachlorophenol	0.124	0.132	-6.5	111	-0.01
58 MT	Phenanthrene	0.960	0.952	0.8	109	0.00
59 MT	Anthracene	0.956	0.933	2.4	108	0.00
60 MT	Di-n-butylphthalate	1.520	1.551	-2.0	111	-0.01
61 CMT	Fluoranthene	0.999	0.984	1.5	108	0.00
62 I	CHRYSENE-d12	1.000	1.000	0.0	110	0.00
63 M	Pyrene	1.828	1.773	3.0	112	0.00
64	TERPHENYL-d14	1.133	1.099	3.0	111	0.00
MT	Butylbenzylphthalate	1.196	1.201	-0.4	109	0.00
MT	Benzo[a]anthracene	1.349	1.257	6.8	109	0.00
MT	Chrysene	1.084	0.994	8.3	111	0.00
68 MT	bis(2-Ethylhexyl)phthalate	1.315	1.301	1.1	107	0.00
69 I	PERYLENE-d12	1.000	1.000	0.0	117	0.00
70 CMT	Di-n-octylphthalate	3.667	3.880	-5.8	105	0.00
71 MT	Benzo[b]fluoranthene	1.764	1.640	7.0	113	-0.01
72 MT	Benzo[k]fluoranthene	1.520	1.479	2.7	114	0.00
73 CMT	Benzo[a]pyrene	1.447	1.351	6.6	114	-0.01
74 MT	Indeno[1,2,3-cd]pyrene	1.240	1.118	9.8	116	-0.01
75 MT	Dibenz[a,h]anthracene	1.072	0.958	10.6	116	-0.01
76 MT	Benzo[g,h,i]perylene	1.158	1.057	8.7	116	-0.02

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Data File : G:\ABN4\DATA\1_27_03\K4W81223.D

Acq On : 27 Jan 2003 22:17

Sample : 50 CKStd

Misc : PREPARED 12/30/02

MS Integration Params: rteint.p

Vial: 16

Operator: 0189JT

Inst : ABN4

Multiplr: 1.00

Method : G:\ABN4\METHODS\8270C_25.M (RTE Integrator)
 Title : CLP BNA Calibration
 Last Update : Mon Jan 27 08:41:47 2003
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-DICHLOROBENZENE-d4	1.000	1.000	0.0	107	0.00
2 MT	N-Nitrosodimethylamine	0.690	0.672	2.6	123	-0.03
3 S	2-FLUOROPHENOL	1.255	1.249	0.5	110	-0.02
4 MT	bis(2-Chloroethyl)ether	1.211	1.175	3.0	106	-0.02
5 S	PHENOL-d5	1.581	1.582	-0.1	111	0.00
6 CMT	Phenol	1.555	1.576	-1.4	110	0.00
7 MT	2-Chlorophenol	1.272	1.214	4.6	104	-0.02
8 MT	1,3-Dichlorobenzene	1.309	1.296	1.0	106	0.00
9 CMT	1,4-Dichlorobenzene	1.317	1.327	-0.8	107	0.00
0 MT	1,2-Dichlorobenzene	1.194	1.195	-0.1	105	0.00
1 MT	Benzyl alcohol	0.799	0.779	2.5	105	-0.02
2 MT	bis(2-chloroisopropyl)ether	2.088	2.030	2.8	106	0.00
3 MT	2-Methylphenol	1.024	0.980	4.3	104	0.00
4 MT	Hexachloroethane	0.525	0.519	1.1	105	0.00
5 PMT	N-Nitroso-di-n-propylamine	0.870	0.821	5.6	104	-0.02
6 MT	4-Methylphenol	1.178	1.061	9.9	102	0.00
7 I	NAPHTHALENE-d8	1.000	1.000	0.0	105	0.00
8 S	NITROBENZENE-d5	0.412	0.398	3.4	104	0.00
9 MT	Nitrobenzene	0.371	0.365	1.6	105	0.00
0 MT	Isophorone	0.755	0.712	5.7	104	0.00
1 MCT	2-Nitrophenol	0.195	0.185	5.1	101	-0.02
2 MT	2,4-Dimethylphenol	0.297	0.279	6.1	105	0.00
3 MT	bis(2-Chloroethoxy)methane	0.384	0.365	4.9	101	-0.02
1 MCT	2,4-Dichlorophenol	0.250	0.244	2.4	103	-0.02
5 MT	1,2,4-Trichlorobenzene	0.245	0.243	0.8	103	-0.02
5 MT	Naphthalene	0.836	0.832	0.5	104	0.00
7 MT	4-Chloroaniline	0.380	0.358	5.8	99	-0.02
1 CMT	Hexachlorobutadiene	0.127	0.128	-0.8	104	-0.02
1 CMT	4-Chloro-3-methylphenol	0.307	0.310	-1.0	106	0.00
1 MT	2-Methylnaphthalene	0.488	0.488	0.0	104	0.00
I	ACENAPHTHENE-d10	1.000	1.000	0.0	102	-0.02
PMT	Hexachlorocyclopentadiene	0.243	0.236	2.9	103	0.00
CMT	2,4,6-Trichlorophenol	0.360	0.365	-1.4	105	-0.02
MT	2,4,5-Trichlorophenol	0.381	0.398	-4.5	108	0.00
S	2-FLUOROBIPHENYL	1.284	1.309	-1.9	105	0.00
MT	2-Chloronaphthalene	1.141	1.145	-0.4	103	-0.02
MT	2-Nitroaniline	0.488	0.477	2.3	104	0.00
MT	Acenaphthylene	2.004	1.992	0.6	103	0.00
MT	Dimethylphthalate	1.532	1.453	5.2	102	0.00
MT	2,6-Dinitrotoluene	0.383	0.367	4.2	100	0.00
CMT	Acenaphthene	1.112	1.106	0.5	103	0.00
TM	3-Nitroaniline	0.426	0.402	5.6	99	0.00
PMT	2,4-Dinitrophenol	0.137	0.103	24.8#	82	0.00
MT	Dibenzofuran	1.526	1.592	-4.3	104	0.00
MT	2,4-Dinitrotoluene	0.410	0.434	-5.9	101	0.00
PMT	4-Nitrophenol	0.168	0.159	5.4	99	0.00
MT	Fluorene	1.007	0.975	3.2	103	0.00
MT	4-Chlorophenyl-phenylether	0.433	0.428	1.2	103	-0.02

f) = Out of Range

W81223.D 8270C_25.M

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Thu Feb 06 10:18:36 2003

JT

Page 1

Data File : G:\ABN4\DATA\1_27_03\K4W81223.D

Acq On : 27 Jan 2003 22:17

Sample : 50 CKStd

Misc : PREPARED 12/30/02

MS Integration Params: rteint.p

Vial: 16

Operator: 0189JT

Inst : ABN4

Multiplr: 1.00

Method : G:\ABN4\METHODS\8270C_25.M (RTE Integrator)

Title : CLP BNA Calibration

Last Update : Mon Jan 27 08:41:47 2003

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
49 MT	Diethylphthalate	1.552	1.519	2.1	101	-0.02
50 MT	4-Nitroaniline	0.357	0.326	8.7	96	0.00
51 I	PHENANTHRENE-d10	1.000	1.000	0.0	100	-0.02
52 MT	4,6-Dinitro-2-methylphenol	0.117	0.104	11.1	90	0.00
53 CMT	n-Nitrosodiphenylamine	0.542	0.530	2.2	100	-0.02
54 S	2,4,6-TRIBROMOPHENOL	0.104	0.105	-1.0	100	0.00
55 MT	4-Bromophenyl-phenylether	0.190	0.184	3.2	99	0.00
56 MT	Hexachlorobenzene	0.220	0.213	3.2	99	0.00
57 CM	Pentachlorophenol	0.124	0.132	-6.5	102	0.00
58 MT	Phenanthrene	0.960	0.939	2.2	100	0.00
59 MT	Anthracene	0.956	0.932	2.5	100	0.00
60 MT	Di-n-butylphthalate	1.520	1.518	0.1	100	-0.02
61 CMT	Fluoranthene	0.999	0.990	0.9	101	0.00
62 I	CHRYSENE-d12	1.000	1.000	0.0	112	0.00
63 M	Pyrene	1.828	1.572	14.0	101	0.00
S	TERPHENYL-d14	1.133	0.999	11.8	103	0.00
MT	Butylbenzylphthalate	1.196	1.105	7.6	102	0.00
MT	Benzo[a]anthracene	1.349	1.251	7.3	110	0.00
67 MT	Chrysene	1.084	0.984	9.2	112	0.00
68 MT	bis(2-Ethylhexyl)phthalate	1.315	1.255	4.6	105	0.00
69 I	PERYLENE-d12	1.000	1.000	0.0	109	0.00
70 CMT	Di-n-octylphthalate	3.667	4.230	-15.4	107	0.00
71 MT	Benzo[b]fluoranthene	1.764	1.743	1.2	112	0.00
72 MT	Benzo[k]fluoranthene	1.520	1.553	-2.2	112	0.00
73 CMT	Benzo[a]pyrene	1.447	1.357	6.2	107	0.00
74 MT	Indeno[1,2,3-cd]pyrene	1.240	1.158	6.6	112	0.00
75 MT	Dibenz[a,h]anthracene	1.072	0.956	10.8	108	0.00
76 MT	Benzo[g,h,i]perylene	1.158	1.060	8.5	109	-0.02

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(#)= Out of Range

SPCC's out = 0 CCC's out = 0

K4W81223.D 8270C_25.M

Thu Feb 06 10:18:37 2003

JT

Page 2

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Lab File ID (Standard): K4W81208.D Date Analyzed: 1/27/2003
 Instrument ID: ABN4 Time Analyzed: 10:03

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #	
12 HOUR STD	769983	11.58	2753558	14.53	1172703	18.81	
UPPER LIMIT	1539966	12.08	5507116	15.03	2345406	19.31	
LOWER LIMIT	384992	11.08	1376779	14.03	586352	18.31	
Sample Number:							
01	BLANK0121	618270	11.57	2314813	14.51	1016051	18.81
02	LCS0121	655650	11.58	2449126	14.53	1047694	18.82
03	LCSDUP0121	598386	11.58	2228585	14.53	949421	18.82
04	LC-MW-01S	610618	11.57	2287595	14.53	1033085	18.81
05	LC-MW-01SM	641122	11.58	2325158	14.53	1016470	18.83
06	LC-MW-01SM	572308	11.58	2047286	14.53	879082	18.82
07	LC-MW-01D	661320	11.58	2442556	14.52	1086740	18.81
08	LC-MW-04S	564739	11.57	2156475	14.53	974158	18.81
09	LC-MW-04D	694721	11.58	2587999	14.52	1176199	18.81
10	LC-MW-02S	576333	11.57	2172134	14.52	965323	18.81
11	LC-MW-02D	634250	11.57	2335045	14.52	1046329	18.81
12	LC-MW-01M	546979	11.57	2064831	14.52	911595	18.80

- IS1 (DCB) = 1,4-DICHLOROBENZEN
- IS2 (NPT) = NAPHTHALENE-d8
- IS3 (ANT) = ACENAPHTHENE-d10
- IS4 (PHN) = PHENANTHRENE-d10
- IS5 (CRY) = CHRYSENE-d12
- IS6 (PRY) = PERYLENE-d12

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
 * Values outside of contract required QC limits

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8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Lab File ID (Standard): K4W81208.D Date Analyzed: 1/27/2003
 Instrument ID: ABN4 Time Analyzed: 10:03

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #	
12 HOUR STD	1868132	22.49	1035069	29.06	590836	32.86	
UPPER LIMIT	3736264	21.99	2070138	28.56	1181672	32.36	
LOWER LIMIT	934066	22.99	517535	29.56	295418	33.36	
Sample Number:							
01	BLANK0121	1557094	22.48	980131	29.03	636315	32.84
02	LCS0121	1689627	22.50	875525	29.08	548881	32.88
03	LCSDUP0121	1518225	22.50	816331	29.07	510810	32.87
04	LC-MW-01S	1574743	22.48	956766	29.04	621729	32.85
05	LC-MW-01SM	1668195	22.50	807306	29.07	465862	32.87
06	LC-MW-01SM	1442362	22.50	759939	29.07	417614	32.87
07	LC-MW-01D	1569268	22.49	1003788	29.04	615201	32.85
08	LC-MW-04S	1509712	22.48	944899	29.03	562918	32.84
09	LC-MW-04D	1791039	22.48	1051283	29.04	623791	32.84
10	LC-MW-02S	1492283	22.48	847961	29.03	466515	32.83
11	LC-MW-02D	1623884	22.48	935690	29.03	553513	32.84
12	LC-MW-01M	1420756	22.48	840126	29.04	477637	32.84

- IS1 (DCB) = 1,4-DICHLOROBENZEN
- IS2 (NPT) = NAPHTHALENE-d8
- IS3 (ANT) = ACENAPHTHENE-d10
- IS4 (PHN) = PHENANTHRENE-d10
- IS5 (CRY) = CHRYSENE-d12
- IS6 (PRY) = PERYLENE-d12

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
 * Values outside of contract required QC limits A-148

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Lab File ID (Standard): K4W81223.D Date Analyzed: 1/27/2003
 Instrument ID: ABN4 Time Analyzed: 22:17

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	703327	11.58	2498026	14.53	1083568	18.81
UPPER LIMIT	1406654	12.08	4996052	15.03	2167136	19.31
LOWER LIMIT	351664	11.08	1249013	14.03	541784	18.31
Sample Number:						
01 BLANK0122	630935	11.57	2303903	14.51	1044020	18.80
02 LCS0122	680220	11.58	2444615	14.53	1060232	18.83
03 LCSDUP0122	497579	11.58	1787048	14.53	761458	18.81
04 LC-MW-5D	575229	11.57	2081795	14.52	936638	18.81
05 LC-MW-03S	641083	11.58	2374167	14.52	1060302	18.81
06 LC-MW-03D	690337	11.58	2529544	14.53	1148770	18.81
07 LC-MW-05S	634026	11.58	2280355	14.52	1046303	18.81

- IS1 (DCB) = 1,4-DICHLOROENZEN
- IS2 (NPT) = NAPHTHALENE-d8
- IS3 (ANT) = ACENAPHTHENE-d10
- IS4 (PHN) = PHENANTHRENE-d10
- IS5 (CRY) = CHRYSENE-d12
- IS6 (PRY) = PERYLENE-d12

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
 * Values outside of contract required QC limits A-149

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: USACHPPM/DLS/ASD/GCMS POC: Grez
 Profile: 27564-004 Site: Cp Bonn Code: E8270 Units: ug/L
 Lab File ID (Standard): K4W81223.D Date Analyzed: 1/27/2003
 Instrument ID: ABN4 Time Analyzed: 22:17

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	1726404	22.49	1056140	29.06	552374	32.86
UPPER LIMIT	3452808	21.99	2112280	28.56	1104748	32.36
LOWER LIMIT	863202	22.99	528070	29.56	276187	33.36
Sample Number:						
01 BLANK0122	1588808	22.48	1006632	29.03	607269	32.84
02 LCS0122	1687146	22.50	797463	29.07	420552	32.87
03 LCSDUP0122	1232886	22.50	572322	29.06	303827	32.86
04 LC-MW-5D	1469720	22.48	917296	29.04	553633	32.85
05 LC-MW-03S	1694813	22.49	1029498	29.04	644978	32.85
06 LC-MW-03D	1787106	22.49	1118323	29.04	646958	32.85
07 LC-MW-05S	1596543	22.49	872195	29.04	475378	32.85

- IS1 (DCB) = 1,4-DICHLOROBENZEN
- IS2 (NPT) = NAPHTHALENE-d8
- IS3 (ANT) = ACENAPHTHENE-d10
- IS4 (PHN) = PHENANTHRENE-d10
- IS5 (CRY) = CHRYSENE-d12
- IS6 (PRY) = PERYLENE-d12

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
 * Values outside of contract required QC limits A-150

Table A-6. VOCs and Reporting Limits in Water (ug/L)

Analyte	Reporting Limit	Analyte	Reporting Limit
dichlorodifluoromethane	5	trans-1,3-dichloropropene	5
chloromethane	5	ethyl methacrylate	5
vinyl chloride	5	1,1,2-trichloroethane	5
bromomethane	5	tetrachloroethene	5
chloroethane	5	1,3-dichloropropane	5
trichlorofluoromethane	5	2-hexanone	10
ethyl ether	5	dibromochloromethane	5
1,1-dichloroethene	5	1,2-dibromoethane	5
acetone	20	chlorobenzene	5
methyl iodide	5	1,1,1,2-tetrachloroethane	5
carbon disulfide	5	ethylbenzene	5
allyl chloride	5	m+p-xylene	5
methylene chloride	5	o-xylene	5
acrylonitrile	20	styrene	5
trans-1,2-dichloroethene	5	bromoform	5
methyl tertiary butyl ether	5	isopropylbenzene	5
1,1-dichloroethane	5	1,1,2-tetrachloroethane	5
2-butanone	10	trans-1,4-dichloro-2-butene	50
cis-1,2-dichloroethene	5	bromobenzene	5
2,2-dichloropropane	5	1,2,3-trichloropropane	5
propionitrile	100	n-propylbenzene	5
methacrylonitrile	50	2-chlorotoluene	5
bromochloromethane	5	1,3,5-trimethylbenzene	5
tetrahydrofuran	10	4-chlorotoluene	5
chloroform	5	tert-butylbenzene	5
1,1,1-trichloroethane	5	1,2,4-trimethylbenzene	5
1,1-dichloropropene	5	pentachloroethane	5
carbon tetrachloride	5	sec-butylbenzene	5
benzene	5	p-isopropyltoluene	5
1,2-dichloroethane	5	1,3-dichlorobenzene	5
trichloroethene	5	1,4-dichlorobenzene	5
1,2-dichloropropane	5	n-butylbenzene	5
methyl methacrylate	5	1,2-dichlorobenzene	5
dibromomethane	5	1,2-dibromo-3-chloropropane	5
bromodichloromethane	5	1,2,4-trichlorobenzene	5
cis-1,3-dichloropropene	5	hexachlorobutadiene	5
4-methyl-2-pentanone	10	naphthalene	5
toluene	5	1,2,3-trichlorobenzene	5

NOTES:

Eleven ground-water samples and nine field blanks arrived at the laboratory on Friday, January 24, 2003. The samples were analyzed by EPA SW846 Method 8260B using Lancaster Laboratories Analysis SOP #5382. All field samples were analyzed within method holding times. All client blanks were collected on 1/2/03, submitted to the laboratory on 1/24/03, and analyzed on either 1/26/03 or 1/27/03. Sample preservation was checked at the time of analysis and was determined to be approximately pH<2, indicating that method preservation requirements were met. No problems were encountered during the sample analysis. Sufficient sample was not available to perform a MSD. However, a MS was performed, and a LCS/LCD was performed to demonstrate precision and accuracy at a batch level. All MS and surrogate recoveries met method requirements. All internal standard area counts and retention times complied with method QC requirements. All blank results were negative.

Additional QA/QC data are provided on the following 148 pages.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s01.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s01.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a,b/mj26s01.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67001

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983820

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan26a.b/mj26s01.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0 CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67002

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983821

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s03.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NO.	COMPOUND	Q
75-71-8	Dichlorodifluoromethane	5 U
74-87-3	Chloromethane	5 U
75-01-4	Vinyl Chloride	5 U
74-83-9	Bromomethane	5 U
75-00-3	Chloroethane	5 U
75-69-4	Trichlorofluoromethane	5 U
60-29-7	Ethyl Ether	5 U
75-35-4	1,1-Dichloroethene	5 U
67-64-1	Acetone	20 U
74-88-4	Methyl Iodide	5 U
75-15-0	Carbon Disulfide	5 U
107-05-1	Allyl Chloride	5 U
75-09-2	Methylene Chloride	5 U
107-13-1	Acrylonitrile	20 U
156-60-5	trans-1,2-Dichloroethene	5 U
1634-04-4	Methyl Tertiary Butyl Ether	5 U
75-34-3	1,1-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
156-59-2	cis-1,2-Dichloroethene	5 U
594-20-7	2,2-Dichloropropane	5 U
107-12-0	Propionitrile	100 U
126-98-7	Methacrylonitrile	50 U
74-97-5	Bromochloromethane	5 U
109-99-9	Tetrahydrofuran	10 U
67-66-3	Chloroform	5 U
71-55-6	1,1,1-Trichloroethane	5 U
563-58-6	1,1-Dichloropropene	5 U
56-23-5	Carbon Tetrachloride	5 U
71-43-2	Benzene	5 U
107-06-2	1,2-Dichloroethane	5 U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67002

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983821

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s03.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67002

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983821

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s03.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67002

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983821

Sample wt/vol: 5.0 (g/mL)mL Lab File ID: HP06720.i/03jan26a.b/mj26s03.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67003

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983822

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s04.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67003

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983822

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s04.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67003

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983822

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan26a.b/mj26s04.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67004

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983823
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s05.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/26/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67004

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983823

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s05.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67004

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983823

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s05.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67004

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983823

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID:HP06720.i/03jan26a.b/mj26s05.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

Number TICs found: 0

(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67005

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983824

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s06.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67005

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983824

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s06.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67005

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983824

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s06.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

67005

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67005

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983824

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID:HP06720.i/03jan26a.b/mj26s06.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

Number TICs found: 0

(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67006

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983825

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s07.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67006

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983825

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s07.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67006

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983825

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s07.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67006

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983825

Sample wt/vol: 5.0 (g/mL)mL Lab File ID: HP06720.i/03jan26a.b/mj26s07.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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02294

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67007

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983926
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s08.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/26/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
75-71-8	Dichlorodifluoromethane	5	U	
74-87-3	Chloromethane	5	U	
75-01-4	Vinyl Chloride	5	U	
74-83-9	Bromomethane	5	U	
75-00-3	Chloroethane	5	U	
75-69-4	Trichlorofluoromethane	5	U	
60-29-7	Ethyl Ether	5	U	
75-35-4	1,1-Dichloroethene	5	U	
67-64-1	Acetone	20	U	
74-88-4	Methyl Iodide	5	U	
75-15-0	Carbon Disulfide	5	U	
107-05-1	Allyl Chloride	5	U	
75-09-2	Methylene Chloride	5	U	
107-13-1	Acrylonitrile	20	U	
156-60-5	trans-1,2-Dichloroethene	5	U	
1634-04-4	Methyl Tertiary Butyl Ether	5	U	
75-34-3	1,1-Dichloroethane	5	U	
78-93-3	2-Butanone	10	U	
156-59-2	cis-1,2-Dichloroethene	5	U	
594-20-7	2,2-Dichloropropane	5	U	
107-12-0	Propionitrile	100	U	
126-98-7	Methacrylonitrile	50	U	
74-97-5	Bromochloromethane	5	U	
109-99-9	Tetrahydrofuran	10	U	
67-66-3	Chloroform	5	U	
71-55-6	1,1,1-Trichloroethane	5	U	
563-58-6	1,1-Dichloropropene	5	U	
56-23-5	Carbon Tetrachloride	5	U	
71-43-2	Benzene	5	U	
107-06-2	1,2-Dichloroethane	5	U	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67007

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983826

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s08.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

03/01/03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67007

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983826

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s08.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67007

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983826

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan26a.b/mj26s08.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

Number TICs found: 0

(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67010

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983827

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s09.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67010

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983827

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s09.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
79-01-6	Trichloroethene		5	U
78-87-5	1,2-Dichloropropane		5	U
80-62-6	Methyl Methacrylate		5	U
74-95-3	Dibromomethane		5	U
75-27-4	Bromodichloromethane		5	U
10061-01-5	cis-1,3-Dichloropropene		5	U
108-10-1	4-Methyl-2-Pentanone		10	U
108-88-3	Toluene		5	U
10061-02-6	trans-1,3-Dichloropropene		5	U
97-63-2	Ethyl Methacrylate		5	U
79-00-5	1,1,2-Trichloroethane		5	U
127-18-4	Tetrachloroethene		5	U
142-28-9	1,3-Dichloropropane		5	U
591-78-6	2-Hexanone		10	U
124-48-1	Dibromochloromethane		5	U
106-93-4	1,2-Dibromoethane		5	U
108-90-7	Chlorobenzene		5	U
630-20-6	1,1,1,2-Tetrachloroethane		5	U
100-41-4	Ethylbenzene		5	U
1330-20-7	m+p-Xylene		5	U
95-47-6	o-Xylene		5	U
100-42-5	Styrene		5	U
75-25-2	Bromoform		5	U
98-82-8	Isopropylbenzene		5	U
79-34-5	1,1,2,2-Tetrachloroethane		5	U
110-57-6	trans-1,4-Dichloro-2-Butene		50	U
108-86-1	Bromobenzene		5	U
96-18-4	1,2,3-Trichloropropane		5	U
103-65-1	n-Propylbenzene		5	U
95-49-8	2-Chlorotoluene		5	U

030103

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67010

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983827

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s09.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67010

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983827

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan26a.b/mj26s09.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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01/26/03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67011

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983828
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s10.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/26/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67011

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983828

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s10.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67011

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983828

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s10.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67011

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983828

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan26a.b/mj26s10.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67012

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983829
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s01.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67012

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983829

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s01.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67012

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983829

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s01.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67012

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983829

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan27a.b/mj27s01.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67013

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983830

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s02.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND,	(ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67013

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983830

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s02.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67013

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983830

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s02.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

108-67-8-----	1,3,5-Trimethylbenzene	5	U
106-43-4-----	4-Chlorotoluene	5	U
98-06-6-----	tert-Butylbenzene	5	U
95-63-6-----	1,2,4-Trimethylbenzene	5	U
76-01-7-----	Pentachloroethane	5	U
135-98-8-----	sec-Butylbenzene	5	U
99-87-6-----	p-Isopropyltoluene	5	U
541-73-1-----	1,3-Dichlorobenzene	5	U
106-46-7-----	1,4-Dichlorobenzene	5	U
104-51-8-----	n-Butylbenzene	5	U
95-50-1-----	1,2-Dichlorobenzene	5	U
96-12-8-----	1,2-Dibromo-3-Chloropropane	5	U
120-82-1-----	1,2,4-Trichlorobenzene	5	U
87-68-3-----	Hexachlorobutadiene	5	U
91-20-3-----	Naphthalene	5	U
87-61-6-----	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67013

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983830

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan27a.b/mj27s02.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67014

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983831

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s03.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67014

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983831

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s03.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67014

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983831

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s03.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67014

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983831

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan27a.b/mj27s03.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67015

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983832

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s04.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67015

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983832

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a:b/mj27s04.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec: _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67015

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983832

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s04.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

67015

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983832

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan27a.b/mj27s04.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA 821-R-02-001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM25

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKM25

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26b01.d

Level: (low/med) LOW Date Received: _____

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	Freon 113	10	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
67-63-0	2-Propanol	100	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
75-65-0	t-Butyl Alcohol	100	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
110-54-3	n-Hexane	5	U
75-34-3	1,1-Dichloroethane	5	U
108-20-3	di-Isopropyl Ether	5	U
126-99-8	2-Chloro-1,3-Butadiene	5	U
637-92-3	Ethyl t-Butyl Ether	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM25

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM25

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26b01.d

Level: (low/med) LOW

Date Received: _____

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM25

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM25

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26b01.d

Level: (low/med) LOW

Date Received:

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
120-82-1-----	1,2,4-Trichlorobenzene	5	U
87-68-3-----	Hexachlorobutadiene	5	U
91-20-3-----	Naphthalene	5	U
87-61-6-----	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKM25

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM25

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID:HP06720.i/03jan26a.b/mj26b01.d

Level: (low/med) LOW

Date Received: _____

‡ Moisture: not dec.

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM26

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW

Date Received: _____

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	Freon 113	10	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
67-63-0	2-Propanol	100	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
75-65-0	t-Butyl Alcohol	100	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
110-54-3	n-Hexane	5	U
75-34-3	1,1-Dichloroethane	5	U
108-20-3	di-Isopropyl Ether	5	U
126-99-8	2-Chloro-1,3-Butadiene	5	U
637-92-3	Ethyl t-Butyl Ether	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM26

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW

Date Received:

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
78-83-1	Isobutyl Alcohol	250	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
994-05-8	t-Amyl Methyl Ether	5	U
142-82-5	n-Heptane	5	U
71-36-3	n-Butanol	250	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
123-91-1	1,4-Dioxane	250	U
75-27-4	Bromodichloromethane	5	U
79-46-9	2-Nitropropane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM26

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW

Date Received:

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM26

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW

Date Received:

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
120-82-1-----	1,2,4-Trichlorobenzene	5	U
87-68-3-----	Hexachlorobutadiene	5	U
91-20-3-----	Naphthalene	5	U
87-61-6-----	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM26

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec.

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001MS

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s02.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane		18
74-87-3	Chloromethane		19
75-01-4	Vinyl Chloride		22
74-83-9	Bromomethane		22
75-00-3	Chloroethane		21
75-69-4	Trichlorofluoromethane		24
60-29-7	Ethyl Ether		17
75-35-4	1,1-Dichloroethene		24
67-64-1	Acetone	150	
74-88-4	Methyl Iodide	22	
75-15-0	Carbon Disulfide	25	
107-05-1	Allyl Chloride	19	
75-09-2	Methylene Chloride	22	
107-13-1	Acrylonitrile	100	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	22	
75-34-3	1,1-Dichloroethane	22	
78-93-3	2-Butanone	140	
156-59-2	cis-1,2-Dichloroethene	20	
594-20-7	2,2-Dichloropropane	22	
107-12-0	Propionitrile	150	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	16	
109-99-9	Tetrahydrofuran	100	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	23	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	23	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	22	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001MS

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s02.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
79-01-6	Trichloroethene		21
78-87-5	1,2-Dichloropropane		21
80-62-6	Methyl Methacrylate		20
74-95-3	Dibromomethane		21
75-27-4	Bromodichloromethane		21
10061-01-5	cis-1,3-Dichloropropene		20
108-10-1	4-Methyl-2-Pentanone		93
108-88-3	Toluene		20
10061-02-6	trans-1,3-Dichloropropene		20
97-63-2	Ethyl Methacrylate		19
79-00-5	1,1,2-Trichloroethane		20
127-18-4	Tetrachloroethene		20
142-28-9	1,3-Dichloropropane		20
591-78-6	2-Hexanone		89
124-48-1	Dibromochloromethane		20
106-93-4	1,2-Dibromoethane		20
108-90-7	Chlorobenzene		20
630-20-6	1,1,1,2-Tetrachloroethane		21
100-41-4	Ethylbenzene		20
1330-20-7	m+p-Xylene		40
95-47-6	o-Xylene		20
100-42-5	Styrene		20
75-25-2	Bromoform		20
98-82-8	Isopropylbenzene		21
79-34-5	1,1,2,2-Tetrachloroethane		19
110-57-6	trans-1,4-Dichloro-2-Butene		110
108-86-1	Bromobenzene		19
96-18-4	1,2,3-Trichloropropane		20
103-65-1	n-Propylbenzene		20
95-49-8	2-Chlorotoluene		20

67001MS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001MS

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s02.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene		20
106-43-4	4-Chlorotoluene		20
98-06-6	tert-Butylbenzene		19
95-63-6	1,2,4-Trimethylbenzene		20
76-01-7	Pentachloroethane		19
135-98-8	sec-Butylbenzene		19
99-87-6	p-Isopropyltoluene		20
541-73-1	1,3-Dichlorobenzene		20
106-46-7	1,4-Dichlorobenzene		20
104-51-8	n-Butylbenzene		18
95-50-1	1,2-Dichlorobenzene		20
96-12-8	1,2-Dibromo-3-Chloropropane		20
120-82-1	1,2,4-Trichlorobenzene		19
87-68-3	Hexachlorobutadiene		17
91-20-3	Naphthalene		18
87-61-6	1,2,3-Trichlorobenzene		19

WATER VOLATILE SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract: _____Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: PSJ91

	LL #'s	EPA SAMPLE NO.	S1 (DBF) #	S2 (DCA) #	S3 (TOL) #	S4 (BFB) #	TOT OUT
01	3983820	67001	104	96	99	98	0
02	3983820	67001MS	102	93	100	103	0
03	3983821	67002	104	98	99	98	0
04	3983822	67003	106	96	98	97	0
05	3983823	67004	101	97	99	97	0
06	3983824	67005	105	96	98	98	0
07	3983825	67006	106	96	99	96	0
08	3983826	67007	106	97	99	98	0
09	3983827	67010	106	97	98	96	0
10	3983828	67011	106	95	100	99	0
11	3983829	67012	104	96	97	99	0
12	3983830	67013	103	94	98	98	0
13	3983831	67014	107	99	97	99	0
14	3983832	67015	103	95	97	96	0
15	VBLKM25	VBLKM25	104	96	99	98	0
16	VBLKM26	VBLKM26	104	96	97	98	0
J	LCDM25	LCDM25	102	99	100	102	0
	LCSM25	LCSM25	102	93	100	103	0

QC LIMITS

S1 (DBF) = Dibromofluoromethane (86-118)
S2 (DCA) = 1,2-Dichloroethane-d4 (80-120)
S3 (TOL) = Toluene-d8 (88-110)
S4 (BFB) = 4-Bromofluorobenzene (86-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

page 1 of 1

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike Recoveries

Unspiked: mj26s01.d
67001 3983820
Method: SW-846 82608
Instrument: HP06720

Matrix Spike: mj26s02.d
67001MS 3983820
Matrix/Level: WL
Dilution Factor: 1.00

Batch: M030261AA

COMPOUND NAME	MS SPIKE	US CONC UG/L	MS CONC UG/L	MS REC %	Range LOWER-UPPER	INSPEC
Dichlorodifluoromethane	20.00	ND	17.99	90	33-156	YES
Chloromethane	20.00	ND	18.78	94	47-139	YES
Vinyl Chloride	20.00	ND	22.07	110	54-144	YES
Bromomethane	20.00	ND	21.83	109	42-134	YES
Chloroethane	20.00	ND	21.49	107	55-129	YES
Trichlorofluoromethane	20.00	ND	23.83	119	70-154	YES
Ethyl Ether	20.00	ND	17.42	87	65-130	YES
1,1-Dichloroethene	20.00	ND	24.41	122	69-151	YES
Acetone	150.00	ND	150.26	100	49-143	YES
Methyl Iodide	20.00	ND	22.40	112	77-138	YES
Carbon Disulfide	20.00	ND	24.57	123	57-164	YES
Allyl Chloride	20.00	ND	19.06	95	35-146	YES
Methylene Chloride	20.00	ND	22.23	111	80-126	YES
Acrylonitrile	100.00	ND	101.35	101	56-123	YES
trans-1,2-Dichloroethene	20.00	ND	22.04	110	82-133	YES
Methyl Tertiary Butyl Eth	20.00	ND	21.57	108	69-134	YES
1,1-Dichloroethane	20.00	ND	22.49	112	79-135	YES
2,2-Dichloropropane	20.00	ND	21.93	110	78-134	YES
cis-1,2-Dichloroethene	20.00	ND	20.40	102	83-126	YES
2-Butanone	150.00	ND	140.33	94	47-143	YES
Propionitrile	150.00	ND	150.67	100	63-129	YES
Bromochloromethane	20.00	ND	16.02	80	60-140	YES
Methacrylonitrile	150.00	ND	152.03	101	70-124	YES
Tetrahydrofuran	100.00	ND	104.85	105	57-129	YES
Chloroform	20.00	ND	21.53	108	77-133	YES
1,1,1-Trichloroethane	20.00	ND	22.84	114	82-135	YES
1,1-Dichloropropene	20.00	ND	21.22	106	80-132	YES
Carbon Tetrachloride	20.00	ND	22.93	115	73-144	YES
Benzene	20.00	ND	20.98	105	78-134	YES
1,2-Dichloroethane	20.00	ND	22.34	112	73-136	YES
Trichloroethene	20.00	ND	20.77	104	75-135	YES
1,2-Dichloropropane	20.00	ND	20.52	103	81-121	YES
Dibromomethane	20.00	ND	20.95	105	83-120	YES
Methyl Methacrylate	20.00	ND	19.51	98	60-125	YES
Bromodichloromethane	20.00	ND	20.56	103	81-127	YES
cis-1,3-Dichloropropene	20.00	ND	19.68	98	69-118	YES
4-Methyl-2-Pentanone	100.00	ND	92.99	93	59-132	YES
Toluene	20.00	ND	20.14	101	83-127	YES
trans-1,3-Dichloropropene	20.00	ND	19.94	100	70-120	YES
Ethyl Methacrylate	20.00	ND	19.28	96	48-132	YES
1,1,2-Trichloroethane	20.00	ND	20.26	101	82-127	YES
Tetrachloroethene	20.00	ND	20.30	101	74-149	YES
1,3-Dichloropropane	20.00	ND	20.39	102	77-126	YES
2-Hexanone	100.00	ND	89.35	89	47-146	YES
Dibromochloromethane	20.00	ND	20.09	100	73-119	YES
1,2-Dibromoethane	20.00	ND	19.79	99	78-120	YES
Chlorobenzene	20.00	ND	20.00	100	81-125	YES
1,1,1,2-Tetrachloroethane	20.00	ND	21.10	106	82-125	YES
Ethylbenzene	20.00	ND	20.50	102	82-134	YES
m-p-Xylene	40.00	ND	40.20	100	82-130	YES
o-Xylene	20.00	ND	20.03	100	82-130	YES
Styrene	20.00	ND	19.83	99	67-137	YES
Bromoform	20.00	ND	19.69	98	59-122	YES
Isopropylbenzene	20.00	ND	20.62	103	81-130	YES
1,1,2,2-Tetrachloroethane	20.00	ND	19.17	96	69-121	YES
trans-1,4-Dichloro-2-Bute	100.00	ND	106.52	107	15-145	YES
Bromobenzene	20.00	ND	19.12	96	83-121	YES
1,2,3-Trichloropropane	20.00	ND	19.87	99	73-125	YES

N/C = Could not calculate

Lab Chronicle:

Ent. by

Ver. by

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike Recoveries

Unspiked: mj26s01.d
67001 3983820
Method: SW-846 B260B
Instrument: HP06720

Matrix Spike: mj26s02.d
67001MS 3983820
Matrix/Level: WL
Dilution Factor: 1.00

Batch: M030261AA

COMPOUND NAME	MS SPIKE	US CONC UG/L	MS CONC UG/L	MS REC %	Range LOWER-UPPER	INSPEC
n-Propylbenzene	20.00	ND	20.11	101	78-131	YES
2-Chlorotoluene	20.00	ND	20.03	100	77-126	YES
1,3,5-Trimethylbenzene	20.00	ND	20.10	100	77-137	YES
4-Chlorotoluene	20.00	ND	20.28	101	81-123	YES
Pentachloroethane	20.00	ND	18.80	94	59-122	YES
tert-Butylbenzene	20.00	ND	19.46	97	76-128	YES
1,2,4-Trimethylbenzene	20.00	ND	20.37	102	75-132	YES
sec-Butylbenzene	20.00	ND	19.41	97	72-134	YES
1,3-Dichlorobenzene	20.00	ND	19.87	99	82-128	YES
p-Isopropyltoluene	20.00	ND	19.92	100	72-135	YES
1,4-Dichlorobenzene	20.00	ND	19.77	99	81-122	YES
n-Butylbenzene	20.00	ND	18.03	90	60-140	YES
1,2-Dichlorobenzene	20.00	ND	19.97	100	82-117	YES
1,2-Dibromo-3-Chloropropa	20.00	ND	19.81	99	54-130	YES
1,2,4-Trichlorobenzene	20.00	ND	18.86	94	66-121	YES
Hexachlorobutadiene	20.00	ND	17.09	85	44-134	YES
Naphthalene	20.00	ND	18.40	92	59-124	YES
1,2,3-Trichlorobenzene	20.00	ND	19.50	97	66-121	YES

N/C = Could not calculate

Lab Chronicle: _____

Ent. by _____

Ver. by _____

Lancaster Laboratories, Inc.
 Volatiles Laboratory Control Sample Recoveries

LCS: mj26101.d
 Client ID: LCSM25
 Method: SW-846 8260B
 Instrument: HP06720

LCS Duplicate: mj26102.d
 Client ID: LCDM25
 Matrix/Level: WL
 Dilution Factor: 1.0

Batch: M030261AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCS D CONC UG/L	LCS REC %	LCS D REC %	Range LOWER-UPPER	RPD %	RPD MAX	INSPEC
Dichlorodifluoromethane	20.00	17.07	16.80	85	84	32-142	2	30	YES
Chloromethane	20.00	18.45	17.83	92	89	47-132	3	30	YES
Vinyl Chloride	20.00	21.38	21.15	107	106	59-129	1	30	YES
Bromomethane	20.00	21.47	20.50	107	103	42-126	5	30	YES
Chloroethane	20.00	20.68	20.55	103	103	53-117	1	30	YES
Trichlorofluoromethane	20.00	22.36	22.86	112	114	66-139	2	30	YES
Ethyl Ether	20.00	17.98	18.20	90	91	69-132	1	30	YES
Acrolein	150.00	145.31	146.83	97	98	48-133	1	30	YES
1,1-Dichloroethene	20.00	23.20	22.62	116	113	67-140	3	30	YES
Freon 113	20.00	22.58	22.77	113	114	78-139	1	30	YES
Acetone	150.00	104.71	106.90	70	71	45-170	2	30	YES
Methyl Iodide	20.00	21.57	21.71	108	109	74-133	1	30	YES
2-Propanol	150.00	204.68	211.01	136	141	54-142	3	30	YES
Carbon Disulfide	20.00	23.44	23.45	117	117	67-143	0	30	YES
Allyl Chloride	20.00	19.11	18.05	96	90	41-139	6	30	YES
Methylene Chloride	20.00	22.27	22.04	111	110	82-122	1	30	YES
t-Butyl Alcohol	200.00	226.30	242.90	113	121	59-139	7	30	YES
Acrylonitrile	100.00	103.17	104.56	103	105	59-125	1	30	YES
trans-1,2-Dichloroethene	20.00	21.30	21.07	106	105	81-124	1	30	YES
Methyl Tertiary Butyl Ether	20.00	22.27	22.17	111	111	77-127	0	30	YES
n-Hexane	20.00	21.71	21.14	109	106	61-146	3	30	YES
1,1-Dichloroethane	20.00	22.25	21.98	111	110	77-129	1	30	YES
2-Chloro-1,3-Butadiene	20.00	22.27	21.60	111	108	73-133	3	30	YES
di-Isopropyl Ether	20.00	21.42	21.16	107	106	74-125	1	30	YES
Ethyl t-Butyl Ether	20.00	20.57	20.72	103	104	74-120	1	30	YES
2,2-Dichloropropane	20.00	21.59	21.32	108	107	75-129	1	30	YES
cis-1,2-Dichloroethene	20.00	19.63	19.92	98	100	84-117	1	30	YES
1,2-Dichloroethene (total)	40.00	40.93	40.99	102	102	84-117	0	30	YES
2-Butanone	150.00	116.35	117.14	78	78	58-141	1	30	YES
Propionitrile	150.00	161.72	159.68	108	106	73-128	1	30	YES
Bromochloromethane	20.00	15.72	16.19	79	81	58-138	3	30	YES
Methacrylonitrile	150.00	156.06	155.85	104	104	79-124	0	30	YES
Tetrahydrofuran	100.00	107.68	108.95	108	109	67-126	1	30	YES
Chloroform	20.00	20.88	20.80	104	104	86-124	0	30	YES
1,1,1-Trichloroethane	20.00	21.05	21.15	105	106	83-127	0	30	YES
Cyclohexane	20.00	21.74	21.63	109	108	71-131	0	30	YES
1,1-Dichloropropene	20.00	19.74	19.53	99	98	79-123	1	30	YES
Carbon Tetrachloride	20.00	21.72	21.32	109	107	77-130	2	30	YES
Benzene	20.00	19.83	19.91	99	100	85-117	0	30	YES
Isobutyl Alcohol	500.00	525.74	540.00	105	108	55-134	3	30	YES
1,2-Dichloroethane	20.00	21.76	21.99	109	110	77-132	1	30	YES
t-Amyl Methyl Ether	20.00	19.43	19.75	97	99	71-114	2	30	YES
n-Heptane	20.00	18.59	18.38	93	92	49-140	1	30	YES
Trichloroethene	20.00	19.84	19.61	99	98	87-117	1	30	YES
n-Butanol	1000.00	985.13	1016.93	99	102	52-124	3	30	YES
1,2-Dichloropropane	20.00	19.87	19.73	99	99	80-117	1	30	YES
Dibromomethane	20.00	20.47	20.92	102	105	87-117	2	30	YES
1,4-Dioxane	500.00	568.05	605.40	114	121	53-133	6	30	YES
Methyl Methacrylate	20.00	19.19	19.56	96	98	64-123	2	30	YES
Bromodichloromethane	20.00	19.80	20.27	99	101	83-121	2	30	YES
2-Nitropropane	20.00	19.77	19.45	99	97	35-157	2	30	YES
2-Chloroethyl Vinyl Ether	20.00	20.04	20.04	100	100	57-131	0	30	YES
cis-1,3-Dichloropropene	20.00	19.47	19.35	97	97	78-114	1	30	YES
4-Methyl-2-Pentanone	100.00	95.18	95.54	95	96	63-130	0	30	YES
Toluene	20.00	19.15	18.80	96	94	85-115	2	30	YES
trans-1,3-Dichloropropene	20.00	19.63	19.40	98	97	72-116	1	30	YES
Ethyl Methacrylate	20.00	19.13	19.44	96	97	48-131	2	30	YES
1,1,2-Trichloroethane	20.00	19.85	19.39	99	97	86-120	2	30	YES

N/C = Could not calculate
 Ent. by _____

Lab Chronicle: _____

Ver. by _____

Lancaster Laboratories, Inc.
 Volatiles Laboratory Control Sample Recoveries

LCS: mj26101.d
 Client ID: LCSM25
 Method: SW-846 82608
 Instrument: HP06720

LCS Duplicate: mj26102.d
 Client ID: LCDM25
 Matrix/Level: WL
 Dilution Factor: 1.0

Batch: H030261AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCSD CONC UG/L	LCS REC %	LCSD REC %	Range LOWER-UPPER	RPD %	RPD MAX	INSPEC
Tetrachloroethene	20.00	19.78	18.84	99	94	79-136	5	30	YES
1,3-Dichloropropane	20.00	19.57	19.62	98	98	84-119	0	30	YES
2-Hexanone	100.00	87.63	88.04	88	88	53-141	0	30	YES
Dibromochloromethane	20.00	19.79	19.75	99	99	78-119	0	30	YES
1,2-Dibromoethane	20.00	19.40	19.44	97	97	81-114	0	30	YES
Chlorobenzene	20.00	19.12	19.12	96	96	85-115	0	30	YES
1,1,1,2-Tetrachloroethane	20.00	20.23	20.17	101	101	83-121	0	30	YES
Ethylbenzene	20.00	19.33	19.27	97	96	82-119	0	30	YES
m-p-Xylene	40.00	38.72	38.19	97	95	84-120	1	30	YES
Xylene (Total)	60.00	57.92	57.60	97	96	84-120	1	30	YES
o-Xylene	20.00	19.20	19.41	96	97	84-120	1	30	YES
Styrene	20.00	19.02	19.09	95	95	77-125	0	30	YES
Bromoform	20.00	19.39	19.16	97	96	63-122	1	30	YES
Isopropylbenzene	20.00	19.53	19.16	98	96	80-120	2	30	YES
1,1,2,2-Tetrachloroethane	20.00	19.05	19.56	95	98	72-119	3	30	YES
trans-1,4-Dichloro-2-Butene	100.00	107.68	109.13	108	109	27-143	1	30	YES
Bromobenzene	20.00	18.23	18.59	91	93	80-118	2	30	YES
1,2,3-Trichloropropane	20.00	19.71	20.12	99	101	76-124	2	30	YES
n-Propylbenzene	20.00	18.87	19.01	94	95	75-124	1	30	YES
2-Chlorotoluene	20.00	19.06	18.55	95	93	80-120	3	30	YES
1,3,5-Trimethylbenzene	20.00	19.30	19.33	96	97	78-122	0	30	YES
4-Chlorotoluene	20.00	19.06	18.91	95	95	80-118	1	30	YES
Pentachloroethane	20.00	18.56	18.46	93	92	57-121	1	30	YES
tert-Butylbenzene	20.00	18.53	18.26	93	91	74-121	2	30	YES
1,2,4-Trimethylbenzene	20.00	19.44	19.54	97	98	79-123	1	30	YES
sec-Butylbenzene	20.00	18.21	18.41	91	92	69-127	1	30	YES
1,3-Dichlorobenzene	20.00	19.00	18.62	95	93	82-119	2	30	YES
p-Isopropyltoluene	20.00	18.56	18.62	93	93	72-126	0	30	YES
1,4-Dichlorobenzene	20.00	18.77	19.14	94	96	84-116	2	30	YES
n-Butylbenzene	20.00	16.74	17.08	84	85	60-131	2	30	YES
1,2-Dichlorobenzene	20.00	19.40	19.59	97	98	84-117	1	30	YES
1,2-Dibromo-3-Chloropropane	20.00	19.27	19.76	96	99	59-120	3	30	YES
1,2,4-Trichlorobenzene	20.00	17.86	19.12	89	96	67-121	7	30	YES
Hexachlorobutadiene	20.00	15.04	16.82	75	84	47-126	11	30	YES
Naphthalene	20.00	18.30	18.98	92	95	64-121	4	30	YES
1,2,3-Trichlorobenzene	20.00	18.16	18.97	91	95	69-121	4	30	YES

N/C = Could not calculate
 Ent. by _____

Lab Chronicle: _____

Ver. by _____

100-44-0-01-005

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID: mj26b01.d Lab Sample ID: VBLKM25
 Date Analyzed: 01/26/03 Time Analyzed: 15:37
 Matrix (soil/water) WATER Level: (low/med) LOW
 Instrument ID: HP06720

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCSM25	LCSM25	mj26l01.d	16:03
02	LCDM25	LCDM25	mj26l02.d	16:28
03	67001	3983820	mj26s01.d	16:54
04	67001MS	3983820	mj26s02.d	17:20
05	67002	3983821	mj26s03.d	17:46
06	67003	3983822	mj26s04.d	18:11
07	67004	3983823	mj26s05.d	18:38
08	67005	3983824	mj26s06.d	19:04
09	67006	3983825	mj26s07.d	19:29
10	67007	3983826	mj26s08.d	19:55
11	67010	3983827	mj26s09.d	20:21
12	67011	3983828	mj26s10.d	20:48

COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Lab File ID: mj27b01.d Lab Sample ID: VBLKM26
Date Analyzed: 01/27/03 Time Analyzed: 10:56
Matrix (soil/water) WATER Level: (low/med) LOW
Instrument ID: HP06720

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	67012	3983829	mj27s01.d	11:21
02	67013	3983830	mj27s02.d	11:47
03	67014	3983831	mj27s03.d	12:13
04	67015	3983832	mj27s04.d	12:39
05	74001	3983833	mj27s05.d	13:05
06	74002	3983834	mj27s06.d	13:31
07	74003	3983835	mj27s07.d	13:57
08	74004	3983836	mj27s08.d	14:23
09	74023	3983837	mj27s09.d	14:49
10	74024	3983838	mj27s10.d	15:15
11	74025	3983839	mj27s11.d	15:42

COMMENTS:

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____, SAS No.: _____ SDG No.: _____
 Lab File ID: mj10t03.d BFB Injection Date: 01/10/03
 Instrument ID: HP06720 BFB Injection Time: 14:41
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.9
75	30.0 - 60.0% of mass 95	46.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	72.0
175	5.0 - 9.0% of mass 174	5.3 (7.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	68.9 (95.8)1
177	5.0 - 9.0% of mass 176	4.1 (5.9)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	VSTD300	mj10i01.d	01/10/03	14:50
02	VSTD100	VSTD100	mj10i02.d	01/10/03	15:28
03	VSTD020	VSTD020	mj10i04.d	01/10/03	16:20
04	VSTD010	VSTD010	mj10i05.d	01/10/03	16:46
05	VSTD050	VSTD050	mj10i07.d	01/10/03	17:37
06	VSTD004	VSTD004	mj10i09.d	01/10/03	19:28
07	VSTD001	1PPBMDL	mj10m01.d	01/10/03	20:20

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID: mj26t01.d BFB Injection Date: 01/26/03

Instrument ID: HP06720 BFB Injection Time: 14:31

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.5
75	30.0 - 60.0% of mass 95	47.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	71.9
175	5.0 - 9.0% of mass 174	5.1 (7.0)1
176	Greater than 95.0%, but less than 101.0% of mass 174	68.3 (95.1)1
177	5.0 - 9.0% of mass 176	4.8 (7.0)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	mj26c01.d	01/26/03	14:45
02	VBLKM25	VBLKM25	mj26b01.d	01/26/03	15:37
03	LCSM25	LCSM25	mj26l01.d	01/26/03	16:03
04	LCDM25	LCDM25	mj26l02.d	01/26/03	16:28
05	67001	3983820	mj26s01.d	01/26/03	16:54
06	67001MS	3983820	mj26s02.d	01/26/03	17:20
07	67002	3983821	mj26s03.d	01/26/03	17:46
08	67003	3983822	mj26s04.d	01/26/03	18:11
09	67004	3983823	mj26s05.d	01/26/03	18:38
10	67005	3983824	mj26s06.d	01/26/03	19:04
11	67006	3983825	mj26s07.d	01/26/03	19:29
12	67007	3983826	mj26s08.d	01/26/03	19:55
13	67010	3983827	mj26s09.d	01/26/03	20:21
14	67011	3983828	mj26s10.d	01/26/03	20:48

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID: mj27t06.d BFB Injection Date: 01/27/03
 Instrument ID: HP06720 BFB Injection Time: 09:57
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.0
75	30.0 - 60.0% of mass 95	46.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	75.7
175	5.0 - 9.0% of mass 174	5.9 (7.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.0 (97.8)1
177	5.0 - 9.0% of mass 176	4.4 (6.0)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	mj27c02.d	01/27/03	10:21
02	VBLKM26	VBLKM26	mj27b01.d	01/27/03	10:56
03	67012	3983829	mj27s01.d	01/27/03	11:21
04	67013	3983830	mj27s02.d	01/27/03	11:47
05	67014	3983831	mj27s03.d	01/27/03	12:13
06	67015	3983832	mj27s04.d	01/27/03	12:39
07	74001	3983833	mj27s05.d	01/27/03	13:05
08	74002	3983834	mj27s06.d	01/27/03	13:31
09	74003	3983835	mj27s07.d	01/27/03	13:57
10	74004	3983836	mj27s08.d	01/27/03	14:23
11	74023	3983837	mj27s09.d	01/27/03	14:49
12	74024	3983838	mj27s10.d	01/27/03	15:15
13	74025	3983839	mj27s11.d	01/27/03	15:42

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date(s): 01/10/03 01/10/03
 Heated Purge: (Y/N) Y Calibration Times: 14:50 19:28
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 4 = mj10i09.d RRF 10= mj10i05.d RRF 20= mj10i04.d
 RRF 50= mj10i07.d RRF100= mj10i02.d RRF300= mj10i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	0.3002	0.3024	0.3728	0.3790	0.3885	0.3847		0.3546	12	AVG
Chloromethane	#0.4082	0.3972	0.3937	0.3981	0.4143	0.3958		0.4012	2	AVG
Vinyl Chloride	*0.3268	0.3342	0.3377	0.3421	0.3550	0.3458		0.3403	3	AVG
Bromomethane	0.2789	0.2542	0.2545	0.2498	0.2622	0.2468		0.2577	4	AVG
Chloroethane	0.2035	0.2030	0.2139	0.2076	0.2253	0.2216		0.2125	4	AVG
Trichlorofluoromethane	0.2226	0.2380	0.2705	0.2764	0.2949	0.2877		0.2650	11	AVG
n-Pentane	0.4173	0.3743	0.3964	0.3951	0.4144	0.4076		0.4009	4	AVG
Ethyl Ether	0.2470	0.2439	0.2447	0.2472	0.2714	0.2668		0.2535	5	AVG
Acrolein	0.1023	0.1052	0.0962	0.0955	0.1007	0.1015		0.1002	4	AVG
1,1-Dichloroethene	*0.2236	0.2228	0.2258	0.2332	0.2397	0.2384		0.2306	3	AVG
Freon 113	0.1951	0.2021	0.2140	0.2164	0.2254	0.2234		0.2127	6	AVG
Acetone	0.0543	0.0537	0.0518	0.0489	0.0500	0.0504		0.0515	4	AVG
Methyl Iodide	0.4114	0.4256	0.4341	0.4452	0.4518	0.4402		0.4347	3	AVG
2-Propanol	0.0383	0.0324	0.0268	0.0328	0.0341	0.0388		0.0339	13	AVG
Carbon Disulfide	0.7953	0.7874	0.8012	0.8290	0.8530	0.8240		0.8150	3	AVG
Allyl Chloride	0.4394	0.3796	0.3843	0.3869	0.4186	0.4192		0.4047	6	AVG
Methylene Chloride	0.2792	0.2803	0.2861	0.2860	0.2979	0.2896		0.2865	2	AVG
t-Butyl Alcohol	0.0567	0.0519	0.0445	0.0516	0.0536	0.0606		0.0531	10	AVG
Acrylonitrile	0.1940	0.1906	0.1798	0.1785	0.1911	0.1940		0.1880	4	AVG
trans-1,2-Dichloroethene	0.2619	0.2570	0.2662	0.2698	0.2780	0.2705		0.2672	3	AVG
Methyl Tertiary Butyl Ether	0.6950	0.7127	0.7225	0.7073	0.8098	0.7745		0.7369	6	AVG
n-Hexane	0.2546	0.2490	0.2570	0.2635	0.2745	0.2822		0.2635	5	AVG
1,1-Dichloroethane	#0.4426	0.4356	0.4393	0.4337	0.4631	0.4495		0.4440	2	AVG
2-Chloro-1,3-Butadiene	0.3215	0.3154	0.3240	0.3363	0.3498	0.3352		0.3304	4	AVG
di-isopropyl Ether	0.8979	0.8299	0.8298	0.8672	0.9217	0.8638		0.8684	4	AVG
Ethyl t-Butyl Ether	0.7800	0.8087	0.8187	0.8186	0.8910	0.8618		0.8298	5	AVG
2,2-Dichloropropane	0.3391	0.3263	0.3320	0.3404	0.3467	0.3241		0.3348	3	AVG
cis-1,2-Dichloroethene	0.2727	0.2742	0.2810	0.2825	0.2885	0.2903		0.2815	3	AVG
1,2-Dichloroethene (total)	0.2673	0.2656	0.2736	0.2762	0.2833	0.2804		0.2744	3	AVG
2-Butanone	0.3044	0.3551	0.2951	0.2964	0.3136	0.2945		0.3099	8	AVG
Propionitrile	0.0744	0.0703	0.0653	0.0729	0.0736	0.0768		0.0722	5	AVG
Bromochloromethane	0.1388	0.1423	0.1454	0.1476	0.1486	0.1536		0.1460	4	AVG
Methacrylonitrile	0.1817	0.1867	0.1890	0.1919	0.1960	0.1902		0.1892	3	AVG
Tetrahydrofuran	0.0614	0.0715	0.0646	0.0644	0.0665	0.0666		0.0658	5	AVG
Chloroform	*0.4275	0.4300	0.4320	0.4485	0.4508	0.4490		0.4396	2	AVG
1,1,1-Trichloroethane	0.3017	0.3062	0.3119	0.3197	0.3292	0.3216		0.3151	3	AVG
Cyclohexane	0.3375	0.3417	0.3564	0.3741	0.3782	0.3845		0.3621	5	AVG
1,1-Dichloropropene	0.3195	0.3372	0.3382	0.3512	0.3554	0.3542		0.3426	4	AVG
Carbon Tetrachloride	0.2440	0.2484	0.2549	0.2625	0.2679	0.2720		0.2583	4	AVG
Isobutyl Alcohol	0.0217	0.0207	0.0182	0.0211	0.0216	0.0228		0.0210	7	AVG
Benzene	1.0413	1.0635	1.0885	1.1013	1.1017	1.0922		1.0814	2	AVG
1,2-Dichloroethane	0.3168	0.3233	0.3273	0.3335	0.3477	0.3247		0.3289	3	AVG
1,2-Dichloroethane(mz98)	0.0324	0.0335	0.0352	0.0361	0.0388	0.0374		0.0356	7	AVG
t-Amyl Methyl Ether	0.7568	0.7696	0.7960	0.7967	0.8487	0.8115		0.7965	4	AVG
n-Heptane	0.2965	0.1924	0.1751	0.1681	0.1806	0.1941		0.2011	24	2ND DEG
Trichloroethene	0.2373	0.2602	0.2637	0.2658	0.2674	0.2584		0.2588	4	AVG
n-Butanol	0.0168	0.0173	0.0155	0.0183	0.0200	0.0206		0.0181	11	AVG
1,2-Dichloropropane	*0.2577	0.2755	0.2784	0.2838	0.2939	0.2850		0.2790	4	AVG
Dibromomethane	0.1790	0.1830	0.1846	0.1906	0.1963	0.1913		0.1875	3	AVG
1,4-Dioxane	0.0045	0.0034	0.0040	0.0041	0.0047	0.0060		0.0044	20	2ND DEG
Methyl Methacrylate	0.2606	0.2918	0.3041	0.3173	0.3338	0.3176		0.3042	8	AVG
Bromodichloromethane	0.3103	0.3137	0.3236	0.3341	0.3485	0.3366		0.3278	4	AVG

Minimum RRF for SPCC(#) = 0.10
 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %RSD for CCC(*) = 30%

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date(s): 01/10/03 01/10/03
 Heated Purge: (Y/N) Y Calibration Times: 14:50 19:28
 Matrix: (soil/water) WATER Level: (Low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID:	RRF 4 = mj10i09.d	RRF 10 = mj10i05.d	RRF 20 = mj10i04.d	RRF 50 = mj10i07.d	RRF100 = mj10i02.d	RRF300 = mj10i01.d	RRF =					
COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RRF	% RSD	CAL. METHOD		
2-Nitropropane	0.0981	0.1227	0.1034	0.1045	0.1191	0.1157		0.1106	9	AVG		
2-Chloroethyl Vinyl Ether	0.2021	0.2337	0.2396	0.2485	0.2664	0.2538		0.2407	9	AVG		
cis-1,3-Dichloropropene	0.4266	0.4585	0.4757	0.4848	0.5088	0.4942		0.4748	6	AVG		
4-Methyl-2-Pentanone	0.5257	0.6755	0.5536	0.5355	0.5715	0.5435		0.5676	10	AVG		
Toluene	*0.8681	0.9194	0.9385	0.9520	0.9647	0.9572		0.9333	4	AVG		
trans-1,3-Dichloropropene	0.5507	0.6015	0.6094	0.6374	0.6604	0.6437		0.6172	6	AVG		
Ethyl Methacrylate	0.5919	0.6833	0.7140	0.7377	0.7765	0.7604		0.7106	9	AVG		
1,1,2-Trichloroethane	0.3442	0.3610	0.3628	0.3770	0.3749	0.3710		0.3651	3	AVG		
Tetrachloroethene	0.3254	0.3399	0.3439	0.3506	0.3462	0.3492		0.3425	3	AVG		
1,3-Dichloropropane	0.6768	0.7024	0.7204	0.7244	0.7406	0.7104		0.7125	3	AVG		
2-Hexanone	0.6101	0.8030	0.6355	0.6237	0.6681	0.6236		0.6607	11	AVG		
Dibromochloromethane	0.3431	0.3817	0.3869	0.4060	0.4120	0.4187		0.3914	7	AVG		
1,2-Dibromoethane	0.3972	0.4005	0.4076	0.4217	0.4314	0.4314		0.4150	4	AVG		
Chlorobenzene	#0.9074	0.9464	0.9438	0.9733	0.9778	0.9692		0.9530	3	AVG		
1,1,1,2-Tetrachloroethane	0.2929	0.3142	0.3132	0.3289	0.3294	0.3395		0.3197	5	AVG		
Ethylbenzene	*1.4802	1.5683	1.6090	1.6514	1.6630	1.6299		1.6003	4	AVG		
m+p-Xylene	0.5565	0.5777	0.5804	0.5976	0.6087	0.6112		0.5887	4	AVG		
Xylene (Total)	0.5426	0.5730	0.5781	0.5972	0.6047	0.6054		0.5835	4	AVG		
o-Xylene	0.5148	0.5636	0.5733	0.5964	0.5968	0.5940		0.5731	6	AVG		
Styrene	0.9255	1.0065	1.0317	1.0945	1.1273	1.1067		1.0487	7	AVG		
Bromoform	#0.2472	0.2582	0.2768	0.2900	0.3034	0.3115		0.2812	9	AVG		
Isopropylbenzene	1.1899	1.2483	1.2896	1.3347	1.3482	1.3415		1.2920	5	AVG		
1,1,2,2-Tetrachloroethane	#1.3490	1.3873	1.3483	1.3711	1.3935	1.4072		1.3761	2	AVG		
trans-1,4-Dichloro-2-Butene	0.3673	0.3602	0.3505	0.3535	0.3650	0.3106		0.3512	6	AVG		
Bromobenzene	0.7949	0.8117	0.8117	0.8277	0.8362	0.8600		0.8237	3	AVG		
1,2,3-Trichloropropane	0.3742	0.3698	0.3560	0.3634	0.3747	0.3643		0.3670	2	AVG		
n-Propyltoluene	3.2144	3.2058	3.2356	3.2719	3.3238	3.3555		3.2678	2	AVG		
2-Chlorotoluene	0.6501	0.6789	0.6791	0.6857	0.6877	0.6991		0.6801	2	AVG		
1,3,5-Trimethylbenzene	1.9661	1.9635	2.0402	2.0464	2.0724	2.0876		2.0294	3	AVG		
4-Chlorotoluene	0.6847	0.7131	0.7139	0.7255	0.7290	0.7447		0.7185	3	AVG		
Pentachloroethane	0.3791	0.3871	0.3978	0.4005	0.4123	0.4471		0.4040	6	AVG		
tert-Butylbenzene	0.4624	0.4511	0.4645	0.4701	0.4791	0.4975		0.4708	3	AVG		
1,2,4-Trimethylbenzene	1.9493	2.1074	2.0889	2.1113	2.1665	2.1192		2.0904	4	AVG		
sec-Butylbenzene	2.4077	2.2541	2.2940	2.3320	2.4475	2.5078		2.3739	4	AVG		
1,3-Dichlorobenzene	1.3155	1.3362	1.3544	1.3761	1.3969	1.4052		1.3641	3	AVG		
p-Isopropyltoluene	1.9723	1.9101	1.9916	2.0024	2.0918	2.1130		2.0135	4	AVG		
1,4-Dichlorobenzene	1.4083	1.4664	1.4725	1.4696	1.4858	1.4792		1.4636	2	AVG		
1,3-Diethylbenzene	1.0852	1.2010	1.1715	1.1665	1.2334	1.2457		1.1839	5	AVG		
1,4-Diethylbenzene	1.1203	1.1986	1.1508	1.1639	1.2567	1.2523		1.1904	5	AVG		
n-Butylbenzene	1.1862	1.1046	1.0606	1.0961	1.1777	1.1846		1.1350	5	AVG		
1,2-Dichlorobenzene	1.2496	1.3342	1.3363	1.3509	1.3665	1.3473		1.3308	3	AVG		
1,2-Diethylbenzene	0.8532	0.9239	0.8968	0.8847	0.9331	0.9176		0.9015	3	AVG		
1,2-Dibromo-3-Chloropropane	0.2323	0.2553	0.2482	0.2631	0.2837	0.2567		0.2566	7	AVG		
1,2,4-Trichlorobenzene	0.6162	0.6231	0.6577	0.6599	0.7609	0.6970		0.6692	8	AVG		
Hexachlorobutadiene	0.3240	0.2734	0.2791	0.2381	0.3025	0.3069		0.2873	11	AVG		
Naphthalene	2.3605	2.7499	2.8030	2.8363	3.1016	2.9123		2.7939	9	AVG		
1,2,3-Trichlorobenzene	0.6053	0.6099	0.6329	0.6264	0.7380	0.6538		0.6444	8	AVG		
Dibromofluoromethane	0.2448	0.2538	0.2552	0.2490	0.2428	0.2484		0.2490	2	AVG		
Dibromofluoromethane(mz111)	0.2515	0.2603	0.2622	0.2514	0.2456	0.2512		0.2537	2	AVG		
1,2-Dichloroethane-d4	0.0674	0.0771	0.0730	0.0694	0.0685	0.0696		0.0708	5	AVG		
1,2-Dichloroethane-d4(mz104)	0.0423	0.0465	0.0458	0.0444	0.0428	0.0439		0.0443	4	AVG		

Minimum RRF for SPCC(#) = 0.10
 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %RSD for CCC(*) = 30%

1-14-03

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SOG No.: _____
 Instrument ID: HP06720 Calibration Date(s): 01/10/03 01/10/03
 Heated Purge: (Y/N) Y Calibration Times: 14:50 19:28
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: 25

LAB FILE ID: RRF 4 = mj10i09.d RRF 10= mj10i05.d RRF 20= mj10i04.d
 RRF 50= mj10i07.d RRF100= mj10i02.d RRF300= mj10i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RRF	% RSD	CAL. METHOD
Toluene-d8	1.3249	1.4173	1.3992	1.3420	1.2989	1.3171		1.3499	4	AVG
Toluene-d8(mz100)	0.8743	0.9472	0.9403	0.8921	0.8759	0.8853		0.9025	4	AVG
4-Bromofluorobenzene	0.4704	0.5238	0.5107	0.4793	0.4744	0.4737		0.4887	5	AVG
4-Bromofluorobenzene(mz174)	0.3427	0.3906	0.3807	0.3622	0.3521	0.3612		0.3649	5	AVG

Average %RSD 5

Minimum RRF for SPCC(#) = 0.10
 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %RSD for CCC(*) = 30%

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/26/03 Time: 14:45
 Lab File ID: mj26c01.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dichlorodifluoromethane	0.3546	0.3281	46.26	50	-7
# Chloromethane	0.4012	0.3982	49.62	50	-1 #
* Vinyl Chloride	0.3403	0.3672	53.95	50	8 *
Bromomethane	0.2577	0.3000	58.20	50	16
Chloroethane	0.2125	0.2472	58.17	50	16
Trichlorofluoromethane	0.2650	0.3323	62.69	50	25
Ethyl Ether	0.2535	0.1802	35.55	50	-29
Acrolein	0.1002	0.1182	589.57	500	18
* 1,1-Dichloroethene	0.2306	0.2605	56.48	50	13 *
Freon 113	0.2127	0.2503	58.82	50	18
Acetone	0.0515	0.0411	79.82	100	-20
Methyl Iodide	0.4347	0.4929	56.70	50	13
2-Propanol	0.0339	0.0478	353.16	250	41
Carbon Disulfide	0.8150	0.9377	57.53	50	15
Allyl Chloride	0.4047	0.2981	36.83	50	-26
Methylene Chloride	0.2865	0.3290	57.41	50	15
t-Butyl Alcohol	0.0531	0.0702	330.15	250	32
Acrylonitrile	0.1880	0.2232	59.36	50	19
trans-1,2-Dichloroethene	0.2672	0.2976	55.69	50	11
Methyl Tertiary Butyl Ether	0.7369	0.8666	58.80	50	18
n-Hexane	0.2635	0.3035	57.60	50	15
# 1,1-Dichloroethane	0.4440	0.5206	58.63	50	17 #
2-Chloro-1,3-Butadiene	0.3304	0.3832	58.00	50	16
di-Isopropyl Ether	0.8684	0.9812	56.50	50	13
Ethyl t-Butyl Ether	0.8298	0.9052	54.54	50	9
2,2-Dichloropropane	0.3348	0.3993	59.64	50	19
cis-1,2-Dichloroethene	0.2815	0.2931	52.05	50	4
1,2-Dichloroethene (total)	0.2744	0.2954	107.73	100	8
2-Butanone	0.3099	0.2723	87.88	100	-12
Propionitrile	0.0722	0.0799	276.42	250	11
Bromochloromethane	0.1460	0.1136	38.89	50	-22
Methacrylonitrile	0.1892	0.1958	129.35	125	3
Tetrahydrofuran	0.0658	0.0681	103.42	100	3
* Chloroform	0.4396	0.4866	55.34	50	11 *
1,1,1-Trichloroethane	0.3151	0.3549	56.33	50	13
Cyclohexane	0.3621	0.3959	54.67	50	9

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*)=20%

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/26/03 Time: 14:45
 Lab File ID: mj26c01.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,1-Dichloropropene	0.3426	0.3685	53.78	50	8
Carbon Tetrachloride	0.2583	0.3009	58.26	50	17
Isobutyl Alcohol	0.0210	0.0240	714.74	625	14
Benzene	1.0814	1.1298	52.24	50	4
1,2-Dichloroethane	0.3289	0.3712	56.44	50	13
t-Amyl Methyl Ether	0.7965	0.8615	54.08	50	8
n-Heptane	0.2011	0.1764	49.92	50	0
Trichloroethene	0.2588	0.2724	52.63	50	5
n-Butanol	0.0181	0.0211	1461.77	1250	17
* 1,2-Dichloropropane	0.2790	0.2939	52.67	50	5 *
Dibromomethane	0.1875	0.2032	54.20	50	8
1,4-Dioxane	0.0044	0.0065	899.25	625	44
Methyl Methacrylate	0.3042	0.3174	52.17	50	4
Bromodichloromethane	0.3278	0.3614	55.12	50	10
2-Nitropropane	0.1106	0.1321	119.48	100	19
2-Chloroethyl Vinyl Ether	0.2407	0.2618	54.40	50	9
cis-1,3-Dichloropropene	0.4748	0.5097	53.68	50	7
4-Methyl-2-Pentanone	0.5676	0.6023	106.11	100	6
* Toluene	0.9333	0.9532	51.07	50	2 *
trans-1,3-Dichloropropene	0.6172	0.6576	53.28	50	7
Ethyl Methacrylate	0.7106	0.7450	52.42	50	5
1,1,2-Trichloroethane	0.3651	0.3842	52.60	50	5
Tetrachloroethene	0.3425	0.3473	50.70	50	1
1,3-Dichloropropane	0.7125	0.7371	51.72	50	3
2-Hexanone	0.6607	0.6365	96.35	100	-4
Dibromochloromethane	0.3914	0.4225	53.97	50	8
1,2-Dibromoethane	0.4150	0.4299	51.80	50	4
# Chlorobenzene	0.9530	0.9739	51.10	50	2 #
1,1,1,2-Tetrachloroethane	0.3197	0.3483	54.48	50	9
* Ethylbenzene	1.6003	1.6747	52.33	50	5 *
m+p-Xylene	0.5887	0.6127	104.09	100	4
Xylene (Total)	0.5835	0.6121	157.38	150	5
o-Xylene	0.5731	0.6109	53.30	50	7
Styrene	1.0487	1.0968	52.29	50	5
# Bromoform	0.2812	0.2981	53.00	50	6 #
Isopropylbenzene	1.2920	1.4005	54.20	50	8

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*)=20%

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/26/03 Time: 14:45
 Lab File ID: mj26c01.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# 1,1,2,2-Tetrachloroethane	1.3761	1.4371	52.22	50	4 #
trans-1,4-Dichloro-2-Butene	0.3512	0.3904	138.97	125	11
Bromobenzene	0.8237	0.8275	50.23	50	0
1,2,3-Trichloropropane	0.3670	0.3981	54.23	50	8
n-Propylbenzene	3.2678	3.4682	53.07	50	6
2-Chlorotoluene	0.6801	0.7146	52.53	50	5
1,3,5-Trimethylbenzene	2.0294	2.1955	54.09	50	8
4-Chlorotoluene	0.7185	0.7328	51.00	50	2
Pentachloroethane	0.4040	0.4082	50.52	50	1
tert-Butylbenzene	0.4708	0.4997	53.08	50	6
1,2,4-Trimethylbenzene	2.0904	2.2774	54.47	50	9
sec-Butylbenzene	2.3739	2.5502	53.71	50	7
1,3-Dichlorobenzene	1.3641	1.4138	51.82	50	4
p-Isopropyltoluene	2.0135	2.2273	55.31	50	11
1,4-Dichlorobenzene	1.4636	1.5015	51.29	50	3
n-Butylbenzene	1.1350	1.1927	52.54	50	5
1,2-Dichlorobenzene	1.3308	1.4168	53.23	50	6
1,2-Dibromo-3-Chloropropane	0.2566	0.2812	54.81	50	10
1,2,4-Trichlorobenzene	0.6692	0.6856	51.23	50	2
Hexachlorobutadiene	0.2873	0.2668	46.42	50	-7
Naphthalene	2.7939	2.8030	50.16	50	0
1,2,3-Trichlorobenzene	0.6444	0.6429	49.88	50	0
Dibromofluoromethane	0.2490	0.2591	52.04	50	4
1,2-Dichloroethane-d4	0.0708	0.0677	47.77	50	-4
Toluene-d8	1.3499	1.3496	49.99	50	0
4-Bromofluorobenzene	0.4887	0.4976	50.91	50	2

Average %Drift 10

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*)=20%

1-11-03

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/27/03 Time: 10:21
 Lab File ID: mj27c02.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dichlorodifluoromethane	0.3546	0.3070	43.29	50	-13
# Chloromethane	0.4012	0.3645	45.42	50	-9 #
* Vinyl Chloride	0.3403	0.3422	50.28	50	1 *
Bromomethane	0.2577	0.2856	55.40	50	11
Chloroethane	0.2125	0.2263	53.25	50	7
Trichlorofluoromethane	0.2650	0.3424	64.60	50	29
Ethyl Ether	0.2535	0.2873	56.68	50	13
Acrolein	0.1002	0.1121	559.06	500	12
* 1,1-Dichloroethene	0.2306	0.2653	57.54	50	15 *
Freon 113	0.2127	0.2463	57.89	50	16
Acetone	0.0515	0.0505	97.97	100	-2
Methyl Iodide	0.4347	0.4969	57.16	50	14
2-Propanol	0.0339	0.0415	306.65	250	23
Carbon Disulfide	0.8150	0.9064	55.61	50	11
Allyl Chloride	0.4047	0.4398	54.35	50	9
Methylene Chloride	0.2865	0.3209	56.00	50	12
t-Butyl Alcohol	0.0531	0.0667	313.61	250	25
Acrylonitrile	0.1880	0.1990	52.93	50	6
trans-1,2-Dichloroethene	0.2672	0.3024	56.58	50	13
Methyl Tertiary Butyl Ether	0.7369	0.8859	60.10	50	20
n-Hexane	0.2635	0.3050	57.88	50	16
# 1,1-Dichloroethane	0.4440	0.5110	57.55	50	15 #
2-Chloro-1,3-Butadiene	0.3304	0.3573	54.08	50	8
di-Isopropyl Ether	0.8684	0.9644	55.53	50	11
Ethyl t-Butyl Ether	0.8298	0.8955	53.96	50	8
2,2-Dichloropropane	0.3348	0.3869	57.78	50	16
cis-1,2-Dichloroethene	0.2815	0.2974	52.81	50	6
1,2-Dichloroethene (total)	0.2744	0.2999	109.40	100	9
2-Butanone	0.3099	0.2877	92.86	100	-7
Propionitrile	0.0722	0.0756	261.78	250	5
Bromochloromethane	0.1460	0.1619	55.42	50	11
Methacrylonitrile	0.1892	0.1907	125.94	125	1
Tetrahydrofuran	0.0658	0.0652	99.08	100	-1
* Chloroform	0.4396	0.4924	56.00	50	12 *
1,1,1-Trichloroethane	0.3151	0.3657	58.03	50	16
Cyclohexane	0.3621	0.3827	52.84	50	6

Minimum RRF for SPCC(#) = 0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*) = 20%

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/27/03 Time: 10:21
 Lab File ID: mj27c02.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: 25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,1-Dichloropropene	0.3426	0.3689	53.83	50	8
Carbon Tetrachloride	0.2583	0.3082	59.66	50	19
Isobutyl Alcohol	0.0210	0.0224	667.16	625	7
Benzene	1.0814	1.1282	52.16	50	4
1,2-Dichloroethane	0.3289	0.3855	58.60	50	17
t-Amyl Methyl Ether	0.7965	0.8567	53.78	50	8
n-Heptane	0.2011	0.1853	52.46	50	5
Trichloroethene	0.2588	0.2787	53.84	50	8
n-Butanol	0.0181	0.0192	1328.41	1250	6
* 1,2-Dichloropropane	0.2790	0.2887	51.74	50	3 *
Dibromomethane	0.1875	0.2062	54.99	50	10
1,4-Dioxane	0.0044	0.0061	853.80	625	37
Methyl Methacrylate	0.3042	0.3301	54.26	50	9
Bromodichloromethane	0.3278	0.3646	55.62	50	11
2-Nitropropane	0.1106	0.1213	109.69	100	10
2-Chloroethyl Vinyl Ether	0.2407	0.2553	53.05	50	6
cis-1,3-Dichloropropene	0.4748	0.5043	53.11	50	6
4-Methyl-2-Pentanone	0.5676	0.5588	98.46	100	-2
* Toluene	0.9333	0.9460	50.68	50	1 *
trans-1,3-Dichloropropene	0.6172	0.6338	51.35	50	3
Ethyl Methacrylate	0.7106	0.6961	48.98	50	-2
1,1,2-Trichloroethane	0.3651	0.3676	50.33	50	1
Tetrachloroethene	0.3425	0.3522	51.41	50	3
1,3-Dichloropropane	0.7125	0.7117	49.95	50	0
2-Hexanone	0.6607	0.5991	90.68	100	-9
Dibromochloromethane	0.3914	0.4259	54.41	50	9
1,2-Dibromoethane	0.4150	0.4287	51.65	50	3
# Chlorobenzene	0.9530	0.9845	51.65	50	3 #
1,1,1,2-Tetrachloroethane	0.3197	0.3451	53.97	50	8
* Ethylbenzene	1.6003	1.6634	51.97	50	4 *
m+p-Xylene	0.5887	0.6096	103.56	100	4
Xylene (Total)	0.5835	0.6066	155.95	150	4
o-Xylene	0.5731	0.6005	52.39	50	5
Styrene	1.0487	1.1004	52.47	50	5
# Bromoform	0.2812	0.3109	55.28	50	11 #
Isopropylbenzene	1.2920	1.3850	53.60	50	7

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*)=20%

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP06720 Calibration Date: 01/27/03 Time: 10:21

Lab File ID: mj27c02.d Init. Calib. Date(s): 01/10/03 01/10/03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# 1,1,2,2-Tetrachloroethane	1.3761	1.3819	50.21	50	0 #
trans-1,4-Dichloro-2-Butene	0.3512	0.3747	133.37	125	7
Bromobenzene	0.8237	0.8676	52.67	50	5
1,2,3-Trichloropropane	0.3670	0.3861	52.59	50	5
n-Propylbenzene	3.2678	3.4852	53.33	50	7
2-Chlorotoluene	0.6801	0.7161	52.65	50	5
1,3,5-Trimethylbenzene	2.0294	2.2511	55.46	50	11
4-Chlorotoluene	0.7185	0.7513	52.29	50	5
Pentachloroethane	0.4040	0.4540	56.19	50	12
tert-Butylbenzene	0.4708	0.5127	54.46	50	9
1,2,4-Trimethylbenzene	2.0904	2.3043	55.11	50	10
sec-Butylbenzene	2.3739	2.6228	55.24	50	10
1,3-Dichlorobenzene	1.3641	1.4524	53.24	50	6
p-Isopropyltoluene	2.0135	2.2948	56.98	50	14
1,4-Dichlorobenzene	1.4636	1.5221	52.00	50	4
n-Butylbenzene	1.1350	1.2054	53.10	50	6
1,2-Dichlorobenzene	1.3308	1.4186	53.30	50	7
1,2-Dibromo-3-Chloropropane	0.2566	0.2604	50.74	50	1
1,2,4-Trichlorobenzene	0.6692	0.7170	53.57	50	7
Hexachlorobutadiene	0.2873	0.2977	51.81	50	4
Naphthalene	2.7939	2.6625	47.65	50	-5
1,2,3-Trichlorobenzene	0.6444	0.6522	50.61	50	1
Dibromofluoromethane	0.2490	0.2555	51.31	50	3
1,2-Dichloroethane-d4	0.0708	0.0668	47.16	50	-6
Toluene-d8	1.3499	1.3097	48.51	50	-3
4-Bromofluorobenzene	0.4887	0.4861	49.73	50	-1

Average %Drift 8

Minimum RRF for SPCC(#) = 0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*) = 20%

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): mj26c01.d Date Analyzed: 01/26/03
 Instrument ID: HP06720 Time Analyzed: 14:45
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1 (FBZ)	RT #	IS2 (CBZ)	RT #	IS3 (DCB)	RT #
	AREA #		AREA #		AREA #	
12 HOUR STD	963179	7.947	677584	11.132	338175	13.115
UPPER LIMIT	1926358	8.447	1355168	11.632	676350	13.615
LOWER LIMIT	481590	7.447	338792	10.632	169088	12.615
EPA SAMPLE NO.						
01 VBLKM25	886027	7.946	628519	11.137	298093	13.114
02 LCSM25	860275	7.940	606812	11.137	310787	13.114
03 LCDM25	852583	7.942	606518	11.138	308759	13.115
04 67001	860523	7.946	606255	11.137	291925	13.114
05 67001MS	850017	7.940	593008	11.131	302901	13.114
06 67002	832753	7.944	594131	11.135	286557	13.112
07 67003	834473	7.940	597116	11.131	279883	13.114
08 67004	818825	7.941	579902	11.132	274297	13.114
09 67005	809550	7.940	571378	11.131	273396	13.114
10 67006	822074	7.947	586058	11.137	273052	13.114
11 67007	799805	7.941	566028	11.132	269142	13.109
12 67010	795865	7.938	566500	11.135	268706	13.112
13 67011	786681	7.940	554235	11.131	261791	13.108

IS1 (FBZ)=Fluorobenzene
 IS2 (CBZ)=Chlorobenzene-d5
 IS3 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): mj27c02.d Date Analyzed: 01/27/03
 Instrument ID: HP06720 Time Analyzed: 10:21
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1 (FBZ)	RT #	IS2 (CBZ)	RT #	IS3 (DCB)	RT #
	AREA #		AREA #		AREA #	
12 HOUR STD	920078	7.906	666775	11.108	328049	13.091
UPPER LIMIT	1840156	8.406	1333550	11.608	656098	13.591
LOWER LIMIT	460039	7.406	333388	10.608	164024	12.591
EPA SAMPLE NO.						
01 VBLKM26	894576	7.906	647842	11.109	310107	13.092
02 67012	873835	7.905	628279	11.107	308171	13.090
03 67013	865887	7.903	616855	11.106	299618	13.088
04 67014	828385	7.909	612043	11.111	293848	13.094
05 67015	849945	7.906	614083	11.108	311016	13.091
06 74001	886618	7.905	643923	11.108	309338	13.091
07 74002	880703	7.907	630501	11.110	306582	13.092
08 74003	865996	7.910	630321	11.112	306990	13.095
09 74004	859239	7.910	626233	11.113	299901	13.096
10 74023	855175	7.911	622785	11.114	298462	13.091
11 74024	842714	7.911	617443	11.114	296552	13.097
12 74025	826582	7.911	601994	11.114	289083	13.091

IS1 (FBZ)=Fluorobenzene
 IS2 (CBZ)=Chlorobenzene-d5
 IS3 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74001

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983833

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s05.d

Level: (low/med) LOW Date Received: 01/24/03

Purity: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74001

Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983833

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s05.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74001

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983833

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s05.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

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1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

74001

Name: Lancaster Laboratories

Contract: _____

Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983833

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan27a.b/mj27s05.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74002

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983834

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s06.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

EPA Form 1631-10-99

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74002

Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983834

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s06.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

79-01-6-----	Trichloroethene	5	U
78-87-5-----	1,2-Dichloropropane	5	U
80-62-6-----	Methyl Methacrylate	5	U
74-95-3-----	Dibromomethane	5	U
75-27-4-----	Bromodichloromethane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
108-88-3-----	Toluene	5	U
10061-02-6-----	trans-1,3-Dichloropropene	5	U
97-63-2-----	Ethyl Methacrylate	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
127-18-4-----	Tetrachloroethene	5	U
142-28-9-----	1,3-Dichloropropane	5	U
591-78-6-----	2-Hexanone	10	U
124-48-1-----	Dibromochloromethane	5	U
106-93-4-----	1,2-Dibromoethane	5	U
108-90-7-----	Chlorobenzene	5	U
630-20-6-----	1,1,1,2-Tetrachloroethane	5	U
100-41-4-----	Ethylbenzene	5	U
1330-20-7-----	m+p-Xylene	5	U
95-47-6-----	o-Xylene	5	U
100-42-5-----	Styrene	5	U
75-25-2-----	Bromoform	5	U
98-82-8-----	Isopropylbenzene	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
110-57-6-----	trans-1,4-Dichloro-2-Butene	50	U
108-86-1-----	Bromobenzene	5	U
96-18-4-----	1,2,3-Trichloropropane	5	U
103-65-1-----	n-Propylbenzene	5	U
95-49-8-----	2-Chlorotoluene	5	U

A-242

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74002

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983834
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s06.d
 Level: (low/med) LOW Date Received: 01/24/03
 Disturbance: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L Q
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

EPA-821-R-03-003

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

74002

Name: Lancaster Laboratories Contract: _____
 Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983834
 Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan27a.b/mj27s06.d
 Level: (low/med) LOW Date Received: .01/24/03
 % Moisture: not dec. Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74003

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983835

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s07.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

03/27/03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74003

Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983835

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a,b/mj27s07.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

79-01-6-----	Trichloroethene	5	U
78-87-5-----	1,2-Dichloropropane	5	U
80-62-6-----	Methyl Methacrylate	5	U
74-95-3-----	Dibromomethane	5	U
75-27-4-----	Bromodichloromethane	5	U
10061-01-5-----	cis-1,3-Dichloropropene	5	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
108-88-3-----	Toluene	5	U
10061-02-6-----	trans-1,3-Dichloropropene	5	U
97-63-2-----	Ethyl Methacrylate	5	U
79-00-5-----	1,1,2-Trichloroethane	5	U
127-18-4-----	Tetrachloroethene	5	U
142-28-9-----	1,3-Dichloropropane	5	U
591-78-6-----	2-Hexanone	10	U
124-48-1-----	Dibromochloromethane	5	U
106-93-4-----	1,2-Dibromoethane	5	U
108-90-7-----	Chlorobenzene	5	U
630-20-6-----	1,1,1,2-Tetrachloroethane	5	U
100-41-4-----	Ethylbenzene	5	U
1330-20-7-----	m+p-Xylene	5	U
95-47-6-----	o-Xylene	5	U
100-42-5-----	Styrene	5	U
75-25-2-----	Bromoform	5	U
98-82-8-----	Isopropylbenzene	5	U
79-34-5-----	1,1,2,2-Tetrachloroethane	5	U
110-57-6-----	trans-1,4-Dichloro-2-Butene	50	U
108-86-1-----	Bromobenzene	5	U
96-18-4-----	1,2,3-Trichloropropane	5	U
103-65-1-----	n-Propylbenzene	5	U
95-49-8-----	2-Chlorotoluene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74003

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983835
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s07.d
 Level: (low/med) LOW Date Received: 01/24/03
 Disturbance: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
108-67-8	1,3,5-Trimethylbenzene	5	U	
106-43-4	4-Chlorotoluene	5	U	
98-06-6	tert-Butylbenzene	5	U	
95-63-6	1,2,4-Trimethylbenzene	5	U	
76-01-7	Pentachloroethane	5	U	
135-98-8	sec-Butylbenzene	5	U	
99-87-6	p-Isopropyltoluene	5	U	
541-73-1	1,3-Dichlorobenzene	5	U	
106-46-7	1,4-Dichlorobenzene	5	U	
104-51-8	n-Butylbenzene	5	U	
95-50-1	1,2-Dichlorobenzene	5	U	
96-12-8	1,2-Dibromo-3-Chloropropane	5	U	
120-82-1	1,2,4-Trichlorobenzene	5	U	
87-68-3	Hexachlorobutadiene	5	U	
91-20-3	Naphthalene	5	U	
87-61-6	1,2,3-Trichlorobenzene	5	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

74003

Lab Name: Lancaster Laboratories

Contract: _____

Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983835

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID:HP06720.i/03jan27a.b/mj27s07.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74004

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983836
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s08.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

EPA 821-R-03-001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74004

Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983836

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a:b/mj27s08.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

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ENV-001 Rev. 02/03

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

74004

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983836

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID: HP06720.i/03jan27a.b/mj27s08.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec.

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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EPA 821-R-03-001

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74023

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983837

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s09.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74023

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983837

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s09.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

74023

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983837

Sample wt/vol: 5.0 (g/mL)mL

Lab File ID:HP06720.i/03jan27a.b/mj27s09.d

Level: (low/med) LOW

Date Received: 01/24/03

% Moisture: not dec.

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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01/27/03

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74024

Name: Lancaster Laboratories Contract: _____

Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983838

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s10.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74024

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983838
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s10.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74024

Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983838
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s10.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

74024

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983838

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan27a:b/mj27s10.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Number TICs found: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74025

Name: Lancaster Laboratories Contract: _____

Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983839

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27s11.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74025

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983839

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s11.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/L Q

79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

A-261

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

74025

Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983839

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27s11.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

108-67-8	-----1,3,5-Trimethylbenzene	5	U
106-43-4	-----4-Chlorotoluene	5	U
98-06-6	-----tert-Butylbenzene	5	U
95-63-6	-----1,2,4-Trimethylbenzene	5	U
76-01-7	-----Pentachloroethane	5	U
135-98-8	-----sec-Butylbenzene	5	U
99-87-6	-----p-Isopropyltoluene	5	U
541-73-1	-----1,3-Dichlorobenzene	5	U
106-46-7	-----1,4-Dichlorobenzene	5	U
104-51-8	-----n-Butylbenzene	5	U
95-50-1	-----1,2-Dichlorobenzene	5	U
96-12-8	-----1,2-Dibromo-3-Chloropropane	5	U
120-82-1	-----1,2,4-Trichlorobenzene	5	U
87-68-3	-----Hexachlorobutadiene	5	U
91-20-3	-----Naphthalene	5	U
87-61-6	-----1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

74025

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983839

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan27a.b/mj27s11.d

Level: (low/med) LOW Date Received: 01/24/03

% Moisture: not dec. Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM25

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKM25

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26b01.d

Level: (low/med) LOW Date Received: _____

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	Freon 113	10	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
67-63-0	2-Propanol	100	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
75-65-0	t-Butyl Alcohol	100	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
110-54-3	n-Hexane	5	U
75-34-3	1,1-Dichloroethane	5	U
108-20-3	di-Isopropyl Ether	5	U
126-99-8	2-Chloro-1,3-Butadiene	5	U
637-92-3	Ethyl t-Butyl Ether	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBKLM25

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBKLM25

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26b01.d

Level: (low/med) LOW

Date Received:

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
78-83-1	Isobutyl Alcohol	250	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
994-05-8	t-Amyl Methyl Ether	5	U
142-82-5	n-Heptane	5	U
71-36-3	n-Butanol	250	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
123-91-1	1,4-Dioxane	250	U
75-27-4	Bromodichloromethane	5	U
79-46-9	2-Nitropropane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM25

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: VBLKM25
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26b01.d
 Level: (low/med) LOW Date Received: _____
 Moisture: not dec. _____ Date Analyzed: 01/26/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM25

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM25

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26b01.d

Level: (low/med) LOW

Date Received:

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
120-82-1-----	1,2,4-Trichlorobenzene	5	U
87-68-3-----	Hexachlorobutadiene	5	U
91-20-3-----	Naphthalene	5	U
87-61-6-----	1,2,3-Trichlorobenzene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: VBLKM26
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27b01.d
 Level: (low/med) LOW Date Received: _____
 Moisture: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene	5	U
76-13-1	Freon 113	10	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
67-63-0	2-Propanol	100	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
75-65-0	t-Butyl Alcohol	100	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
110-54-3	n-Hexane	5	U
75-34-3	1,1-Dichloroethane	5	U
108-20-3	di-Isopropyl Ether	5	U
126-99-8	2-Chloro-1,3-Butadiene	5	U
637-92-3	Ethyl t-Butyl Ether	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKM26

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW Date Received: _____

Moisture: not dec. _____ Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
110-82-7	Cyclohexane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
78-83-1	Isobutyl Alcohol	250	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U
994-05-8	t-Amyl Methyl Ether	5	U
142-82-5	n-Heptane	5	U
71-36-3	n-Butanol	250	U
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
123-91-1	1,4-Dioxane	250	U
75-27-4	Bromodichloromethane	5	U
79-46-9	2-Nitropropane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U

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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBKLM26

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: VBKLM26
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan27a.b/mj27b01.d
 Level: (low/med) LOW Date Received: _____
 Moisture: not dec. _____ Date Analyzed: 01/27/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
1330-20-7	Xylene (Total)	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: VBLKM26

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW

Date Received:

Moisture: not dec. _____

Date Analyzed: 01/27/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKM26

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: VBLKM26

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP06720.i/03jan27a.b/mj27b01.d

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 01/27/03

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0 CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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LABOR

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s01.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
75-71-8	Dichlorodifluoromethane	5	U
74-87-3	Chloromethane	5	U
75-01-4	Vinyl Chloride	5	U
74-83-9	Bromomethane	5	U
75-00-3	Chloroethane	5	U
75-69-4	Trichlorofluoromethane	5	U
60-29-7	Ethyl Ether	5	U
75-35-4	1,1-Dichloroethene	5	U
67-64-1	Acetone	20	U
74-88-4	Methyl Iodide	5	U
75-15-0	Carbon Disulfide	5	U
107-05-1	Allyl Chloride	5	U
75-09-2	Methylene Chloride	5	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	5	U
1634-04-4	Methyl Tertiary Butyl Ether	5	U
75-34-3	1,1-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
156-59-2	cis-1,2-Dichloroethene	5	U
594-20-7	2,2-Dichloropropane	5	U
107-12-0	Propionitrile	100	U
126-98-7	Methacrylonitrile	50	U
74-97-5	Bromochloromethane	5	U
109-99-9	Tetrahydrofuran	10	U
67-66-3	Chloroform	5	U
71-55-6	1,1,1-Trichloroethane	5	U
563-58-6	1,1-Dichloropropene	5	U
56-23-5	Carbon Tetrachloride	5	U
71-43-2	Benzene	5	U
107-06-2	1,2-Dichloroethane	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s01.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
79-01-6	Trichloroethene	5	U
78-87-5	1,2-Dichloropropane	5	U
80-62-6	Methyl Methacrylate	5	U
74-95-3	Dibromomethane	5	U
75-27-4	Bromodichloromethane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
97-63-2	Ethyl Methacrylate	5	U
79-00-5	1,1,2-Trichloroethane	5	U
127-18-4	Tetrachloroethene	5	U
142-28-9	1,3-Dichloropropane	5	U
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	5	U
106-93-4	1,2-Dibromoethane	5	U
108-90-7	Chlorobenzene	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
100-41-4	Ethylbenzene	5	U
1330-20-7	m+p-Xylene	5	U
95-47-6	o-Xylene	5	U
100-42-5	Styrene	5	U
75-25-2	Bromoform	5	U
98-82-8	Isopropylbenzene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-Dichloro-2-Butene	50	U
108-86-1	Bromobenzene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
103-65-1	n-Propylbenzene	5	U
95-49-8	2-Chlorotoluene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s01.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-67-8	1,3,5-Trimethylbenzene	5	U
106-43-4	4-Chlorotoluene	5	U
98-06-6	tert-Butylbenzene	5	U
95-63-6	1,2,4-Trimethylbenzene	5	U
76-01-7	Pentachloroethane	5	U
135-98-8	sec-Butylbenzene	5	U
99-87-6	p-Isopropyltoluene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
104-51-8	n-Butylbenzene	5	U
95-50-1	1,2-Dichlorobenzene	5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
87-68-3	Hexachlorobutadiene	5	U
91-20-3	Naphthalene	5	U
87-61-6	1,2,3-Trichlorobenzene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001MS

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Matrix: (soil/water) WATER Lab Sample ID: 3983820
 Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s02.d
 Level: (low/med) LOW Date Received: 01/24/03
 Moisture: not dec. _____ Date Analyzed: 01/26/03
 Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	18	
74-87-3	Chloromethane	19	
75-01-4	Vinyl Chloride	22	
74-83-9	Bromomethane	22	
75-00-3	Chloroethane	21	
75-69-4	Trichlorofluoromethane	24	
60-29-7	Ethyl Ether	17	
75-35-4	1,1-Dichloroethene	24	
67-64-1	Acetone	150	
74-88-4	Methyl Iodide	22	
75-15-0	Carbon Disulfide	25	
107-05-1	Allyl Chloride	19	
75-09-2	Methylene Chloride	22	
107-13-1	Acrylonitrile	100	
156-60-5	trans-1,2-Dichloroethene	22	
1634-04-4	Methyl Tertiary Butyl Ether	22	
75-34-3	1,1-Dichloroethane	22	
78-93-3	2-Butanone	140	
156-59-2	cis-1,2-Dichloroethene	20	
594-20-7	2,2-Dichloropropane	22	
107-12-0	Propionitrile	150	
126-98-7	Methacrylonitrile	150	
74-97-5	Bromochloromethane	16	
109-99-9	Tetrahydrofuran	100	
67-66-3	Chloroform	22	
71-55-6	1,1,1-Trichloroethane	23	
563-58-6	1,1-Dichloropropene	21	
56-23-5	Carbon Tetrachloride	23	
71-43-2	Benzene	21	
107-06-2	1,2-Dichloroethane	22	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001MS

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL Lab File ID: HP06720.i/03jan26a.b/mj26s02.d

Level: (low/med) LOW Date Received: 01/24/03

Moisture: not dec. _____ Date Analyzed: 01/26/03

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L Q

CAS NO.	COMPOUND	(ug/L or ug/Kg) ug/L	Q
79-01-6-----	Trichloroethene	21	
78-87-5-----	1,2-Dichloropropane	21	
80-62-6-----	Methyl Methacrylate	20	
74-95-3-----	Dibromomethane	21	
75-27-4-----	Bromodichloromethane	21	
10061-01-5-----	cis-1,3-Dichloropropene	20	
108-10-1-----	4-Methyl-2-Pentanone	93	
108-88-3-----	Toluene	20	
10061-02-6-----	trans-1,3-Dichloropropene	20	
97-63-2-----	Ethyl Methacrylate	19	
79-00-5-----	1,1,2-Trichloroethane	20	
127-18-4-----	Tetrachloroethene	20	
142-28-9-----	1,3-Dichloropropane	20	
591-78-6-----	2-Hexanone	89	
124-48-1-----	Dibromochloromethane	20	
106-93-4-----	1,2-Dibromoethane	20	
108-90-7-----	Chlorobenzene	20	
630-20-6-----	1,1,1,2-Tetrachloroethane	21	
100-41-4-----	Ethylbenzene	20	
1330-20-7-----	m+p-Xylene	40	
95-47-6-----	o-Xylene	20	
100-42-5-----	Styrene	20	
75-25-2-----	Bromoform	20	
98-82-8-----	Isopropylbenzene	21	
79-34-5-----	1,1,2,2-Tetrachloroethane	19	
110-57-6-----	trans-1,4-Dichloro-2-Butene	110	
108-86-1-----	Bromobenzene	19	
96-18-4-----	1,2,3-Trichloropropane	20	
103-65-1-----	n-Propylbenzene	20	
95-49-8-----	2-Chlorotoluene	20	

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

67001MS

Lab Name: Lancaster Laboratories

Contract: _____

Lab Code: LANCAS

Case No.: _____

SAS No.: _____

SDG No.: _____

Matrix: (soil/water) WATER

Lab Sample ID: 3983820

Sample wt/vol: 5.00 (g/mL) mL

Lab File ID: HP06720.i/03jan26a.b/mj26s02.d

Level: (low/med) LOW

Date Received: 01/24/03

Moisture: not dec. _____

Date Analyzed: 01/26/03

Column: (pack/cap) CAP

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/Kg)	ug/L	
108-67-8	1,3,5-Trimethylbenzene		20	
106-43-4	4-Chlorotoluene		20	
98-06-6	tert-Butylbenzene		19	
95-63-6	1,2,4-Trimethylbenzene		20	
76-01-7	Pentachloroethane		19	
135-98-8	sec-Butylbenzene		19	
99-87-6	p-Isopropyltoluene		20	
541-73-1	1,3-Dichlorobenzene		20	
106-46-7	1,4-Dichlorobenzene		20	
104-51-8	n-Butylbenzene		18	
95-50-1	1,2-Dichlorobenzene		20	
96-12-8	1,2-Dibromo-3-Chloropropane		20	
120-82-1	1,2,4-Trichlorobenzene		19	
87-68-3	Hexachlorobutadiene		17	
91-20-3	Naphthalene		18	
87-61-6	1,2,3-Trichlorobenzene		19	

NO USE FOR

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: PSJ92

LL #'s	EPA SAMPLE NO.	S1 (DBF) #	S2 (DCA) #	S3 (TOL) #	S4 (BFB) #	TOT OUT	
1	3983833	74001	106	97	97	97	0
2	3983834	74002	104	93	97	97	0
3	3983835	74003	107	95	97	96	0
4	3983836	74004	107	97	97	97	0
5	3983837	74023	106	97	97	97	0
6	3983838	74024	108	94	96	97	0
7	3983839	74025	108	96	96	95	0
8	VBLKM25	VBLKM25	104	96	99	98	0
9	VBLKM26	VBLKM26	104	96	97	98	0
0	3983820	67001	104	96	99	98	0
1	3983820	67001MS	102	93	100	103	0
2	LCDM25	LCDM25	102	99	100	102	0
3	LCSM25	LCSM25	102	93	100	103	0

QC LIMITS

S1 (DBF) = Dibromofluoromethane (86-118)
 S2 (DCA) = 1,2-Dichloroethane-d4 (80-120)
 S3 (TOL) = Toluene-d8 (88-110)
 S4 (BFB) = 4-Bromofluorobenzene (86-115)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D Surrogate diluted out

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike Recoveries

Unspiked: mj26s01.d
67001 3983820
Method: SW-846 8260B
Instrument: HP06720

Matrix Spike: mj26s02.d
67001MS 3983820
Matrix/Level: WL
Dilution Factor: 1.00

Batch: M030261AA

COMPOUND NAME	MS SPIKE	US CONC UG/L	MS CONC UG/L	MS REC %	Range LOWER-UPPER	INSPEC
Dichlorodifluoromethane	20.00	ND	17.99	90	33-156	YES
Chloromethane	20.00	ND	18.78	94	47-139	YES
Vinyl Chloride	20.00	ND	22.07	110	54-144	YES
Bromomethane	20.00	ND	21.83	109	42-134	YES
Chloroethane	20.00	ND	21.49	107	55-129	YES
Trichlorofluoromethane	20.00	ND	23.83	119	70-154	YES
Ethyl Ether	20.00	ND	17.42	87	65-130	YES
1,1-Dichloroethene	20.00	ND	24.41	122	69-151	YES
Acetone	150.00	ND	150.26	100	49-143	YES
Methyl Iodide	20.00	ND	22.40	112	77-138	YES
Carbon Disulfide	20.00	ND	24.57	123	57-164	YES
Allyl Chloride	20.00	ND	19.06	95	35-146	YES
Methylene Chloride	20.00	ND	22.23	111	80-126	YES
Acrylonitrile	100.00	ND	101.35	101	56-123	YES
trans-1,2-Dichloroethene	20.00	ND	22.04	110	82-133	YES
Methyl Tertiary Butyl Eth	20.00	ND	21.57	108	69-134	YES
1,1-Dichloroethane	20.00	ND	22.49	112	79-135	YES
2,2-Dichloropropane	20.00	ND	21.93	110	78-134	YES
cis-1,2-Dichloroethene	20.00	ND	20.40	102	83-126	YES
2-Butanone	150.00	ND	140.33	94	47-143	YES
Propionitrile	150.00	ND	150.67	100	63-129	YES
Bromochloromethane	20.00	ND	16.02	80	60-140	YES
Methacrylonitrile	150.00	ND	152.03	101	70-124	YES
Tetrahydrofuran	100.00	ND	104.85	105	57-129	YES
Chloroform	20.00	ND	21.53	108	77-133	YES
1,1,1-Trichloroethane	20.00	ND	22.84	114	82-135	YES
1,1-Dichloropropene	20.00	ND	21.22	106	80-132	YES
Carbon Tetrachloride	20.00	ND	22.93	115	73-144	YES
Benzene	20.00	ND	20.98	105	78-134	YES
1,2-Dichloroethane	20.00	ND	22.34	112	73-136	YES
Trichloroethene	20.00	ND	20.77	104	75-135	YES
1,2-Dichloropropane	20.00	ND	20.52	103	81-121	YES
Dibromomethane	20.00	ND	20.95	105	83-120	YES
Methyl Methacrylate	20.00	ND	19.51	98	60-125	YES
Bromodichloromethane	20.00	ND	20.56	103	81-127	YES
cis-1,3-Dichloropropene	20.00	ND	19.68	98	69-118	YES
4-Methyl-2-Pentanone	100.00	ND	92.99	93	59-132	YES
Toluene	20.00	ND	20.14	101	83-127	YES
trans-1,3-Dichloropropene	20.00	ND	19.94	100	70-120	YES
Ethyl Methacrylate	20.00	ND	19.28	96	48-132	YES
1,1,2-Trichloroethane	20.00	ND	20.26	101	82-127	YES
Tetrachloroethene	20.00	ND	20.30	101	74-149	YES
1,3-Dichloropropane	20.00	ND	20.39	102	77-126	YES
2-Hexanone	100.00	ND	89.35	89	47-146	YES
Dibromochloromethane	20.00	ND	20.09	100	73-119	YES
1,2-Dibromoethane	20.00	ND	19.79	99	78-120	YES
Chlorobenzene	20.00	ND	20.00	100	81-125	YES
1,1,1,2-Tetrachloroethane	20.00	ND	21.10	106	82-125	YES
Ethylbenzene	20.00	ND	20.50	102	82-134	YES
m+p-Xylene	40.00	ND	40.20	100	82-130	YES
o-Xylene	20.00	ND	20.03	100	82-130	YES
Styrene	20.00	ND	19.83	99	67-137	YES
Bromoform	20.00	ND	19.69	98	59-122	YES
Isopropylbenzene	20.00	ND	20.62	103	81-130	YES
1,1,2,2-Tetrachloroethane	20.00	ND	19.17	96	69-121	YES
trans-1,4-Dichloro-2-Bute	100.00	ND	106.52	107	15-145	YES
Bromobenzene	20.00	ND	19.12	96	83-121	YES
1,2,3-Trichloropropane	20.00	ND	19.87	99	73-125	YES

N/C = Could not calculate

Ent. by _____

Lab Chronicle: _____

Ver. by _____

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike Recoveries

Unspiked: mj26s01.d
67001 3983820
Method: SW-846 82608
Instrument: HP06720

Matrix Spike: mj26s02.d
67001MS 3983820
Matrix/Level: WL
Dilution Factor: 1.00

Batch: M030261AA

COMPOUND NAME	MS SPIKE	US CONC UG/L	MS CONC UG/L	MS REC %	Range LOWER-UPPER	INSPEC
n-Propylbenzene	20.00	ND	20.11	101	78-131	YES
2-Chlorotoluene	20.00	ND	20.03	100	77-126	YES
1,3,5-Trimethylbenzene	20.00	ND	20.10	100	77-137	YES
4-Chlorotoluene	20.00	ND	20.28	101	81-123	YES
Pentachloroethane	20.00	ND	18.80	94	59-122	YES
tert-Butylbenzene	20.00	ND	19.46	97	76-128	YES
1,2,4-Trimethylbenzene	20.00	ND	20.37	102	75-132	YES
sec-Butylbenzene	20.00	ND	19.41	97	72-134	YES
1,3-Dichlorobenzene	20.00	ND	19.87	99	82-128	YES
p-Isopropyltoluene	20.00	ND	19.92	100	72-135	YES
1,4-Dichlorobenzene	20.00	ND	19.77	99	81-122	YES
n-Butylbenzene	20.00	ND	18.03	90	60-140	YES
1,2-Dichlorobenzene	20.00	ND	19.97	100	82-117	YES
1,2-Dibromo-3-Chloropropa	20.00	ND	19.81	99	54-130	YES
1,2,4-Trichlorobenzene	20.00	ND	18.86	94	66-121	YES
Hexachlorobutadiene	20.00	ND	17.09	85	44-134	YES
Naphthalene	20.00	ND	18.40	92	59-124	YES
1,2,3-Trichlorobenzene	20.00	ND	19.50	97	66-121	YES

Lab Chronicle: _____

N/C = Could not calculate

Ent. by _____

Ver. by _____

0
2
1
2

Lancaster Laboratories, Inc.
 Volatiles Laboratory Control Sample Recoveries

LCS: mj26101.d
 Client ID: LCSM25
 Method: SW-846 8260B
 Instrument: HP06720

LCS Duplicate: mj26102.d
 Client ID: LCOM25
 Matrix/Level: WL
 Dilution Factor: 1.0

Batch: M030261AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCSD CONC UG/L	LCS REC %	LCSD REC %	Range LOWER-UPPER	RPD %	RPD MAX	INSPEC
Dichlorodifluoromethane	20.00	17.07	16.80	85	84	32-142	2	30	YES
Chloromethane	20.00	18.45	17.83	92	89	47-132	3	30	YES
Vinyl Chloride	20.00	21.38	21.15	107	106	59-129	1	30	YES
Bromomethane	20.00	21.47	20.50	107	103	42-126	5	30	YES
Chloroethane	20.00	20.68	20.55	103	103	53-117	1	30	YES
Trichlorofluoromethane	20.00	22.36	22.86	112	114	66-139	2	30	YES
Ethyl Ether	20.00	17.98	18.20	90	91	69-132	1	30	YES
Acrolein	150.00	145.31	146.83	97	98	48-133	1	30	YES
1,1-Dichloroethene	20.00	23.20	22.62	116	113	67-140	3	30	YES
Freon 113	20.00	22.58	22.77	113	114	78-139	1	30	YES
Acetone	150.00	104.71	106.90	70	71	45-170	2	30	YES
Methyl Iodide	20.00	21.57	21.71	108	109	74-133	1	30	YES
2-Propanol	150.00	204.68	211.01	136	141	54-142	3	30	YES
Carbon Disulfide	20.00	23.44	23.45	117	117	67-143	0	30	YES
Allyl Chloride	20.00	19.11	18.05	96	90	41-139	6	30	YES
Methylene Chloride	20.00	22.27	22.04	111	110	82-122	1	30	YES
t-Butyl Alcohol	200.00	226.30	242.90	113	121	59-139	7	30	YES
Acrylonitrile	100.00	103.17	104.56	103	105	59-125	1	30	YES
trans-1,2-Dichloroethene	20.00	21.30	21.07	106	105	81-124	1	30	YES
Methyl Tertiary Butyl Ether	20.00	22.27	22.17	111	111	77-127	0	30	YES
n-Hexane	20.00	21.71	21.14	109	106	61-146	3	30	YES
1,1-Dichloroethane	20.00	22.25	21.98	111	110	77-129	1	30	YES
2-Chloro-1,3-Butadiene	20.00	22.27	21.60	111	108	73-133	3	30	YES
di-Isopropyl Ether	20.00	21.42	21.16	107	106	74-125	1	30	YES
Ethyl t-Butyl Ether	20.00	20.57	20.72	103	104	74-120	1	30	YES
2,2-Dichloropropane	20.00	21.59	21.32	108	107	75-129	1	30	YES
cis-1,2-Dichloroethene	20.00	19.63	19.92	98	100	84-117	1	30	YES
1,2-Dichloroethene (total)	40.00	40.93	40.99	102	102	84-117	0	30	YES
2-Butanone	150.00	116.35	117.14	78	78	58-141	1	30	YES
Propionitrile	150.00	161.72	159.68	108	106	73-128	1	30	YES
Bromochloromethane	20.00	15.72	16.19	79	81	58-138	3	30	YES
Methacrylonitrile	150.00	156.06	155.85	104	104	79-124	0	30	YES
Tetrahydrofuran	100.00	107.68	108.95	108	109	67-126	1	30	YES
Chloroform	20.00	20.88	20.80	104	104	86-124	0	30	YES
1,1,1-Trichloroethane	20.00	21.05	21.15	105	106	83-127	0	30	YES
Cyclohexane	20.00	21.74	21.63	109	108	71-131	0	30	YES
1,1-Dichloropropene	20.00	19.74	19.53	99	98	79-123	1	30	YES
Carbon Tetrachloride	20.00	21.72	21.32	109	107	77-130	2	30	YES
Benzene	20.00	19.83	19.91	99	100	85-117	0	30	YES
Isobutyl Alcohol	500.00	525.74	540.00	105	108	55-134	3	30	YES
1,2-Dichloroethane	20.00	21.76	21.99	109	110	77-132	1	30	YES
t-Amyl Methyl Ether	20.00	19.43	19.75	97	99	71-114	2	30	YES
n-Heptane	20.00	18.59	18.38	93	92	49-140	1	30	YES
Trichloroethene	20.00	19.84	19.61	99	98	87-117	1	30	YES
n-Butanol	1000.00	985.13	1016.93	99	102	52-124	3	30	YES
1,2-Dichloropropane	20.00	19.87	19.73	99	99	80-117	1	30	YES
Dibromomethane	20.00	20.47	20.92	102	105	87-117	2	30	YES
1,4-Dioxane	500.00	568.05	605.40	114	121	53-133	6	30	YES
Methyl Methacrylate	20.00	19.19	19.56	96	98	64-123	2	30	YES
Bromodichloromethane	20.00	19.80	20.27	99	101	83-121	2	30	YES
2-Nitropropane	20.00	19.77	19.45	99	97	35-157	2	30	YES
2-Chloroethyl Vinyl Ether	20.00	20.04	20.04	100	100	57-131	0	30	YES
cis-1,3-Dichloropropene	20.00	19.47	19.35	97	97	78-114	1	30	YES
4-Methyl-2-Pentanone	100.00	95.18	95.54	95	96	63-130	0	30	YES
Toluene	20.00	19.15	18.80	96	94	85-115	2	30	YES
trans-1,3-Dichloropropene	20.00	19.63	19.40	98	97	72-116	1	30	YES
Ethyl Methacrylate	20.00	19.13	19.44	96	97	48-131	2	30	YES
1,1,2-Trichloroethane	20.00	19.85	19.39	99	97	86-120	2	30	YES

N/C = Could not calculate

Lab Chronicle: _____

Ent. by _____

Ver. by _____

0
2
1
3

Lancaster Laboratories, Inc.
 Volatiles Laboratory Control Sample Recoveries

LCS: mj26101.d
 Client ID: LCSM25
 Method: SW-846 B260B
 Instrument: HP06720

LCS Duplicate: mj26102.d
 Client ID: LCOM25
 Matrix/Level: WL
 Dilution Factor: 1.0

Batch: M030261AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC. UG/L	LCSD CONC UG/L	LCS REC %	LCSD REC %	Range LOWER-UPPER	RPD %	RPD MAX	INSPEC
Tetrachloroethene	20.00	19.78	18.84	99	94	79-136	5	30	YES
1,3-Dichloropropane	20.00	19.57	19.62	98	98	84-119	0	30	YES
2-Hexanone	100.00	87.63	88.04	88	88	53-141	0	30	YES
Dibromochloromethane	20.00	19.79	19.75	99	99	78-119	0	30	YES
1,2-Dibromoethane	20.00	19.40	19.44	97	97	81-114	0	30	YES
Chlorobenzene	20.00	19.12	19.12	96	96	85-115	0	30	YES
1,1,1,2-Tetrachloroethane	20.00	20.23	20.17	101	101	83-121	0	30	YES
Ethylbenzene	20.00	19.33	19.27	97	96	82-119	0	30	YES
m+p-Xylene	40.00	38.72	38.19	97	95	84-120	1	30	YES
Xylene (Total)	60.00	57.92	57.60	97	96	84-120	1	30	YES
o-Xylene	20.00	19.20	19.41	96	97	84-120	1	30	YES
Styrene	20.00	19.02	19.09	95	95	77-125	0	30	YES
Bromoform	20.00	19.39	19.16	97	96	63-122	1	30	YES
Isopropylbenzene	20.00	19.53	19.16	98	96	80-120	2	30	YES
1,1,2,2-Tetrachloroethane	20.00	19.05	19.56	95	98	72-119	3	30	YES
trans-1,4-Dichloro-2-Butene	100.00	107.68	109.13	108	109	27-143	1	30	YES
Bromobenzene	20.00	18.23	18.59	91	93	80-118	2	30	YES
1,2,3-Trichloropropane	20.00	19.71	20.12	99	101	76-124	2	30	YES
n-Propylbenzene	20.00	18.87	19.01	94	95	75-124	1	30	YES
2-Chlorotoluene	20.00	19.06	18.55	95	93	80-120	3	30	YES
1,3,5-Trimethylbenzene	20.00	19.30	19.33	96	97	78-122	0	30	YES
4-Chlorotoluene	20.00	19.06	18.91	95	95	80-118	1	30	YES
Pentachloroethane	20.00	18.56	18.46	93	92	57-121	1	30	YES
tert-Butylbenzene	20.00	18.53	18.26	93	91	74-121	2	30	YES
1,2,4-Trimethylbenzene	20.00	19.44	19.54	97	98	79-123	1	30	YES
sec-Butylbenzene	20.00	18.21	18.41	91	92	69-127	1	30	YES
1,3-Dichlorobenzene	20.00	19.00	18.62	95	93	82-119	2	30	YES
p-Isopropyltoluene	20.00	18.56	18.62	93	93	72-126	0	30	YES
1,4-Dichlorobenzene	20.00	18.77	19.14	94	96	84-116	2	30	YES
n-Butylbenzene	20.00	16.74	17.08	84	85	60-131	2	30	YES
1,2-Dichlorobenzene	20.00	19.40	19.59	97	98	84-117	1	30	YES
1,2-Dibromo-3-Chloropropane	20.00	19.27	19.76	96	99	59-120	3	30	YES
1,2,4-Trichlorobenzene	20.00	17.86	19.12	89	96	67-121	7	30	YES
Hexachlorobutadiene	20.00	15.04	16.82	75	84	47-126	11	30	YES
Naphthalene	20.00	18.30	18.98	92	95	64-121	4	30	YES
1,2,3-Trichlorobenzene	20.00	18.16	18.97	91	95	69-121	4	30	YES

N/C = Could not calculate

Lab Chronicle:

Ent. by

Ver. by

VOLATILE METHOD BLANK SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID: mj26b01.d Lab Sample ID: VBLKM25
 Date Analyzed: 01/26/03 Time Analyzed: 15:37
 Matrix (soil/water) WATER Level: (low/med) LOW
 Instrument ID: HP06720

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCSM25	LCSM25	mj26101.d	16:03
02	LCDM25	LCDM25	mj26102.d	16:28
03	67001	3983820	mj26s01.d	16:54
04	67001MS	3983820	mj26s02.d	17:20
05	67002	3983821	mj26s03.d	17:46
06	67003	3983822	mj26s04.d	18:11
07	67004	3983823	mj26s05.d	18:38
08	67005	3983824	mj26s06.d	19:04
09	67006	3983825	mj26s07.d	19:29
10	67007	3983826	mj26s08.d	19:55
11	67010	3983827	mj26s09.d	20:21
12	67011	3983828	mj26s10.d	20:48

COMMENTS:

4A.
VOLATILE METHOD BLANK SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
Lab File ID: mj27b01.d Lab Sample ID: VBLKM26
Date Analyzed: 01/27/03 Time Analyzed: 10:56
Matrix (soil/water) WATER Level: (low/med) LOW
Instrument ID: HP06720

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	67012	3983829	mj27s01.d	11:21
02	67013	3983830	mj27s02.d	11:47
03	67014	3983831	mj27s03.d	12:13
04	67015	3983832	mj27s04.d	12:39
05	74001	3983833	mj27s05.d	13:05
06	74002	3983834	mj27s06.d	13:31
07	74003	3983835	mj27s07.d	13:57
08	74004	3983836	mj27s08.d	14:23
09	74023	3983837	mj27s09.d	14:49
10	74024	3983838	mj27s10.d	15:15
11	74025	3983839	mj27s11.d	15:42

COMMENTS:

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID: mj10t03.d BFB Injection Date: 01/10/03
 Instrument ID: HP06720 BFB Injection Time: 14:41
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.9
75	30.0 - 60.0% of mass 95	46.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.1
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	72.0
175	5.0 - 9.0% of mass 174	5.3 (7.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	68.9 (95.8)1
177	5.0 - 9.0% of mass 176	4.1 (5.9)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	VSTD300	mj10i01.d	01/10/03	14:50
02	VSTD100	VSTD100	mj10i02.d	01/10/03	15:28
03	VSTD020	VSTD020	mj10i04.d	01/10/03	16:20
04	VSTD010	VSTD010	mj10i05.d	01/10/03	16:46
05	VSTD050	VSTD050	mj10i07.d	01/10/03	17:37
06	VSTD004	VSTD004	mj10i09.d	01/10/03	19:28
07	VSTD001	1PPBMDL	mj10m01.d	01/10/03	20:20

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID: mj26t01.d BFB Injection Date: 01/26/03

Instrument ID: HP06720 BFB Injection Time: 14:31

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.5
75	30.0 - 60.0% of mass 95	47.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	71.9
175	5.0 - 9.0% of mass 174	5.1 (7.0)1
176	Greater than 95.0%, but less than 101.0% of mass 174	68.3 (95.1)1
177	5.0 - 9.0% of mass 176	4.8 (7.0)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	mj26c01.d	01/26/03	14:45
02	VBLKM25	VBLKM25	mj26b01.d	01/26/03	15:37
03	LCSM25	LCSM25	mj26l01.d	01/26/03	16:03
04	LCDM25	LCDM25	mj26l02.d	01/26/03	16:28
05	67001	3983820	mj26s01.d	01/26/03	16:54
06	67001MS	3983820	mj26s02.d	01/26/03	17:20
07	67002	3983821	mj26s03.d	01/26/03	17:46
08	67003	3983822	mj26s04.d	01/26/03	18:11
09	67004	3983823	mj26s05.d	01/26/03	18:38
10	67005	3983824	mj26s06.d	01/26/03	19:04
11	67006	3983825	mj26s07.d	01/26/03	19:29
12	67007	3983826	mj26s08.d	01/26/03	19:55
13	67010	3983827	mj26s09.d	01/26/03	20:21
14	67011	3983828	mj26s10.d	01/26/03	20:48

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID: mj27t06.d BFB Injection Date: 01/27/03
 Instrument ID: HP06720 BFB Injection Time: 09:57
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.0
75	30.0 - 60.0% of mass 95	46.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	75.7
175	5.0 - 9.0% of mass 174	5.9 (7.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.0 (97.8)1
177	5.0 - 9.0% of mass 176	4.4 (6.0)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	mj27c02.d	01/27/03	10:21
02	VBLKM26	VBLKM26	mj27b01.d	01/27/03	10:56
03	67012	3983829	mj27s01.d	01/27/03	11:21
04	67013	3983830	mj27s02.d	01/27/03	11:47
05	67014	3983831	mj27s03.d	01/27/03	12:13
06	67015	3983832	mj27s04.d	01/27/03	12:39
07	74001	3983833	mj27s05.d	01/27/03	13:05
08	74002	3983834	mj27s06.d	01/27/03	13:31
09	74003	3983835	mj27s07.d	01/27/03	13:57
10	74004	3983836	mj27s08.d	01/27/03	14:23
11	74023	3983837	mj27s09.d	01/27/03	14:49
12	74024	3983838	mj27s10.d	01/27/03	15:15
13	74025	3983839	mj27s11.d	01/27/03	15:42

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date(s): 01/10/03 01/10/03
 Heated Purge: (Y/N) Y Calibration Times: 14:50 19:28
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 4 = mj10i09.d RRF 10 = mj10i05.d RRF 20 = mj10i04.d
 RRF 50 = mj10i07.d RRF100 = mj10i02.d RRF300 = mj10i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	0.3002	0.3024	0.3728	0.3790	0.3885	0.3847		0.3546	12	AVG
Chloromethane	#0.4082	0.3972	0.3937	0.3981	0.4143	0.3958		0.4012	2	AVG
Vinyl Chloride	*0.3268	0.3342	0.3377	0.3421	0.3550	0.3458		0.3403	3	AVG
Bromomethane	0.2789	0.2542	0.2545	0.2498	0.2622	0.2468		0.2577	4	AVG
Chloroethane	0.2035	0.2030	0.2139	0.2076	0.2253	0.2216		0.2125	4	AVG
Trichlorofluoromethane	0.2226	0.2380	0.2705	0.2764	0.2949	0.2877		0.2650	11	AVG
n-Pentane	0.4173	0.3743	0.3964	0.3951	0.4144	0.4076		0.4009	4	AVG
Ethyl Ether	0.2470	0.2439	0.2447	0.2472	0.2714	0.2668		0.2535	5	AVG
Acrolein	0.1023	0.1052	0.0962	0.0955	0.1007	0.1015		0.1002	4	AVG
1,1-Dichloroethene	*0.2236	0.2228	0.2258	0.2332	0.2397	0.2384		0.2306	3	AVG
Freon 113	0.1951	0.2021	0.2140	0.2164	0.2254	0.2234		0.2127	6	AVG
Acetone	0.0543	0.0537	0.0518	0.0489	0.0500	0.0504		0.0515	4	AVG
Methyl Iodide	0.4114	0.4256	0.4341	0.4452	0.4518	0.4402		0.4347	3	AVG
2-Propanol	0.0383	0.0324	0.0268	0.0328	0.0341	0.0388		0.0339	13	AVG
Carbon Disulfide	0.7953	0.7874	0.8012	0.8290	0.8530	0.8240		0.8150	3	AVG
Allyl Chloride	0.4394	0.3796	0.3843	0.3869	0.4186	0.4192		0.4047	6	AVG
Methylene Chloride	0.2792	0.2803	0.2861	0.2860	0.2979	0.2896		0.2865	2	AVG
t-Butyl Alcohol	0.0567	0.0519	0.0445	0.0516	0.0536	0.0606		0.0531	10	AVG
Acrylonitrile	0.1940	0.1906	0.1798	0.1785	0.1911	0.1940		0.1880	4	AVG
trans-1,2-Dichloroethene	0.2619	0.2570	0.2662	0.2698	0.2780	0.2705		0.2672	3	AVG
Methyl Tertiary Butyl Ether	0.6950	0.7127	0.7225	0.7073	0.8098	0.7745		0.7369	6	AVG
n-Hexane	0.2546	0.2490	0.2570	0.2635	0.2745	0.2822		0.2635	5	AVG
1,1-Dichloroethane	#0.4426	0.4356	0.4393	0.4337	0.4631	0.4495		0.4440	2	AVG
2-Chloro-1,3-Butadiene	0.3215	0.3154	0.3240	0.3363	0.3498	0.3352		0.3304	4	AVG
di-Isopropyl Ether	0.8979	0.8299	0.8298	0.8672	0.9217	0.8638		0.8684	4	AVG
Ethyl t-Butyl Ether	0.7800	0.8087	0.8187	0.8186	0.8910	0.8618		0.8298	5	AVG
2,2-Dichloropropane	0.3391	0.3263	0.3320	0.3404	0.3467	0.3241		0.3348	3	AVG
cis-1,2-Dichloroethene	0.2727	0.2742	0.2810	0.2825	0.2885	0.2903		0.2815	3	AVG
1,2-Dichloroethene (total)	0.2673	0.2656	0.2736	0.2762	0.2833	0.2804		0.2744	3	AVG
2-Butanone	0.3044	0.3551	0.2951	0.2964	0.3136	0.2945		0.3099	8	AVG
Propionitrile	0.0744	0.0703	0.0653	0.0729	0.0736	0.0768		0.0722	5	AVG
Bromochloromethane	0.1388	0.1423	0.1454	0.1476	0.1486	0.1536		0.1460	4	AVG
Methacrylonitrile	0.1817	0.1867	0.1890	0.1919	0.1960	0.1902		0.1892	3	AVG
Tetrahydrofuran	0.0614	0.0715	0.0646	0.0644	0.0665	0.0666		0.0658	5	AVG
Chloroform	*0.4275	0.4300	0.4320	0.4485	0.4508	0.4490		0.4396	2	AVG
1,1,1-Trichloroethane	0.3017	0.3062	0.3119	0.3197	0.3292	0.3216		0.3151	3	AVG
Cyclohexane	0.3375	0.3417	0.3564	0.3741	0.3782	0.3845		0.3621	5	AVG
1,1-Dichloropropene	0.3195	0.3372	0.3382	0.3512	0.3554	0.3542		0.3426	4	AVG
Carbon Tetrachloride	0.2440	0.2484	0.2549	0.2625	0.2679	0.2720		0.2583	4	AVG
Isobutyl Alcohol	0.0217	0.0207	0.0182	0.0211	0.0216	0.0228		0.0210	7	AVG
Benzene	1.0413	1.0635	1.0885	1.1013	1.1017	1.0922		1.0814	2	AVG
1,2-Dichloroethane	0.3168	0.3233	0.3273	0.3335	0.3477	0.3247		0.3289	3	AVG
1,2-Dichloroethane(mz98)	0.0324	0.0335	0.0352	0.0361	0.0388	0.0374		0.0356	7	AVG
t-Amyl Methyl Ether	0.7568	0.7696	0.7960	0.7967	0.8487	0.8115		0.7965	4	AVG
n-Heptane	0.2965	0.1924	0.1751	0.1681	0.1806	0.1941		0.2011	24	ZNODEG
Trichloroethene	0.2373	0.2602	0.2637	0.2658	0.2674	0.2584		0.2588	4	AVG
n-Butanol	0.0168	0.0173	0.0155	0.0183	0.0200	0.0206		0.0181	11	AVG
1,2-Dichloropropane	*0.2577	0.2755	0.2784	0.2838	0.2939	0.2850		0.2790	4	AVG
Dibromomethane	0.1790	0.1830	0.1846	0.1906	0.1963	0.1913		0.1875	3	AVG
1,4-Dioxane	0.0045	0.0034	0.0040	0.0041	0.0047	0.0060		0.0044	20	ZNODEG
Methyl Methacrylate	0.2606	0.2918	0.3041	0.3173	0.3338	0.3176		0.3042	8	AVG
Bromodichloromethane	0.3103	0.3137	0.3236	0.3341	0.3485	0.3366		0.3278	4	AVG

Minimum RRF for SPCC(#) = 0.10
 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %RSD for CCC(*) = 30%

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date(s): 01/10/03 01/10/03
 Heated Purge: (Y/N) Y Calibration Times: 14:50 19:28
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE 1D: RRF 4 = mj10i09.d RRF 10= mj10i05.d RRF 20= mj10i04.d
 RRF 50= mj10i07.d RRF100= mj10i02.d RRF300= mj10i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RRF	% RSD	CAL. METHOD
2-Nitropropane	0.0981	0.1227	0.1034	0.1045	0.1191	0.1157		0.1106	9	AVG
2-Chloroethyl Vinyl Ether	0.2021	0.2337	0.2396	0.2485	0.2664	0.2538		0.2407	9	AVG
cis-1,3-Dichloropropene	0.4266	0.4585	0.4757	0.4848	0.5088	0.4942		0.4748	6	AVG
4-Methyl-2-Pentanone	0.5257	0.6755	0.5536	0.5355	0.5715	0.5435		0.5676	10	AVG
Toluene	*0.8681	0.9194	0.9385	0.9520	0.9647	0.9572		0.9333	4	AVG
trans-1,3-Dichloropropene	0.5507	0.6015	0.6094	0.6374	0.6604	0.6437		0.6172	6	AVG
Ethyl Methacrylate	0.5919	0.6833	0.7140	0.7377	0.7765	0.7604		0.7106	9	AVG
1,1,2-Trichloroethane	0.3442	0.3610	0.3628	0.3770	0.3749	0.3710		0.3651	3	AVG
Tetrachloroethane	0.3254	0.3399	0.3439	0.3506	0.3462	0.3492		0.3425	3	AVG
1,3-Dichloropropane	0.6768	0.7024	0.7204	0.7244	0.7406	0.7104		0.7125	3	AVG
2-Hexanone	0.6101	0.8030	0.6355	0.6237	0.6681	0.6236		0.6607	11	AVG
Dibromochloromethane	0.3431	0.3817	0.3869	0.4060	0.4120	0.4187		0.3914	7	AVG
1,2-Dibromoethane	0.3972	0.4005	0.4076	0.4217	0.4314	0.4314		0.4150	4	AVG
Chlorobenzene	#0.9074	0.9464	0.9438	0.9733	0.9778	0.9692		0.9530	3	AVG
1,1,1,2-Tetrachloroethane	0.2929	0.3142	0.3132	0.3289	0.3294	0.3395		0.3197	5	AVG
Ethylbenzene	*1.4802	1.5683	1.6090	1.6514	1.6630	1.6299		1.6003	4	AVG
m+p-Xylene	0.5565	0.5777	0.5804	0.5976	0.6087	0.6112		0.5887	4	AVG
Xylene (Total)	0.5426	0.5730	0.5781	0.5972	0.6047	0.6054		0.5835	4	AVG
o-Xylene	0.5148	0.5636	0.5733	0.5964	0.5968	0.5940		0.5731	6	AVG
Styrene	0.9255	1.0065	1.0317	1.0945	1.1273	1.1067		1.0487	7	AVG
Bromoform	#0.2472	0.2582	0.2768	0.2900	0.3034	0.3115		0.2812	9	AVG
Isopropylbenzene	1.1899	1.2483	1.2896	1.3347	1.3482	1.3415		1.2920	5	AVG
1,1,2,2-Tetrachloroethane	#1.3490	1.3873	1.3483	1.3711	1.3935	1.4072		1.3761	2	AVG
trans-1,4-Dichloro-2-Butene	0.3673	0.3602	0.3505	0.3535	0.3650	0.3106		0.3512	6	AVG
Bromobenzene	0.7949	0.8117	0.8117	0.8277	0.8362	0.8600		0.8237	3	AVG
1,2,3-Trichloropropane	0.3742	0.3698	0.3560	0.3634	0.3747	0.3643		0.3670	2	AVG
n-Propylbenzene	3.2144	3.2058	3.2356	3.2719	3.3238	3.3555		3.2678	2	AVG
2-Chlorotoluene	0.6501	0.6789	0.6791	0.6857	0.6877	0.6991		0.6801	2	AVG
1,3,5-Trimethylbenzene	1.9661	1.9635	2.0402	2.0464	2.0724	2.0876		2.0294	3	AVG
4-Chlorotoluene	0.6847	0.7131	0.7139	0.7255	0.7290	0.7447		0.7185	3	AVG
Pentachloroethane	0.3791	0.3871	0.3978	0.4005	0.4123	0.4471		0.4040	6	AVG
tert-Butylbenzene	0.4624	0.4511	0.4645	0.4701	0.4791	0.4975		0.4708	3	AVG
1,2,4-Trimethylbenzene	1.9493	2.1074	2.0889	2.1113	2.1665	2.1192		2.0904	4	AVG
sec-Butylbenzene	2.4077	2.2541	2.2940	2.3320	2.4475	2.5078		2.3739	4	AVG
1,3-Dichlorobenzene	1.3155	1.3362	1.3544	1.3761	1.3969	1.4052		1.3641	3	AVG
p-Isopropyltoluene	1.9723	1.9101	1.9916	2.0024	2.0918	2.1130		2.0135	4	AVG
1,4-Dichlorobenzene	1.4083	1.4664	1.4725	1.4696	1.4858	1.4792		1.4636	2	AVG
1,3-Diethylbenzene	1.0852	1.2010	1.1715	1.1665	1.2334	1.2457		1.1839	5	AVG
1,4-Diethylbenzene	1.1203	1.1986	1.1508	1.1639	1.2567	1.2523		1.1904	5	AVG
n-Butylbenzene	1.1862	1.1046	1.0606	1.0961	1.1777	1.1846		1.1350	5	AVG
1,2-Dichlorobenzene	1.2496	1.3342	1.3363	1.3509	1.3665	1.3473		1.3308	3	AVG
1,2-Diethylbenzene	0.8532	0.9239	0.8968	0.8847	0.9331	0.9176		0.9015	3	AVG
1,2-Dibromo-3-Chloropropane	0.2323	0.2553	0.2482	0.2631	0.2837	0.2567		0.2566	7	AVG
1,2,4-Trichlorobenzene	0.6162	0.6231	0.6577	0.6599	0.7609	0.6970		0.6692	8	AVG
Hexachlorobutadiene	0.3240	0.2734	0.2791	0.2381	0.3025	0.3069		0.2873	11	AVG
Naphthalene	2.3605	2.7499	2.8030	2.8363	3.1016	2.9123		2.7939	9	AVG
1,2,3-Trichlorobenzene	0.6053	0.6099	0.6329	0.6264	0.7380	0.6538		0.6444	8	AVG
Dibromofluoromethane	0.2448	0.2538	0.2552	0.2490	0.2428	0.2484		0.2490	2	AVG
Dibromofluoromethane(mz111)	0.2515	0.2603	0.2622	0.2514	0.2456	0.2512		0.2537	2	AVG
1,2-Dichloroethane-d4	0.0674	0.0771	0.0730	0.0694	0.0685	0.0696		0.0708	5	AVG
1,2-Dichloroethane-d4(mz104)	0.0423	0.0465	0.0458	0.0444	0.0428	0.0439		0.0443	4	AVG

Minimum RRF for SPCC(%) = 0.10
 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %RSD for CCC(*) = 30%

11/10/03

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date(s): 01/10/03 01/10/03
 Heated Purge: (Y/N) Y Calibration Times: 14:50 19:28
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 4 = mj10i09.d RRF 10= mj10i05.d RRF 20= mj10i04.d
 RRF 50= mj10i07.d RRF100= mj10i02.d RRF300= mj10i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	RRF	% RSD	CAL. METHOD
Toluene-d8	1.3249	1.4173	1.3992	1.3420	1.2989	1.3171		1.3499	4	AVG
Toluene-d8(mz100)	0.8743	0.9472	0.9403	0.8921	0.8759	0.8853		0.9025	4	AVG
4-Bromofluorobenzene	0.4704	0.5238	0.5107	0.4793	0.4744	0.4737		0.4887	5	AVG
4-Bromofluorobenzene(mz174)	0.3427	0.3906	0.3807	0.3622	0.3521	0.3612		0.3649	5	AVG

Average %RSD 5

Minimum RRF for SPCC(#) = 0.10
 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %RSD for CCC(*) = 30%

A-291

2/2/03

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP06720 Calibration Date: 01/26/03 Time: 14:45

Lab File ID: mj26c01.d Init. Calib. Date(s): 01/10/03 01/10/03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dichlorodifluoromethane	0.3546	0.3281	46.26	50	-7
# Chloromethane	0.4012	0.3982	49.62	50	-1 #
* Vinyl Chloride	0.3403	0.3672	53.95	50	8 *
Bromomethane	0.2577	0.3000	58.20	50	16
Chloroethane	0.2125	0.2472	58.17	50	16
Trichlorofluoromethane	0.2650	0.3323	62.69	50	25
Ethyl Ether	0.2535	0.1802	35.55	50	-29
Acrolein	0.1002	0.1182	589.57	500	18
* 1,1-Dichloroethene	0.2306	0.2605	56.48	50	13 *
Freon 113	0.2127	0.2503	58.82	50	18
Acetone	0.0515	0.0411	79.82	100	-20
Methyl Iodide	0.4347	0.4929	56.70	50	13
2-Propanol	0.0339	0.0478	353.16	250	41
Carbon Disulfide	0.8150	0.9377	57.53	50	15
Allyl Chloride	0.4047	0.2981	36.83	50	-26
Methylene Chloride	0.2865	0.3290	57.41	50	15
t-Butyl Alcohol	0.0531	0.0702	330.15	250	32
Acrylonitrile	0.1880	0.2232	59.36	50	19
trans-1,2-Dichloroethene	0.2672	0.2976	55.69	50	11
Methyl Tertiary Butyl Ether	0.7369	0.8666	58.80	50	18
n-Hexane	0.2635	0.3035	57.60	50	15
# 1,1-Dichloroethane	0.4440	0.5206	58.63	50	17 #
2-Chloro-1,3-Butadiene	0.3304	0.3832	58.00	50	16
di-Isopropyl Ether	0.8684	0.9812	56.50	50	13
Ethyl t-Butyl Ether	0.8298	0.9052	54.54	50	9
2,2-Dichloropropane	0.3348	0.3993	59.64	50	19
cis-1,2-Dichloroethene	0.2815	0.2931	52.05	50	4
1,2-Dichloroethene (total)	0.2744	0.2954	107.73	100	8
2-Butanone	0.3099	0.2723	87.88	100	-12
Propionitrile	0.0722	0.0799	276.42	250	11
Bromochloromethane	0.1460	0.1136	38.89	50	-22
Methacrylonitrile	0.1892	0.1958	129.35	125	3
Tetrahydrofuran	0.0658	0.0681	103.42	100	3
* Chloroform	0.4396	0.4866	55.34	50	11 *
1,1,1-Trichloroethane	0.3151	0.3549	56.33	50	13
Cyclohexane	0.3621	0.3959	54.67	50	9

Minimum RRF for SPCC(#) = 0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*) = 20%

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP06720 Calibration Date: 01/26/03 Time: 14:45

Lab File ID: mj26c01.d Init. Calib. Date(s): 01/10/03 01/10/03

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,1-Dichloropropene	0.3426	0.3685	53.78	50	8
Carbon Tetrachloride	0.2583	0.3009	58.26	50	17
Isobutyl Alcohol	0.0210	0.0240	714.74	625	14
Benzene	1.0814	1.1298	52.24	50	4
1,2-Dichloroethane	0.3289	0.3712	56.44	50	13
t-Amyl Methyl Ether	0.7965	0.8615	54.08	50	8
n-Heptane	0.2011	0.1764	49.92	50	0
Trichloroethene	0.2588	0.2724	52.63	50	5
n-Butanol	0.0181	0.0211	1461.77	1250	17
* 1,2-Dichloropropane	0.2790	0.2939	52.67	50	5 *
Dibromomethane	0.1875	0.2032	54.20	50	8
1,4-Dioxane	0.0044	0.0065	899.25	625	44
Methyl Methacrylate	0.3042	0.3174	52.17	50	4
Bromodichloromethane	0.3278	0.3614	55.12	50	10
2-Nitropropane	0.1106	0.1321	119.48	100	19
2-Chloroethyl Vinyl Ether	0.2407	0.2618	54.40	50	9
cis-1,3-Dichloropropene	0.4748	0.5097	53.68	50	7
4-Methyl-2-Pentanone	0.5676	0.6023	106.11	100	6
* Toluene	0.9333	0.9532	51.07	50	2 *
trans-1,3-Dichloropropene	0.6172	0.6576	53.28	50	7
Ethyl Methacrylate	0.7106	0.7450	52.42	50	5
1,1,2-Trichloroethane	0.3651	0.3842	52.60	50	5
Tetrachloroethene	0.3425	0.3473	50.70	50	1
1,3-Dichloropropane	0.7125	0.7371	51.72	50	3
2-Hexanone	0.6607	0.6365	96.35	100	-4
Dibromochloromethane	0.3914	0.4225	53.97	50	8
1,2-Dibromoethane	0.4150	0.4299	51.80	50	4
# Chlorobenzene	0.9530	0.9739	51.10	50	2 #
1,1,1,2-Tetrachloroethane	0.3197	0.3483	54.48	50	9
* Ethylbenzene	1.6003	1.6747	52.33	50	5 *
m+p-Xylene	0.5887	0.6127	104.09	100	4
Xylene (Total)	0.5835	0.6121	157.38	150	5
o-Xylene	0.5731	0.6109	53.30	50	7
Styrene	1.0487	1.0968	52.29	50	5
# Bromoform	0.2812	0.2981	53.00	50	6 #
Isopropylbenzene	1.2920	1.4005	54.20	50	8

Minimum RRF for SPCC(#) = 0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)

Maximum %Drift for CCC(*) = 20%

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/26/03 Time: 14:45
 Lab File ID: mj26c01.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# 1,1,2,2-Tetrachloroethane	1.3761	1.4371	52.22	50	4
trans-1,4-Dichloro-2-Butene	0.3512	0.3904	138.97	125	11
Bromobenzene	0.8237	0.8275	50.23	50	0
1,2,3-Trichloropropane	0.3670	0.3981	54.23	50	8
n-Propylbenzene	3.2678	3.4682	53.07	50	6
2-Chlorotoluene	0.6801	0.7146	52.53	50	5
1,3,5-Trimethylbenzene	2.0294	2.1955	54.09	50	8
4-Chlorotoluene	0.7185	0.7328	51.00	50	2
Pentachloroethane	0.4040	0.4082	50.52	50	1
tert-Butylbenzene	0.4708	0.4997	53.08	50	6
1,2,4-Trimethylbenzene	2.0904	2.2774	54.47	50	9
sec-Butylbenzene	2.3739	2.5502	53.71	50	7
1,3-Dichlorobenzene	1.3641	1.4138	51.82	50	4
p-Isopropyltoluene	2.0135	2.2273	55.31	50	11
1,4-Dichlorobenzene	1.4636	1.5015	51.29	50	3
n-Butylbenzene	1.1350	1.1927	52.54	50	5
1,2-Dichlorobenzene	1.3308	1.4168	53.23	50	6
1,2-Dibromo-3-Chloropropane	0.2566	0.2812	54.81	50	10
1,2,4-Trichlorobenzene	0.6692	0.6856	51.23	50	2
Hexachlorobutadiene	0.2873	0.2668	46.42	50	-7
Naphthalene	2.7939	2.8030	50.16	50	0
1,2,3-Trichlorobenzene	0.6444	0.6429	49.88	50	0
Dibromofluoromethane	0.2490	0.2591	52.04	50	4
1,2-Dichloroethane-d4	0.0708	0.0677	47.77	50	-4
Toluene-d8	1.3499	1.3496	49.99	50	0
4-Bromofluorobenzene	0.4887	0.4976	50.91	50	2

Average %Drift 10

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*)=20%

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/27/03 Time: 10:21
 Lab File ID: mj27c02.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dichlorodifluoromethane	0.3546	0.3070	43.29	50	-13
# Chloromethane	0.4012	0.3645	45.42	50	-9 #
* Vinyl Chloride	0.3403	0.3422	50.28	50	1 *
Bromomethane	0.2577	0.2856	55.40	50	11
Chloroethane	0.2125	0.2263	53.25	50	7
Trichlorofluoromethane	0.2650	0.3424	64.60	50	29
Ethyl Ether	0.2535	0.2873	56.68	50	13
Acrolein	0.1002	0.1121	559.06	500	12
* 1,1-Dichloroethene	0.2306	0.2653	57.54	50	15 *
Freon 113	0.2127	0.2463	57.89	50	16
Acetone	0.0515	0.0505	97.97	100	-2
Methyl Iodide	0.4347	0.4969	57.16	50	14
2-Propanol	0.0339	0.0415	306.65	250	23
Carbon Disulfide	0.8150	0.9064	55.61	50	11
Allyl Chloride	0.4047	0.4398	54.35	50	9
Methylene Chloride	0.2865	0.3209	56.00	50	12
t-Butyl Alcohol	0.0531	0.0667	313.61	250	25
Acrylonitrile	0.1880	0.1990	52.93	50	6
trans-1,2-Dichloroethene	0.2672	0.3024	56.58	50	13
Methyl Tertiary Butyl Ether	0.7369	0.8859	60.10	50	20
n-Hexane	0.2635	0.3050	57.88	50	16
# 1,1-Dichloroethane	0.4440	0.5110	57.55	50	15 #
2-Chloro-1,3-Butadiene	0.3304	0.3573	54.08	50	8
di-Isopropyl Ether	0.8684	0.9644	55.53	50	11
Ethyl t-Butyl Ether	0.8298	0.8955	53.96	50	8
2,2-Dichloropropane	0.3348	0.3869	57.78	50	16
cis-1,2-Dichloroethene	0.2815	0.2974	52.81	50	6
1,2-Dichloroethene (total)	0.2744	0.2999	109.40	100	9
2-Butanone	0.3099	0.2877	92.86	100	-7
Propionitrile	0.0722	0.0756	261.78	250	5
Bromochloromethane	0.1460	0.1619	55.42	50	11
Methacrylonitrile	0.1892	0.1907	125.94	125	1
Tetrahydrofuran	0.0658	0.0652	99.08	100	-1
* Chloroform	0.4396	0.4924	56.00	50	12 *
1,1,1-Trichloroethane	0.3151	0.3657	58.03	50	16
Cyclohexane	0.3621	0.3827	52.84	50	6

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*)=20%

EPA/600/4-91/010

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/27/03 Time: 10:21
 Lab File ID: mj27c02.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,1-Dichloropropene	0.3426	0.3689	53.83	50	8
Carbon Tetrachloride	0.2583	0.3082	59.66	50	19
Isobutyl Alcohol	0.0210	0.0224	667.16	625	7
Benzene	1.0814	1.1282	52.16	50	4
1,2-Dichloroethane	0.3289	0.3855	58.60	50	17
t-Amyl Methyl Ether	0.7965	0.8567	53.78	50	8
n-Heptane	0.2011	0.1853	52.46	50	5
Trichloroethene	0.2588	0.2787	53.84	50	8
n-Butanol	0.0181	0.0192	1328.41	1250	6
* 1,2-Dichloropropane	0.2790	0.2887	51.74	50	3 *
Dibromomethane	0.1875	0.2062	54.99	50	10
1,4-Dioxane	0.0044	0.0061	853.80	625	37
Methyl Methacrylate	0.3042	0.3301	54.26	50	9
Bromodichloromethane	0.3278	0.3646	55.62	50	11
2-Nitropropane	0.1106	0.1213	109.69	100	10
2-Chloroethyl Vinyl Ether	0.2407	0.2553	53.05	50	6
cis-1,3-Dichloropropene	0.4748	0.5043	53.11	50	6
4-Methyl-2-Pentanone	0.5676	0.5588	98.46	100	-2
* Toluene	0.9333	0.9460	50.68	50	1 *
trans-1,3-Dichloropropene	0.6172	0.6338	51.35	50	3
Ethyl Methacrylate	0.7106	0.6961	48.98	50	-2
1,1,2-Trichloroethane	0.3651	0.3676	50.33	50	1
Tetrachloroethene	0.3425	0.3522	51.41	50	3
1,3-Dichloropropane	0.7125	0.7117	49.95	50	0
2-Hexanone	0.6607	0.5991	90.68	100	-9
Dibromochloromethane	0.3914	0.4259	54.41	50	9
1,2-Dibromoethane	0.4150	0.4287	51.65	50	3
# Chlorobenzene	0.9530	0.9845	51.65	50	3 #
1,1,1,2-Tetrachloroethane	0.3197	0.3451	53.97	50	8
* Ethylbenzene	1.6003	1.6634	51.97	50	4 *
m+p-Xylene	0.5887	0.6096	103.56	100	4
Xylene (Total)	0.5835	0.6066	155.95	150	4
o-Xylene	0.5731	0.6005	52.39	50	5
Styrene	1.0487	1.1004	52.47	50	5
# Bromoform	0.2812	0.3109	55.28	50	11 #
Isopropylbenzene	1.2920	1.3850	53.60	50	7

Minimum RRF for SPCC(#) = 0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*) = 20%

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Instrument ID: HP06720 Calibration Date: 01/27/03 Time: 10:21
 Lab File ID: mj27c02.d Init. Calib. Date(s): 01/10/03 01/10/03
 Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
# 1,1,2,2-Tetrachloroethane	1.3761	1.3819	50.21	50	0 #
trans-1,4-Dichloro-2-Butene	0.3512	0.3747	133.37	125	7
Bromobenzene	0.8237	0.8676	52.67	50	5
1,2,3-Trichloropropane	0.3670	0.3861	52.59	50	5
n-Propylbenzene	3.2678	3.4852	53.33	50	7
2-Chlorotoluene	0.6801	0.7161	52.65	50	5
1,3,5-Trimethylbenzene	2.0294	2.2511	55.46	50	11
4-Chlorotoluene	0.7185	0.7513	52.29	50	5
Pentachloroethane	0.4040	0.4540	56.19	50	12
tert-Butylbenzene	0.4708	0.5127	54.46	50	9
1,2,4-Trimethylbenzene	2.0904	2.3043	55.11	50	10
sec-Butylbenzene	2.3739	2.6228	55.24	50	10
1,3-Dichlorobenzene	1.3641	1.4524	53.24	50	6
p-Isopropyltoluene	2.0135	2.2948	56.98	50	14
1,4-Dichlorobenzene	1.4636	1.5221	52.00	50	4
n-Butylbenzene	1.1350	1.2054	53.10	50	6
1,2-Dichlorobenzene	1.3308	1.4186	53.30	50	7
1,2-Dibromo-3-Chloropropane	0.2566	0.2604	50.74	50	1
1,2,4-Trichlorobenzene	0.6692	0.7170	53.57	50	7
Hexachlorobutadiene	0.2873	0.2977	51.81	50	4
Naphthalene	2.7939	2.6625	47.65	50	-5
1,2,3-Trichlorobenzene	0.6444	0.6522	50.61	50	1
Dibromofluoromethane	0.2490	0.2555	51.31	50	3
1,2-Dichloroethane-d4	0.0708	0.0668	47.16	50	-6
Toluene-d8	1.3499	1.3097	48.51	50	-3
4-Bromofluorobenzene	0.4887	0.4861	49.73	50	-1

Average %Drift 8

Minimum RRF for SPCC(#) = 0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
 Maximum %Drift for CCC(*) = 20%

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): mj26c01.d Date Analyzed: 01/26/03
 Instrument ID: HP06720 Time Analyzed: 14:45
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1 (FBZ)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	963179	7.947	677584	11.132	338175	13.115
UPPER LIMIT	1926358	8.447	1355168	11.632	676350	13.615
LOWER LIMIT	481590	7.447	338792	10.632	169088	12.615
EPA SAMPLE NO.						
01 VBLKM25	886027	7.946	628519	11.137	298093	13.114
02 LC25	860275	7.940	606812	11.137	310787	13.114
03 LCDM25	852583	7.942	606518	11.138	308759	13.115
04 67001	860523	7.946	606255	11.137	291925	13.114
05 67001MS	850017	7.940	593008	11.131	302901	13.114
06 67002	832753	7.944	594131	11.135	286557	13.112
07 67003	834473	7.940	597116	11.131	279883	13.114
08 67004	818825	7.941	579902	11.132	274297	13.114
09 67005	809550	7.940	571378	11.131	273396	13.114
10 67006	822074	7.947	586058	11.137	273052	13.114
11 67007	799805	7.941	566028	11.132	269142	13.109
12 67010	795865	7.938	566500	11.135	268706	13.112
13 67011	786681	7.940	554235	11.131	261791	13.108

IS1 (FBZ)=Fluorobenzene
 IS2 (CBZ)=Chlorobenzene-d5
 IS3 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

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8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract: _____
 Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____
 Lab File ID (Standard): mj27c02.d Date Analyzed: 01/27/03
 Instrument ID: HP06720 Time Analyzed: 10:21
 Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1 (FBZ)		IS2 (CBZ)		IS3 (DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD		920078	7.906	666775	11.108	328049	13.091
UPPER LIMIT		1840156	8.406	1333550	11.608	656098	13.591
LOWER LIMIT		460039	7.406	333388	10.608	164024	12.591
EPA SAMPLE NO.							
01	VBLKM26	894576	7.906	647842	11.109	310107	13.092
02	67012	873835	7.905	628279	11.107	308171	13.090
03	67013	865887	7.903	616855	11.106	299618	13.088
04	67014	828385	7.909	612043	11.111	293848	13.094
05	67015	849945	7.906	614083	11.108	311016	13.091
06	74001	886618	7.905	643923	11.108	309338	13.091
07	74002	880703	7.907	630501	11.110	306582	13.092
08	74003	865996	7.910	630321	11.112	306990	13.095
09	74004	859239	7.910	626233	11.113	299901	13.096
10	74023	855175	7.911	622785	11.114	298462	13.091
11	74024	842714	7.911	617443	11.114	296552	13.097
12	74025	826582	7.911	601994	11.114	289083	13.091

IS1 (FBZ)=Fluorobenzene
 IS2 (CBZ)=Chlorobenzene-d5
 IS3 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
 of internal standard area.
 LOWER LIMIT = - 50%
 of internal standard area.

Column used to flag values outside QC limits with an asterisk
 * Values outside of QC limits.

APPENDIX D
MTCA Stat 97 Reports

MTCA stat 97 Reports

Compliance calculations

Arsenic at DA2

11
11
11
12
12
12
28.5
12
29.4
23.6
30.1
29.7
11
12
29.3

Number of samples		Uncensored values	
Uncensored	15	Mean	18.31
Censored		Lognormal mean	18.38
Detection limit or PQL		Std. devn.	8.689687375
Method detection limit		Median	12
TOTAL	15	Min.	11
		Max.	30.1
Lognormal distribution?		Normal distribution?	
r-squared is:	0.740	r-squared is:	0.731
Recommendations:			
Reject lognormal distribution.			
W value is 0.7125. This is less than the tabled value of 0.881			
Reject normal distribution.			
W value is 0.705. This is less than the tabled value of 0.881			
UCL (based on t-statistic) is 22.2577653672309			
UCL (based on Z-statistic) is 21.997			

Compliance calculations

Barium at DA2

152
121
208
215
166
180
123
228
262
454
181
130
264
246
313

Number of samples		Uncensored values	
Uncensored	15	Mean	216.20
Censored		Lognormal mean	216.56
Detection limit or PQL		Std. devn.	86.91884556
Method detection limit		Median	208
TOTAL	15	Min.	121
		Max.	454
Lognormal distribution? r-squared is: 0.966		Normal distribution? r-squared is: 0.870	
<p>Recommendations: Assume lognormal distribution. W value is 0.9632. This exceeds the tabled value of 0.881</p>			
<p>UCL (Land's method) is 262.05460309006</p>			

Compliance calculations

Chromium at DA2

43
42.3
25.3
36.7
33.3
33.6
43.6
36.8
39
34.9
30.1
31.2
30.3
34.2
37.1

Number of samples		Uncensored values	
Uncensored	15	Mean	35.43
Censored		Lognormal mean	35.46
Detection limit or PQL		Std. devn.	5.176798054
Method detection limit		Median	34.9
TOTAL	15	Min.	25.3
		Max.	43.6
Lognormal distribution?		Normal distribution?	
r-squared is:	0.964	r-squared is:	0.972
Recommendations:			
Assume lognormal distribution.			
W value is 0.9626. This exceeds the tabled value of 0.881			
UCL (Land's method) is 38.0724185994152			

Compliance calculations

Copper at DA2

87.7
 82.4
 70.7
 127
 96.2
 90.6
 105
 117
 120
 160
 77.4
 63.8
 92.6
 94.9
 104

Number of samples		Uncensored values	
Uncensored	15	Mean	99.29
Censored		Lognormal mean	99.42
Detection limit or PQL		Std. devn.	24.45940855
Method detection limit		Median	94.9
TOTAL	15	Min.	63.8
		Max.	160
Lognormal distribution?		Normal distribution?	
r-squared is:	0.983	r-squared is:	0.936
Recommendations:			
Assume lognormal distribution.			
W value is 0.9877. This exceeds the tabled value of 0.881			
UCL (Land's method) is 111.67228094075			

Compliance calculations

17.8
 16.6
 17.6
 23.9
 16.4
 16.6
 28.2
 27.2
 27.8
 28.5
 21.6
 15
 16.8
 22.3
 24.9

Lead at DA2

Number of samples		Uncensored values	
Uncensored	15	Mean	21.41
Censored		Lognormal mean	21.45
Detection limit or PQL		Std. devn.	5.008545079
Method detection limit		Median	21.6
TOTAL	15	Min.	15
		Max.	28.5
Lognormal distribution?		Normal distribution?	
r-squared is:	0.901	r-squared is:	0.895
Recommendations: Use lognormal distribution.			
UCL (Land's method) is 24.0637653503047			

Compliance calculations

Nickel at DA2

11
11
11
12
12
12
11
12
12
12
12
11
12
36.5
12
12

Number of samples		Uncensored values	
Uncensored	15	Mean	13.30
Censored		Lognormal mean	13.12
Detection limit or PQL		Std. devn.	6.435948149
Method detection limit		Median	12
TOTAL	15	Min.	11
		Max.	36.5
Lognormal distribution? r-squared is: 0.358		Normal distribution? r-squared is: 0.308	
<p>Recommendations:</p> <p>Reject lognormal distribution. W value is 0.3895. This is less than the tabled value of 0.881</p> <p>Reject normal distribution. W value is 0.3397. This is less than the tabled value of 0.881</p>			
<p>UCL (based on Z-statistic) is 16.034</p>			

Compliance calculations

Zinc at DA2

101
52.6
66.8
75.5
61.1
76.2
73.7
84.7
66.2
81.2
69.4
50
74.6
68.1
75.5

Number of samples		Uncensored values	
Uncensored	15	Mean	71.77
Censored		Lognormal mean	71.86
Detection limit or PQL		Std. devn.	12.53500622
Method detection limit		Median	73.7
TOTAL	15	Min.	50
		Max.	101
Lognormal distribution?		Normal distribution?	
r-squared is:	0.946	r-squared is:	0.942
Recommendations: Use lognormal distribution.			
UCL (Land's method) is 78.2084764271592			

Compliance calculations

DA3 Antimony

5.5
5.3
5.3
5.4
5.6
5.3
5.6
5.3
11.7
8.6
10.3
8.7
7.6
3.3
1.18
1.18
1.15
1.1
1.5
1.23
1.07
1.31
1.2
1.07
1.26
1.25
1.57
1.12
1.16
1.32
1.37

Number of samples		Uncensored values	
Uncensored	31	Mean	3.69
Censored		Lognormal mean	3.74
Detection limit or PQL		Std. devn.	3.1565993
Method detection limit		Median	1.5
TOTAL	31	Min.	1.07
		Max.	11.7
Lognormal distribution?		Normal distribution?	
r-squared is:	0.821	r-squared is:	0.799
Recommendations:			
Reject lognormal distribution.			
W value is 0.7993. This is less than the tabled value of 0.929			
Reject normal distribution.			
W value is 0.7891. This is less than the tabled value of 0.929			
UCL (based on t-statistic) is 4.65693923383017			
UCL (based on Z-statistic) is 4.627			

Compliance calculations

D3 All ICP & GFAA Arsenic

2.22
 1.79
 3.17
 2.58
 1
 2.46
 6.08
 3.92
 1.99
 2.93
 2.92
 2.67
 1
 2.24
 5.42
 2.59
 1
 12
 11
 11
 11
 12
 11
 12
 11
 3.8
 10.4
 3.9
 5
 3.3
 5.5

Number of samples		Uncensored values	
Uncensored	31	Mean	5.45
Censored		Lognormal mean	5.61
Detection limit or PQL		Std. devn.	3.985222461
Method detection limit		Median	3.8
TOTAL	31	Min.	1
		Max.	12
Lognormal distribution?		Normal distribution?	
r-squared is:	0.930	r-squared is:	0.831
Recommendations:			
Use lognormal distribution.			
UCL (Land's method) is 7.69627567211632			

Compliance calculations

DA3 ICP Arsenic

12
11
11
11
12
11
12
11
3.8
10.4
3.9
5
3.3
5.5

Number of samples		Uncensored values	
Uncensored	14	Mean	8.78
Censored		Lognormal mean	9.00
Detection limit or PQL		Std. devn.	3.530782997
Method detection limit		Median	11
TOTAL	14	Min.	3.3
		Max.	12
Lognormal distribution? r-squared is: 0.767		Normal distribution? r-squared is: 0.781	
<p>Recommendations:</p> <p>Reject lognormal distribution. W value is 0.7487. This is less than the tabled value of 0.874</p> <p>Reject normal distribution. W value is 0.7587. This is less than the tabled value of 0.874</p>			
UCL (based on t-statistic) is 10.4497604341899			
UCL (based on Z-statistic) is 10.331			

Compliance calculations

Arsenic DA3 (GFAA)

2.22
 1.79
 3.17
 2.58
 1
 2.46
 6.08
 3.92
 1.99
 2.93
 2.92
 2.67
 1
 2.24
 5.42
 2.59
 1

Number of samples		Uncensored values	
Uncensored	17	Mean	2.70
Censored		Lognormal mean	2.74
Detection limit or PQL		Std. devn.	1.395578364
Method detection limit		Median	2.58
TOTAL	17	Min.	1
		Max.	6.08
Lognormal distribution?		Normal distribution?	
r-squared is:	0.933	r-squared is:	0.881
<p>Recommendations:</p> <p>Assume lognormal distribution.</p> <p>W value is 0.9269. This exceeds the tabled value of 0.892</p>			
<p>UCL (Land's method) is 3.58860118529333</p>			

Compliance calculations

198
116
143
109
221
108
206
116

Barium DA3

Number of samples		Uncensored values	
Uncensored	8	Mean	152.13
Censored		Lognormal mean	152.90
Detection limit or PQL		Std. devn.	48.18250275
Method detection limit		Median	129.5
TOTAL	8	Min.	108
		Max.	221
Lognormal distribution?		Normal distribution?	
r-squared is:	0.852	r-squared is:	0.840
Recommendations:			
Assume lognormal distribution.			
W value is 0.8218. This exceeds the tabled value of 0.818			
UCL (Land's method) is 194.610354119486			

Compliance calculations

DA3 Chromium

17.6
 17.4
 14.5
 15.3
 12.2
 17.7
 24.8
 15.1
 19.5
 19.6
 16.4
 19.8
 9.57
 17.3
 24
 18.2
 14.9
 17.6
 15.8
 13.2
 21.4
 14.9
 18.5
 19
 18
 17.7
 21.4
 18.7
 21.8
 23
 20.4

Number of samples		Uncensored values	
Uncensored	31	Mean	17.91
Censored		Lognormal mean	17.94
Detection limit or PQL		Std. devn.	3.385333484
Method detection limit		Median	17.7
TOTAL	31	Min.	9.57
		Max.	24.8
Lognormal distribution?		Normal distribution?	
r-squared is:	0.948	r-squared is:	0.984
Recommendations:			
Use lognormal distribution.			
UCL (Land's method) is 19.1306782113729			

Compliance calculations

DA3 Copper

32.8
 34.8
 104
 144
 52.6
 31.5
 49.3
 122
 41.4
 41.8
 125
 182
 166
 31.9
 49.3
 104
 108
 140
 40
 55.8
 42.7
 79.7
 50.4
 113
 44.4
 164
 363
 104
 151
 141
 178

Number of samples		Uncensored values	
Uncensored	31	Mean	99.59
Censored		Lognormal mean	100.23
Detection limit or PQL		Std. devn.	69.93761475
Method detection limit		Median	104
TOTAL	31	Min.	31.5
		Max.	363
Lognormal distribution? r-squared is: 0.931		Normal distribution? r-squared is: 0.803	
Recommendations: Use lognormal distribution.			
UCL (Land's method) is 128.592070294934			

Compliance calculations

13.1
12
8.27
4.97
8.7
12.8
14
10.6
13.8
14.3
7.79
5.61
9.73
12.3
14.1
10.9
9.31
11.6
8.6
10.4
11.7
13.3
11.8
18.7
9.3
6.1
120
7.6
10.1
8.3
22

DA3 Lead

Number of samples		Uncensored values	
Uncensored	31	Mean	14.57
Censored		Lognormal mean	13.18
Detection limit or PQL		Std. devn.	19.88772763
Method detection limit		Median	10.9
TOTAL	31	Min.	4.97
		Max.	120
Lognormal distribution?		Normal distribution?	
r-squared is:	0.727	r-squared is:	0.294
Recommendations:			
Reject lognormal distribution.			
W value is 0.7623. This is less than the tabled value of 0.929			
Reject normal distribution.			
W value is 0.3307. This is less than the tabled value of 0.929			
UCL (based on t-statistic) is 20.6351328203425			
	UCL (based on Z-statistic) is 20.449		

Compliance calculations

DA3 Mercury

0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.03
 0.059
 0.064
 0.055
 0.0518
 0.078
 0.95
 1.19
 0.04
 0.35
 0.33
 0.94

Number of samples		Uncensored values	
Uncensored	23	Mean	0.19
Censored		Lognormal mean	0.16
Detection limit or PQL		Std. devn.	0.343609806
Method detection limit		Median	0.03
TOTAL	23	Min.	0.03
		Max.	1.19
Lognormal distribution?		Normal distribution?	
r-squared is:	0.698	r-squared is:	0.537
Recommendations:			
Reject lognormal distribution.			
W value is 0.6888. This is less than the tabled value of 0.914			
Reject normal distribution.			
W value is 0.5421. This is less than the tabled value of 0.914			
UCL (based on t-statistic) is 0.317271098684741			
UCL (based on Z-statistic) is 0.312			

Compliance calculations

10.3
 9.09
 11
 12.7
 4.4
 10.8
 13.4
 1.32
 11.6
 11.8
 13.9
 19.9
 5.71
 8.74
 23
 12.8
 5.26
 12
 11
 11
 11
 12
 11
 12.8
 14.8
 13.6
 15.5
 13.6
 14.1

DA3 Nickel

Number of samples		Uncensored values	
Uncensored	31	Mean	11.65
Censored		Lognormal mean	12.12
Detection limit or PQL		Std. devn.	4.094676507
Method detection limit		Median	11.8
TOTAL	31	Min.	1.32
		Max.	23
Lognormal distribution? r-squared is: 0.711		Normal distribution? r-squared is: 0.899	
Recommendations: Reject lognormal distribution. W value is 0.7419. This is less than the tabled value of 0.929 Reject normal distribution. W value is 0.9193. This is less than the tabled value of 0.929			
UCL (Land's method) is 14.5169134207856			
UCL (based on Z-statistic) is 12.859			

Compliance calculations

DA3 Zinc

76.3
79.5
100
97.8
30
65.6
72.9
87.7
49
72.3
58.1
79.3
85.3
39.3
74.4
61.8
90.9
69.1
56
56.1
44.3
55.5
54.4
73.2
53.7
97.4
144
77.4
106
89.7
123

Number of samples		Uncensored values	
Uncensored	31	Mean	74.84
Censored		Lognormal mean	75.11
Detection limit or PQL		Std. devn.	24.45885903
Method detection limit		Median	73.2
TOTAL	31	Min.	30
		Max.	144
Lognormal distribution?		Normal distribution?	
r-squared is:	0.981	r-squared is:	0.961
Recommendations:			
Use lognormal distribution.			
UCL (Land's method) is 83.9162082362023			

WEST COAST ANALYTICAL SERVICE, INC.
Analytical Chemists
9240 Santa Fe Springs Road - Santa Fe Springs, CA 90670
562-948-2225 Fax 562-948-5850
w c a s . c o m

FAX REPORT

Date: Monday, May 19, 2003

Fax No: 206.957.7121

Company: Analytical Resources Inc

Location: Tukwila

Attn: Stephanie Lucas

REFERENCE: Data - WCAS job number 64299

Here is the Raw Data for WCAS Job No. 63781 that you requested. Please give me a call if you have any questions.

From: Doria Lillig Ext. 304

Time: 10:35

Faxed pages: 29

West Coast Analytical Service, Inc. is not responsible for fax transmission errors. Unless otherwise noted, this data is preliminary and has not had final quality control review.

Client: Analytical Resources Inc
 Job No.: 63781

Perchlorate by EPA 314.0
 Ion Chromatography-Suppressed Conductivity

Column: Dionex AS16/AG16
 Eluent: 35 mM NaOH
 Flow: 1.2 mL/min
 Injection: 1200 µL
 Detection: Suppressed Conductivity

<u>ARI Sample ID</u>	<u>Client Sample ID</u>	<u>Parts Per Billion (µg/L)</u>
03-4612-FK-15A	0415031S	ND
03-4613-FK-15B	0415031D	ND
03-4614-FK-15C	0415032D	ND
03-4615-FK-15D	0415032S	ND
03-4616-FK-15E	0415035D	ND
03-4617-FK-15F	0415035S	ND
03-4618-FK-15G	0415036S	ND
03-4619-FK-15H	0415037S	ND
03-4620-FK-15I	0415038S	ND

Method Blank ND

Detection Limit: 2

Date Analyzed: 04-21-03

Calibration Summary

Sample ID: Laboratory Control Standard (50 ppb Second Source Standard)

<u>Date Analyzed</u>	<u>Result</u>	<u>% Rec</u>	<u>% Rec Limits</u>
04-21-03	47	94	90-110

Standard Curve (n = 5) r² ≥ 0.999

Quality Control Summary

Sample ID: 03-4612-FK-15A (ARI) 0415031S (Client)

<u>Analyte</u>	<u>Sample Result</u>	<u>Spike Conc</u>	<u>Spike Result</u>	<u>Spike % Rec</u>	<u>Spike Dup Result</u>	<u>Spike Dup % Rec</u>	<u>Spike RPD</u>
Perchlorate	ND	101	99	98	97	96	2
QC Guidelines				80-120		80-120	15

For: **SEVERN TRENT** WATER TREATMENT CO. **SEVERN TRENT**

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

main of
Custody Record To: **ARI**

Client: **PPC** Project Manager: **Jeff Dawson** Date: **15 Apr 03** Chain of Custody Number: **00574**

Address: **64213 Grover** Telephone Number (Area Code)/Fax Number: **509-967-2518** Lab Number: **1** of **1**

City: **West Richland** State: **WA** Zip Code: **99353** Site Contact: **Lab Contact:**

Project Name and Location (State): **Camp Bonneville** Carrier/Waybill Number: **1689-001**

Sample ID and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix		Containers & Preservatives						Special Instructions/ Conditions of Receipt	
			Aqueous	Sol	Unpres.	H2SO4	HNO3	HCl	HOH	NH4OH		
0415031S	4/15/03	0950	X									
0415031D	4/15/03	1030	X									
0415032D	4/15/03	1112	X									
0415032S	4/15/03	1140	X									
0415035D	4/15/03	1255	X									
0415035S	4/15/03	1327	X									
0415036S	4/15/03	1448	X									
0415037S	4/15/03	1518	X									
0415038S	4/15/03	1545	X									

Cooler: Yes No Cooler Temp: _____

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Return To Client Archive For _____ Months

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

1. Relinquished By: **Jeff Dawson** Date: **4/15/03** Time: **12:49**

2. Relinquished By: _____ Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____

Comments: _____

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

STL8274-580 (12/02)

Standard: 1000 ppm perchlorate (from Li) Preparer: J. Nicholson

ID #: 438-0225-197-1 Date: 2-25-03 Expires: 6-25-03

ratio = 1.069

Compound/Stock	ID #/ Lot #	Exp. Date	Conc.	Amount	Final Conc.	Bal/ Pip. #
Li perchlorate	Batch 727607	7/06	/	0.1059g	1000 ppm	0701

Bal 0.192 g/ml

Solvent: DI H₂O 18M Lot no.: NA Final Volume: 99.06 ml

Standard: 10 ppm ClO₄ (from Li) Preparer: J. Nicholson

D #: 438-0225-197-2 Date: 2-25-03 Expires: 6-25-03

Compound/Stock	ID #/ Lot #	Exp. Date	Conc.	Amount	Final Conc.	Bal/ Pip. #
1000 ppm ClO ₄	438-0225-197-1	9/03	1000 ppm	1.07 ml	10 ppm	IC-1

Bal 0.192 g/ml

Solvent: DI H₂O 18M Lot no.: NA Final Volume: 100.0 ml

Standard: ClO₄ ICV 50 ppb Preparer: J. Nicholson

D #: 438-0225-197-3 Date: 2-25-03 Expires: 3-25-03

Compound/Stock	ID #/ Lot #	Exp. Date	Conc.	Amount	Final Conc.	Bal/ Pip. #
10 ppm ClO ₄	438-0225-197-2	8/03	10 ppm	250 µl	50 ppb	IC-1

Bal 0.192 g/ml

Solvent: DI H₂O 18M Lot no.: NA Final Volume: 50.0 ml

Standard: 1000 ppm Perchlorate (from Na) Preparer: J. Nickman

D#: 473-0415-046-1 Date: 4-15-03 Expires: 10-15-03

Ratio = $\frac{1.412}{2.411/03}$ 1.412
 $\frac{1.412}{2.411/03}$ (E)

Compound/Stock	ID #/ Lot #	Exp. Date	Conc.	Amount	Final Conc.	Bal/ Pip. #
<u>NaClO₄ - H₂O</u>	<u>EMA 38160831</u>	<u>5/04</u>	<u>-</u>	<u>143.3mg</u>	<u>1000 ppm</u>	<u>0701</u>

* 4/15/03
2.411/03 not used

Bal 0192 1g/ml

Solvent: D₂ H₂O 18MA Lot no.: NA Final Volume: 101.49ml

Standard: 10 ppm Perchlorate STD Preparer: J. Nickman

D#: 473-0415-046-2 Date: 4-15-03 Expires: 10-15-03

Compound/Stock	ID #/ Lot #	Exp. Date	Conc.	Amount	Final Conc.	Bal/ Pip. #
<u>ClO₄ from Na</u>	<u>473-0415-046-1</u>	<u>1/03</u>	<u>1000 ppm</u>	<u>1.00ml</u>	<u>10 ppm</u>	<u>IC-1</u>

not used 2/4/5/03

Bal 0192 1g/ml

Solvent: D₂ H₂O 18MA Lot no.: NA Final Volume: 100.0ml

Standard: 50 ppm ClO₄ STD Preparer: J. Nickman

D#: 473-0415-046-3 Date: 4-15-03 Expires: 5-15-03

Compound/Stock	ID #/ Lot #	Exp. Date	Conc.	Amount	Final Conc.	Bal/ Pip. #
<u>10 ppm ClO₄ (from Li)</u>	<u>438-0225-197-2</u>	<u>8/03</u>	<u>10000 ppm</u>	<u>250µl</u>	<u>50 ppm</u>	<u>IC-1</u>

not used 2/4/5/03

Bal 0192 1g/ml

Solvent: D₂ H₂O 18MA Lot no.: NA Final Volume: 50.0ml

Standard: 4 perchlorate Sids EPA 314

Preparer: J. Nickman

#: 473-0415-046-2 Date: 4-15-03

Stock Expires: 10/03

Compound/Stock SM ID	Lot #	f. vol val.	Exp. Date	Stock Conc.	Amount	Final Conc.	Bal/Pipette#
150-0415-067-1		100.0 mL	5-15-03	10000 ppb	50 µl	5 ppb	IC-2
150-0415-067-2		50.0 mL	5-15-03	10000 ppb	100 µl	20 ppb	IC-2
150-0415-067-3		50.0 mL	5-15-03	10000 ppb	250 µl	50 ppb	IC-1
150-0415-067-4		50.0 mL	5-15-03	10000 ppb	500 µl	100 ppb	IC-1
150-0415-067-5		50.0 mL	5-15-03	10000 ppb	2.5 mL	500 ppb	IC-2
A diagonal line is drawn across the remaining empty rows of the table, starting from the bottom left and going towards the top right. The date <u>4/15/03</u> is written near the line.							

Lot: 105 M-0 16 MA

Lot no.: WA

Final Volume: see col 2

Job: 63781

Client: Analyt. Resources

Date	Initials	Sample ID	Amount (mL or g)	Dilution (mL)	Final Dilution (mL)
4-21-03	K	FK ISA MS	5µl @ 0.1m	10-0µl	sample
4-21-03	K	FK ISA MSD	5µl @ 0.1m	10-0µl	sample
✓ not used 4/22/03					

Diluent: NA

Comments:

Solvent: NA

Balance: 0.192 1g hook

Pipet: IC-2 20-100µl

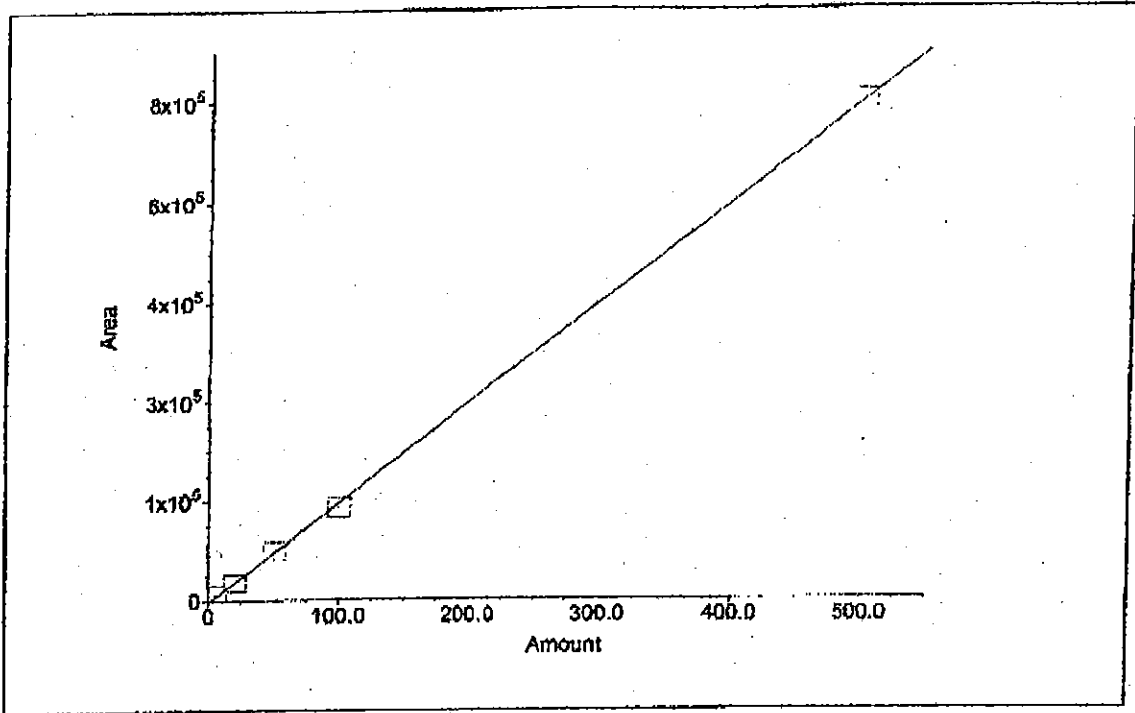
Syringe: NA

Misc: sample soln 10 ppm ClO₂

438
24/2/03
(K)

473-0415-046-2 exp 10/03

Standard: SAC001 r^2 type: Linear
Origin: Ignore Calibration: Area
r^2=0.999810
Amt=0.0006212*Resp+2.241



21	Water	Sample		perchlorate.met	0421_021.dxd	1
22	5 ppb 450-0415-067-1	Calibration	1	perchlorate.met	0421_022.dxd	1
23	20 ppb 450-0415-067-2	Calibration	2	perchlorate.met	0421_023.dxd	1
24	50 ppb 450-00415-067-3	Calibration	3	perchlorate.met	0421_024.dxd	1
25	100 ppb 450-0415-067-4	Calibration	4	perchlorate.met	0421_025.dxd	1
26	500 ppb 450-0415-067-5	Calibration	5	perchlorate.met	0421_026.dxd	1
27	Water	Sample		perchlorate.met	0421_027.dxd	1
	50 ppb ICV 473-0415-048-3	Sample		perchlorate.met	0421_028.dxd	1
	Water	Sample		perchlorate.met	0421_029.dxd	1
30	63781 FK15A	Sample		perchlorate.met	0421_030.dxd	1
31	63781 FK15B	Sample		perchlorate.met	0421_031.dxd	1
32	63781 FK15C	Sample		perchlorate.met	0421_032.dxd	1
33	63781 FK15D	Sample		perchlorate.met	0421_033.dxd	1
34	63781 FK15E	Sample		perchlorate.met	0421_034.dxd	1
35	63781 FK15F	Sample		perchlorate.met	0421_035.dxd	1
36	63781 FK15G	Sample		perchlorate.met	0421_036.dxd	1
37	63781 FK15H	Sample		perchlorate.met	0421_037.dxd	1
38	63781 FK15I	Sample		perchlorate.met	0421_038.dxd	1
39	50 ppb 450-00415-067-3	Sample		perchlorate.met	0421_039.dxd	1
40	63781 FK15A MS	Sample		perchlorate.met	0421_040.dxd	1.01
41	63781 FK15A MSD	Sample		perchlorate.met	0421_041.dxd	1.01
42	50 ppb 450-00415-067-3	Sample		perchlorate.met	0421_042.dxd	1
43		Sample		stop.met		1

Default Method Path: C:\PEAKNET\METHOD
Default Data Path: C:\PEAKNET\DATA\0403\ANION
Comment:

21	Water	Sample		perchlorate.met	0421_021.dxd	1
22	5 ppb 450-0415-067-1	Calibration	1	perchlorate.met	0421_022.dxd	1
23	20 ppb 450-0415-067-2	Calibration	2	perchlorate.met	0421_023.dxd	1
24	50 ppb 450-0415-067-3	Calibration	3	perchlorate.met	0421_024.dxd	1
25	100 ppb 450-0415-067-4	Calibration	4	perchlorate.met	0421_025.dxd	1
26	500 ppb 450-0415-067-5	Calibration	5	perchlorate.met	0421_026.dxd	1
27	Water	Sample		perchlorate.met	0421_027.dxd	1
28	50 ppb ICV 473-0415-046-3	Sample		perchlorate.met	0421_028.dxd	1
29	Water	Sample		perchlorate.met	0421_029.dxd	1
30	63781 FK15A	Sample		perchlorate.met	0421_030.dxd	1
31	63781 FK15B	Sample		perchlorate.met	0421_031.dxd	1
32	63781 FK15C	Sample		perchlorate.met	0421_032.dxd	1
33	63781 FK15D	Sample		perchlorate.met	0421_033.dxd	1
34	63781 FK15E	Sample		perchlorate.met	0421_034.dxd	1
35	63781 FK15F	Sample		perchlorate.met	0421_035.dxd	1
36	63781 FK15G	Sample		perchlorate.met	0421_036.dxd	1
37	63781 FK15H	Sample		perchlorate.met	0421_037.dxd	1
38	63781 FK15I	Sample		perchlorate.met	0421_038.dxd	1
39	50 ppb 450-0415-067-3	Sample		perchlorate.met	0421_039.dxd	1
40	63781 FK15A MS	Sample		perchlorate.met	0421_040.dxd	1.01
41	63781 FK15A MSD	Sample		perchlorate.met	0421_041.dxd	1.01
42	50 ppb 450-0415-067-3	Sample		perchlorate.met	0421_042.dxd	1
43		Sample		stop.met		1

Default Method Path: C:\PEAKNET\METHOD
Default Data Path: C:\PEAKNET\DATA\403\ANION
Comment:

Sample Name : Water

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_021.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 9:27:18 AM

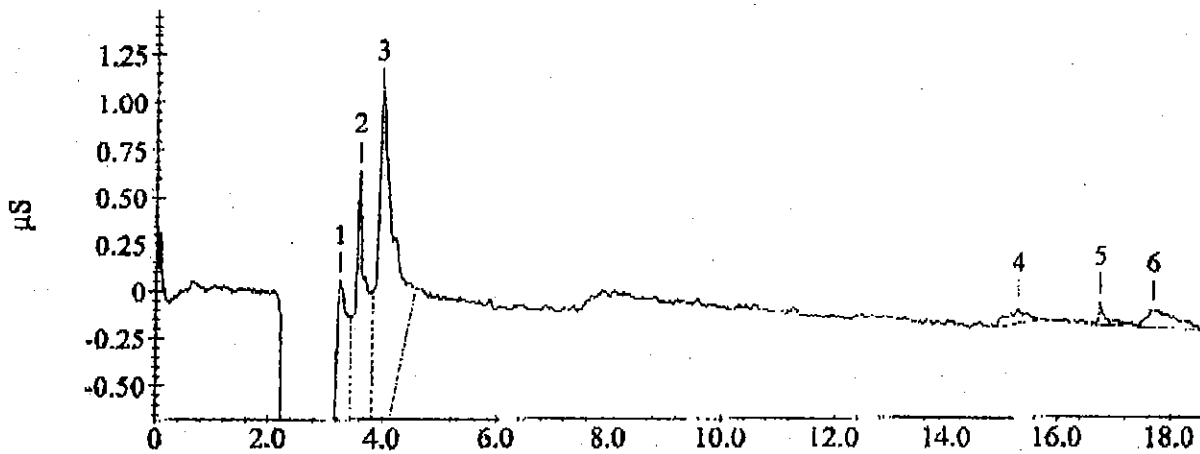
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.23	0.000	365971	20912	17.50
	3.57	0.000	326979	21685	15.08
	3.95	0.000	387612	19640	19.74
	15.27	0.000	20792	805	25.84
	16.73	0.000	12654	1264	10.01
	17.67	0.000	33354	973	34.28

Water



Sample Name : 5 ppb 450-0415-067-1

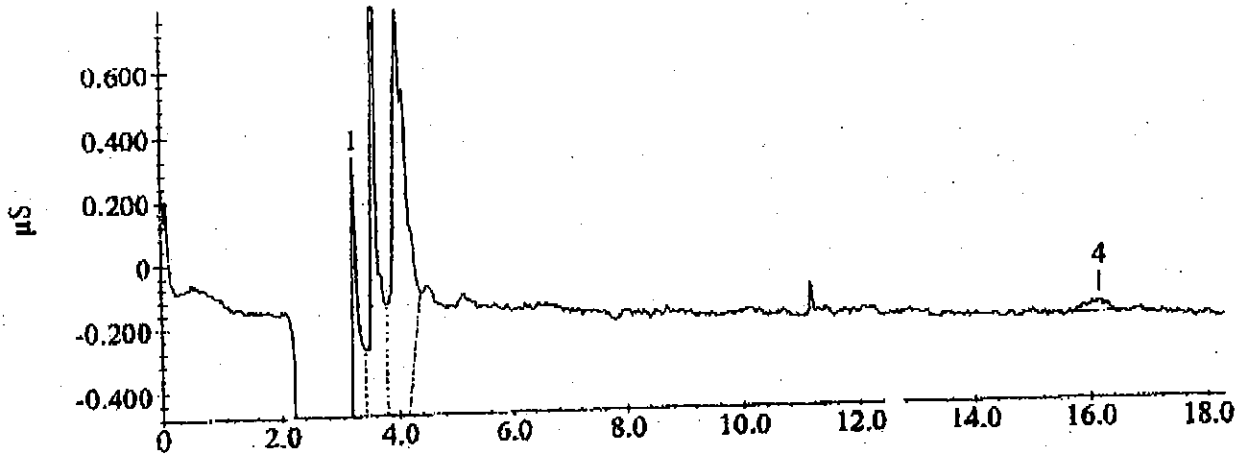
Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_022.DXD

Method File Name : c:\peaknet\method\perchlorate.met
Schedule File Name : c:\peaknet\schedule\perchlorate.sch
Date Time Collected : 4/21/03 9:48:55 AM
Calibration Date : 4/21/03 10:31:19 AM
System Operator : JR

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1		3.22			
4	perchlorate	16.13	8579	8622	8622

5 ppb 450-0415-067-1



Sample Name : 20 ppb 450-0415-067-2

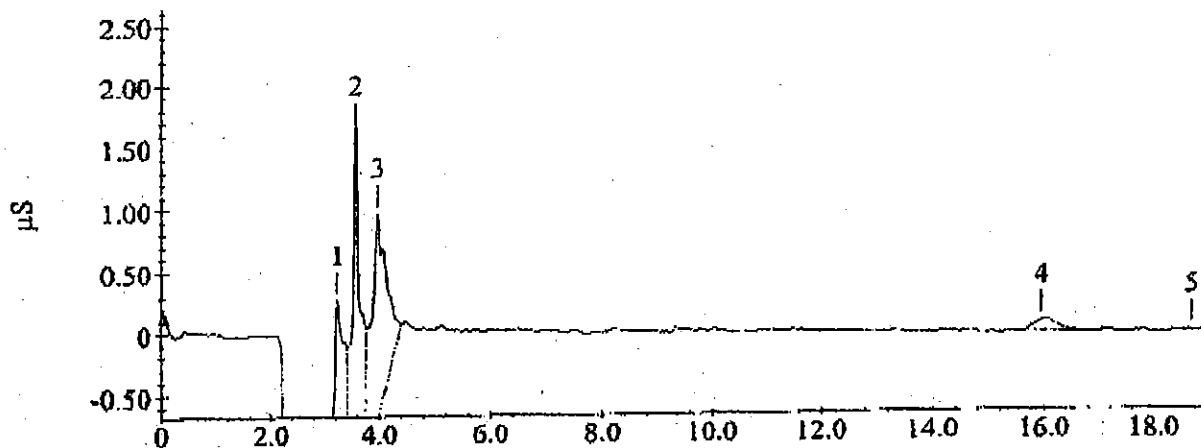
Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_023.DXD

Method File Name : C:\PeakNet\method\Perchlorate.met
Schedule File Name : c:\peaknet\schedule\perchlorate.sch
Date Time Collected : 4/21/03 10:10:30 AM
Calibration Date : 4/21/03 10:33:06 AM
System Operator : JR

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1		3.22			
4	perchlorate	15.93	29941	28047	28047

20 ppb 450-0415-067-2



Sample Name : 50 ppb 450-00415-067-3

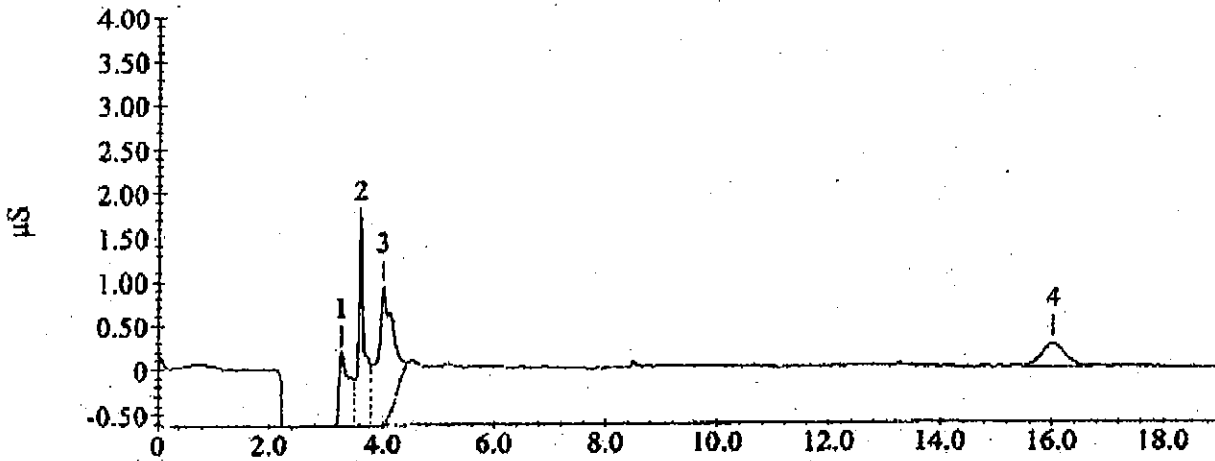
Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_024.DXD

Method File Name : C:\PeakNet\method\Perchlorate.met
Schedule File Name : c:\peaknet\schedule\perchlorate.sch
Date Time Collected : 4/21/03 10:32:06 AM
Calibration Date : 4/21/03 11:00:26 AM
System Operator : JR

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1		3.25			
4	perchlorate	16.00	76571	79729	79729

50 ppb 450-00415-067-3



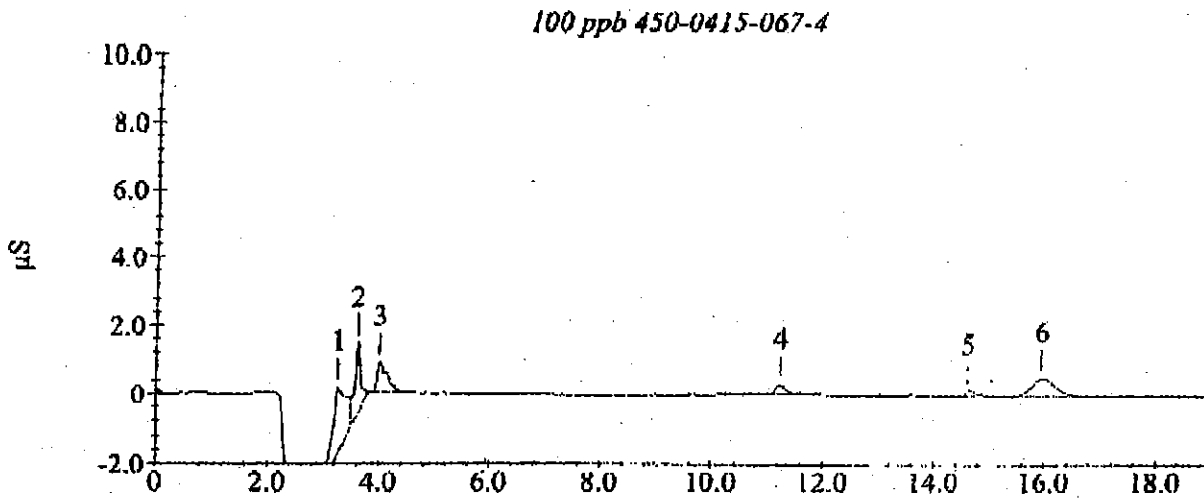
Sample Name : 100 ppb 450-0415-067-4

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_025.DXD

Method File Name : C:\PeakNet\method\Perchlorate.met
Schedule File Name : c:\peaknet\schedule\perchlorate.sch
Date Time Collected : 4/21/03 10:53:40 AM
Calibration Date : 4/21/03 11:31:28 AM
System Operator : JR

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1		3.27			
6	perchlorate	15.93	138143	149790	149790

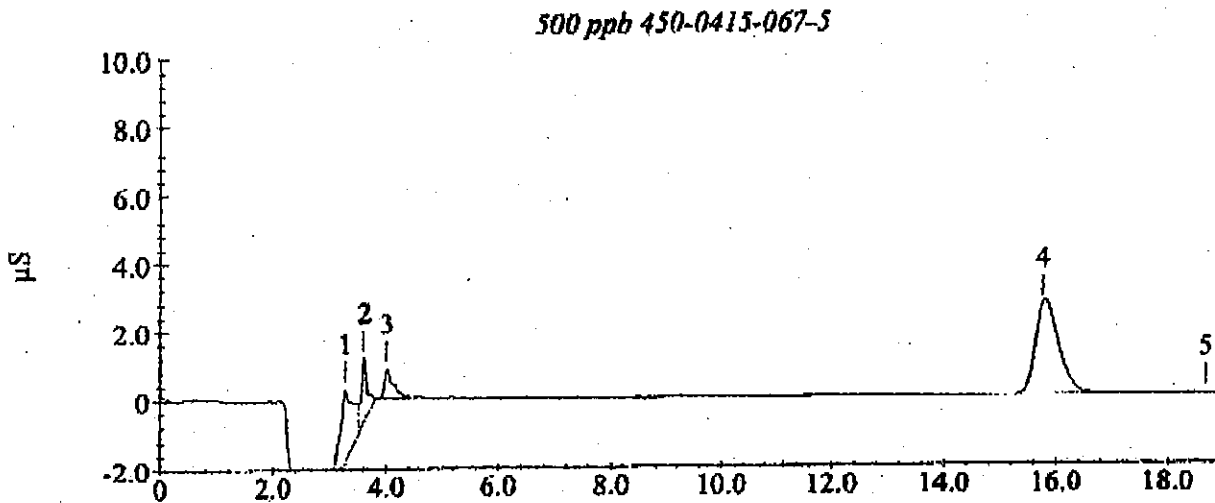


Sample Name : 500 ppb 450-0415-067-5
Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_026.DXD

Method File Name : C:\PeakNet\method\Perchlorate.met
Schedule File Name : c:\peaknet\schedule\perchlorate.sch
Date Time Collected : 4/21/03 11:15:16 AM
Calibration Date : 4/21/03 11:38:04 AM
System Operator : JR

Peak Information : All Components

Peak #	Component Name	Retention Time	Cal Response (Previous)	Cal Response (Measured)	Cal Response (New)
1		3.27			
4	perchlorate	15.73	783591	802426	802426



Sample Name : Water

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_027.DXD

015 *Carl*

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 11:36:54 AM

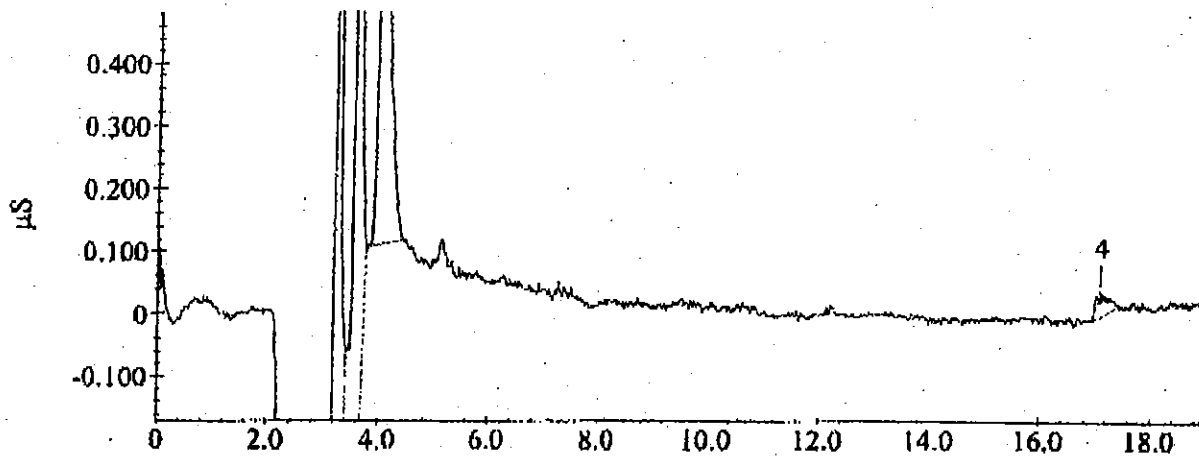
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/H Ratio
	3.22	0.000	343059	33704	10.18
	3.55	0.000	234125	37008	6.33
	3.97	0.000	105590	9915	10.65
	17.07	0.000	5843	357	16.39

Water



Sample Name : 50 ppb ICV 473-0415-046-3

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_028.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 11:58:30 AM

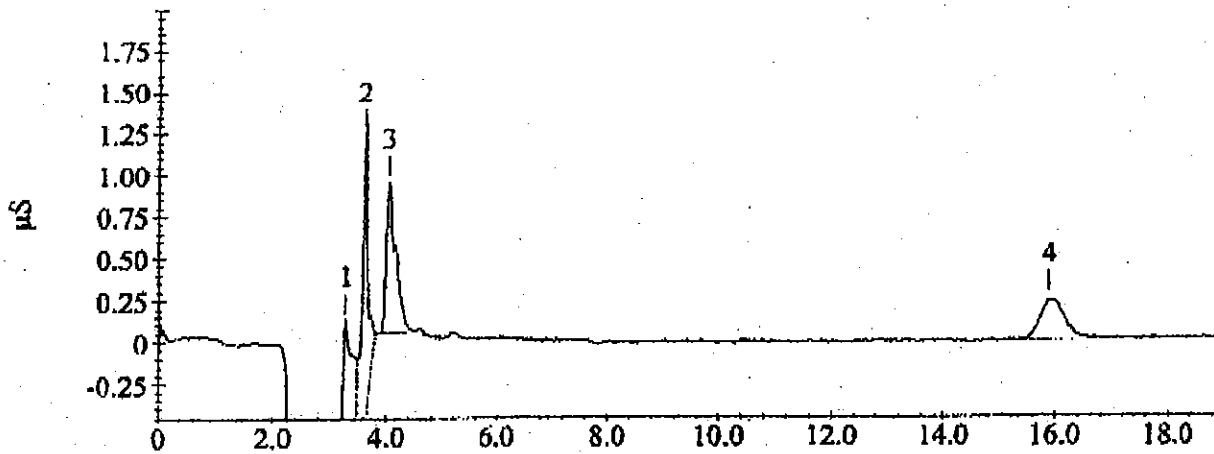
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.27	0.000	300969	19034	15.81
	3.60	0.000	145227	18537	7.83
	4.02	0.000	103964	8845	11.75
perchlorate	15.87	47.126	72258	2313	31.24

50 ppb ICV 473-0415-046-3



Sample Name : Water

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_029.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 12:20:05 PM

System Operator : JR

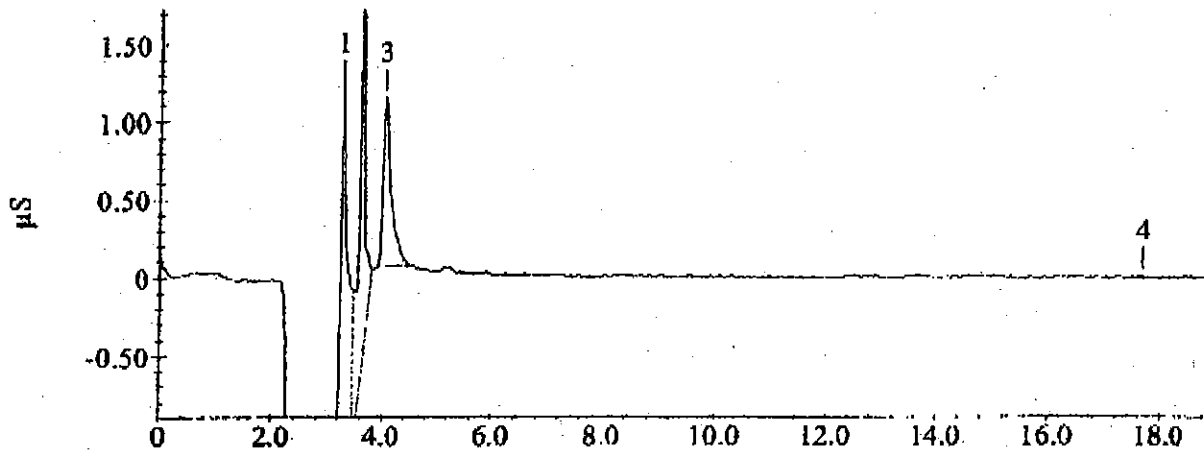
Dilution Factor : 1.00

OK method 122

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.27	0.000	341862	30270	11.29
	3.62	0.000	166263	24201	6.87
	4.03	0.000	111470	10818	10.30
	17.67	0.000	1303	80	16.31

Water



Sample Name : 63781 FK15A

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_030.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 12:41:40 PM

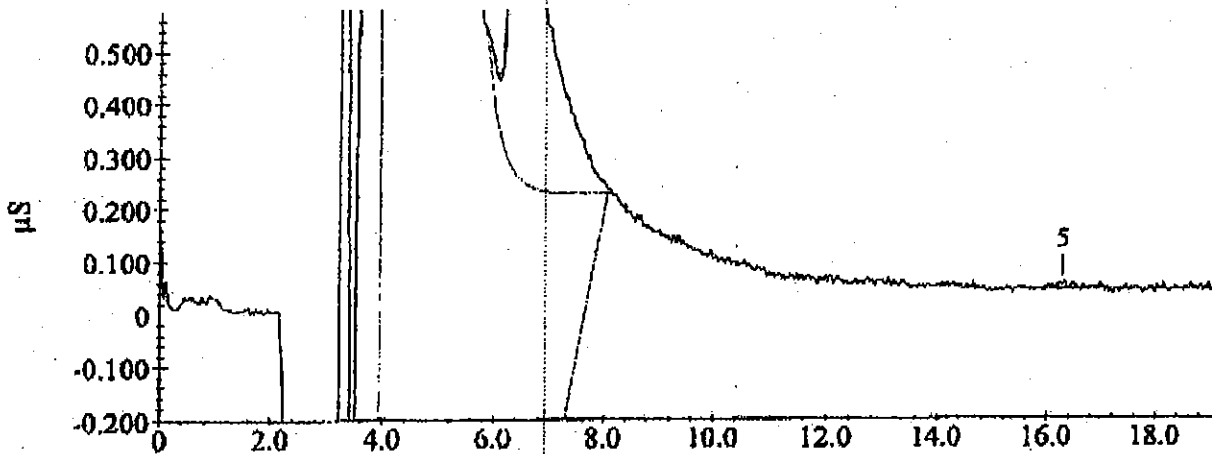
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.27	0.000	913715	120233	7.60
	3.65	0.000	8956813	1621214	5.52
	4.45	0.000	8541960	747587	11.43
	6.37	0.000	333180	6730	49.51
perchlorate	16.27	1.117	1927	65	29.70

63781 FK15A



Sample Name : 63781 FK15B

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_031.DXD

Method File Name : c:\peaknet\method\perchlorate.met

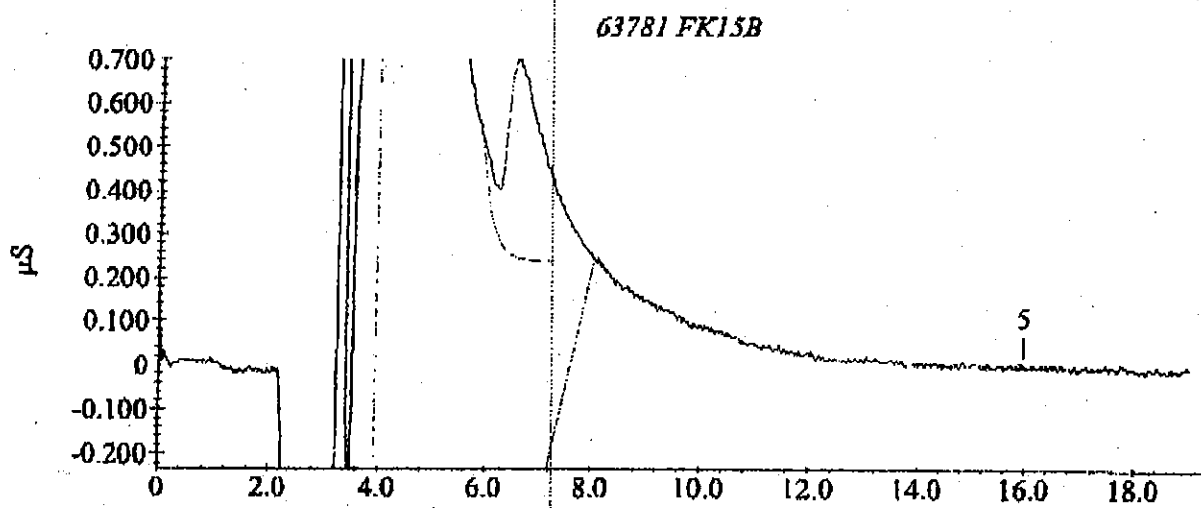
Date Time Collected : 4/21/03 1:03:15 PM

System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/H Ratio
	3.27	0.000	989251	134901	7.33
	3.65	0.000	9318479	1675152	5.56
	4.47	0.000	19729276	3747121	5.27
	6.53	0.000	230877	4562	50.61
perchlorate ADL	15.93	0.744	1282	83	15.43



Sample Name : 63781 FK15C

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_032.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 1:24:50 PM

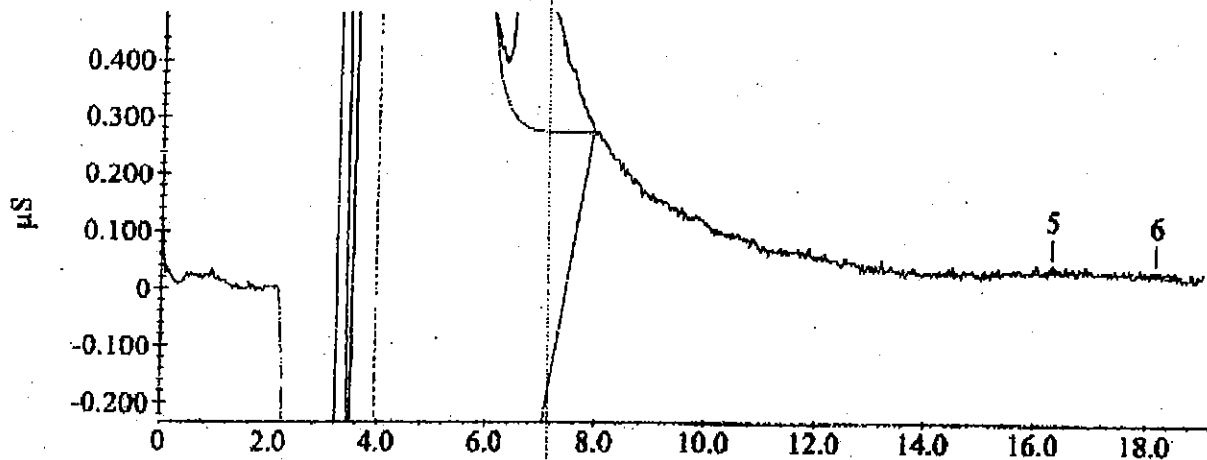
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.27	0.000	984759	129370	7.61
	3.67	0.000	15497186	3089982	5.02
	4.47	0.000	25204157	4572346	5.51
	6.62	0.000	181523	3600	50.42
	16.27	0.000	982	82	11.90
	18.13	0.000	846	48	17.50

63781 FK15C



Sample Name : 63781 FK15D

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_033.DXD

Method File Name : c:\peaknet\method\perchlorate.met

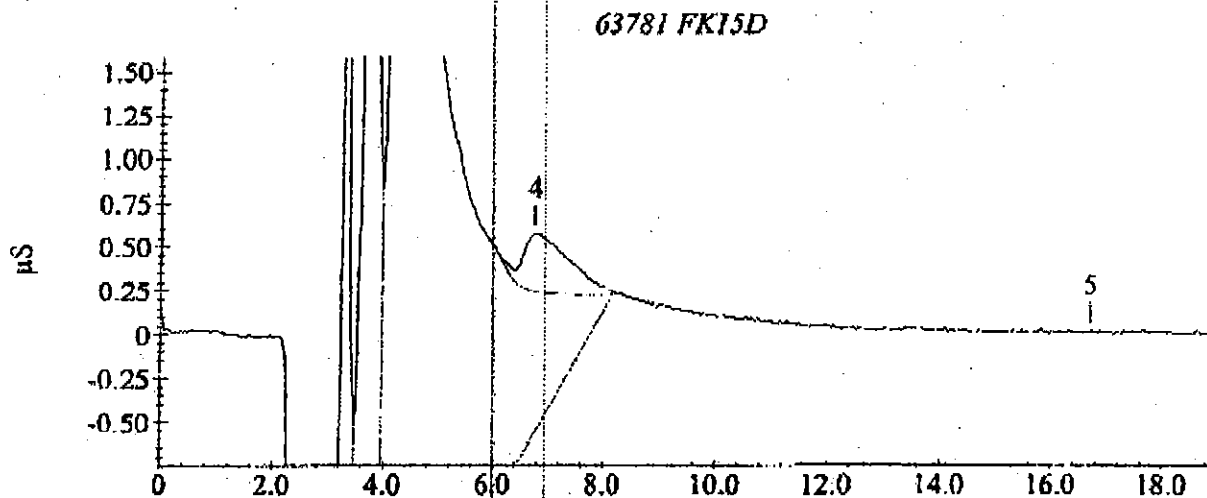
Date Time Collected : 4/21/03 1:46:25 PM

System Operator : JK

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.28	0.000	916600	127104	7.21
	3.67	0.000	11674925	2322464	5.03
	4.48	0.000	9408885	915499	10.28
	6.72	0.000	192499	3249	59.25
	16.67	0.000	41	37	1.09



Sample Name : 63781 FK15E

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_034.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 2:07:59 PM

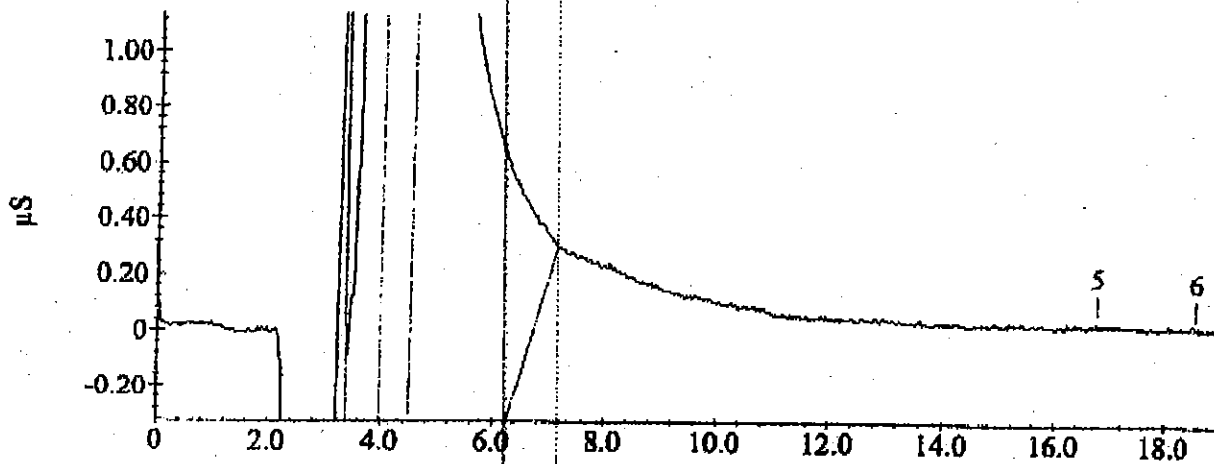
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.27	0.000	520936	64878	8.03
	3.67	0.000	26062275	4797394	5.43
	4.48	0.000	11669815	1192502	9.79
	4.58	0.000	48506708	10090383	4.81
	16.73	0.000	1415	128	11.02
	18.53	0.000	1232	30	41.05

63781 FK15E



Sample Name : 63781 FK15F

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_035.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 2:29:34 PM

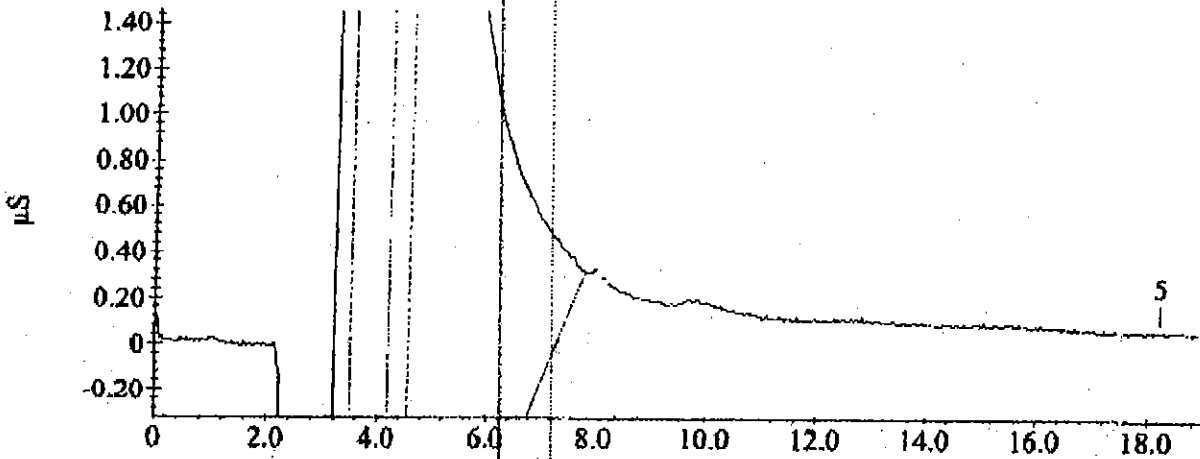
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.25	0.000	1266151	128534	9.85
	3.78	0.000	258867976	25487953	10.16
	4.38	0.000	13764317	1001710	13.74
	4.70	0.000	179449984	20664536	8.68
	18.20	0.000	2361	73	32.26

63781 FK15F



Sample Name : 63781 FK15G

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_036.DXD

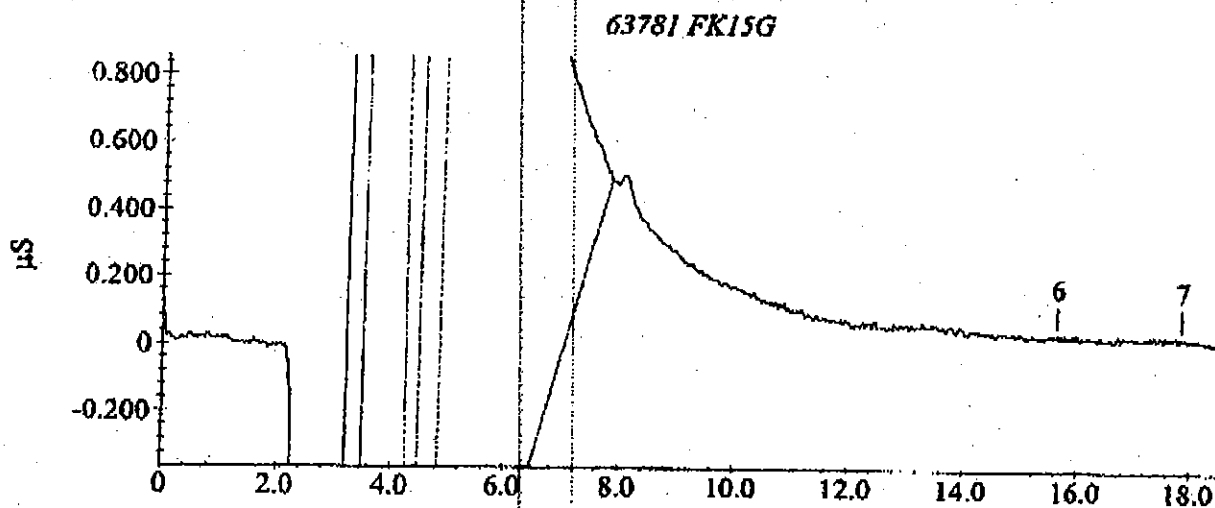
Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 2:51:09 PM

System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks					
Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/H Ratio
	3.27	0.000	1135724	124529	9.12
	3.75	0.000	207600304	22527370	9.22
	4.35	0.000	2531884	175341	14.44
	4.70	0.000	5231331	354102	14.77
	4.90	0.000	33722381	8267655	4.08
perchlorate	15.60	1.030	1777	80	22.18
	17.80	0.000	703	9	79.89



Sample Name : 63781 FK15H

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_037.DXD

Method File Name : c:\peaknet\method\perchlorate.met

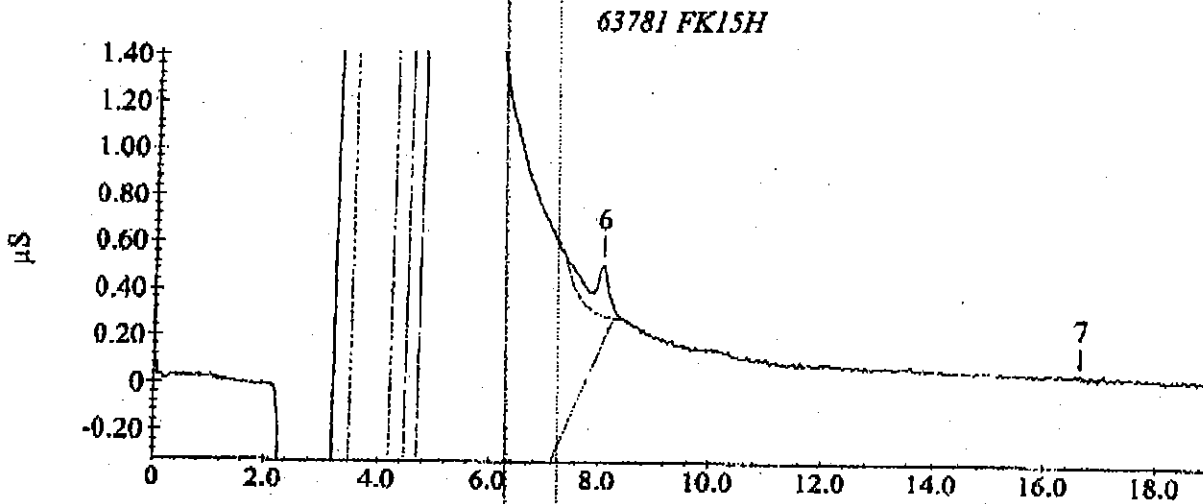
Date Time Collected : 4/21/03 3:12:45 PM

System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	3.27	0.000	1702955	204981	8.31
	3.80	0.000	279505406	26710280	10.46
	4.37	0.000	4516123	430652	10.49
	4.62	0.000	6005000	580329	10.35
	4.80	0.000	82688823	16849766	4.91
IODIDE	8.02	0.000	33157	2129	15.57
perchlorate 8.0L	16.60	0.703	1212	84	14.43



Sample Analysis Report

Sample Name : 63781 FK151

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_038.DXD

Method File Name : c:\peaknet\method\perchlorate.met

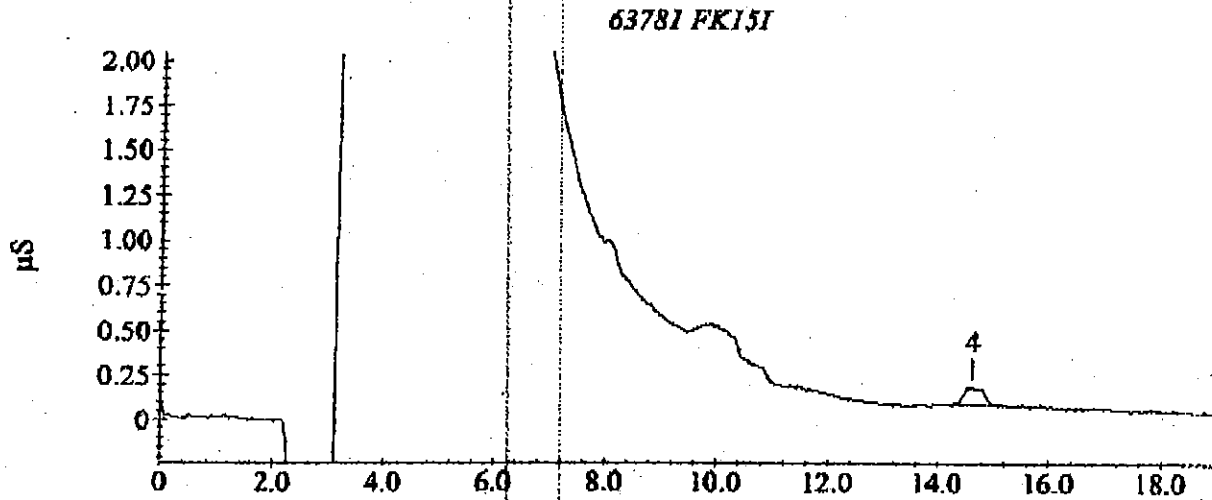
Date Time Collected : 4/21/03 3:34:20 PM

System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
	2.87	0.000	14896	2201	6.77
	3.92	0.000	57862268	3456826	16.74
	4.13	0.000	118134761	18334244	6.44
	14.60	0.000	22924	916	25.02



Sample Name : 50 ppb 450-00415-067-3

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_039.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 3:55:55 PM

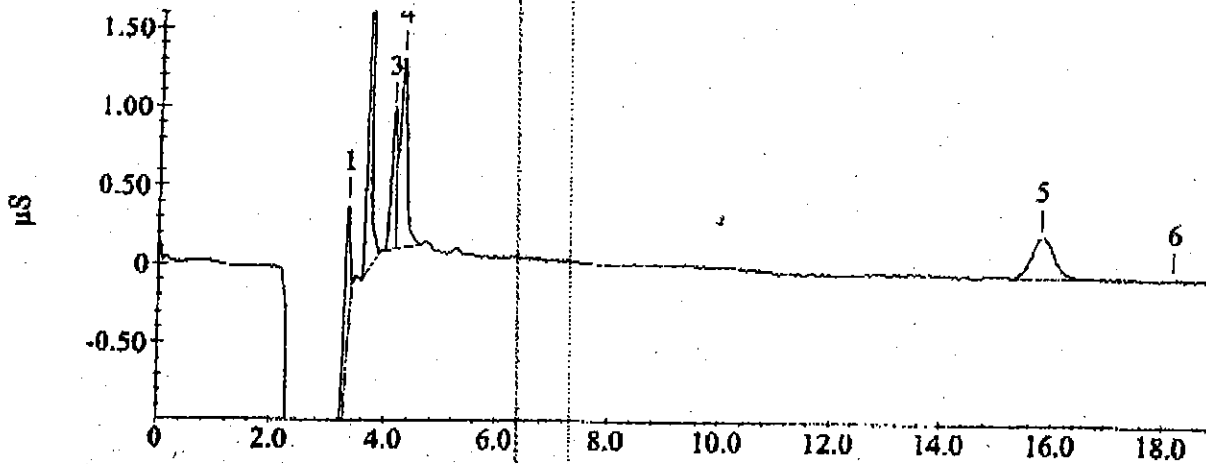
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/H Ratio
	3.30	0.000	85778	11324	7.57
	3.63	0.000	118196	23243	5.09
	4.07	0.000	56489	8755	6.45
	4.22	0.000	94877	12031	7.89
perchlorate	15.73	49.646	76315	2596	29.39
	18.13	0.000	617	28	21.72

50 ppb 450-00415-067-3



Sample Name : 63781 FK15A MS

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_040.DXD

Method File Name : c:\peaknet\method\perchlorate.met

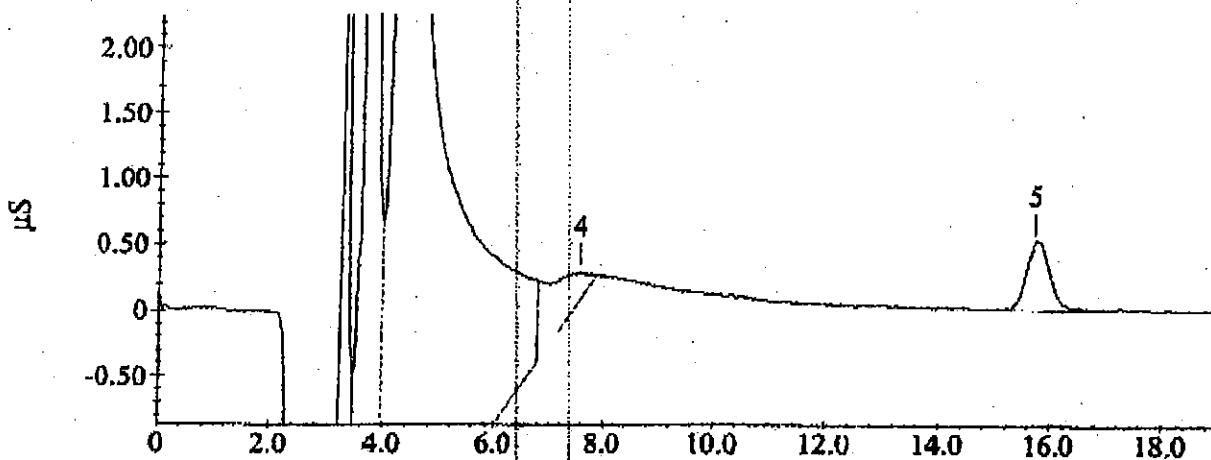
Date Time Collected : 4/21/03 4:17:32 PM

System Operator : JR

Dilution Factor : 1.01

Peak Information : All Peaks					
Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/H Ratio
	3.28	0.000	813630	105099	7.74
	3.67	0.000	8753112	1664962	5.26
	4.45	0.000	7461241	691654	10.79
IODIDE	7.53	0.000	91619	2094	43.75
perchlorate	15.67	98.782	153842	4990	30.83

63781 FK15A MS



Sample Name : 63781 FK15A MSD

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_041.DXD

Method File Name : c:\peaknet\method\perchlorate.met

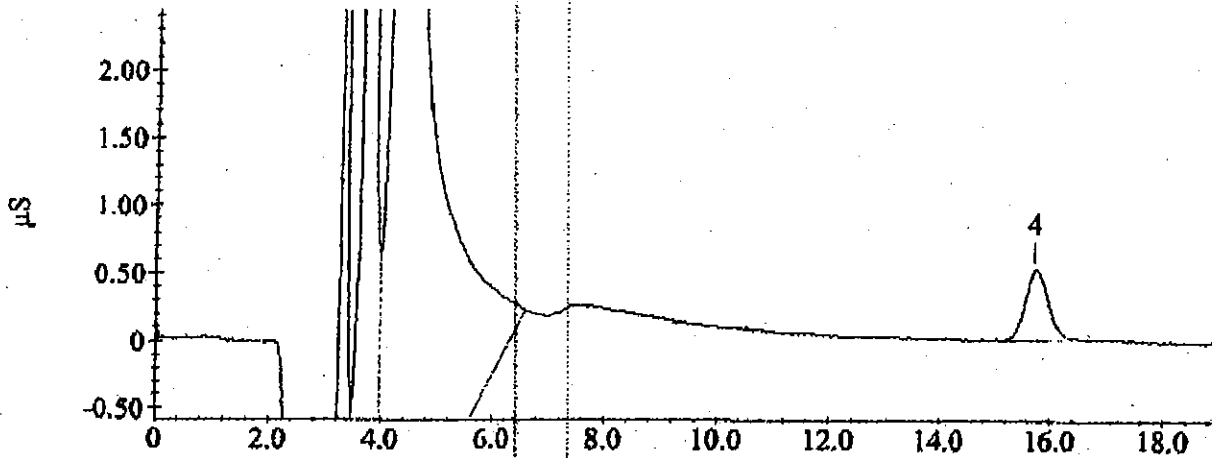
Date Time Collected : 4/21/03 4:39:06 PM

System Operator : JR

Dilution Factor : 1.01

Peak Information : All Peaks					
Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/ H Ratio
perchlorate	3.28	0.000	803637	103758	7.75
	3.67	0.000	8687017	1625205	5.35
	4.45	0.000	6606287	688461	9.60
	15.67	97.329	151527	5096	29.74

63781 FK15A MSD



Sample Name : 50 ppb 450-00415-067-3

Data File Name : C:\PEAKNET\DATA\0403\ANION\0421_042.DXD

Method File Name : c:\peaknet\method\perchlorate.met

Date Time Collected : 4/21/03 5:00:41 PM

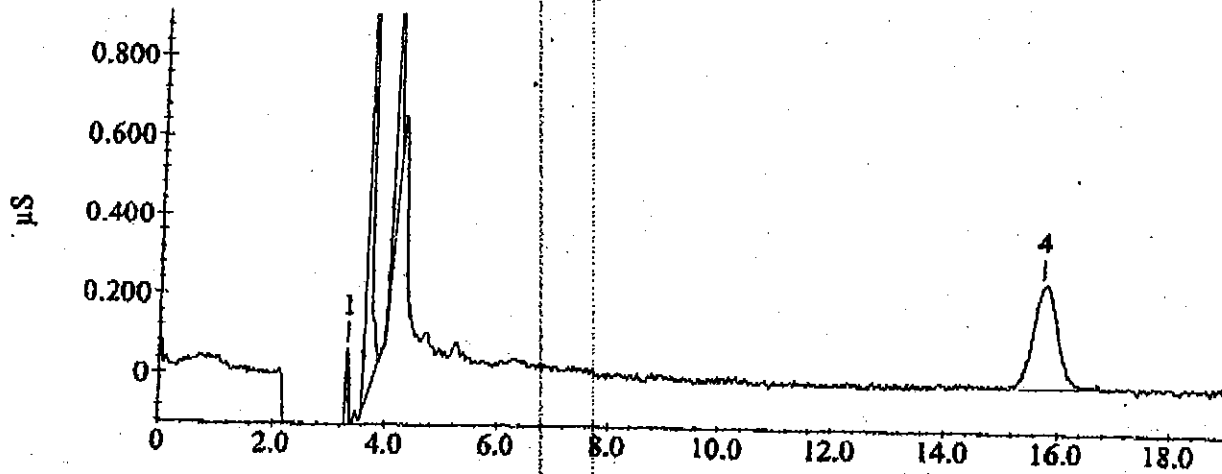
System Operator : JR

Dilution Factor : 1.00

Peak Information : All Peaks

Component Name	Ret. Time	Amount	Peak Area	Peak Height	Peak A/H Ratio
	3.30	0.000	72924	8370	8.71
	3.63	0.000	66344	12779	5.19
	4.08	0.000	32808	5833	5.62
perchlorate	15.67	50.222	77243	2517	30.69

50 ppb 450-00415-067-3



WELL SAMPLING DATA SHEET

Project: BRAC

DATE: 4/15/03 WELL NO: LCMW-015
 SAMPLERS: Jeff Dawson, Grant Dawson
 LOCATION: Camp Bonneville Vancouver, WA
 SAMPLE NO: 04150315

CASING MATERIAL: PVC
 CASING DIAMETER: 2 in CONSTRUCTED DEPTH: 20 ft
 PHYSICAL CONDITION OF WELL (caps, covers, locks): Good Screening Interval: 10-20 ft

FIELD MEASUREMENTS:
 DEPTH TO STATIC WATER: 3.95 ft DEPTH MEASURED FROM:
 TIME: 0913 Top of access port
 Mark on PVC casing
 Depth 4.76 ft Mark on protective casing
 Time 0957 Other

PURGING INFORMATION:
 PUMP: Dedicated Non-dedicated
 BAILER: PVC Stainless Steel Polyethylene

WATER CONDITIONS:

Time	0931	0935	0941	0945	0949
pH	5.26	5.68	5.99	6.08	6.15
Conductivity (umhos/cm)	0.111	0.110	0.109	0.108	0.107
Temperature (°C)	10.0	10.0	10.0	10.0	10.0
Turbidity (NTUs)	30.4	19.8	18.1	17.7	17.9
Gallons Purged	1.165	3	7	17	21
Dissolved O ₂	6.97	5.02	4.63	4.52	4.89

PURGE TIME INTERVAL: 0928 TO 0940
 APPROXIMATE GALLONS PURGED: 22 liters

SAMPLE COLLECTION DEVICE:
 PVC BAILER TEFLON BAILER POLYETHYLENE BAILER
 DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING SS BAILER
 OTHER pump tube

SAMPLING INFORMATION: SAMPLING TIME 0950
 DUPLICATES COLLECTED FIELD BLANK, EQUIPMENT BLANK
 QA SPLITS PROVIDED QA/QC VOLUMES COLLECTED

ANALYSES TO BE PERFORMED:
 EXPLOSIVES (8930) OTHER Metals
 NO₂, NO₃ TPH VOCs

NOTES: 00-6.97, 5.02, 4.63, 4.52, 4.89

Perchlorate and anions analysis

WELL SAMPLING DATA SHEET

Project: BRAC

DATE: 4/15/03 WELL NO.: LCMW-010
SAMPLERS: Jess Dawson, Grant Dawson
LOCATION: Camp Banneville Vancouver, WA
SAMPLE NO.: 04150310

CASING MATERIAL: PVC
CASING DIAMETER: 2.0 CONSTRUCTED DEPTH: 39.83 ft
PHYSICAL CONDITION OF WELL (caps, covers, locks): Good Screening Interval: 29.83-39.83 ft

FIELD MEASUREMENTS:
DEPTH TO STATIC WATER: 1009 DEPTH MEASURED FROM:
TIME: 4:43 ft _____ Top of access port
Depth 7.62 ft Mark on PVC casing
Time 1033 _____ Mark on protective casing
_____ Other

PURGING INFORMATION:
PUMP: _____ Dedicated Non-dedicated
BAILER: _____ PVC _____ Stainless Steel _____ Polyethylene

WATER CONDITIONS:

Time	1014	1018	1022	1027
pH	6.47	6.46	6.50	6.50
Conductivity (umhos) (mS/cm)	0.120	0.120	0.119	0.119
Temperature (°C)	10.4	10.7	10.8	10.7
Turbidity (NTUs)	35.1	48.6	68.7	48.5
Gallons Purged	1	3	6	11
00	8.02	4.95	4.60	4.69

PURGE TIME INTERVAL: 1013 TO 1030
APPROXIMATE GALLONS PURGED: 13 liters

SAMPLE COLLECTION DEVICE:
_____ PVC BAILER _____ TEFLON BAILER _____ POLYETHYLENE BAILER
_____ DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING _____ SS BAILER
 OTHER Pump tube

SAMPLING INFORMATION: _____ SAMPLING TIME 1030
_____ DUPLICATES COLLECTED _____ FIELD BLANK, EQUIPMENT BLANK
_____ QA SPLITS PROVIDED _____ QA/QC VOLUMES COLLECTED

ANALYSES TO BE PERFORMED:
 EXPLOSIVES (8330) OTHER _____ Metals
 NO₂, NO₃ _____ TPH _____ VOCs

NOTES: 00 - 8.02, 4.95, 4.60, 4.69

Perchlorate and anions analysis

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WELL SAMPLING DATA SHEET

Project: BRAC

DATE: 04/15/03 WELL NO.: LCMW025
SAMPLERS: Jeff Dawson, Grant Dawson
LOCATION: Camp Bonneville Vancouver, WA
SAMPLE NO.: 04150325

CASING MATERIAL: PVC
CASING DIAMETER: 2.0 CONSTRUCTED DEPTH: 15
PHYSICAL CONDITION OF WELL (caps, covers, locks): _____ Screening Interval: 10-15 ft

FIELD MEASUREMENTS:
DEPTH TO STATIC WATER: 4.73 DEPTH MEASURED FROM: _____
TIME: 1118 _____ Top of access port
X Mark on PVC casing
_____ Mark on protective casing
_____ Other

Depth 4.93
Time 1143

PURGING INFORMATION:
PUMP: _____ Dedicated _____ X Non-dedicated
BAILER: _____ PVC _____ Stainless Steel _____ Polyethylene

WATER CONDITIONS:

Time	<u>1126</u>	<u>1130</u>	<u>1134</u>	<u>1138</u>		
pH	<u>6.55</u>	<u>6.53</u>	<u>6.53</u>	<u>6.55</u>		
Conductivity (umhos) (mS/cm)	<u>0.121</u>	<u>0.121</u>	<u>0.125</u>	<u>0.121</u>		
Temperature (°C)	<u>9.8</u>	<u>9.9</u>	<u>9.9</u>	<u>10.0</u>		
Turbidity (NTUs)	<u>90.1</u>	<u>44.9</u>	<u>50.6</u>	<u>59.5</u>		
Gallons Purged	<u>0.5</u>	<u>4</u>	<u>6</u>	<u>8</u>		
<u>00</u>	<u>6.80</u>	<u>5.45</u>	<u>5.35</u>	<u>5.61</u>		

PURGE TIME INTERVAL: 1128 TO 1138
APPROXIMATE GALLONS PURGED: 8 liters

SAMPLE COLLECTION DEVICE:
_____ PVC BAILER _____ TEFLON BAILER _____ POLYETHYLENE BAILER
_____ DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING _____ SS BAILER
X OTHER pump take

SAMPLING INFORMATION: _____ SAMPLING TIME 1140
_____ DUPLICATES COLLECTED _____ FIELD BLANK, EQUIPMENT BLANK
_____ QA SPLITS PROVIDED _____ QA/QC VOLUMES COLLECTED

ANALYSES TO BE PERFORMED:
_____ EXPLOSIVES (8339) _____ X OTHER _____ Metals
X NO₂, NO₃ _____ TPH _____ VOCs

NOTES:
Perchlorate and Anions Analysis

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WELL SAMPLING DATA SHEET

Project: BRAC

DATE: 04/15/03 WELL NO.: LC MW - 02 D
SAMPLERS: Grant Dawson Grant Dawson
LOCATION: Camp Bonneville Vancouver, WA
SAMPLE NO.: 04150320

CASING MATERIAL: PVC
CASING DIAMETER: 2 in CONSTRUCTED DEPTH: 35 ft
PHYSICAL CONDITION OF WELL (caps, covers, locks): Good Screening Interval: 25-35 ft

FIELD MEASUREMENTS:

DEPTH TO STATIC WATER: 5.06
TIME: 1048

Depth 9.45
Time 1115

DEPTH MEASURED FROM:

- Top of access port
- Mark on PVC casing
- Mark on protective casing
- Other

PURGING INFORMATION:

PUMP: Dedicated Non-dedicated
BAILER: PVC Stainless Steel Polyethylene

WATER CONDITIONS:

Time	1057	1101	1105	1109		
pH	6.70	6.61	6.57	6.55		
Conductivity (umhos) mS/cm	0.119	0.119	0.120	0.125		
Temperature (°C)	10.6	10.6	10.6	10.6		
Turbidity (NTUs)	44.7	45.7	23.8	20.4		
Gallons Purged (liters)	1	3	5	7		
DO	7.94	5.84	5.75	5.75		

PURGE TIME INTERVAL: 1055 to 1112
APPROXIMATE GALLONS PURGED: 8 liters

SAMPLE COLLECTION DEVICE:

PVC BAILER TEFLON BAILER POLYETHYLENE BAILER
 DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING SS BAILER
 OTHER pump tube

SAMPLING INFORMATION:

DUPLICATES COLLECTED: SAMPLING TIME 1112
QA SPLITS PROVIDED: FIELD BLANK, EQUIPMENT BLANK
QA/QC VOLUMES COLLECTED

ANALYSES TO BE PERFORMED:

EXPLOSIVES (8330) OTHER Metals
 NO₂ NO₃ TPH VOCs

NOTES:

Perchlorate and Anions Analysis

WELL SAMPLING DATA SHEET

Project: BRAC

DATE: 04/15/03 WELL NO.: LCMW-055
 SAMPLERS: Jeff Dawson, Grant Dawson
 LOCATION: Camp Bennett, Vancouver, WA
 SAMPLE NO.: 04150355

CASING MATERIAL: PVC
 CASING DIAMETER: 2 in CONSTRUCTED DEPTH: 37 ft
 PHYSICAL CONDITION OF WELL (caps, covers, locks): Good Screening Interval: 22-37 ft

FIELD MEASUREMENTS:
 DEPTH TO STATIC WATER: 6.48 ft DEPTH MEASURED FROM:
 TIME: 1304 Top of access port
Depth 21.22 ft Mark on PVC casing
 Time 1329 Mark on protective casing
 Other

PURGING INFORMATION:
 PUMP: Dedicated Non-dedicated
 BAILER: PVC Stainless Steel Polyethylene

WATER CONDITIONS:

Time	1312	1317	1321	1325
pH	6.98	7.10	7.14	7.17
Conductivity (umhos) (mS/cm)	0.472	0.469	0.469	0.474
Temperature (°C)	11.8	10.7	10.5	10.6
Turbidity (NTUs)	114	138	103	89.6
Gallons Purged	1.725	0.5	1	6
DO	3.25	0.00	0.00	0.06

PURGE TIME INTERVAL: 1312
 APPROXIMATE GALLONS PURGED: 6 liters

SAMPLE COLLECTION DEVICE:
 PVC BAILER TEFLON BAILER POLYETHYLENE BAILER
 DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING SS BAILER
 OTHER Pump tube

SAMPLING INFORMATION:
 DUPLICATES COLLECTED: FIELD BLANK, EQUIPMENT BLANK
 QA SPLITS PROVIDED: QA/QC VOLUMES COLLECTED
 SAMPLING TIME: 1327

ANALYSES TO BE PERFORMED:
 EXPLOSIVES (8330) OTHER Metals
 NO₂, NO₃ TPH VOCs

NOTES:
Perchlorate and anions

WELL SAMPLING DATA SHEET

62.5

Project: BRA C

DATE: 04/15/03 WELL NO.: LC MW-05D
SAMPLERS: Jeff Dawson, Grant Dawson
LOCATION: Camp Bonneville Vancouver, WA
SAMPLE NO: 0415035D

CASING MATERIAL: PVC CONSTRUCTED DEPTH: 62 ft
CASING DIAMETER: 2 in Screening Interval: 52-62 ft
PHYSICAL CONDITION OF WELL (caps, covers, locks): good

FIELD MEASUREMENTS:
DEPTH TO STATIC WATER: 0.21 ft DEPTH MEASURED FROM:
TIME: 1231 Top of access port
Depth 18.81 ft Mark on PVC casing
Time 1258 Mark on protective casing
 Other

PURGING INFORMATION:
PUMP: Dedicated Non-dedicated
BAILER: PVC Stainless Steel Polyethylene

WATER CONDITIONS:

Time	1240	1244	1248	1252
pH	6.84	6.85	6.89	6.87
Conductivity (umhos)	0.205	0.205	0.198	0.202
Temperature (°C)	11.2	11.3	12.1	11.1
Turbidity (NTUs)	393	248	179	126
Gallons Purged	2	4	5	6
DO	0.00	0.00	0.32	0.0

PURGE TIME INTERVAL: 1238 TO 1255
APPROXIMATE GALLONS PURGED: 7 liters

SAMPLE COLLECTION DEVICE:
 PVC BAILER TEFLON BAILER POLYETHYLENE BAILER
 DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING SS BAILER
 OTHER: pump tube

SAMPLING INFORMATION:
DUPLICATES COLLECTED: FIELD BLANK, EQUIPMENT BLANK
QA SPLITS PROVIDED: QATC VOLUMES COLLECTED
SAMPLING TIME: 1255

ANALYSES TO BE PERFORMED:
 EXPLOSIVES (8330) OTHER Metals
 NO₂, NO₃ TPH VOCs

NOTES:

Perchlorate and anions

WELL SAMPLING DATA SHEET

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Project: BRAC

DATE: 04115103 WELL NO.: LCMW-065
SAMPLERS: Jeff Dawson, Grant Dawson
LOCATION: Camp Bonneville, Vancouver, WA
SAMPLE NO.: 04150365

CASING MATERIAL: PVC CONSTRUCTED DEPTH: 15
CASING DIAMETER: 2.0 Screening Interval: 8-15
PHYSICAL CONDITION OF WELL (caps, covers, locks): Good

FIELD MEASUREMENTS:
DEPTH TO STATIC WATER: 4.97 ft
TIME: 1429
Depth 12.43 ft
Time 1452
DEPTH MEASURED FROM:
 Top of access port
 Mark on PVC casing
 Mark on protective casing
 Other

PURGING INFORMATION:
PUMP: Dedicated Non-dedicated
BAILER: PVC Stainless Steel Polyethylene

WATER CONDITIONS:

Time	1433	1437	1441	1445	1447	1448
pH	7.25	7.03	6.93	6.90	6.87	6.82
Conductivity (umhos) (mS/cm)	0.562	0.551	0.541	0.457	0.421	0.432
Temperature (°C)	9.7	9.6	9.5	9.3	9.4	9.4
Turbidity (NTUs)	59.4	44.4	12.6	73.7	11.8	11.2
Gallons Purged	0.5	2	3.5	6	7	7
00	0.69	0.00	0.00	0.00	0.00	0.00
PURGE TIME INTERVAL:	1433		10	1445		
APPROXIMATE GALLONS PURGED:		6				

SAMPLE COLLECTION DEVICE:
 PVC BAILER TEFLON BAILER POLYETHYLENE BAILER
 DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING SS BAILER
 OTHER: pump tube

SAMPLING INFORMATION:
DUPLICATES COLLECTED: SAMPLING TIME: 1448
FIELD BLANK, EQUIPMENT BLANK
QA SPLITS PROVIDED: QA/QC VOLUMES COLLECTED:

ANALYSES TO BE PERFORMED:
EXPLOSIVES (8330):
 NO₂, NO₃ OTHER: TPH Metals VOCs

NOTES:
Perchlorate and anions

WELL SAMPLING DATA SHEET

36.2 Project: BRAC

DATE: 0415103 WELL NO.: LCMW-085
 SAMPLERS: Jeff Dawson, Grant Dawson
 LOCATION: Camp Bagnerville Vancouver, WA
 SAMPLE NO.: 041503BS

CASING MATERIAL: PVC
 CASING DIAMETER: 2 in CONSTRUCTED DEPTH: 37
 PHYSICAL CONDITION OF WELL (caps, covers, locks): Good Screening Interval: 22-37

FIELD MEASUREMENTS:
 DEPTH TO STATIC WATER: 6.43 ft DEPTH MEASURED FROM:
 TIME: 1529 Top of access port
Depth 1545 Mark on PVC casing
 Time 2310 ft Mark on protective casing
 Other

PURGING INFORMATION:
 PUMP: Dedicated Non-dedicated
 BAILER: PVC Stainless Steel Polyethylene

WATER CONDITIONS:

Time	1529	1533	1537	1541	
pH	7.07	7.04	7.01	7.00	
Conductivity (umhos)/(mS/cm)	2.23	2.20	2.20	2.20	
Temperature (°C)	10.7	10.2	10.4	10.5	
Turbidity (NTUs)	73.8	19.9	39.5	37.6	
Gallons Purged	1.145	0.1	5	7	
DO	2.89	0.00	0.60	0.00	
PURGE TIME INTERVAL:	1529		TO	1541	
APPROXIMATE GALLONS PURGED:			7		

SAMPLE COLLECTION DEVICE:
 PVC BAILER TEFLON BAILER POLYETHYLENE BAILER
 DEDICATED PUMP WITH PVC PIPE AND TYGON TUBING SS BAILER
 OTHER: pump tube

SAMPLING INFORMATION:
 SAMPLING TIME: 1545
 DUPLICATES COLLECTED FIELD BLANK, EQUIPMENT BLANK
 QA/QC SPLITS PROVIDED QA/QC VOLUMES COLLECTED

ANALYSES TO BE PERFORMED:
 EXPLOSIVES (8330) OTHER Metals
 NO₂, NO₃ TPH VOCs

NOTES:
Perchlorate and Anions



APPENDIX E
PPC Data – QA/QC Summaries

PPC Data and QA/QC Summaries



STL

STL Seattle
5755 8th Street East
Tacoma, WA 98424

Tel: 253 922 2310
Fax: 253 922 5047
www.stl-inc.com

TRANSMITTAL MEMORANDUM

DATE: April 25, 2003

TO: Jeff Dawson
Project Performance Corporation
64213 Grover
West Richland, WA 99353

PROJECT: Camp Bonneville

REPORT NUMBER: 113117

TOTAL NUMBER OF PAGES: _____

Enclosed are the test results for nine samples received at STL Seattle on April 16, 2003. The perchlorate analyses were subcontracted to STL Denver, and the perchlorate data follows the STL Seattle data.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

Katie Downie
Project Manager

STL Seattle is a part of Severn Trent Laboratories, Inc.

This report is issued solely for the use of the person or company to whom it is addressed. Any use, copying or disclosure other than by the intended recipient is unauthorized. If you have received this report in error, please notify the sender immediately at 253-922-2310 and destroy this report immediately.

100001

STL Seattle

Sample Identification:

<u>Lab. No.</u>	<u>Client ID</u>	<u>Date/Time Sampled</u>	<u>Matrix</u>
113117-1	0415031S	04-15-03 09:50	Liquid
113117-2	0415031D	04-15-03 10:30	Liquid
113117-3	0415032D	04-15-03 11:12	Liquid
113117-4	0415032S	04-15-03 11:40	Liquid
113117-5	0415035D	04-15-03 12:55	Liquid
113117-6	0415035S	04-15-03 13:27	Liquid
113117-7	0415036S	04-15-03 14:48	Liquid
113117-8	0415037S	04-15-03 15:18	Liquid
113117-9	0415038S	04-15-03 15:45	Liquid

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STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415031S
Lab ID:	113117-01
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	ND	0.61	0.3	

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415031D
Lab ID:	113117-02
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	ND	0.61	0.3	

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415032D
Lab ID:	113117-03
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate\Nitrite	ND	0.61	0.3	

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415032S
Lab ID:	113117-04
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	ND	0.61	0.3	

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415035D
Lab ID:	113117-05
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate\Nitrite	1.16	0.61	0.3	

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415035S
Lab ID:	113117-06
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	1.11	0.61	0.3	

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415036S
Lab ID:	113117-07
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	ND	0.61	0.3	

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415037S
Lab ID:	113117-08
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	0.59	0.81	0.3	J

STL Seattle

Client Name	Project Performance Corporation
Client ID:	0415038S
Lab ID:	113117-09
Date Received:	4/16/03
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	10

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	2.23	0.61	0.3	

STL Seattle

Lab ID:	Method Blank - 1894
Date Received:	-
Date Prepared:	4/18/03
Date Analyzed:	4/18/03
% Solids	-
Dilution Factor	1

Anions by USEPA Method 300A

Analyte	Result (mg/L)	PQL	MRL	Flags
Nitrate/Nitrite	ND	0.061	0.03	

STL Seattle

Blank Spike Report

Lab ID: 1894
Date Prepared: 4/18/03
Date Analyzed: 4/19/03
QC Batch ID: 1894

Anions by USEPA Method 300A

Compound Name	Blank Result (mg/L)	Spike Amount (mg/L)	BS Result (mg/L)	BS % Rec.	Flag
Nitrate/Nitrite	0	6	5.8	96.6	

STL Seattle

Matrix Spike Report

Client Sample ID: W-3
Lab ID: 113184-01
Date Prepared: 4/18/03
Date Analyzed: 4/19/03
QC Batch ID: 1894

Anions by USEPA Method 300A

Compound Name	Sample Result (mg/L)	Spike Amount (mg/L)	MS Result (mg/L)	MS % Rec.	Flag
Nitrate/Nitrite	0	6	6.03	101	

STL Seattle

Duplicate Report

Client Sample ID: W-3
Lab ID: 113184-01
Date Prepared: 4/18/03
Date Analyzed: 4/19/03
QC Batch ID: 1894

Anions by USEPA Method 300A

Parameter Name	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD %	Flag
Nitrate/Nitrite	0	0	NC	

DATA QUALIFIERS AND ABBREVIATIONS

- B1:** This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2:** This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1:** Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be $\leq 40\%$.
- C2:** Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be $> 40\%$. The higher result was reported unless anomalies were noted.
- M:** GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D:** The reported result for this analyte was calculated based on a secondary dilution factor.
- E:** The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J:** The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL:** Maximum Contaminant Level
- MDL:** Method Detection Limit
- N:** See analytical narrative.
- ND:** Not Detected
- PQL:** Practical Quantitation Limit
- X1:** Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2:** Contaminant does not appear to be "typical" product.
- X3:** Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4:** RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a:** RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5:** Matrix spike recovery was not determined due to the required dilution.
- X6:** Recovery and/or RPD values for matrix spike/(matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7:** Recovery and/or RPD values for matrix spike/(matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a:** Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8:** Surrogate recovery was not determined due to the required dilution.
- X9:** Surrogate recovery outside advisory QC limits due to matrix interference.

2759 8th Street E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

Client: **GUARDIAN**
Address: **West Richland**
City: **WA** State: **WA** Zip Code: **99171**

Project Manager: **Jeff Dawson** Date: **15 Apr 03** Chain of Custody Number: **00573**
 Telephone Number (Area Code)/Fax Number: **509-967-1118** Lab Number: **2117** Page: **1** of **1**
 Site Contact: **Paul ...** Lab Contact: **Paul ...**
 Carrier/Waybill Number: **10291-201**

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix				Containers & Preservatives				Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt	
			Aqueous	Sed.	Sol.	Unpres.	H2SO4	HNO3	HCl	NaOH			ZnAc/ NaOH
04150315	4/15/03	0430	X										
0415031D	4/15/03	1030	X										
0415032D	4/15/03	1112	X										
0415032S	4/15/03	1140	X										
0415035D	4/15/03	1255	X										
0415035S	4/15/03	1327	X										
0415036S	4/15/03	1448	X										
0415037S	4/15/03	1518	X										
0415038S	4/15/03	1545	X										

Cooler: Yes No Cooler Temp: _____
 Turn Around Time Required (business days): 24 Hours 48 Hours 5 Days 10 Days 15 Days Other _____
 Relinquished By: **Jeff Dawson** Date: **16 Apr 03** Time: **1215**
 Relinquished By: _____ Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Return To Client Archive For _____
 Sample Disposal: Disposal By Lab Months: _____
 (A fee may be assessed if samples are retained longer than 1 month)

QC Requirements (Specify):
 1. Received By: **Jeff Dawson** Date: **4/16/03** Time: **1215**
 2. Received By: _____ Date: _____ Time: _____
 3. Received By: _____ Date: _____ Time: _____

Comments: _____

ANALYTICAL REPORT

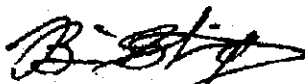
Camp Bonneville

Lot Number: D3D170302

Katie Downie

**STL Seattle
5755 8th Street E
Tacoma, WA 98424**

STL DENVER



**Brian Stringer
Project Manager**

April 23, 2003

Table Of Contents

Standard Deliverables with Supporting Documentation

Report Contents

Number of Pages

Standard Deliverables

(The Cover Letter and the Report Cover page are considered integral parts of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.)

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- Table of Contents
- Case Narrative
- Executive Summary – Detection Highlights
- Methods Summary
- Method/Analyst Summary
- Lot Sample Summary
- Analytical Results
- QC Data Association Summary
- Chain-of-Custody

Supporting Documentation

(Note: A one-page "Description of Supporting Documentation" is provided at the beginning of this section.)

Check below when supporting documentation is present.

- Volatile GC/MS
- Semivolatile GC/MS
- Volatile GC
- Semivolatile GC
- LC/MS or HPLC
- Metals
- General Chemistry
- Subcontracted Data

Case Narrative
Lot D3D170302

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted.

The test results presented in this report meet all requirements of NELAC, and any exceptions are noted. This report shall not be reproduced, except in full, without written permission from the laboratory.

Sample Receiving

Nine samples were received under chain of custody on April 17, 2003. The samples were received in good condition at a temperature of 4.8°C.

Perchlorates, Method EPA-DW1 314.0

The MS/MSD performed on sample D3D170302-001 was in control.

No anomalies were observed.

EXECUTIVE SUMMARY - Detection Highlights

D3D170302

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
NO DETECTABLE PARAMETERS				

METHODS SUMMARY

D3D170302

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Perchlorate	EPA-DW1 314.0	EPA 314.0

References:

EPA-DW1 "METHODS FOR THE DETERMINATION OF ORGANIC AND INORGANIC
COMPOUNDS IN DRINKING WATER," VOLUME 1, EPA 815-R-00-014.

METHOD / ANALYST SUMMARY

D3D170302

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
EPA-DW1 314.0	Lowell Coon	016091

References:

EPA-DW1 "METHODS FOR THE DETERMINATION OF ORGANIC AND INORGANIC
COMPOUNDS IN DRINKING WATER," VOLUME 1, EPA 815-R-00-014.

SAMPLE SUMMARY

D3D170302

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMPLE TIME
FL53F	001	113117-1	04/15/03	09:50
FL53H	002	113117-2	04/15/03	10:30
FL53K	003	113117-3	04/15/03	11:12
FL53L	004	113117-4	04/15/03	11:40
FL53M	005	113117-5	04/15/03	00:55
FL53P	006	113117-6	04/15/03	13:27
FL53Q	007	113117-7	04/15/03	14:48
FL53V	008	113117-8	04/15/03	15:18
FL53X	009	113117-9	04/15/03	15:45

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

STL SEATTLE

Client Sample ID: 113117-1

General Chemistry

Lot-Sample #...: D3D170302-001 Work Order #...: FL53F
Date Sampled...: 04/15/03 09:50 Date Received...: 04/17/03

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479

Dilution Factor: 1 Analysis Time...: 03:39

STL SEATTLE

Client Sample ID: 113117-2

General Chemistry

Lot-Sample #....: D3D170302-002 Work Order #....: FL53H
Date Sampled...: 04/15/03 10:30 Date Received...: 04/17/03

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479

Dilution Factor: 1 Analysis Time...: 04:38

STL SEATTLE

Client Sample ID: 113117-3

General Chemistry

Lot-Sample #....: D3D170302-003 Work Order #....: FL53K
Date Sampled....: 04/15/03 11:12 Date Received...: 04/17/03

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479

Dilution Factor: 1 Analysis Time..: 04:57

STL SEATTLE

Client Sample ID: 113117-4

General Chemistry

Lot-Sample #...: D3D170302-004 Work Order #...: FL53L Matrix.....: WATER
Date Sampled...: 04/15/03 11:40 Date Received...: 04/17/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479

Dilution Factor: 1 Analysis Time...: 05:17

STL SEATTLE

Client Sample ID: 113117-5

General Chemistry

Lot-Sample #...: D3D170302-005 Work Order #...: FL53M
Date Sampled...: 04/15/03 00:55 Date Received...: 04/17/03

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479

Dilution Factor: 1 Analysis Time.: 06:16

STL SEATTLE

Client Sample ID: 113117-6

General Chemistry

Lot-Sample #...: D3D170302-006 Work Order #...: PL53P Matrix.....: WATER
Date Sampled...: 04/15/03 13:27 Date Received...: 04/17/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479
		Dilution Factor: 1		Analysis Time...: 06:35		

0030

STL SEATTLE

Client Sample ID: 113117-7

General Chemistry

Lot-Sample #...: D3D170302-007 Work Order #...: PL53Q
Date Sampled...: 04/15/03 14:48 Date Received...: 04/17/03

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DWI 314.0	04/18/03	3108479

Dilution Factor: 1 Analysis Time...: 06:55

STL SEATTLE

Client Sample ID: 113117-8

General Chemistry

Lot-Sample #: D3D170302-008 Work Order #: FL53V Matrix: WATER
Date Sampled: 04/15/03 15:18 Date Received: 04/17/03

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479
		Dilution Factor: 1		Analysis Time: 07:14		

STL SEATTLE

Client Sample ID: 113117-9

General Chemistry

Lot-Sample #...: D3D170302-009 Work Order #...: FL53X
Date Sampled...: 04/15/03 15:45 Date Received...: 04/17/03

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate	ND	1.0	ug/L	EPA-DW1 314.0	04/18/03	3108479

Dilution Factor: 1 Analysis Time...: 07:34

QC DATA ASSOCIATION SUMMARY

D3D170302

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	EPA-DW1 314.0		3108479	3108255
002	WATER	EPA-DW1 314.0		3108479	3108255
003	WATER	EPA-DW1 314.0		3108479	3108255
004	WATER	EPA-DW1 314.0		3108479	3108255
005	WATER	EPA-DW1 314.0		3108479	3108255
006	WATER	EPA-DW1 314.0		3108479	3108255
007	WATER	EPA-DW1 314.0		3108479	3108255
008	WATER	EPA-DW1 314.0		3108479	3108255
009	WATER	EPA-DW1 314.0		3108479	3108255

METHOD BLANK REPORT

General Chemistry

Client Lot #...: D3D170302

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Perchlorate	ND	Work Order #: FL9AM1AA 1.0	ug/L	MB Lot-Sample #: EPA-DW1 314.0	D3D180000-479 04/18/03	3108479
		Dilution Factor: 1				
		Analysis Time...: 03:20				

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: D3D170302

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate			WO#: FL9AMLAC-LCS/FL9AMLAD-LCSD LCS Lot-Sample#: D3D180000-479				
	107	(85 - 115)			EPA-DW1 314.0	04/18/03	3108479
	106	(85 - 115)	1.8	(0-15)	EPA-DW1 314.0	04/18/03	3108479
			Dilution Factor: 1		Analysis Time...: 02:41		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: D3D170302

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate								
	10.0	10.7	ug/L	107		EPA-DW1 314.0	04/18/03	3108479
	10.0	10.6	ug/L	106	1.8	EPA-DW1 314.0	04/18/03	3108479

WO#: FL9AM1AC-LCS/FL9AM1AD-LCSD LCS Lot-Sample#: D3D180000-479

Dilution Factor: 1

Analysis Time...: 02:41

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: D3D170302

Matrix.....: WATER

Date Sampled...: 04/15/03 09:50 Date Received...: 04/17/03

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Perchlorate			WO#:	FL53FLAC-MS/FL53FLAD-MSD	MS Lot-Sample #:	D3D170302-001	
	102	(80 - 120)			EPA-DW1 314.0	04/18/03	3108479
	103	(80 - 120)	1.1	(0-15)	EPA-DW1 314.0	04/18/03	3108479

Dilution Factor: 1
Analysis Time...: 03:59

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #: D3D170302
 Date Sampled: 04/15/03 09:50 Date Received: 04/17/03

Matrix: WATER

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Perchlorate			WO#: FL53FLAC-MS/FL53FLAD-MSD				MS Lot-Sample #: D3D170302-001		
	ND	10.0	10.2	ug/L	102		EPA-DW1 314.0	04/18/03	3108479
	ND	10.0	10.3	ug/L	103	1.1	EPA-DW1 314.0	04/18/03	3108479
			Dilution Factor: 1						
			Analysis Time: 03:59						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

4/11/03

11000 001 SUBJECT E.
Tacoma, WA 98424
Tel. 253-922-2310
Fax 253-922-5047
www.stl-inc.com

Chain of Custody Record

Client: **STL SEATTLE** Project Manager: **KATIE DOWNIE** Date: **4-16-03** Chain of Custody Number: **00629**

Address: **5755 8th SA E** Telephone Number (Area Code)/Fax Number: **253 922 2310 / 253 922 5047** Lab Number: _____

City: **TACOMA** State: **WA** Zip Code: **98424** Site Contact: _____ Page: **1** of **1**

Project Name and Location (State): **CAMP BONNEVILLE** Carrier/Waybill Number: _____

Contract/Purchase Order/Quote No.: _____ Lab Contact: _____

Special Instructions/Conditions of Receipt: _____

Sample I.D. and Location/Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives					Analysis (Attach list if more space is needed)			
			Arsenic	As	Pb	Ag	Am	H2SO4	HNO3	HCl	HOAc	Zinc		None		
113117-1	4-15-03	9:50	X													
113117-2		10:30	X													
113117-3		11:12	X													
113117-4		11:40	X													
113117-5		12:55	X													
113117-6		13:27	X													
113117-7		14:48	X													
113117-8		15:18	X													
113117-9		15:45	X													

Please fax
by End of Day
4-22-03 &
follow w/1
REPORT by
4-30-03

Cooler: Yes No Cooler Temp: _____

Possible Hazard Identification: Non-Hazard Flammable Skin Irritant Poison B Unknown Disposal By Lab Sample Disposal Return To Client Archive For _____ Months

Turn Around Time Required (business days): 24 Hours 48 Hours 5 Days 10 Days 15 Days Other (OF DAY) 4:22

1. Relinquished By: **[Signature]** Date: **4-16-03** Time: **1:30P**

2. Relinquished By: **[Signature]** Date: _____ Time: _____

3. Relinquished By: _____ Date: _____ Time: _____

1. Received By: **[Signature]** Date: **4-16-03** Time: **8:30**

2. Received By: _____ Date: _____ Time: _____

3. Received By: _____ Date: _____ Time: _____

Comments: _____

General Chemistry

Supporting Documentation

Sample Sequence, Instrument Printouts, Calculations



STL

Method: Perchlorate

I certify that, to the best of my knowledge, the attached package represents a complete and accurate copy of the original data.

Signature/Date:  4/19/03

**GENERAL CHEMISTRY
CALIBRATION DATA**

SEVERN

TRENT

STL

Updated 02/01/03

Ion Chromatography Controls and Standards for Perchlorate

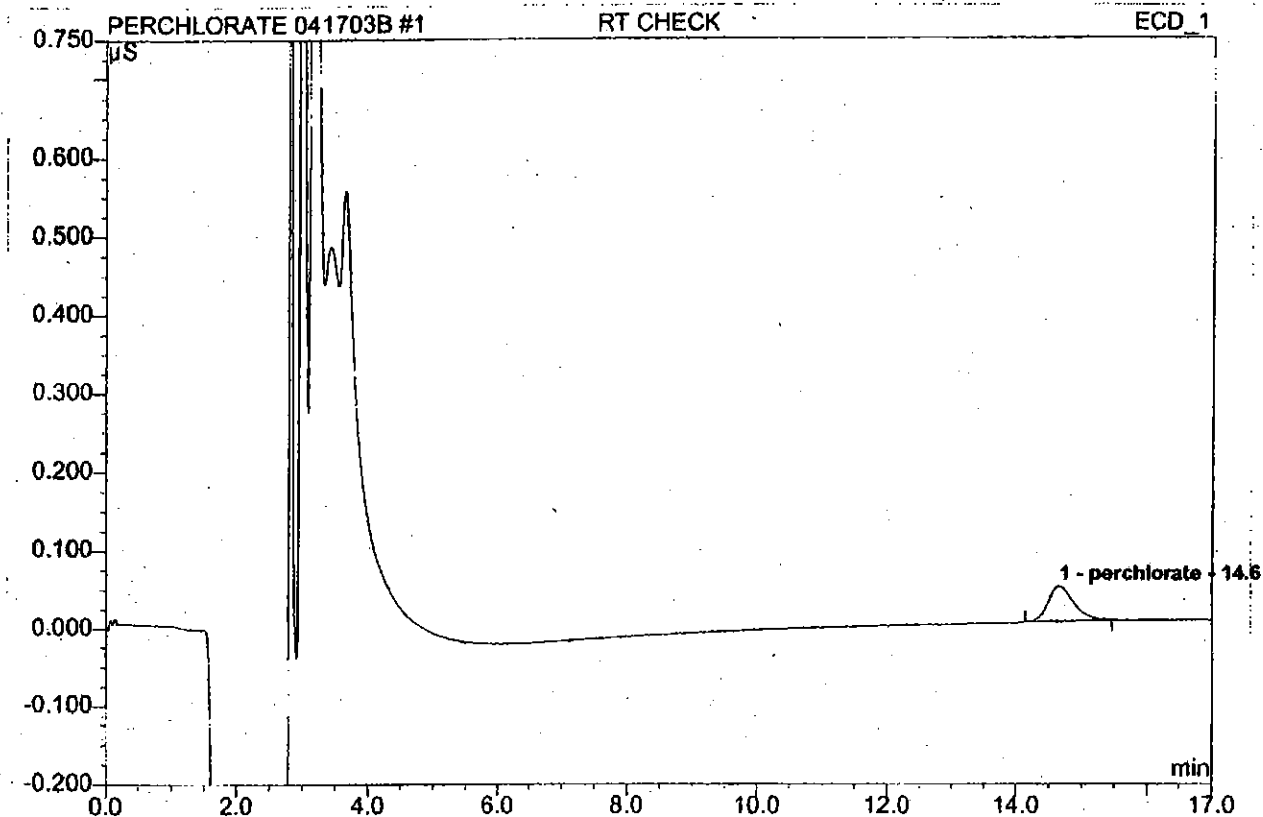
Analyte	ICV	CAL/LCS/CCV
Perchlorate	Fisher	Aldrich
Std #	std0013-01	std0015-01
Lot #	005008	mi13010mi
Expires	11/03/05	03/23/06

QC Standard Values

Method Name	Perchlorate	Low curve RL 1ppb	High curve RL 20ppb
	QC name	True value	True value
	ICV	20ppb	250ppb
	ICCS	1ppb	20ppb
	IPC	5ppb	50ppb
	LCS/CCV/DCS	10ppb	200ppb
	MS/SD	10ppb	100ppb

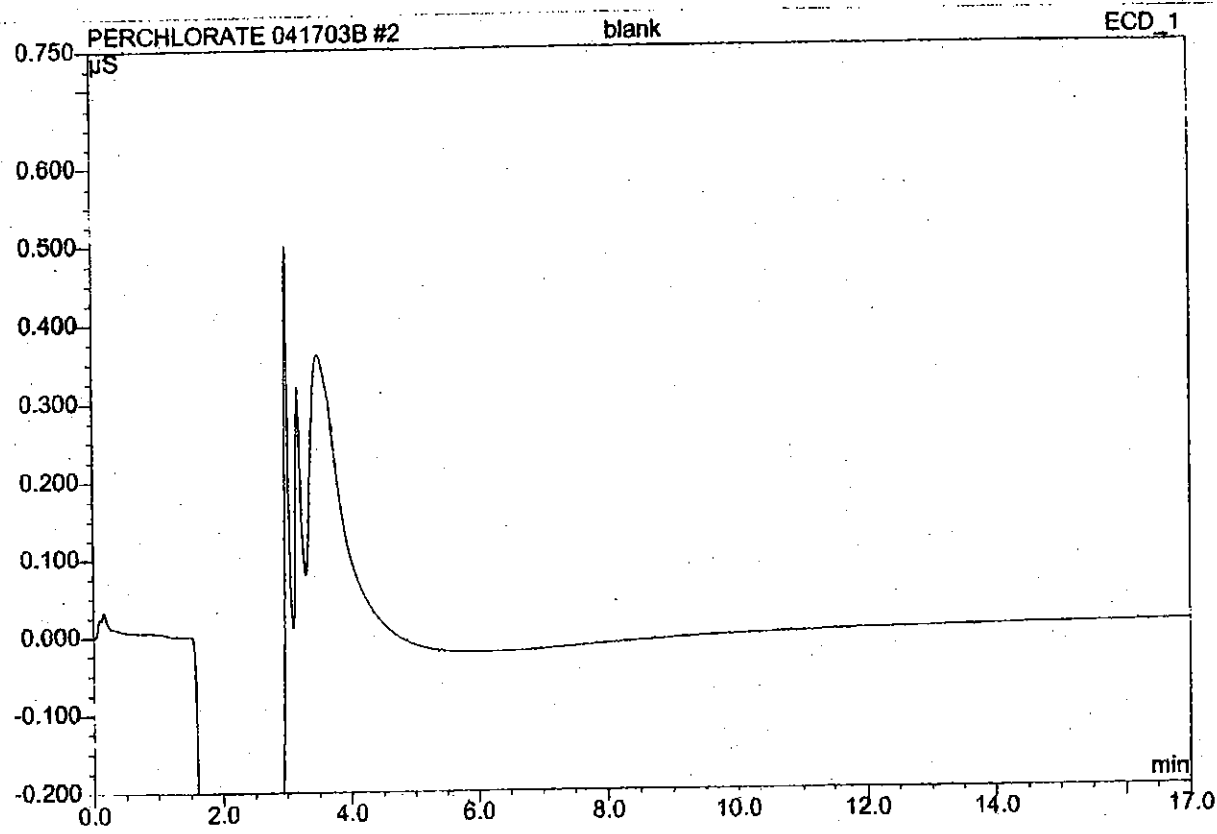
1 RT CHECK

Sample Name:	RT CHECK	Injection Volume:	1000.0
Vial Number:	1	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 19:39	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel.Area %	Amount $\mu\text{g/L}$	Type
1	14.65	perchlorate	0.045	0.0205	100.00	8.935	BMB
Total:			0.045	0.020	100.00	8.935	

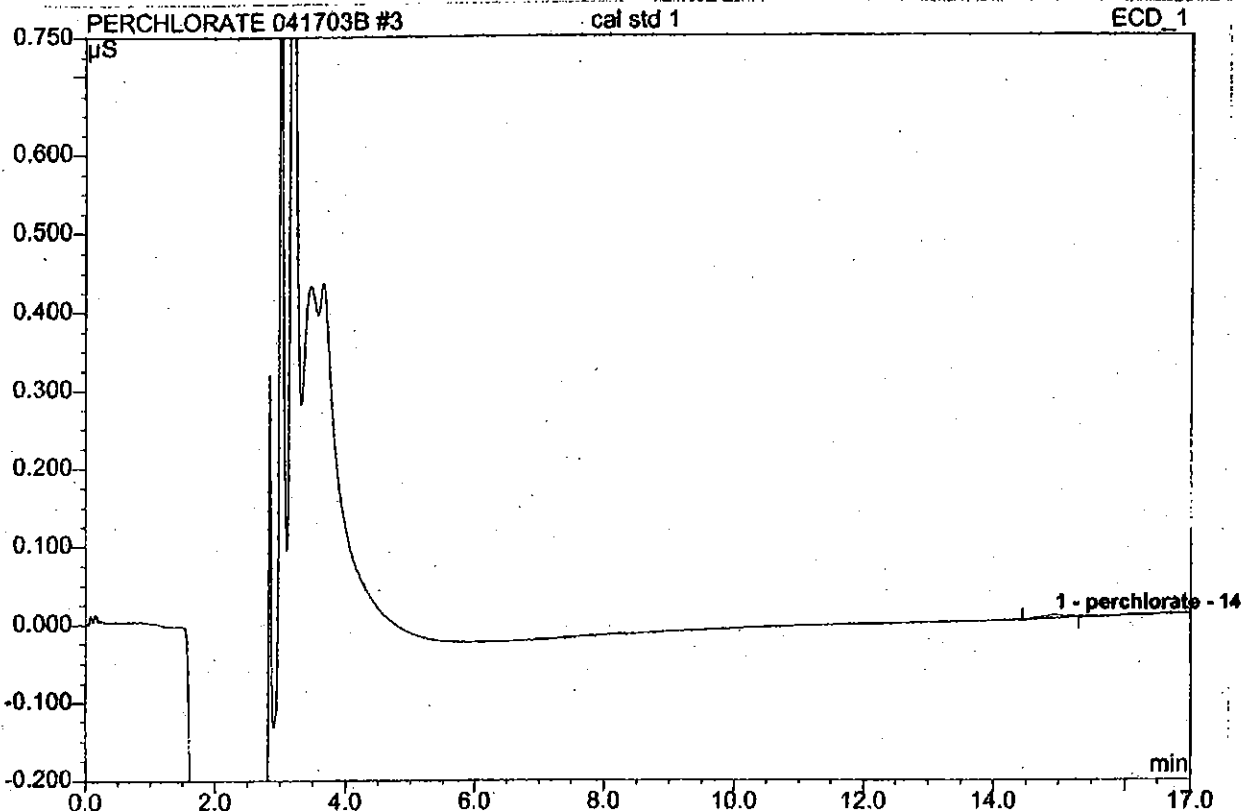
2 blank			
Sample Name:	blank	Injection Volume:	1000.0
Vial Number:	2	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 19:58	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

3 cal std 1

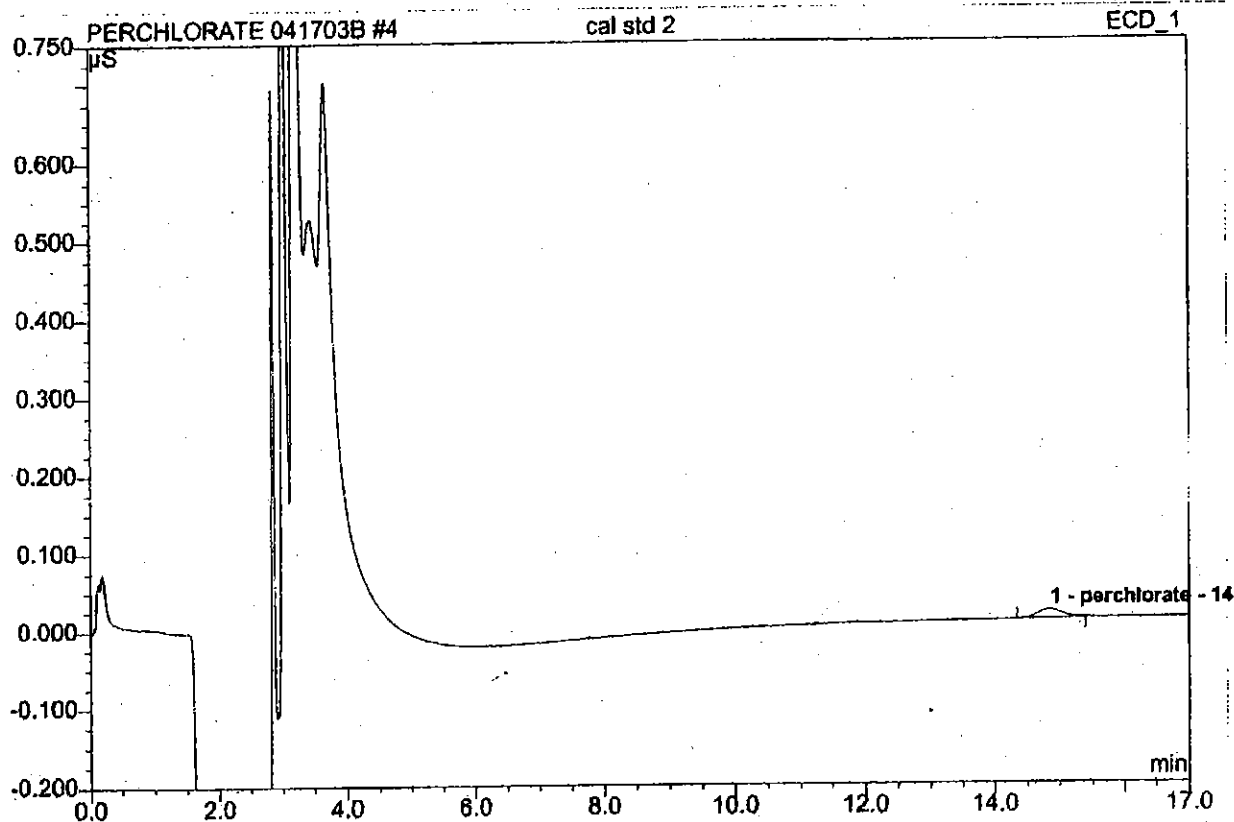
Sample Name:	cal std 1	Injection Volume:	1000.0
Vial Number:	3	Channel:	ECD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 20:18	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount ug/L	Type
1	14.95	perchlorate	0.004	0.0016	100.00	0.713	BMB
Total:			0.004	0.002	100.00	0.713	

4 cal std 2

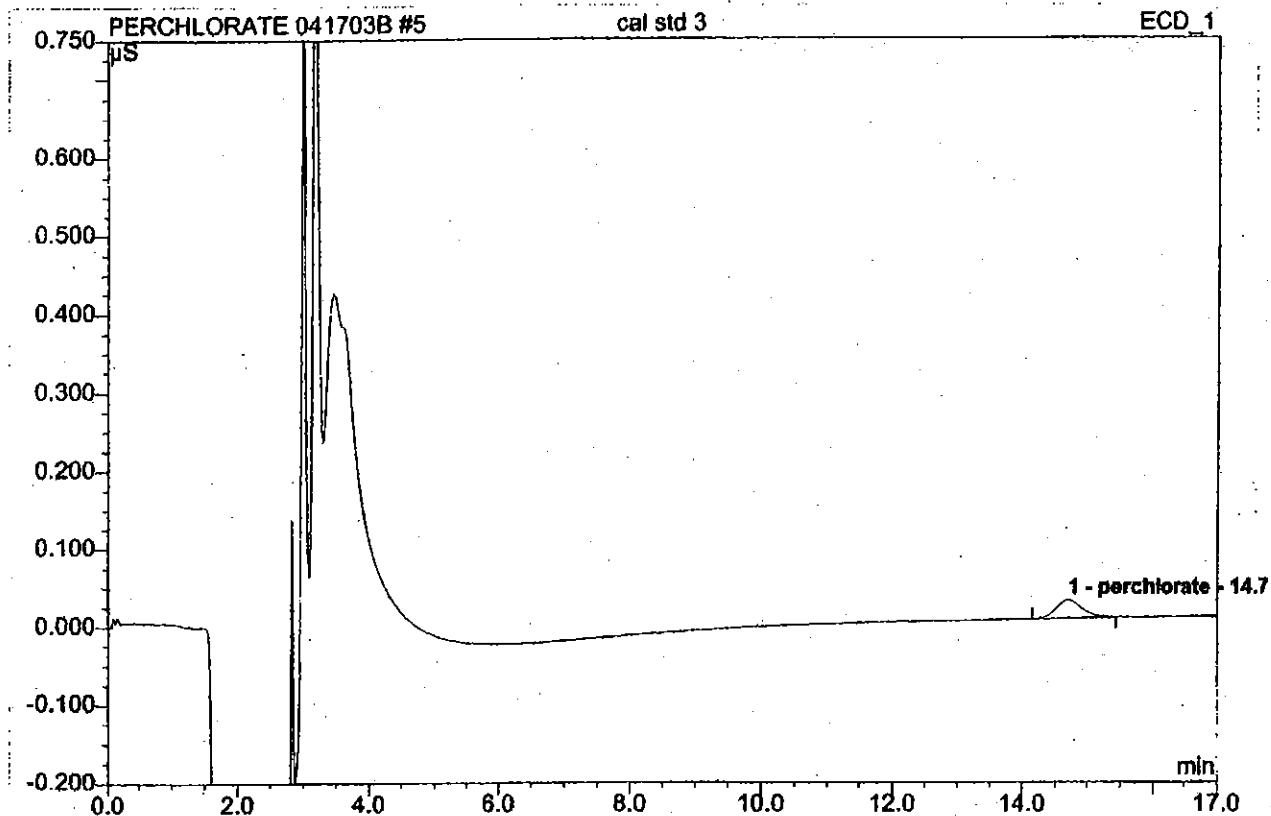
Sample Name:	cal std 2	Injection Volume:	1000.0
Vial Number:	4	Channel:	ECD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 20:37	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	14.85	perchlorate	0.011	0.0048	100.00	2.105	BMB
Total:			0.011	0.005	100.00	2.105	

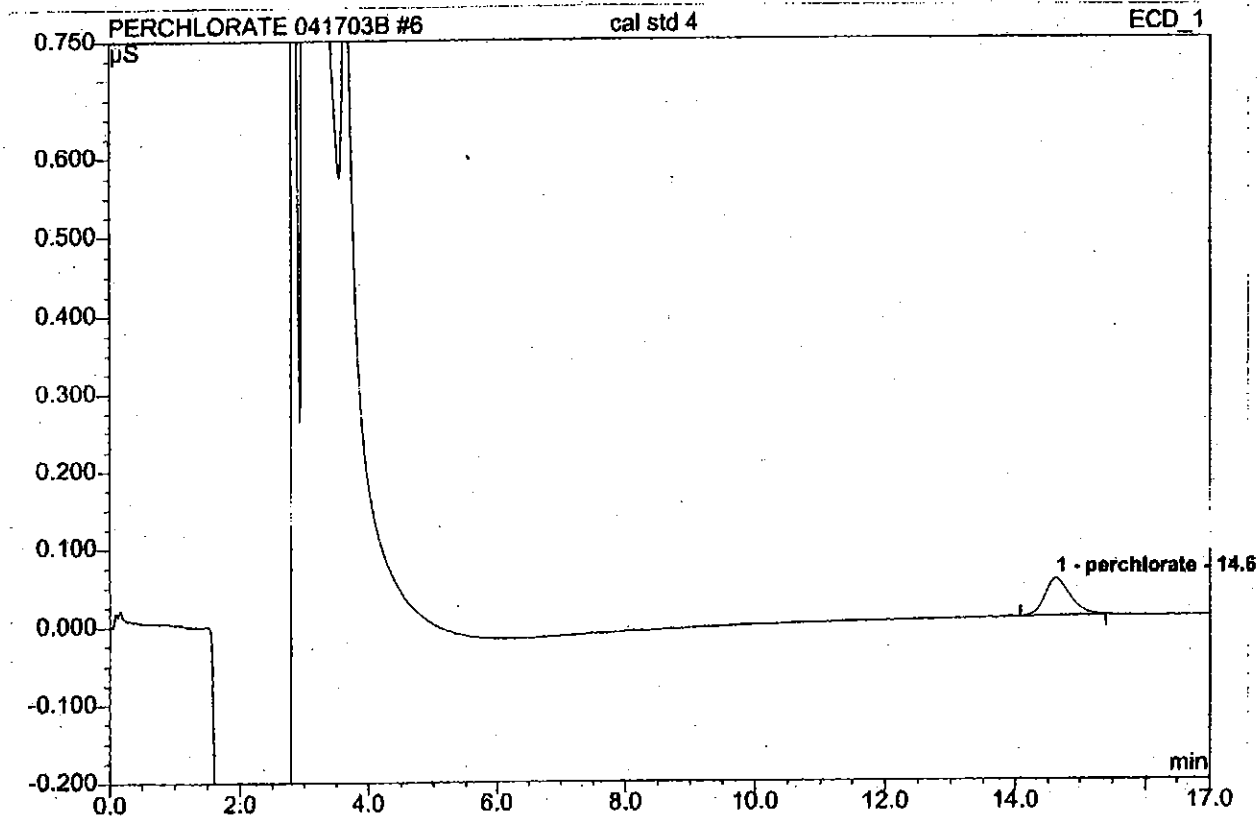
5 cal std 3

Sample Name:	cal std 3	Injection Volume:	1000.0
Vial Number:	5	Channel:	ECD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 20:57	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
1	14.70	perchlorate	0.024	0.0108	100.00	4.706	BMB
Total:			0.024	0.011	100.00	4.706	

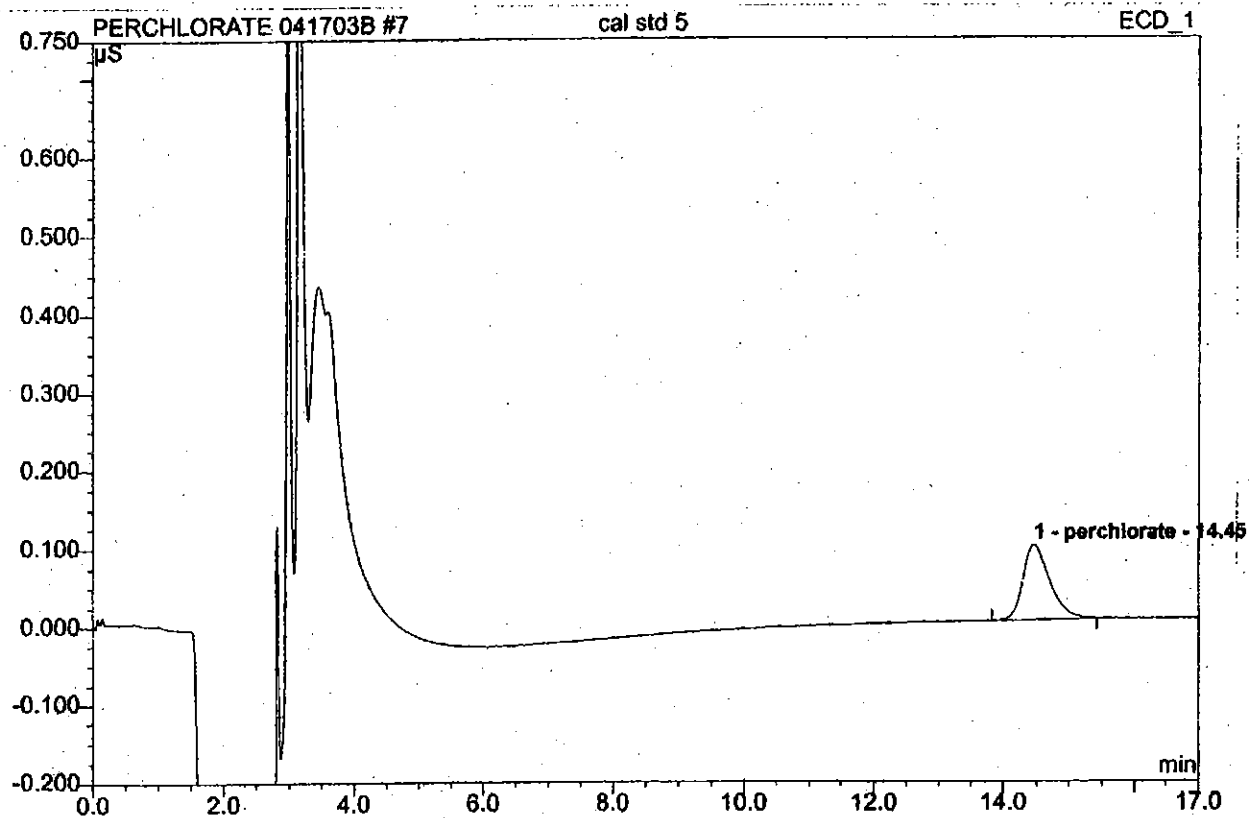
6 cal std 4			
Sample Name:	cal std 4	Injection Volume:	1000.0
Vial Number:	6	Channel:	ECD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 21:16	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
1	14.62	perchlorate	0.047	0.0215	100.00	9.380	BMB
Total:			0.047	0.021	100.00	9.380	

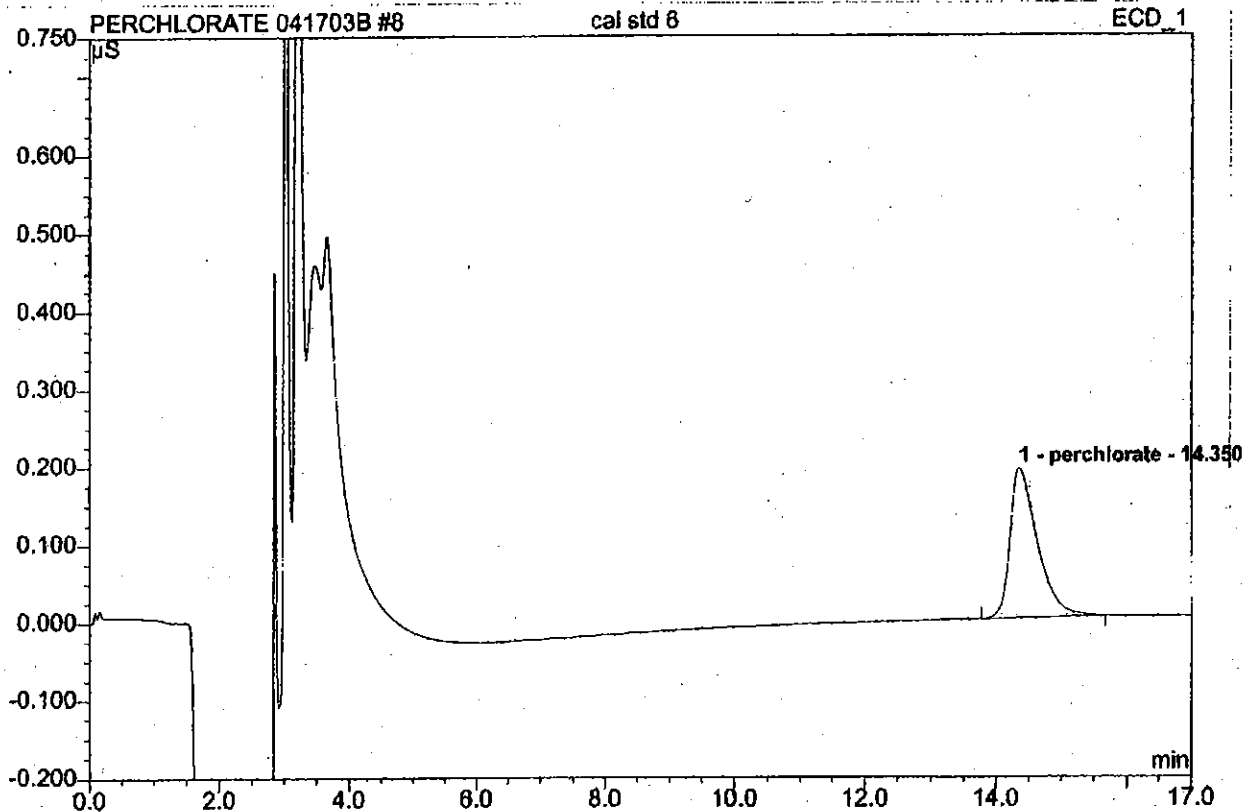
7 cal std 5

Sample Name:	cal std 5	Injection Volume:	1000.0
Vial Number:	7	Channel:	ECD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 21:36	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	14.46	perchlorate	0.096	0.0450	100.00	19.641	BMB
Total:			0.096	0.045	100.00	19.641	

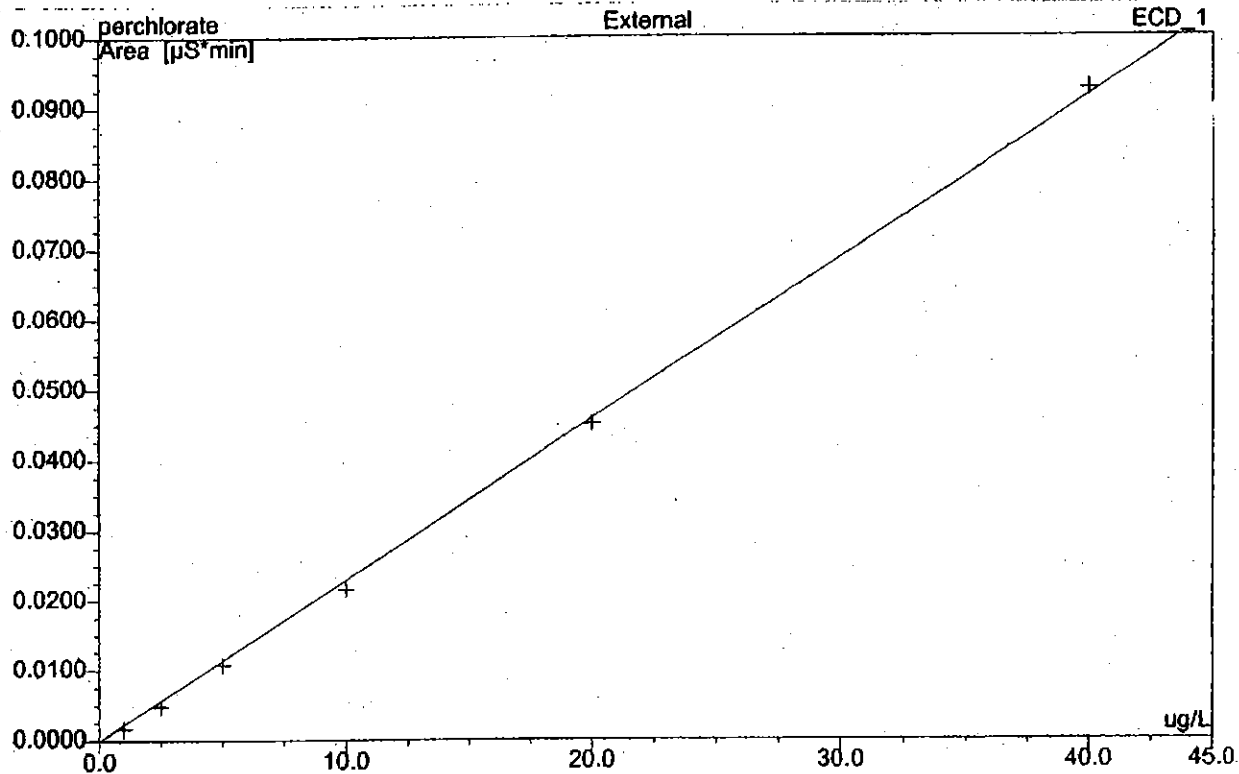
8 cal std 6			
Sample Name:	cal std 6	Injection Volume:	1000.0
Vial Number:	8	Channel:	ECD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 21:55	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount ug/L	Type
1	14.35	perchlorate	0.192	0.0925	100.00	40.403	BMB
Total:			0.192	0.093	100.00	40.403	

8 cal std 6

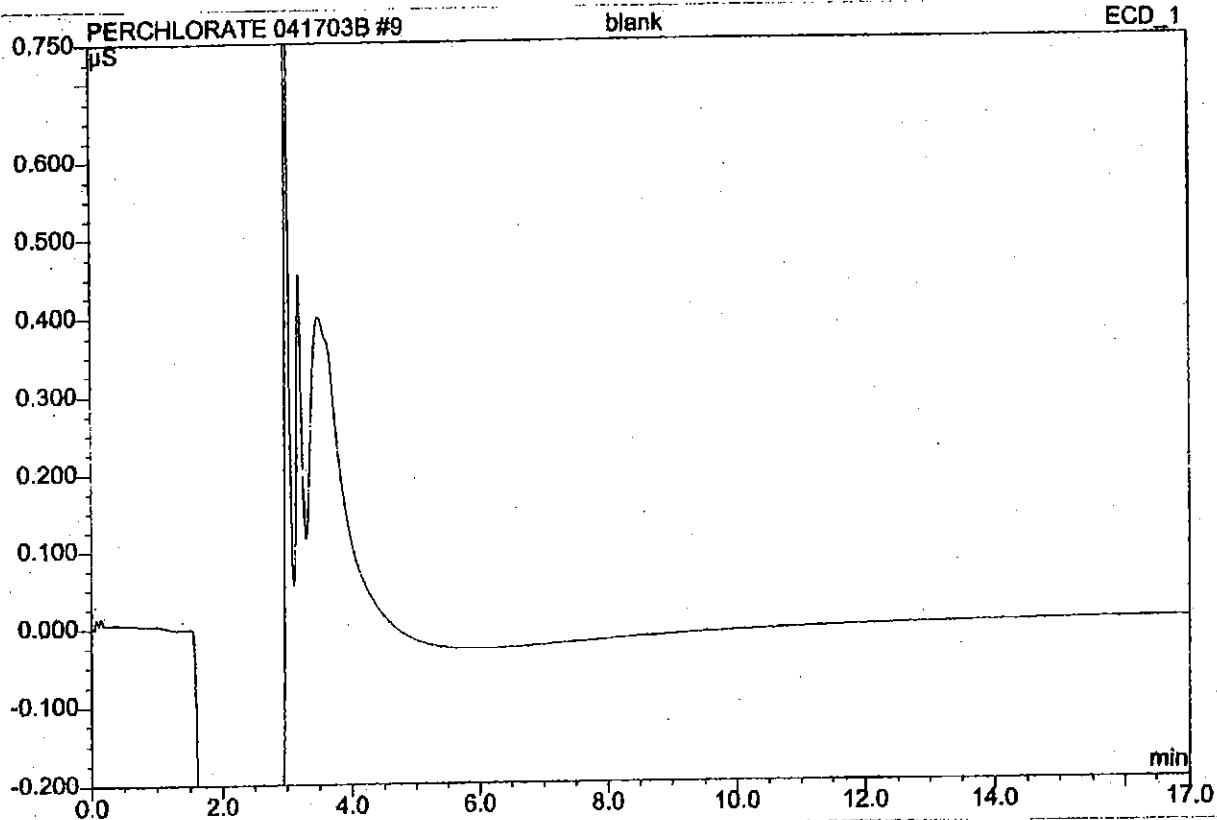
Sample Name:	cal std 6	Injection Volume:	1000.0
Vial Number:	8	Channel:	ECD_1
Sample Type:	standard	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 21:55	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Cal. Type	Points	Corr. Coeff. %	Offset	Slope	Curve
1	14.35	perchlorate	Lin	6	99.9901	0.0000	0.0023	0.0000
Average:					99.9901	0.0000	0.0023	0.0000

9 blank

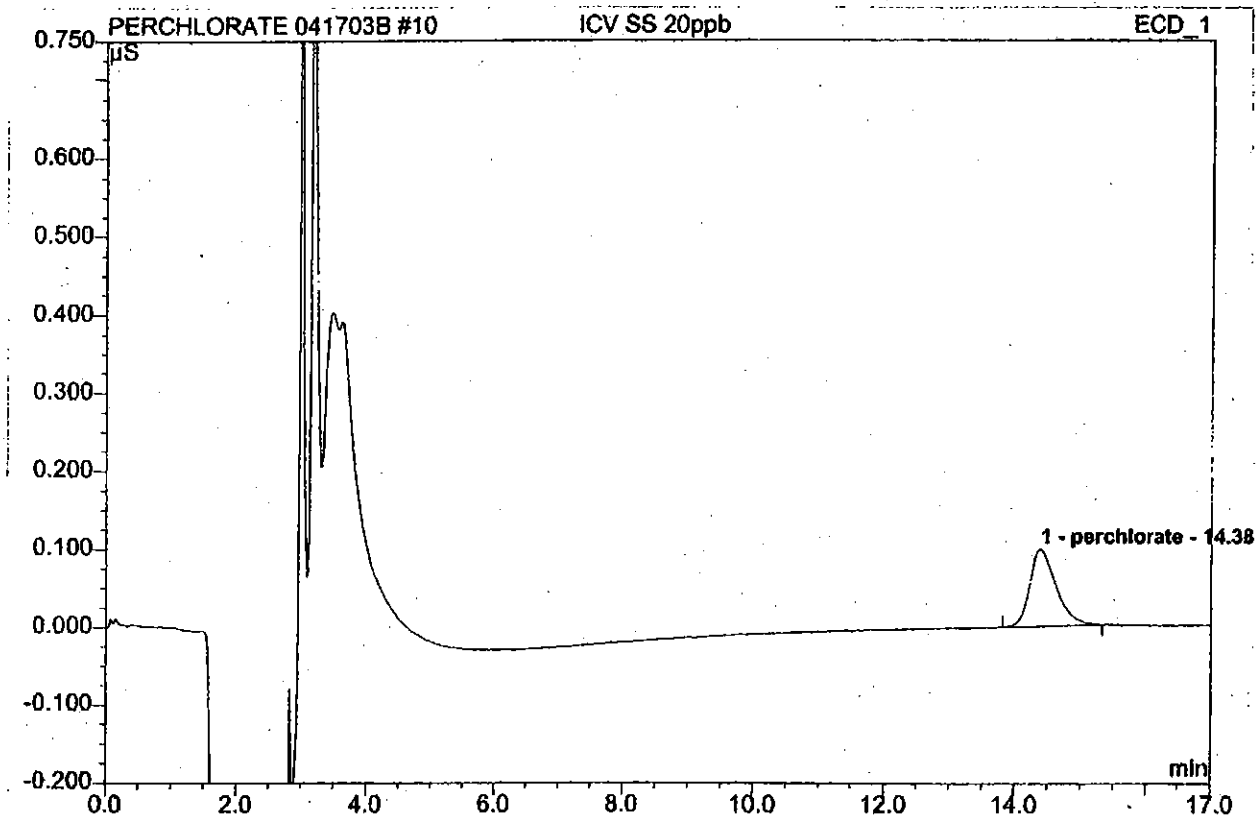
Sample Name:	blank	Injection Volume:	1000.0
Vial Number:	9	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 22:15	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

10 ICV SS 20ppb

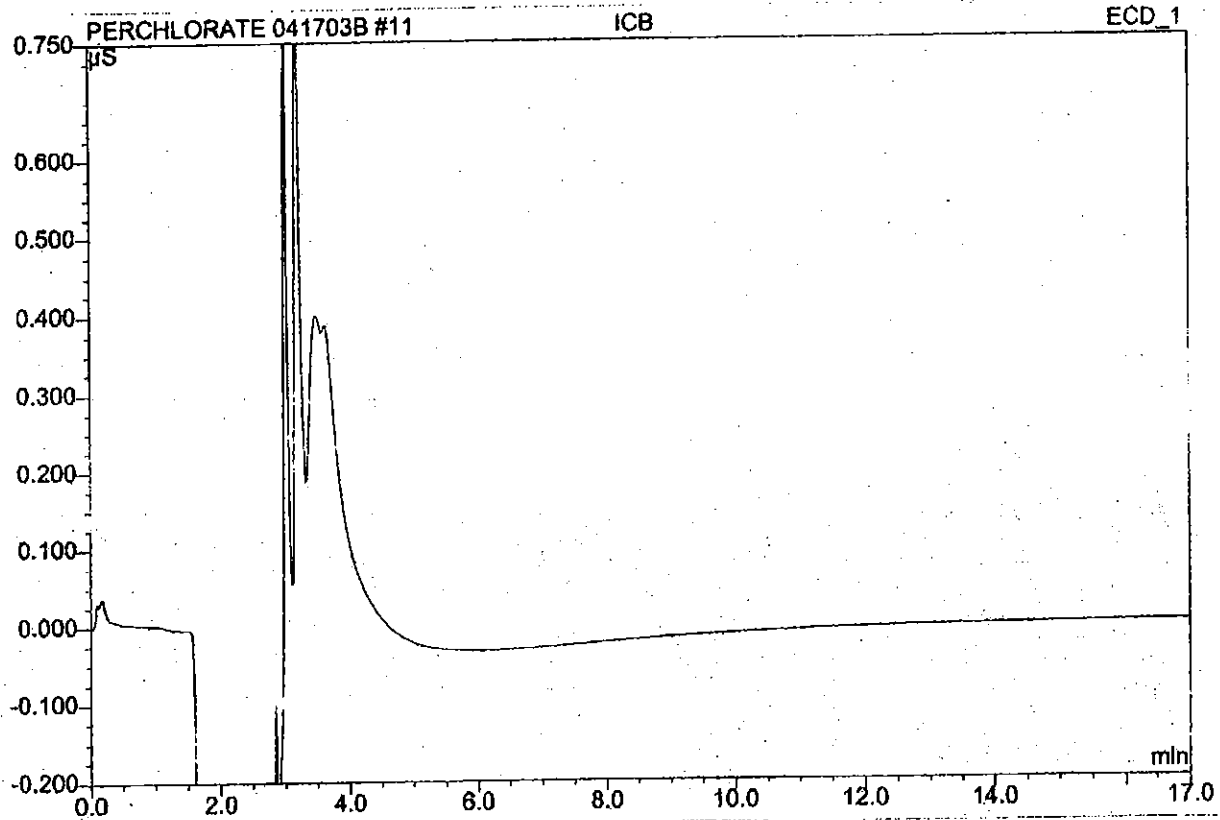
Sample Name:	ICV SS 20ppb	Injection Volume:	1000.0
Vial Number:	10	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 22:58	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	14.38	perchlorate	0.099	0.0455	100.00	19.879	BMB
Total:			0.099	0.046	100.00	19.879	

11 ICB

Sample Name:	ICB	Injection Volume:	1000.0
Vial Number:	11	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/16/2003 23:17	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

**GENERAL CHEMISTRY
SAMPLE DATA**

SEVERN

TRENT

STL

	MS Batch #		
	QC Batch #		3108479
Time	Sample Name	Dil.Fac.	Amount
			ug/L
			perchlorate
04.16.03 19:39	RT CHECK	1.0000	8.9350
04.16.03 19:58	blank	1.0000	n.a.
04.16.03 20:18	cal std 1	1.0000	0.7133
04.16.03 20:37	cal std 2	1.0000	2.1052
04.16.03 20:57	cal std 3	1.0000	4.7063
04.16.03 21:16	cal std 4	1.0000	9.3805
04.16.03 21:36	cal std 5	1.0000	19.8406
04.16.03 21:55	cal std 6	1.0000	40.4032
04.16.03 22:15	blank	1.0000	n.a.
04.16.03 22:58	ICV SS 20ppb	1.0000	19.8787
04.16.03 23:17	ICB	1.0000	n.a.
04.18.03 01:16	ICCS 1ppb	1.0000	0.7579
04.18.03 01:36	blank	1.0000	n.a.
04.18.03 02:21	IPC 5ppb	1.0000	4.2472
04.18.03 02:41	DCS-1/LCS 10ppb	1.0000	10.7465
04.18.03 03:00	DCS-2 10ppb	1.0000	10.5570
04.18.03 03:20	MTHD BLNK	1.0000	n.a.
04.18.03 03:39	FL53F D3D170302 -01	1.0000	n.a.
04.18.03 03:59	FL53F -01 MS	1.0000	10.1921
04.18.03 04:18	FL53F -01 SD	1.0000	10.3083
04.18.03 04:38	FL53H -02	1.0000	n.a.
04.18.03 04:57	FL53K -03	1.0000	n.a.
04.18.03 05:17	FL53L -04	1.0000	n.a.
04.18.03 05:36	CCV 10ppb	1.0000	11.0526
04.18.03 05:56	CCB	1.0000	n.a.
04.18.03 06:18	FL53M -05	1.0000	n.a.
04.18.03 06:35	FL53P -06	1.0000	n.a.
04.18.03 06:55	FL53Q -07	1.0000	n.a.
04.18.03 07:14	FL53V -08	1.0000	n.a.
04.18.03 07:34	FL53X -09	1.0000	n.a.
04.18.03 07:53	FL0T0 D3D150276 -01 20	20.0000	393.3063
04.18.03 08:13	FLT2W D3D120157 -01 20	2000.0000	20028.2225
04.18.03 08:32	FLT2W -11 100X	100.0000	2983.0010
04.18.03 08:52	FLT3Q -19 500X	500.0000	9811.5932
04.18.03 09:11	FLT3X -20 20X	20.0000	527.4887
04.18.03 09:31	CCV 10PPB	1.0000	10.7585
04.18.03 09:50	CCB	1.0000	n.a.

Title: IC5 anions sequence 11-14-02

Datasource: 3C7HN01_local

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences

Timebase: IC5

Created: 4/17/2003 7:53:18 PM by cooni

#Samples: 37

Last Update: 4/18/2003 2:29:46 AM by cooni

No.	Name	Type	Pos.	Inj. Vol.	Program
1	RT CHECK	Unknown	1	1000.0	Perchlorate Program 11-19-02
2	blank	Unknown	2	1000.0	Perchlorate Program 11-19-02
3	cal std 1	Standard	3	1000.0	Perchlorate Program 11-19-02
4	cal std 2	Standard	4	1000.0	Perchlorate Program 11-19-02
5	cal std 3	Standard	5	1000.0	Perchlorate Program 11-19-02
6	cal std 4	Standard	6	1000.0	Perchlorate Program 11-19-02
7	cal std 5	Standard	7	1000.0	Perchlorate Program 11-19-02
8	cal std 6	Standard	8	1000.0	Perchlorate Program 11-19-02
9	blank	Unknown	9	1000.0	Perchlorate Program 11-19-02
10	ICV SS 20ppb	Unknown	10	1000.0	Perchlorate Program 11-19-02
11	ICB	Unknown	11	1000.0	Perchlorate Program 11-19-02
12	ICCS 1ppb	Unknown	1	1000.0	Perchlorate Program 11-19-02
13	blank	Unknown	2	1000.0	Perchlorate Program 11-19-02
14	IPC 5ppb	Unknown	3	1000.0	Perchlorate Program 11-19-02
15	DCS-1/LCS 10ppb	Unknown	4	1000.0	Perchlorate Program 11-19-02
16	DCS-2 10ppb	Unknown	5	1000.0	Perchlorate Program 11-19-02
17	MTHD BLNK	Unknown	6	1000.0	Perchlorate Program 11-19-02
18	FL53F D3D170302 -01	Unknown	7	1000.0	Perchlorate Program 11-19-02
19	FL53F -01 MS	Unknown	8	1000.0	Perchlorate Program 11-19-02
20	FL53F -01 SD	Unknown	9	1000.0	Perchlorate Program 11-19-02
21	FL53H -02	Unknown	10	1000.0	Perchlorate Program 11-19-02
22	FL53K -03	Unknown	11	1000.0	Perchlorate Program 11-19-02
23	FL53L -04	Unknown	12	1000.0	Perchlorate Program 11-19-02
24	CCV 10ppb	Unknown	13	1000.0	Perchlorate Program 11-19-02
25	CCB	Unknown	14	1000.0	Perchlorate Program 11-19-02
26	FL53M -05	Unknown	15	1000.0	Perchlorate Program 11-19-02
27	FL53P -06	Unknown	16	1000.0	Perchlorate Program 11-19-02
28	FL53Q -07	Unknown	17	1000.0	Perchlorate Program 11-19-02
29	FL53V -08	Unknown	18	1000.0	Perchlorate Program 11-19-02
30	FL53X -09	Unknown	19	1000.0	Perchlorate Program 11-19-02
31	FL0T0 D3D150276 -01 20X	Unknown	20	1000.0	Perchlorate Program 11-19-02
32	FLT2L D3D120157-01 2000X	Unknown	21	1000.0	Perchlorate Program 11-19-02
33	FLT2W -11 100X	Unknown	22	1000.0	Perchlorate Program 11-19-02
34	FLT3Q -19 500X	Unknown	23	1000.0	Perchlorate Program 11-19-02
35	FLT3X -20 20X	Unknown	24	1000.0	Perchlorate Program 11-19-02
36	CCV 10PPB	Unknown	25	1000.0	Perchlorate Program 11-19-02
37	CCB	Unknown	26	1000.0	Perchlorate Program 11-19-02

Title: IC5 anions sequence 11-14-02

Datasource: 3C7HN01_local

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences

Timebase: IC5

#Samples: 37

Created: 4/17/2003 7:53:18 PM by coonl

Last Update: 4/18/2003 2:29:46 AM by coonl

No.	Name	Method	Status	Inj. Date/Time	Weight
1	RT CHECK	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 7:39:04 PM	1.0000
2	blank	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 7:58:35 PM	1.0000
3	cal std 1	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 8:18:06 PM	1.0000
4	cal std 2	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 8:37:37 PM	1.0000
5	cal std 3	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 8:57:09 PM	1.0000
6	cal std 4	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 9:16:40 PM	1.0000
7	cal std 5	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 9:36:11 PM	1.0000
8	cal std 6	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 9:55:42 PM	1.0000
9	blank	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 10:15:13 PM	1.0000
10	ICV SS 20ppb	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 10:58:14 PM	1.0000
11	ICB	IC5 Perch Low Quant Method 12-16-02	Finished	4/16/2003 11:17:46 PM	1.0000
12	ICCS 1ppb	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 1:16:48 AM	1.0000
13	blank	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 1:36:19 AM	1.0000
14	IPC 5ppb	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 2:21:48 AM	1.0000
15	DCS-1/LCS 10ppb	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 2:41:19 AM	1.0000
16	DCS-2 10ppb	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 3:00:50 AM	1.0000
17	MTHD BLNK	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 3:20:21 AM	1.0000
18	FL53F D3D170302 -01	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 3:39:52 AM	1.0000
19	FL53F -01 MS	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 3:59:23 AM	1.0000
20	FL53F -01 SD	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 4:18:54 AM	1.0000
21	FL53H -02	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 4:38:26 AM	1.0000
22	FL53K -03	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 4:57:57 AM	1.0000
23	FL53L -04	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 5:17:27 AM	1.0000
24	CCV 10ppb	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 6:36:59 AM	1.0000
25	CCB	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 5:56:30 AM	1.0000
26	FL53M -05	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 6:16:01 AM	1.0000
27	FL53P -06	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 6:35:32 AM	1.0000
28	FL53Q -07	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 6:55:03 AM	1.0000
29	FL53V -08	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 7:14:34 AM	1.0000
30	FL53X -09	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 7:34:05 AM	1.0000
31	FL0T0 D3D150276 -01 20X	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 7:53:36 AM	1.0000
32	FLT2L D3D120157-01 2000X	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 8:13:08 AM	1.0000
33	FLT2W -11 100X	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 8:32:40 AM	1.0000
34	FLT3Q -19 500X	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 8:52:11 AM	1.0000
35	FLT3X -20 20X	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 9:11:42 AM	1.0000
36	CCV 10PPB	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 9:31:13 AM	1.0000
37	CCB	IC5 Perch Low Quant Method 12-16-02	Finished	4/18/2003 9:50:44 AM	1.0000

Title: IC5 anions sequence 11-14-02

Datasource: 3C7HN01_local

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences

Timebase: IC5

#Samples: 37

Created: 4/17/2003 7:53:18 PM by cooni

Last Update: 4/18/2003 2:29:46 AM by cooni

No.	Name	Dil. Factor	ISTD Amount	Sample ID	Replicate ID	Comment
1	RT CHECK	1.0000	1.0000		01	
2	blank	1.0000	1.0000		01	
3	cal std 1	1.0000	1.0000		01	
4	cal std 2	1.0000	1.0000		01	
5	cal std 3	1.0000	1.0000		01	
6	cal std 4	1.0000	1.0000		01	
7	cal std 5	1.0000	1.0000		01	
8	cal std 6	1.0000	1.0000		01	
9	blank	1.0000	1.0000		01	
10	ICV SS 20ppb	1.0000	1.0000		01	
11	ICB	1.0000	1.0000		01	
12	ICCS 1ppb	1.0000	1.0000		01	
13	blank	1.0000	1.0000		01	
14	IPC 5ppb	1.0000	1.0000		01	
15	DCS-1/LCS 10ppb	1.0000	1.0000		01	
16	DCS-2 10ppb	1.0000	1.0000		01	
17	MTHD BLNK	1.0000	1.0000		01	
18	FL53F D3D170302 -01	1.0000	1.0000		01	
19	FL53F -01 MS	1.0000	1.0000		01	
20	FL53F -01 SD	1.0000	1.0000		01	
21	FL53H -02	1.0000	1.0000		01	
22	FL53K -03	1.0000	1.0000		01	
23	FL53L -04	1.0000	1.0000		01	
24	CCV 10ppb	1.0000	1.0000		01	
25	CCB	1.0000	1.0000		01	
26	FL53M -05	1.0000	1.0000		01	
27	FL53P -06	1.0000	1.0000		01	
28	FL53Q -07	1.0000	1.0000		01	
29	FL53V -08	1.0000	1.0000		01	
30	FL53X -09	1.0000	1.0000		01	
31	FL0T0 D3D150276 -01 20X	20.0000	1.0000		01	
32	FLT2L D3D120157-01 2000X	2000.0000	1.0000		01	
33	FLT2W -11 100X	100.0000	1.0000		01	
34	FLT3Q -19 500X	500.0000	1.0000		01	
35	FLT3X -20 20X	20.0000	1.0000		01	
36	CCV 10PPB	1.0000	1.0000		01	
37	CCB	1.0000	1.0000		01	

Operator: coonl

Printed: 4/18/2003 5:06:07 PM

Title: Perchlorate Program 11-19-02

Dataprogram: 3C7HN01_local

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Seq Created: 11/19/2002 12:29:20 PM by tennisp

Timebase: IC5

Changed: 1/25/2003 1:37:32 PM by coonl

```
Pressure.LowerLimit = 0
Pressure.UpperLimit = 4000
%A.Equate = "%A"
%B.Equate = "%B"
%C.Equate = "%C"
%D.Equate = "%D"
LoadPosition
Data_Collection_Rate = 2.0
Temperature_Compensation = 1.7
DS3_Temperature = 35
Suppressor_Type = None
Flow = 1.00
%B = 0.0
%C = 0.0
%D = 0.0
Curve = 5

-2.400 Pump_TTL_1.0v Duration=10.00

0.000 ECD.Autozero
InjectPosition Duration=180.00
ECD_1.AcqOn

17.000 ECD_1.AcqOff

End
```

Operator: coonl

Printed: 4/18/2003 5:06:07 PM

Title: Perchlorate Program 11-19-02

Datasource: 3C7HN01_local

Location: ARV-WET-IC1_1NC5 Sequences\Perchlorate Sequences\PERCHLORATE Created: 11/19/2002 12:29:20 PM by tennisp

Timebase: IC5

Changed: 1/25/2003 1:37:32 PM by coonl

No. Channel Operation Parameters

Title: IC5 Perch Quant Method 11-14-02
Datasource: 3C7HN01_local Created: 12/16/2002 7:57:20 PM by coonl
Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences\PERCHL(Last Update: 1/31/2003 7:33:12 PM by coonl

Blank Run Subtraction: No Blank Run Subtraction

Detection Table:

No.	Ret. Time [min]	Param. Name	Param. Value	Channel
1	0.000	Minimum Area	0.0005 [Signal]*min	All Channels
2	0.000	Inhibit Integration	On	All Channels
3	13.000	Inhibit Integration	Off	All Channels

Operator: coonl

Printed: 4/18/2003 5:08:08 PM

Time: IC5 Perch Quant Method 11-14-02

Datasource: 3C7HN01_local

Created:

12/16/2002 7:57:20 PM by coonl

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences\PERCHL

Last Update:

1/31/2003 7:33:12 PM by coonl

Peak Table:

Use Recently Detected Ret. Times: Last standard

Dead time:

Delay time of 2nd detector: <None>

No.	Peak Name	Ret.Time	Window	Standard	Int.Type	Cal.Type	Peak Type	Group	Comment
1	perchlorate	15.200 min	10.000 RN	External	Area	Lin	Main		

Operator: coonl

Printed: 4/18/2003 5:06:08 PM

Title: IC5 Perch Quant Method 11-14-02

Datasource: 3C7HN01_local

Created:

12/18/2002 7:57:20 PM by coonl

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences\PERCHL

Last Update: 1/31/2003 7:33:12 PM by coonl

Amount Table:

Dimension of Amounts: ug/L

Reference Volume for Amounts: Use inject volume of first standard

No.	Peak Name	Ret.Time	Resp.Fact.	Amount cal std 1	Amount cal std 2	Amount cal std 3	Amount cal std 4	Amount cal std 5	Amount cal std 6	Comment
1	perchlorate	15.200 min	1.000000	1.000000	2.500000	5.000000	10.000000	20.000000	40.000000	

Title: IC5 Perch Quant Method 11-14-02

Datasource: 3C7HN01_local

Created: 12/16/2002 7:57:20 PM by coonl







Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences\PERCHL(Last Update:

1/31/2003 7:33:12 PM by coonl

Calibration:

Calibration Mode: Total

Auto Recalibrate: On

No.	Enabled	Name	Smp.No.	Pos.	Inj. Vol.	Weight	ISTD Amount	Dil. Factor	Inj. Date/Time
1	<input checked="" type="checkbox"/>	 cal std 1	3	3	1000.0	1.0000	1.0000	1.0000	4/16/2003 8:18:06 P
2	<input checked="" type="checkbox"/>	 cal std 2	4	4	1000.0	1.0000	1.0000	1.0000	4/16/2003 8:37:37 P
3	<input checked="" type="checkbox"/>	 cal std 3	5	5	1000.0	1.0000	1.0000	1.0000	4/16/2003 8:57:09 P
4	<input checked="" type="checkbox"/>	 cal std 4	6	6	1000.0	1.0000	1.0000	1.0000	4/16/2003 9:16:40 P
5	<input checked="" type="checkbox"/>	 cal std 5	7	7	1000.0	1.0000	1.0000	1.0000	4/16/2003 9:36:11 P
6	<input checked="" type="checkbox"/>	 cal std 6	8	8	1000.0	1.0000	1.0000	1.0000	4/16/2003 9:55:42 P

Title: IC5 Perch Quant Method 11-14-02

Datasource: 3C7HN01_local

Created:







12/16/2002 7:57:20 PM by coonl

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences\PERCHL (Last Update:

1/31/2003 7:33:12 PM by coonl

Calibration:

Calibration Mode: Total
Auto Recalibrate: On

No.	Enabled	Name	Sample Comment	Calib. Comment
1	<input checked="" type="checkbox"/>	 cal std 1		Ok
2	<input checked="" type="checkbox"/>	 cal std 2		Ok
3	<input checked="" type="checkbox"/>	 cal std 3		Ok
4	<input checked="" type="checkbox"/>	 cal std 4		Ok
5	<input checked="" type="checkbox"/>	 cal std 5		Ok
6	<input checked="" type="checkbox"/>	 cal std 6		Ok

Title: IC5 Perch Quant Method 11-14-02
Datasource: 3C7HN01_local Created: 12/16/2002 7:57:20 PM by coonl
Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences\PERCHL.Last Update: 1/31/2003 7:33:12 PM by coonl

System Suitability Test:

No.	Name	Sample Condition	Test Condition	Aggregate	Operator	Value	Channel	Peak
1								

Operator: coonl

Printed: 4/18/2003 5:06:08 PM

Title: IC5 Perch Quant Method 11-14-02

Datasource: 3C7HN01_local

Created:

12/16/2002 7:57:20 PM by coonl

Location: ARV-WET-IC1_1\IC5 Sequences\Perchlorate Sequences\PERCHL(Last Update:

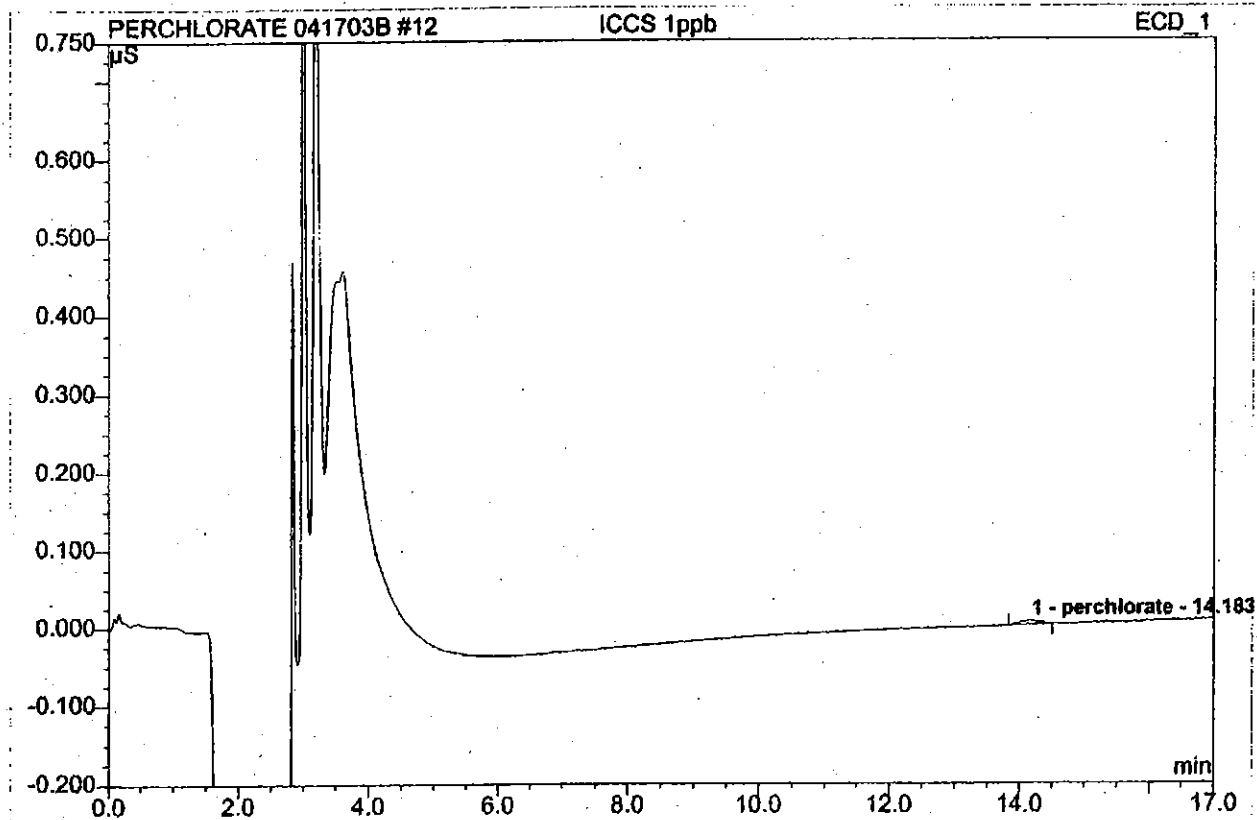
1/31/2003 7:33:12 PM by coonl

System Suitability Test:

No.	Name	N.A.	Fail-Action	Result	SST Message
1					

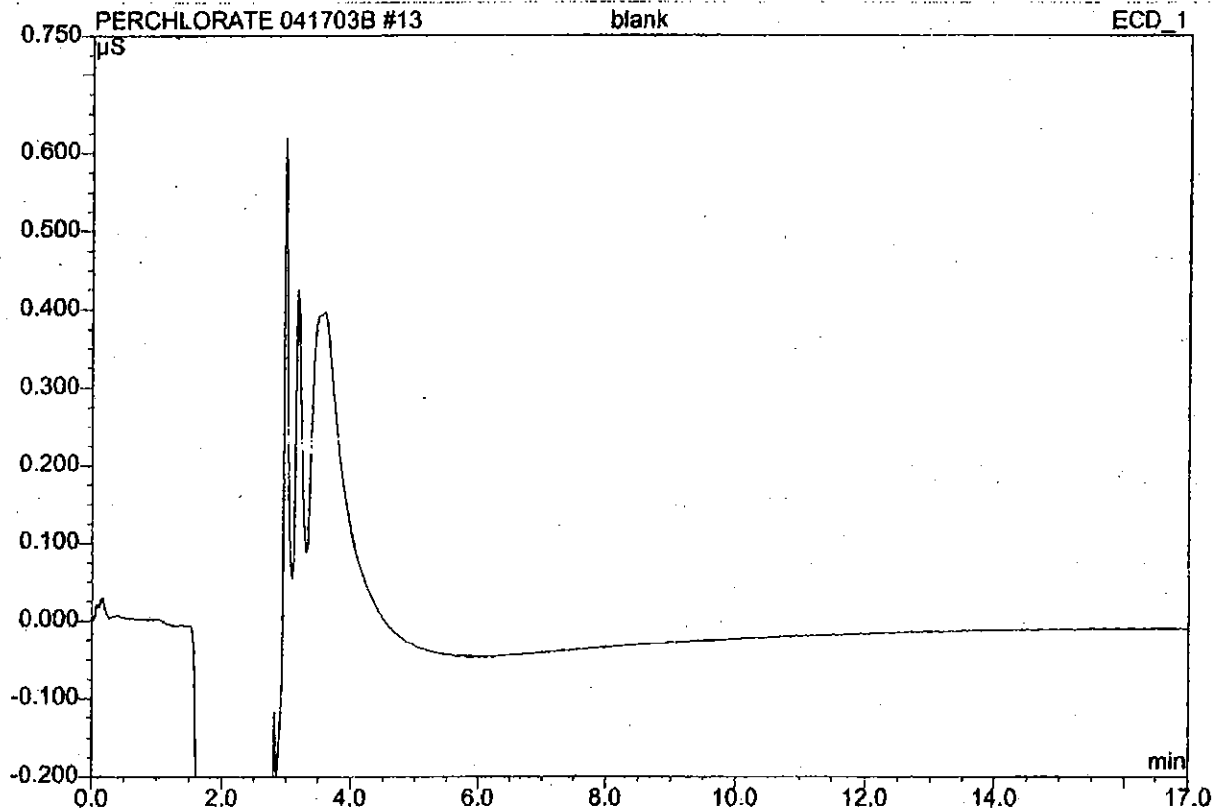
12 ICCS 1ppb

Sample Name:	ICCS 1ppb	Injection Volume:	1000.0
Vial Number:	1	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 1:16	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount ug/L	Type
1	14.18	perchlorate	0.005	0.0017	100.00	0.758	BMB
Total:			0.005	0.002	100.00	0.758	

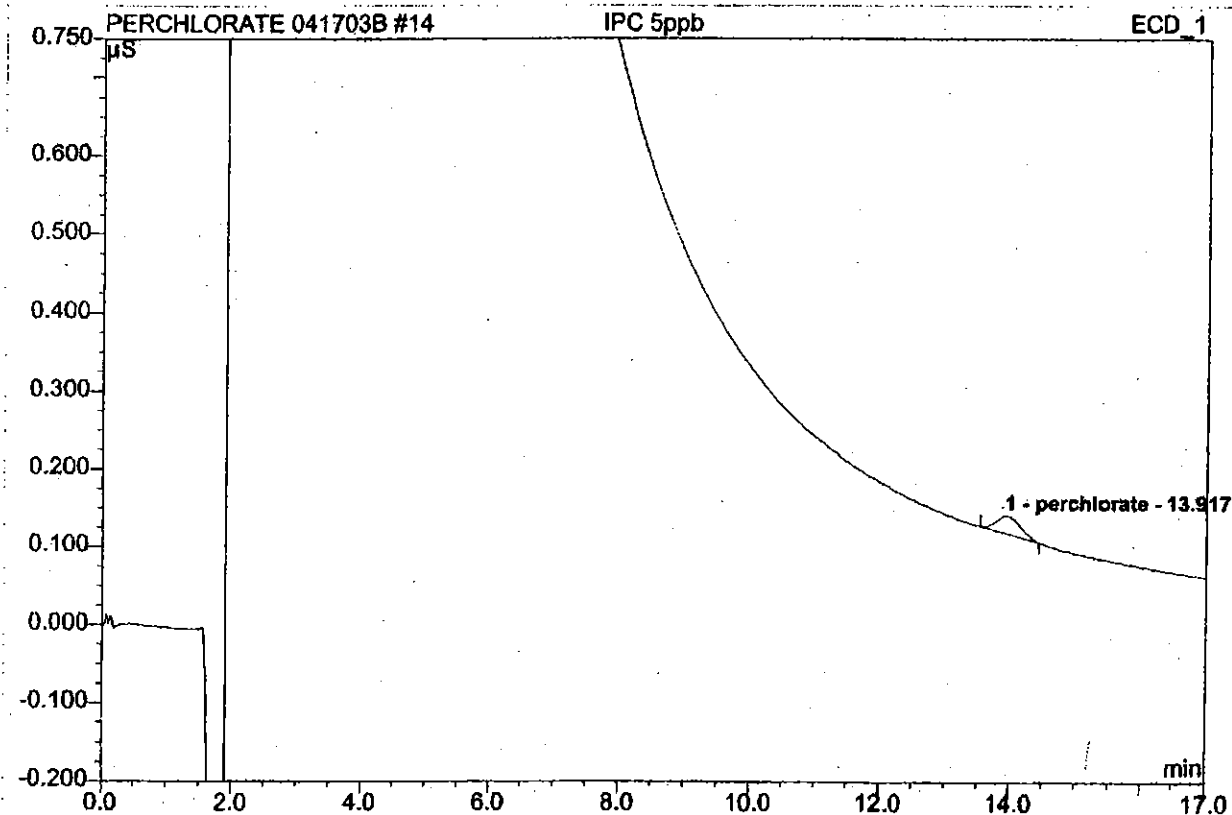
13 blank			
Sample Name:	blank	Injection Volume:	1000.0
Vial Number:	2	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 1:36	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

14 IPC 5ppb

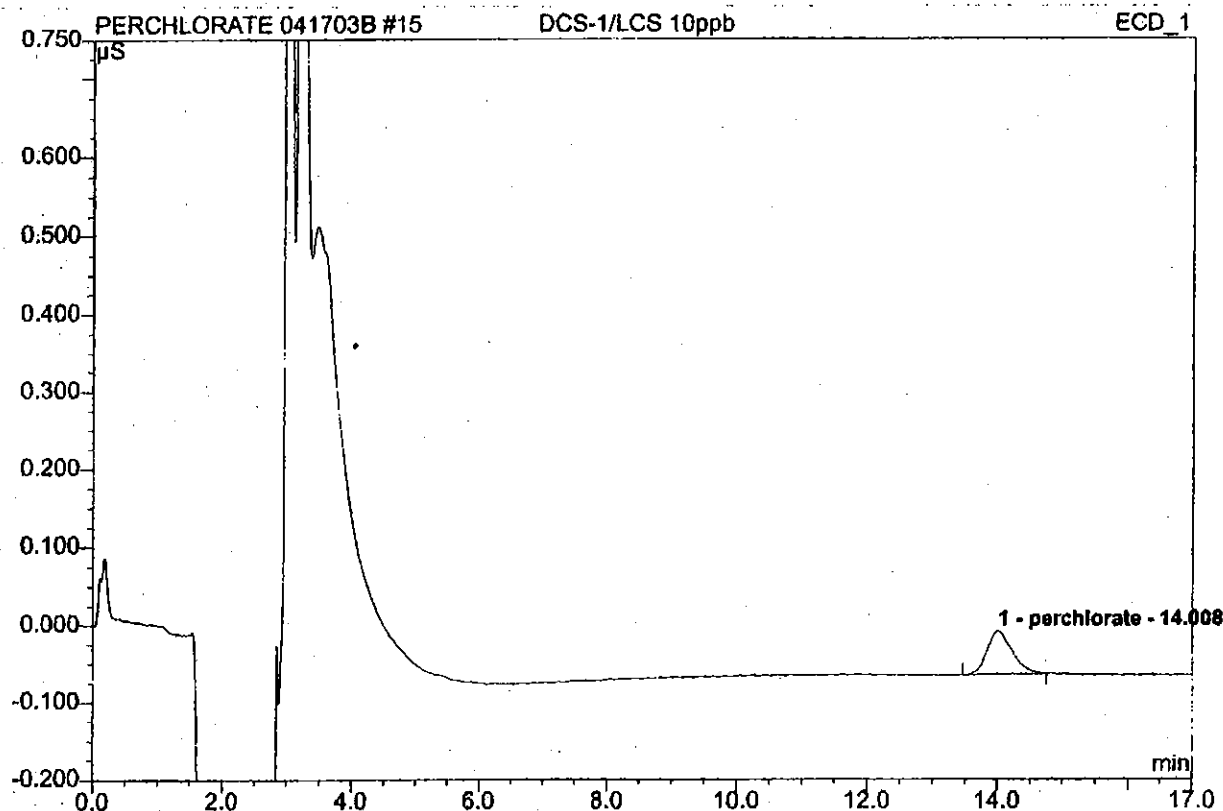
Sample Name:	IPC 5ppb	Injection Volume:	1000.0
Vial Number:	3	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 2:21	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	13.92	perchlorate	0.022	0.0097	100.00	4.247	BMB
Total:			0.022	0.010	100.00	4.247	

15 DCS-1/LCS 10ppb

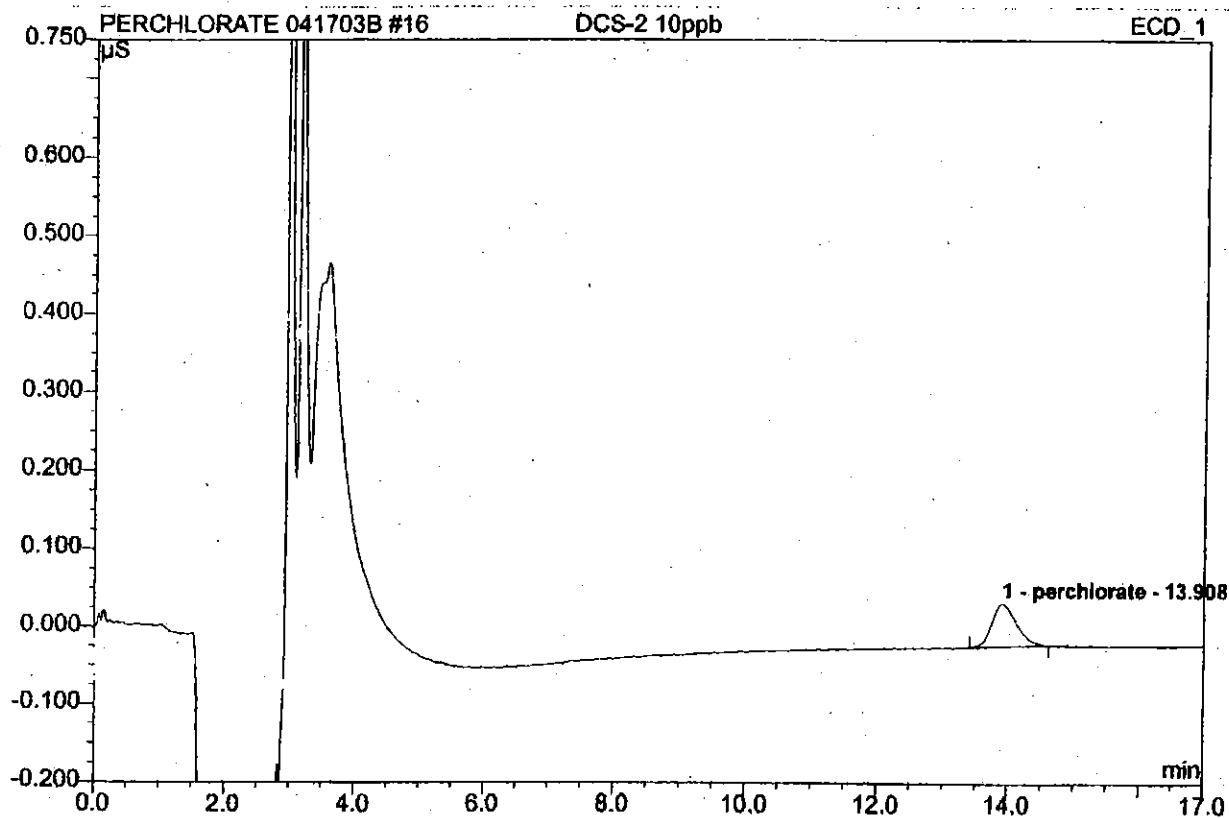
Sample Name:	DCS-1/LCS 10ppb	Injection Volume:	1000.0
Vial Number:	4	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 2:41	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	14.01	perchlorate	0.056	0.0246	100.00	10.747	BMB
Total:			0.056	0.025	100.00	10.747	

16 DCS-2 10ppb

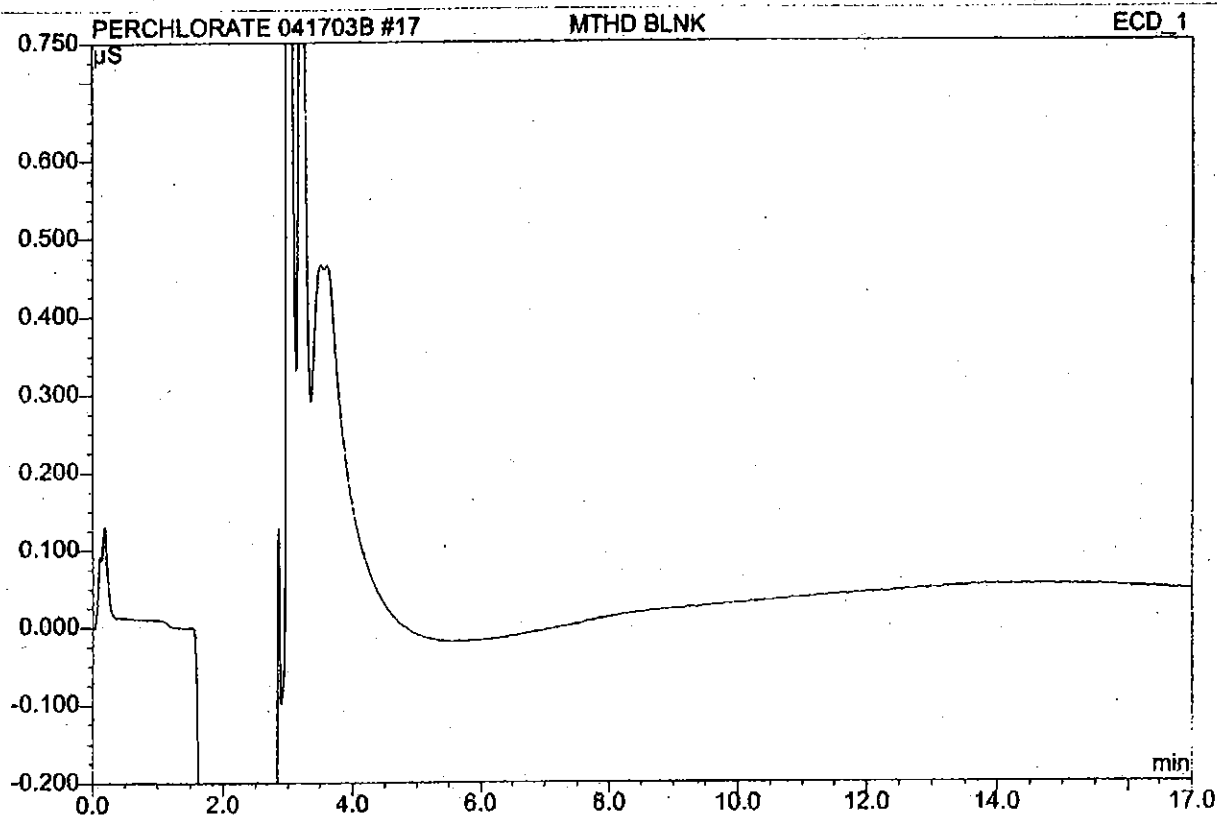
Sample Name:	DCS-2 10ppb	Injection Volume:	1000.0
Vial Number:	5	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 3:00	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	13.91	perchlorate	0.055	0.0242	100.00	10.557	BMB
Total:			0.055	0.024	100.00	10.557	

17 MTHD BLNK

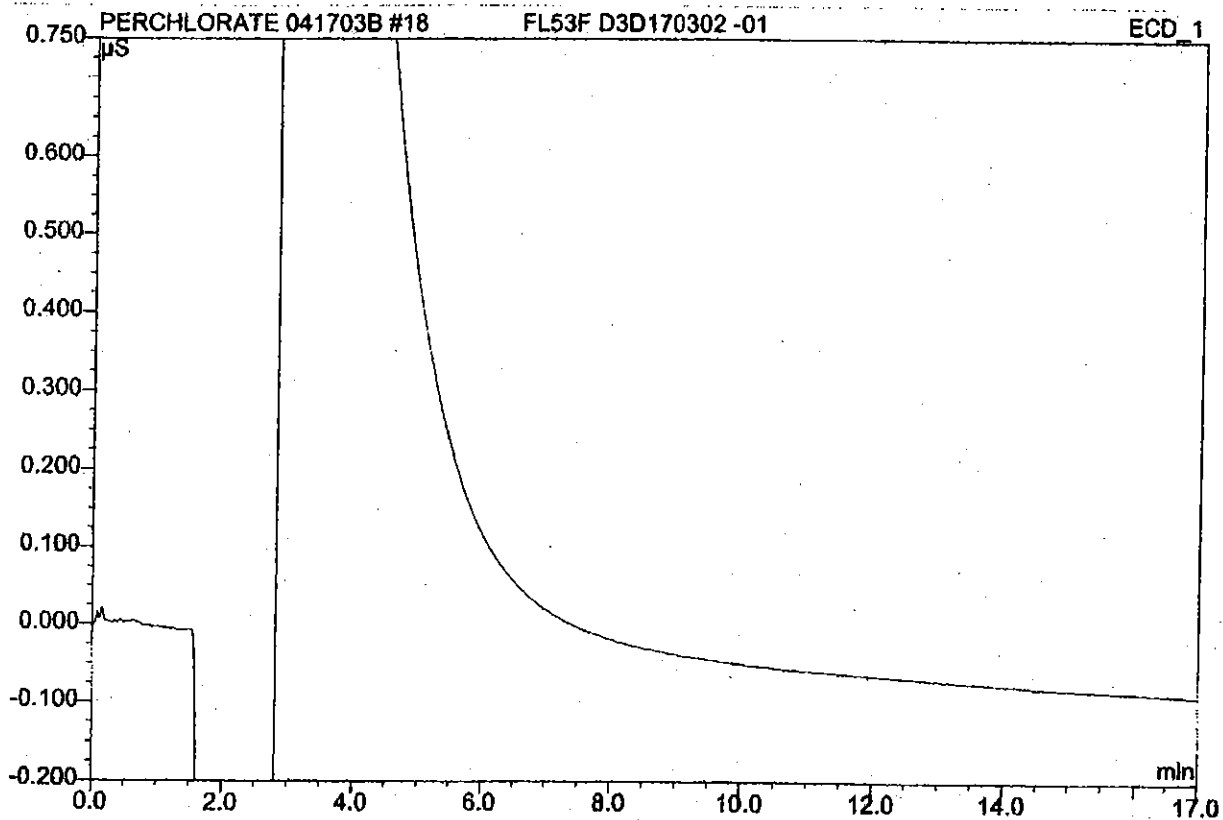
Sample Name:	MTHD BLNK	Injection Volume:	1000.0
Vial Number:	6	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 3:20	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

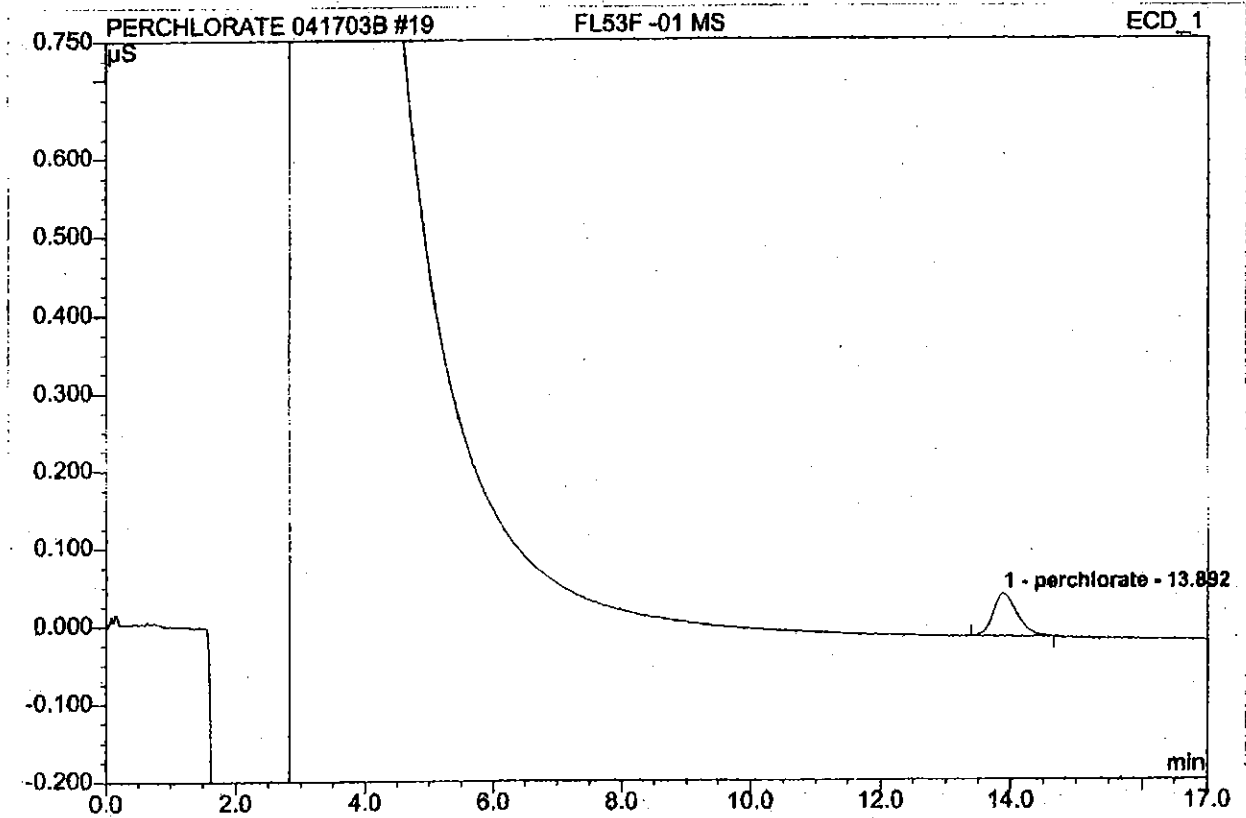
18 FL53F D3D170302 -01

Sample Name:	FL53F D3D170302 -01	Injection Volume:	1000.0
Vial Number:	7	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 3:39	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

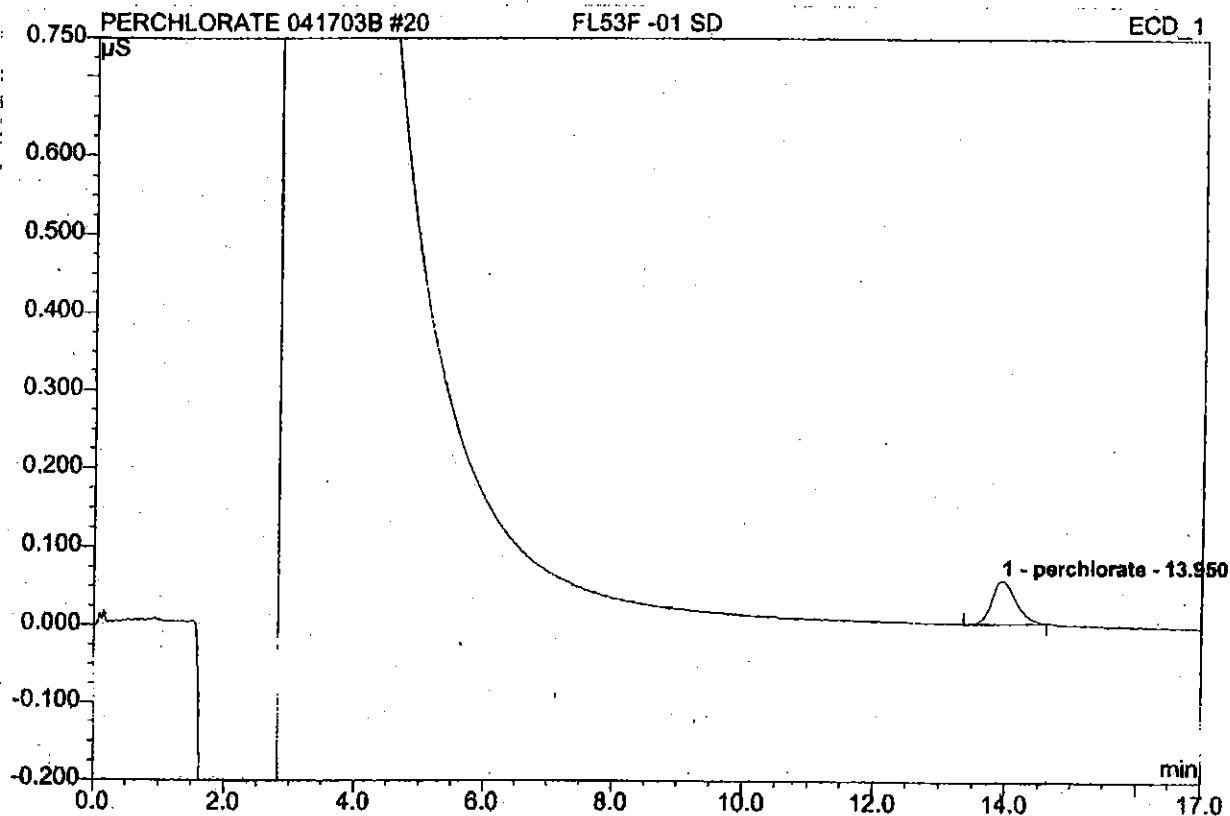
19 FL53F -01 MS			
Sample Name:	FL53F -01 MS	Injection Volume:	1000.0
Vial Number:	8	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 3:59	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	13.89	perchlorate	0.054	0.0233	100.00	10.192	BMB
Total:			0.054	0.023	100.00	10.192	

20 FL53F -01 SD

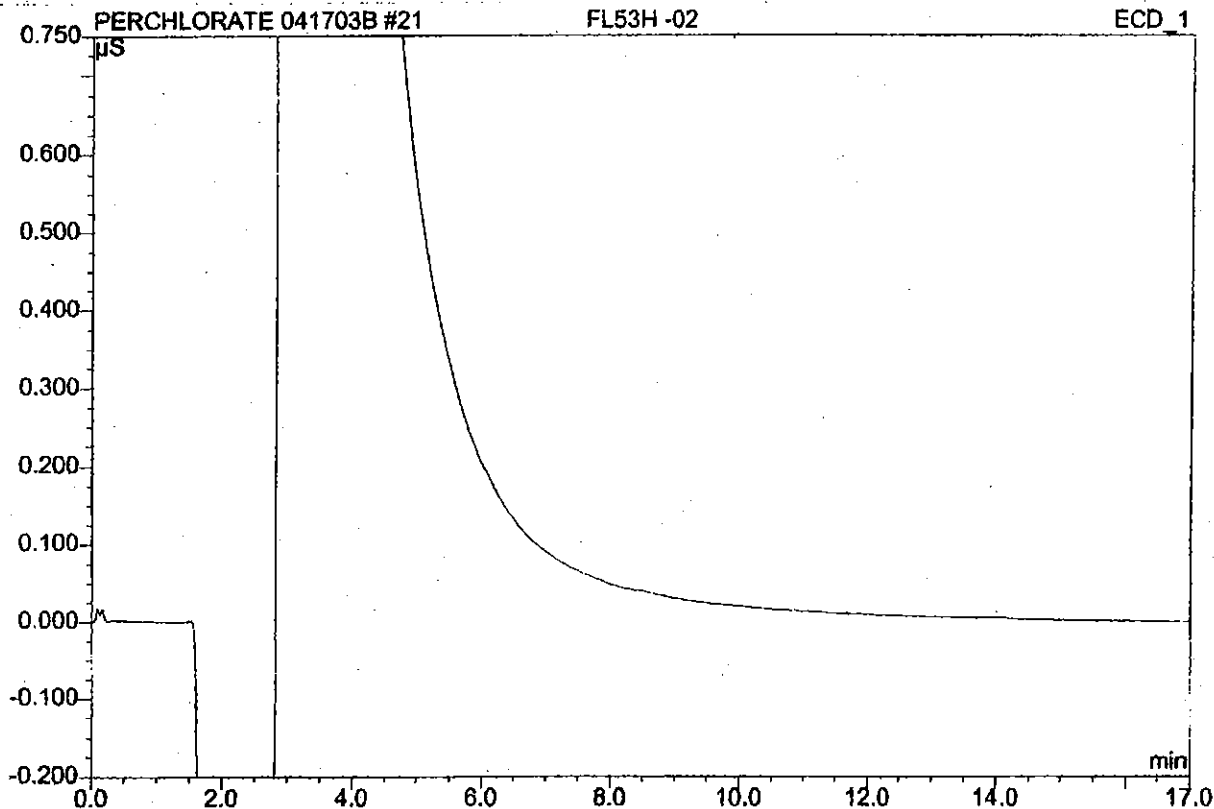
Sample Name:	FL53F -01 SD	Injection Volume:	1000.0
Vial Number:	9	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 4:18	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1.	13.95	perchlorate	0.055	0.0236	100.00	10.308	BMB
Total:			0.055	0.024	100.00	10.308	

21 FL53H -02

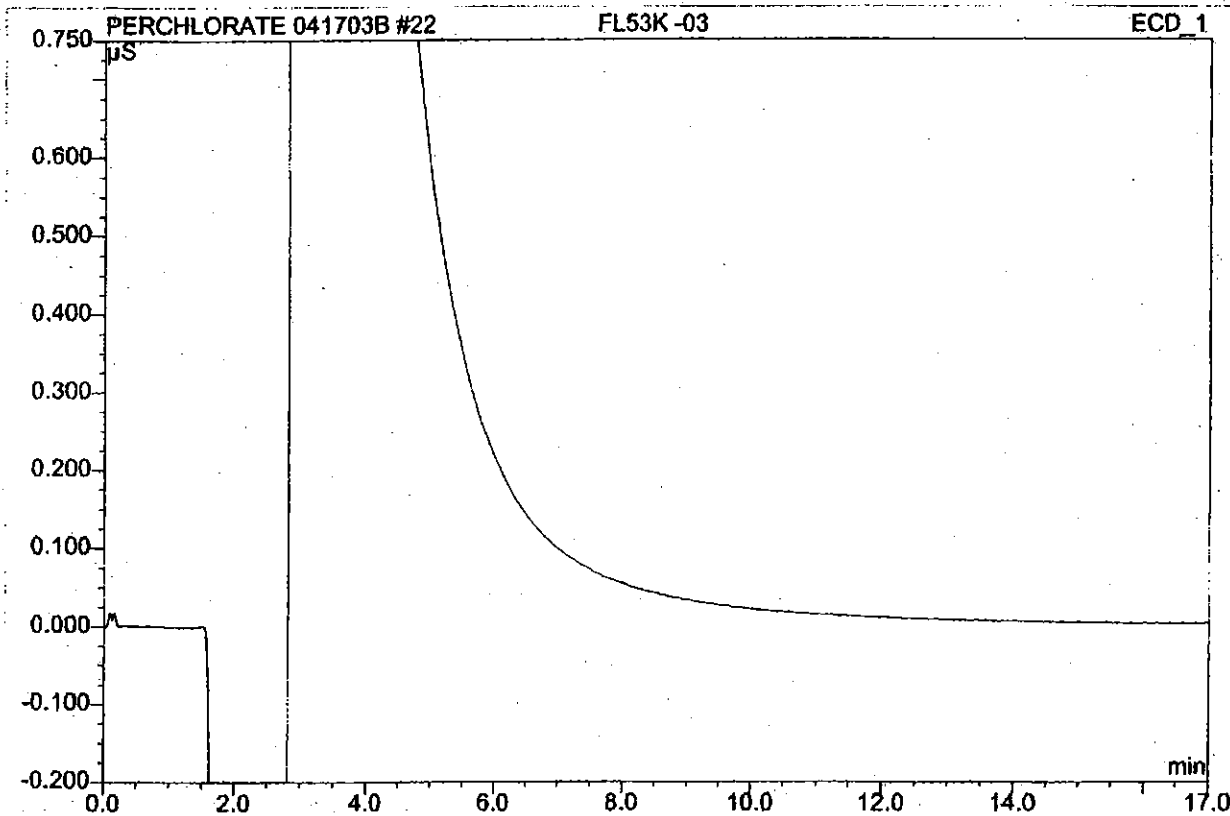
Sample Name:	FL53H -02	Injection Volume:	1000.0
Vial Number:	10	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 4:38	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

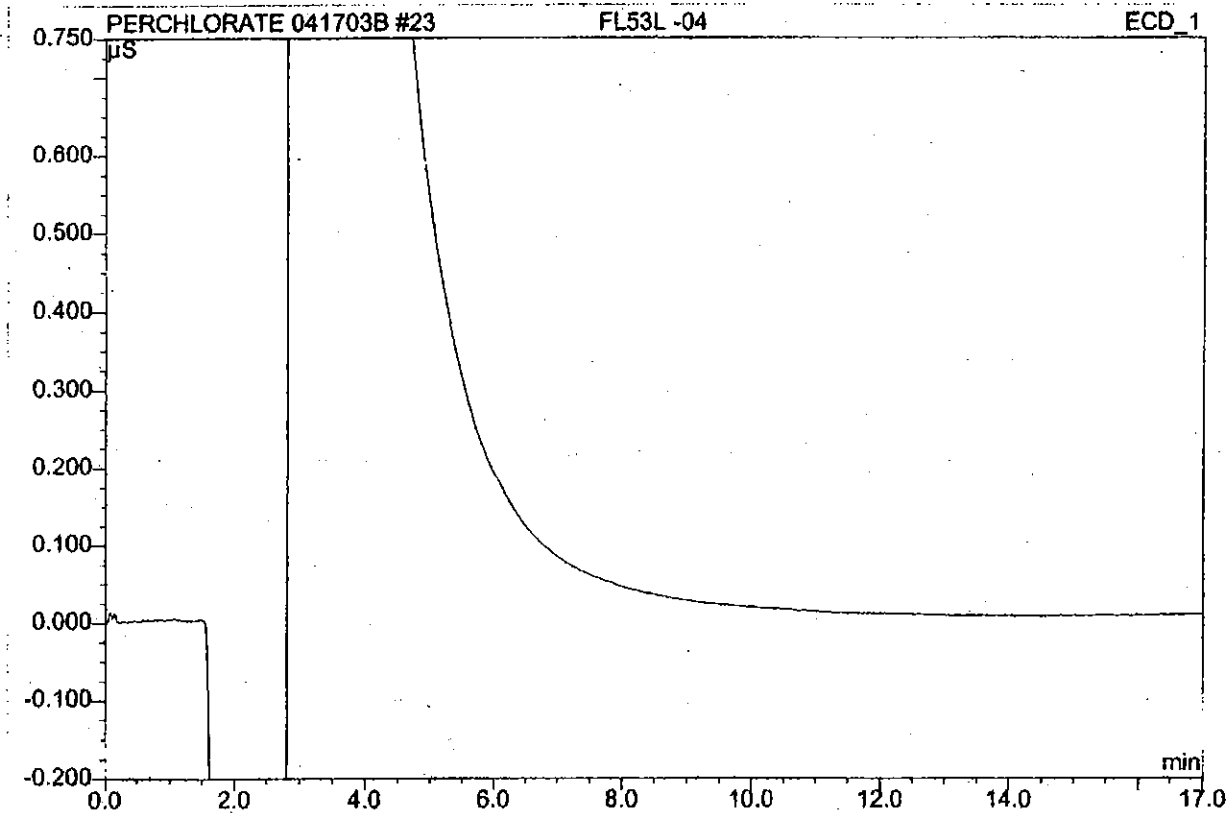
22 FL53K -03

Sample Name:	FL53K -03	Injection Volume:	1000.0
Vial Number:	11	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 4:57	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

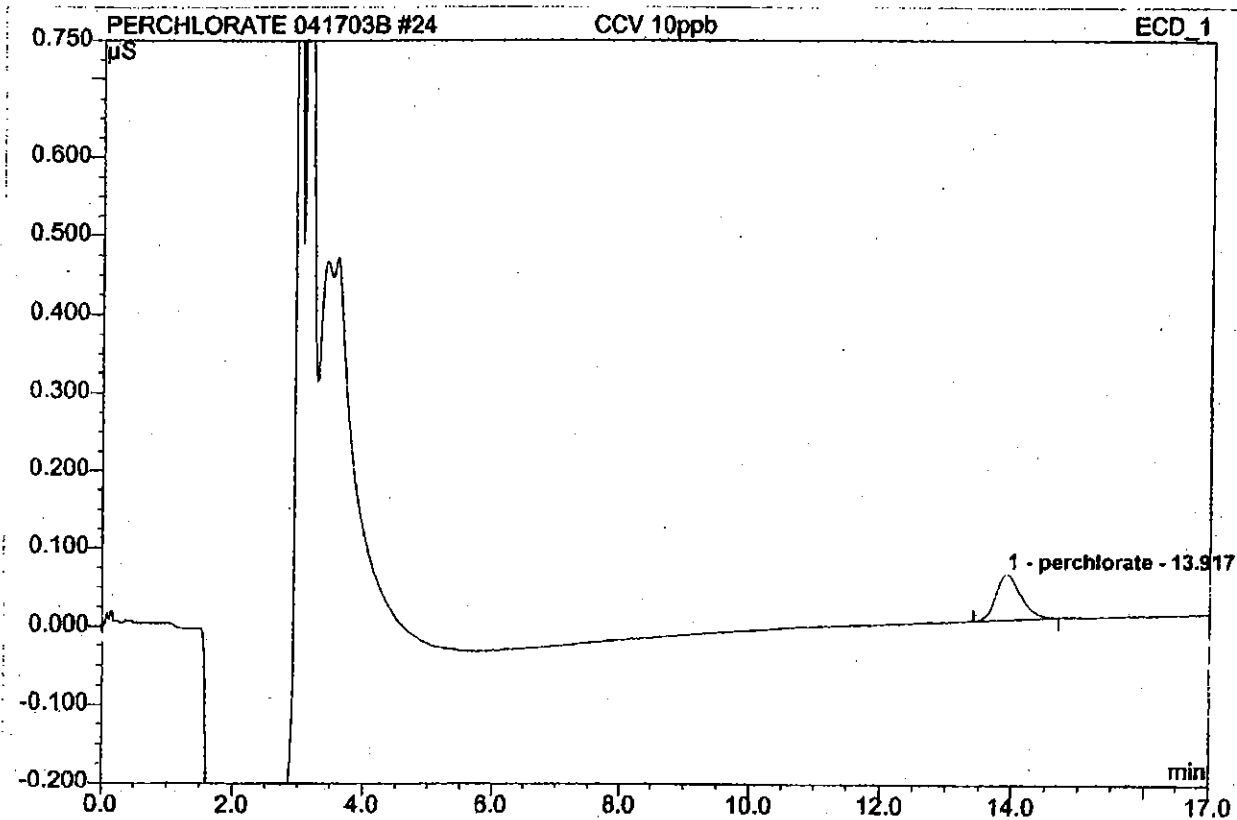
23 FL53L -04			
Sample Name:	FL53L -04	Injection Volume:	1000.0
Vial Number:	12	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 5:17	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

24 CCV 10ppb

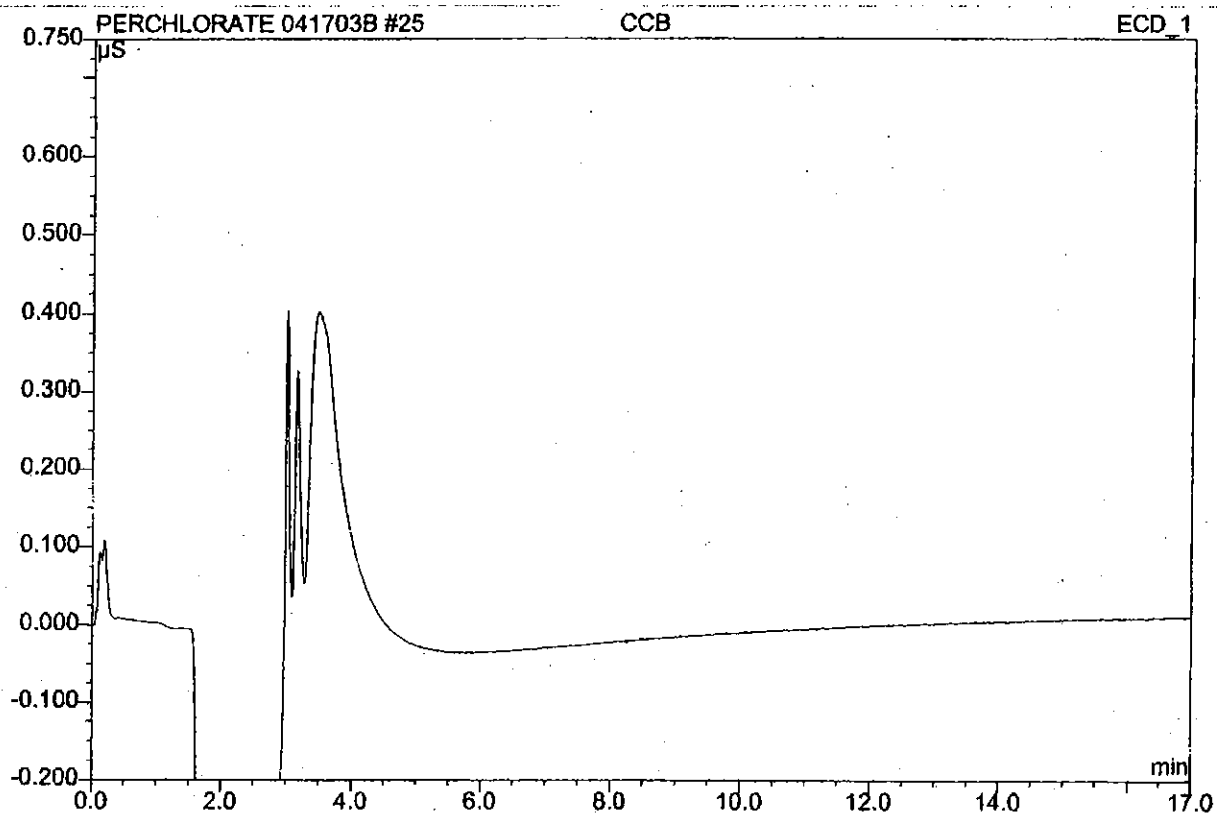
Sample Name:	CCV 10ppb	Injection Volume:	1000.0
Vial Number:	13	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 5:36	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height μS	Area $\mu\text{S}\cdot\text{min}$	Rel. Area %	Amount $\mu\text{g/L}$	Type
1	13.92	perchlorate	0.058	0.0253	100.00	11.053	BMB
Total:			0.058	0.025	100.00	11.053	

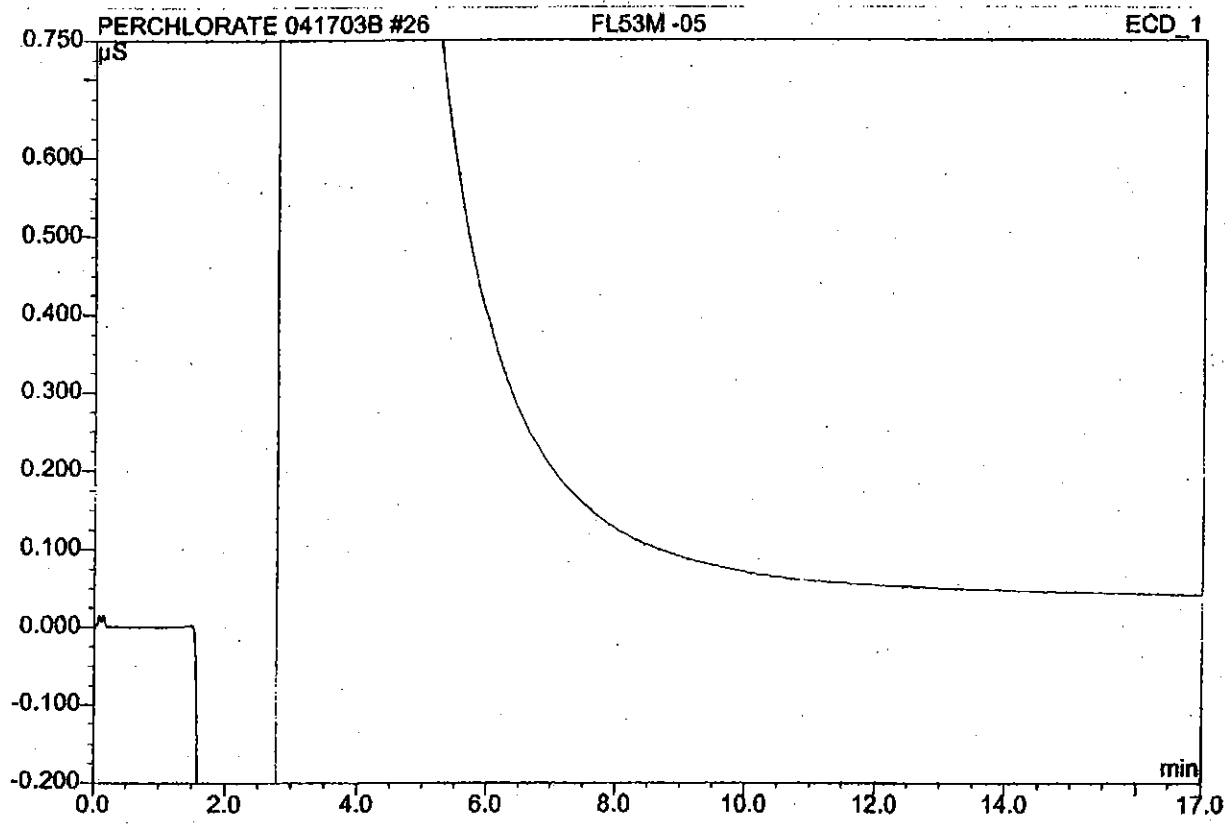
25 CCB

Sample Name:	CCB	Injection Volume:	1000.0
Vial Number:	14	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 5:56	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

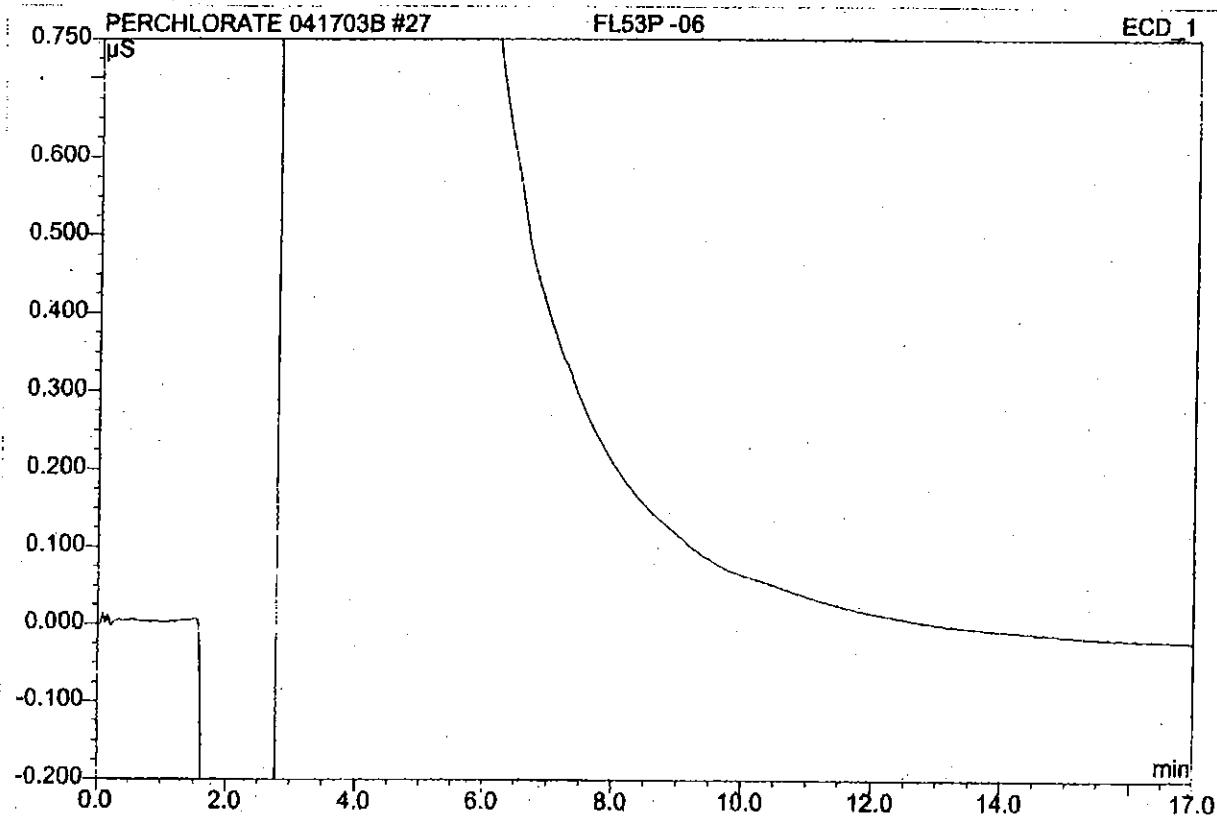
26 FL53M -05			
Sample Name:	FL53M -05	Injection Volume:	1000.0
Vial Number:	15	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 8:16	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height μS	Area μS*min	Rel.Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

27 FL53P -06

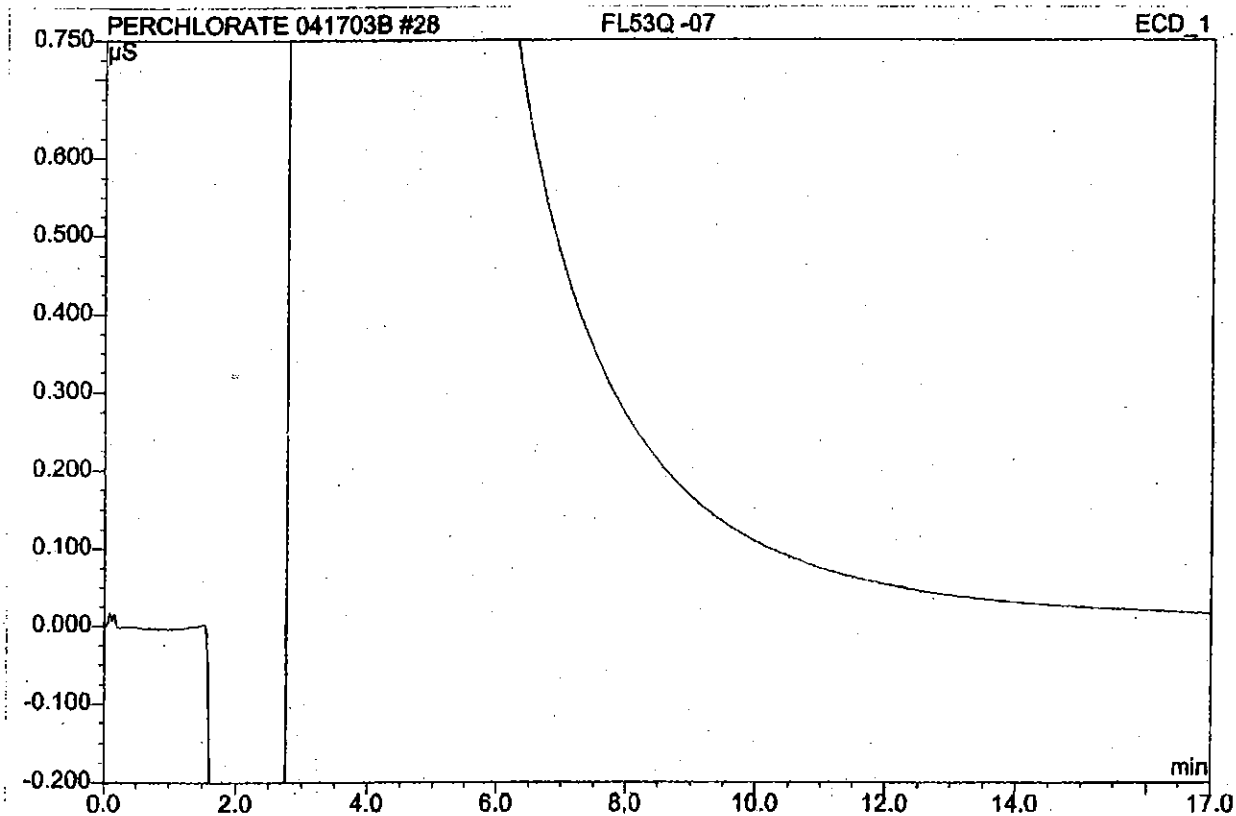
Sample Name:	FL53P -06	Injection Volume:	1000.0
Vial Number:	16	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 6:35	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

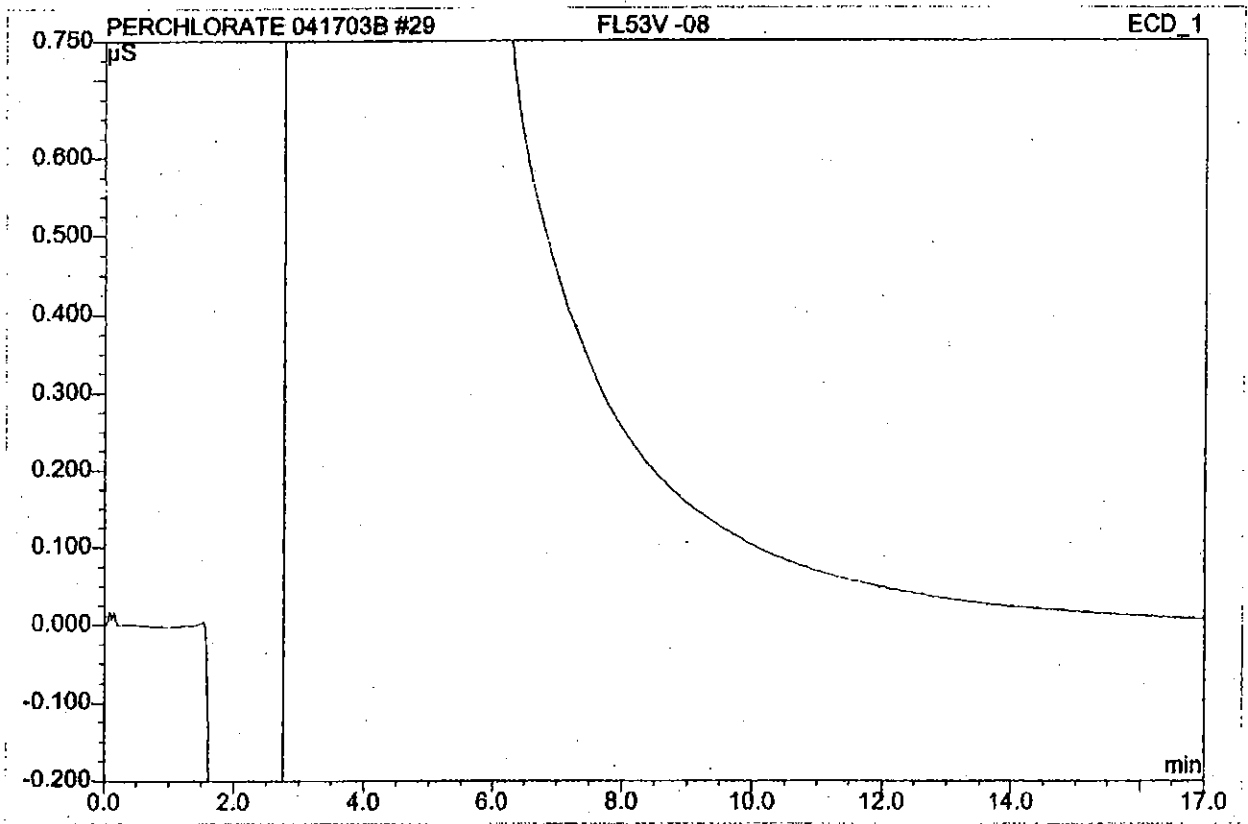
28 FL53Q -07

Sample Name:	FL53Q -07	Injection Volume:	1000.0
Vial Number:	17	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 6:55	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



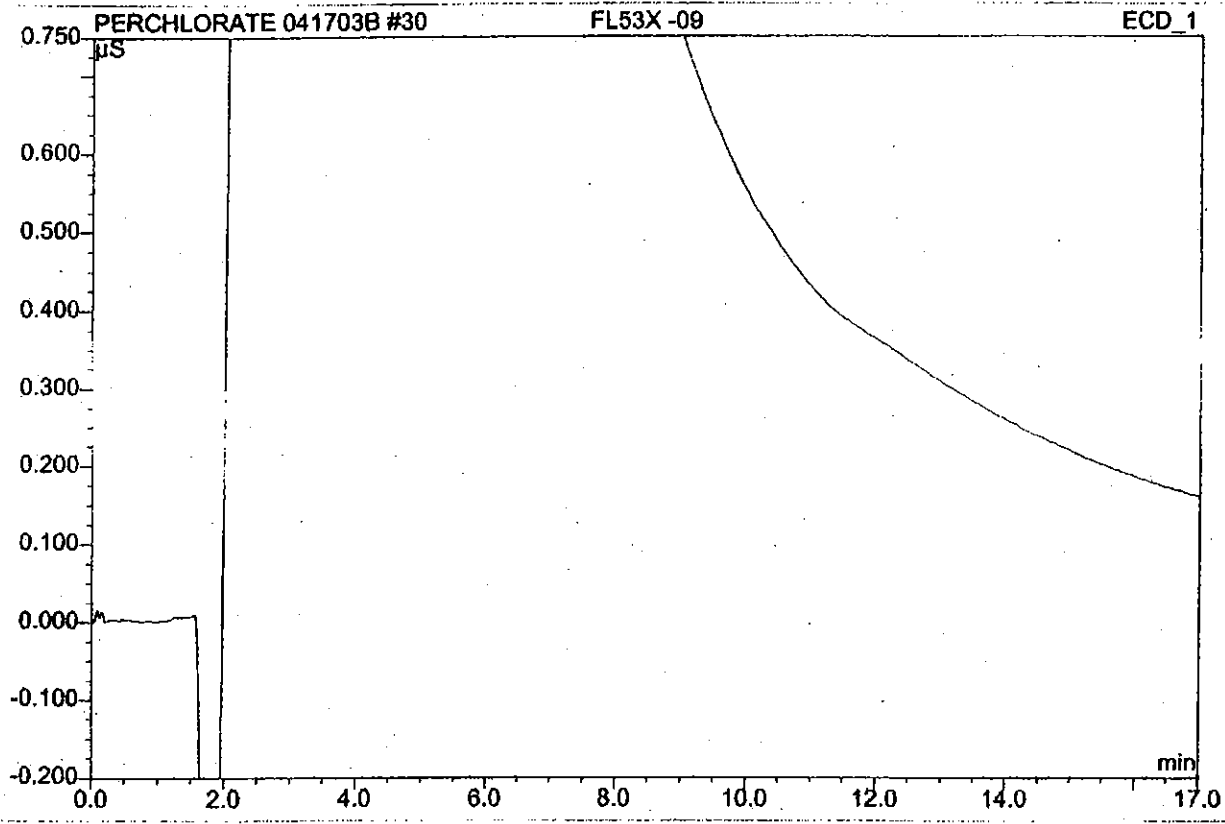
No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

29 FL53V -08			
Sample Name:	FL53V -08	Injection Volume:	1000.0
Vial Number:	18	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 7:14	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

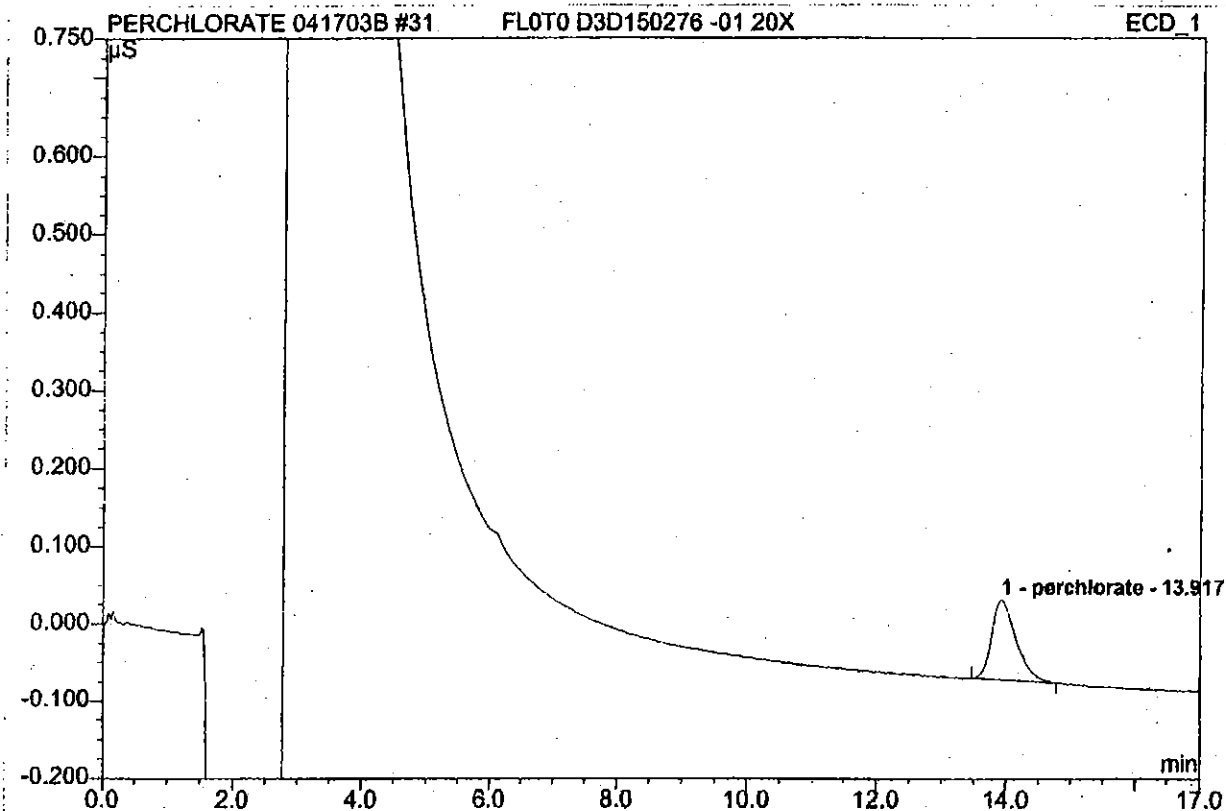
30 FL53X -09			
Sample Name:	FL53X -09	Injection Volume:	1000.0
Vial Number:	19	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 7:34	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

31 FL0T0 D3D150276 -01 20X

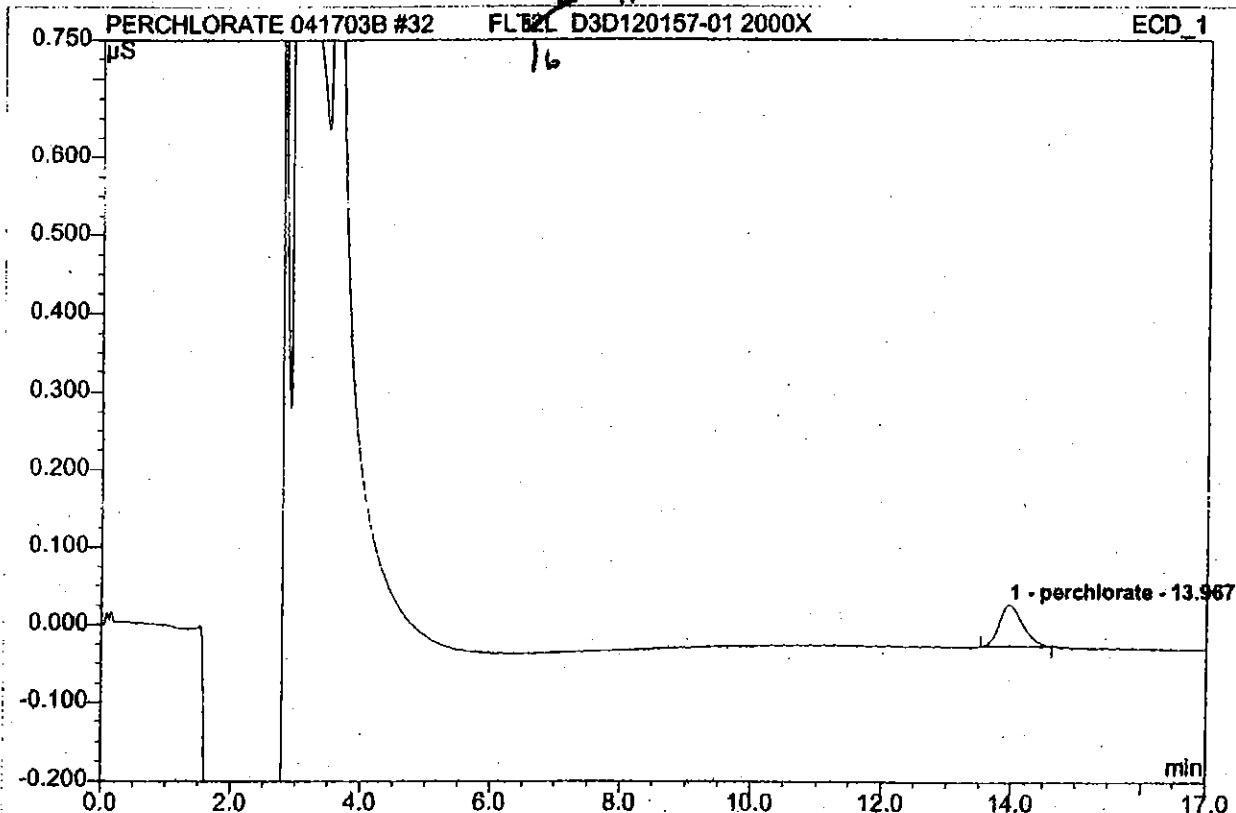
Sample Name:	FL0T0 D3D150276 -01 20X	Injection Volume:	1000.0
Vial Number:	20	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	20.0000
Recording Time:	4/18/2003 7:53	Sample Weight:	1.0000
Run Time (min):	17.01	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	13.92	perchlorate	0.103	0.0450	100.00	393.306	BMB
Total:			0.103	0.045	100.00	393.306	

32 FLT2L D3D120157-01 2000X

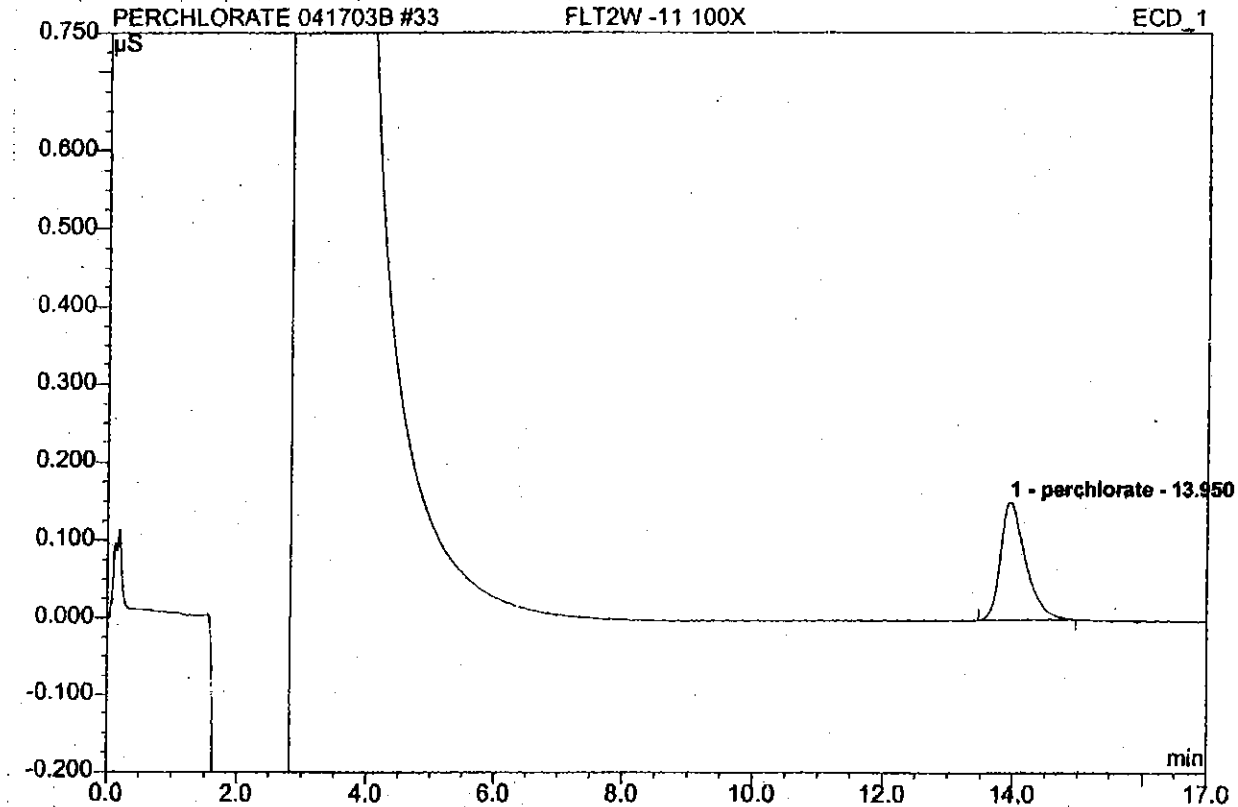
Sample Name:	FLT2L D3D120157-01 2000X	Injection Volume:	1000.0
Vial Number:	21	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	2000.0000
Recording Time:	4/18/2003 8:13	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height μS	Area μS*min	Rel. Area %	Amount ug/L	Type
1	13.97	perchlorate	0.054	0.0229	100.00	20028.222	BMB
Total:			0.054	0.023	100.00	20028.222	

33 FLT2W -11 100X

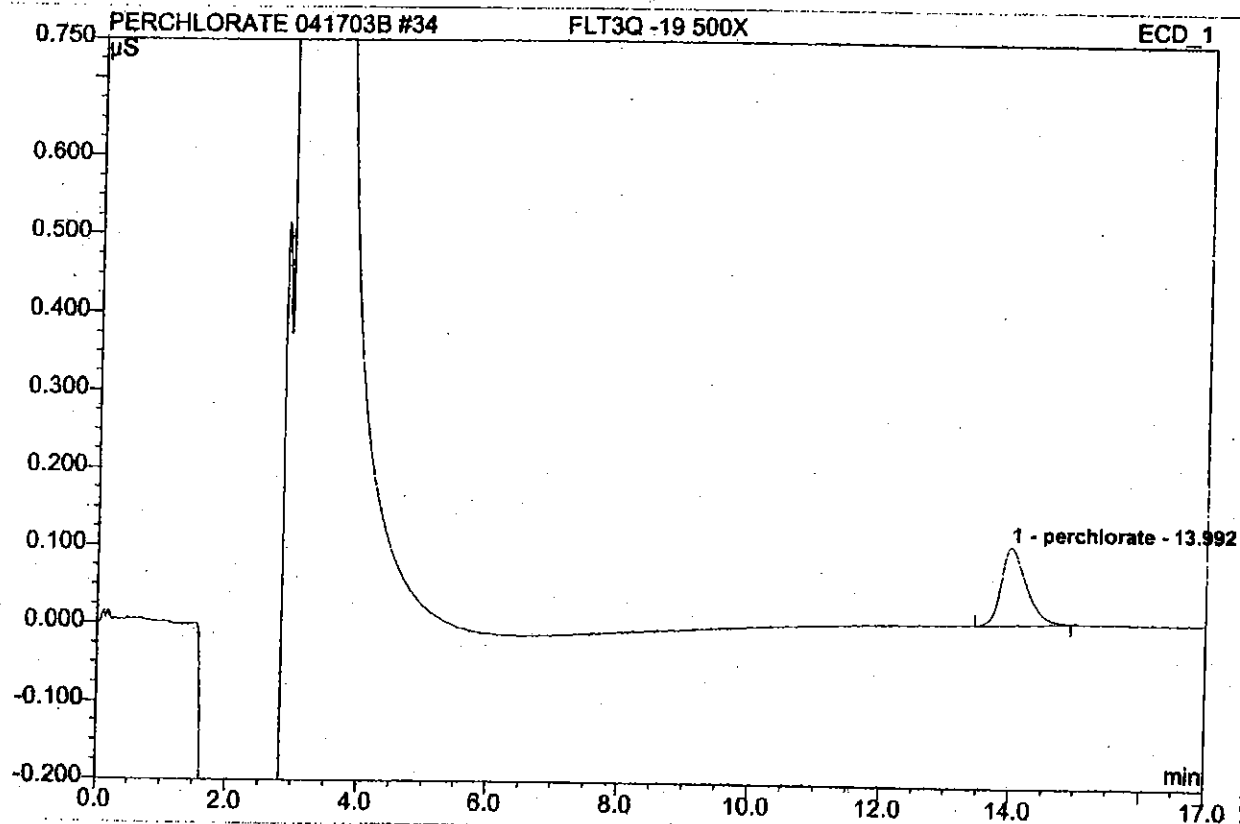
Sample Name:	FLT2W -11 100X	Injection Volume:	1000.0
Vial Number:	22	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	100.0000
Recording Time:	4/18/2003 8:32	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
1	13.95	perchlorate	0.152	0.0683	100.00	2983.001	BMB
Total:			0.152	0.068	100.00	2983.001	

34 FLT3Q -19 500X

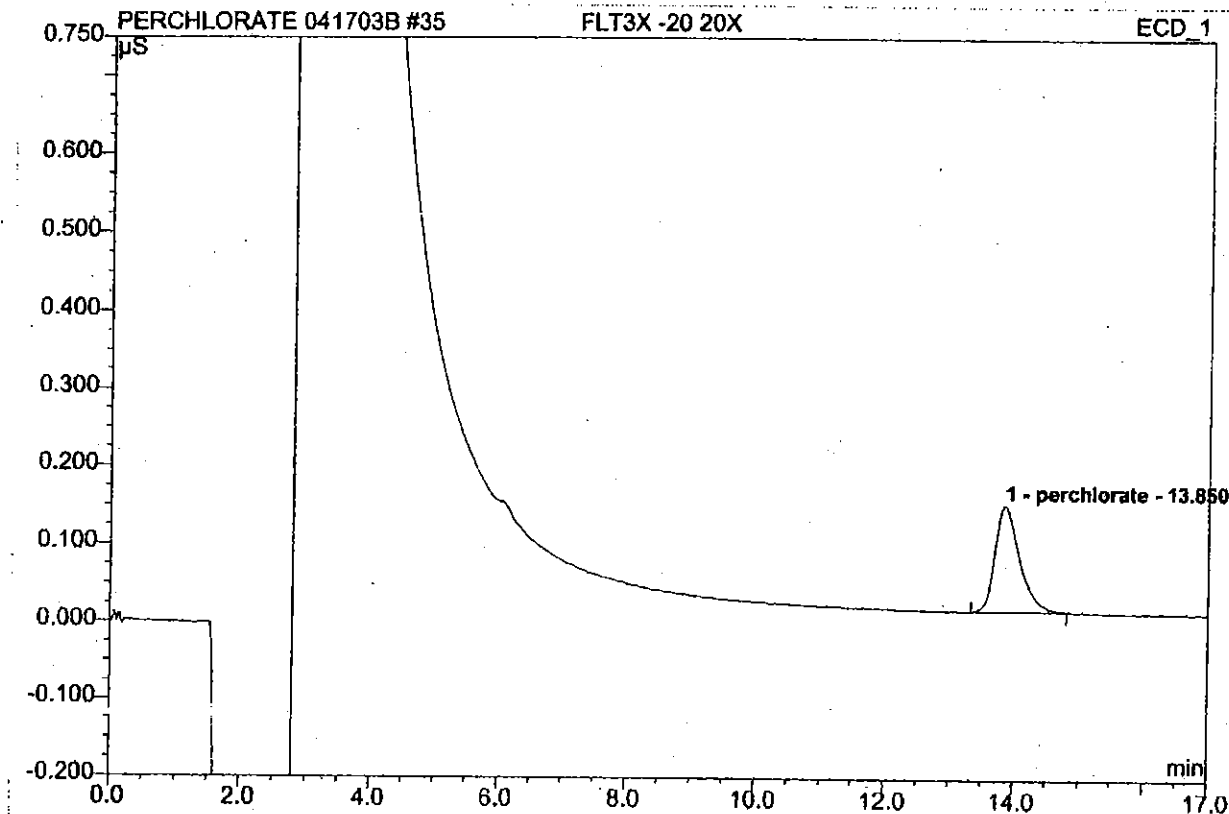
Sample Name:	FLT3Q -19 500X	Injection Volume:	1000.0
Vial Number:	23	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	500.0000
Recording Time:	4/18/2003 8:52	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L.	Type
1	13.99	perchlorate	0.100	0.0449	100.00	9811.593	BMB
Total:			0.100	0.045	100.00	9811.593	

35 FLT3X -20 20X

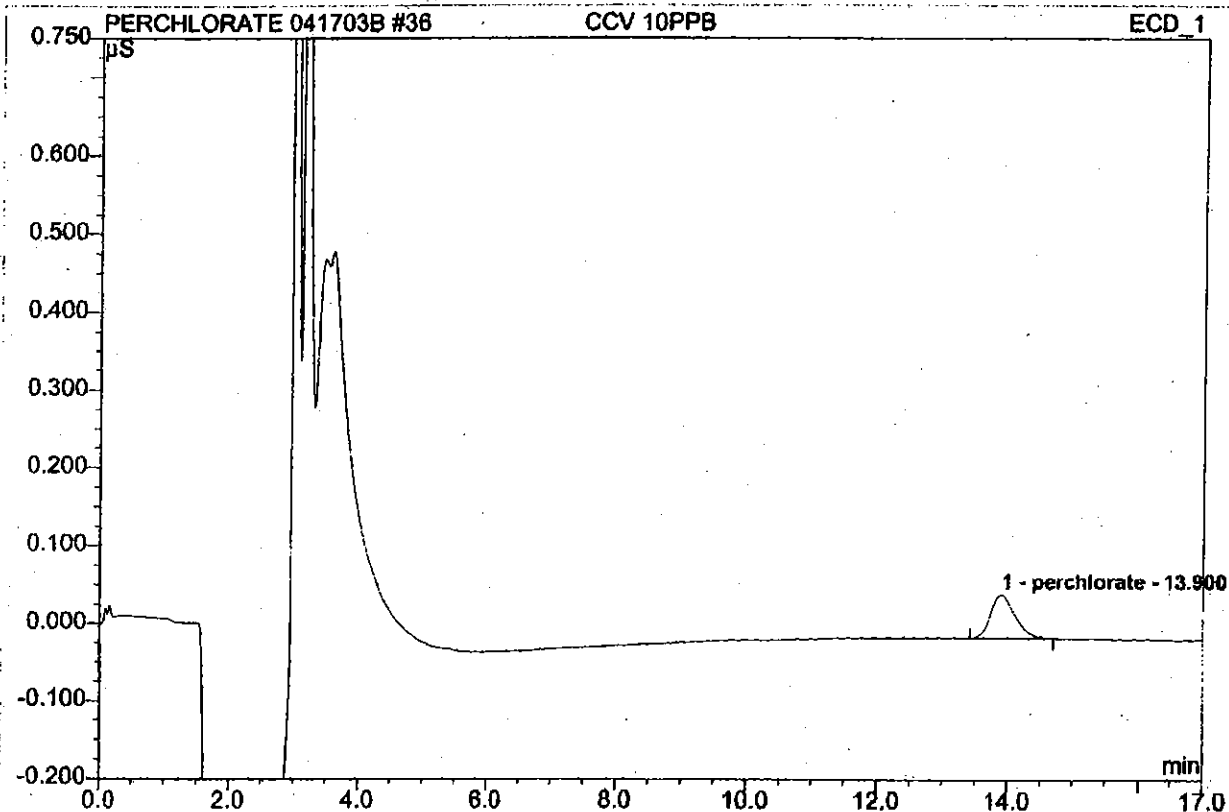
Sample Name:	FLT3X -20 20X	Injection Volume:	1000.0
Vial Number:	24	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	20.0000
Recording Time:	4/18/2003 9:11	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
1	13.85	perchlorate	0.136	0.0604	100.00	527.489	BMB
Total:			0.136	0.060	100.00	527.489	

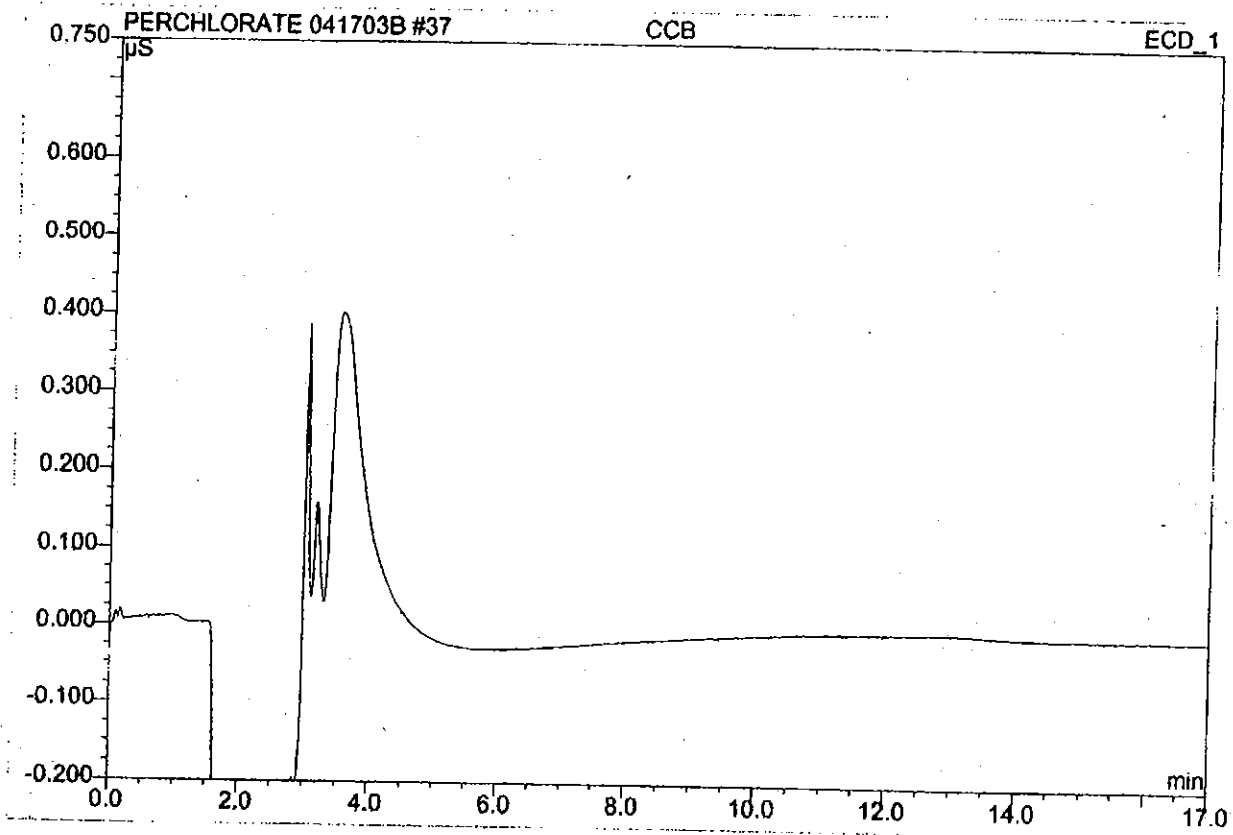
36 CCV 10PPB

Sample Name:	CCV 10PPB	Injection Volume:	1000.0
Vial Number:	25	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 9:31	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ug/L	Type
1	13.90	perchlorate	0.056	0.0246	100.00	10.758	BMB
Total:			0.056	0.025	100.00	10.758	

37 CCB			
Sample Name:	CCB	Injection Volume:	1000.0
Vial Number:	26	Channel:	ECD_1
Sample Type:	unknown	Wavelength:	n.a.
Control Program:	Perchlorate Program 11-19-02	Bandwidth:	n.a.
Quantif. Method:	IC5 Perch Low Quant Method 12-16-02	Dilution Factor:	1.0000
Recording Time:	4/18/2003 9:50	Sample Weight:	1.0000
Run Time (min):	17.00	Sample Amount:	1.0000



No.	Ret. Time min	Peak Name	Height µS	Area µS*min	Rel. Area %	Amount ug/L	Type
Total:			0.000	0.000	0.00	0.000	

APPENDIX F
*November 2003 Center of Crater
Laboratory Data Report*

**Demolition Area 3 Laboratory Data
November 2003
Center of Crater Soil Sampling Results**

December 16, 2003

Service Request No: K2309408

Eric Waehling
US Army Corp of Engineers-Public Works
AF2H-PWE-M517E
P.O. Box 339-500
Fort Lewis, WA 98433-9500

RE: Demo 3 / CAMP BONNEVILLE

Dear Eric:

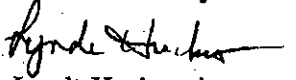
Enclosed are the results of the sample(s) submitted to our laboratory on November 26, 2003. For your reference, these analyses have been assigned our service request number K2309408.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358.

Respectfully submitted,

Columbia Analytical Services, Inc.


Lynda Huckestein
Client Services Manager

LH/jeb

Page 1 of 105

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL has been elevated due to a matrix interference.
- X See case narrative.
- * The duplicate analysis not within control limits. See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
- U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
- i The MRL/MDL has been elevated due to a chromatographic interference.
- X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client: US Army Corp of Engineers
Project: Camp Bonneville
Sample Matrix: Soil

Service Request No.: K2309408
Date Received: 11/26/2003

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seven soil samples were received for analysis at Columbia Analytical Services on 11/26/2003. In accordance with instructions from Eric Waehling, sample D3B3 was placed on hold. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Perchlorate by EPA Method 314

Perchlorate by EPA Method 314.0M

The matrix spike recovery of perchlorate for sample D3W was outside control criteria because of suspected matrix interference. A Matrix Spike Duplicate (MSD) was also analyzed, but produced similar results. The results of the original analysis are reported. No further corrective action was appropriate.

Total Metals

The MRL for Silver is elevated due to spectral interference from an unidentified matrix component.

The matrix spike recoveries of Beryllium, Selenium, and Silver for sample D2W (K2309408-001) were outside control criteria because of suspected matrix interference. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicates the analytical batch was in control. The matrix spike outlier suggests a potential low bias in this matrix. No further corrective action was appropriate.

Explosives by EPA Method 8330

The soil samples designated for Explosives were extracted in accordance with the EPA Method 8330. In addition to the standard list of compounds in the method, PETN and Picric Acid were requested. Several modifications to the EPA method were performed in order to quantitate these additional compounds after the initial extraction was performed. The extraction procedure was performed on the soil samples using acetonitrile in an ultrasonic bath and then filtered. The EPA Method 8330 analytical procedure was followed for the standard list of compounds. Two separate analytical runs were performed for the analysis of PETN and Picric Acid.

The analysis for PETN was performed as a separate quantitation using a wavelength of 210 nm. The results are considered semi-quantitative by this procedure because a method validation study was not performed under the same sample preparation and analysis conditions for this compound.

The quantitation for picric acid was performed using a three-point calibration curve. The reversed phase HPLC techniques in EPA Method 8330 do not retain Picric Acid on the HPLC. Thus the primary means of quantitation

Approved by _____ Date 12/16/03

was the absorbance measurement at 360 nm using the ultra violet detector. Due to the retention problems of this analyte on the analytical column, the analyte does not chromatograph as a single peak, but as a range of peaks from ~2.8-3.3 minutes. The quantitation was performed by measuring the response within this retention time window. The results are considered semi-quantitative by this procedure because a method validation study was not performed under the same sample preparation and analysis conditions for this compound.

A matrix spike, duplicate matrix spike and laboratory control sample was analyzed containing all of the target analytes. The recoveries of the target compounds indicate that the precision and accuracy by these procedures is within standard control criteria. There were no detectable levels of PETN or Picric Acid above the method reporting limit.

Approved by _____ Date 12/14/03

**Chain of Custody
Documentation**



Columbia Analytical Services, Inc.
An Employee-Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 685-7222/207 • FAX (360) 636-1088

CHAIN OF CUSTODY

SR#: 12204408 OF 1 PAGE 1 COC # 1

PROJECT NAME: CAMP COMMUNITE - DEMO 3
 PROJECT NUMBER: 1
 PROJECT MANAGER: Erk Warbling
 COMPANY ADDRESS: ARMY
 CITY/STATE/ZIP: _____
 E-MAIL ADDRESS: _____
 PHONE # 252-960732
 FAX # _____
 ANALYST SIGNATURE: [Signature]

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	REMARKS
D3W	1/25/03	12:50	501	1	1	Explosives/Plat/Perth 8330
D3E	1/25/03	13:10	501	1	1	Perthrate 31+
D3N	1/25/03	13:15	501	1	1	Perthrate 31+
D3S	1/25/03	13:20	501	1	1	Perthrate 31+
D3B1	1/25/03	13:40	501	1	1	Perthrate 31+
D3B2	1/25/03	13:45	501	1	1	Perthrate 31+
D3B3	1/25/03	13:50	501	1	1	Perthrate 31+

Circle which metals are to be analyzed: Priority Pollutant - check 157

Total Metals: Al Ag Ba Be Bi B Ca Cd Co Cr Cu Fe Pb Mn Mo Ni K Ag Na Se Sr Ti Sn V Hg

Dissolved Metals: Al As Sb Ba Be Bi B Ca Cd Co Cr Cu Fe Pb Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS: Disregard Nitrate on bottles

INVOICE INFORMATION
 P.O. # _____
 Bill To: _____

TURNAROUND REQUIREMENTS
 24 hr. _____
 48 hr. _____
 5 Day _____
 Standard (10-15 working days)
 Provide FAX Results _____

Requested Report Date _____

REPORT REQUIREMENTS

I. Routine Report: Method Blank, Surrogate, as required _____

II. Report Dup., MS, MSD as required _____

III. Data Validation Report (includes all raw data) _____

IV. CLP Deliverable Report _____

V. EDD _____

RELINQUISHED BY: [Signature] Date/Time 1-25-03 16:45 Firm _____

RECEIVED BY: [Signature] Date/Time 1/26/03 13:02 Firm _____

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client Camp Bonneville Work Order K23 09408
Cooler received on 11-25-03 and opened on 11-26-03 by AJH

1. Were custody seals on outside of cooler?
If yes, how many and where? 1 F. Y N
2. Were seals intact and signature, & date correct? Y N
3. Is the shipper's airbill available and filed? If no, record airbill number: H.P. Y N
4. COC # _____
Temperature of cooler(s) upon receipt: 0-7 _____
Temperature Blank: _____
5. Were custody papers properly filled out (ink, signed, etc.)? Y N
6. Type of packing material present 100, plastic Y N
7. Did all bottles arrive in good condition (unbroken)? Y N
8. Were all bottle labels complete (i.e. analysis, preservation, etc.)? Y N
9. Did all bottle labels and tags agree with custody papers? Y N
10. Were the correct types of bottles used for the tests indicated? Y N
11. Were all of the preserved bottles received at the lab with the appropriate pH? Y N
12. Were VOA vials checked for absence of air bubbles, and if present, noted below? Y N
13. Did the bottles originate from CAS/K or a branch laboratory? Y N
14. Are CWA Microbiology samples received with > 1/2 the 24 hr. hold time remaining from collection? Y N
15. Was Cl2/Res negative? Y N

Explain any discrepancies: _____

RESOLUTION: _____

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

PERCHLORATE

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/03
Date Received: 11/26/03

Perchlorate

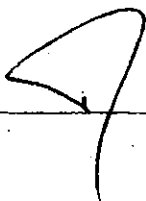
Prep Method: NONE
Analysis Method: 314.0M
Test Notes:

Units: ug/Kg (ppb)
Basis: Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
D3W	K2309408-001	180	45	5	NA	12/15/03	ND	
D3E	K2309408-002	180	45	5	NA	12/15/03	ND	
D3N	K2309408-003	180	45	5	NA	12/15/03	ND	
D3S	K2309408-004	180	45	5	NA	12/15/03	ND	
D3B1	K2309408-005	180	45	5	NA	12/15/03	ND	
D3B2	K2309408-006	180	45	5	NA	12/15/03	ND	
D3B3	K2309408-007	180	45	5	NA	12/15/03	ND	
Method Blank	K2309408-MB	36	9.0	1	NA	12/15/03	ND	

M Modified for analysis of soil.

Approved By: _____



Date: 12/16/03

1A/020597p

09408WET.BRI - Sample 12/16/03

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/03
Date Received: 11/26/03
Date Extracted: NA
Date Analyzed: 12/15/03

Duplicate Summary
Inorganic Parameters

Sample Name: D3W
Lab Code: K2309408-001DUP
Test Notes:

Units: ug/Kg (ppb)
Basis: Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Perchlorate	NONE	314.0M	180	ND	ND	ND	-	

Approved By: _____
DUP/020197p

Date: 12/16/03

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/03
Date Received: 11/26/03
Date Extracted: NA
Date Analyzed: 12/15/03

Matrix Spike Summary
Inorganic Parameters

Sample Name: D3W
Lab Code: K2309408-001MS
Test Notes:

Units: ug/Kg (ppb)
Basis: Dry

Analyte	Prep Method	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Perchlorate	NONE	314.0M	180	298	ND	187	63	80-120	*

Approved By: _____

Date: 12/16/03

MS/020597r

09408WET.BR1 - MS 12/16/03

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
LCS Matrix: Water

Service Request: K2309408
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 12/15/03

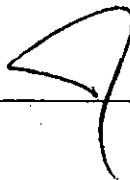
Laboratory Control Sample Summary
Inorganic Parameters

Sample Name: Lab Control Sample
Lab Code: K2309408-LCS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Perchlorate	NONE	314.0M	500	490	98	85-115	

Approved By: _____
LCS020597p



Date: 12/16/03

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE

Service Request: K2309408
Date Collected: NA
Date Received: NA
Date Analyzed: 12/15/03

Perchlorate
EPA Method 314.0M
Units: ug/L (ppb)

INITIAL CALIBRATION CHECK STANDARD (ICCS)

	True Value	Measured Value	Percent Recovery
ICCS Result	2.0	2.1	105

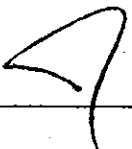
CONTINUING CALIBRATION VERIFICATION (CCV)

	True Value	Measured Value	Percent Recovery
CCV 1 Result	25.0	23.0	92
CCV 2 Result	25.0	24.2	97

ENDING CALIBRATION VERIFICATION (ECCV)

	True Value	Measured Value	Percent Recovery
ECCV Result	100	104	104

Approved By: _____
COMBAT/CD/042695



Date: 12/16/03

TOTAL METALS

METALS

- Cover Page -

INORGANIC ANALYSIS DATA PACKAGE

Client: U.S. Army Corps of Engineers

Service Request: K2309408

Project No.: CAMP BONNEVILLE

Project Name: Demo 3

<u>Sample No.</u>	<u>Lab Sample ID.</u>
D3W	K2309408-001
D3WD	K2309408-001D
D3WS	K2309408-001S
D3E	K2309408-002
D3N	K2309408-003
D3S	K2309408-004
D3B1	K2309408-005
D3B2	K2309408-006
Method Blank	K2309408-MB

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

Yes/No YES

If yes-were raw data generated before application of background corrections?

Yes/No NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Date: _____

Analytical Services

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: U.S. Army Corps of Engineers
 Project No.: CAMP BONNEVILLE
 Project Name: Demo 3
 Matrix: SOIL

Service Request: K2309408
 Date Collected: 11/25/03
 Date Received: 11/26/03
 Units: mg/kg
 Basis: Dry

Sample Name: D3W

Lab Code: K2309408-001

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010B	10.8	6.5	2	12/11/03	12/15/03	8.7	B	
Arsenic	7060A	2.7	0.5	5	12/11/03	12/12/03	5.0		
Beryllium	6010B	1.08	0.04	2	12/11/03	12/15/03	0.40	B	N
Cadmium	6010B	1.1	0.2	2	12/11/03	12/15/03	0.7	B	
Chromium	6010B	2.2	0.7	2	12/11/03	12/15/03	21.8		
Copper	6010B	2.2	2.2	2	12/11/03	12/15/03	151		
Lead	6010B	21.7	3.3	2	12/11/03	12/15/03	10.1	B	
Mercury	7471A	0.04	0.02	2	12/8/03	12/9/03	0.35		
Nickel	6010B	4.3	0.3	2	12/11/03	12/15/03	15.5		
Selenium	7740	0.7	0.1	2	12/11/03	12/12/03	0.1	U	N
Silver	6010B	10.8	2.2	2	12/11/03	12/15/03	2.2	U	N
Thallium	7841	1.1	0.2	2	12/11/03	12/12/03	0.4	B	
Zinc	6010B	2.2	0.4	2	12/11/03	12/15/03	106		

* Solids: 65.4

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: U.S. Army Corps of Engineers
 Project No.: CAMP BONNEVILLE
 Project Name: Demo 3
 Matrix: SOIL

Service Request: K2309408
 Date Collected: 11/25/03
 Date Received: 11/26/03
 Units: mg/kg
 Basis: Dry

Sample Name: D3E

Lab Code: K2309408-002

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010B	9.7	5.8	2	12/11/03	12/15/03	8.6	B	
Arsenic	7060A	2.5	0.5	5	12/11/03	12/12/03	10.4		
Beryllium	6010B	0.97	0.04	2	12/11/03	12/15/03	0.35	B	N
Cadmium	6010B	1.0	0.2	2	12/11/03	12/15/03	0.5	B	
Chromium	6010B	1.9	0.6	2	12/11/03	12/15/03	21.4		
Copper	6010B	1.9	1.9	2	12/11/03	12/15/03	363		
Lead	6010B	19.3	2.9	2	12/11/03	12/15/03	120		
Mercury	7471A	0.19	0.10	10	12/9/03	12/9/03	1.19		
Nickel	6010B	3.9	0.3	2	12/11/03	12/15/03	14.8		
Selenium	7740	1.0	0.2	2	12/11/03	12/12/03	0.2	U	N
Silver	6010B	9.7	1.9	2	12/11/03	12/15/03	1.9	U	N
Thallium	7841	1.0	0.2	2	12/11/03	12/12/03	0.3	B	
Zinc	6010B	1.9	0.4	2	12/11/03	12/15/03	144		

% Solids: 56.8

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: U.S. Army Corps of Engineers
 Project No.: CAMP BONNEVILLE
 Project Name: Demo 3
 Matrix: SOIL

Service Request: K2309408
 Date Collected: 11/25/03
 Date Received: 11/26/03
 Units: mg/kg
 Basis: Dry

Sample Name: D3N

Lab Code: K2309408-003

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010B	10.9	6.5	2	12/11/03	12/15/03	11.7		
Arsenic	7060A	2.7	0.5	5	12/11/03	12/12/03	3.8		
Beryllium	6010B	1.09	0.04	2	12/11/03	12/15/03	0.26	B	N
Cadmium	6010B	1.1	0.2	2	12/11/03	12/15/03	1.0	B	
Chromium	6010B	2.2	0.7	2	12/11/03	12/15/03	17.7		
Copper	6010B	2.2	2.2	2	12/11/03	12/15/03	164		
Lead	6010B	21.7	3.3	2	12/11/03	12/15/03	6.1	B	
Mercury	7471A	0.19	0.09	10	12/8/03	12/9/03	0.95		
Nickel	6010B	4.4	0.3	2	12/11/03	12/15/03	12.8		
Selenium	7740	1.1	0.2	2	12/11/03	12/12/03	0.2	U	N
Silver	6010B	10.9	2.2	2	12/11/03	12/15/03	2.2	U	N
Thallium	7841	1.1	0.2	2	12/11/03	12/12/03	0.3	B	
Zinc	6010B	2.2	0.4	2	12/11/03	12/15/03	97.4		

% Solids: 65.7

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: U.S. Army Corps of Engineers

Service Request: K2309408

Project No.: CAMP BONNEVILLE

Date Collected: 11/25/03

Project Name: Demo 3

Date Received: 11/26/03

Matrix: SOIL

Units: mg/kg

Basis: Dry

Sample Name: D3S

Lab Code: K2309408-004

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010B	11.7	7.0	2	12/11/03	12/15/03	10.3	B	
Arsenic	7060A	2.9	0.6	5	12/11/03	12/12/03	3.9		
Beryllium	6010B	1.17	0.05	2	12/11/03	12/15/03	0.52	B	N
Cadmium	6010B	1.2	0.2	2	12/11/03	12/15/03	0.2	U	
Chromium	6010B	2.3	0.7	2	12/11/03	12/15/03	18.7		
Copper	6010B	2.3	2.3	2	12/11/03	12/15/03	104		
Lead	6010B	23.3	3.5	2	12/11/03	12/15/03	7.6	B	
Mercury	7471A	0.02	0.01	1	12/8/03	12/9/03	0.04		
Nickel	6010B	4.7	0.4	2	12/11/03	12/15/03	13.6		
Selenium	7740	1.2	0.2	2	12/11/03	12/12/03	0.2	U	N
Silver	6010B	11.7	2.3	2	12/11/03	12/15/03	2.3	U	N
Thallium	7841	1.2	0.2	2	12/11/03	12/12/03	0.4	B	
Zinc	6010B	2.3	0.5	2	12/11/03	12/15/03	77.4		

% Solids: 71.4

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: U.S. Army Corps of Engineers
 Project No.: CAMP BONNEVILLE
 Project Name: Demo 3
 Matrix: SOIL

Service Request: K2309408
 Date Collected: 11/25/03
 Date Received: 11/26/03
 Units: mg/kg
 Basis: Dry

Sample Name: D3B1

Lab Code: K2309408-005

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010B	11.4	6.8	2	12/11/03	12/15/03	7.6	B	
Arsenic	7060A	2.9	0.6	5	12/11/03	12/12/03	3.3		
Beryllium	6010B	1.14	0.05	2	12/11/03	12/15/03	0.52	B	N
Cadmium	6010B	1.1	0.2	2	12/11/03	12/15/03	0.2	U	
Chromium	6010B	2.3	0.7	2	12/11/03	12/15/03	23.0		
Copper	6010B	2.3	2.3	2	12/11/03	12/15/03	141		
Lead	6010B	22.8	3.4	2	12/11/03	12/15/03	8.3	B	
Mercury	7471A	0.02	0.01	1	12/8/03	12/9/03	0.33		
Nickel	6010B	4.6	0.3	2	12/11/03	12/15/03	13.6		
Selenium	7740	1.2	0.2	2	12/11/03	12/12/03	0.2	U	N
Silver	6010B	11.4	2.3	2	12/11/03	12/15/03	2.3	U	N
Thallium	7841	1.2	0.2	2	12/11/03	12/12/03	0.4	B	
Zinc	6010B	2.3	0.5	2	12/11/03	12/15/03	89.7		

* Solids: 72.5

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: U.S. Army Corps of Engineers
 Project No.: CAMP BONNEVILLE
 Project Name: Demo 3
 Matrix: SOIL

Service Request: K2309408
 Date Collected: 11/25/03
 Date Received: 11/26/03
 Units: mg/kg
 Basis: Dry

Sample Name: D3B2

Lab Code: K2309408-006

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010B	10.9	6.6	2	12/11/03	12/15/03	6.6	U	
Arsenic	7060A	2.7	0.5	5	12/11/03	12/12/03	5.5		
Beryllium	6010B	1.09	0.04	2	12/11/03	12/15/03	0.34	B	N
Cadmium	6010B	1.1	0.2	2	12/11/03	12/15/03	0.5	B	
Chromium	6010B	2.2	0.7	2	12/11/03	12/15/03	20.4		
Copper	6010B	2.2	2.2	2	12/11/03	12/15/03	178		
Lead	6010B	21.9	3.3	2	12/11/03	12/15/03	22.0		
Mercury	7471A	0.02	0.01	1	12/8/03	12/9/03	0.94		
Nickel	6010B	4.4	0.3	2	12/11/03	12/15/03	14.1		
Selenium	7740	1.1	0.2	2	12/11/03	12/12/03	0.2	U	N
Silver	6010B	10.9	2.2	2	12/11/03	12/15/03	2.2	U	N
Thallium	7841	1.1	0.2	2	12/11/03	12/12/03	0.4	B	
Zinc	6010B	2.2	0.4	2	12/11/03	12/15/03	123		

% Solids: 64.8

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: U.S. Army Corps of Engineers Service Request: K2309408
 Project No.: CAMP BONNEVILLE Date Collected: NA
 Project Name: Demo 3 Date Received: NA
 Matrix: SOIL Units: mg/kg
 Basis: Dry

Sample Name: Method Blank

Lab Code: K2309408-MB

Analyte	Analysis Method	MRL	MDL	Dil.	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6010B	10.0	6.0	2	12/11/03	12/15/03	6.0	U	
Arsenic	7060A	2.5	0.5	5	12/11/03	12/12/03	0.5	U	
Beryllium	6010B	1.00	0.04	2	12/11/03	12/15/03	0.04	U	N
Cadmium	6010B	1.0	0.2	2	12/11/03	12/15/03	0.2	U	
Chromium	6010B	2.0	0.6	2	12/11/03	12/15/03	0.6	U	
Copper	6010B	2.0	2.0	2	12/11/03	12/15/03	2.0	U	
Lead	6010B	20.0	3.0	2	12/11/03	12/15/03	3.0	U	
Mercury	7471A	0.02	0.01	1	12/8/03	12/9/03	0.01	U	
Nickel	6010B	4.0	0.3	2	12/11/03	12/15/03	0.3	U	
Selenium	7740	1.0	0.2	2	12/11/03	12/12/03	0.2	U	N
Silver	6010B	10.0	2.0	2	12/11/03	12/15/03	2.0	U	N
Thallium	7841	1.0	0.2	2	12/11/03	12/12/03	0.2	U	
Zinc	6010B	2.0	0.4	2	12/11/03	12/15/03	0.4	U	

* Solids: 100.0

Comments:

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: U.S. Army Corps of Engineers

Service Request: K2309408

Project No.: CAMP BONNEVILLE

Project Name: Demo 3

ICV Source: Inorganic Ventures

CCV Source: CAS Mixed Solutions

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration				Method	
	True	Found	%R(1)	True	Found	%R(1)	Found		%R(1)
Antimony	2500	2470	99	500	499	100	468	94	6010B
Arsenic	25.0	25.7	102	30.0	31.4	105	29.5	98	7060A
Beryllium	125	113	90	500	486	97	482	96	6010B
Cadmium	1250	1240	99	500	503	101	505	101	6010B
Chromium	500	504	101	500	503	101	503	101	6010B
Copper	625	623	100	500	492	98	497	99	6010B
Lead	2500	2490	100	500	508	102	488	98	6010B
Mercury	5.0	4.78	96	5.0	4.87	97	4.89	98	7471A
Nickel	1250	1250	100	500	497	99	494	99	6010B
Selenium	25.0	25.0	100	20.0	19.2	96	19.6	98	7740
Silver	625	608	97	500	487	97	488	98	6010B
Thallium	25.0	26.1	104	40.0	39.3	98	39.4	99	7841
Zinc	1250	1240	99	500	501	100	499	100	6010B

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: U.S. Army Corps of Engineers

Service Request: K2309408

Project No.: CAMP BONNEVILLE

Project Name: Demo 3

ICV Source:

CCV Source: CAS Mixed Solutions

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration				Method	
	True	Found	%R(1)	True	Found	%R(1)	Found		%R(1)
Antimony				500	507	101	464	93	6010B
Arsenic				30.0	30.2	101	29.7	99	7060A
Beryllium				500	491	98	481	96	6010B
Cadmium				500	502	100	497	99	6010B
Chromium				500	504	101	497	99	6010B
Copper				500	497	99	494	99	6010B
Lead				500	515	103	500	100	6010B
Mercury				5.0	4.77	95	4.65	93	7471A
Nickel				500	505	101	492	98	6010B
Selenium				20.0	19.6	98	19.7	99	7740
Silver				500	499	100	486	97	6010B
Thallium				40.0	40.0	100			7841
Zinc				500	504	101	494	99	6010B

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: U.S. Army Corps of Engineers

Service Request: K2309408

Project No.: CAMP BONNEVILLE

Project Name: Demo 3

ICV Source:

CCV Source: CAS Mixed Solutions

Concentration Units: ug/l

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Arsenic				30.0	30.4	101			7060A
Mercury				5.0	4.69	94	4.65	93	7471A
Selenium				20.0	19.9	100	21.1	106	7740

**Organic Analysis:
PETN by HPLC**

Summary Package

Sample and QC Results

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

PETN by HPLC

Sample Name: D3W
Lab Code: K2309408-001
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Pentaerythritol Tetranitrate	ND U	16	1	12/04/03	12/09/03	KWG0319510	

Surrogate Name	%Rec	Control Limits	Note

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

PETN by HPLC

Sample Name: D3E
Lab Code: K2309408-002
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Pentaerythritol Tetranitrate	ND U	18	1	12/04/03	12/09/03	KWG0319510	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

PETN by HPLC

Sample Name: D3N
Lab Code: K2309408-003
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Pentaerythritol Tetranitrate	ND U	14	1	12/04/03	12/09/03	KWG0319510	

Surrogate Name	%Rec	Control Limits	Note

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

PETN by HPLC

Sample Name: D3S
Lab Code: K2309408-004
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry ;
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Pentaerythritol Tetranitrate	ND U	13	1	12/04/03	12/09/03	KWG0319510	

Surrogate Name	%Rec	Control Limits	Note

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

PETN by HPLC

Sample Name: D3B1
Lab Code: K2309408-005
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Pentaerythritol Tetranitrate	ND U	12	1	12/04/03	12/09/03	KWG0319510	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

PETN by HPLC

Sample Name: D3B2
Lab Code: K2309408-006
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Pentaerythritol Tetranitrate	ND U	14	1	12/04/03	12/09/03	KWG0319510	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

PETN by HPLC

Sample Name: D3B3
Lab Code: K2309408-007
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Pentaerythritol Tetranitrate	ND U	13	1	12/04/03	12/09/03	KWG0319510	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

Organic Analysis:
Picric acid by HPLC

Summary Package

Sample and QC Results

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Picric acid by HPLC

Sample Name: D3W
Lab Code: K2309408-001
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND U	16	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Picric acid by HPLC

Sample Name: D3E
Lab Code: K2309408-002
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND	U	18	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Picric acid by HPLC

Sample Name: D3N
Lab Code: K2309408-003

Units: mg/Kg
Basis: Dry

Extraction Method: METHOD
Analysis Method: 8330M

Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND U	16	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Picric acid by HPLC

Sample Name: D3S
Lab Code: K2309408-004
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND U	15	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Picric acid by HPLC

Sample Name: D3B1
Lab Code: K2309408-005
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND U	14	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Picric acid by HPLC

Sample Name: D3B2
Lab Code: K2309408-006
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND U	16	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Picric acid by HPLC

Sample Name: D3B3
Lab Code: K2309408-007
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND U	14	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: NA
Date Received: NA

Picric acid by HPLC

Sample Name: Method Blank
Lab Code: KWG0319509-4
Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Picric Acid	ND U	10	1	12/04/03	12/09/03	KWG0319509	

Surrogate Name	%Rec	Control Limits	Note
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Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
 Project: Camp Bonneville-Demo 3
 Sample Matrix: Soil

Service Request: K2309408
 Date Extracted: 12/04/2003
 Date Analyzed: 12/09/2003

Matrix Spike/Duplicate Matrix Spike Summary
 Picric acid by HPLC

Sample Name: D3W
 Lab Code: K2309408-001
 Extraction Method: METHOD
 Analysis Method: 8330M

Units: mg/Kg
 Basis: Dry
 Level: Low
 Extraction Lot: KWG0319509

Analyte Name	Sample Result	D3WMS KWG0319509-1 Matrix Spike			D3WDMS KWG0319509-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Picric Acid	ND	41.9	37.7	111	41.1	37.7	109	70-130	2	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Extracted: 12/04/2003
Date Analyzed: 12/09/2003

Lab Control Spike Summary
Picric acid by HPLC

Extraction Method: METHOD
Analysis Method: 8330M

Units: mg/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0319509

Analyte Name	Lab Control Sample KWG0319509-3 Lab Control Spike			%Rec Limits
	Result	Expected	%Rec	
Picric Acid	24.9	25.0	100	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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U:\Stealth\Crystal.rpt\form3LCS.rpt

Form 3C - Organic

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SuperSet Reference: RR33289

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
 Project: Camp Bonneville-Demo 3
 Sample Matrix: Soil

Service Request: K2309408
 Date Extracted: 12/04/2003
 Date Analyzed: 12/09/2003
 Time Analyzed: 13:52

Method Blank Summary
 Picric acid by HPLC

Sample Name: Method Blank,
 Lab Code: KWG0319509-4
 Extraction Method: METHOD
 Analysis Method: 8330M

File ID: J:\LC04\DATA\1209003\12090016.D
 Instrument ID: LC04
 Level: Low
 Extraction Lot: KWG0319509

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0319509-3	J:\LC04\DATA\1209003\12090017.D	12/09/03	14:05
D3W	K2309408-001	J:\LC04\DATA\1209003\12090018.D	12/09/03	14:18
D3WMS	KWG0319509-1	J:\LC04\DATA\1209003\12090019.D	12/09/03	14:31
D3WDMS	KWG0319509-2	J:\LC04\DATA\1209003\12090020.D	12/09/03	14:44
D3E	K2309408-002	J:\LC04\DATA\1209003\12090021.D	12/09/03	14:56
D3N	K2309408-003	J:\LC04\DATA\1209003\12090022.D	12/09/03	15:09
D3S	K2309408-004	J:\LC04\DATA\1209003\12090023.D	12/09/03	15:22
D3B1	K2309408-005	J:\LC04\DATA\1209003\12090024.D	12/09/03	15:35
D3B2	K2309408-006	J:\LC04\DATA\1209003\12090025.D	12/09/03	15:48
D3B3	K2309408-007	J:\LC04\DATA\1209003\12090026.D	12/09/03	16:01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: U.S. Army Corps of Engineers
 Project: Camp Bonneville-Demo 3
 Sample Matrix: Soil

Service Request: K2309408
 Date Extracted: 12/04/2003
 Date Analyzed: 12/09/2003
 Time Analyzed: 14:05

Lab Control Sample Summary
 Picric acid by HPLC

Sample Name: Lab Control Sample
 Lab Code: KWG0319509-3
 Extraction Method: METHOD
 Analysis Method: 8330M

File ID: J:\LC04\DATA\1209003\12090017.D
 Instrument ID: LC04
 Level: Low
 Extraction Lot: KWG0319509

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0319509-4	J:\LC04\DATA\1209003\12090016.D	12/09/03	13:52
D3W	K2309408-001	J:\LC04\DATA\1209003\12090018.D	12/09/03	14:18
D3WMS	KWG0319509-1	J:\LC04\DATA\1209003\12090019.D	12/09/03	14:31
D3WDMS	KWG0319509-2	J:\LC04\DATA\1209003\12090020.D	12/09/03	14:44
D3E	K2309408-002	J:\LC04\DATA\1209003\12090021.D	12/09/03	14:56
D3N	K2309408-003	J:\LC04\DATA\1209003\12090022.D	12/09/03	15:09
D3S	K2309408-004	J:\LC04\DATA\1209003\12090023.D	12/09/03	15:22
D3B1	K2309408-005	J:\LC04\DATA\1209003\12090024.D	12/09/03	15:35
D3B2	K2309408-006	J:\LC04\DATA\1209003\12090025.D	12/09/03	15:48
D3B3	K2309408-007	J:\LC04\DATA\1209003\12090026.D	12/09/03	16:01

**Explosives
Method 8330**

Organic Analysis:
Nitroaromatics and Nitramines (Explosives)

Summary Package

Sample and QC Results

COLUMBIA ANALYTICAL SERVICES, INC.

Client:
Project:

U.S. Army Corps of Engineers
Demo 3/CAMP BONNEVILLE

Service Request: K2309408

Cover Page - Organic Analysis Data Package
Nitroaromatics and Nitramines (Explosives)

Sample Name	Lab Code	Date Collected	Date Received
D3W	K2309408-001	11/25/2003	11/26/2003
D3E	K2309408-002	11/25/2003	11/26/2003
D3N	K2309408-003	11/25/2003	11/26/2003
D3S	K2309408-004	11/25/2003	11/26/2003
D3B1	K2309408-005	11/25/2003	11/26/2003
D3B2	K2309408-006	11/25/2003	11/26/2003
D3B3	K2309408-007	11/25/2003	11/26/2003
D3WMS	KWG0319508-1	11/25/2003	11/26/2003
D3WDMS	KWG0319508-2	11/25/2003	11/26/2003

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____

Name: Meena Shah

Date: 12/11/03

Title: Scientist

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Nitroaromatics and Nitramines (Explosives)

Sample Name: D3W
Lab Code: K2309408-001
Extraction Method: METHOD
Analysis Method: 8330

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	3.1	0.077	1	12/04/03	12/09/03	KWG0319508	
RDX	ND	U	3.1	0.15	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	3.1	0.094	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	3.1	0.082	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	3.1	0.19	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	3.1	0.095	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	3.1	0.11	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	3.1	0.12	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	3.1	0.086	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	3.1	0.13	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	3.1	0.11	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	3.1	0.13	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	3.1	0.17	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	3.1	0.11	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	91	63-118	12/09/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Nitroaromatics and Nitramines (Explosives)

Sample Name: D3E
Lab Code: K2309408-002
Extraction Method: METHOD
Analysis Method: 8330

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	3.5	0.089	1	12/04/03	12/09/03	KWG0319508	
RDX	1.3	JN	3.5	0.18	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	3.5	0.11	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	3.5	0.094	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	3.5	0.22	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	3.5	0.11	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	3.5	0.12	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	3.5	0.13	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	3.5	0.099	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	3.5	0.15	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	3.5	0.12	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	3.5	0.15	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	3.5	0.20	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	3.5	0.13	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	90	63-118	12/09/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Nitroaromatics and Nitramines (Explosives)

Sample Name: D3N
Lab Code: K2309408-003
Extraction Method: METHOD
Analysis Method: 8330

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	2.8	0.077	1	12/04/03	12/09/03	KWG0319508	
RDX	ND	U	2.8	0.15	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	2.8	0.093	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	2.8	0.081	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	2.8	0.19	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	2.8	0.095	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	2.8	0.11	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	2.8	0.11	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	2.8	0.086	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	2.8	0.13	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	2.8	0.11	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	2.8	0.13	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	2.8	0.17	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	2.8	0.11	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	91	63-118	12/09/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Nitroaromatics and Nitramines (Explosives)

Sample Name: D3S
Lab Code: K2309408-004
Extraction Method: METHOD
Analysis Method: 8330

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	2.6	0.071	1	12/04/03	12/09/03	KWG0319508	
RDX	ND	U	2.6	0.14	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	2.6	0.086	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	2.6	0.075	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	2.6	0.17	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	2.6	0.087	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	2.6	0.093	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	2.6	0.11	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	2.6	0.079	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	2.6	0.12	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	2.6	0.094	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	2.6	0.12	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	2.6	0.16	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	2.6	0.097	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	91	63-118	12/09/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
 Project: Demo 3/CAMP BONNEVILLE
 Sample Matrix: Soil

Service Request: K2309408
 Date Collected: 11/25/2003
 Date Received: 11/26/2003

Nitroaromatics and Nitramines (Explosives)

Sample Name: D3B1
 Lab Code: K2309408-005
 Extraction Method: METHOD
 Analysis Method: 8330

Units: mg/Kg
 Basis: Dry
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	2.4	0.069	1	12/04/03	12/09/03	KWG0319508	
RDX	ND	U	2.4	0.14	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	2.4	0.085	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	2.4	0.074	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	2.4	0.17	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	2.4	0.086	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	2.4	0.092	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	2.4	0.10	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	2.4	0.078	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	2.4	0.12	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	2.4	0.093	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	2.4	0.12	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	2.4	0.16	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	2.4	0.096	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	90	63-118	12/09/03	Acceptable

Comments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
 Project: Demo 3/CAMP BONNEVILLE
 Sample Matrix: Soil

Service Request: K2309408
 Date Collected: 11/25/2003
 Date Received: 11/26/2003

Nitroaromatics and Nitramines (Explosives)

Sample Name: D3B2
 Lab Code: K2309408-006
 Extraction Method: METHOD
 Analysis Method: 8330

Units: mg/Kg
 Basis: Dry
 Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	2.7	0.078	1	12/04/03	12/09/03	KWG0319508	
RDX	ND	U	2.7	0.16	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	2.7	0.095	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	2.7	0.082	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	2.7	0.19	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	2.7	0.096	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	2.7	0.11	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	2.7	0.12	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	2.7	0.087	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	2.7	0.13	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	2.7	0.11	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	2.7	0.13	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	2.7	0.17	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	2.7	0.11	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	90	63-118	12/09/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Camp Bonneville-Demo 3
Sample Matrix: Soil

Service Request: K2309408
Date Collected: 11/25/2003
Date Received: 11/26/2003

Nitroaromatics and Nitramines (Explosives)

Sample Name: D3B3
Lab Code: K2309408-007
Extraction Method: METHOD
Analysis Method: 8330

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	2.6	0.069	1	12/04/03	12/09/03	KWG0319508	
RDX	ND	U	2.6	0.14	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	2.6	0.084	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	2.6	0.073	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	2.6	0.17	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	2.6	0.086	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	2.6	0.091	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	2.6	0.10	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	2.6	0.078	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	2.6	0.12	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	2.6	0.093	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	2.6	0.12	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	2.6	0.16	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	2.6	0.095	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	91	63-118	12/09/03	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: U.S. Army Corps of Engineers
Project: Demo 3/CAMP BONNEVILLE
Sample Matrix: Soil

Service Request: K2309408
Date Collected: NA
Date Received: NA

Nitroaromatics and Nitramines (Explosives)

Sample Name: Method Blank
Lab Code: KWG0319508-4
Extraction Method: METHOD
Analysis Method: 8330

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
HMX	ND	U	2.0	0.050	1	12/04/03	12/09/03	KWG0319508	
RDX	ND	U	2.0	0.098	1	12/04/03	12/09/03	KWG0319508	
1,3,5-Trinitrobenzene	ND	U	2.0	0.061	1	12/04/03	12/09/03	KWG0319508	
1,3-Dinitrobenzene	ND	U	2.0	0.053	1	12/04/03	12/09/03	KWG0319508	
TETRYL	ND	U	2.0	0.12	1	12/04/03	12/09/03	KWG0319508	
Nitrobenzene	ND	U	2.0	0.062	1	12/04/03	12/09/03	KWG0319508	
4-Amino-2,6-dinitrotoluene	ND	U	2.0	0.066	1	12/04/03	12/09/03	KWG0319508	
2-Amino-4,6-dinitrotoluene	ND	U	2.0	0.072	1	12/04/03	12/09/03	KWG0319508	
2,4,6-Trinitrotoluene	ND	U	2.0	0.056	1	12/04/03	12/09/03	KWG0319508	
2,6-Dinitrotoluene	ND	U	2.0	0.082	1	12/04/03	12/09/03	KWG0319508	
2,4-Dinitrotoluene	ND	U	2.0	0.067	1	12/04/03	12/09/03	KWG0319508	
2-Nitrotoluene	ND	U	2.0	0.080	1	12/04/03	12/09/03	KWG0319508	
4-Nitrotoluene	ND	U	2.0	0.11	1	12/04/03	12/09/03	KWG0319508	
3-Nitrotoluene	ND	U	2.0	0.069	1	12/04/03	12/09/03	KWG0319508	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1-Chloro-3-nitrobenzene	96	63-118	12/09/03	Acceptable

Comments: