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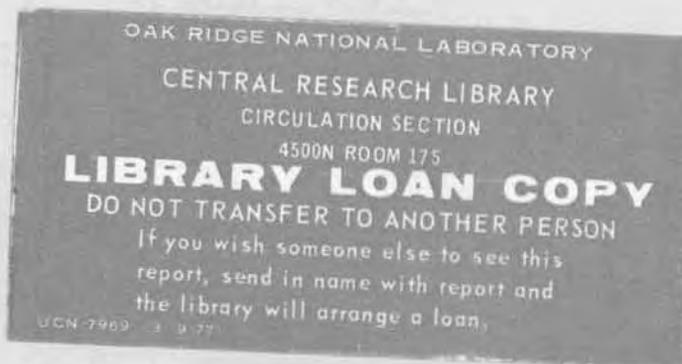
Brookhaven National Laboratory

Sampling and Analysis Data Document

This document contains uninterpreted sampling and analytical data. The data will be interpreted by the DOE Environmental Survey Team and used to modify, as appropriate, the tentative Survey findings contained in the Environmental Survey Preliminary Report. Final Survey findings will be presented in the Environmental Survey Summary Report.

DRAFT

Volume II
July 1989



DEPARTMENT OF ENERGY
ENVIRONMENTAL SURVEY

BROOKHAVEN NATIONAL LABORATORY SAMPLING AND ANALYSIS DATA DOCUMENT (DRAFT)

VOLUME II

July 1989

Prepared by:
DOE Environmental Survey and
Oak Ridge National Laboratory

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Martin Marietta Energy Systems, Inc.

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Approved

ORNL Data Management



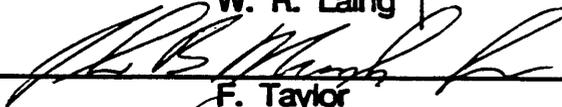
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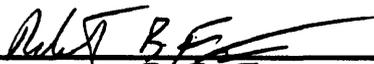
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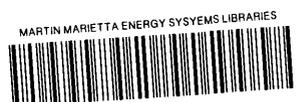


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Appendix A

UPDATED LIST OF SAMPLING AND ANALYTICAL REQUESTS

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TABLE A.1
 BROOKHAVEN SITE ENVIRONMENTAL SAMPLES
 WITH FIELD QC SAMPLES
 SORTED BY ENVIRONMENTAL PROBLEM AND REQUEST NUMBER

REQ NUMB	PROB NUMB	ST	DATE COLL. DD/MM/YY	LOCATION	TYPE LOCATION	MEDIA	NUMB SAMP		ANIONS		METALS		O&G		PET HYDRO		PES/H/PCB		SEMIVOLS		VOLS		RADS					
							ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN	ACTU	PLAN
							AL	NED	AL	NED	AL	NED	AL	NED	AL	NED	AL	NED	AL	NED	AL	NED	AL	NED	AL	NED	AL	NED
BR809	0		17/04/88	BOUNDRY RD	WELL	GRN WATER	3	3	BKGRN	0	0	3	3	0	0	0	0	0	3	3	3	3	3	3				
BR810	0		17/04/88	BOUNDRY RD	BACKGROUND	SEDIMENT	3	3	BKGRN	0	0	3	3	3	3	0	0	3	3	3	3	3	3	3				
BR300	1		12/04/88	PRIMARY PD	HMMA POND	SUR WATER	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	3	3	3	3	3				
BR301	1		12/04/88	PRIMARY PD	POND	SUR WATER	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	0	3	3	3	3				
BR301	1		12/04/88	PRIMARY PD	POND	SUR WATER	1	1	QC RN	0	0	1	1	0	0	0	0	1	1	0	1	1	1	1				
BR301	1		17/04/88	PRIMARY PD	POND	SUR WATER	3	3	GRAB	0	0	0	0	0	0	0	0	3	3	3	3	0	0	0	0			
BR302	1		12/04/88	WOODED PD	POND	SUR WATER	1	1	QC FL	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1			
BR302	1		12/04/88	WOODED PD	POND	SUR WATER	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	0	3	3	3	3	3			
BR302	1		17/04/88	WOODED PD	POND	SUR WATER	3	3	GRAB	0	0	0	0	0	0	0	0	3	3	3	3	0	0	0	0			
BR303	1		12/04/88	S PRIM. PD	POND	SEDIMENT	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	3	3	3	3	3	3			
BR304	1		12/04/88	N PRIM. PD	POND	SEDIMENT	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	3	3	3	3	3	3			
BR304	1		12/04/88	N PRIM. PD	POND	SUR WATER	1	1	QC RN	0	0	1	1	0	0	0	0	1	1	0	1	1	1	1	1			
BR305	1		12/04/88	N WOODED P	POND	SEDIMENT	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	3	3	3	3	3	3			
BR306	2		18/04/88	B. 479	CESSPOOL	SUR WATER	1	1	QC FL	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0			
BR306	2		18/04/88	B. 479	CESSPOOL	SUR WATER	2	2	GRAB	2	2	2	2	2	2	0	0	0	0	2	2	2	2	0	0			
BR306	2		18/04/88	B. 975	CESSPOOL	SUR WATER	1	1	GRAB	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0			
BR307	2	DELETED		B. 244	CESSPOOL	SUR WATER	0	3	GRAB	0	3	0	3	0	3	0	0	0	0	3	0	3	0	0	0			
BR308	2		18/04/88	B. 422	CESSPOOL	SUR WATER	3	3	GRAB	3	3	3	3	3	3	0	0	0	0	3	3	3	3	0	0			
BR308	2		18/04/88	B. 422	CESSPOOL	SUR WATER	1	1	QC RN	1	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0			
BR309	2	DELETED		B. 197	CESSPOOL	SUR WATER	0	3	GRAB	0	3	0	3	0	3	0	0	0	0	3	0	3	0	0	0			
BR310	2		18/04/88	B. 905	CESSPOOL	SUR WATER	3	3	GRAB	3	3	3	3	3	3	0	0	0	0	3	3	3	3	0	0			
BR311	2		19/04/88	B. 479	CESSPOOL	SEDIMENT	1	1	GRAB	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	1			
BR311	2		19/04/88	B. 479	CESSPOOL	SUR WATER	1	1	QC RN	0	0	1	1	0	0	1	1	0	1	1	1	1	1	1	1			
BR312	2	DELETED		B. 244	CESSPOOL	SEDIMENT	0	1	GRAB	0	0	0	1	0	0	0	1	0	1	0	1	0	1	0	1			
BR313	2		19/04/88	B. 422	CESSPOOL	SEDIMENT	1	1	GRAB	0	0	1	1	0	0	1	1	1	1	1	0	1	1	1	1			
BR314	2	DELETED		B. 197	CESSPOOL	SEDIMENT	0	1	GRAB	0	0	0	1	0	0	0	1	0	1	0	1	0	1	0	1			
BR315	2		19/04/88	B. 905	CESSPOOL	SEDIMENT	1	1	GRAB	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	1			
BR316	3		25/06/88	M UPTON RD	WELL	GRN WATER	4	4	PUMP	0	0	4	4	0	0	0	0	4	4	4	4	4	4	4	4			
BR500	4		13/04/88	BNL LANDF	LEACHATE	SOIL	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	3	3	3	3	3	3			
BR500	4		13/04/88	BNL LANDF	LEACHATE	SUR WATER	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	0	3	3	3	3	3			
BR500	4		16/04/88	BNL LANDF	LEACHATE	SUR WATER	3	3	GRAB	0	0	0	0	0	0	0	0	3	3	0	3	0	0	0	0			
BR507	4		30/06/88	CURR. LNDF	WELL	GRN WATER	8	8	PUMP	0	0	8	8	0	0	0	0	0	0	8	8	8	8	8	8			
BR508	4	DELETED		U/D CUR LF	WELL AT LND	SOIL	0	4	GRAB	0	0	0	4	0	0	0	0	0	0	0	4	0	4	0	4			
BR508	4		28/06/88	U/D CUR LF	WELL AT LND	SOIL	6	6	GRAB	0	0	6	6	0	0	0	0	0	0	6	6	6	6	6	6			
BR508	4		28/06/88	U/D CUR LF	WELL AT LND	SUR WATER	1	1	QC RN	0	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1			
BR501	5	DELETED		B. 811	SLURRY	SEDIMENT	0	4	GRAB	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0			
BR501	5		12/04/88	B. 811	SLURRY	SUR WATER	1	1	QC RN	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0			
BR501	5		13/04/88	B. 811	SLURRY	SEDIMENT	4	4	GRAB	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0			
BR502	5	DELETED		B. 811	SLUDGE	SEDIMENT	0	9	GRAB	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9			
BR503	6		14/04/88	B. 444	RELEASES	SOIL	4	4	GRAB	0	0	4	4	4	4	0	0	0	0	4	4	2	4	4	4			
BR503	6		14/04/88	B. 444	RELEASES	SUR WATER	1	1	QC RN	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	1			
BR504	6		14/04/88	B. 444	RELEASES	SOIL	3	3	GRAB	0	0	3	3	3	3	0	0	0	0	3	3	2	3	3	3			
BR505	6		14/04/88	AGS AREA	RELEASES	SOIL	6	6	GRAB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6			

A-3

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TABLE A.1
 BROOKHAVEN SITE ENVIRONMENTAL SAMPLES
 WITH FIELD QC SAMPLES
 SORTED BY ENVIRONMENTAL PROBLEM AND REQUEST NUMBER

REQ NUMB	PROB NUMB	ST COLL.	DATE DD/MM/YY	LOCATION	TYPE LOCATION	MEDIA	NUMB SAMP		ANIONS		METALS		O&G		PET HYDRO		PES/H/PCB		SEMI VOLS		VOLS		RADS					
							ACTU	PLAN	AL	INED	AL	INED	AL	INED	AL	INED	AL	INED	AL	INED	AL	INED	AL	INED	AL	INED	AL	INED
BR506	7		14/04/88	HMMA SPRAY	AERATION	SOIL	7	7	GRAB	0	0	0	0	0	0	0	0	1	7	0	7	7	7					
BR800	8		15/04/88	STP	DREDGE MATL	SOIL	5	5	GRAB	0	0	5	5	0	0	0	0	5	5	5	5	5	5					
BR800	8		15/04/88	STP	DREDGE MATL	SUR WATER	1	1	QC RN	0	0	1	1	0	0	0	0	1	1	0	1	1	1					
BR801	8		15/04/88	STP	TANK	SUR WATER	1	1	QC RN	0	0	1	1	0	0	0	0	1	1	1	1	1	1					
BR801	8		15/04/88	STP	TANK	UNSEAL CO	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	3	3	3	3					
BR802	8		18/04/88	STP	TANK	SEDIMENT	1	1	GRAB	0	0	1	1	0	0	0	0	1	1	1	1	1	1					
BR802	8		19/04/88	STP	TANK	SEDIMENT	2	2	GRAB	0	0	2	2	0	0	0	0	2	2	2	2	2	2					
BR803	8		18/04/88	STP	SLUDGE BEDS	SOIL	4	4	GRAB	0	0	4	4	0	0	0	0	4	4	4	4	4	4					
BR804	9		20/04/88	AGS I&II	SCRAPYARD	SOIL	1	1	GRAB	0	0	1	1	0	0	0	0	0	0	0	0	1	1					
BR804	9		20/04/88	AGS I&II	SCRAPYARD	SOIL	5	5	GRAB	0	0	5	5	0	0	0	0	0	0	0	0	5	5					
BR805	9		20/04/88	AGS SCRAP.	WELL	GRN WATER	4	4	HELMZ	0	0	3	4	0	0	0	0	3	4	3	4	3	4					
BR806	10		20/04/88	B. 975	BUBBLE ARE	SOIL	14	14	GRAB	0	0	14	14	0	0	0	0	14	14	0	14	14	14					
BR806	10		20/04/88	B. 975	BUBBLE ARE	SUR WATER	1	1	QC RN	0	0	1	1	0	0	0	0	0	0	1	1	1	1					
BR807	10		21/04/88	B-975	WELL	GRN WATER	3	3	BAILR	0	0	3	3	0	0	0	0	3	3	3	3	3	3					
BR807	10		21/04/88	B-975	WELL	GRN WATER	1	1	QC FL	0	0	1	1	0	0	0	0	0	0	0	0	1	1					
BR809	10		16/06/88	B-975	WELL	GRN WATER	2	2	PUMP	0	0	2	2	0	0	0	0	2	2	2	2	2	2					
BR809	10		23/06/88	B-975	WELL	GRN WATER	2	2	PUMP	0	0	2	2	0	0	0	0	2	2	2	2	2	2					
BR809	10		24/06/88	B-975	WELL	GRN WATER	4	4	PUMP	0	0	4	4	0	0	0	0	4	4	4	4	4	4					
BR809	10		25/06/88	B-975	WELL	WATER	1	1	QC FL	0	0	1	1	0	0	0	0	1	1	1	1	1	1					
BR809	10		25/06/88	B-975	WELL	WATER	1	1	QC RN	0	0	1	1	0	0	0	0	0	0	0	0	1	1					
BR810	10	DELETED		B. 975	WELLS	SOIL	0	5	GRAB	0	0	0	5	0	5	0	0	5	0	5	0	5	5					
BR808	11		21/04/88	B. 481	LEACH PIT	SOIL	3	3	GRAB	0	0	3	3	0	0	0	0	3	3	3	3	3	3					
BR301	99		18/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR302	99		18/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR305	99		14/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR306	99		18/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR308	99		20/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR316	99		25/06/88	TRIP BLANK	TRIP BLANK	WATER	2	2	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0				
BR500	99		14/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR503	99		15/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR507	99		30/06/88	TRIP BLANK	TRIP BLANK	WATER	4	4	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	4	0	0				
BR508	99		28/06/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR801	99		15/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR801	99		16/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR805	99		21/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR807	99		21/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR808	99		21/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR809	99		20/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
BR809	99		25/06/88	TRIP BLANK	TRIP BLANK	WATER	5	5	QC BL	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0				
BR810	99		18/04/88	TRIP BLANK	TRIP BLANK	WATER	1	1	QC BL	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0				
TOTAL							187	217		11	17	138	169	22	33	4	6	55	75	120	157	113	174	135	156			

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Appendix B

BACKGROUND CONCENTRATION LEVELS OF ANALYTES

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APPENDIX B BACKGROUND CONCENTRATION LEVELS OF ANALYTES

The purpose of Appendix B is to provide data on the level of contaminants in environmental samples that are expected from sources other than site operations. The data provided in Tables B.1 through B.8 are from BNL's 1987 Environmental Monitoring Report BNL52152/UC-402 and were not obtained as part of the Survey.

A limited amount of background data are available for radionuclides in surface water. The data in Table B.1 and B.2 are from off-site sampling of the Carmens River surface waters (Figure B.1). The information comes from Tables 27 and 28 of the 1987 Environmental Monitoring Report. Table B.1 shows tritium was below the detection limit and strontium-90 was not analyzed for the background site. Table B.2 gives limited data on potassium-40.

The data presented in Tables B.3 through B.7 are representative of on-site groundwater and may be useful as a reference frame. Tables B.3 through B.6 deal with on-site potable water supply wells and provide data on trihalomethane (B.3), volatile organics (B.4), organic compounds (B.5), and average water quality and metals (B.6). Information for these tables was taken from tables 33 through 36 of the 1987 Environmental Monitoring Report. Figure B.2 shows the location of the potable water supply wells. Data from Table B.7 are from on-site surveillance wells and provide average water quality and metals information. Information for this table was taken from an unnumbered table on page 103 of the 1987 Environmental Monitoring Report. Figure B.3 show the location of the surveillance wells.

The data in Table B.8 provide radionuclide concentrations in soil at two off-site locations in the vicinity of BNL.

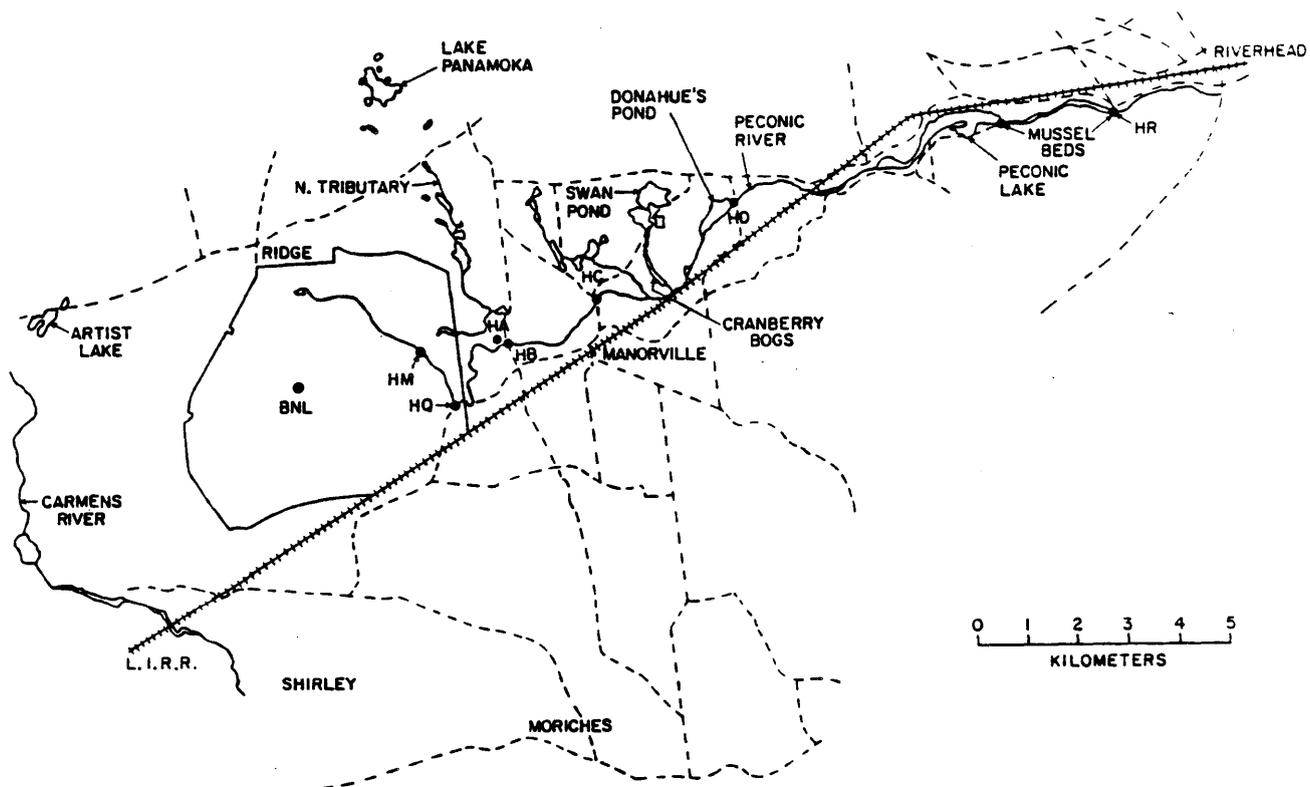


Figure B.1. BNL Vicinity Map Showing Carmens River

Table B.1. 1987 BNL Environmental Monitoring
 in Carmens River Surface Water

Gross Alpha and Gross Beta Concentrations

Sample Period	No. of Samples	Gross Alpha Concentration			Gross Beta Concentration		
		Avg pCi/L	Min pCi/L	Max pCi/L	Avg pCi/L	Min pCi/L	Max pCi/L
JAN	1	0.113	-	-	0.49	-	-
FEB	1	0.358	-	-	1.55	-	-
APR	1	0.154	-	-	1.10	-	-
JUN	1	0.256	-	-	0.98	-	-
SEP	1	0.205	-	-	1.13	-	-
Average	-	0.217	-	-	1.05	-	-
Typical Minimum Detectable Concentration		0.53			1.17		

Tritium and Strontium-90 Concentrations

Sample Period	No. of Samples	Tritium Concentration			Strontium-90 Concentration
		Avg pCi/L	Min pCi/L	Max pCi/L	pCi/L
JAN	1	-54	-	-	NA
FEB	1	27	-	-	NA
APR	1	-110	-	-	NA
JUN	1	-150	-	-	NA
SEP	1	29	-	-	NA
Average	-	-52	-	-	NA
Typical Minimum Detectable Concentration		300			0.1

NA: Not analyzed.

**Table B.2. 1987 BNL Environmental Monitoring
Nuclide Specific Concentration in Carmens River
Surface Water Samples**

Aliquot Liters - 1.20E+01

Nuclides*	June	September
Sodium-22	ND	ND
Cobalt-60	ND	ND
Zinc-65	ND	ND
Cesium-137	ND	ND
Potassium-40	ND	2.29E+00
Cobalt-57	ND	ND
Rubidium-83	ND	ND
Cesium-134	ND	ND
Iodine-131	ND	ND

ND: Not detected.

* All nuclides are measured in pCi/L

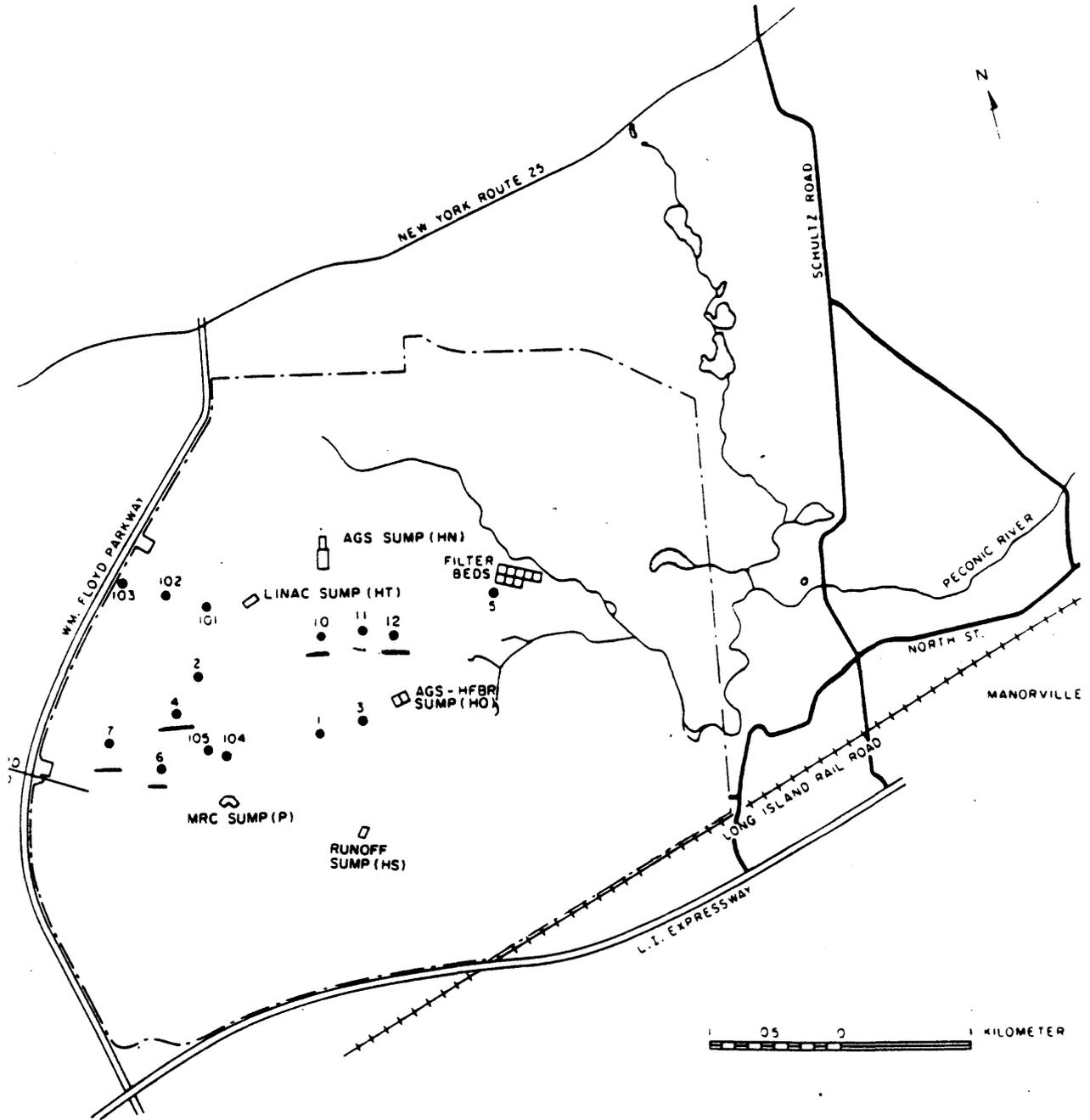


Figure B.2. On-Site: Potable and Supply Wells and Recharge Sumps

Table B.3. 1987 BNL Environmental Monitoring
 Potable Water and Supply Wells,
 Average Trihalomethane Data

Well ID	No. of Samples		chloroform mg/L	chloro-dibromo-methane mg/L	bromo-dichloro-methane mg/L	bromo-form mg/L
WTP-IN	2	Avg: Min: Max:	0.004 ND 0.007	ND	ND	ND
WTP-EFF	1	Avg: Min: Max:	ND	ND	0.015	ND
4 (FD)	2	Avg: Min: Max:	0.006 ND 0.011	ND	0.006 ND 0.012	ND
6 (FF)	2	Avg: Min: Max:	ND	ND	0.004 ND 0.008	ND
7 (FG)	2	Avg: Min: Max:	ND	ND	ND	ND
10 (FO)	2	Avg: Min: Max:	ND	ND	ND	ND

ND: Not detected. Average Method Detection Limits were: chloroform - 0.006 mg/L; chlorodibromoethane - 0.007 mg/L; bromodichloromethane - 0.006 mg/L; bromoform - 0.006 mg/L.

WTP-IN: Water Treatment Plant Influent
 WTP-EFF: Water Treatment Plant Effluent

Table B.3. 1987 BNL Environmental Monitoring
 Potable Water and Supply Wells,
 Average Trihalomethane Data
 (continued)

Well ID	No. of Samples		chloro- form mg/L	chloro- dibromo- methane mg/L	bromo- dichloro- methane mg/L	bromo- form mg/L
11 (FP)	2	Avg: Min: Max:	0.003 ND 0.006	ND	0.004 ND 0.008	ND
12 (FQ)	2	Avg: Min: Max:	0.003 ND 0.006	ND	ND	ND
5 (FE)	1	Avg: Min: Max:	0.008	ND	0.008	ND
105 (FL)	2	Avg: Min: Max:	0.004 ND 0.007	ND	ND	ND
NYS Drinking Water Standards			0.100	0.100	0.100	0.100

ND: Not detected. Average Method Detection Limits were: chloroform - 0.006 mg/L; chlorodibromoethane - 0.007 mg/L; bromodichloromethane - 0.006 mg/L; bromoform - 0.006 mg/L.

Table B.4. 1987 BNL Environmental Monitoring
 Potable Water and Supply Wells,
 Average Volatile Organic Compound Data

Well ID	No. of Samples		1,1,1-trichloroethane mg/L	trichloroethylene mg/L	tetrachloroethylene mg/L
WTP-IN	2	Avg: Min: Max:	ND	ND	ND
WTP-EFF	1	Avg: Min: Max:	ND	ND	ND
4 (FD)	2	Avg: Min: Max:	ND	ND	ND
6 (FF)	2	Avg: Min: Max:	ND	ND	ND
7 (FG)	2	Avg: Min: Max:	ND	ND	ND
10 (FO)	1	Avg: Min: Max:	ND	NA	NA

NA: Not analyzed.

ND: Not detected. Average Method Detection Limits were: 1,1,1-trichloroethane - 0.004 mg/L; trichloroethylene - 0.005 mg/L; tetrachloroethylene - 0.006 mg/L.

WTP-IN: Water Treatment Plant Influent
 WTP-EFF: Water Treatment Plant Effluent

Table B.4. 1987 BNL Environmental Monitoring
 Potable Water and Supply Wells,
 Average Volatile Organic Compound Data
 (continued)

Well ID	No. of Samples		1,1,1-trichloroethane mg/L	trichloroethylene mg/L	tetrachloroethylene mg/L
11 (FP)	2	Avg:	0.012	0.003	ND
		Min:	0.010	ND	
		Max:	0.014	0.005	
12 (FQ)	2	Avg:	ND	ND	ND
		Min:			
		Max:			
5 (FE)	1	Avg:	ND	0.05	ND
		Min:			
		Max:			
105 (FL)	1	Avg:	0.020	0.003	ND
		Min:	0.016	ND	
		Max:	0.024	0.006	
NYS Drinking Water Standards			0.050(a)	0.005	0.050(a)

ND: Not detected. Average Method Detection Limits were: 1,1,1-trichloroethane - 0.004 mg/L; trichloroethylene - 0.005 mg/L; tetrachloroethylene - 0.006 mg/L.

(a) NYSDOH advisory guidelines.

**Table B.5. 1987 BNL Environmental Monitoring
 Potable Water Supply Wells,
 Organic Compound Data***

Compound	Well No. 4 (FD) mg/L	Well No. 6 (FF) mg/L	Well No. 7 (FG) mg/L	NYS Drinking Water Standards
Benzene	ND	ND	ND	0.005
Carbon Tetrachloride	ND	ND	ND	0.005
Chloroform	0.004	ND	ND	0.100
1,1-dichloroethane	ND	ND	ND	
1,2-dichloroethane	ND	ND	ND	0.005
1,1-dichloroethylene	ND	ND	ND	0.007
o-dichlorobenzene	ND	ND	ND	
p-dichlorobenzene	ND	ND	ND	
1,2-dichloropropane	ND	ND	ND	
Methylene Chloride	ND	0.002	0.003	
1,1,1,-trichloroethane	ND	ND	ND	
1,1,2-trichloroethylene	ND	0.001	ND	0.005
Toluene	ND	ND	0.001	
Tetrachloroethylene	ND	ND	ND	
Vinyl Chloride	ND	ND	ND	0.002
m-xylene	ND	ND	ND	
o-xylene	ND	ND	ND	
p-xylene	ND	ND	ND	

ND: Not detected.

* Analysis was performed once during the year.

Table B.5. 1987 BNL Environmental Monitoring
 Potable Water Supply Wells,
 Organic Compound Data
 (continued)

Compound	Well No. 10 (FO) mg/L	Well No. 11 (FP) mg/L	Well No. 12 (FQ) mg/L	NYS Drinking Water Standards
Benzene	ND	ND	ND	0.005
Carbon Tetrachloride	ND	ND	ND	0.005
Chloroform	0.002	ND	0.002	0.100
1,1-dichloroethane	0.002	ND	ND	
1,2-dichloroethane	ND	ND	ND	0.005
1,1-dichloroethylene	ND	ND	ND	0.007
o-dichlorobenzene	ND	ND	ND	
p-dichlorobenzene	ND	ND	ND	
1,2-dichloropropane	ND	ND	ND	
Methylene Chloride	ND	ND	ND	
1,1,1,-trichloroethane	0.004	0.007	0.001	
1,1,2-trichloroethylene	ND	ND	ND	0.005
Toluene	ND	ND	ND	
Tetrachloroethylene	ND	ND	ND	
Vinyl Chloride	ND	ND	ND	0.002
m-xylene	ND	ND	ND	
o-xylene	ND	ND	ND	
p-xylene	ND	ND	ND	

ND: Not detected.

* Analysis was performed once during the year.

Table B.6. 1987 Environmental Monitoring
 Potable Supply Wells, Average Water Quality and Metals Data

	Well No. 4 (FD)	Well No. 6 (FF)	Well No. 7 (FG)	NYS Drinking Water Standard
Number of samples	4	4	4	
pH (SU)	5.6-5.9	6.1-6.2	6.0-6.1	6.5-8.5
Specific conductance (umhos/cm)	95	110	89	(a)
Total coliforms ^(b)	ND	ND	ND	4/100mL
<u>Results in mg/L</u>				
Ammonia-N	<0.02	0.01	<0.02	(a)
Nitrate-N	0.3	0.15	0.25	10.0
Nitrite-N	<0.1	<0.1	<0.1	(a)
Total solids	83.0	78.0	75.0	(a)
Chlorides	17.6	17.3	12.7	250.0
Sulfates	9.6	8.6	6.6	250.0
silver	<0.025	<0.025	<0.025	0.05
cadmium	<0.005	<0.005	<0.005	0.01
chromium	<0.025	<0.025	<0.025	0.05
copper	0.03	<0.05	0.02	1.0
iron	0.25	4.35	1.61	0.3
mercury	<0.0002	<0.0002	<0.0002	0.002
manganese	0.01	0.07	0.06	0.3
sodium	8.4	10.8	7.9	(a)
lead	0.004	0.002	<0.025	0.025
zinc	<0.02	<0.02	<0.02	5.0

ND: Not detected.
 (a) No standard specified.
 (b) Sampled monthly.

Table B.6. 1987 Environmental Monitoring
 Potable Supply Wells, Average Water Quality and Metals Data
 (continued)

	Well No. 10 (FO)	Well No. 11 (FP)	Well No. 12 (FQ)	NYS Drinking Water Standard
Number of samples	4	3	4	
pH (SU)	6.2-6.7	6.1	6.4-6.5	6.5-8.5
Specific conductance (umhos/cm)	114	108	125	(a)
Total coliforms ^(b)	ND	ND	ND	4/100mL
<u>Results in mg/L</u>				
Ammonia-N	<0.02	<0.02	<0.02	(a)
Nitrate-N	0.55	0.5	0.45	10.0
Nitrite-N	<0.1	<0.1	<0.1	(a)
Total solids	113.0	143.0	89.0	(a)
Chlorides	14.0	14.4	18.7	250.0
Sulfates	11.0	12.1	15.4	250.0
silver	<0.025	<0.025	<0.025	0.05
cadmium	<0.005	<0.005	<0.005	0.01
chromium	<0.025	<0.025	<0.025	0.05
copper	<0.05	<0.05	<0.05	1.0
iron	<0.075	<0.075	<0.075	0.3
mercury	<0.0002	<0.0002	<0.0002	0.002
manganese	<0.05	<0.05	<0.05	0.3
sodium	9.5	10.0	14.6	(a)
lead	<0.025	<0.025	<0.025	0.025
zinc	0.01	<0.02	<0.02	5.0

ND: Not detected.
 (a) No standard specified.
 (b) Sampled monthly.

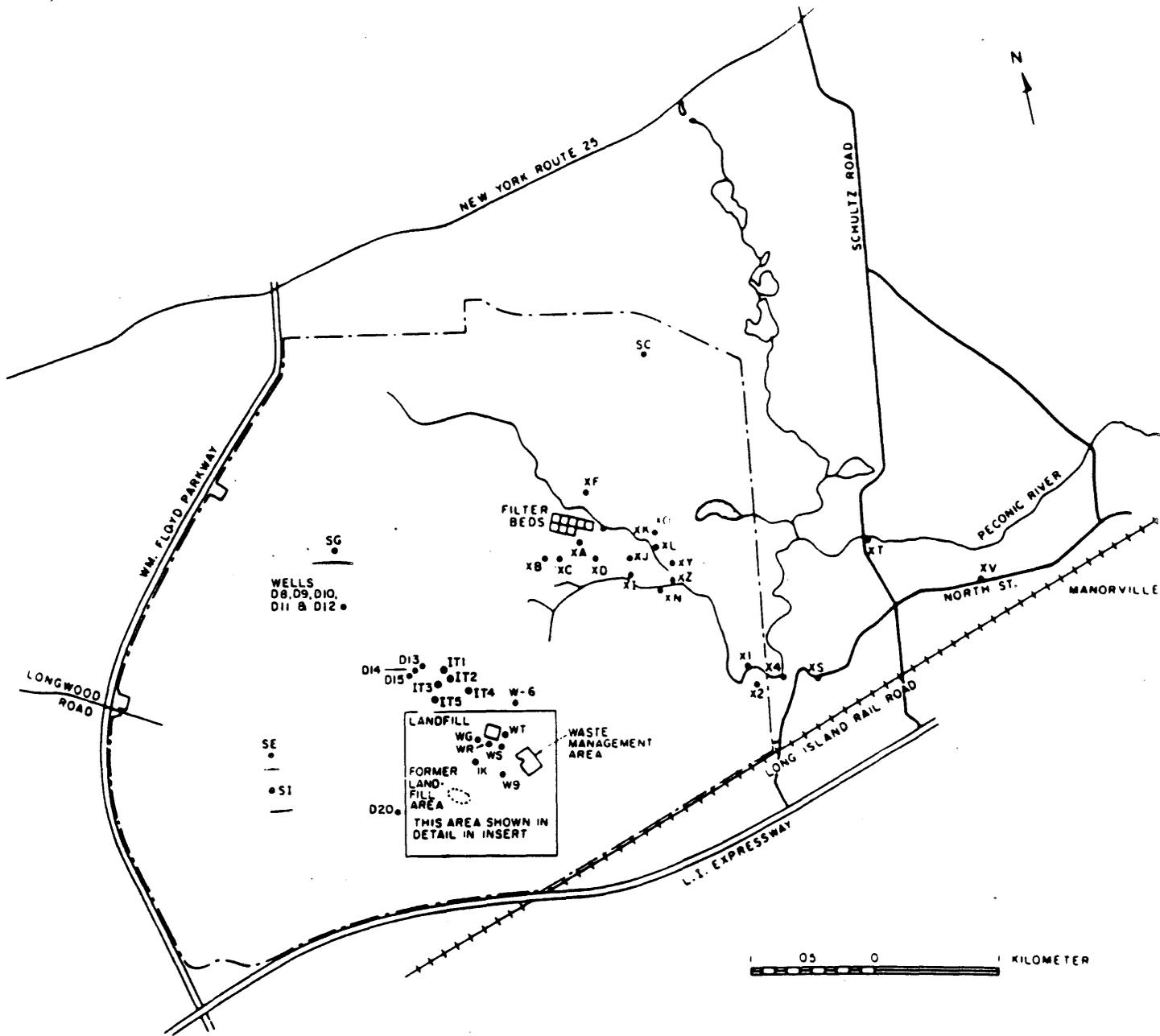


Figure B.3. Location of Groundwater Surveillance Wells

**Table B.7. 1987 BNL Environmental Monitoring
 On-Site Control Wells and Groundwater Surveillance Wells,
 Average Water Quality and Metals Data**

Analyte	Unit	Well SE*	Well SI**	Well SG**	NYS Drinking Water Standards
pH	SU	6.1	6.3-6.6	6.5-6.6	6.5-8.5
conductivity	umhos/cm	476	348	153	(a)
chlorides	mg/L	19.4	23.4	24.7	250.0
sulfates	mg/L	16.3	16.2	17.7	250.0
nitrate/ nitrogen	mg/L	<2.5	<2.5	<2.5	10.0
silver	mg/L	<0.020	<0.020	<0.020	0.025
cadmium	mg/L	<0.005	<0.005	<0.005	0.01
chromium	mg/L	<0.025	<0.025	<0.025	0.05
copper	mg/L	<0.05	<0.05	<0.05	1.0
iron	mg/L	0.59	0.17	0.12	0.30
mercury	mg/L	<0.0002	<0.0002	<0.0002	0.002
manganese	mg/L	0.02	0.02	<0.02	0.3
sodium	mg/L	22.0	23.0	19.6	(a)
lead	mg/L	<0.025	<0.025	<0.025	0.025
zinc	mg/L	0.01	<0.01	0.01	5.0

NA: Not analyzed.

(a) No standard specified.

* One sample was taken.

** Two samples were taken.

**Table B.8. 1987 BNL Environmental Monitoring
Radionuclide Concentrations in Soil in the Vicinity of BNL**

Radionuclides (pCi/kg)	Location	
	Cow Neck Farm	Berenzy
Potassium-40	3790	6480
Beryllium-7	ND	ND
Cesium-137	602	266
Radium-226	795	793
Thorium-228	523	695

ND: Not detected.

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Appendix C
AUDITS

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- Letter dated July 15, 1988, from Harold A. Vincent to Peter C. Lindahl. Subject: Results of ANL participation in the EMSL-LV third quarter Inorganic Performance Evaluation Study (QB3, FY88, Inorganic).	C-191
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Issue Date: July 1989
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ORNL EPA Technical and Laboratory Evidence Audit Reports

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY LAS VEGAS
P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

FEB 19 1988

FEB 22 1988

D. Karen Knight
DOE Environmental Survey Sampling
and Analysis Manager
U.S. Department of Energy
Forrestal Bldg., EH-24
1000 Independence Avenue
Washington, DC 20585

Dear Ms. Knight:

Enclosed is the final report by Jesse Gerard of LEMSCO for an on-site radiation measurement evaluation and the final report by Cynthia Miller, Jeffrey Worthington, and Betty Malone of Techlaw for an on-site evidentiary audit carried out at the Oak Ridge National Laboratory on August 25, 1987.

J. Gerard's report includes a completed copy of the new checklist for radiation measurement quality assurance support patterned after those established for the inorganic and organic technical areas under the Contract Laboratory Program (CLP) of the EPA. He outlined during the visit and the debriefing the data items required for a full data package for the sample designated group(s) that will get the full audit. ORNL will cooperate in furnishing this material.

The evidentiary audit covered all areas of the laboratory involved with the DOE environmental survey even though no technical evaluation was made during this visit for the organic and inorganic laboratory areas.

Of the four items noted in the Techlaw report as being repeated from the previous audit of June 10, 1987, the one of rewriting SOPs to may be the most extensive in effort but once done, will be the easiest to maintain or adapt in the future. The most difficult item of the four to keep from reappearing is the one involved with accounting for errors and error correction in the data documents. Training is important and supervisors have to vigilantly watch that proper correction is applied when bad data is to be identified as such. The other recommendations, both previous and from this audit can easily be addressed by following the procedures in the SOPs when they have been revised.

Sincerely,



Harold A. Vincent
Chemist

Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosures

cc:

William Laing, ORNL
Pamela Howell, ORNL
Jeff Wade, ORNL

LABORATORY EVIDENCE AUDIT REPORT

FEB 22 1988

OAK RIDGE NATIONAL LABORATORY
ANALYTICAL CHEMISTRY DIVISION
MARTIN MARIETTA ENERGY SYSTEMS, INC.

OAK RIDGE, TENNESSEE

AUGUST 25, 1987

Martin Marietta Energy Systems, Inc. (MMES)
Analytical Chemistry Division
Oak Ridge National Laboratory
Oak Ridge, TN 37830
(615) 574-4898

William Laing	- Inorganic Chemistry Section Manager ^{1,2,3}
Bruce Clark	- Program Manager, Environmental Restoration and Facilities Upgrade Program ^{1,2,3}
Pam Howell	- Quality Control Officer ^{1,2,3}
Julian Hackney	- Analyst ²
Julia Thompson	- Analyst ²
Sophie Bobrowski	- Analyst ²
Wayne Greist	- Group Leader, Separations and Synthesis ²
Amelia Herndon	- Analyst ²
W. Rogers	- Analyst ²
Jeff Wade	- Group Leader, Low-Level Radio- chemical Analysis ^{1,2,3}
Robert Holmes	- Analyst ²
K. Webb	- Analyst ²
Sandra Glover	- Analyst ²
B. Tomkins	- Analyst ²
N. Ferguson	- Analyst ²
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Cynthia Miller - Staff Associate
Jeffrey Worthington - Associate Consultant
Elizabeth Malone - Associate Consultant

This work was conducted on behalf of the Environmental Protection Agency's (EPA) National Enforcement Investigations Center (NEIC) under EPA Contract #68-01-7369.

INTRODUCTION

The National Enforcement Investigations Center (NEIC) assigned the Contract Evidence Audit Team (CEAT) to perform an evidence audit on Martin Marietta Energy Systems (MMES) Analytical Chemistry Division Laboratory located at Oak Ridge National Laboratory in Oak Ridge, Tennessee. The laboratory is receiving, preparing, and analyzing samples using USEPA Contract Laboratory Program (CLP) protocols for the Department of Energy's (DOE) Environmental Survey.

The purpose of this audit was to determine if laboratory policies and procedures are in place to satisfy evidence handling requirements. The report specifies the corrective action needed to meet EPA Evidence Audit Requirements.

The audit was conducted on August 25, 1987 in conjunction with a technical audit performed by representatives from the USEPA Environmental Monitoring Systems Laboratory (EMSL) at Las Vegas, Nevada.

The following operations, accompanying documentation, and written standard operating procedures (SOPs) were reviewed: sample receiving, sample storage, sample tracking (from receipt to completion of analysis), and analytical project file organization and assembly.

EXECUTIVE SUMMARY

This was the third audit of MMES conducted by USEPA representatives in support of the DOE Environmental Survey Program. The previous audit was conducted on June 8-9, 1987 and resulted in nine recommendations. Four of the nine recommendations have not been addressed or corrected. The recommendations from the previous audit still requiring corrective action are:

1. The laboratory's written SOPs should be revised to include accurate descriptions of the actual laboratory procedures in the following areas:
 - a. Sample Receiving
 - b. Sample Storage
 - c. Sample Identification
 - d. Sample Security
 - e. Sample Tracking
 - f. Analytical Project File Organization and Assembly
2. Corrections to documents should be made by drawing a single line through the error and initialing and dating the correction. Correction fluid should not be used on Environmental Survey project-related documents.

3. Laboratory personnel should record the appropriate information on the Organic Sample Control and Chain-of-Custody Sheet or indicate that the activity was not performed.
4. Airbills should be routinely placed in the receiving document files.

The following six findings (non-conformances to Evidence Audit Requirements) were identified during the present audit and are discussed in this report:

Findings

1. Written SOPs did not contain accurate descriptions of the actual laboratory procedures used for the following:
 - a. Sample Receiving
 - b. Sample Storage
 - c. Sample Identification
 - d. Sample Security
 - e. Sample Tracking
2. Information was obliterated or rendered unreadable.
3. Error corrections were not consistently signed and dated by the analysts.
4. Entries in the explosives laboratory logbook are not consistently signed and dated.
5. Sample receiving information on the Organic Sample Control and Chain-of-Custody Sheet is not recorded in the space provided.
6. Airbills are not always placed in the receiving document file.

As a result of these findings, the following recommendations were made:

Recommendations

1. The laboratory's written SOPs should be revised to include accurate descriptions of the actual laboratory procedures in the following areas:

- a. Sample Receiving
 - b. Sample Storage
 - c. Sample Identification
 - d. Sample Security
 - e. Sample Tracking
2. Corrections to supporting documents and raw data should be made by drawing a single line through the error and entering the correct information.
 3. Corrections and additions to supporting documents and raw data should be dated and initialed.
 4. Logbook entries should be dated and signed by the analyst or individual performing the activity at the time the activity was performed.
 5. Laboratory personnel should record the appropriate information on the Organic Sample Control and Chain-of-Custody Sheet or indicate that the activity was not performed.
 6. Airbills should be routinely placed in the receiving document files.

The audit was concluded August 25, 1987. Audit participants are listed on the cover page of this report.

PROCEDURAL AUDIT

The procedural audit consisted of review and examination of actual and written SOPs and accompanying documentation for the following laboratory operations: sample receiving, sample storage, sample identification, sample security, sample tracking (from receipt to completion of analysis), and analytical project file organization and assembly.

Sample Receiving

Samples are received at the shipping/receiving area of the laboratory which is located approximately one mile from the laboratory building. A receiving clerk signs the airbills, and the sample containers are delivered to Building 4500S by the facility's delivery service. The Federal Express couriers may deliver the sample containers directly to Building 4500S on Saturdays.

Barry Grant, the designated sample custodian, takes possession of the containers. B. Grant inspects the custody seals and open the containers in the sample receiving area of Building 4500S. The custodian signs and dates the chain-of-custody records, checks for the presence/absence of receiving documents, and verifies the agreement/non-agreement among information recorded on the sample shipping documents. The sample custodian records the receiving information on the Shipping Container Sample Log-In Form.

According to Bruce Clark, problems associated with sample condition or documentation and their resolution are noted in the "Comments" column of the Shipping Container Sample Log-In Form and the "Remarks" column of the Field Chain-of-Custody Record. Also, according to Bruce Clark, tag numbers not referenced on shipping documents are recorded on the Field Chain-of-Custody Record.

A Request for Analytical Services Form is also received with the samples. This form contains information regarding sample identification and requested analyses.

An internal chain-of-custody receipt record is completed for each batch of samples received at the facility. This document is sent with the sample when delivered to the analyst. A unique laboratory identification number is assigned to each sample when the sample arrives at the laboratory where the analysis is to be performed. Each laboratory (inorganic, organic, radiochemistry) has the same method for assigning identification numbers. The

year is the first two (2) digits, the month is the second two (2) digits, the day is the third two (2) digits, and the sequence order representing the order in which the sample was checked in for that day is the last two (2) digits.

Inorganic Sample Receiving

The sample custodian makes a copy of the Request for Analytical Services Form and writes a request number on the original form. A sample identification number is then assigned to each inorganic sample, and the numbers are recorded on the original request and on the Sample Log-In Sheet.

Copies of the Request for Analytical Services Form are sent to each inorganic laboratory to serve as notification of sample arrival. The samples are placed in a storage area located adjacent to the sample receiving area.

Organic Sample Receiving

The sample custodian sends a Request for Analytical Services form to the organic analysis department to inform the department of the arrival of samples. The organic laboratory assigns identification numbers to each sample and places them in storage.

Radiochemistry Sample Receiving

A copy of the Request for Analytical Services Form is also sent to the radiochemistry laboratory. The radiochemistry laboratory assigns identification numbers to each sample and places them in storage.

Written SOPs for sample receiving have been developed and implemented. The auditor read these SOPs, and they did not accurately describe the procedures in use for sample receiving. These SOPs are documented in Quality Assurance/Quality Control Standard Operating Procedure and Sample Receipt and Handling.

Sample Storage, Identification, and Security

Storage, identification, and security procedures are described in the four sections below.

Inorganic Sample Storage and Identification

Inorganic samples are stored in the Building 4500S storage room located immediately adjacent to the sample receiving room. Samples designated for Inductively Coupled Plasma (ICP) analysis may also be stored in the same storage room. If samples are delivered on Saturday, all samples could be stored here.

Inorganic samples are identified with the field identification number and the assigned laboratory number. Sample preparation containers are identified with the laboratory number, percent acid, and sample weight or volume.

In Building 1505, samples are stored in a locked three-door refrigerator located in the hallway near the entrance to the atomic absorption (AA) laboratory. Prepared AA metals samples are stored in locked cabinets in the AA laboratory. Samples and digestates for AA and mercury analysis are also stored in locked cabinets in Building 2026 Annex.

Samples prepared for AA and mercury analysis (digestates) are identified with the field identification number and the laboratory number. Sample preparation containers are identified with the laboratory number.

Organic Sample Storage and Identification

Organic samples are stored in the sample preparation laboratory located in Building 4500S. Extracts are stored in a refrigerator located adjacent to the analysis area.

Organic samples are identified with the field number and the assigned laboratory number. Sample extract vials are marked with a marking pen or sticker indicating the assigned laboratory number.

Radiochemistry Sample Storage and Identification

Samples requiring radiochemistry analysis are stored in the locked custody room located in the radiochemistry department in Building 4500S. These samples are identified with the field identification number and the assigned laboratory number.

Security

The refrigerators and sample storage areas are locked at night. The facility is surrounded by a fence. Visitors must enter through a visitor screening center, obtain an identification tag, and sign in before they are allowed to enter the facility. The visitors are not escorted when entering the facility. This was discussed during the post-audit debriefing. The AA preparation and analysis laboratories in Building 1505 are locked at night.

Written SOPs for sample storage, identification, and sample security have been developed and implemented. The auditors read these SOPs, and they described the procedures in the laboratory; however, they did not accurately describe the storage areas in

the laboratory that will be used for Environmental Survey samples. The SOPs are documented in the laboratory SOPs Quality Assurance/Quality Control Standard Operating Procedures and Sample Receipt and Handling.

Sample Tracking

All samples are currently received at the "inorganic receiving area" of Building 4500S. Metals samples requiring ICP analysis are also prepared and analyzed in Building 4500S.

Cyanide, oil and grease, ion chromatography, and radio-chemistry tests are performed in Building 4500S. Asbestos analyses are performed in Building 4500N.

Metal samples for AA analysis are delivered to Building 1505. These samples are then taken to the Building 2026 Annex where they are prepared (digested). The mercury fraction is analyzed by cold vapor AA in Building 2026 Annex. The AA metals digestates are returned to Building 1505 where they are analyzed by Furnace AA.

The preparation and analysis of "explosives" samples are performed in Building 2026 Annex.

Samples may be tracked through the laboratory from receipt to completion of analysis by using the following documents:

1. Shipping Container Sample Log-In Forms
2. Request for Analytical Services (Several Copies)
3. Receipt Record/Chain-of-Custody Forms
4. ICP Preparation Logs
5. ICP Preparation Control Worksheets
6. ICP Analysis Logbooks (ICP EPA/CLP Program Log)
7. Log-In Books (AA and Hg Samples)
8. Contract Laboratory Samples - Flame AA and Furnace AA Analyses Building 1505 Logbook
9. Contract Laboratory Samples Preparation and Mercury Analysis Building 2026 Annex Log (AA and Hg Preparation, Hg Analysis)
10. AA Analysis Control Worksheets
11. CLP Logbooks (Cyanide Preparation and Analyses)
12. Phenol Analysis Logbooks
13. Ion Chromatography Analysis Control Worksheets
14. Asbestos Samples Pantex (Asbestos Determinations)
15. CLP Logbooks (Oil and Grease Determinations)
16. Oil and Grease Analysis Control Worksheets
17. Uranium Analysis Control Worksheets

18. CLP Logbooks (Explosives Weight and Identification Number)
19. HPLC Sample Logbooks (Explosive Analyses)
20. Sample Preparation Logsheets (Organic Preparation)
21. GC/MS Instrument Operations Logsheets
22. GC Instrument Operations Logsheets
23. Chain-of-Custody Record Low-Level Radiochemical Analysis Group
24. Alpha/Beta Worksheets
25. Gamma Scan Worksheets

The procedures and documentation used to track inorganic and organic samples and radiochemistry samples are described in the following three sections.

Inorganic Sample Tracking

Copies of the Request for Analytical Services Forms (with the assigned inorganic batch number) are sent to the appropriate inorganic laboratories by B. Grant to serve as notification of the arrival of samples. Preparation of samples for ICP analysis are documented in the ICP preparation logbook entitled Logbook for P.E. and EPA Sample J. H. Hackney, 4500 SR-147. ICP preparation information is also recorded on an ICP Preparation Control Worksheet. The ICP analyses are recorded in the logbook entitled ICP EPA/CLP Program Log.

Metals samples for AA analysis are brought to Building 1505 after the laboratory personnel signs the Receipt Record/Chain-of-Custody Record.

The samples are then delivered to Building 2026 where mercury and inorganic sample digestions are recorded in a logbook entitled Contract Laboratory Samples Preparation and Mercury Analysis Building 2026 Annex Log. The mercury analyses are performed in Building 2026 and recorded in the same logbook as well as a Mercury Control Worksheet. The transfer of samples to Building 2026 and back to Building 1505 is recorded in the Log-In Book.

The prepared metal digestates are returned to Building 1505 for analysis and are accompanied by the logbook (Contract Laboratory Samples - Flame AA and Furnace AA Analyses Building 1505 Logbook). The AA analyses are recorded in the previously described logbook and on AA Control Worksheets.

Cyanide analyses are performed in Building 4500S and are recorded in a logbook entitled CLP. Ion chromatography analysis is performed in Building 4500S. The analyses are recorded on Ion Chromatography Control Worksheets. The instrument produces a strip chart.

Asbestos determinations are performed in Building 4500N. This analysis is recorded in a logbook entitled Asbestos Samples Pantex. The laboratory has not analyzed any samples for phenols. According to J. Stewart, a logbook for phenols analysis will be initiated when samples arrive with a request for phenols analysis. Oil and grease determinations are recorded in a logbook entitled CLP and the Oil and Grease Analysis Control Worksheets.

Organic Sample Tracking

Organic samples are brought to the organic sample preparation area with a Request for Analytical Services Form and an Analytical Chain-of-Custody Form/Receipt Record that had been initiated by the sample receiving department. This record was previously described in the inorganic sample tracking section.

The preparation chemist signs the custody form and initiates the Record Receipt/Chain-of-Custody. The auditors observed that the receiving information was not consistently recorded on this form.

The preparation chemist assigns a batch number to the Request for Analytical Services Form, copies the request form, and then tapes the copy into a logbook entitled No. 4 Sample Log.

Extraction data is recorded on the Sample Preparation Logsheet. Copies of this logsheet are also taped into the No. 4 Sample Log.

The analysis of the volatile fraction is recorded on the GC/MS Instrument Operations Logsheet (GC/MS Logbook). The analysis of the base/neutral/acid fraction is recorded in a separate GC/MS logbook.

The pesticides analysis is recorded on the GC Instrument Operations Logsheet (Logbook).

The explosive analysis is recorded in the HPLC Sample Log. The weight of each sample is recorded in a CLP logbook. The auditors observed that the information in both logbooks were not consistently dated and signed.

Radiochemistry Sample Tracking

The transfer of samples to the radiochemistry laboratory is recorded on the Chain-of-Custody Record Low-Level Radiochemical Analysis Group (LLRAG) Form in addition to the previously mentioned Receipt Record/Chain-of-Custody. This form is also used to track the sample through the radiochemistry laboratory.

Summaries of preparation and analyses radiochemistry are recorded in the untitled radiochemistry logbook. Alpha and beta counts are recorded on the Alpha/Beta Worksheet. Gamma scans are recorded on the Gamma Scan Worksheet.

The uranium analysis is recorded on the Uranium Analysis Control Worksheet.

Written SOPs for sample tracking have been developed and implemented. The auditor read these SOPs, and they did not accurately describe the documents used to track samples and the analytical paths of the various sample fractions. The written SOPs are documented in Quality Assurance/Quality Control Standard Operating Procedures and Sample Receipt and Handling.

Analytical Project File Organization and Assembly

Receiving documents are currently filed in the laboratory receiving room. Preparation logbooks remain in the possession of the analysts. Analysis logbooks are kept in the analytical area of the laboratory. The Organic Chain-of-Custody Forms are kept in files in the organics laboratory office. Airbills are retained by the receiving clerk.

The laboratory has not developed actual or written procedures for the organization and assembly of laboratory documents related to the receipt, storage transfer, preparation, and analysis of Environmental Survey samples. (Technical direction has not been received from DOE in this area.)

EVIDENCE AUDIT

The evidence audit consisted of review and examination of analytical project file documentation. Completed analytical project files have not been assembled, numbered, or inventoried. Thus, the auditors could make no observations concerning the completeness and consistency of analytical project files.

AUDIT FINDINGS

The following six findings (non-conformances to Evidence Audit Requirements) are based on the results of the procedural and evidence audits.

Findings

1. Written SOPs did not contain accurate descriptions of the actual laboratory procedures used for the following:

- a. Sample Receiving
 - b. Sample Storage
 - c. Sample Identification
 - d. Sample Security
 - e. Sample Tracking
2. Information was obliterated or rendered unreadable.
 3. Error corrections were not consistently signed and dated by the analysts.
 4. Entries in the explosives laboratory logbook are not consistently signed and dated.
 5. Sample receiving information on the Organic Sample Control and Chain-of-Custody Sheet is not recorded in the space provided.
 6. Airbills are not always placed in the receiving document file.

SUMMARY

A debriefing session was held on August 25, 1987 with MMES personnel. During this debriefing, the evidence auditors made the following recommendations based on the findings discussed in this report:

1. The laboratory's written SOPs should be revised to include accurate descriptions of the actual laboratory procedures in the following areas:
 - a. Sample Receiving
 - b. Sample Storage
 - c. Sample Identification
 - d. Sample Security
 - e. Sample Tracking
2. Corrections to supporting documents and raw data should be made by drawing a single line through the error and entering the correct information.
3. Corrections and additions to supporting documents and raw data should be dated and initialed.
4. Logbook entries should be dated and signed by the analyst or individual performing the activity at the time the activity was performed.

5. Laboratory personnel should record the appropriate information on the Organic Sample Control and Chain-of-Custody Sheet or indicate that the activity was not performed.
6. Airbills should be routinely placed in the receiving document files.



Environmental Programs Office
1050 E. Flamingo Road, Suite 120, Las Vegas, Nevada 89119

FEB 22 1988

January 28, 1988

United States Environmental
Protection Agency
P.O. Box 93478
Las Vegas, Nevada 89193-3478

ATTENTION: DR. HAROLD VINCENT, QAD

VIA: *2/4/88* M. T. HOMSHER

SUBJECT: ON-SITE RAD PREASSESSMENT EVALUATION OF OAK RIDGE
NATIONAL LABORATORY (ORNL/X-10).

Dear Dr. Vincent:

This is the detailed RAD Preassessment Evaluation Report for ORNL/X-10. A preliminary report was sent to you on September 2, 1987. Due to a lack of funds, this report is about four months beyond its due date.

Very truly yours,

Jesse T. Gerard

Jesse T. Gerard
Staff Scientist
QA Department

JTG/ahh

cc: M. T. Homsher D. W. Bottrell
R. D. Flotard K. J. Cabbie
J. D. Petty J. Huber
C. S. Soong E. Whittaker
J. O. 70.23 WP-1916C
DES 9-122

ATTACHMENT

(blank page)



Environmental Programs Office
1050 E. Flamingo Road, Suite 120, Las Vegas, Nevada 89119

January 19, 1988

United States Environmental
Protection Agency
P.O. Box 93478
Las Vegas, Nevada 89193-3478

ATTENTION: DR. HAROLD C. VINCENT

SUBJECT: RAD PREASSESSMENT ON-SITE EVALUATION OF OAK RIDGE
NATIONAL LABORATORY (ORNL/X-10) ON AUGUST 25, 1987

Dear Dr. Vincent:

The subject RAD preassessment on-site evaluation has been completed and the following items must be given attention in order to improve data integrity.

1. Logbooks and laboratory notebooks were not signed and dated by personnel or verified by signing and dating by the supervisor. This was the case across the board for all techniques. Additionally, notebook/logbook changes were not crossed out and initialed by personnel making the changes.
2. It is recommended that an instrument logbook be maintained for the γ -ray spectroscopy area with instrument settings etc., entered.
3. It is recommended that manual validation checks of computer generated data/results be performed randomly at a fixed frequency. For example, rather than blindly accepting computer data reduction results of γ -ray spectra it is recommended that manual checks be made (printing out digital channel data and hand calculation/calculator computation of peak areas) to ensure that something has not gone wrong and that the method of computer integration is appropriate for the situation. Results of the computer versus hand calculated final results should be documented in a logbook/notebook in a continuing fashion easy to follow with time. Retain calculations and data for archival purposes.

- 1 -

4. At present, ORNL is not storing raw data for archival purposes. Raw data being data directly output from the equipment (instrument settings, etc., for runs would be available in logbooks), onto disks or tapes, etc. Raw data is data on which a decision has not been irreversibly made so that at a future date, one can return to the original data/instrument output (in the case of γ -spectroscopy all 2000/4000 channels) as versus data reduced in a fashion so that original instrument output data cannot be regenerated. It is recommended that all data output directly from equipment be stored on disk, or tape, etc., for future retrieval. The capability already exists to do this at ORNL but it is not being done.
5. Written SOPs were not available for the overall program sample receipt and storage area - nor were appropriate portions available to the sample custodian.
6. As a general recommendation, it is suggested that survey program wide Gross α and Gross β procedures for soils, sludges etc., be used that can provide comparable data such as consistent comparably low detection limits as well as good precision and accuracy. The variation of capabilities of procedures among different laboratories is wide and since the site survey plans are beginning to depend more heavily on survey/screening techniques such as Gross α , Gross β and γ -scan it is very important that comparable data be generated across all sites especially since these results will be used to prioritize sites for further work. These procedures for water and air filters seem to be quite acceptable and comparable and seem to be well documented.
7. While analyses are being performed (or planned) for Gross α , Gross β , γ -Scan, ^3H , Tot.U etc., in soils and sludges, validated "Survey Analysis and Sampling Manual Appendix 4: Radiochemical Analyses" procedures for ORNL (X-10) could not be found.
8. Based on conversations on July 27, 1987 at a meeting in Las Vegas, K. Knight expressed support for all DOE Laboratories participating in the Environmental Program to also participate in the EML PE program and EPA drinking water PE/IC samples. It is recommended that ORNL participate on a full regular basis in those programs for those radionuclides/parameters associated with the DOE Environmental Survey Program for matrices involved in site analyses requested of them. Past participation generally is good and quite comprehensive but ORNL participation does not cover all parameters required for the DOE Environmental Survey Program even though available in the PE samples.

DR. HAROLD C. VINCENT
RAD PREASSESSMENT ON-SITE EVALUATION....
PAGE III

9. Data audit sample reporting requirements for reporting of data/results on samples to be audited were discussed and it was generally felt and agreed that lab personnel understood what was required.

Details of some of the above items may be found in the text of this report. An evidentiary audit was conducted simultaneously. Their findings will be provided in a separate report.

Laboratory: Oak Ridge National Laboratory (X-10)
Date: August 25, 1987
Type of Evaluation: RAD Preassessment On-Site Evaluation

Personnel Contacted:

NAME	TITLE
Bruce R. Clark	Coordinator, DOE Environmental Survey Program
Pamala Howell	QA Specialist
Jeff W. Wade	Supervisor of RAD Analytical Area
Bill Laing	Section Head QA Office
Joe Stewart	Fluorimetry Expert

Laboratory Evaluation Team:

Jesse T. Gerard	RAD QA Evaluator
Earl Whittaker	RAD QA Evaluator
Harold Vincent	Task Monitor DOE Site Survey Program
Cynthia L. Miller	Techlaw (CEAT) Auditor
Betty C. Malone	Techlaw (CEAT) Auditor
Jeff Worthington	Techlaw (CEAT) Auditor

A. Procedural Changes the Laboratory Agreed to Implement

The following comments refer to deficiencies noted in the Laboratory Evaluation Checklist (Attachment 1).

For comments see page 1, 2, and 3 above and also page 6, item D.

B. Review of Environmental Measurements Laboratory and EPA Drinking Water Performance Evaluation Samples

The results of both were discussed with the laboratory personnel:

For comments see page 2, item 8 above.

C. Review of Data Audit

The following comments refer to the Summary/Conclusions of the data audit for Problem No _____, Request No. _____ (Attachment 2.)

<u>Report</u>		
<u>Item #</u>	<u>Comments</u>	<u>Action*</u>

Information on samples for data audits has not been received yet-as this stage is just beginning to evolve. See page 3, item 9 above for comment.

D. Issues to be Resolved by DOE Headquarters

As is required for items page 1, 2 and 3 since this is a preassessment evaluation.

Attachment 1

Laboratory Evaluation Checklist

I. Organization and Personnel (Page 1 of 2)

ITEM	YES	NO	COMMENT
Laboratory or Project Manager (individual responsible for overall technical effort) Name: <u>Bruce R. Clark</u>	x		615-574-6896
Name: <u>Jeff W. Wade</u> Job Title: <u>Supervisor RAD Anal. Chem.</u>	x		615-574-4528
Name: <u>Bill Laing</u> Job Title: <u>Section Head, QA Office</u>	x		
Name: <u>Joe Stewart</u> Job Title: <u>Fluorimetry Expert</u>	x		615-574-4895
Name: _____ Job Title: _____			
Name: _____ Job Title: _____			
Name: _____ Job Title: _____			
Do personnel assigned to this project have the appropriate background to successfully accomplish the objectives of the program?	x		

II. Sample Receipt and Storage Area (Page 1 of 1)

ITEM	YES	NO	COMMENT
Are written Standard Operating Procedures (SOPs) developed for receipt and storage of samples?		x	For RAD area, yes.
Is the appropriate portion of the SOP available to the sample custodian at the sample receipt/storage area?		x	For RAD area, yes.
Are adequate facilities provided for storage of samples.	x		
Are the sample receipt/storage and records maintained in a manner consistent with program needs?	x		
Are standards stored separately from sample digestates?	x		
Has the supervisor of the individual maintaining the notebook/bench sheet/logbook personally examined and reviewed the notebook/bench sheet/logbook periodically, and signed his/her name therein, together with the date and appropriate comments as to whether or not the document is being maintained in an appropriate manner?		x	

Additional Comments

Main DOE Environmental Survey Receipt and Storage SOPs were not completed at this point in time.

III. Sample Preparation Area (Page 1 of 2)

When touring the facilities, give special attention to: (a) the overall appearance of organization and neatness, (b) the proper maintenance of facilities and instrumentation, (c) the general adequacy of the facilities to accomplish the required work.

ITEM	YES	NO	COMMENT
Is the laboratory maintained in a clean and organized manner?	x		
Does the laboratory appear to have adequate workspace (120 sq. feet, 6 linear feet of unencumbered bench space per analyst)?	x		
Are contamination-free areas provided for trace level analytical work? (Low level and high activity areas separated.)	x		
Are the hoods in good condition and functional?	x		
Are chemical waste disposal policies/procedures well defined and followed by the laboratory?	x		
Does the laboratory have a source of distilled/demineralized water?	x		
Is the conductivity of distilled/demineralized water routinely checked and recorded?		x	Not needed?
Is the analytical balance located away from draft and areas subject to rapid temperature changes?	x		
Has the balance been calibrated within one year by a certified technician?	x		Quarterly.
Is the balance routinely checked with the appropriate range of class S weights daily before use and are the results recorded in a logbook?	x		Contracted.
Is the sample preparation portion of the SOP available to the analyst at the sample preparation area?	x		
Are unexpired standards used to prepare instrument calibration standards?	x		
Are fresh analytical standards prepared at a frequency consistent with good QA?	x		
Are chemicals and standards dated upon receipt?	x		
Are reference materials properly labeled with concentrations, date of preparation, and the identity of the person preparing the sample?	x		
Is a spiking/calibration standards preparation and tracking logbook(s) maintained?	x		
Are the primary standards traceable to NBS standards where possible?	x		
Do the analysts record bench data in a neat and accurate manner?	x		

IV. Sample Analysis Instrumentation (Page 1 of 11)

A. Gamma-Ray Spectrometer

	Manufacturer	Model	Automated Sample Exchanger Used	Installation Date
1. Spectrometer		Ge-		
ID# 1		(1)LGC2250LATT		
2	Two PyT's	(2)LGC2250LATT	Manual	5 years old
Data System	ND-9900			
2. Spectrometer		Ge-		
ID# 3		(3)2020		
4	Two Canberra's	(4)2001	Manual	6 years old
Data System	ND-9900			
3. Spectrometer		Ge-		
ID# 5		(5)OTZDS30-25185		
6	Two Tennelec's	(6)CPZDS30-25185	Manual	< 1 year old
Data System	ND-9900			
4. Spectrometer				
ID#				
Data System				
5. Spectrometer				
ID#				
Data System				
6. Spectrometer				
ID#				
Data System				

Spectrometers 1, 2, 3, 4 are approx. 20% effic., 5 is 25% and 6 is 30% - 3 inch lead chambers used. ND-9900 controls all 6 detectors.

IV. Sample Analysis Instrumentation (Page 2 of 11)

A. Gamma-Ray Spectrometer

ITEM	YES	NO	COMMENT
Are operating manuals readily available to the operator?	x		
Are calibration protocols available to the operator?	x		
Are energy, efficiency, FWHM values, gains and check standard results kept in a permanent record so that instrument performance can be measured over time?		x	Yes, except for Inst., logbook settings i.e., gains etc.
Is there a methods manual (SOP) available to the operator?	x		
Are NBS traceable standards used for calibration?	x		
Duplicate samples analyzed? (Frequency)	x		1/10, 1 per batch
Spike/standard samples and blanks? (Frequency)	x		1/20, 1/10, 1 per batch.
Is a permanent service record maintained in a logbook?	x		
How is the data reduced-off line computer, dedicated system or other?	x		Dedicated.
Are radioisotopic or interelement correction factors updated every six months or more frequently?		x	Avoided.
Is service maintenance by contract?	x		
Is preventative maintenance applied?	x		

Additional Comments

Blindly takes computer output without performing manual validation checks (see item 3, page 1).

Does not store raw data for archival purposes even though capability exists to do so (see item 4, page 2).

Calibrates efficiency, resolution etc., each day and maintains results in logbook with printout.

IV. Sample Analysis Instrumentation (Page 3 of 11)

B. Alpha Spectrometer

	Manufacturer	Model	Automated Sample Exchanger Used	Installation Date
1. Spectrometer ID# 1, 2, 3, 4	Tennelec	Si(Li) TC-256	Manual	2 years old
Data System	ND-9900			
2. Spectrometer ID# 5, 6, 7, 8	Tennelec	Si(Li) TC-256	Manual	2 years old
Data System	ND-9900			
3. Spectrometer ID# 9, 10, 11, 12	Tennelec	Si(Li) TC-256	Manual	2 years old
Data System	ND-9900			
4. Spectrometer ID#				
Data System				
5. Spectrometer ID#				
Data System				
6. Spectrometer ID#				
Data System				

3-Four simultaneously operated α -spectrometers for a total of 12 available. 1024 channels used for spectra. ND-9900 controls all detectors. All are part of the same system so there is only one model number TC-256.

IV. Sample Analysis Instrumentation (Page 4 of 11)

B. Alpha Spectrometer

ITEM	YES	NO	COMMENT
Are operating manuals readily available to the operator?	x		
Are calibration protocols available to the operator?	x		
Are energy, efficiency, FWHM values, gains and check standard results kept in a permanent record so that instrument performance can be measured over time?	x		
Is there a methods manual (SOP) available to the operator?	x		
Are NBS traceable standards used for calibration?	x		
Duplicate samples analyzed? (Frequency)	x		1/10, 1 per batch
Spike/standard samples and blanks? (Frequency)	x		1/10, 1/20, 1 per batch.
Is a permanent service record maintained in a logbook?	x		
How is the data reduced—off line computer, dedicated system or other?	x		Dedicatd.
Are radioisotopic or interelement correction factors updated every six months or more frequently?		x	Avoided-not applicable.
Is service maintenance by contract?	x		
Is preventative maintenance applied?	x		

Additional Comments

Calibrates efficiency and resolution etc., each day and maintains results in logbook with printouts.

IV. Sample Analysis Instrumentation (Page 5 of 11)

C. Low Background Gas Flow Proportional Counting System (Gross Alpha and Gross Beta)

	Manufacturer	Model	Sample Capacity	Installation Date
1. Instrument				
ID#				
Gross α / β Ctr	Tennelec	LB5100	Multiple	3 years old.
Window		Voltage		Operating α =750
Density or Thickness		Plateau	Not available	Voltage β =1470
	260 ug/cm ²	Span and Slope	Not available	Gas p-10(Ar, Me)
(Rack of 4) x 3 = 12 at a time				
2. Instrument				
ID#				
⁹⁰ Sr Ctr	Tennelec	LB4000	Manual	Not Available
Window		Voltage		Operating α =1200
Density or Thickness		Plateau	Not available	Voltage β =1913
	260 ug/cm ²	Span and Slope	Not available	Gas p-10, (Ar Me)
3. Instrument				
ID#				
Window		Voltage		Operating
Density or Thickness		Plateau		Voltage
		Span and Slope		Gas
4. Instrument				
ID#				
Window		Voltage		Operating
Density or Thickness		Plateau		Voltage
		Span and Slope		Gas
5. Instrument				
ID#				
Window		Voltage		Operating
Density or Thickness		Plateau		Voltage
		Span and Slope		Gas

1 system of each type. The second one is the older of the two.

IV. Sample Analysis Instrumentation (Page 6 of 11)

C. Low Background Gas Flow Proportional Counting System (Gross Alpha and Gross Beta)

ITEM	YES	NO	COMMENT
Are operating manuals readily available to the operator?	x		
Are calibration protocols available to the operator?	x		
Are calibration results kept in a permanent record so that instrument performance can be measured over time?	x		
Is there a methods manual (SOP) available to the operator?	x		
Are NBS traceable standards used for calibration?	x		
Is a permanent service record maintained in a logbook?	x		
How is the data reduced-off line computer, dedicated system or other?	x		Each has its own microprocessor-HP
Is calibration done at least daily or batch frequency?	x		
Duplicate samples analyzed? (Frequency)	x		1/10, 1 per batch
Spike/standard samples and blanks? (Frequency)	x		1/10 stds, 1/20 spikes, 1/batch.
Are self-absorption curves readily available to analyst (curves reestablished last 3 months)?	x		Daily checked.
Is service maintenance by contract?	x		
Is preventative maintenance applied?	x		

Additional Comments

Calibrates efficiency, etc., each day and maintains results in logbook with printouts.

IV. Sample Analysis Instrumentation (Page 7 of 11)

D. Liquid Scintillation (LS) Spectrometer

	Manufacturer	Model	Sample Capacity	Installation Date
1. LS Spectrometer ID# 1	Packard	460C	Multiple	5-6 years old
Data System Data output by system is manually feed into area computer				
2. LS Spectrometer ID#				
Data System				
3. LS Spectrometer ID#				
Data System				
4. LS Spectrometer ID#				
Data System				
5. LS Spectrometer ID#				
Data System				
6. LS Spectrometer ID#				
Data System				

1 liquid scintillation system only.

IV. Sample Analysis Instrumentation (Page 8 of 11)

D. Liquid Scintillation (LS) Spectrometer

ITEM	YES	NO	COMMENT
Are operating manuals readily available to the operator?	x		
Are calibration protocols available to the operator?	x		
Are calibration results (i.e., sensitivity) kept in a permanent record so that instrument performance can be measured over time?	x		
Is there a methods manual (SOP) available to the operator?	x		
Are NBS traceable standards used for calibration?	x		
Is a permanent service record maintained in a logbook?	x		
How is the data reduced-off line computer, dedicated system or other?	x		Raw data input into area computer manually.
Duplicate samples analyzed? (Frequency)	x		1/10, 1 per batch
Spike/standard samples and blanks? (Frequency)	x		Stds 1/10, spikes 1/20, 1 per batch
Is calibration done at least daily or batch frequency?	x		Per setup or each day.
Are multiple discriminator channels available? (List how many.)	x		3.
Refrigeration?		x	
External Standard?	x		
Is service maintenance by contract?	x		
Is preventative maintenance applied?	x		

Additional Comments

IV. Sample Analysis Instrumentation (Page 9 of 11)

E. Fluorometer/Spectrophotometer

	Manufacturer	Model	Type: Fluorometer or Spectrophotometer	Installation Date
1. Instrument ID# 1	ORNL In-House	Q1165	Fluorophotometer Serial #12	Fluorometer Not Available
2. Instrument ID#				
3. Instrument ID#				
4. Instrument ID#				
5. Instrument ID#				
6. Instrument ID#				
7. Instrument ID#				
8. Instrument ID#				
9. Instrument ID#				
10. Instrument ID#				
11. Instrument ID#				
Tot.U-Induction Furnace Method. One system only.				

IV. Sample Analysis Instrumentation (Page 10 of 11)

E. Fluorometer/Spectrophotometer

ITEM	YES	NO	COMMENT
Are operating manuals readily available to the operator?	x		
Are calibration protocols available the the operator?	x		
Are calibration results (i.e., sensitivity) kept in a permanent record so that instrument performance can be measured over time?	x		
Is there a methods manual (SOP) available to the operator?	x		
Are NBS traceable standards used for calibration?	x		
Is a permanent service record maintained in a logbook?	x		
How is the data reduced--off line computer, dedicated system or other?	x		Output from INST. Manual Calc.- Calib Curves.
Is calibration redone at least every 3 months?	x		Daily Check.
Duplicate samples analyzed? (Frequency)	x		1/10, 1 per batch
Spike/standard samples and blanks? (Frequency)	x		Stds 1/10, Spikes 1/20, 1 per batch
Is service maintenance by contract?	x		
Is preventative maintenance applied?	x		

Additional Comments

Fluorometer (Tot.U) is not located in the RAD area. Uranium in RAD area is usually by α -spectrometry. There is only one unit. It is part of Inorg. Section Eval. also.

IV. Sample Analysis Instrumentation (Page 11 of 11)

F. Thermal Ionization Mass Spectrometer (TIMS)

	Manufacturer	Model	Installation Date
1. Instrument ID#			
2. Instrument ID#			
3. Instrument ID#			

ITEM	YES	NO	COMMENT
Are operating manuals readily available to the operator?			
Are calibration protocols available to the operator?			
Are calibration results kept in a permanent record so that instrument performance can be measured over time?			
Is there a methods manual (SOP) available to the operator?			
Are NBS traceable standards used for calibration?			
Is a permanent service record maintained in a logbook?			
How is the data reduced-off line computer, dedicated system or other?			
Is calibration/recalibration done at least with batch frequency?			
Duplicate samples analyzed? (Frequency)			
Spikes/standard samples and blanks? (Frequency)			
Is service maintenance by contract?			
Is preventative maintenance applied?			

Additional Comments

ORNL (X-10) - does not have a TIMS Unit.

VI. Quality Control Manual and SOP's (Page 1 of 1)

ITEM	YES	NO	COMMENT
Does the laboratory maintain a Quality Control Manual?		x	See below.
Does the manual address the important elements of a QC program, including the following:		x	See below.
a. Personnel?		x	See below.
b. Facilities and equipment?		x	See below.
c. Operation of instruments?		x	See below.
d. Documentation of procedures?		x	See below.
e. Preventative maintenance?		x	See below.
f. Reliability of data?		x	See below.
g. Data validation?		x	See below.
h. Feedback and corrective action?		x	See below.
Are files of outdated SOP's stored for reference		x	See below.

Additional Comments

QA/QC Division (Pam. Howell) - contents of manual in preparation at this point in time - so these questions can't be answered yet.

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Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

November 3, 1987

Robert B. Fitts

Response to the On-Site Evaluation and Evidentiary Audit Carried out at
the Oak Ridge National Laboratory on 8/25/87

- Item #1 - Notebooks are now reviewed once a week by the laboratory supervisor, notebook/logbook changes are made by drawing a line through the entry and then initialed by the technician making the change.
- Item #2 - We have been keeping a logbook (containing QA/QC data) for each instrument, we are now keeping a logbook that contains instrument settings, etc.
- Item #3 - We process a standard or standard spike and a duplicate with every tenth sample. The computer generated data/results are checked by such QA/QC measures. All instruments are monitored on a daily basis by counting known standards before the day's counting begins. The recommendation that we perform manual data reduction on gamma spectra is unfounded.
- Item #4 - We are now storing all gamma spectra for the survey indefinitely on floppy disks. Previously, the data was held for thirty days.
- Item #5 - We have a written SOP for sample receiving, login, and chain-of-custody. The SOP is and has been available to everyone.
- Item #6 - This recommendation should be addressed by the RAD Committee, not our laboratory.
- Item #7 - All of our procedures should be in the survey manual, they were submitted months ago.
- Item #8 - We are heavily involved in the EPA-Las Vegas PE/IC samples. The data from past work is available from me or from EPA-LV.

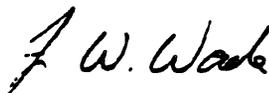
Robert B. Fitts

-2-

November 3, 1987

We measure radionuclides in water and air filters and these analyses cover all parameters required in a water matrix for the survey. As of 11/1/87, soil samples were not available from EPA-LV.

Sincerely,



J. W. Wade
Analytical Chemistry Division

JWW:sdc

cc: B. R. Clark
D. L. Dihel
P. L. Howell
W. R. Laing
J. R. Stokely

Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

Internal Quality Assurance Reviews

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OAK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC

POST OFFICE BOX X
OAK RIDGE, TENNESSEE 37831

April 21, 1988

Distribution

Martin Marietta Energy Systems QA Audit of
The Oak Ridge Environmental Survey Program

Attached is the final report from the internal QA Audit of the Oak Ridge National Laboratory activities for the DOE Environmental Survey Program. The audit was commissioned by me and, for the ORNL Analytical Chemistry Division (ACD) by D. Shults, Director of the ORNL ACD at the request of D. K. Knight, the DOE Environmental Survey Program Manager.

I would welcome any comments you might wish to make regarding this report.

Sincerely,



Robert B. Fitts, Program Manager
DOE Environmental Survey
Environmental Sciences Division

REF:tmp

DISTRIBUTION

**B. R. Appleton
J. T. Bradbury
J. E. Caton
M. R. Guerin
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W. D. Shults
R. F. Swiger
R. S. Wiltshire**

APR 22 1988

April 18, 1988

R. B. Fitts

DOE Environmental Survey Program - Final Quality Assurance (QA) Review of the ORNL Analytical Chemistry Division's Organic, Inorganic, Radiochemical, and High Explosives Analysis Laboratories

Please find attached the report from the above activities. In order to understand the final report, please reference the cover letter for the Review of the Pantex Site Organic Data Generated by the ORNL Analytical Chemistry Division (ACD), dated March 23, 1988. This cover letter is included with this report as Attachment 6.

Due to the urgency of this situation we have distributed draft reports to the labs. Further distribution should be made by your office. Please request corrective actions and allow P. L. Howell to track, review and verify adequacy of the completed action items as per the Charter, dated February 25, 1988.

All of the requested QA reviews of the ORNL ACD's Organic, Inorganic, Radiochemical and High Explosives analysis labs are now complete. Any additional information concerning the reviews (review notes, evidentiary information) is available to you upon request.

Should you have further concerns or questions about anything in the reports or QA concerns in your program, please call me or P. E. Melroy, ORNL's Quality Manager.



D. W. Frazier, 1000, MS-335, ORNL (6-0347)

DWF:cet (QA-88-30)

Attachments:

1. Copy of Sample control and Chain-of-Custody Sheet with suggested additions
2. Letter - Oak Ridge Environmental Survey Program Review - Final Review and Recommendations - To Frazier, From McMahon
3. Lists of the revised Organic and Inorganic Standard Operating Procedures reviewed
4. Total list of organic SOP's to be revised
5. Total list of inorganic SOP's to be revised
6. Cover letter and Review Report (from L. W. McMahon) from the Pantex site data review

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Final Report of the Second Quality Assurance (QA) Review of the ORNL Analytical Chemistry Division's Organic, Inorganic, Radiochemistry, and High Explosives Analysis Laboratory Participating in the DOE Environmental Survey Program

Issued to:

R. B. Fitts

April 18, 1988

Issued By:

D. W. Frazier

D. W. Frazier, Review Team Leader

S. K. Holladay

S. K. Holladay

P. L. Howell

P. L. Howell

L. W. McMahon

L. W. McMahon

A. N. Weisbin

A. N. Weisbin

A. A. Halouma

A. A. Halouma

INTRODUCTION

On April 11-12, 1988, the QA review team consisting of A. A. Halouma, S. K. Holladay, P. L. Howell, L. W. McMahon, A. N. Weisbin and D. W. Frazier met with ORNL personnel W. R. Laing, J. E. Caton Jr., W. H. Griest, J. C. Price, J. W. Wade, C. A. Treese, J. A. Hayden, and S. J. Bobrowski, prior to beginning the review of the subject laboratories. A checklist including the areas of concern for the review had been provided prior to the activity. The status of the corrective action items from the EPA audits of the program conducted in June 1987 and January 1988 and from the first QA review were also addressed. This report will reflect, as best could be determined, the status of subject labs readiness to be audited by the EPA in connection with the requirements of the statement of work. Since this is the final report, items from the first report are included to provide a comprehensive overall summary of this status.

SCOPE

This QA review was requested by R. B. Fitts, Program Manager of the Oak Ridge Environmental Survey Program (ORESP) and ORNL Analytical Chemistry Division (ACD) Director W. D. Shults, to obtain an independent evaluation of participant's compliance to established guidelines to the Contract Laboratory Program protocol. The Draft of ORNL USEPA Contract Laboratory Program (CLP) Statement of Work for Organic and Inorganic Analysis Multi-Media, Multi-Concentration SOW No. 787, and good lab practices were used as the basis for the review. The team began in the Sample Receiving Laboratory and proceeded to review the Organic, Inorganic, Radiochemistry, and High Explosives analysis laboratories.

COMMENDABLE EFFORTS NOTED

ORGANICS LABORATORY

1. Volatile organic matrix spikes, tune criteria, and surrogate recoveries are being reviewed on a batch-to-batch basis - relates a good effort to comply with protocol in spite of man-power needs.
2. Instrument run log notebooks were well thought-out and designed.
3. There was an excellent effort to develop software to produce the required PCB/Pesticide CLP forms. Further efforts to include additional useful information to the Form ID was made prior to the second QA review.
4. Review of the linearity of standards, surrogate recoveries, matrix spikes and matrix spike duplicates is now evident in the Organic labs prior to sample reporting.
5. There has been a commendable effort put forth to address the corrective action items from the EPA audits and the first QA review.

6. The semivolatile data evaluation, although not complete at the time of this second review, is moving toward completion since additional instrumentation has been ordered and further training in the use of the software is scheduled with Hewlett Packard Company representatives.
7. The final report of Pantex VOA data has been generated to correctly state quantitative values, positive contaminate identifications, documentation of deviations from the protocol, and documentation of corrective actions taken for out-of-control conditions.

INORGANICS LABORATORY

8. Applicable inorganic technical and CLP procedures were made accessible in notebooks for use by each analyst - very good practice.
9. Exemplary documentation of notebooks in compliance to the CLP protocol in the ICP and Atomic Absorption labs.
10. Revised standard operating procedures, and implementation thereof has begun.
11. All biographical data on personnel was well documented.
12. Certification records were available on all personnel including the EPA procedures that they were certified to perform - excellent.
13. CAPA Sample Prep lab notebooks and records were exemplary.
14. A holding time traceability system has been established in this section, and is being tested in the organic section. By request number the sample is compared to the holding time date and to the program due date, whichever date is earlier is printed as the deadline.

Status: Incomplete

ATOMIC ABSORPTION LAB

14. Training records to CLP procedure are complete.
15. Procedures in use were on hand for analysts use.

MERCURY LAB

16. The sample prep and mercury labs were very well organized.

RADIOCHEMISTRY

17. Chain-of-custody system for paperflow and sample management appeared to be an effective system for the present set-up.
18. Documentation of instrument maintenance, specific weekly counting activities, instrument setting log, and QC were found to be exemplary.

HIGH EXPLOSIVES LABORATORY

19. Even though this lab is not under the CLP protocol, several SOP's were written to cover the involvement in the program.
20. Data transfer and CLP form generation are being patterned after the PCB/PEST Form I and are quite comprehensive - excellent effort.

ASBESTOS LAB

21. Involvement for the Environmental Survey in the Asbestos lab was found to be very well organized, instrument and standard operating procedures were in place, training - past and future plans were excellent, master log book is noteworthy, lab security is well thought out and implemented, and waste management was handled by sending all of the sample (including the portion analyzed) back to the customer, just an exemplary effort.

DEFICIENCIES/RECOMMENDATIONS

GENERAL:

This review included a more thorough study of the standard operating procedures (SOP) throughout the labs. A. N. Weisbin, spent a considerable amount of time reviewing newly written SOP's against the CLP requirements. The list of Organic and Inorganic SOP's reviewed and conclusions drawn can be found in Attachment_3 to this report. Consider that the recommendations and comments in the attachment are the team's recommendations to be incorporated into the SOP.

1. There were too many different forms requiring varying information, and inconsistently used for the same purpose in use throughout the laboratories, which made sample tracking very difficult. Although the number of forms has not decreased, the Organic lab has re-designed their chain-of-custody form to reflect only the needed information.

Recommendation This applies specifically to work under the CLP protocol; Use a centralized receiving record, or a log to record the incoming samples.

Comment

- A. The Organic Lab Chain-of-Custody form has been revised to reflect their informational needs. Three suggested additions are included for your consideration as a result of previous audits (1) the number of containers received, (2) the site name, and (3) state whether the container holds a sample or an extract. (See Attachment 1, copy of the form.)
- B. In order for sample tracking to be more efficient, consider numbering the forms to cross-reference Request for Analytical Services form with the Chain-of-Custody form.
- C. There is now a central sample tracking system in place.

Status: Complete

2. There is no consistent documentation to the customer concerning as-received sample nonconformances.

Recommendation: Written documentation of sample nonconformances should accompany phone calls to notify the customer. An entry can be made directly on the Request for Analytical Services form. This could be called out in the Sample Receiving and Inspection for the DOE Environmental Survey Program Standard Operating Procedure.

Comment: This item is covered in Draft SOP-002, Sample Receiving and Inspection for the DOE Environmental Survey Program.

Status: Complete

3. The lack of man-power which was evident in the sample receiving area during the first review is being handled.

Recommendation: During the interim, it will be necessary to properly train temporary personnel. The use of a simple stepwise checklist made up from the SOP to assure that everything gets done can be used, or simply train some relief personnel to the SOP for back-up (especially in the sample receiving areas.)

Comment: This item is also covered by Draft SOP-002, as in item #4.

Status: Complete

4. Different AnaLis sample identification numbers were assigned to the same sample for multi-analysis (VOA, SVO, ICP, Hg, etc.) was found to be inefficient and time consuming when compiling data reports for a sample.

Recommendation: Consider centralization of the sample log-in function. Man-power and terminals for this function could yield a more efficient sample tracking system with several avenues to data retrieval at one source. Consideration of this for the CLP program is strongly advised by the QA review team.

Comment: Lab personnel have developed a sample tracking system which allows samples to be located via request numbers or assigned lab numbers. Therefore a central login would not be necessary.

Status: Complete

5. A lack of awareness of the Analytical Chemistry Division's general policy for sample disposal was Train employees in the use of applicable SOPs.

Comment: Draft SOP-013 will be issued by June 1, 1988. Training of the sample receiving personnel to the SOP has already taken place.

Status: Incomplete

6. Printed forms were completely filled in. This was much improved over the situation observed during the last review.

Comment: This area should be monitored on an unscheduled basis to assure that it is continuously being done.

Status: Complete

7. Personnel should be made aware of the data validation process. A documented data validation process is scheduled to be written to cover this issue.

Comment: Standard operating procedures to be revised or written should have targeted completion dates.

Status: Incomplete

8. Date of receipt on chemicals were inconsistently applied.

Recommendation: Management must assure that policy regarding age of chemicals used for any aspect of analysis is set up and implemented. This allows chemicals to be used on a first-in first-out basis.

Status: Incomplete

9. Non-target parameter laboratories have very little familiarity with QA/QC and evidentiary requirements.

Recommendation: Strongly consider conducting documented QA/QC discussions at regular intervals during general meetings or separately, whichever meets the need. Regular meetings should document attendance if safety or QA/QC is discussed and kept in training file.

Status: Incomplete

10. Non-target parameter labs were found to be weak in the implementation of standard operating procedures (SOPs).

Recommendation: Train employees in the use of applicable SOPs.

Status: Incomplete

11. Glassware Cleaning procedures, posted above sinks for easy reference by user, were not signed and dated by management.

Recommendation: All Technical and Standard Operating Procedures should be signed and dated by applicable management to show that the procedure is an official document.

Status: Incomplete

12. Notebook reviews were being performed, but repeated obliterations without initials or dates of the action were found.

Recommendations: Instructions for how to fill out a notebook are available in the Martin Marietta Energy System's laboratory notebooks and handling of errors is a part of the instructions. Training to these instructions should be a part of the regular group meetings for old and new hires. An error should have a single line drawn through it, initialed, and dated.

Comment: Draft SOP-003, Requirements for Recording and Correcting Lab Entries for the Environmental Survey Program has been written to address this deficiency. Training of all ACD employees to the SOP has been planned and will be complete by June 1, 1988.

Status: Incomplete

13. The mechanism for handling future CLP work has changed. Future work will incorporate analyst review and interpretation of all data prior to reporting quantitative values, and to assure that the required QC criteria are met before proceeding with the analysis.

Status: To be monitored during analysis of next CLP samples.

ORGANIC LABORATORIES

14. Although writing and revision of SOP's are in progress, it is doubtful that all of the SOP's called out on the list supplied to the team will be completed prior to another EPA audit.

Recommendation: Prepare an action plan for completing the writing and revision of SOP's, with specifics, such as SOP name, completion date, review and comment due date, issue date, training to SOP completion date, and show evidence that the plan is being followed. Be reasonable in this activity, set dates that can be achieved, but dates that reflect urgency to have this activity completed.

Status: Incomplete

15. While tracking an Argonne CLP sample, it was noted that there was no Chain-of-Custody form, nor original request for services resulting in an incomplete paperflow.

Recommendation: Prepare a receiving and completed data package checklist to be reviewed for essential paperwork in a CLP package for each file.

Comment: This type problem will be handled with the implementation of the appropriate SOP's. However, this is still a concern until the SOP's are implemented. A copy of this checklist was supplied to the lab by L. W. McMahon.

Status: Incomplete

16. Training to the CLP protocol is being planned for the Organic labs staff. Arrangements are being made to obtain the services of EPA personnel to conduct the training in mid-May.

Status: Incomplete

17. There was insufficient data handling software/hardware during the first review. Presently, arrangements have been made with Hewlett-Packard Company representative to further train staff to use the new RTA System, and two additional Scan Boxes have been ordered to make the system efficient which will increase data evaluation productivity.

Status: Incomplete

18. There is now documentation of corrective actions in the GC-MS and PCB/PEST labs.

Status: Complete

19. The daily check on the refrigerator temperature is now being performed and recorded. Temperature excursions are handled by adjusting the controls until the event is under control. The Temperature Controlled Sample Storage Areas: Records and Maintenance SOP, is to be written and implemented. The Organic Analysis lab supervisor has committed to supply the team with a schedule for the completion of the organic SOP's.

Status: Incomplete

20. Sample concentration data is now being flagged to show the appropriate blanks concentrations.

Status: Incomplete

21. Data validation will be performed by two people in the GC-MS lab, as well as by the Group Supervisor, when possible, in a manner that will expedite sample analysis and data handling.

Comment: Unscheduled monitoring should confirm continued practice.

Status: Complete

22. There was evidence that only ^{two} ~~three~~ performance evaluation samples out of five quarters were completed and reported.

Recommendation: In order to access the labs ability and capability to operate under the CLP protocol, the performance evaluation samples must be completed and reported to show good faith that the samples can be analyzed as necessary.

Status: Incomplete

PESTICIDE/PCB LABORATORY

During this QA review, L. W. McMahon reviewed in detail the PCB/PEST data as it is now being evaluated and the semivolatile data as it is presently generated using the Aquarius software. Please find a draft version of his report to me in Attachment 2, dated April 15, 1988 entitled Oak Ridge Environmental Survey Program Review - Final Review and Recommendations. The recommendations stated in his report are official recommendations of the QA review team and will be considered as such.

22. Lack of sufficient number of Gas Chromatographs (GC) and personnel for project workload was noted during the first review. At present, another GC has been borrowed for CLP work until a recently ordered system is in-house and set up. Management is actively interviewing to add personnel to the workforce. There can be no date set for personnel addition, this activity will have to be monitored closely to expedite the process.

Status: Incomplete

23. A better understanding of the CLP protocol is now evident, such as personnel now are aware that the Form VIII Evaluation Standards must be within specification prior to sample analyses; that the raw data reported on Form I is the laboratory validated results, and that tentatively identified compounds must be referenced on Form X. However, the following recommendations must be made in an effort to strengthen this area.

- Recommendation:**
- Give SAIC hardcopy of data to use to verify the final electronic CLP form generation.
 - Continue to put the PCB/PEST data together in the CLP package.
 - Report all quantitation data as estimated flagged with a "J".
 - If matrix spike recovery = 0, the data associated with it should be flagged as not useful.
 - Alter computer program on sample calculation for the following; discontinue averaging the response factors, and quantitate on the nearest appropriate Individual A or B standard.
 - All organic staff need additional training to the CLP protocols.

24. SAIC should take out the packed and capillary column data that they now have and replace it with the data on the present Form I.

Status: Incomplete

25. Case narrative should explain the rationale for altering Forms II and VIII and should also address Form III.

Status: Incomplete

26. Confirm via comparison the information on the forms vs the information in the AnaLis database.

Status: Incomplete

VOLATILE ORGANICS

The status of the VOA data was reported in a letter to D. W. Frazier, from L. W. McMahon entitled Review of Pantex Data at ORNL 2/23/88 - 2/26/88, dated March 2, 1988. (See Attachment 7.)

SEMI-VOLATILE ORGANICS

29. The evaluation of the raw data generated on the GC-MS Chem stations is now taking place through the use of the RTA to produce the CLP forms. The information is being assembled into CLP data packages.

Status: Incomplete

30. The review team has similar concerns with the semi-volatile organic data as with the volatile organic data, such as matrix spike results being outside the QC window, detection limits and results needing to be corrected for moisture content, and positive hits reported as estimated values. The number of CLP non-conformances is probably not so extensive that the data should all be declared as Level III quality. This conclusion was based on the evaluation of limited data available at the time of the review. The semi-volatile organic data evaluation by the labs' staff was not complete. It has been predicted that this data evaluation will not be complete for several weeks.

Status: Incomplete

HIGH EXPLOSIVES LAB

31. Sample receipt is inadequate. Chain-of-custody is not carried through to receiving personnel at Bldg. 2026 from ORNL Receiving personnel.

Recommendation: Some type of arrangements will be made and documented with ORNL Receiving such that someone in the Lab must sign for the incoming samples. They are presently left at the front door of the High Explosives lab Bldg. 2026 until the cooler is found.

Status: Incomplete

INORGANIC LABS

GENERAL:

32. Control work sheets containing the results of analysis are now being put into laboratory notebooks in the % solid and fluorometric Uranium analysis lab.

Status: Complete

33. Notebook entries are being made in black ink.

Status: Complete

34. Violations of error correction protocol (single line through error, initials, and date) were observed in notebooks throughout the lab.

Recommendation: See recommendation under Deficiency #12.

Status: Incomplete

35. The review of the notebooks by supervision or designee obliterated actual data in several notebooks.

Recommendation: An area on the data page should be allotted for witnesses signatures and/or stamps.

Status: Unscheduled monitoring to confirm continued action.

ICP LAB

36. Lack of back-up instrumentation presently on line in the ICP laboratory.

Recommendation: Provide documented policy or agreements for back-up in case the present ICP instrument fails.

Comment: To date the team has not received any assurances that this concern has been handled.

Status: Incomplete

CYANIDE LAB

37. There is a need for awareness of the methods used in the lab (SW-846, EPA-600, and CLP method EPA-335.2) for different types of samples.

Recommendation: Train employees so that they will be aware of such information.

Comment: This can be handled in regular group discussion meetings.

Status: Incomplete

38. There was no awareness that there are specified concentrations with which the instrument should be calibrated.

a. This was reflected in the lack of frequent instrument standardizations.

b. General lab QA/QC not strictly followed;

- Conductivity of water is not recorded.
- Balance is not regularly calibrated.

Recommendation: Implement SOP's to alleviate this situation.

Comment: Assure that employees in this lab are following the QA/QC procedures for the ACD as well as for the Environmental Survey Program.

Status: Incomplete

39. There was no SOP for washing glassware at the sink.

Recommendation: Post SOP at sink in the Cyanide analysis lab.

Status: Incomplete

40. Reagents should be dated upon receipt before storage in the refrigerator.

Recommendation: Initial and date all incoming reagents, standards, etc. for use in sample analysis to allow first-in first-out usage of supplies.

Status: Requires unscheduled monitoring for continuous action.

RADIOCHEMISTRY LAB

41. Procedures are still in the old format, but updating to conform to the NQA-1 format is in progress.

Recommendation: Document expected completion of this activity.

Status: Incomplete

42. The Environmental Survey Manual is in the process of assigning ESM numbers for the Radiochemical procedures.

Status: Complete

43. The Sample Receiving, Logging and Distribution procedure was found to be inadequate. There is no QA input and it is not written in procedural format.

Recommendation: This procedure is a strawman and is in need of being completed, "adding the meat of how to do the receiving, logging and distribution." The SOP is a part of the QA process and was written so that when it is implemented will assure that these processes don't fall through a crack.

Status: Incomplete

ASBESTOS LAB

44. Standard operating procedures for this lab are not written, but a system is definitely in place.

Recommendation: Inorganic lab SOP's should include the Asbestos lab in all areas.

Status: Incomplete

DRAFT

Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

ATTACHMENT 2
Detailed Review of PCB/PEST Data Evaluations

April 15, 1988

D. W. Frazier

Oak Ridge Environmental Survey Program Review - Final Review and Recommendations

During the second review on April 11, Mike Guerin's and John Hayden's comments and questions expressed previously (Pantex PCB/Pesticide Data Review, Guerin to Frazier, March 25, 1988) regarding the pesticide/PCB data were addressed. I will note how these issues were resolved and then offer some conclusions from the review.

Issues Noted in Guerin's Memo

1. The data packages reviewed on February 23-26 did not reflect extensive data evaluation and checks. Contradictory results were reported within the data set (duplicate Form I's with different results), within AnaLIS, and within the SAIC database. Two causes for this were identified; misunderstanding by the laboratory about how to present CLP data and transfer of raw data to SAIC. As of the second review on April 11 the lab is reprocessing the CLP packages to reflect the necessary data checks and evaluation.
2. The calibrations did not meet the CLP linearity requirement. Specific instruction is found on pages D-32 through D-35 and E-52 of the 10/86 SOW. The additional 5 point standards used by the lab to demonstrate linearity were at a higher concentration range than required. In addition the response factors used for calculations were averaged. This process was reviewed with John Hayden on 4/11 and his questions regarding the linearity and continuing calibration requirements were resolved.
3. To insure SAIC database is correct, hard copies of the lab evaluated data will be given to SAIC.
4. Abnormalities previously noted in computer generated forms have been corrected.
5. After re-evaluating the blank data and correcting the Form I data, the concern about blank contamination has been resolved. The single positive hit must be addressed in the case narrative.
6. Over the past year to 18 months, EPA-EMSL has been quite nebulous regarding the use of an appropriate surrogate as well as the value of Dibuty/Chlorandate (DBC) recovery data. The lab was operating under the assumption that mirex was an acceptable alternative to DBC. In terms of the SOW used for the DOE Survey work it was not. However, while no criteria is available to evaluate mirex recovery, it can be used to make some technical judgement as to how well the overall extraction and analysis process is working. This issue must also be addressed in a case narrative. (Analysis data to evaluate mirex is provided as Attachment 6.)

7. The questions posed by the Guerin memo were addressed on 4/11 with John Hayden as follows:
 - (a) A single Form I is used to report quantitative, confirmed data. Raw data from both columns is to be included in the package. The data reported on Form I is the laboratory validated results.
 - (b) If the linearity check from EVAL A, B, and C exceeds 10% for aldrin, endrin, or DBC discontinue the analysis, troubleshoot the equipment/technique, and meet this requirement before continuing analysis. If DDT exceeds the 10% requirement see paragraph 4.5.4.4, page E-59 of the 10/86 SOW. The footnote on Form VIII PEST-1 refers to DDT only.
 - (c) There is no reference to tentatively identified compounds on Form X.

OVERALL ASSESSMENT OF PANTEX PESTICIDE/PCB DATA

While appropriate to make professional judgments and express concerns on the validity of data, the additive nature of QC factors out of specification is difficult to express. The reviewer as well as the laboratory has a responsibility to inform users of the data of all concerns in order to assist that user in avoiding inappropriate use of the data while at the same time not precluding data necessary to facilitate the progress of projects requiring the availability of the data. While data which does not meet specified requirements is never fully acceptable, this line-of-thought is consistent with EPA guidance on laboratory data evaluation (Technical Directive Document No. HQ-8410-01, Laboratory Data Validation, Functional Guidelines For Evaluating Pesticide/PCB's Analysis, May 28, 1985). Using guidance from this document, I suggest reporting the data annotated as outlined below while fully explaining any non-conformance in the case narratives. I suggest this for the following reasons:

1. Factors beyond the control of the laboratory were a cause of many QC non-conformances.
 - (a) There was miscommunication between management and the lab concerning project requirements, capabilities available at the time of Pantex sampling, and capacity to handle the workload within the time frame allotted.
 - (b) There were continuing changes in program requirements, by DOE-HQ, concerning the CLP reporting requirements and documentation, and
 - (c) Continuing changes to the Sampling and Analysis Plan even during sampling.
2. Making data available in this manner will facilitate the progress of the Pantex project.

I. Suggested procedure to annotate Pantex Pesticide/PCB data

Sample Holding Times - If 40 CFR 136 holding times are exceeded, flag all positive results as estimated (J) and sample quantitation limits as estimated (UJ) and annotate data to the effect that holding times were exceeded.

II. Pesticides Instrument Performance -

1. DDT Retention Time - If the retention time of DDT is less than 12 minutes, a close examination of the chromatography is necessary to assure that adequate separation of individual components is achieved. If adequate separation is not achieved, all affected compound data are unusable and must be flagged with (R).
2. Retention Time Windows - Retention time windows are used in qualitative identification. When these retention time windows have not been met, positive results should be considered tentative (N).
3. DDT/Endrin Degradation Check
 - a. DDT breakdown is greater than 20%;
 - (1) All quantitative results for DDT should be considered estimated and flagged with (J).
 - (2) Qualitative and quantitative results for DDD and DDE should be considered estimated and tentatively identified and flagged with (JN).
 - (3) All other pesticide PCB results should be inspected very closely to determine their validity.
 - b. If Endrin breakdown is greater than 20%;
 - (1) All quantitative results for endrin should be considered estimated and flagged with (J).
 - (2) Qualitative and quantitative results for Endrin ketone should be considered as tentative and flagged with (NJ).
 - (3) All other results should be inspected very closely to determine their validity.
4. Retention Time Check
 - a. If the retention time shift for DBC is greater than 2.0% for packed column or greater than 0.3% for capillary column, the analysis should be

considered unusable for that sample(s) with discernable chromatographic peaks and results flagged with an (R).

- b. The absence of a DBC peak does not constitute a violation of the above condition since DBC may be absent due to low recovery of dilution.

III. Calibration

1. Initial Calibration - If criteria for linearity are not met, all associated quantitative results should be considered estimated and flagged with (J).
2. Continuing Calibration
 - a. If the % Difference between calibration factors during the 12 hour period is greater than 15% for the compound(s) being quantitated, flag all associated positive quantitative results as estimated and flagged with (J).
 - b. If the % difference is > 20% than the CRLOD is estimated and flagged with (UJ).

IV. Matrix Spike/Matrix Spike Duplicate

1. No action is taken on Matrix Spike/Matrix Spike Duplicate (MS/MSD) Data alone to qualify an entire Case.
2. The results of the matrix spike and matrix spike duplicate can be used in conjunction with other QC criteria to aid the user in applying more informed professional judgement when necessary.
3. On a sample-by-sample basis, the following suggestion on using MS/MSD results is provided for the specific sample spiked. If the results are positive (above detection limit) and the percent recovery is zero, the results of the unspiked sample for which (MS/MSD) were performed are flagged with a (J) as estimated. If the results are less than the detection limit and spike recovery is zero, the results for the spiked compound(s) with zero recovery for the unspiked MS/MSD sample should be flagged as unusable with an (R). Multiple zero recoveries for compounds may suggest more general application of qualifiers.

- VII. Compound Identification - Compound results reported without meeting qualitative criteria for two column confirmation should be flagged as not detected with a (U), using professional judgement to assign appropriate Sample Detection Limit.

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Status of Laboratory Operations for Future Work

The laboratory personnel have a better understanding of CLP QA/QC requirements and are working within their means to insure capabilities are in place to handle future work. The Hewlett Packard (HP) RTA system is operational. On-site training by HP personnel, well versed in the use of Aquarius software is scheduled for mid-May. Two scan boxes previously recommended to increase productivity for semivolatle data processing has been ordered.

Communication between the sampling team and analytical team has improved and the sampling schedule at INEL has been lengthened in an attempt to resolve capacity issues in light of holding time concerns. Since 300 volatile organics will exceed the labs capacity, the aide of one or more other laboratories should be arranged as soon as possible.

Review of Sampling and Data Management Activities in Support of DOE Survey

On the morning of April 13, a short time was spent with Donna Pickel, John Murphy, and Karen Daniels reviewing the ORNL field participation in the Pantex project. Murphy reiterated the evolution of program requirements regarding field QC activities and their subsequent implementation by the ORNL team. At Murphy's initiative he has updated his on-site NPDES sampling program to include many of the DOE Environmental Survey program field QC protocols and intends further QC improvements to the RCRA sampling as well. From this discussion it appears the participation of the ORNL sampling team in the DOE Environmental Survey has resulted in improvements to the on-site monitoring programs at ORNL. Murphy provided the review team a written response to the review team checklist which addressed the documentation techniques, disposal procedures, sampling plan deviations, and training and personnel qualifications.

I would offer a single suggestion as to how this work effort has been documented in that the field log sheets should be bound by 19-hole punch spiral binder prior to archival in the case file. This should serve as better binding for storage than the staples and loose-leaf binders used during assimilation.

Karen Daniels is responsible for the data management activities. Much of this work has been contracted to SAIC. A review of SAIC work was reported earlier (McMahon to Frazier, March 18, 1988). Again, I would reiterate the recommendation that the data management teams review hard copy, lab generated CLP forms against the electronic database to insure that lab evaluated data is the data represented in the

D. W. Frazier
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database. Furthermore, a meeting between lab personnel and the data management team will likely be needed to insure the annotated lab data is properly interpreted. Dealing with CLP QA/QC requirements is equally new to the data management team. I believe a training program, by lab personnel experienced in the generation of CLP data, would be beneficial for the data management team and strengthen the communication skills needed to deal with the CLP lab.

Please call me if I can provide further information.

L. W. McMahon, 9704-1, MS-001, Y-12 (4-7535)

cc: T. R. Butz/C.C. Hill
L. L. McCauley/C.W. Kimbrough

ATTACHMENT 3

Organic Lab - List of New Standard Operating Procedures (SOP) Reviewed

A. N. Weisbin
4-11-88

Recommendations and Comments:

- SOP #1 Sample Login and Identification for the DOE Environmental Survey Program (Draft dated 3-12-88 - not approved)
- 7.2.10 - "Arrange for the proper and secure storage of all samples" - too general.
 - Delete "...QA/QC section, if not applicable", statement.
- SOP #6 Personnel Signature and Initial Record
- SOP #4 Sample Storage for the DOE Environmental Survey Program (Refrigerators)
- SOP #2 Duties and Responsibilities of Sample Custodian
- SOP #3 Sample Chain of Custody
- Procedure should address answers to questions of "Who signs what?" (signature and date) "Who has ultimate responsibility?"
- SOP #5 Sample Storage Area Security
- SOP #8 Sample Tracking
- How are corrections made? Signed for? Attachments?
- SOP #9 Sample Preparation Bench Sheet
- Sect. 6.2. - How will the sample be identified?
 - Sect. 6.3. - Incomplete
- SOP #17 Document Flow
- Incomplete
 - Need responsible person also for each document.

Inorganic - List of Standard Operating Procedures (SOP) Reviewed

A. N. Weisbin
4-12-88

Recommendations and Comments:(Applies to all SOP's)

1. Recommend that the Scope and Purpose be separated.
2. Recommend that the QA/QC applicability statement be deleted.
3. Suggest that the summary should be "requirements".
4. Suggest that the list of forms be an attachment in the procedure.

SOP # 001 Duties and Responsibilities of Sample Custodian for the DOE Environmental Survey Program

SOP # 002 Sample Receiving and Inspection

Suggestion: - 7.4.11 Reference secure storage and login procedures...
Be specific, reference which secure storage and which login procedure will be used.

SOP # 003 Requirements for Recording and Correcting Laboratory Entries for the Environmental Survey Program

SOP # 004 Sample Login and Identification

SOP # 005 Personnel Signature and Initial Record

SOP # 006 Monitoring Analytical Balance Performance

SOP # 007 Sample Storage

SOP # 008 Sample Security

SOP # 009 Monitoring Cold Storage Temperatures

SOP # 011 Sample Chain-of-Custody

SOP # 013 Sample disposal

See comprehensive listing of all SOP's in Attachment 5 to this report.

ATTACHMENT 4

STANDARD OPERATING PROCEDURES

ORGANIZATIONAL

1. SAMPLE LOGIN AND IDENTIFICATION ✓
2. DUTIES AND RESPONSIBILITIES OF SAMPLE CUSTODIAN ✓
3. SAMPLE CHAIN-OF-CUSTODY ✓
4. SAMPLE STORAGE ✓
5. SAMPLE STORAGE AREA SECURITY ✓
6. PERSONNEL SIGNATURE AND INITIAL RECORD ✓
7. SAMPLE IDENTIFICATION
8. TRACKING SAMPLE ANALYSES ✓
9. SAMPLE REQUEST LOG NOTEBOOK
10. SAMPLE PREPARATION LOG
11. SAMPLE PREPARATION BENCH SHEET ✓
12. VOLATILES ANALYSIS INJECTION LOG
13. SEMIVOLATILES ANALYSIS INJECTION LOG
14. GCMS BACKLOG SHEET
15. PESTICIDES/PCBS ANALYSIS INJECTION LOG
16. PROGRESS REPORT
17. DOCUMENT FLOW ✓
18. DOCUMENT CONTROL
19. ORGANIC GCMS DATA REVIEW
20. REVIEW OF SAI-TREATED VOLATILES DATA
21. ORGANIC PESTICIDES DATA REVIEW
22. ORGANIZATION AND ASSEMBLY OF CASE FILE
23. ORGANIZATION AND ASSEMBLY OF EPA ORGANIC DATA PACKAGE
24. DOCUMENT/DATA PACKAGE SHIPPING
25. TRACEABILITY OF STANDARDS
26. ORGANIC STANDARDS STORAGE AND CUSTODY
27. ORGANIC REAGENT TRACEABILITY
28. TRACEABILITY OF MATRIX AND SURROGATE SPIKING SOLUTIONS
29. STORAGE OF MATRIX AND SURROGATE SPIKING SOLUTIONS
30. REQUIREMENTS FOR RECORDING, VALIDATING, AND CORRECTING ENTRIES
31. TEMPERATURE CONTROLLED SAMPLE STORAGE AREAS: RECORDS AND MAINTENANCE
32. CLEANING OF GLASSWARE
33. BALANCE OPERATION CHECK
34. DISPOSAL OF ENVIRONMENTAL SAMPLES
35. LABORATORY SAFETY

DRAFT

ATTACHMENT 5

STANDARD OPERATING PROCEDURES
FOR THE DOE ENVIRONMENTAL SURVEY PROGRAM

- X ● DUTIES AND RESPONSIBILITIES OF SAMPLE CUSTODIAN
 - X ● SAMPLE RECEIVING AND INSPECTION
 - X ● REQUIREMENTS FOR REPORTING AND CORRECTING LABORATORY ENTRIES
 - X ● SAMPLE LOGIN AND IDENTIFICATION
 - X ● SAMPLE STORAGE
 - X ● SAMPLE SECURITY
 - X ● SAMPLE CHAIN-OF-CUSTODY
 - X ● SAMPLE TRACKING
 - X ● PERSONNEL SIGNATURE AND INITIAL RECORD
 - X ● MONITORING COLD STORAGE TEMPERATURES
 - X ● SAMPLE DISPOSAL
 - X ● MONITORING ANALYTICAL BALANCE PERFORMANCE
 - DOCUMENT CONTROL
 - ANALYTICAL PROJECT FILE ORGANIZATION
 - CASE FILE ASSEMBLY
 - DATA MANAGEMENT AND SECURITY
 - MONITORING WATER QUALITY
 - CLEANING GLASSWARE
-

X = DRAFT COMPLETED

Sophie Bobrowski
Analytical Chemistry Division
April 11, 1988

Attachment 6

Oak Ridge Environmental Survey Program - Review of the Pantex Site Organic Data
Generated by the ORNL Analytical Chemistry Division (ACD)

Issued to:

R. B. Fitts

March 23, 1988

Issued by:

D. W. Frazier

D. W. Frazier, Review Team Leader

A. H. Halouma

A. H. Halouma

P. L. Howell

P. L. Howell

L. W. McMahon

L. W. McMahon



Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

March 23, 1988

R. B. Fitts

DOE Environmental Survey Program - Review of the Pantex Site Organic Data
Generated by the ORNL Analytical Chemistry Division (ACD).

In January 1988, EPA representatives reviewed the Pantex Site data generated by the ORNL ACD Organic labs. As a result of that audit, the data was declared suspect. A quality assurance review team was chosen at MM-ES to conduct an independent review of the data. On February 23, 24, & 26, 1988, this activity took place to assess the status or usefulness of the data in light of the comments made, and to document an independent evaluation of the participant's compliance to established guidelines as stated in the CLP statement of work.

Selected organic data, generated by ORNL, on environmental samples collected at Pantex as part of the DOE Environmental Survey were reviewed by the team. The following summary will discuss our conclusions based on compliance to requirements of the CLP protocol or from a view of the data being legally defensible versus actual usefulness from a technical point of view. However, prior to stating the conclusions drawn from the review, the team requests that the following issues/comments be recognized and considered.

1. **Recognize:**

- a. That the Organic Lab employees were directed to analyze the sample set from Pantex within the holding times and produce data. The lab received 195 volatile organic analyses (VOA), 203 semivolatile organic (SVO), and 154 PCB/Pesticides to be analyzed by two employees for 75% of the project, (25% of the samples were analyzed by one person) on 4 GC/MS instruments equipped with auto-samplers, two gas chromatographs with auto-samplers (which were not operational 100% of the project) operated by one or two employees;
- b. That these samples came in one delivery;
- c. That laboratory capacity was estimated to be 40 samples per week for the three parameters including sample preparation.

2. **Recognize:**

- a. That long hours and diligent efforts were expended by all concerned to produce the data within the specified holding times.

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- b. It was readily apparent that sufficient staff and instrumentation were not available to handle the workload from the Pantex Site.
 - c. Furthermore, it is suspected that sufficient laboratory capacity does not exist in any single DOE laboratory to handle this project given the short holding times associated with the organic samples.
 - d. At the time of the Pantex sample analyses, only 10% of the data was to be reported as full CLP data packages.
3. **Recognize:**
- a. That the ORNL Organic lab, like the other DOE laboratories, was unaccustomed to providing the level of documentation required by CLP.
 - b. There is a definite learning curve which all laboratories, including ORNL, must undergo before producing CLP level data efficiently and in quantity.
4. **Consider:**
- a. The results in light of the CLP statement of work which when adhered to, should produce data that is legally defensible in a court of law.
 - b. That technically, in a broad sense, most of the data is useful for the volatile organics (both soil and water samples).

It is with these issues in mind that the review is summarized below. Specific comments and notes from the review can be supplied upon request.

The VOA data, although not documented to the degree that a third party could recreate the analysis, were retrievable. The level of CLP non-compliances was not unreasonable for the two soil data sets reviewed considering the time frame available for the analyses to be completed. On the other hand, the VOA data reviewed for two water data sets had numerous errors which caused serious concerns. The chief cause of non-compliances appeared to have been a lack of communication or interpretation of CLP requirements, insufficient software to allow timely data interpretation by the analysts, and insufficient time and resources to properly document required information to the level required by the CLP.

1. **Recommendation:** The final report of Pantex VOA data should be regenerated to correctly state quantitative values, positive contaminate identifications, documentation of deviations from the protocol, and documentation of corrective actions taken for out-of-control conditions.

The most serious concerns were with the Pesticide/PCB data. There was an excellent effort to produce the forms electronically, however, the evaluation of the required QC samples was less than adequate. According to the data reviewed, quantitative values

R. B. Fitts
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appeared to be reported based on raw electronic data, rather than analyst review and interpretation which is essential.

The linearity evaluation check did not meet CLP requirements on any of the analysis batches. In conclusion, there were enough errors found in the documentation to cause the team to doubt the validity of the results to be reported. Considering that the Gas Chromatograph Electron Capture detector data is more difficult to reconstruct, and that all linearity checks were outside the QC window, it is doubtful that useful data can be regenerated from the raw electronic data, as with the VOA's.

2. **Recommendation:** Future CLP work should incorporate analyst review and interpretation of all data prior to reporting quantitative values, assure that the required QC criteria are met before proceeding with the analysis.

The laboratory evaluation and interpretation of the Semivolatile data had not been completed at the time of the review. There was insufficient data to evaluate the usefulness of the Pantex semivolatiles analysis.

3. **Recommendation:** Due to the length of time since the analysis were performed and the target completion date, the evaluation of this data should be given top priority in order to ultimately generate the necessary CLP forms to complete the data package.

A major concern of the team was the data that SAIC and DEM have in the Pantex data base. None of the data in the SAIC database should be considered as laboratory evaluated and approved. SAIC has provided a useful service which aided the laboratory process raw data, and generate CLP forms. However, it appeared that SAIC and DEM had misinterpreted raw data as final analysis results. The data required processing and laboratory evaluation prior to being put onto the final CLP forms. To reiterate, a considerable amount of data review and evaluation is required on the part of the laboratory before any of the Organic analytical results from the Pantex site can be considered final.

4. **Recommendation:** All of the data in the SAIC data bases should be discarded, and only the final results, validated by laboratory staff should be included in the data. The team understands that the release of the data prior to validation was to aide in the development of the required software. However, there was insufficient resources for the amount of review that this entailed.

R. B. Fitts
Page 4
March 23, 1988

Should you have any questions concerning this report please call me.

D. W. Frazier, 1000, MS-335, ORNL (6-0347)

DWF:cet (QA-88-26)

MAR 8 1988



Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

March 2, 1988

D.W. Frazier

Review of Pantex Data at ORNL 2/23/88 - 2/26/88

Selected Organic data, generated by ORNL, on environmental samples collected at Pantex as part of the DOE Environmental Survey were reviewed by myself as a member of the review team on February 23-24 and 26. The purpose of the review was to assess the usefulness of the data in light of comments made by DOE and EPA during a program review in January.

Before stating conclusions drawn from the review, please allow me to make a few pertinent comments. The long hours and diligent efforts by the analysts and chemists who have worked on the Pantex analyses should be recognized. It is readily apparent that sufficient staff and instrumentation were not available to handle the workload from Pantex. Furthermore, I suspect sufficient laboratory capacity did not exist in any single DOE laboratory to handle this project given the short holding times associated with the organic samples. Compounding this issue is the fact that ORNL, like the other DOE laboratories, was unaccustomed to providing the level of documentation required by CLP. There is a definite learning curve which all laboratories, including ORNL, must undergo before producing CLP level data efficiently and in quantity. It is with these issues in mind that my review is summarized below. Specific comments and notes from the review are included in the attachment.

The VOA data, although not documented to the degree that a third party could recreate the analysis, were retrievable. The level of CLP non-compliances was not unreasonable for the two data sets I reviewed. The chief cause of non-compliances appear to have been lack of communication as to CLP requirements and insufficient software to allow timely data interpretation by the analysts. The final report of this data should be regenerated to correctly state quantitative values and positive contaminate identifications. Considering the samples were relatively "clean", useful information can still be gathered provided the issues noted in the attachment are addressed.

The most serious concerns are with the Pesticide/PCB data. Based on the data presented it appears quantitative values were reported based on raw electronic data rather than analyst review and interpretation. The linearity evaluation check did not meet CLP requirements on any of the analysis batches. Enough errors were found in the documentation to create doubt in the validity of the results reported. Considering that the GC ECD

D. W. Frazier
Page 2
March 2, 1988

data is more difficult to reconstruct, and that all linearity checks were outside the QC window, it is doubtful that useful data can be regenerated as with the VOA's.

The laboratory evaluation and interpretation of the Semivolatile data had not been completed at the time of the review. Insufficient data exists to evaluate the usefulness of the Pantex semivolatiles.

A major concern is the data SAIC and DEM have in the Pantex data base. No data in the SAIC database should be considered as laboratory evaluated and approved data. SAIC has provided a useful service in aiding the laboratory process raw data. However, it appears SAIC and DEM have misinterpreted raw data, requiring processing, and laboratory evaluation as final analysis results. This is not the case!! A considerable amount of data review and evaluation is required on the part of the laboratory before any of the Organic analytical results from the Pantex site can be considered final.

Please call me if I can provide any other information.



L.W. McMahon, 9704-1, MS-001, Y-12 (4-7535) - NoRC

LWM:da

Attachment: As stated

cc/attach: T. R. Butz/C. C. Hill
L. L. McCauley/C. W. Kimbrough

VOA Data Reviewed at ORNL 2/23-2/26

VOA Data - Two sets of VOA soil data were reviewed. The sample sets were selected at random from the GC/MS Instrument Operations Logbook. The laboratory personnel stated that the VOA data had been compiled as CLP packages for delivery to EMSL-LV but the laboratory records had been dismantled and the VOA data filed by run day with all like forms combined as a case file of Pantex data. This has resulted in renumbering of the pages as well as duplication of many forms and raw data thus making the data review more difficult.

The lab has prepared Instrument Operation Logbooks which detail the analysis sequence. The logbooks were very useful in defining an analysis batch. The lab staff detailed how the data was compiled for the Pantex data. SAIC has written software to aid in calculations and preparation of the VOA CLP forms. The software provided by SAIC has been most useful in "crunching numbers" but has generated a large amount of "Form I data" which needs to be carefully scrutinized by the laboratory.

The area report tables and quant reports output by the Laboratory Chem Station Data Systems were often included with the raw data along with a second report table "from a Lotus File". The documentation as it exists is often conflicting and leads to many questions. Laboratory staff were needed to explain how certain response factors and quantitative numbers were obtained. The explanation was always provided. The documentation, as it exists, can not be used to reconstruct the analysis without the aid of the individual performing the analysis. Also, there is no indication that the detection limits for soils or quantitative results for soils have been corrected to allow for percent moisture.

I. VOA analyses of 6/7/87, Instrument 0

- Logbook shows sequence of analysis as follows for VOA's requested on Pantex requisition number 91283.

<u>LAB Ident.</u>	<u>Description</u>
BFB Tune	
06707201	50 ppb CCC run
067VWB01	Blank 6/7
870607-016	PX012031
-017	PX012019
-018	PX053052
-019	PX053052
-020	PX053041
-021	PX045018
-022	PX045029
-023	PX045030

The last sample of this set (PX045030) was ran outside the twelve window of tune, CCC, and blank requirements. However, the BFB tune file was not altered during the entire Pantex project according to the chemist. The tune and CCC run of the following days run were within spec.

- Form V, BFB tune. The computer generated form V misstates the ion abundance criteria for mass 174 as "> 2% of mass 174". The correct statement should be > 50% of mass 95. The bar graph and mass listing are within requirements and the tune as reported for mass 174 is correct.
- Form VII, Continuing Calibration Check (CCC) - The 50ppb CCC and SPCC requirements were met.
- Lab Blank. Methylene chloride (11.5 ppb) and acetone (10.4 ppb) are reported. This trace level of background is typical for oraganic laboratories. Only mass spectra of Methylene chloride is given and no standard spectra are included.
- Form II, Surrogates - 25 of 27 surrogates reported with this set are within the QC window.
- Form III, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) - No Matrix spikes were analyzed with this set. The analyst misinterpreted the CLP procedure to require only one set of matrix spikes per twenty samples without regard to matrix type. A water MS and MSD were analyzed with a set of water samples (on instrument G) on this same day. However, this does not meet the requirement of MS and MSD for the soil sample set under review.
- Form IV, Blank data. A water blank, rather than a blank of similar matrix was analyzed. The form correctly reflects the samples associated with this set and that the last analysis was outside the twelve hour window.
- Form VIII, internal standard areas - All internal standard areas were within the QC windows established.
- Form I, results. The laboratory personnel stated that the completed Form I's were still being reviewed to insure flags were properly assigned to the data. It was also reported that the data had already been delivered as a complete CLP package.

A large number of compounds, from several samples, are reported to be present at a level less than the required reporting detection limit (an estimated value) and thus are flagged with a J. Many compounds are reported as "0 J ug/kg". No spectra were included for the majority of compounds

reported as estimated values. It appears that the data on the Form I's represent positive hits of the quantitation ion rather than reported final results based on review of mass spectral data. These positive hits may in fact be due to background or "electronic noise".

The J flag should be used to note the concentration of a tentatively identified compound as estimated or to flag a Target Compound as being present but at a level less than the quantitation limit. In either case, a conclusion that a compound is present in the sample is to be based on mass spectral data that matches standard spectra or that meets the identification criteria based on spectral interpretation. The Form I data reviewed in this set appears to report a positive identification for many compounds, however a review of the raw data indicates few positive identifications based on mass spectral data. Only one sample appears to have a target compound significantly above the quantitation limit. Toluene is reported at 58 ppb in sample PX045029. Raw and background subtracted spectra are included which identify toluene as being present but the CLP required standard reference spectra is missing.

Mass Spectral data for this set should be reviewed to determine presence of Target Compounds. The Form I results should be regenerated to reflect actual reportable results. On regenerating the results the % moisture determination is to be used to calculate actual detection limits and quantifiable results. Lab personnel stated that no results had been corrected for moisture at the time of this review.

- Form VI, Calibration data. The last calibration date was 6/2. The response factors were reviewed and the calculations spot checked. The calibration data were acceptable.

II. VOA Analyses of 6/12/87, Instrument 0

- Sample ID's and order of analysis taken from GC/MS Instrument Operations Logbook

<u>Lab Ident.</u>	<u>Description</u>
BFB Tune	
50 ppb	50 ppb CCC run
870611-226	PX020019
870611-227	PX020020
870611-228	PX020031
870611-229	PX020042
870611-230	PX020053
870611-231	PX020064
870611-231	PX020064 MS
870611-231	PX020064 MSD

The last run was again outside the twelve hour window of BFB tune, CCC, and instrument blank requirements.

- Form V, BFB Tune. Ion Abundance Criteria statement for mass 174 is incorrect as noted previously. All mass % relative abundances on the computer generated form are " 0 ". The zeros have been stricken and hand entry of data recorded without any notations. Bar graph and mass listing met requirements.
- Form VII, Continuing Calibration Check. SPCC and CCC requirements were met. Two area report tables, with different areas are included with the documentation. Input from lab personnel was needed to determine which areas were used to determine the response factors.
- Lab Blank. The Form I report for the lab blank reports Methylene Chloride, Acetone, and 2-butanone at 5 ppb or above. Many compounds are reported to be present at less than 1ppb (0J). The only spectra documenting the presence of any compounds was for methylene chloride and the standard reference spectra was missing for it.
- Form II, Surrogate recovery. 26 of 27 surrogate recoveries were within QC window.
- Form III, Matrix Spike results. 9 of 10 Matrix spike recoveries were within the QC window while the relative percent difference between duplicates was in the QC window for all 5 matrix spike compounds. However the Form III was not properly completed to report these results.

A report of MS and MSD data, generated by SAIC, was reviewed (Summary of Pantex Volatiles, Run = 0612). This output has MS and MSD % recoveries which differ from the Quant reports in the lab.

- Form IV, Blank Data. Time of analysis reported for last sample run shows the run to be outside the twelve hour window. A water blank was utilized.
- Form VIII, Internal Standard Area - The sample identifications on the form do not differentiate the MS and MSD runs from the sample run. 24 of 27 internal areas met the QC window. The three outside the window represent all three standards from the final run of the day (PX020064 MSD). The peak areas from this run differ by a factor of approximately 50 from the other runs in this set.
- Form I, Results. In general many positive results are reported as estimated values (flagged with J) but the raw data does not substantiate these results. As with the set of data previously discussed, the Form I's need considerable rework to reflect the chemist interpretation on the data.

In addition, all detection limits and results should be corrected for moisture content.

Examples of problems are noted:

- * PX020019 - acetone and MEK results should be flagged with a B. Only spectra included is that of methylene chloride. Three copies of Form I are included: Two appear to be duplicates, a third reports different results.
- * PX020020 - Many positive hits reported as estimated values, no spectra to support identifications.
- * PX020042 - Methylene chloride and acetone are correctly flagged with B's, MEK is not. Duplicate pages in the package complicate the review process.
- * PX020064 MSD - No Form I included, only TIC and quant report. The total-ion-chromatogram for this sample indicates very low response of internal standards and surrogates. The pattern of the TIC indicates that perhaps the purge and trap device malfunctioned on this run. This is also likely to be the cause for the three internal standards from this run to be outside the QC window.

For these reasons and for those cited on the first set, the mass spectral data should be reviewed to determine presence and absence of target compounds and Form I data regenerated to reflect data review by the laboratory.

- Form VI, Calibration data - The same calibration file (6/2/87) was used for this set.

Summary of Pantex PCB/Pesticide Data Review at ORNL 2/23 -2/26

It was readily apparent that considerable time and effort had gone into the development of software to "crunch the numbers" and generate the CLP Pesticide/PCB forms. However, a review of the data also reveals that the software is still in a development stage. While the GC/MS data readily lends itself to computerization, the day-to-day GC data evaluation is based more on operator experience and day-to-day interpretation of chromatographic patterns. Decisions must be made daily, often hourly on various operating conditions that may influence the results (background, sample matrix, and late eluting peaks that interfere with the next run for example). Programming these decisions into computer software is complex at best and lab personnel should be commended for progress to date. However, in regard

date.

to the Pantex data a number of concerns must be expressed. The most pressing concern is that "electronic data" (i.e. raw, unevaluated data) has been accepted by SAIC prior to laboratory evaluation. In addition, the bulk of the documentation appears to report analysis results based solely on electronic processing rather than operator evaluation.

More difficulty was experienced in determining a sample "batch" for the review. The chemist was uncertain if the samples had been analyzed in such a manner as to relate a blank, Matrix spike (MS) and Matrix Spike Duplicate (MSD) with a given set of samples. A review of the Analytical Services Form, Sample Preparation Logsheet, and GC Instrument Operations Logsheet revealed the following samples from Pantex Request # 91339 as a "batch".

<u>Laboratory Indent.</u>	<u>Description</u>
870615-213	PX052017
870615-214	PX052028
870615-215	PX052039
870615-216	PX052040 *
870615-217	PX052051
870615-218	PX052062
870615-219	PX052073
870615-220	PX052084
870615-221	PX052095
870615-222	PX052108
870615-223	PX052119
870615-224	PX052120
870615-225	PX052131
PX91339SB	Blank

* Prepared as unspiked, matrix spike and matrix spike duplicate

The three forms were needed to relate this as a batch since;

- Only Pantex sample identifications were used on the GC log
- Only Lab sample identifications were used on the Sample Prep Log
- Only the Service request form relates both lab and Pantex identifications
- The GC log omits the first numerical digit of the Pantex sample identification due to field size allowed by the computer program.

This set of samples were received on 6/15, extracted on 6/26 and analyzed on 9/15 thru 9/17 (1 day beyond extraction holding time, and 52 days beyond analytical holding time).

- Form II, Surrogate Recovery - Mirex was used as the surrogate rather than Dibutylchloroendate (DBC). Assuming the QC advisory guidelines for DBC can be extended to mirex, 9 of 16 surrogates are outside the advisory

window. Since Mirex was used as the surrogate rather than DBC, the number of non-compliances can not be evaluated.

- Form III, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) - The form reviewed had the proper header (Soil Pesticide Matrix Spike) but the QC limits stated on the form were those for water. The comments on the form state that the samples were prepared incorrectly with no further explanation of what was done incorrectly. 12 of 12 MS recoveries were outside QC limit while the form data reports 1 of 6 % RPD out. In fact 5 of 6 RPD were out with only dieldrin reproducing with 0% recovery. The chemist stated that the computer was not programmed (at the time of the Pantex project) to report negative % RPD as out-of-control since the CLP procedure did not specify negative values as out-of-control. In fact the absolute value should be considered and it was implied that the computer program had been so modified.

Sample PX052040 and been analyzed unspiked and as MS and MSD. The matrix spike compounds were gamma-BHC, heptachlor, aldrin, dieldrin, endrin, and 4,4'-DDT. The analysis results of this sample (Form I data, unspiked), matrix spike, and matrix spike duplicate are noted below. Also included are the sample results as reported in AnaLIS.

<u>Compound Reported</u>	<u>Packed Column Form I</u>	<u>AnaLIS</u>	<u>Form I MS</u>	<u>Form I MSD</u>
alpha-BHC			83.59	19.07
beta-BHC	8.07			
Endosulfan I	16.03	8.00	29.47	13.34
4,4'-DDT		16.00		19.32
aldrin			20.16	

Besides the fact that poor recoveries were obtained on the spiked samples, the presence or absence of other contaminants in the sample are questionable based on the various results reported above.

- Form IV, Blank data. Samples associated with this set are noted. The Form I report for the blank (PX91339SB) shows 16 ug/kg heptachlor. The quant report for this blank (part of the raw data) reports 19.14 ug/Kg beta-BHC and 30.00 ug/Kg Heptachlor. Data from other blanks (PX91306SB, PX91306SB, PX91275WB) analyzed as part of the Pantex project were reviewed. It was noted that aldrin, heptachlor epoxide, endosulfan II and hetpachlor were reported at levels of 12.44 to 53.67 ug/kg.

- Form VIII, Evaluation Standards Summary. The percent relative standard deviation (%RSD) of calibration factors for aldrin, endrin, DBC, and DDT is not to exceed 10% on the quantitation (packed) column.

The procedure makes an exception to this rule for DDT. This linearity check for each 72 hour run sequence for the Pantex project was reviewed and is summarized below.

Date of analyses	Number compounds exceeding 10% RSD	Smallest % RSD Reported for outliers
7/30 - 8/2	3 of 4	18
8/6 - 8/12	3 of 4	15
9/10 - 9/13	3 of 4	13
9/14 - 9/15	2 of 4	10
9/28 - 10/1	4 of 4	15
10/1 - 10/2	4 of 4	38
10/14 - 10/21	4 of 4	38
10/15 - 10/17	4 of 4	30

Based on EPA data evaluation criteria, all quantitative results would be questioned.

Summary of Pantex Semivolatile Data Reviewed at ORNL 2/23-2/26

SAIC has worked with lab personnel to develop software to generate the CLP documentation for the Semivolatiles as they did for the Volatiles. Although considerable work has been completed, data processing for the semivolatiles has not been completed to the extent of the Volatiles. It was explained that as semivolatiles are analyzed by GC/MS, data files containing peak number for identification purposes, retention time, quantitation mass, and peak area of the quantitative ion are uploaded to SAIC for processing. The laboratory received back from SAIC not analyses batches but the entire set of Pantex data. Corrections were made to the output from SAIC and returned. The next submission contained data which had been corrected for dilution factors. A third submission was in the laboratory for evaluation at the time of the review.

While the SAIC work has been helpful to the laboratory, it has not provided the timely processing of data needed by lab personnel to effectively evaluate the data. The Semivolatile data for Pantex is at best in the very early stage of evaluation by the laboratory.

A review of data to date included Pantex samples from requestion 91332. The samples were extracted on 6/24/87 and analyzed on 11/2/87, beyond the analytical holding time. Data for a second set of samples, analyzed on 8/10 were also reviewed. The amount of data available at the time of the review is insufficient to make an evaluation of its acceptability for the DOE Survey Program. A few comments are noted on the available data below.

- The two instrument tunes for DFTPP reviewed met the tune criteria.
- The instrument calibration of 11/1 had only the response factors for the SPCC and CCC compounds calculated. This is the minimum information needed to determine if samples can be run. The lab is dependent on the SAIC software to calculate all response factors.
- On the CCC run of 8/10 the percent difference in RF from the calibration run for hexachlorobutadiene exceeded the 25% requirement (31.39%). All other CCC and SPCC compounds (16 of 17) were within established QC window.
- No blank, MS, or MSD data were located for the set analyzed on 11/2/87.
- Surrogate recoveries had not been determined for the majority of analyses. An SAIC report of analysis results on sample 870615-132 (PX015023) dated 2/23/88 was reviewed. The report included results with and without correction for the dilution factor. The dilution factor was recorded as 35. Assuming the surrogate spike levels were as designated in the CLP, the recoveries were calculated as shown below.

<u>Surrogate Compound</u>	<u>Assumed Spike Level</u>	<u>% Recovery at at DF of 1</u>	<u>% Recovery at DF of 35</u>
Nitrobenzene-d5	50 ug/L	12	218
2-Fluorobiphenyl	50	15.2	272
p-terphenyl-d14	50	17.6	311
Phenol-d6	100	16.7	589
2-fluorophenol	100	11.6	408
2,4,6-TBP	100	33.6	1180

Phenol-d6 and 2,4,6-TBP are within the QC window assuming the dilution factor was 1 and not 35. However, an assessment of surrogate recoveries would premature at this stage since the laboratory is still processing the data.

Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

ORNL Results of Inorganic and Organic Performance Evaluation Studies

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PERFORMANCE EVALUATION SCORES FOR ORNL

Date Received	Code	Score
07/19/88	QB4FY88 Inorganic	89.5 (CAR)
04/20/88	QB3FY88 Inorganic	96.3
01/22/88	QB2FY88 Inorganic	94.1
08/17/87	WP-019 Nontarget inorganic	Acceptable
02/24/88	WP-020 Nontarget inorganic	Acceptable
08/31/88	WP-021 Nontarget inorganic	Acceptable

CAR = Corrective Action Required

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

OCT 24 1988

Mr. William R. Laing
Oak Ridge National Laboratory
P. O. Box 2008, 45005 MS-127
Oak Ridge, TN 37831

Dear Mr. Laing:

The results of the participation of your laboratory in the EMSL-LV fourth quarter inorganic performance evaluation study (QB4, FY88, INORGANIC) are enclosed. This includes copies of the analysis reports for inorganics in soil and water samples. The reports also present statistical information on the numbers of laboratories that had difficulties with specific analytes.

The score for your laboratory was 89.5. The DOE environmental survey requires a formal response from each laboratory, describing any changes or actions taken to identify and correct any deficiencies and to improve laboratory performance. That response will become part of the quality assurance record for analytical work done by your laboratory for sites in the DOE environmental survey. In order to meet schedule times for data document publication, corrective action responses should be sent within 15 days of receipt of this letter.

This office will be glad to furnish any counsel and further information regarding this work.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent
Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosures

cc:
Vincent Fayne, DOE HQ
Alan Crockett, INEL

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**INORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR QS 4 FY 88**

LABORATORY NAME: Oak Ridge National (TN) (N2)
 PERFORMANCE LEVEL: ACCEPTABLE - Corrective Actions Necessary
 LABORATORY RANK: Above = 20 Same = 0 Below = 17

Σ Score: 89.5
 REPORT DATE: 9/26/1988
 MATRIX: WATER

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS NIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS NSPK OUT	#LABS DUP OUT	
ALUMINUM	725	930	839		0	6	0	0	0	38
ANTIMONY	60.0	90	76		0	3	0	4	0	38
ARSENIC	26	39	31.1		0	1	0	2	1	38
BARIUM	2790	3260	3070		0	2	0	0	0	38
BERYLLIUM	30	40	36		0	0	0	0	0	38
CADMIUM	6.9	13	9.8		0	4	0	1	0	38
CALCIUM	5190	6270	5790		0	2	0	0	0	38
CERONIUM	31	49	45		0	4	0	0	0	38
COBALT	72	96	82		0	1	0	0	0	38
COPPER	60	100	83		0	2	0	0	0	38
IRON	1600	1890	1690		0	2	0	2	0	38
LEAD	54	77	48.8	X	0	0	0	2	2	38
NICKELIUM	7040	9040	8400		0	1	0	0	0	38
MANGANESE	46	57	54		0	2	0	0	0	38
MERCURY	6.3	10	8.7		0	5	0	0	0	38
NICKEL	113	163	137		0	3	0	0	1	38
POTASSIUM	8300	10700	9150		0	2	0	0	0	38
SELENIUM	11	19	15.5		0	0	0	5	1	38
SILVER	10.0	15	8.3	B	15	1	0	2	1	38
SODIUM	17100	22100	20300		0	3	0	0	0	38
THALLIUM	29	50	35.6		1	4	0	5	3	38
VANADIUM	54	60	72	X	0	6	0	0	0	38
ZINC	30	59	70	X	0	6	0	0	1	38

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS NIS-QUANTIFIED: 3
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 0
 WATER :

OF DUPLICATES OUT: 0
 WATER :

**INORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR Q3 4 FY 88**

LABORATORY NAME: Oak Ridge National (TN) (N2)
PERFORMANCE LEVEL: ACCEPTABLE - Corrective Actions Necessary
LABORATORY RANK: Above = 29 Same = 0 Below = 17

Z Score: 89.5
REPORT DATE: 9/26/1988
MATRIX: SOIL

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS NIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS NSPK OUT	#LABS DUP OUT	
ALUMINUM	4630	17500	12000		0	1	0	0	1	38
ANTIMONY	12.0	50	21		3	2	0	27	0	38
ARSENIC	242	378	318		0	6	0	2	2	38
BARIUM	94	146	119		0	3	0	1	0	38
BERYLLIUM	4.4	7.7	7.1	E	1	2	0	2	0	38
CADMIUM	13	20	15	E	0	7	0	2	0	38
CALCIUM	49000	61300	56000		0	4	0	0	0	38
CERONIUM	42	63	49	E	0	2	0	1	0	38
COBALT	35	50	47		0	4	0	1	0	38
COPPER	1710	2100	1000		0	4	0	0	0	38
IRON	13500	26000	20500		0	4	0	0	0	38
LEAD	362	412	336		0	5	0	2	1	38
MAGNESIUM	29900	37900	35100		0	3	0	0	0	38
MANGANESE	4310	5660	5240		0	4	0	1	0	38
MERCURY	1.9	4.4	3.9		0	2	0	0	1	38
NICKEL	20	50	36		0	2	0	1	0	38
POTASSIUM	1000.0	1440	1026		0	5	0	0	0	38
SELENIUM	4.8	16	11.5		1	3	0	4	2	38
SILVER	3.0	10	0.2		0	4	0	5	2	38
SODIUM	d	d	290	B	0	0	1	0	0	38
THALLIUM	6.5	14	10		1	3	0	6	0	38
VANADIUM	24	58	41	E	0	2	0	1	0	38
ZINC	206	338	268		0	3	0	5	0	38

OF ELEMENTS NOT-IDENTIFIED: 0
OF ELEMENTS NIS-QUANTIFIED: 0
OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 2
SOIL : Sb, Ag

OF DUPLICATES OUT: 0
SOIL :

OAK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX 2008
OAK RIDGE, TENNESSEE 37831

November 2, 1988

Vincent Fayne
USDOE
Forrestal Bldg, EH-24
Independence Ave., SW
Washington, DC 20585

Harold Vincent
EMSL-LV
P. O. Box 93478
Las Vegas, NV 89193-3478

Gentlemen:

Oak Ridge National Laboratory participated in the EMSL-LV fourth quarter inorganic performance evaluation study (QB4, FY88, INORGANIC) receiving a score of 89.5. It is assumed, no detailed score sheet was received, that points were deducted for mis-quantification of lead (GFAAS), vanadium (ICP), and zinc (ICP) in the WATER sample. Additional points were deducted for matrix spike noncompliance results for antimony (ICP) and silver (ICP) in the SOIL sample.

Poor spike recovery for antimony in soil digestions continues to be a problem. As mentioned in previous response letters, the digestion technique is being evaluated. No progress has been made in correcting the problem as of this date. Recoveries for silver in soil digestions have never been a problem in the past, and no clear reason for the QB4 noncompliance has been found. Silver analyses will be monitored carefully during future DOE Site Survey work.

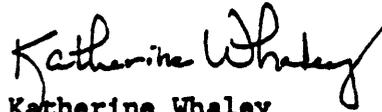
Vanadium on the JY48 suffers from adjacent channel interference from the strong emitter magnesium which cannot be accommodated using software driven interelement correction. Manual correction is required. A service call is expected shortly and this situation will be evaluated again.

It is believed that the poor zinc performance is a result of contamination during digestion, as the calibration verification and 2XCRDL standard results were in compliance. Greater effort will be made to ensure that digestion vessels and glass pipets are contamination free before use and that handling during digestion does not result in contamination.

All quality control parameters for lead analysis in the WATER sample were in compliance throughout the run. The sample was diluted to bring the observed result within the calibration range of the instrument and it is felt that the error stems from improper pipeting. Greater care will be taken in the future to ensure that pipets are calibrated and functioning properly.

Please call if you have any questions.

Sincerely,


Katherine Whaley
ICP Spectroscopist


William Laing
Program Manager

cc: R. B. Fitts

Bcc: Whaley
Ferguson
Halladay
Hammell
Bobrowski



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 · FTS 545-2100)

JUL 15 1988

Mr. William R. Laing
Oak Ridge National Laboratory
P. O. Box 2008, 45005 MS-127
Oak Ridge, TN 37831

Dear Mr. Laing:

The results of the participation of your laboratory in the EMSL-LV third quarter inorganic performance evaluation study (QB3, FY88, Case Number 9302) are enclosed. This includes copies of the analysis reports for inorganics in soil and water samples. The reports also present statistical information on the numbers of laboratories having difficulties with specific analytes.

The score for your laboratory is higher than 90 so that no formal response is required describing any changes or corrective actions taken to improve the performance evaluation score. However, it is still prudent for your laboratory to examine all factors affecting the scoring and take any actions which would improve those scores.

This office will be glad to furnish any council and further information regarding this work.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent,
Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosures

cc: (w/enclosure)
D. K. Knight, DOE HQ

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INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 3 FY 88

LABORATORY NAME: Oak Ridge National (TN) (C3)
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 6 Same = 1 Below = 30

% Score: 96.3
 REPORT DATE: 6/15/1988
 MATRIX: WATER

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINUM	1790	2190	1960		0	3	0	0	0	38
ANTIMONY	86	156	115		2	3	0	3	0	38
ARSENIC	40	58	48.6		0	1	0	5	3	38
BARIUM	265	331	314		0	3	0	1	0	38
BERYLLIUM	5.0	6.7	5.9		2	1	0	0	0	38
CADMIUM	65	82	79		0	2	0	1	0	38
CALCIUM	8970	11000	10400		0	3	0	0	0	38
CHROMIUM	90	117	111		0	2	0	0	0	38
COBALT	61	87	78		0	1	0	0	0	38
COPPER	126	170	154		0	3	0	1	0	38
IRON	492	621	568		0	1	0	0	1	38
LEAD	5.0	7.5	5.2		3	8	0	4	2	38
MAGNESIUM	5740	6770	6940	X	0	4	0	0	0	38
MANGANESE	35	50	46		0	2	0	0	0	38
MERCURY	2.8	5.2	4.3		0	0	0	4	1	38
NICKEL	48	85	70		0	4	0	1	0	38
POTASSIUM	6700	8220	7800		0	4	0	0	0	38
SELENIUM	39	62	54.6		0	1	0	0	2	38
SILVER	10.0	15	11		13	2	0	4	3	38
SODIUM	8970	10900	10700		0	4	0	0	0	38
THALLIUM	17	31	21.4		1	4	0	7	0	38
VANADIUM	64	93	87		0	1	0	0	0	38
ZINC	124	178	166		0	2	0	0	0	38

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 1
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 0
 WATER :

OF DUPLICATES OUT: 0
 WATER :

INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 3 FY 88

LABORATORY NAME: Oak Ridge National (TN) (C3)
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 6 Same = 1 Below = 30

% Score: 96.3
 REPORT DATE: 6/15/1988
 MATRIX: SOIL

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINUM	8310	16200	13000		0	3	0	0	0	38
ANTIMONY	c	c	10	U	0	0	0	27	1	38
ARSENIC	2.0	2.3	1.4	B	7	7	0	4	2	3
BARIUM	40.0	57	50		0	0	0	3	0	3
BERYLLIUM	c	c	0.48	B	0	0	1	1	0	38
CADMIUM	c	c	0.98		0	0	1	0	1	38
CALCIUM	1000.0	4150	2570		0	0	0	0	0	38
CHROMIUM	13	34	23		0	1	0	2	0	38
COBALT	d	d	6.4		0	0	0	0	0	38
COPPER	8.9	22	15		0	1	0	1	0	38
IRON	8720	19000	14300		0	1	0	0	0	38
LEAD	3.2	7.1	4.8		1	3	0	8	5	38
MAGNESIUM	3340	5550	4520		0	3	0	0	0	38
MANGANESE	171	282	237		0	3	0	3	1	38
MERCURY	c	c	0.04	B	0	0	2	2	2	38
NICKEL	24	45	35		0	2	0	1	0	38
POTASSIUM	d	d	355	B	0	0	1	0	0	38
SELENIUM	c	c	0.25	U	0	0	0	12	0	38
SILVER	c	c	1	U	0	0	1	9	1	38
SODIUM	d	d	163	B	0	0	0	0	0	38
THALLIUM	c	c	0.14	U	0	0	1	3	1	38
VANADIUM	17	53	38	E	0	3	0	0	0	38
ZINC	31	59	49		0	0	0	1	3	38

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 0
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 1
 SOIL : Sb

OF DUPLICATES OUT: 0
 SOIL :

AK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARHETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX 2008
OAK RIDGE, TENNESSEE 37831

September 21, 1988

Randal Scott
Sampling & Analysis Program Manager
Office of Environmental Audit and Compliance
US Dept. of Energy
Forrestal Bldg.
1000 Independence Ave.
Washington, DC 20585

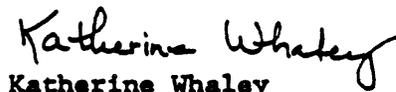
Dear Randal:

The score received by Oak Ridge National Laboratory, X-10, for the QB3-FY88 inorganic performance evaluation study was 96.3 percent. Points were deducted for mis-quantification of magnesium in the water sample and for nonconformance antimony spike results in the soil sample.

Associated calibration verification data for both elements were in control throughout analysis. Analysis results for re-digested QB2-FY88 water sample were within the control limits for magnesium. Assuming no instrument glitch at time of analysis, the problem would seem to be contamination at either/or both the preparation and/or analysis stages. We will more carefully clean our glassware and work spaces in the future.

In the case of antimony, the spike recovery for the water sample was in control. Historically we have had problems with loss of antimony during soil digestions involving the CLP procedure. Efforts are ongoing to ascertain at what point in the digestion the loss occurs.

Sincerely,


Katherine Whaley
ICP Spectroscopist


W. R. Laing
DOE Site Survey Program Manager
Analytical Chemistry Division

KSW:WRL:lp

cc: Harold Vincent

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 OFFICE OF RESEARCH AND DEVELOPMENT
 ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
 P.O. BOX 93478
 LAS VEGAS, NEVADA 89193-3478
 (702/798-2100 - FTS 545-2100)

APR 12 1988

Mr. W. R. Laing
 Oak Ridge National Laboratory
 Building 4500 S. MS-131
 Oak Ridge, TN 37831-6107

Dear Mr. Laing: *second*

The results of the participation of your laboratory in the EMSL-LV ~~first~~ quarter inorganic performance evaluation study (QB2, FY88, Case Number 8782) are enclosed. This includes copies of the analysis reports for inorganics in soil and water samples and a comparison table showing the distribution of scores of all laboratories participating. The number of misses for each element is also listed.

This office will be glad to furnish any council and further information regarding this work.

Sincerely,

Harold A. Vincent

Harold A. Vincent,
 Chemist, Quality Assurance Research Branch
 Quality Assurance and Methods Development Division

Enclosures

APR 20 1988

cc:
 Pamela Howell

cc: (w/o encl)
 D. K. Knight,

*Price
 Babrowski
 Whaley
 Hixson
 Ferguson
 Herndon
 Musick
 Shultz*

*Another good PE score!
 Rerun this PE with the
 new QB 3 which has
 just been received. You
 will be able to compare
 results with those reported
 Rev. *W. Laing**

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INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR OB 2 FY 88

*Ans. 20 100s
 100s 20, 200
 score 100s 94.1*

Σ Score: 94.1
 REPORT DATE: 3/23/1988
 MATRIX: WATER

LABORATORY NAME: ORNL
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 11 Same = 1 Below = 18

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS MIS ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS HSPK OUT	#LABS DUP OUT	
ALUMINIUM	2540	3300	2990		0	1	0	0	0	31
ANTIMONY	0	111	82.9		3	0	0	1	3	31
ARSENIC	68	106	89.6		0	1	0	0	0	31
BARIUM	372	450	691	X	0	4	0	0	1	31
BERYLLIUM	38	51	44.7		0	1	0	0	0	31
CADMIUM	19	32	27.4	E	0	0	0	0	1	31
CALCIUM	12300	15500	14600		0	2	0	0	0	31
CHROMIUM	14	40	33		0	0	0	0	1	31
COBALT	66	113	91.7	E	0	0	0	0	0	31
COPPER	180	244	213		0	2	0	1	2	31
IRON	355	442	430	E	0	4	0	0	0	31
	12	25	17.7		0	0	0	3	2	31
MAGNESIUM	7830	9600	8970		0	2	0	0	0	31
MANGANESE	62	81	73.1	E	0	1	0	0	0	31
MERCURY	10	20	15.6		0	2	0	1	1	31
NICKEL	86	126	107		0	1	0	0	1	31
POTASSIUM	8810	12400	10600		0	2	0	0	0	31
SELENIUM	18	28	26		0	2	0	1	0	31
SILVER	c	c	9.5	B	0	0	0	5	0	31
SODIUM	6100	8320	7150		0	5	0	0	0	31
THALLIUM	51	88	58.8		0	1	0	7	1	31
TITANIUM	118	154	148		0	1	0	1	0	31
ZINC	47	66	57		0	5	0	1	2	31

OF ELEMENTS NOT IDENTIFIED: 0
 OF ELEMENTS MISQUANTIFIED: 1
 OF FALSE POSITIVES: 0

OF DUPLICATES OUT: 2
 WATER : Sb, Ba
 SOIL :

OF MATRIX SPIKES OUT: 1
 WATER :
 SOIL : Sb

INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOM QB 2 FY 88

our score
 ↓

LABORATORY NAME: ORNL
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 11 Same = 1 Below = 18

Score: 94.1
 REPORT DATE: 3/23/1988
 MATRIX: SOIL

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS MIS ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINUM	4790	11900	9690		0	2	0	0	0	1
ANTIMONY	0	53	33		3	3	0	20	0	31
ARSENIC	17	28	21.8		0	4	0	7	1	31
BARIUM	156	189	169		0	3	0	1	0	1
BERYLLIUM	16	21	18		0	0	0	1	0	31
CADMIUM	9.7	17	13.1		0	0	0	1	0	31
CALCIUM	75301	104001	90700		0	2	0	0	0	1
CHROMIUM	16	51	30.8		0	2	0	8	0	1
COBALT	71	92	75.3	E	0	1	0	0	0	31
COPPER	88	112	94.5		0	3	0	1	0	1
IRON	12600	17400	15300	E	0	3	0	0	0	1
LEAD	164	226	188		0	4	0	2	0	31
MAGNESIUM	40801	57101	48400		0	2	0	0	0	31
MANGANESE	2810	3530	3220	E	0	7	0	1	0	1
MERCURY	12	24	17.6		0	3	0	2	1	1
NICKEL	26	54	37.9		0	2	0	3	0	31
POTASSIUM	0	1970	1690		0	4	0	0	0	1
SELENIUM	6.5	20	16		0	3	0	4	4	1
SILVER	33	52	45.6		0	3	0	5	1	31
SODIUM	d	d	361	B	0	0	0	0	0	31
THALLIUM	19	43	29.8		0	0	0	6	2	1
VANADIUM	41	70	58.3	E	0	1	0	0	0	31
ZINC	162	209	189		0	2	0	2	0	31

OF ELEMENTS NOT IDENTIFIED: 0
 # OF ELEMENTS MISQUANTIFIED: 0
 # OF FALSE POSITIVES: 0

OF DUPLICATES OUT: 2
 WATER : Sb, Ba
 SOIL :

OF MATRIX SPIKES OUT: 1
 WATER :
 SOIL : Sb

SUMMARY OF LABORATORY SCORES
QB 2 FY 88

CODE	SCORE	NOT ID	MISQUANT	FALSE POS	MSPK OUT	DUP OUT
A1	72.8	0	6	0	5	5
A2	91.8	0	2	0	3	0
A3	-	-	-	-	-	-
B1	99.5	0	0	0	1	0
B2	72.3	0	7	0	4	3
B3	79.1	0	6	0	1	1
C1	96.1	0	1	0	1	0
C2	-	-	-	-	-	-
C3	-	-	-	-	-	-
D1	-	-	-	-	-	-
D2	94.1	0	1	0	1	2
D3	83	0	5	0	1	0
E1	95.6	0	1	0	2	0
E2	91.8	0	2	0	1	1
E3	-	-	-	-	-	-
F1	-	-	-	-	-	-
F2	-	-	-	-	-	-
F3	-	-	-	-	-	-
G1	86.5	0	4	0	1	0
G2	83.5	0	5	0	0	0
G3	98.5	0	0	0	3	0
H1	-	-	-	-	-	-
H2	-	-	-	-	-	-
I1	-	-	-	-	-	-
I2	-	-	-	-	-	-
J1	75.5	0	6	0	9	1
J2	98	0	0	0	4	0
K1	95.1	0	1	0	3	0
K2	-	-	-	-	-	-
L1	96.6	0	1	0	0	0
L2	-	-	-	-	-	-
M1	93.1	0	1	0	7	2
M2	89.8	0	2	0	0	0
N1	76.8	0	6	0	5	1
N2	87.5	0	3	0	3	1
O1	-	-	-	-	-	-
O2	99	0	0	0	2	0
P1	94.1	0	1	0	3	1
P2	96.6	0	1	0	0	0
Q1	-	-	-	-	-	-
Q2	-	-	-	-	-	-
R1	-	-	-	-	-	-
R2	-	-	-	-	-	-
S1	69.3	0	10	0	0	0
S2	-	-	-	-	-	-
T1	78	0	5	0	7	2
T2	-	-	-	-	-	-
U1	71.9	0	8	0	5	1
U2	-	-	-	-	-	-
V1	97.5	0	0	0	3	1
V2	94.6	0	1	0	2	1
V1	-	-	-	-	-	-
V2	-	-	-	-	-	-
X1	-	-	-	-	-	-
X2	-	-	-	-	-	-
Y1	90.8	0	2	0	3	1
Y2	-	-	-	-	-	-
Z1	-	-	-	-	-	-
Z2	89	0	3	0	2	0

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OAK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX X
OAK RIDGE, TENNESSEE 37831

April 29, 1988

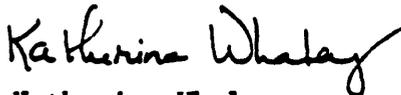
Harold Vincent
US EPA, EMSL-LV, QAD
P. O. Box 15027
Las Vegas, NV 89114

Dear Mr. Vincent:

According to instructions received with the QB-2-88 performance evaluation score sheet package, any quantified value falling outside the acceptance window should be explained in writing. Our score for this set was 94.1. The result for Ba on the water sample fell outside the upper range unit. The high value is believed to be caused by contamination during preparation as the duplicate result was also out for Ba. The soil sample, prepared in Erlenmeyer flasks, was not contaminated. The beakers used in the preparation of water samples will be cleaned more carefully in the future.

If a letter is not required for scores greater than 90, please let me know.

Sincerely,



Katherine Whaley
ICP Spectroscopist



W. R. Laing
DOE Site Survey Program Manager

cc: Karen Knight

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

DEC 16 1987

Mr. William R. Laing
Oak Ridge National Laboratory
Building 4500 S. MS-131
Oak Ridge, TN 37831-6107

Dear Bill:

The results of the analyses for the water pollution sample, WP-019, are complete. Comparison sheets are enclosed showing the true values, acceptance limit ranges, warning limit ranges, and the values your laboratory obtained. Values for analytes present in the samples in determined quantities, but not generally determined in this DOE exercise, are also included. These latter values may be ignored or used for whatever purpose your laboratory can find.

Most of the analytical determinations done by the participating DOE laboratories were good. Your laboratory did extremely well and completed determinations for many of the optional analytes. Not all were perfect, and we can still learn from this performance evaluation exercise. Determinations by the ORNL laboratory of the metals on sample vials 1 & 2 were very good. Values your laboratory measured for metals on vials 3 & 4 were off from the true values by a factor of 2 in each case. Values for total dissolved solids were high in each case and should be investigated. Values for non-filterable residue were slightly high, but do not seem to pose a serious problem.

I congratulate you and your laboratory on doing a fine job in this exercise and hope we can continue to rely on your laboratory furnishing the DOE environmental survey with high-quality analytical information.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent
Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosure

cc:(w/o enclosure)
D. Karen Knight, DOE HQ

LABORATORY: ORNL
SUMMARY OF DOE SURVEY - LABORATORY SUPPORT (WPO19)

Parameter	Sample Number	True Value	Reported Value	Acceptance Limits	Warning Limits
pH Units	3	4.00	3.97	3.93 - 4.09	3.95 - 4.07
	4	9.19	9.18	8.86 - 9.40	8.93 - 9.33
Spec. Cond.	1	659	675	592. - 732.	610. - 714.
	2	272	279	245. - 302.	252. - 295.
Total Diss. Sol.	1	399	489**	325. - 482.	344. - 462.
	2	158	286**	95.9 - 217.	111. - 202.
Total Hardness	1	159.5	163	151. - 174.	154. - 172.
	2	73.5	74.6	65.1 - 82.9	67.3 - 80.7
Total Alkalinity	1	55.0	56.0	49.0 - 60.4	50.4 - 59.0
	2	7.49	6.50	4.71 - 11.6	5.57 - 10.8
Chloride	1	113	117	106. - 128.	108. - 125.
	2	52.1	52.8	47.1 - 57.1	48.3 - 55.9
Flouride	1	2.01	1.97	1.74 - 2.23	1.80 - 2.17
	2	0.247	0.285	.155 - .337	.178 - .314
Sulfate	1	74.0	73.3	60.7 - 85.5	63.8 - 82.4
	2	33.0	31.6	24.5 - 39.4	26.3 - 37.5
Ammonia ⁻ N	1	0.800	0.823	.538 - 1.09	.605 - 1.03
	2	3.00	3.19	2.33 - 3.58	2.48 - 3.43
Nitrate ⁻ N	1	0.500	0.496	.383 - .614	.411 - .586
	2	2.00	2.15	1.59 - 2.38	1.68 - 2.28
Ortho ⁻ P	1	0.080	0.081	.0454- .108	.0529- .100
	2	0.800	0.816	.682 - .904	.708 - .877
TOC	1	59.2	58.0	46.8 - 74.3	50.4 - 70.7
	2	109	107	86.8 - 128.	92.2 - 122.
Total CN	1	0.124	0.130	.0687- .161	.0805 - .149
	2	0.300	0.307	.174 - .388	.201 - .361
Non-Filt. Res.	1	69.4	73.0*	61.1 - 73.6	62.6 - 72.0
	2	24.7	27.3**	20.5 - 27.2	21.3 - 26.4
Oil and Grease	1	35.3	35.8	20.9 - 43.0	23.7 - 40.3
	2	12.8	12.8	3.99 - 18.1	5.74 - 16.3

NR - Not reported.

*Outside warning limits.

**Outside acceptance limits.

PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WP019

LABORATORY: ORNL

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ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
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TRACE METALS IN MICROGRAMS PER LITER:

ALUMINUM	1	87.2	78.0	49.5 - 148.	62.0 - 136.	
	2	828	858	658. - 1050.	707.- 997.	
ARSENIC	1	24.8	26.0	17.3 - 34.1	19.4 - 32.0	
	2	123	130	95.3 - 161.	104. - 153.	
BERYLLIUM	1	94.0	89.9	75.7 - 103.	79.2 - 99.6	
	2	288	270	231. - 306.	241. - 296.	
CADMIUM	1	10.1	10.0	7.22 - 12.8	7.92 - 12.1	
	2	154	150	128. - 170.	133. - 165.	
COBALT	1	47.5	47.5	37.0 - 57.4	39.6 - 54.8	
	2	609	594	506. - 694.	530. - 670.	
CHROMIUM	1	15.4	15.0	8.74 - 20.2	10.2 - 18.8	
	2	245	240	181. - 287.	194. - 274.	
COPPER	1	39.9	40.0	31.6 - 47.6	33.6 - 45.6	
	2	177	176	152. - 195.	157. - 190.	
IRON	1	49.8	50.4	30.4 - 70.0	35.3 - 65.1	
	2	413	420	357. - 471.	371. - 457.	
MERCURY	1	2.24	2.40	1.52 - 3.21	1.73 - 3.00	
	2	15.0	15.6	11.6 - 20.1	12.7 - 19.0	
MANGANESE	1	38.1	37.8	27.8 - 46.1	30.1 - 43.8	
	2	150	147	127. - 164.	132. - 159.	
NICKEL	1	62.6	63.0	46.9 - 78.8	50.9 - 74.8	
	2	282	280	237. - 322.	248. - 311.	
LEAD	1	49.6	50.4	37.2 - 64.4	40.6 - 61.0	
	2	164	168	140. - 197.	147. - 190.	

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*BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WPO19

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
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TRACE METALS IN MICROGRAMS PER LITER:

SELENIUM	1	23.7	20.0	12.4 - 25.8	14.0 - 24.1	
	2	138	120	84.2 - 150.	92.4 - 141.	
VANADIUM	1	62.7	62.0	46.1 - 78.4	50.5 - 74.0	
	2	637	620	520. - 720.	547. - 693.	
ZINC	1	31.3	30.4	22.7- 38.8	24.7 - 36.8	
	2	117	114	90.7 - 134.	96.1 - 129.	
ANTIMONY	3	26.3	13.8	6.04 - 22.6	8.22 - 20.4	
	4	75.1	37.3	21.6 - 54.7	25.9 - 50.4	
SILVER	3	35.2	17.5	13.4 - 21.5	14.4 - 20.4	
	4	6.9	13.43	2.13 - 4.95	2.49 - 4.60	
THALLIUM	3	2.87	3.20	1.58 - 4.82	2.01 - 4.39	
	4	28.6	32.0	21.1 - 43.2	24.1 - 40.2	
MOLYBDENUM	3	8.79	4.40	.352 - 8.85	1.52 - 7.68	
	4	74.7	37.0	19.3 - 49.3	23.2 - 45.4	
STRONTIUM	3	179	91.5	73.7 - 107.	78.3 - 102.	
	4	36.4	18.3	14.3 - 22.2	15.4 - 21.1	
TITANIUM	3	70.6	37.1	19.0 - 52.2	23.6 - 47.6	
	4	303	156	113. - 205.	125. - 192.	

*BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

SUMMARY OF DOE SURVEY - LABORATORY SUPPORT (WPO19)

Parameter	ORNL		ORGDP		ANL		BCD		INEL	
	Sample 1	Sample 2								
Al	87.2	828	-	-	-	-	-	-	-	-
As	24.8	123	-	-	-	-	-	-	-	-
Be	94.0	288	-	-	-	-	-	-	-	-
Cd	10.1	154	-	-	-	-	-	-	-	-
Co	47.5	609	-	-	-	-	-	-	-	-
Cr	15.4	245	-	-	-	-	-	-	-	-
Cu	39.9	177	-	-	-	-	-	-	-	-
Fe	49.8	413	-	-	-	-	-	-	-	-
Hg	2.24	15.0	-	-	-	-	-	-	-	-
Mn	38.1	150	-	-	-	-	-	-	-	-
Ni	62.6	282	-	-	-	-	-	-	-	-
Pb	49.6	164	-	-	-	-	-	-	-	-
Se	23.7	138	-	-	-	-	-	-	-	-
V	62.7	637	-	-	-	-	-	-	-	-
Zn	31.3	117	-	-	-	-	-	-	-	-
Sb	26.3	75.1	-	-	-	-	-	-	-	-
Ag	35.2	6.91	-	-	-	-	-	-	-	-
Tl	2.87	28.6	-	-	-	-	-	-	-	-
Mo	8.79	74.7	-	-	-	-	-	-	-	-
Sr	179	36.4	-	-	-	-	-	-	-	-
Ti	70.6	303	-	-	-	-	-	-	-	-

SUMMARY OF DOE SURVEY - LABORATORY SUPPORT (WP019)

Parameter	ORNL		ORGDP		ANL		BCD		INEL	
	Sample 1	Sample 2								
pH Units	3.97	9.18	4.01	9.20	-	-	-	-	3.90	7.80
Spec. Cond.	675	279	611	254	-	-	-	-	642	298
Total Diss. Sol.	489	286	433	177	384	411	-	-	359	147
Total Hardness	163	74.6	165	76	-	-	-	-	-	-
Total Alkalinity	56.0	6.50	58	9	-	-	-	-	-	-
Chloride	117	52.8	118	51.7	115	74.1	120	48.6	120	51.7
Fluoride	1.97	0.285	1.7	0.2	1.83	0.246	2.12	0.32	2.01	0.305
Sulfate	73.3	31.6	71.1	31.2	67.8	29.7	75.1	34.9	74.4	32.2
Ammonia -N	0.823	3.19	0.83	3.47	-	-	-	-	-	-
Nitrate -N	0.496	2.15	0.51	1.95	0.45	1.87	-	-	.492	2.062
Ortho -P	0.081	0.816	0.08	0.77	0.0743	0.78	-	-	.0729	.765
TOC	58.0	107	-	-	-	-	-	-	57.2	110
Total CN	0.130	0.307	0.13	0.35	0.095	0.283	0.096	0.046	.0933	0.287
Non-Filt. Res.	73.0	27.3	70	25	66.2	23.8	50.6	21.4	65.8	24.7
Oil and Grease	35.8	12.8	31	11	30.8	11.1	16.9	5.4	28.2	-

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SUMMARY OF DOE SURVEY - LABORATORY SUPPORT (WP019)

Parameter	ORNL		ORGDP		ANL		BCD		INEL	
	Sample 1	Sample 2								
pH Units	3.97	9.18	4.01	9.20	-	-	-	-	3.90	7.80
Spec. Cond.	675	279	611	254	-	-	-	-	642	298
Total Diss. Sol.	489	286	433	177	384	411	-	-	359	147
Total Hardness	163	74.6	165	76	-	-	-	-	-	-
Calcium	61.6	1.25	-	-	-	-	-	-	-	-
Magnesium	0.553	18.0	-	-	-	-	-	-	-	-
Sodium	59.9	18.1	-	-	-	-	-	-	-	-
Potassium	18.6	10.0	-	-	-	-	-	-	-	-
Total Alkalinity	56.0	6.50	58	9	-	-	-	-	-	-
Chloride	117	52.8	118	51.7	115	74.1	120	48.6	120	51.7
Fluoride	1.97	0.285	1.7	0.2	1.83	0.246	2.12	0.32	2.01	0.305
Sulfate	73.3	31.6	71.1	31.2	67.8	29.7	75.1	34.9	74.4	32.2
Ammonia -N	0.823	3.19	0.83	3.47	-	-	-	-	-	-
Nitrate -N	0.496	2.15	0.51	1.95	0.45	1.87	-	-	.492	2.062
Ortho -P	0.081	0.816	0.08	0.77	0.0743	0.78	-	-	.0729	.765
Kjeld. -N	0.527	4.36	-	-	-	-	-	-	-	-
Total -P	0.304	2.19	-	-	-	-	-	-	-	-
COD	166	323	-	-	-	-	-	-	-	-
TOC	58.0	107	-	-	-	-	-	-	57.2	110
5-day BOD	88.0	183	-	-	-	-	-	-	-	-
Total CN	0.130	0.307	0.13	0.35	0.095	0.283	0.096	0.046	.0933	0.287
Non-Filt. Res.	73.0	27.3	70	25	66.2	23.8	50.6	21.4	65.8	24.7
Oil and Grease	35.8	12.8	31	11	30.8	11.1	16.9	5.4	28.2	-
Total Phenolics	0.494	1.35	-	-	-	-	-	-	-	-
Total Res. Chlorine	0.70	1.43	-	-	-	-	-	-	-	-

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PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WPO19

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
TRACE METALS IN MICROGRAMS PER LITER:						
ALUMINUM	1		78.0	49.5- 148.	62.0- 136.	
	2		858	658.-1050.	707.- 997.	
ARSENIC	1		26.0	17.3- 34.1	19.4- 32.0	
	2		130	95.3- 161.	104.- 153.	
BERYLLIUM	1		89.9	75.7- 103.	79.2- 99.6	
	2		270	231.- 306.	241.- 296.	
CADMIUM	1		10.0	7.22- 12.8	7.92- 12.1	
	2		150	128.- 170.	133.- 165.	
COBALT	1		47.5	37.0- 57.4	39.6- 54.8	
	2		594	506.- 694.	530.- 670.	
CHROMIUM	1		15.0	8.74- 20.2	10.2- 18.8	
	2		240	181.- 287.	194.- 274.	
COPPER	1		40.0	31.6- 47.6	33.6- 45.6	
	2		176	152.- 195.	157.- 190.	
IRON	1		50.4	30.4- 70.0	35.3- 65.1	
	2		420	357.- 471.	371.- 457.	
MERCURY	1		2.40	1.52- 3.21	1.73- 3.00	
	2		15.6	11.6- 20.1	12.7- 19.0	
MANGANESE	1		37.8	27.8- 46.1	30.1- 43.8	
	2		147	127.- 164.	132.- 159.	
NICKEL	1		63.0	46.9- 78.8	50.9- 74.8	
	2		280	237.- 322.	248.- 311.	
LEAD	1		50.4	37.2- 64.4	40.6- 61.0	
	2		168	140.- 197.	147.- 190.	

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WP019

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
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TRACE METALS IN MICROGRAMS PER LITER:

SELENIUM	1		20.0	12.4- 25.8	14.0- 24.1	
	2		120	84.2- 150.	92.4- 141.	
VANADIUM	1		62.0	46.1- 78.4	50.5- 74.0	
	2		620	520.- 720.	547.- 693.	
ZINC	1		30.4	22.7- 38.8	24.7- 36.8	
	2		114	90.7- 134.	96.1- 129.	
ANTIMONY	3		13.8	6.04- 22.6	8.22- 20.4	
	4		37.3	21.6- 54.7	25.9- 50.4	
SILVER	3		17.5	13.4- 21.5	14.4- 20.4	
	4		3.43	2.13- 4.95	2.49- 4.60	
THALLIUM	3		3.20	1.58- 4.82	2.01- 4.39	
	4		32.0	21.1- 43.2	24.1- 40.2	
MOLYBDENUM	3		4.40	.352- 8.85	1.52- 7.68	
	4		37.0	19.3- 49.3	23.2- 45.4	
STRONTIUM	3		91.5	73.7- 107.	78.3- 102.	
	4		18.3	14.3- 22.2	15.4- 21.1	
TITANIUM	3		37.1	19.0- 52.2	23.6- 47.6	
	4		156	113.- 205.	125.- 192.	

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WP019

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
MINERALS IN MILLIGRAMS PER LITER: (EXCEPT AS NOTED)						
PH-UNITS	3		4.00	3.93- 4.09	3.95- 4.07	
	4		9.19	8.86- 9.40	8.93- 9.33	
SPEC. COND. (UMHOS/CM AT 25 C)	1		659	592.- 732.	610.- 714.	
	2		272	245.- 302.	252.- 295.	
TDS AT 180 C	1		399	325.- 482.	344.- 462.	
	2		158	95.9- 217.	111.- 202.	
TOTAL HARDNESS (AS CaCO3)	1		159.5	151.- 174.	154.- 172.	
	2		73.5	65.1- 82.9	67.3- 80.7	
CALCIUM	1		63.0	54.7- 74.0	57.1- 71.6	
	2		0.905	.700- 1.78	.835- 1.65	
MAGNESIUM	1		0.520	.424- .635	.451- .608	
	2		17.3	14.8- 19.8	15.4- 19.2	
SODIUM	1		52.6	46.0- 58.4	47.5- 56.8	
	2		13.7	10.8- 16.2	11.4- 15.6	
POTASSIUM	1		18.0	14.9- 21.0	15.6- 20.2	
	2		10.0	8.29- 11.5	8.68- 11.1	
TOTAL ALKALINITY (AS CaCO3)	1		55.0	49.0- 60.4	50.4- 59.0	
	2		7.49	4.71- 11.6	5.57- 10.8	
CHLORIDE	1		113	106.- 128.	108.- 125.	
	2		52.1	47.1- 57.1	48.3- 55.9	
FLUORIDE	1		2.01	1.74- 2.23	1.80- 2.17	
	2		0.247	.155- .337	.178- .314	
SULFATE	1		74.0	60.7- 85.5	63.8- 82.4	
	2		33.0	24.5- 39.4	26.3- 37.5	

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

PERFORMANCE EVALUATION REPORT
WATER POLLUTION STUDY NUMBER WPO19

DATE: 11/16/87

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
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NUTRIENTS IN MILLIGRAMS PER LITER:

AMMONIA-NITROGEN	1		0.800	.538- 1.09	.605- 1.03	
	2		3.00	2.33- 3.58	2.48- 3.43	
NITRATE-NITROGEN	1		0.500	.383- .614	.411- .586	
	2		2.00	1.59- 2.38	1.68- 2.28	
ORTHOPHOSPHATE	1		0.080	.0454- .108	.0529- .100	
	2		0.800	.682- .904	.708- .877	
KJELDAHL-NITROGEN	3		0.500	.0635- 1.02	.179- .903	
	4		4.00	2.78- 5.16	3.07- 4.87	
TOTAL PHOSPHORUS	3		0.300	.226- .394	.246- .373	
	4		2.00	1.63- 2.43	1.73- 2.34	

DEMANDS IN MILLIGRAMS PER LITER:

COD	1		150	118.- 168.	124.- 162.	
	2		275	213.- 307.	225.- 295.	
TOC	1		59.2	46.8- 74.3	50.4- 70.7	
	2		109	86.8- 128.	92.2- 122.	
5-DAY BOD	1		97.8	61.6- 134.	70.5- 125.	
	2		175	108.- 242.	125.- 225.	

PCB'S IN MICROGRAMS PER LITER:

PCB-AROCLOR 1016/1242	1		4.57	2.01- 6.61	2.60- 6.02	
PCB-AROCLOR 1260	2		1.86	.733- 2.54	.996- 2.28	
PCB-AROCLOR 1262	2		1.86	1.18- 2.25	1.32- 2.11	

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WPO19

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
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PESTICIDES IN MICROGRAMS PER LITER:

ALDRIN	1	0.851	.225-	1.16	.344-	1.04
	2	0.334	.0833-	.460	.131-	.412
DIELDRIN	1	0.829	.453-	1.12	.538-	1.03
	2	0.290	.134-	.405	.168-	.370
DDD	1	0.390	.135-	.565	.189-	.511
	2	0.975	.419-	1.31	.533-	1.20
DDE	1	0.676	.285-	.920	.365-	.840
	2	0.169	.0926-	.255	.113-	.234
DDT	1	0.297	.0879-	.477	.137-	.428
	2	0.742	.330-	1.07	.424-	.973
HEPTACHLOR	1	0.540	.203-	.745	.272-	.676
	2	0.166	.0595-	.239	.0824-	.216
HEPTACHLOR EPOXIDE	1	0.105	.0550-	.144	.0664-	.132
	2	0.456	.262-	.603	.305-	.560
CHLORDANE	3	7.73	3.56-	9.39	4.31-	8.65
	4	0.620	.240-	.919	.327-	.833

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WPO19

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
VOLATILE HALOCARBONS IN MICROGRAMS PER LITER:						
1,2 DICHLOROETHANE	1		54.8	37.3- 72.9	41.9- 68.3	
	2		3.65	.694- 7.74	1.60- 6.83	
CHLOROFORM	1		92.9	52.8- 129.	62.6- 120.	
	2		14.7	8.21- 21.7	9.93- 20.0	
1,1,1 TRICHLOROETHANE	1		32.6	18.4- 52.7	22.8- 48.3	
	2		9.38	4.84- 15.5	6.20- 14.1	
TRICHLOROETHENE	1		48.2	30.3- 67.6	35.0- 62.8	
	2		2.41	1.02- 3.74	1.37- 3.39	
CARBONTETRACHLORIDE	1		27.2	16.7- 38.7	19.5- 35.9	
	2		6.81	3.31- 11.0	4.29- 9.99	
TETRACHLOROETHENE	1		28.9	15.7- 42.0	19.0- 38.6	
	2		5.36	1.65- 9.06	2.59- 8.11	
BROMODICHLOROMETHANE	1		32.2	24.5- 45.4	27.1- 42.7	
	2		7.24	4.11- 11.5	5.05- 10.5	
DIBROMOCHLOROMETHANE	1		67.7	37.7- 108.	46.6- 98.7	
	2		2.26	.643- 4.15	1.09- 3.70	
BROMOFORM	1		32.9	21.8- 48.8	25.2- 45.3	
	2		4.93	2.23- 7.22	2.87- 6.58	
METHYLENE CHLORIDE	1		42.6	25.8- 67.3	31.1- 62.0	
	2		2.13	D.L.- 5.51	.608- 4.79	
CHLOROBENZENE	1		30.8	18.7- 43.8	21.9- 40.6	
	2		3.85	1.48- 6.07	2.07- 5.48	

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.
 D.L. STANDS FOR DETECTION LIMIT

PERFORMANCE EVALUATION REPORT

DATE: 11/16/87

WATER POLLUTION STUDY NUMBER WP019

LABORATORY:

ANALYTES	SAMPLE NUMBER	REPORT VALUE	TRUE VALUE*	ACCEPTANCE LIMITS	WARNING LIMITS	PERFORMANCE EVALUATION
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VOLATILE AROMATICS IN MICROGRAMS PER LITER:

BENZENE	1		9.89	6.29- 14.0	7.29- 13.0	
	2		42.9	29.4- 57.7	33.0- 54.0	
ETHYLBENZENE	1		8.47	4.52- 11.6	5.44- 10.7	
	2		26.1	16.3- 35.5	18.8- 33.1	
TOLUENE	1		5.95	3.24- 8.80	3.97- 8.07	
	2		29.7	20.8- 39.4	23.2- 37.0	
1,2-DICHLOROBENZENE	1		5.42	1.20- 9.58	2.37- 8.41	
	2		61.4	36.0- 89.4	43.0- 82.4	
1,3-DICHLOROBENZENE	1		3.46	.773- 5.89	1.44- 5.22	
	2		26.0	10.7- 38.1	14.5- 34.3	
1,4-DICHLOROBENZENE	1		4.47	1.15- 8.26	2.13- 7.28	
	2		35.8	18.8- 55.0	23.6- 50.2	

MISCELLANEOUS PARAMETERS:

TOTAL CYANIDE (IN MG/L)	1		0.124	.0687- .161	.0805- .149	
	2		0.300	.174- .388	.201- .361	
NON-FILTERABLE RESIDUE (IN MG/L)	1		69.4	61.1- 73.6	62.6- 72.0	
	2		24.7	20.5- 27.2	21.3- 26.4	
OIL AND GREASE (IN MG/L)	1		35.3	20.9- 43.0	23.7- 40.3	
	2		12.8	3.99- 18.1	5.74- 16.3	
TOTAL PHENOLICS (IN MG/L)	1		0.505	.229- .775	.298- .706	
	2		1.29	.588- 1.96	.762- 1.79	
TOTAL RESIDUAL CHLORINE (IN MG/L)	1		0.654	.401- .848	.459- .790	
	2		1.31	.920- 1.56	1.0- 1.48	

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

JUN 20 1988

Mr. William R. Laing
Oak Ridge National Laboratory
Building 4500 S. MS-131
Oak Ridge, TN 37831-6107

Dear Bill:

The multi-laboratory study of the analyses for the water pollution sample, WP-020, is complete. Comparison sheets are enclosed showing the true values, acceptance limit ranges, and warning limit ranges. Values for some analytes present in the samples in determined quantities, but not generally determined in this DOE exercise, are also provided. The ORNL laboratories provided values for many of the optional analytes, and comparison with the true values should yield helpful information. A good general agreement is apparent.

Comparison of the shorter list of analytes, used for the DOE laboratories in this study, shows only one value outside the acceptance range. That is the one for fluoride at a true value of 0.123 milligrams per liter. It can be noted from the comparison sheets that a larger fraction of the participating laboratories had difficulty with that determination than for most others.

The enclosed information should be reviewed by your laboratory staff with regard to installing any corrective action which would improve analytical quality. I congratulate your laboratory on the completion of a large group of analytical determinations of high quality and thank you for your participation in the study. We remain ready to provide counsel regarding any portion of this study.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent
Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosure

cc: (w/ enclosure)
D. Karen Knight, DOE HQ

METALS	TRAC	ORNL
Aluminum	113 626	120 652
Arsenic	391 111	371 99
Beryllium	70.4 571	71.6 584
Cadmium	100 270	195 276
Cobalt	75.5 382	77.9 391
Chromium	832 89.2	894 90.1
Copper	291 100	296 100
Iron	1410 763	1480 766
Mercury	2.24 0.936	2.29 0.94
Manganese	211 860	221 858
Nickel	571 171	613 170
Lead	171 914	158 923
Selenium	32 82.1	33.4 80.4
Vanadium	1310 360	1360 363
Zinc	650 1270	698 1320
Antimony	82.8 124	97.8 128
Silver	14.6 5.48	15 7.29
Thallium	5.76 54.4	6.23 57.6
Molybdenum	61.6 26.4	60.1 40
Strontium	61 15.3	62.4 17.2
Titanium	48.2 278	45.8 273

DCE ENVIRONMENTAL SURVEY LABORATORIES; WF 030

Analyte	TRUE	ORNL	ACPT LMTS	WARN LMTS
Chloride	69.6 218.	74.6 234.	69.6-77.0 209.-237.	68.3-75.7 212.-234.
Fluoride	1.11 0.123**	1.09 0.377**	.953-1.25 .0601-.198	.990-1.21 .0775-.181
Sulfate	5.01 120.	4.41 119.	2.61-7.11 101.-137.	3.17-6.55 105.-132.
AmmoniaN	2.10 10.3	2.58* 10.7	1.59-2.63 8.42-12.0	1.71-2.50 8.84-11.6
NitrateN	5.50 0.950	5.81 0.87	4.50-6.48 .750-1.16	4.74-6.24 .799-1.11
Ortho-P	1.10 4.80	1.20 5.13	.919-1.27 4.14-5.46	.961-1.23 4.30-5.30
Kjeld-N	8.10 14.5	8.48 14.0	5.98-10.0 11.0-17.6	6.47-9.53 11.8-16.8
Total-P	9.50 4.40	9.57 4.16	7.45-11.0 3.52-5.11	7.87-10.6 3.71-4.92
Cyanide	0.460 0.155	0.444 0.141	.308-.587 .0845-.207	.343-.552 .0999-.192
Non-F Res	56.3 34.8	53. 38.	44.9-67.7 24.7-45.0	47.7-64.9 27.2-42.5
Oil/Greas	14.0 21.0	13.4 18.6	6.52-18.7 10.1-27.4	8.04-17.2 12.3-25.2

** EXCEEDS ACCEPTANCE LIMITS * EXCEEDS WARNING LIMITS

JUL 14 1988 *OSH*

OAK RIDGE NATIONAL LABORATORY
OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC

POST OFFICE BOX 2008
OAK RIDGE, TENNESSEE 37831

July 14, 1988

Harold Vincent
EPA-LV
P. O. Box 93478
Las Vegas, NV 89193-3478

Dear Harold:

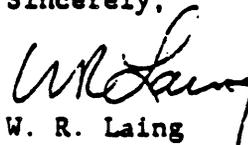
I have checked the fluoride value that we obtained on the last water pollution sample, WP-20. The measurement was made using ion chromatography. The sample was run on triplicate, with no dilution, using two ion chromatographs. The results were as follows:

	<u>System 1</u>		<u>System 2</u>	
	<u>Seq.</u>	<u>F. mg/L</u>	<u>Seq.</u>	<u>F. mg/L</u>
QC	1	0.56	1	0.55
Calib.	2	OK	2	OK
WP-20	4	0.313	3	0.415
WP-20			13	0.403

Sample QC is an internal QC sample whose value is unknown to the analyst. The value for this control is 0.58 mg/L. Calibration is the daily calibration standard. Sequence is the sequence number within the sample data group. The three values obtained (0.313, 0.415 and 0.403) were averaged to obtain the 0.377 value reported. Although the scatter in the 3 results is greater than I would expect, I can find no problems with the measurement itself. It may be, as you noted, that there was not good precision between laboratories on this measurement of this sample.

Please call me if you have any questions.

Sincerely,



W. R. Laing
Section Head
Analytical Chemistry Division

WRL:lp

cc: Karen Knight
Susan Holladay

Internal Correspondence

JAN 06 1989 OSH

MARTIN MARIETTA ENERGY SYSTEMS, INC.

December 28, 1988

Distribution**Results of Water Pollution Sample, WP-021**

Attached are the results on EPA WP-21 for inorganics. All results were satisfactory. Note the large number of results that are very close to the true value. This is really good work!



W. R. Laing

Distribution
CAPA Group
EAL Group
W. Shults
S. Holladay
P. Howell ✓
D. Bostick
B. Fitts
K. Owenby
K. Daniels



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

DEC 19 1988

Mr. William R. Laing
Oak Ridge National Laboratory
P.O. Box 2008
Building 4500 S. MS-131
Oak Ridge, TN 37831-6107

Dear Bill:

Results of the multi-laboratory study of the analyses for the water pollution sample, WP-021, are attached. The attachments include comparison sheets showing the true values, values determined in your laboratory, acceptance limit ranges, and warning limit ranges. Explanations of these terms are given on one attachment.

The laboratories participating in the DOE environmental survey were instructed to use the WP performance evaluation samples to augment available PE materials by providing analytical determinations for survey-requested analytes which were not available as components in those other PE samples. The laboratories could option to determine other WP sample components for their own QA/QC purposes. The comparison of the survey list of analytes, shows no ORNL values out of range. No response regarding corrective action is required.

Thank you for your participation in the study. We remain ready to counsel regarding any portion of this work.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent
Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosure

cc: (w/Enclosure)
Vincent Fayne, DOE HQ
Alan Crockett, INEL

DOE LAB RESULTS : WF021

12/7/88

Analyte	EPA	ORNL
pH-units	5.61	
	8.35	
Spec cond.	642	
	670	
TDS	370	
	377	
Tot Hrdns	235	
	92.2	
Sodium	11.0	14.5
	95.0	105
Potassium	11.0	12.0
	21.5	24.0
Total Alk	13.9	
	104	
Chloride	172	172
	65.4	66.0
Fluoride	0.320	0.40
	3.70	3.71
Sulfate	15.1	14.8
	116	123
AmmoniaN	0.270	
	1.20	
NitrateN	0.250	
	1.90	
Ortho-P	0.065	
	0.900	
Kjeld-N	0.380	
	5.71	
Total-P	0.150	
	3.50	
COD	43.5	
	229	
TOC	17.2	
	90.5	
BOD	27.9	
	146	
Cyanide	0.150	0.154
	0.225	0.226
Non-F res	81.1	
	43.0	
Oil/Greas	5.2	
	29.5	
Tot-Phen	0.557	
	2.82	
TotRC1	0.301	
	1.91	

WFO21 Continued --

METALS

Aluminum	624	627
	234	234
Arsenic	390	383
	54.2	51.8
Beryllium	135	139
	8.99	8.91
Cadmium	222	221
	24.0	24.3
Cobalt	509	510
	17.0	18.2
Chromium	125	128
	41.7	42.7
Copper	96.0	102
	8.00	10.2
Iron	210	216
	42.0	42.7
Mercury	10.7	9.79
	1.47	1.31
Manganese	315	323
	70.0	70.4
Nickel	350	372
	140	145
Lead	126	116
	21.0	19.5
Selenium	180	181
	40.0	40.3
Vanadium	124	133
	43.1	45.7
Zinc	190	198
	63.3	70.5
Antimony	149	153
	179	170
Silver	0.95	0.93
	11.7	11.1
Thallium	8.00	7.91
	72.0	66.3
Molybdenum	47.5	45.8
	18.5	
Strontium	42.7	36.7*
	8.54	8.25
Titanium	100	98.6
	63.1	62.4

** EXCEEDS ACCEPTANCE LIMITS

* EXCEEDS WARNING LIMITS

Analyte	TRUE	ORNL	ACPT LMTS	WARN LMTS
Chloride	172 65.4	172 66.0	157 - 179 58.6- 71.7	159 - 176 60.3- 70.1
Fluoride	0.320 3.70	0.40 3.71	.242- .403 3.06- 4.12	.263- .383 3.20- 3.99
Sulfate	15.1 116	14.8 123	11.5- 18.2 96.1- 133	12.3- 17.4 101- 128
Ammonian	0.270 1.20		.0896-.517 .856- 1.56	.141-.466 .942- 1.48
NitrateN	0.250 1.90		.163- .334 1.51- 2.26	.183- .313 1.60- 2.17
Ortho-P	0.065 0.900		.0380-.0922 .762- 1.04	.0445-.0857 .796- 1.01
Kjeld-N	0.380 5.71		D.L.- .900 4.07- 7.22	.0680- .785 4.45- 6.84
Total-P	0.150 3.50		.0960- .216 2.85- 4.33	.110- .202 3.03- 4.15
Cyanide	0.150 0.225	0.154 0.226	.0844- .196 .128- .297	.0986- .182 .150- .276
Non-F Res	81.1 43.0		74.9- 84.6 36.7- 45.7	76.1- 83.4 37.9- 44.6
Oil/Greas	5.2 29.5		1.37- 9.14 16.8- 36.7	2.33- 8.17 19.3- 34.2

** EXCEEDS ACCEPTANCE LIMITS

* EXCEEDS WARNING LIMITS

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BNL Data Document
Issue Date: July 1989
Revision: 00

BCD Results of Inorganic and Organic Performance Evaluation Studies

Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

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PERFORMANCE EVALUATION SCORES FOR BCD

Code	Score
QB1FY89 Organic	*
QB4FY88 Organic	93.8
QB3FY88 Organic	95.6
QB2FY88 Organic	47.3

*BCD did not submit samples for this quarterly blind.

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BNL Data Document
Issue Date: July 1989
Revision: 00

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BNL Data Document
Issue Date: July 1989
Revision: 00

Battelle-Columbus Division
did not participate in the
QB1,FY89 Organic.

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P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

JAN 0 6 1989

Dennis W. Raichart
Battelle-Columbus Division
505 King Avenue
Columbus, Ohio 43201-2693

Dear Dr. Raichart:

The results of the participation of your laboratory in the EMSL-LV fourth quarter organic performance evaluation study (~~QOB4~~ ~~FY88~~ ~~ORGANIC~~) are enclosed. This includes copies of the analysis reports for organics in soil and water samples. The reports also present statistical information on the numbers of laboratories having difficulties with specific analytes.

The DOE environmental survey requires a formal response from each laboratory working on survey site samples when a score of less than 100 is obtained on performance evaluation samples. That response will become part of the quality assurance record for analytical work completed by your laboratory on samples from sites in the survey. If these qualifications apply to your laboratory, please forward your corrective action responses within 15 days of receipt of this letter in order that we may meet data document schedules.

This office will be glad to furnish any council and further information regarding this work.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent

Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosures

cc: (w/enclosures)
Vincent Fayne, DOE HQ
Alan Crockett, INEL

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ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 4 FY 88

LABORATORY: Battelle Columbus (OH)
 PERFORMANCE: ACCEPTABLE - No Response Required
 RANK: Above = 18 Same = 1 Below = 59

SCORE: 93.8
 REPORT DATE: 12/28/88
 MATRIX: WATER

COMPOUND	CONFIDENCE INTERVALS				LABORATORY DATA CONC	LABS HIS-QNT	PROGRAM LABS NOT-ID	DATA LABS ID-CPD	TOTAL LABS
	WARNING LOWER	UPPER	ACTION LOWER	UPPER					
TCL VOLATILE									
METHYLENE CHLORIDE	NU	NU	NU	NU	130	0	0	14	14
ACETONE	NU	NU	NU	NU	53	0	1	13	14
CARBON DISULFIDE	93	160	83	170	170	0	0	14	14
1,1-DICHLOROETHENE	110	170	99	180	180	0	3	14	14
1,1-DICHLOROETHANE	120	170	120	180	160	2	0	14	14
1,2-DICHLOROETHENE (TOTAL)	110	160	99	160	160	1	0	14	14
CHLOROFORM	120	160	110	170	160	1	0	14	14
1,2-DICHLOROETHANE	130	170	120	180	170	0	0	14	14
2-BUTANONE	16	120	10	170	11	0	3	11	14
1,1,1-TRICHLOROETHANE	110	170	100	180	160	0	0	14	14
CARBON TETRACHLORIDE	57	110	49	140	98	0	0	14	14
VINYL ACETATE	NU	NU	NU	NU	10	0	11	3	14
BROMODICHLOROMETHANE	130	170	120	180	180	0	0	14	14
1,2-DICHLOROPROPANE	140	190	130	190	200	1	0	14	14
CIS-1,3-DICHLOROPROPENE	23	45	20	57	45	2	1	13	14
TRICHLOROETHENE	120	170	110	180	190	1	0	14	14
DIBROMOCHLOROMETHANE	130	180	120	190	190	0	0	14	14
1,1,2-TRICHLOROETHANE	130	170	120	180	180	1	0	14	14
BENZENE	120	160	110	170	170	0	0	14	14
BROMOFORM	120	160	110	190	180	0	0	14	14
2-PENTANONE, 4-METHYL-	61	150	48	160	78	1	2	12	14
2-HEXANONE	29	100	10	140	33	0	0	14	14
TETRACHLOROETHENE	92	130	87	150	130	0	0	14	14
TOLUENE	120	150	110	160	140	0	0	14	14
1,1,2,2-TETRACHLOROETHANE	110	160	100	170	160	1	0	14	14
CHLOROBENZENE	120	160	120	170	170	0	0	14	14
ETHYL BENZENE	84	140	75	150	120	0	0	14	14
STYRENE	77	130	69	160	100	1	0	14	14
XYLENES (TOTAL)	110	150	100	160	150	0	0	14	14
TCL SEMIVOLATILE									
PHENOL	15	72	10	100	88	0	1	13	14
BIS(2-CHLOROETHYL) ETHER	23	38	21	45	36	2	0	14	14
1,4-DICHLOROBENZENE	22	37	20	45	35	1	0	14	14
1,2-DICHLOROBENZENE	23	38	21	45	36	1	0	14	14
2-METHYLPHENOL	32	87	25	120	100	0	1	13	14
BIS(2-CHLOROISOPROPYL) ETHER	42	72	38	88	67	1	0	14	14
N-NITROSO-DI-N-PROPYLAMINE	28	45	26	54	44	0	0	14	14
HEXACHLOROETHANE	17	32	15	40	31	1	0	14	14
NITROBENZENE	13	22	12	23	19	2	0	14	14
ISOPHORONE	11	18	10	22	19	0	0	14	14
2-NITROPHENOL	85	140	77	160	130	1	0	14	14
BENZOIC ACID	NU	NU	NU	NU	26	0	10	4	14
BIS(2-CHLOROETHOXY)METHANE	37	57	34	60	59	2	0	14	14
1,2,4-TRICHLOROBENZENE	10	16	10	19	17	1	0	14	14
NAPHTHALENE	11	19	10	23	19	0	0	14	14
4-CHLOROANILINE	97	230	78	250	230	2	0	14	14
2-METHYLNAPHTHALENE	49	87	44	110	87	0	0	14	14
2,4,6-TRICHLOROPHENOL	44	72	39	76	72	1	1	13	14
2-NITROANILINE	130	210	120	230	170	1	0	13	14
DIMETHYL PHTHALATE	NU	NU	NU	NU	4	0	0	14	14
3-NITROANILINE	110	260	91	280	220	1	0	14	14
2,4-DINITROPHENOL	100	250	92	270	180	1	0	13	14
4-NITROPHENOL	50	190	50	210	160	1	0	14	14
DIBENZOFURAN	120	180	120	220	170	0	5	9	14
2,4-DINITROTOLUENE	17	64	10	89	50	0	0	9	14

ORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR Q3 4 FY 88

LABORATORY: Battelle Columbus (OH)
PERFORMANCE: ACCEPTABLE - No Response Required
RANK: Above = 10 Same = 1 Below = 59

SCORE: 93.8
REPORT DATE: 12/28/88
MATRIX: WATER

COMPOUND	CONFIDENCE INTERVALS				LABORATORY DATA CONC	LABS HIS-ONT	PROGRAM LABS NOT-10	DATA LABS 10-CPD	TOTAL LABS
	WARNING LOWER	UPPER	ACTION LOWER	UPPER					
DIETHYLPHTHALATE	15	83	10	120	11	0	0	14	14
4-CHLOROPHENYL PHENYL ETHER	65	99	60	100	89	0	0	14	14
FLUORENE	60	96	64	110	89	1	0	14	14
4-NITROANILINE	62	140	51	140	47	2	0	14	14
4,6-DINITRO-2-METHYLPHENOL	54	110	50	120	90	0	0	14	14
4-BROMOPHENYL PHENYL ETHER	31	46	29	54	46	1	0	14	14
HEXACHLOROBENZENE	25	46	22	56	43	1	0	14	14
DI-N-BUTYLPHTHALATE	12	80	10	120	19	0	2	12	14
FLUORANTHENE	31	51	28	54	45	1	0	14	14
PYRENE	28	48	25	51	50	0	6	8	14
BUTYL BENZYL PHTHALATE	NU	NU	NU	NU	15	0	0	14	14
BENZO(A)ANTHRACENE	52	110	44	120	79	1	0	14	14
CHRYSENE	14	33	11	35	23	1	0	14	14
BIS(2-ETHYLHEXYL)PHTHALATE	18	91	10	100	62	1	0	14	14
DI-N-OCTYL PHTHALATE	22	92	12	100	45	1	2	12	14
BENZO(K)FLUORANTHENE	37	100	27	110	67	1	0	14	14
DIBENZO(A,H)ANTHRACENE	36	120	24	130	65	0	0	14	14
BENZO(G,H,I)PERYLENE	38	120	26	130	71	1	0	14	14
TCL PESTICIDES									
ALPHA-BHC	NU	NU	NU	NU	0.16	0	6	8	14
BETA-BHC	NU	NU	NU	NU	0.16	0	3	11	14
DELTA-BHC	NU	NU	NU	NU	0.14	0	4	10	14
GAMMA-BHC (LINDANE)	NU	NU	NU	NU	0.18	0	1	13	14
HEPTACHLOR	0.060	0.25	0.05	0.35	0.2	1	0	14	14
ALDRIN	0.16	0.51	0.11	0.57	0.42	1	0	14	14
HEPTACHLOR EPOXIDE	0.12	0.37	0.087	0.40	0.26	1	0	14	14
ENDOSULFAN I	NU	NU	NU	NU	0.05	0	10	4	14
DIELDRIN	0.30	0.70	0.24	0.76	0.62	1	0	14	14
ENDRIN	0.21	0.45	0.17	0.49	0.35	1	0	14	14
4,4'-DDD	2.8	5.5	2.5	5.9	2.7	1	0	14	14
ENDOSULFAN SULFATE	NU	NU	NU	NU	0.43	0	3	11	14
4,4'-DDT	1.2	3.4	0.85	3.8	1.7	2	0	14	14
METHOXYCHLOR	NU	NU	NU	NU	0.91	0	2	12	14
GAMMA-CHLORDANE	0.80	2.1	0.62	2.2	1.2	1	0	14	14
NON-TCL VOLATILE									
ETHER, 2-CHLORO-ETHYL-VINYL					26		5	9	14
METHANE, TRICHLORO-FLUORO-					48		4	10	14
NON-TCL SEMIVOLATILE									
MALATHION					0		14	0	14
BENZOPHENONE					66		4	10	14
BENZIDINE					0		6	8	14
TCL VOLATILE (Contaminants)									
TRANS-1,3-DICHLOROPROPENE					2		12	2	14
TCL SEMIVOLATILE (Contaminants)									
BENZYL ALCOHOL					25		3	11	14
2,4-DIMETHYLPHENOL					8		12	2	14

OF TCL COMPOUNDS NOT-IDENTIFIED: 0
OF TCL COMPOUNDS HIS-QUANTIFIED: 3
OF TCL CONTAMINANTS: 0

OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 0
OF NON-TCL CONTAMINANTS: 0

ORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR QB 4 FY 88

LABORATORY: Battelle Columbus (OH)
PERFORMANCE: ACCEPTABLE - Response Explaining Deficiency(ies) Required
RANK: Above = 52 Same = 2 Below = 15

SCORE: 61.2
REPORT DATE: 12/28/86
MATRIX: SOIL

COMPOUND	CONFIDENCE INTERVALS				LABORATORY DATA CONC	LABS MIS-QMT	PROGRAM LABS NOT-ID	DATA LABS ID-CPD	TOTAL LABS
	WARNING LOWER	WARNING UPPER	ACTION LOWER	ACTION UPPER					
TCL VOLATILE									
ETHYL BENZENE	NU	NU	NU	NU	2	0	4	7	11
TCL SEMIVOLATILE									
1,2-DICHLOROBENZENE	NU	NU	NU	NU	660 U	0	10	1	11
2,4-DICHLOROPHENOL	870	2000	700	2600	2100 S	0	0	11	11
2,4,6-TRICHLOROPHENOL	1300	2700	1100	3400	3200 S	0	0	11	11
2-CHLORONAPHTHALENE	1000	2800	740	3800	3100 S	0	0	11	11
ACENAPHTHYLENE	350	780	330	1000	780 S	0	0	11	11
ACENAPHTHENE	1200	2600	960	3300	2800 S	0	0	11	11
FLUORENE	2000	4100	1700	5200	4200 S	0	0	11	11
4-BROMOPHENYL PHENYL ETHER	2300	4400	2000	5400	4800 S	0	0	11	11
3,3'-DICHLOROBENZIDINE	NU	NU	NU	NU	1300 U	0	8	3	11
BENZO(B)FLUORANTHENE	930	1700	810	2200	1600 S	0	0	11	11
TCL VOLATILE (Contaminants)									
METHYLENE CHLORIDE					11		3	8	11
1,1,1-TRICHLOROETHANE					8	C	9	2	11
TOLUENE					2		9	2	11
TCL PESTICIDES (Contaminants)									
ALPHA-BHC					1.8		10	1	11
GAMMA-BHC (LINDANE)					6.6		6	5	11
ENDOSULFAN I					2.1		9	2	11
NON-TCL VOLATILE (Contaminants)									
ETHANE,1,1,2-TRICHLORO-1,2,2-TRIFL					5		10	1	11

OF TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF TCL COMPOUNDS MIS-QUANTIFIED: 0
 # OF TCL CONTAMINANTS: 1
 # OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF NON-TCL CONTAMINANTS: 0

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	Name	Initials	Date
Originator	BJ Hidy	BH	1/18/89
Concurrence	DW Raichart	DWR	1/23/89
	RK Mitchum	RK	1/23/89
Approved	VA Fishman	VF	1/24/89

Internal Distribution

VA Fishman
 BH Hidy
 RK Mitchum
 DW Raichart.

January 24, 1988 1989

Dr. Harold Vincent
 U.S. EPA Environmental Monitoring
 Systems Laboratory (EMSL-LV)
 944 E. Harmon
 Las Vegas, NV 89109

Dear Dr. Vincent:

Please find enclosed for your review, a listing of the ~~corrective actions~~ taken in response to our participation in the EMSL-LV Fourth Quarter FY 88 ~~Organics Performance Evaluation Study (OPEES)~~ [Case No. 10015].

The information provided by the Superfund Performance Evaluation Program has been of great use to Battelle by indicating areas in which we can improve the performance of our analytical and quality assurance programs.

If you have any questions or comments concerning the corrective actions we have taken, please contact me at (614-424-3342) or Bruce Hidy at (614-424-4591).

Sincerely,



Dennis W. Raichart, Ph. D.
 Associate Section Manager
 Chemistry Section

DWR:gp

Enclosure

cc: Mr. Vincent Fayne, DOE Headquarters
 Dr. J. Leland Daniel, PNL

CORRECTIVE ACTIONS FOR QB4, FY 88

WATER - TCL VOLATILE

Performance Problems

Two (2) TCL compounds, 1,2-Dichloropropane and Trichloroethene, were reported at levels just above the upper action confidence interval established for these compounds during the fourth quarter performance evaluation study.

Corrective Actions

Examination of the data for these two compounds did not reveal any problems with their quantification or with the quantification of their associated internal standard. Examination of the daily continuing calibration check (CCC) sample showed that the percent difference (%D) between response factor for each of the compounds relative to the average from the initial calibration was 2.5% for 1,2-Dichloropropane and 5.4% for Trichloroethene. No obvious explanation for these two high values was evident. However, there were seven other compounds which were reported that were above the upper warning confidence interval. Therefore, it is possible that there was a bias introduced into the initial calibration standards during their preparation. In the future, in addition to a comparison of the newly prepared standards with previously prepared standards and additional comparison with a standard from some other source will be made.

WATER - TCL SEMIVOLATILE

Performance Problems

One (1) TCL compound, 4-Nitroaniline, was reported at a level just below the lower action confidence interval established for this compound during the fourth quarter performance evaluation study.

Corrective Actions

Examination of the data for this compound revealed a problem with its quantification. Because of the high polarity of this compound, its extraction efficiency is lower than non-polar compounds and its chromatographic peak shape is broader than non-polar compounds. 4-Nitroaniline also has a low average response factor. These characteristics can make this compound difficult to quantify using automated routines. It appears that during the automated quantification of this compound, a significant portion of the peak tail was omitted from the total peak area. This caused a lower value to be reported. In the future, when compounds known to be difficult to quantify due to their high polarity are detected, a manual evaluation will be made to ensure proper quantification of the peak has been made.

WATER - TCL PESTICIDES

Performance Problems

None indicated.

Corrective Actions

None required.

WATER - NON-TCL VOLATILES

Performance Problems

None indicated.

Corrective Actions

None required.

WATER - NON-TCL SEMIVOLATILE

Performance Problems

None indicated.

Corrective Actions

None required.

WATER - TCL VOLATILE (Contaminants)

Performance Problems

None indicated.

Corrective Actions

None required.

WATER - TCL SEMIVOLATILE (Contaminants)

Performance Problems

None indicated.

Corrective Actions

None required.

WATER - TCL PESTICIDE (Contaminants)

Performance Problems

None indicated.

Corrective Actions

None required.

SOIL - TCL VOLATILE

Performance Problems

None indicated.

Corrective Actions

None required.

SOIL - TCL SEMIVOLATILE

Performance Problems

None indicated.

Corrective Actions

None required.

SOIL - TCL PESTICIDES

Performance Problems

None indicated.

Corrective Actions

None required.

SOIL - NON-TCL VOLATILES

Performance Problems

None indicated.

Corrective Actions

None required.

SOIL - NON-TCL SEMIVOLATILE

Performance Problems

None indicated.

Corrective Actions

None required.

SOIL - TCL VOLATILE (Contaminants)

Performance Problems

One (1) TCL compound, 1,1,1-Trichloroethane, reported at a level just above the contract required quantification limit (CRQL) was considered a contaminant (a TCL compound not included in the performance evaluation material used for the fourth quarter performance evaluation study).

Corrective Actions

Examination of the data for this compound confirmed that all of the criteria required for compound identification as stated in the SOW had been met. Therefore, this compound cannot be considered a false positive identification. Examination of the daily method/system blank run with this sample did not provide any evidence that detection of this compound was the result of method/system contamination. Contamination of the soil matrix with this compound may have occurred during the shipping or storage of the sample but cannot be established based on a single occurrence.

SOIL - TCL SEMIVOLATILE (Contaminants)

Performance Problems

None indicated.

Corrective Actions

None required.

SOIL - TCL PESTICIDE (Contaminants)

Performance Problems

None indicated.

Corrective Actions

None required.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 OFFICE OF RESEARCH AND DEVELOPMENT
 ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
 P.O. BOX 93478
 LAS VEGAS, NEVADA 89193-3478
 (702/798-2100 - FTS 545-2100)

xc RL Jensen
 Dennis Reichart
 Bruce Hedy *
 Sue Hetzel
 Ramona Meyer
 Greg Dussault

AUG 08 1988

REC'D 15 1988

Dr. Judith Gebhart
 Battelle-Columbus Division
 505 King Avenue
 Columbus, Ohio 43201-2693

Dear Dr. Gebhart:

* with attachment

The Individual Laboratory Summary Report (ILSR) summarizing the results of the participation of your laboratory in the EMSL-LV third quarter organics performance evaluation study ~~(OBS-98-238)~~ is enclosed. In addition, general information concerning the scoring procedure used for QB3 is included.

The score for your laboratory at 95.6 is in the CLP category of acceptable (score--90 or above), with no response required regarding any changes or corrective actions. Even with the good score, it would be wise to examine the report for information which would be helpful to your laboratory in this kind of analysis.

Congratulations on the good score! This office will be glad to furnish any counsel and further information regarding this work.

Sincerely,

Harold A. Vincent
 Chemist

Quality Assurance Research Branch, QAD

Enclosures

cc:
 D. Karen Knight, DOE HQ

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Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

NOTE

Documentation to support Battelle's 95.6 score for EMSL-LV's Organic QB3 FY88 evaluation has been requested. ORNL will attach this documentation upon receipt from Battelle.

Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
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(702/798-2100 - FTS 545-2100)

Revised 4/29/88
by

Copied: J.E. GEBHART 4/29/88
D.W. ROEMER 4/29/88

Mr. Gregory A. DusSault
Battelle Columbus Division
Anal & Struct. Chem. Center
505 King Avenue
Columbus, OH 43201-2693

Dear Mr. DusSault:

For your information and review the results for your participation in the EMSL-LV ~~Second Quarter Organic~~ Performance Evaluation Study (QB2-~~88~~) are included here. Enclosed is general information about the Superfund Performance Evaluation Program. The PE portion of the Laboratory Profile Package, called the "Individual Laboratory Summary Report" (ILSR) was described in your letter reports last quarter. Other general information about the PE program is explained on the following pages.

The samples consisted of aqueous materials spiked with Target Compound List (TCL) and non-TCL pollutants at environmentally representative levels. Samples for all laboratories were from the same homogeneous batch. Each sample set was to be prepared and analyzed by current contractually required procedures.

The EMSL-LV thanks you for your participation in this study and wishes to congratulate the laboratories for an overall fine performance. We trust that this information is vital to you as a member of the community of laboratories analyzing hazardous waste samples for Superfund.

Sincerely,

Larry Butler, Ph.D.

Supervisor, Performance Evaluation Program
Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosure

cc: (w/enclosure)
Carla Dempsey, OERR
Joan Fisk, OERR
Emile Boulos, OERR
Angelo Carasea, OERR
Howard Fribush, OERR

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ORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR QB 2 FY 88

LABORATORY: Battelle Columbus (OH)
PERFORMANCE: UNACCEPTABLE - Corrective Actions Mandatory
RANK: Above = 47 Same = 0 Below = 5

X SCORE: 47.3
REPORT DATE: 4/13/1988
MATRIX: WATER

COMPOUND	90 % CI		LABORATORY		#LABS NOT-ID	PROGRAM #LABS HIS-QUART	DATA #LABS CONTAM	TOTAL #LABS
	LOWER	UPPER	CONC	Q				
TCL VOLATILE								
BROMOMETHANE	64	240	120		0	3	0	52
METHYLENE CHLORIDE	0	0	84		0	0	0	52
1,1-DICHLOROETHANE	34	55	44		0	3	0	52
2-BUTANONE	38	170	10	U (6)	4	7	0	52
BROMODICHLOROMETHANE	59	80	73		0	4	0	52
1,1,2-TRICHLOROETHANE	54	76	62		0	8	0	52
BENZENE	12	17	15		1	5	0	52
2-HEXANONE	48	200	99		1	4	0	52
TOLUENE	18	30	23	B	0	2	0	52
CHLOROBENZENE	85	110	100		0	3	0	52
STYRENE	80	110	100		0	6	0	52
XYLENES (TOTAL)	120	180	150		0	6	0	52

TCL SEMIVOLATILE

2-CHLOROPHENOL	23	52	46	44		0	6	0	52
N-NITROSO-DI-N-PROPYLAMINE	45	84	82	88	X +	0	7	0	52
ISOPHORONE	65	140	122	130		0	6	0	52
2,4-DIMETHYLPHENOL	10	53	57	59	X X	0	2	0	52
BENZOIC ACID	50	200	190	220	X	0	7	0	52
HEXACHLOROBUTADIENE	61	160	150	150	(1) +	0	3	0	52
2-METHYLNAPHTHALENE	20	55	45	52	(1)	1	3	0	52
2,4,6-TRICHLOROPHENOL	55	100	94	92	\$	0	9	0	52
2-NITROANILINE	50	100	67	77		0	2	0	52
ACENAPHTHYLENE	59	100	120	120	X X	0	9	0	52
ACENAPHTHENE	61	100	100	110	X +	0	5	0	52
2,4-DINITROPHENOL	81	260	190	210		3	7	0	52
DIBENZOFURAN	96	160	140	150		0	7	0	52
4-NITROPHENOL	50	200	140	170		0	1	0	52
FLUORENE	64	100	110	120	X X	0	5	0	52
DIMETHYLPHthalate	0	0	0	0	J	0	0	0	52
PENTACHLOROPHENOL	74	230	180	140		0	6	0	52
PHENANTHRENE	62	100	100	100	(1) \$	1	5	0	52
ANTHRACENE	57	100	100	96	\$	0	5	0	52
PYRENE	42	110	110	100	\$	0	6	0	52
BUTYL BENZYL PHTHALATE	0	0	0	0	B	0	0	0	52
BENZO(A)ANTHRACENE	31	100	85	92		0	2	0	52
DI-N-OCTYL PHTHALATE	10	100	45	45		0	2	0	52
DIBENZ(A,H)ANTHRACENE	17	140	60	61		1	2	0	52

TCL PESTICIDES

HEPTACHLOR	0.05	0.43	0.29			0	8	0	52
ALDRIN	0.14	0.53	0.38			18	5	0	52
ENDRIN	0.16	0.48	0.86	X		2	11	0	52
TOXAPHENE	0	0	0	0		0	0	1	52

NON-TCL SEMIVOLATILE

BENZOPHENONE	ft 995	pur 870	97	J		0	0	0	52
DISULFOTON			0	(ND)		0	0	0	52
CHLORPYRIFOS	ft 963	pur 546	19	J		0	0	0	52
2-NITRO-P-CRESOL	ft 999	pur 827	77	J		0	0	0	52

TCL SEMIVOLATILE (Contaminants)

BENZYL ALCOHOL			14	MS MS0 13 11		0	0	0	52
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ORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR QB 2 FY 88

LABORATORY: Battelle Columbus (OH)
PERFORMANCE: UNACCEPTABLE - Corrective Actions Mandatory
RANK: Above = 47 Same = 0 Below = 5

% SCORE: 47.3
REPORT DATE: 4/13/1988
MATRIX: WATER

COMPOUND	98 % CI		LABORATORY DATA CONC	#LABS NOT-ID	PROGRAM #LABS MIS-QUANT	DATA #LABS CONTAM	TOTAL #LABS
	LOWER	UPPER					
BIS(2-ETHYLHEXYL)PHTHALATE			6, 5, 6 J	0	0	1	52
TCL PESTICIDES (Contaminants)							
DIELDRIN			0.051 J	0	0	1	52
HEPTACHLOR EPOXIDE			0.012 J	0	0	0	52
ALPHA-CHLORDANE			0.04 J	0	0	0	52
NON-TCL SEMIVOLATILE (Contaminants)							
2H-INDOL-2-ONE, 1,3-DIHYDRO-	At 967	pur 600	21 J	0	0	2	52
BORANE, DIMETHOXY-	At 954	pur 529	15 J	0	0	0	52
BENZENE, POSS C2 NITRO-	At 906	pur 452	48 J	0	0	0	52
FURANONE, BENZO-3(2H)-	At 931	pur 277	12 J	0	0	0	52

- A # OF TCL COMPOUNDS NOT-IDENTIFIED: 1
- B # OF TCL COMPOUNDS MIS-QUANTIFIED: 7
- C # OF TCL CONTAMINANTS: 1
- D # OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 1
- E # OF NON-TCL CONTAMINANTS: 4

X = ~~36~~ # of Total TCLs spiked
36

$$\text{SCORE} = 100 - \left[\frac{150}{X} * (2A + B + C) + 2.2 * (D + E) \right]$$

$\frac{150}{36} = 4.17$

For Review and Approval

No G1271-2260 (826)

	Name	Initials	Date
Originator	BJ Hidy	BH	6/2/88
Concurrence	JE Gebhart	JEG	6/2/88
	RA Mayer	RM	6/2/88
Approved			

Internal Distribution

RL Joiner/JE Gebhart
DW Raichart
LH Kenny
SS Hetzel
RA Mayer
RMO
File

June 2, 1988

Dr. Harold Vincent
U.S. EPA Environmental Monitoring
Systems Laboratory (EMSL-LV)
944 E. Harmon
Las Vegas, NV 89109

Dear Dr. Vincent:

Please find enclosed for your review and approval, a listing of the ~~corrective actions~~ taken in response to our participation in the EMSL-LV ~~Second Quarter FY 88 Organic Performance Evaluation Study (QB2 FY 88)~~ [Case No. 8783].

The information provided by the Superfund Performance Evaluation Program has been of great use to Battelle by indicating areas in which we can improve the performance of our analytical and quality assurance programs.

If you have any questions or comments concerning the corrective actions we have taken, please contact me at (614-424-4605) or Bruce Hidy at (614-424-4591).

Sincerely,



J. E. Gebhart, Ph. D.
Section Manager
Analytical Chemistry Section

JEG:gp

cc: Karen Knight (DOE)

Enclosure

CORRECTIVE ACTIONS FOR QB2, FY 88

TCL VOLATILE

Performance Problems

One TCL volatile compound, 2-Butanone, was not detected. This compound is difficult to detect due to its poor purging efficiency, poor chromatography (broad peak shape), and poor response (low response factor). Careful inspection of the sample file showed this compound to be present at the expected retention time.

Corrective Actions

We are currently trying to improve the purging efficiency of this compound by increasing the purge flow from 30 mL/min to 40 mL/min. We have also increased the sensitivity of the automated search procedure and will continue to manually search all samples for this compound until we are certain that the automated procedure is reliable.

TCL SEMIVOLATILE

Performance Problems

Six TCL semivolatile compounds were detected and reported at levels which exceeded the 90% confidence interval (CI) for each compound. Additionally, three TCL semivolatile compounds were flagged as exceeding their upper warning limit. Further investigation of this fraction showed that the majority of the compounds detected and reported were near the upper limit of their 90% CI.

Corrective Actions

The two most likely causes for this consistent high bias in our reported values were investigated. First, the volume calibration for the sample extract vials was checked. If the samples extracts had been concentrated to a volume less than 1.0 mL then the analyte concentrations would appear to be higher than expected. Each sample vial was clearly and accurately marked for 1.0 mL. The second likely cause was that the concentration of our internal standard solution had changed such that the concentration of the internal standard analytes was less than the 40 ng/ μ L specified by the SOW. A fresh internal standard solution was prepared from a new ampule of the same Lot number used for the QB analyses. A comparison of the response of the two solution showed very good agreement for all of the compounds. At this point a third, less likely, cause was investigated. A fresh calibration curve was prepared from materials obtained from the EPA QAMB. The 50 μ g/L standard used for the daily CCC used during the analysis of the QB samples was compared to the 50 μ g/L standard from QAMB materials. Again, all analytes were found to be in good agreement between the two standards. None of the above items would appear to be the source of the consistent high bias in our data. At this point we have been unable to identify any additional possibilities likely or unlikely which we can evaluate. The only other possibility we have considered is based on the fact that we prepared these samples using continuous liquid-

liquid extraction and normally achieve high extraction efficiency and high recoveries of the analytes. If the majority of the reporting laboratories used separatory funnel extractions, which may have yielded lower recoveries, then the 90% CI may be bias toward the lower recovery values.

TCL PESTICIDES

Performance Problems

One TCL pesticide compound, Endrin, was reported above the 90% CI established for that compound. This compound was confirmed using the secondary column. However, confirmation of the quantification was not investigated prior to the submission of this QB. Further investigation showed that the endrin standard used for calibration for this data had degraded significantly resulting in a lower than expected response for that standard. This caused the reported value for the sample to be higher than it should have been. No other standards were found to have degraded.

Corrective Actions

We will carefully evaluate the performance of all of our standards for each of the compounds based on their historical performance prior to the analysis of all samples. Any significant change (as specified by the SOW) in the response of any analyte will be addressed by preparation of a new standard for that analyte.

NON-TCL VOLATILES

Performance Problems

None indicated.

Corrective Actions

None required.

NON-TCL SEMIVOLATILE

Performance Problems

One Non-TCL semivolatile compound, Disulfoton, was not detected. This compound was found to be totally unresolved chromatographically from phenanthrene-d10, an internal standard present at a relatively high level in the sample.

Corrective Actions

Additional attention will be paid to the symmetry of the TCL compound peaks, internal standard and surrogate compound peaks for indications of partial coelution of Non-TCL compounds. Also, additional attention will be paid to the mass spectra of the TCL compounds detected and the mass spectra of all

internal standard and surrogate standard peaks to determine the presents of "extra" ions which would indicate complete coelution of a Non-TCL compound with these other standard peaks.

TCL VOLATILE (Contaminants)

Performance Problems

None indicated.

Corrective Actions

None required.

TCL SEMIVOLATILE (Contaminants)

Performance Problems

One TCL semivolatile compound, Benzyl alcohol, was reported as detected at 14 µg/L, just above the CRQL of 10 µg/L. Confirmation of the mass spectra for benzyl alcohol was made against that days CCC standard. This compound was also detected and report in the matrix spike and matrix spike duplicate analyses at 13 µg/L and 11 µg/L respectively. Benzyl alcohol was not detected or reported in the sample blank analysis.

Corrective Actions

Based on the above data we believe that the detection and reporting of this compound was valid and no corrective actions are justified.

TCL PESTICIDE (Contaminants)

Performance Problems

One TCL pesticide, Dieldrin, was detected and reported as 0.051 µg/L (Form I PEST, page 0270) which is below the CRQL of 0.10 µg/L. The value was incorrectly entered as 0.51 µg/L on the EPA Individual Laboratory Summary Report Form.

Corrective Actions

Because the value was incorrectly entered by EPA no corrective actions are justified.

NON-TCL SEMIVOLATILE (Contaminants)

Performance Problems

Four Non-TCL semivolatile compounds (TICs) detected and reported were scored as contaminants. In the judgement of the experienced analysts who generated

and reviewed the data, all of the criteria required to report these compounds as TICs were met. Additional review of the matrix spike and matrix spike duplicate analyses showed the presence of these compounds in both samples. None of these compounds were detected in the sample blank or the standards analyzed for this QB. The results of the forward library search gave FIT values of >900 and PURITY values of >300 for each compound. However, the three correctly identified TICs all had FIT values >950 and PURITY values >500.

Corrective Actions

In the future, the analysts who generate and review the TIC data will use as an additional guideline that the expected FIT values should be >950 and the expected PURITY values should be >500. However, we will continue to report all TIC compounds which in the judgement of an experienced analyst meet the criteria required for reporting the compound.

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Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

ANL Results of Inorganic and Organic Performance Evaluation Studies

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PERFORMANCE EVALUATION SCORES FOR ANL

Code	Score
QB1FY89 Inorganic	94.8
QB4FY88 Inorganic	95.8
QB3FY88 Inorganic	99.0

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 OFFICE OF RESEARCH AND DEVELOPMENT
 ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
 P.O. BOX 93478
 LAS VEGAS, NEVADA 89193-3478
 (702/798-2100 - FTS 545-2100)

6861 20 811
 FEB 07 1989

Mr. William R. Laing
 Oak Ridge National Laboratory
 P. O. Box 2008, 45005 MS-127
 Oak Ridge, TN 37831

Dear Mr. Laing:

The results of the participation of your laboratory in the Environmental Monitoring Systems Laboratory-Las Vegas (EMSL-LV) first quarter Inorganic Performance Evaluation Study (QB1, FY89 Inorganic) are enclosed. This includes copies of the statistical information on the numbers of laboratories in the program that had difficulties with specific analytes.

For scores of less than 100 for each quarterly blind performance evaluation sample, the Department of Energy (DOE) Environmental Survey requires that the laboratory provide a formal response which would describe any changes or corrective actions that have been taken to improve analytical performance and eliminate deficiencies. That response will become a part of the quality assurance record for analytical work completed by the laboratory for sites in the DOE environmental survey. In order to meet delivery times for data document publication, please send your corrective action responses to Vincent Fayne at DOE Headquarters with copies sent to me at the EMSL-LV within 15 days of receipt of this letter.

This office will be glad to furnish any counsel and further information regarding this work.

Sincerely,

Harold A. Vincent FEB 13 1989

Distribution:

Reply needed for CAPP by Feb. 22.

W. Laing

Chem
 Quality

Enclosures

cc: (w/Enclosures)
 Vincent Fayne, DOE HQ
 Alan Crockett, INEL

Distribution:

Shults	Thompson (reply)	Ferguson
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INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR Q3 1 FY 89

LABORATORY NAME: Oak Ridge National (TN) (H2)
 PERFORMANCE LEVEL: ACCEPTABLE - Corrective Actions Necessary
 LABORATORY RANK: Above = 26 / Same = 0 / Below = 14

% Score: 86.7
 REPORT DATE: 12/15/1988
 MATRIX: WATER

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LAB
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS HSPK OUT	#LABS DUP OUT	
	ALUMINUM	433	617	553				0	3	
ANTIMONY	60.0	67	50	U	12	4	0	1	0	41
ARSENIC	66	95	78.5		0	1	1	5	0	41
BARIUM	340	425	386		0	1	0	0	0	41
BERYLLIUM	135	162	153		0	2	0	1	0	41
CADMIUM	151	184	168		0	5	0	1	0	41
CALCIUM	d	d	1050	B	0	0	0	0	0	41
CHROMIUM	62	79	72		0	1	0	0	1	41
COBALT	172	225	196		0	0	0	0	0	41
COPPER	171	208	192		0	3	0	0	0	41
DN	100.0	158	107		0	3	0	1	0	41
LEAD	46	74	56.2		0	0	0	4	0	41
MAGNESIUM	d	d	1260	B	0	0	0	0	0	41
MANGANESE	149	185	163		0	2	0	1	0	41
MERCURY	12	23	16		0	6	0	1	0	41
NICKEL	100	141	118	E	0	0	0	0	0	41
POTASSIUM	16200	20400	9700	X	1	5	0	0	0	41
SELENIUM	26	40	36.4		0	2	0	3	1	41
SILVER	c	c	6	U	0	0	0	6	1	41
SODIUM	11700	14200	12550		1	3	0	0	0	41
THALLIUM	51	77	61.2		0	4	1	2	1	41
VANADIUM	101	127	113		0	2	0	0	0	41
ZINC	56	93	71.6		0	2	0	1	0	41

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 1
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 0
 WATER :

OF DUPLICATES OUT: 0
 .R :

INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 1 FY 89

LABORATORY NAME: Oak Ridge National (TN) (H2)
 PERFORMANCE LEVEL: ACCEPTABLE - Corrective Actions Necessary
 LABORATORY RANK: Above = 26 Same = 0 Below = 14

% Score: 86.7
 REPORT DATE: 12/15/78
 MATRIX: SOIL

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS MIS-QUANT	PROGRAM DATA		#LABS DUP OUT	TOT L
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS MSPK OUT		
ALUMINUM	6290	19500	13600		0	1	0	0	1	4
ANTIMONY	c	c	7.8	U	0	0	0	27	1	4
ARSENIC	3.8	10	6.6		0	5	0	9	2	4
BARIUM	164	209	177		0	1	0	0	0	4
BERYLLIUM	1.0	1.4	1.6	E X	8	2	0	0	0	4
CADMIUM	c	c	1.2		0	0	0	0	3	4
CALCIUM	42100	49700	47600		0	2	0	0	0	4
CHROMIUM	10	22	15.4	E	0	2	0	1	1	4
COBALT	10.0	14	10.8		1	1	0	0	0	4
COPPER	16	30	24.1		0	2	0	1	3	4
IRON	14600	20300	18800		0	0	0	0	0	4
LEAD	85	220	126		0	0	0	6	16	4
MAGNESIUM	2870	4570	4160		0	0	0	0	0	4
MANGANESE	567	698	741	E X	0	4	0	0	0	4
MERCURY	c	c	0.04	B	0	0	0	3	3	4
NICKEL	13	27	21.2	E	0	1	0	0	0	4
POTASSIUM	1080	3500	2572		1	2	0	0	0	4
SELENIUM	c	c	0.15	B	0	0	0	21	0	4
SILVER	c	c	0.9	U	0	0	0	7	0	4
SODIUM	d	d	229	B	0	0	0	0	0	4
THALLIUM	c	c	0.22	U	0	0	0	3	0	4
VANADIUM	15	39	29.9		0	1	0	1	0	4
ZINC	109	147	122		0	0	0	0	1	4

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 2
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 1
 SOIL : Sb

OF DUPLICATES OUT: 0
 SOIL :

OAK RIDGE NATIONAL LABORATORY

OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.

POST OFFICE BOX 2008
OAK RIDGE, TENNESSEE 37831

February 22, 1989

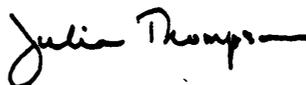
Vincent Fayne
USDOE
Forrestal Bldg, EH-24
Independence Ave., SW
Washington, DC 20585

Dear Mr. Fayne:

In response to ORNL's score of 86.7 for the QB-1 FY 89 Inorganic Performance Evaluation Study, the changes/corrective action are described below.

The result for potassium on the water sample was well below the 95% CI. It has been surmised that a dilution error was made, as all QC for this analysis was good. Greater care will be made in the future when dilutions are made. The soil sample results indicated that Be and Mn were slightly above the limits. An investigation is currently in progress to re-evaluate the interelement correction factors for these elements.

Sincerely,



Julia Thompson
ICP Spectroscopist



W. R. Laing ✓
Program Manager

JKT:WRL:lp

cc: Harold Vincent

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

OCT 24 1988

Mr. Peter C. Lindahl
Analytical Chemistry Division, BLD 205
Argonne National Laboratory
9700 S. Cass Avenue
Argonne, IL 60439

Dear Mr. Lindahl:

The results of the participation of your laboratory in the EMSL-LV fourth quarter Inorganic Performance Evaluation study (QB4, INORGANIC, FY88) are enclosed. This includes copies of the analysis reports for inorganics in soil and water samples. The reports also present statistical information on the numbers of laboratories program that had difficulties with specific analytes.

Although the score for the effort by the ANL laboratory was very good at 95.8% the DOE environmental survey requires a formal response describing any changes or corrective actions taken to improve the performance and eliminate deficiencies. That response will become a part of the quality assurance record for analytical work completed by your laboratory for sites in the DOE environmental survey. In order to meet delivery times for data Document publication, please send your corrective action responses within 15 days of receipt of this letter.

This office will be glad to furnish any counsel and further information regarding this work.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent

Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosures

cc:

Vincent Fayne, DOE HQ
Alan Crockett, INEL

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INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR Q3 4 FY 88

LABORATORY NAME: Argonne National (IL) (E21)
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 10 Same = 1 Below = 26

Y Score: 95.8
 REPORT DATE: 9/26/1988
 MATRIX: WATER

ELEMENT NAME	95 % CI		LAB RESULTS		PROGRAM DATA					TOTAL #LAES
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE	#LABS NOT-ID	#LABS MIS-QUANT	#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINIUM	725	930	783		0	6	0	0	0	33
ANTIMONY	60.0	90	64.6		0	3	0	4	0	33
ARSENIC	25	39	36.2		0	1	0	2	1	33
BARIUM	2790	3260	2940		0	2	0	0	0	33
BERYLLIUM	30	40	34.8		0	0	0	0	0	33
CADMIUM	6.9	13	10.5		0	4	0	1	0	33
CALCIUM	5190	6270	5510	E	0	2	0	0	0	33
CHROMIUM	31	49	41.2		0	4	0	0	0	33
COBALT	72	95	72.5		0	1	0	0	0	33
COPPER	60	100	90.5		0	2	0	0	0	33
IRON	1600	1890	1750		0	2	0	2	0	33
LEAD	54	77	66.1		0	8	0	2	2	33
MAGNESIUM	7840	9040	8040	E	0	1	0	0	0	33
MANGANESE	46	57	53.8	E	0	2	0	0	0	33
MERCURY	6.3	10	7.6		0	5	0	0	0	33
NICKEL	113	163	145		0	3	0	0	1	33
POTASSIUM	8380	10700	9700		0	2	0	0	0	33
SELENIUM	11	19	14.5		0	0	0	5	1	33
SILVER	10.0	15	6.9	B	15	1	0	2	1	33
SODIUM	17100	22100	19000		0	3	0	0	0	33
THALLIUM	29	50	41.9		1	4	0	5	3	33
THORIUM	54	69	52.9	X	0	6	0	0	0	33
ZINC	30	59	56		0	6	0	0	1	33

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 1
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 0
 WATER :

OF DUPLICATES OUT: 0
 WATER :

INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR Q3 4 FY 88

LABORATORY NAME: Argonne National (IL) (B21)
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 19 Same = 1 Below = 26

% Score: 95.8
 REPORT DATE: 9/26/1988
 MATRIX: SOIL

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINUM	4630	17500	9180		0	1	0	0	1	33
ANTIMONY	12.0	58	36.1		3	2	0	27	0	33
ARSENIC	242	378	292		0	6	0	2	2	33
BARIUM	94	146	123		0	3	0	1	0	33
BERYLLIUM	4.4	7.7	6.6	E	1	2	0	2	0	33
CADMIUM	13	20	15.2		0	7	0	2	0	33
CALCIUM	49000	61300	50300		0	4	0	0	0	33
CHROMIUM	42	63	61.7	E *	0	2	0	1	0	33
COBALT	35	58	48.4		0	4	0	1	0	33
COPPER	1710	2100	1850		0	4	0	0	0	33
IRON	13500	26000	19700		0	4	0	0	0	33
LEAD	392	412	387		0	5	0	2	1	33
MAGNESIUM	29900	37900	30800		0	3	0	0	0	33
MANGANESE	4310	5660	5200		0	4	0	1	0	33
MERCURY	1.9	4.4	3		0	2	0	0	1	33
NICKEL	20	50	35.1		0	2	0	1	0	33
POTASSIUM	1000.0	1440	869	B	0	5	0	0	0	33
SELENIUM	4.8	16	10.6		1	3	0	4	2	33
SILVER	3.8	10	6.6		0	4	0	5	2	33
SODIUM	d	d	247	BE	0	0	1	0	0	33
THALLIUM	6.5	14	10.9		1	3	0	6	0	33
VANADIUM	24	58	36.6		0	2	0	1	0	33
ZINC	206	338	269		0	3	0	5	0	33

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 0
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 2
 SOIL : Sb, Zn

OF DUPLICATES OUT: 0
 SOIL :

ARGONNE NATIONAL LABORATORY

9700 SOUTH CASS AVENUE, ARGONNE, ILLINOIS 60439

October 31, 1988

Mr. Vincent Fayne
U.S. Department of Energy
Office of Environmental Audit
Forrestal Building, EH-24
1000 Independence Avenue, SW
Washington, DC 20585

Dear Vince,

As Harold Vincent, U.S. EPA EMSL-LV, has reported, the Argonne National Laboratory/Analytical Chemistry Laboratory's score on the EMSL-LV's Inorganic Performance Evaluation (PE) Study (QB4 FY88, Case No. 10017) was 95.8. In accordance with DOE Environmental Survey policy on addressing PE sample results, the following clarifications are presented:

Water Matrix

CVAA - Reported value within acceptance range, no corrective action required.

FAA - Reported values within acceptance range, no corrective action required.

ICP - Vanadium value outside acceptance range.

Our reported value of 52.9 $\mu\text{g/L}$ was just outside the lower limit of the acceptance range of 54-69 $\mu\text{g/L}$ for the water sample. Review of our ICP quality control results, including ICB, ICV, CCB, CCV, and aqueous LCS data shows no bias in the data that would result in reporting low V concentrations. In fact, the reported value for V in the soil sample, 36.6 mg/kg, is close to the middle of the 24-58 mg/kg acceptance range. In light of this information, it appears that extensive corrective actions will not be necessary, but we do plan to review our vanadium QC data thoroughly to see if a minor trend has recently occurred that would lead to biased low V results.

CVAA = Cold vapor atomic absorption for mercury, FAA = Furnace atomic absorption, and ICP = Inductively coupled plasma emission spectroscopy.

Soil Matrix

CVAA - Reported value within acceptance range, no corrective action required.

FAA - Sb matrix spike outside of acceptance range.

ICP - Zn matrix spike outside of acceptance range.

October 31, 1988

Review of the FAA Sb and ICP Zn matrix spike results for the soil sample prior to submission of the data to the U.S. EPA EMSL-LV indicated that these two matrix spikes were outside the recovery criteria acceptance limits of 75-125% and the data were flagged accordingly. Assessment by Don Graczyk, the inorganic coordinator, and me resulted in the conscious decision that we would accept the one point penalty (0.5 x 2 values outside) to our score rather than spend the two to three days of effort to redigest and reanalyze a new set of samples for these two elements, since this was a method defect and redigestion and reanalysis would probably not result in an improved score. Additional information indicating a method defect is that these two elements in the soil matrix presented matrix spike problems for many of the participating laboratories; twenty-seven of the thirty-one participating laboratories reported Sb matrix spike results outside the acceptance window, and five of the laboratories reported Zn matrix spike results outside the acceptance range. Since this is a method defect, no corrective action(s) will be implemented.

I trust our result of 95.8 out of a possible 100 on the PE samples is consistent with the DOE Environmental Survey's goals of providing data of known quality. Should you have any question regarding our analysis of these PE sample results, please contact me at FTS 972-3490 or Don Graczyk at FTS 972-3489.

Sincerely,



Peter C. Lindahl
Analytical Chemistry Laboratory
Chemical Technology Division

PCL:amb

cc: D. Green
R. Heinrich
M. Erickson
D. Graczyk
F. Martino
E. Palys
R. Scott (DOE-OEA)
H. Vincent (EPA EMSL-LV)
A. Crockett (INEL)
R. Lugar (INEL)
M. Steindler (2)
P. Nelson
DES File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
ENVIRONMENTAL MONITORING SYSTEMS LABORATORY-LAS VEGAS
P.O. BOX 93478
LAS VEGAS, NEVADA 89193-3478
(702/798-2100 - FTS 545-2100)

JUL 15 1968

Mr. Peter C. Lindahl
Analytical Chemistry Division, BLD 205
Argonne National Laboratory
9700 S. Cass Avenue
Argonne, IL 60439

Dear Mr. Lindahl:

The results of the participation of your laboratory in the EMSL-LV third quarter inorganic performance evaluation study (QB3, FY88, Case Number 9302) are enclosed. This includes copies of the analysis reports for inorganics in soil and water samples. The reports also present statistical information on the numbers of laboratories having difficulties with specific analytes.

The score for your laboratory is higher than 90 so that no formal response is required describing any changes or corrective actions taken to improve the performance evaluation score. However, it is still prudent for your laboratory to examine all factors affecting the scoring and take any actions which would improve those scores.

This office will be glad to furnish any council and further information regarding this work.

Sincerely,

A handwritten signature in cursive script that reads "Harold A. Vincent".

Harold A. Vincent,
Chemist, Quality Assurance Research Branch
Quality Assurance and Methods Development Division

Enclosures

cc: (w/enclosure)
D. K. Knight, DOE Hq

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INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 3 FY 88

LABORATORY NAME: Argonne National (IL) (M3)
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 0 Same = 1 Below = 36

Score: 99
 REPORT DATE: 6/15/1988
 MATRIX: WATER

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINUM	1790	2190	1970		0	3	0	0	0	38
ANTIMONY	86	156	124		2	3	0	3	0	38
ARSENIC	40	58	52.3		0	1	0	5	3	38
BARIUM	265	331	300	E	0	3	0	1	0	38
BERYLLIUM	5.0	6.7	6		2	1	0	0	0	38
CADMIUM	65	82	73	E	0	2	0	1	0	38
CALCIUM	8970	11000	10100		0	3	0	0	0	38
CHROMIUM	90	117	107		0	2	0	0	0	38
COBALT	61	87	77.7		0	1	0	0	0	38
COPPER	126	170	158		0	3	0	1	0	38
IRON	492	621	605		0	1	0	0	1	38
LEAD	5.0	7.5	7.1		3	0	0	4	2	36
MAGNESIUM	5740	6770	6460		0	4	0	0	0	38
MANGANESE	35	50	47		0	2	0	0	0	38
MERCURY	2.8	5.2	3.7		0	0	0	4	1	38
NICKEL	48	85	68.7		0	4	0	1	0	38
POTASSIUM	6700	8220	7560		0	4	0	0	0	38
SELENIUM	39	62	52		0	1	0	0	2	38
SILVER	10.0	15	9		13	2	0	4	3	38
SODIUM	8970	10900	10300	E	0	4	0	0	0	38
THALLIUM	17	31	21.6		1	4	0	7	0	38
VANADIUM	64	93	72		0	1	0	0	0	38
ZINC	124	170	143	E	0	2	0	0	0	38

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 0
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 0
 WATER :

OF DUPLICATES OUT: 0
 WATER :

INORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 3 FY 88

LABORATORY NAME: Argonne National (IL) (M3)
 PERFORMANCE LEVEL: ACCEPTABLE
 LABORATORY RANK: Above = 0 Same = 1 Below = 36

I Score: 99
 REPORT DATE: 6/15/1988
 MATRIX: SOIL

ELEMENT NAME	95 % CI		LAB RESULTS		#LABS NOT-ID	#LABS MIS-QUANT	PROGRAM DATA			TOTAL #LABS
	LOWER	UPPER	REPORTED VALUE	QUALIFIER CODE			#LABS FALSE POS	#LABS MSPK OUT	#LABS DUP OUT	
ALUMINUM	8310	16200	10600		0	3	0	0	0	38
ANTIMONY	c	c	2.4	U	0	0	0	27	1	38
ARSENIC	2.0	2.3	0.76	U	7	7	0	4	2	38
BARIUM	40.0	57	54.5		0	0	0	3	0	38
BERYLLIUM	c	c	0.04	U	0	0	1	1	0	38
CADMIUM	c	c	0.4	B	0	0	1	0	1	38
CALCIUM	1000.0	4150	2000		0	0	0	0	0	38
CHROMIUM	13	34	22.6		0	1	0	2	0	38
COBALT	d	d	6.8	B	0	0	0	0	0	38
COPPER	8.9	22	16.2		0	1	0	1	0	38
IRON	8720	19000	11500		0	1	0	0	0	38
LEAD	3.2	7.1	6.1		1	3	0	8	5	38
MAGNESIUM	3340	5550	4200	E	0	3	0	9	0	38
MANGANESE	171	282	219		0	3	0	3	1	38
MERCURY	c	c	0.05	B	0	0	2	2	2	38
NICKEL	24	45	35.8		0	2	0	1	0	38
POTASSIUM	d	d	302	B	0	0	1	0	0	38
SELENIUM	c	c	0.5	U	0	0	0	12	0	38
SILVER	c	c	0.08	U	0	0	1	9	1	38
SODIUM	d	d	105	B	0	0	0	0	0	38
THALLIUM	c	c	0.4	U	0	0	1	3	1	38
VANADIUM	17	53	27.7		0	3	0	0	0	38
ZINC	31	59	37.1	E	0	0	0	1	3	38

OF ELEMENTS NOT-IDENTIFIED: 0
 # OF ELEMENTS MIS-QUANTIFIED: 0
 # OF FALSE POSITIVES: 0

OF MATRIX SPIKES OUT: 2
 SOIL : Sb, Pb

OF DUPLICATES OUT: 0
 SOIL :

ARGONNE NATIONAL LABORATORY

9700 SOUTH CASS AVENUE, ARGONNE, ILLINOIS 60439

July 25, 1988

Ms. D. Karen Knight
U.S. Department of Energy
Office of Environmental Audit
Forrestal Building, EH-24
1000 Independence Ave., SW
Washington, DC 20585

Dear Karen,

We have received from Harold Vincent, U.S. EPA EMSL-LV, the Argonne National Laboratory's scores from the Water Pollution Study No. WP-020 and from the EMSL-LV's Inorganic Performance Evaluation (PE) Study QB3 FY88 (Case No. 9302). We are pleased to report that our WP-020 results for chloride, fluoride, sulfate, nitrate, o-phosphate, cyanide, nonfilterable residue, and oil and grease were all in excellent agreement with the EPA reference values and none of the values we reported exceeded warning limits. Since all of our values fell within the acceptance range, no corrective actions are required in response to the WP-020 laboratory evaluation. We have, however, reviewed the comparisons available in the results to identify and improve any areas where potential problems might exist.

Argonne's score on the Inorganic PE, QB3 FY88, was 99.0. In accordance with DOE Environmental Survey policy on addressing PE sample results, the following clarifications are presented:

Water Matrix

CVAA - Reported value within acceptance range; no corrective action required

FAA - Reported values within acceptance range; no corrective action required.

ICP - Reported values within acceptance range; no corrective action required.

CVAA = Cold vapor atomic absorption for mercury, FAA = Furnace atomic absorption, and ICP = Inductively coupled plasma emission spectroscopy.

Soil Matrix

CVAA - Reported value within acceptance range; no corrective action required.

FAA - Sb matrix spike outside of acceptance range.

- Pb matrix spike outside of acceptance range.

ICP - Reported values within acceptance range; no corrective action required.

C-195

U.S. DEPARTMENT OF ENERGY

THE UNIVERSITY OF CHICAGO

Review of the FAA Sb and Pb matrix spike data prior to their submission to U.S. EPA EMSL-LV had indicated that these two matrix spikes were outside the recovery-criteria acceptance limits of 75-125% and the data were flagged accordingly. An assessment by Don Graczyk, the inorganic coordinator, and me resulted in the decision that we would accept the one-point (0.5 x 2 values outside acceptance limits) penalty to our score rather than spend the two to three days of effort to redigest and reanalyze a new set of samples for these two elements. It is notable that these elements in the soil matrix presented matrix-spike problems for many of the participating laboratories, with 27 of the 38 participants reporting an Sb matrix spike outside the acceptance window and eight of the 38 laboratories reporting a Pb matrix spike outside the acceptance range. Looking back, it appears that our decision not to spend time reanalyzing the PE samples and their associated matrix spikes for Sb and Pb was correct, since, at least in the case of Sb, the probability is small that satisfactory recovery would have been obtained from the reanalysis.

We trust that our scores on these PE samples are consistent with the DOE Environmental Survey's goals of providing data of known quality. Should you have any questions regarding these results or our response to them, please contact me at FTS 972-3490 or Don Graczyk at FTS 972-3489.

Sincerely,



Peter C. Lindahl
Analytical Chemistry Laboratory
Chemical Technology Division

PCL:amb

cc: D. Green
R. Heinrich
M. Erickson
D. Graczyk
L. Gillis
F. Martino
S. Ballou
D. Knudson
T. Surles
E. Palys
H. Vincent (EMSL-LV)
M. Steindler (2)
P. Nelson
DES File'

Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

ORGDP Results of Inorganic and Organic Performance Evaluation Studies

Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

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PERFORMANCE EVALUATION SCORES FOR ORGDP

Code	Score
QB4FY88 Organic	95.6
QB3FY88 Organic	68.8
QB2FY88 Organic	93.6

Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00

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ORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR QM 4 FY 88

LABORATORY: Martin Marietta ORGDP (TN)
PERFORMANCE: ACCEPTABLE - No Response Required
RANK: Above = 5 Same = 0 Below = 65

T SCORE: 95.6
REPORT DATE: 12/28/88
MATRIX: WATER

COMPOUND	CONFIDENCE INTERVALS				LABORATORY DATA CONC	LABS HIS-ONT	PROGRAM LABS NOT-ID	DATA LABS ID-CPD	TOTAL LABS
	WARNING LOWER	UPPER	ACTION LOWER	UPPER					
TCL VOLATILE									
METHYLENE CHLORIDE	NU	NU	NU	NU	130	0	0	14	14
ACETONE	NU	NU	NU	NU	60	0	0	13	14
CARBON DISULFIDE	93	160	83	170	99	0	0	14	14
1,1-DICHLOROETHENE	110	170	99	170	130	3	0	14	14
1,1-DICHLOROETHANE	120	170	120	180	140	2	0	14	14
1,2-DICHLOROETHENE (TOTAL)	110	160	99	160	120	1	0	14	14
CHLOROFORM	120	160	110	170	120	1	0	14	14
1,2-DICHLOROETHANE	130	170	120	180	140	1	0	14	14
2-BUTANONE	16	120	10	170	71	0	3	11	14
1,1,1-TRICHLOROETHANE	110	170	100	180	130	0	0	14	14
CARBON TETRACHLORIDE	57	110	49	140	83	0	0	14	14
VINYL ACETATE	NU	NU	NU	NU	10 U	0	11	3	14
BROMODICHLOROMETHANE	130	170	120	180	140	0	0	14	14
1,2-DICHLOROPROPANE	140	190	130	190	150	1	0	14	14
CIS-1,3-DICHLOROPROPENE	23	45	20	57	38	2	1	13	14
TRICHLOROETHENE	120	170	110	180	130	1	0	14	14
DIBROMOCHLOROMETHANE	130	180	120	190	140	0	0	14	14
1,1,2-TRICHLOROETHANE	130	170	120	180	140	1	0	14	14
BENZENE	120	160	110	170	130	0	0	14	14
BROMOFORM	120	180	110	190	150	0	0	14	14
2-PENTANONE, 4-METHYL-	61	150	48	160	100	1	0	14	14
2-HEXANONE	20	98	10	140	74	0	2	12	14
TETRACHLOROETHERE	92	130	87	150	100	0	0	14	14
TOLUENE	120	150	110	160	130	0	0	14	14
1,1,2,2-TETRACHLOROETHANE	110	160	100	170	130	1	0	14	14
CHLOROBENZENE	120	160	120	170	140	0	0	14	14
ETHYL BENZENE	84	140	75	150	110	0	0	14	14
STYRENE	77	130	69	160	140	1	0	14	14
XYLENES (TOTAL)	110	150	100	160	120	0	0	14	14
TCL SEMIVOLATILE									
PHENOL	15	72	10	100	0	NR	0	13	14
BIS(2-CHLOROETHYL)ETHER	23	38	21	45	0	NR	2	0	14
1,4-DICHLOROBENZENE	22	37	20	45	0	NR	1	0	14
1,2-DICHLOROBENZENE	23	38	21	45	0	NR	1	0	14
2-METHYLPHENOL	32	87	25	120	0	NR	0	1	13
BIS(2-CHLOROISOPROPYL)ETHER	42	72	38	88	0	NR	1	0	14
N-NITROSO-DI-N-PROPYLAMINE	28	45	26	54	0	NK	0	0	14
HEXACHLOROETHANE	17	32	15	40	0	NR	1	0	14
NITROBENZENE	13	22	12	23	0	NR	2	0	14
ISOPHORONE	11	18	10	22	0	NR	0	0	14
2-NITROPHENOL	85	140	77	160	0	NR	1	0	14
BENZOIC ACID	NU	NU	NU	NU	0	NR	0	10	4
BIS(2-CHLOROETHOXY)METHANE	37	57	34	60	0	NR	2	0	14
1,2,4-TRICHLOROBENZENE	10	16	10	19	0	NR	1	0	14
NAPHTHALENE	11	19	10	23	0	NR	0	0	14
4-CHLOROANILINE	97	230	70	250	0	NR	2	0	14
2-METHYLNAPHTHALENE	49	87	44	110	0	NR	0	0	14
2,4,6-TRICHLOROPHENOL	44	72	39	76	0	NR	1	0	14
2-NITROANILINE	130	210	120	230	0	NR	1	1	13
DIMETHYL PHTHALATE	NU	NU	NU	NU	0	NR	0	1	14
3-NITROANILINE	110	160	91	190	0	NR	1	0	14
2,4-DINITROPHENOL	100	150	82	170	0	NR	1	0	14
4-NITROPHENOL	50	190	50	210	0	NR	1	1	13
IMIDAZOLONE	120	180	110	220	0	NR	0	0	14
2,4-DINITROTOLUENE	17	64	10	69	0	NK	0	5	9

ORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR QB 4 FY 88

LABORATORY: Martin Marietta ORGDP (TN)
PERFORMANCE: ACCEPTABLE - No Response Required
RANK: Above = 5 Same = 0 Below = 65

SCORE: 95.6
REPORT DATE: 12/28/88
MATRIX: WATER

COMPOUND	CONFIDENCE INTERVALS				LABORATORY DATA		# LABS MIS-QNT	PROGRAM # LABS NOT-ID	DATA # LABS ID-CPD	TOTAL # LABS
	WARNING LOWER	UPPER	ACTION LOWER	UPPER	CONC	Q				
DIETHYLPHTHALATE	15	83	10	120	0	NR	0	0	14	14
4-CHLOROPHENYL PHENYL ETHER	65	99	60	100	0	NR	0	0	14	14
FLUORENE	68	96	64	110	0	NR	1	0	14	14
4-NITROANILINE	62	140	51	140	0	NR	2	0	14	14
4,6-DINITRO-2-METHYLPHENOL	54	110	50	120	0	NR	0	0	14	14
4-BROMOPHENYL PHENYL ETHER	31	46	29	54	0	NR	1	0	14	14
HEXACHLOROBENZENE	25	46	22	56	0	NR	1	0	14	14
DI-N-BUTYLPHTHALATE	12	80	10	120	0	NR	0	2	12	14
FLUORANTHENE	31	51	28	54	0	NR	1	0	14	14
PYRENE	28	48	25	51	0	NR	0	0	14	14
BUTYL BENZYL PHTHALATE	NU	NU	NU	NU	0	NR	0	6	8	14
BENZO(A)ANTHRACENE	52	110	44	120	0	NR	0	0	14	14
CHRYSENE	14	33	11	35	0	NR	1	0	14	14
BIS(2-ETHYLHEXYL)PHTHALATE	18	91	10	100	0	NR	1	0	14	14
DI-N-OCTYL PHTHALATE	22	92	12	100	0	NR	1	0	14	14
BENZO(K)FLUORANTHENE	37	100	27	110	0	NR	1	2	12	14
DIBENZ(A,H)ANTHRACENE	36	120	24	130	0	NR	0	0	14	14
BENZO(G,H,I)PERYLENE	38	120	26	130	0	NR	1	0	14	14
TCL PESTICIDES										
ALPHA-BHC	NU	NU	NU	NU	0.5	U	0	6	8	14
BETA-BHC	NU	NU	NU	NU	0.37		0	3	11	14
DELTA-BHC	NU	NU	NU	NU	0.5	U	0	4	10	14
GAMMA-BHC (LINDANE)	NU	NU	NU	NU	0.09		0	1	13	14
HEPTACHLOR	0.060	0.25	0.05	0.35	0.2		1	0	14	14
ALDRIN	0.16	0.51	0.11	0.57	0.53	S	1	0	14	14
HEPTACHLOR EPOXIDE	0.12	0.37	0.087	0.40	0.31		1	0	14	14
ENDOSULFAN I	NU	NU	NU	NU	0.05	U	0	10	4	14
DIELDRIN	0.30	0.70	0.24	0.76	0.4		1	0	14	14
ENDRIN	0.21	0.45	0.17	0.49	0.14	X	1	0	14	14
4,4'-DDD	2.8	5.5	2.5	5.9	3.9		1	0	14	14
ENDOSULFAN SULFATE	NU	NU	NU	NU	0.28		0	3	11	14
4,4'-DDT	1.2	3.4	0.85	3.8	1.5		2	0	14	14
METROXYCHLOR	NU	NU	NU	NU	0.68		0	0	12	14
GAMMA-CHLORDANE	0.80	2.1	0.62	2.2	1.2		1	0	14	14
NON-TCL VOLATILE										
ETHER, 2-CHLORO-ETHYL-VINYL					46			5	9	14
METHANE, TRICHLORO-FLUORO-					90			4	10	14
NON-TCL SEMIVOLATILE										
MALATHION					0			14	0	14
BENZOPHENONE					0			4	10	14
BENZIDINE					0			6	8	14
NON-TCL VOLATILE (Contaminants)										
ETHER, ETHYL-					110			11	3	14

OF TCL COMPOUNDS NOT-IDENTIFIED: 0
OF TCL COMPOUNDS MIS-QUANTIFIED: 1
OF TCL CONTAMINANTS: 0

OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 0
OF NON-TCL CONTAMINANTS: 0

ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR Q3 4 FY 88

LABORATORY: Martin Marietta ORGDP (TN)
 PERFORMANCE:
 RANK: Above = 09 Same = 0 Below = 0

SCORE: NONE
 REPORT DATE: 12/28/88
 MATRIX: SOIL

COMPOUND	CONFIDENCE INTERVALS				LABORATORY		#LABS NIS-QNT	PROGRAM #LABS NOT-ID	DATA #LABS ID-CPD	TOTAL #LABS
	WARNING		ACTION		DATA					
	LOWER	UPPER	LOWER	UPPER	CONC					
TCL VOLATILE										
ETHYL BENZENE	NU	NU	NU	NU	1		0	4	7	11
TCL SEMIVOLATILE										
1,2-DICHLOROBENZENE	NU	NU	NU	NU	0	NR	0	10	1	11
2,4-DICHLOROPHENOL	870	2800	700	2600	0	NR	0	0	11	11
2,4,6-TRICHLOROPHENOL	1300	2700	1100	3400	0	NR	0	0	11	11
2-CHLORONAPHTHALENE	1000	2800	740	3800	0	NR	0	0	11	11
ACENAPHTHYLENE	350	780	330	1000	0	NR	0	0	11	11
ACENAPHTHENE	1200	2600	960	1300	0	NR	0	0	11	11
FLUORENE	2000	4100	1700	5200	0	NR	0	0	11	11
4-BROMOPHENYL PHENYL ETHER	2300	4400	2000	5400	0	NR	0	0	11	11
3,3'-DICHLOROBENZIDINE	NU	NU	NU	NU	0	NK	0	0	3	11
BENZO(b)FLUORANTHENE	930	1700	810	2200	0	NR	0	0	11	11
TCL VOLATILE (Contaminants)										
METHYLENE CHLORIDE					13			3	0	11

OF TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF TCL COMPOUNDS MIS-QUANTIFIED: 0
 # OF TCL CONTAMINANTS: 0

OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF NON-TCL CONTAMINANTS: 0

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ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 3 FY 88

LABORATORY: Martin Marietta ORGDP (TN)
 PERFORMANCE: UNACCEPTABLE - Response Explaining Deficiency(ies) Required
 RANK: Above = 51 Same = 0 Below = 15

SCORE: 68.8
 REPORT DATE: 07/07/88
 MATRIX: WATER

COMPOUND	CONFIDENCE INTERVALS				LABORATORY DATA CONC	LABS NOT-ID	PROGRAM LABS MIS-QUANT	DATA LABS CONTAM	TOTAL LABS
	WARNING LOWER	WARNING UPPER	ACTION LOWER	ACTION UPPER					
TCL VOLATILE									
METHYLENE CHLORIDE	NU	NU	NU	NU	130	C0	0	0	66
ACETONE	78	190	62	200	90		1	0	66
CARBON DISULFIDE	110	200	100	210	120		0	13	66
1,1-DICHLOROETHENE	110	130	100	180	140		0	7	66
1,1-DICHLOROETHANE	130	170	120	180	140		1	6	66
1,2-DICHLOROETHENE (TOTAL)	110	170	100	180	140		1	3	66
CHLOROFORM	120	150	120	170	130		0	7	66
1,2-DICHLOROETHANE	130	170	120	170	140		0	4	66
2-BUTANONE	85	190	70	200	100		4	5	66
1,1,1-TRICHLOROETHANE	120	170	120	180	130		0	7	66
CARBON TETRACHLORIDE	110	170	90	180	140		0	5	66
VINYL ACETATE	NU	NU	NU	NU	10	U	0	0	66
BROMODICHLOROMETHANE	130	170	120	180	140		0	2	66
1,2-DICHLOROPROPANE	140	150	140	180	150		0	9	66
CIS-1,3-DICHLOROPROPENE	76	140	67	170	100		12	5	66
TRICHLOROETHENE	120	170	120	170	140		0	8	66
DIBROMOCHLOROMETHANE	140	120	130	190	150		0	9	66
1,1,2-TRICHLOROETHANE	130	170	120	170	140		0	5	66
BENZENE	120	160	120	160	140		0	8	66
TRANS-1,3-DICHLOROPROPENE	NU	NU	NU	NU	5	U	0	1	66
FORMALDEHYDE	130	190	120	200	160		0	5	66
PENTANONE, 4-METHYL-	92	160	82	170	110		1	7	66
2-HEXANONE	63	140	52	150	99		1	6	66
TETRACHLOROETHENE	100	140	94	160	120		1	5	66
TOLUENE	120	150	120	160	130		0	7	66
1,1,2,2-TETRACHLOROETHANE	110	160	110	170	140		1	5	66
CHLOROBENZENE	130	160	120	170	140		0	3	66
ETHYL BENZENE	100	140	97	160	120		0	3	66
STYRENE	86	150	77	150	140		0	4	66
XYLENES (TOTAL)	120	160	110	170	120		1	8	66
TCL SEMIVOLATILE									
PHENOL	10	42	10	61	5		0	0	66
2-CHLOROPHENOL	24	45	21	56	22		0	6	66
BENZYL ALCOHOL	NU	NU	NU	NU	10	U	0	0	66
2-METHYLPHENOL	22	40	19	50	12	X	1	6	66
4-METHYLPHENOL	20	42	17	53	8	X	3	4	66
2-NITROPHENOL	22	45	19	58	21	S	0	6	66
2,4-DIMETHYLPHENOL	16	38	13	50	10	U&	0	3	66
2,4-DICHLOROPHENOL	26	48	23	51	17	X	1	5	66
4-CHLORO-3-METHYL PHENOL	27	48	24	52	24	S	1	6	66
2,4,5-TRICHLOROPHENOL	100	200	89	210	50	X	1	5	66
2-CHLORONAPHTHALENE	25	45	22	55	18	X	0	4	66
3-NITROANILINE	50	120	50	130	9		0	4	66
4-NITROPHENOL	NU	NU	NU	NU	50	U	0	0	66
4,6-DINITRO-2-METHYLPHENOL	81	160	69	180	72	S	3	7	66
N-NITROSODIPHENYLAMINE	52	120	42	140	45	S	0	5	66
HEXACHLOROBENZENE	22	48	18	52	24		2	9	66
PENTACHLOROPHENOL	NU	NU	NU	NU	16		0	0	66
DI-N-BUTYLPHTHALATE	NU	NU	NU	NU	10	U	0	0	66
FLUORANTHENE	NU	NU	NU	NU	5		0	0	66
ENZO(A)ANTHRACENE	NU	NU	NU	NU	5		0	0	66
ENZO(B)FLUORANTHENE	34	110	24	150	64		0	2	66
ENZO(K)FLUORANTHENE	40	110	30	120	62		2	3	66
BF(1,2,3-CD)PYRENE	40	110	30	150	56		0	1	66
BF(1,2,3-CD)PYRENE	28	100	18	140	71		1	0	66

ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR Q8 3 FY 88

LABORATORY: Martin Marietta ORGDP (TN)
 PERFORMANCE: UNACCEPTABLE - Response Explaining Deficiency(ies) Required
 RANK: Above = 51 Same = 0 Below = 15

% SCORE: 66.8
 REPORT DATE: 07/07/88
 MATRIX: WATER

COMPOUND	CONFIDENCE INTERVALS				LABORATORY DATA CONC	G	#LABS NOT-ID	PROGRAM #LABS MIS-QUANT	DATA #LABS CONTAM	TOTAL #LABS
	WARNING LOWER	WARNING UPPER	ACTION LOWER	ACTION UPPER						
DIBENZ(A,H)ANTHRACENE	NU	NU	NU	NU	8		0	0	0	66
BENZO(G,H,I)PERYLENE	NU	NU	NU	NU	8		0	0	0	66
TCL PESTICIDES										
ALPHA-BHC	NU	NU	NU	NU	25	U	0	0	1	66
DELTA-BHC	NU	NU	NU	NU	25	U	0	0	1	66
HEPTACHLOR EPOXIDE	0.100	0.29	0.071	0.32	0.13		10	4	0	66
4,4'-DDE	NU	NU	NU	NU	0.1	U	0	0	2	66
ENDOSULFAN II	NU	NU	NU	NU	0.1	U	0	0	0	66
METHOXYCHLOR	NU	NU	NU	NU	0.5	U	0	0	0	66
ALPHA-CHLORDANE	0.82	2.8	0.54	3.1	0.5	U&	7	2	0	66
GAMMA-CHLORDANE	0.53	1.5	0.5	1.7	0.5	U&	1	6	0	66
AROCLOR-1016	NU	NU	NU	NU	5	U	0	0	0	66
AROCLOR-1260	NU	NU	NU	NU	0.94		0	0	1	66
NON-TCL VOLATILE										
ETHER,2-CHLORO-ETHYL-VINYL					32		15	0	0	66
METHANE,TRICHLORO-FLUORO-					65		13	0	0	66
NON-TCL SEMIVOLATILE										
BENZOPHENONE					28		9	0	0	66
AZINPHOSETHYL					68		1	0	0	66
META-PICOLINE					13		0	0	0	66
TCL SEMIVOLATILE (Contaminants)										
NITROBENZENE					14	C	0	0	0	66
BIS(2-ETHYLHEXYL)PHTHALATE					210	C0	0	0	1	66
DI-N-OCTYL PHTHALATE					10	C0	0	0	0	66
NON-TCL SEMIVOLATILE (Contaminants)										
ADIPATE,DIOCTYL-					1500	C0	0	0	0	66
NON-TCL SEMIVOLATILE (Contaminants)										
UNKNOWN					8		0	0	12	66

OF TCL COMPOUNDS NOT-IDENTIFIED: 2
 # OF TCL COMPOUNDS MIS-QUANTIFIED: 5
 # OF TCL CONTAMINANTS: 1

OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF NON-TCL CONTAMINANTS: 0

ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 2 FY 88

LABORATORY: Martin Marietta ORGDP (TN)
 PERFORMANCE: ACCEPTABLE
 RANK: Above = 0 Same = 2 Below = 48

% SCORE: 93.6
 REPORT DATE: 4/1/1988
 MATRIX: WATER

COMPOUND	90 % CI		LABORATORY DATA		#LABS NOT-ID	PROGRAM #LABS HIS-QUANT	DATA #LABS CONTAM	TOTAL #LABS
	LOWER	UPPER	CONC	Q				
TCL VOLATILE								
BROMOMETHANE	64	240	170		0	2	0	50
METHYLENE CHLORIDE	c	c	83	B	0	0	0	50
1,1-DICHLOROETHANE	34	55	47		0	3	0	50
2-BUTANONE	38	170	40	s	3	7	0	50
BROMODICHLOROMETHANE	59	80	62		0	3	0	50
1,1,2-TRICHLOROETHANE	54	76	60		0	8	0	50
BENZENE	12	17	14		1	5	0	50
2-HEXANONE	48	200	74		1	3	0	50
TOLUENE	18	30	21	B	0	2	0	50
CHLOROBENZENE	85	110	95		0	3	0	50
STYRENE	80	110	120	X	0	6	0	50
XYLENES (TOTAL)	120	180	130		0	5	0	50
TCL SEMIVOLATILE								
2-CHLOROPHENOL	23	52	29		0	5	0	50
N-NITROSO-DI-N-PROPYLAMINE	45	84	50		0	6	0	50
ISOPHORONE	65	140	96		0	5	0	50
2,4-DIMETHYLPHENOL	10	53	15		0	2	0	50
BENZOIC ACID	50	200	50	U	0	7	0	50
HEXACHLOROBUTADIENE	61	160	89		0	2	0	50
2-METHYLNAPHTHALENE	20	55	32		0	3	0	50
2,4,6-TRICHLOROPHENOL	55	100	67		0	8	0	50
2-NITROANILINE	50	100	43	J s	0	2	0	50
ACENAPHTHYLENE	59	100	70		0	8	0	50
ACENAPHTHENE	61	100	71		0	4	0	50
2,4-DINITROPHENOL	81	260	150		3	7	0	50
DIBENZOFURAN	96	160	130		0	6	0	50
4-NITROPHENOL	50	200	58	s	0	1	0	50
FLUORENE	64	100	75		0	4	0	50
DIETHYLPHTHALATE	c	c	46		0	0	0	50
PENTACHLOROPHENOL	74	230	100		0	6	0	50
PHENANTHRENE	62	100	73		0	5	0	50
ANTHRACENE	57	100	68		0	4	0	50
PYRENE	42	110	70		0	6	0	50
BUTYL BENZYL PHTHALATE	c	c	24		0	0	0	50
BENZO(A)ANTHRACENE	31	100	76		0	2	0	50
DI-N-OCTYL PHTHALATE	10	100	60	B	0	2	0	50
DIBENZ(A,H)ANTHRACENE	17	140	110		0	2	0	50
TCL PESTICIDES								
HEPTACHLOR	0.05	0.43	0.19	J	1	8	0	50
ALDRIN	0.13	0.53	0.22	:	19	5	0	50
ENDRIN	0.16	0.48	0.28	:	3	11	0	50
TOXAPHENE	c	c	:	U	0	0	1	50
NON-TCL SEMIVOLATILE								
BENZOPHENONE			74		0	0	0	50
DISULFOTON			51		0	0	0	50
CHLORPYRIFOS			37		0	0	0	50
2-NITRO-P-CRESOL			44		0	0	0	50
TCL SEMIVOLATILE (Contaminants)								
NITROBENZENE			7	J	0	0	0	50

ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QB 2 FY 88

LABORATORY: Martin Marietta ORGDP (TN)
 PERFORMANCE: ACCEPTABLE
 RANK: Above = 0 Same = 2 Below = 48

% SCORE: 93.6
 REPORT DATE: 4/1/1988
 MATRIX: WATER

COMPOUND	90 % CI		LABORATORY DATA CONC	Q	#LABS NOT-ID	PROGRAM #LABS MIS-QUANT	DATA #LABS CONTAM	TOTAL #LABS
	LOWER	UPPER						
BIS(2-ETHYLHEXYL)PHTHALATE			18	B	0	0	1	50
NON-TCL VOLATILE (Contaminants)								
CYCLOTRISILOXANE,HEXAMETHYL-			15	JB	0	0	0	50
NON-TCL SEMIVOLATILE (Contaminants)								
UNKNOWN			7		0	0	18	50
UNKNOWN			23	F	0	0	10	50

OF TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF TCL COMPOUNDS MIS-QUANTIFIED: 1
 # OF TCL CONTAMINANTS: 0

OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF NON-TCL CONTAMINANTS: 1

**Draft - Do Not Cite
BNL Data Document
Issue Date: July 1989
Revision: 00**

**Appendix D
ANALYTICAL CHEMISTRY QC SUMMARY**

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Title: DETERMINATION OF OAK RIDGE DATA USABILITY

Background:

A Data Usability Team (DUT) composed of representatives from Department of Energy (DOE), Environmental Protection Agency Environmental Monitoring Services Laboratory - Las Vegas, Nevada (EPA EMSL-LV), and Martin Marietta Energy Systems will determine the usability of organic data generated by ORNL for four DOE ENVIRONMENTAL SURVEY SITES. The four sites are 1) Pantex Site, 2) Lawrence Livermore National Laboratory (LLNL), 3) Sandia National Laboratory (SNLL), and 4) Argonne National Laboratory (ANL).

Purpose:

This standard operating procedure (SOP) describes the review procedure for determining the usability of "validated" organic data for the above sites. Organic data was validated by a Data Quality Assessment Team from EPA EMSL-LV team, which performed the validation process in accordance with the SOP FOR OAK RIDGE DATA VALIDATION (Attachment A).

Applicability:

The Data Usability Team will review files containing "validated" organic data organized by environmental problem for each of the four DOE ENVIRONMENTAL SURVEY SITES. The contents of each environmental problem file is as follows:

- 1) a list of analytes with data quality summaries described on a form entitled "Organic Data Quality Level Task Volatile Organic Compounds", and
- 2) a list of trip blank information per sample delivery group (SDG) described on a form entitled "Organic Data Quality Level Task Volatile Organic Compounds".

To assist the team, a master sheet (Attachment B) summarizing the data usability screening products for each specific type of organic class (i.e. Volatiles, Semivolatiles, Pesticides/PCBs) will be used. The master sheet and the contents of the environmental problem file represent the products produced by the Data Quality Assessment Team performing the data validation process described in Attachment B.

The review procedure to be used by the Data Usability Team will involve the following steps:

1. review of each environmental problem from the Sampling and Analysis Plan for each site,
2. review of the master sheet (Attachment B),
3. review of the contents of the individual files for each environmental problem,
4. performance of an evaluation for usability, and
5. production of a summary table which outlines the conclusions.

Attachment C contains an example file for one environmental problem at the Pantex Site. Attachment D contains the guidelines for the evaluation for usability. Attachment E contains an example of the type of summary table which outlines the conclusions from the review procedure.

ATTACHMENT A
SOP FOR OAK RIDGE DATA VALIDATION
(WITH ATTACHMENT 1.0)

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ATTACHMENT A

SOP FOR OAK RIDGE DATA VALIDATION

EMSL-LV will be qualifying all data associated with four data packages produced by Oak Ridge National Laboratory (ORNL). The four data packages are from the following sampling sites: 1) Pantex; 2) LINL; 3) SNLL; and 4) ANL.

This SOP is designed to aid the evaluator in organizing and performing the validation procedure. This procedure involves qualifying all data according to Contract Laboratory Program Equivalency (CLPE). CLPE is based on the CLP Organics Statement of Work, 7/87

The validation procedure will involve review of ten data quality areas. These areas are as follows and are listed in the order in which evaluators may proceed.

1. Holding Times
2. Initial Calibrations
3. Continuing Calibrations
4. Blanks
5. Tunes
6. Surrogate
7. Internal Standards
8. Tentatively Identified Compounds
9. Pesticide Retention standard
10. Analyte Retention Time (Pest. fraction)

Due to the large number of samples and limited auditing time, the order of the validation procedure above has been set up to qualify as many samples, as quickly as possible. Proceeding with the validation in the order listed above may permit the auditor to validate batches of samples as a unit, thus saving time.

The auditors will be evaluating only the data submitted in the Case Narrative and on Forms I through VIII for the volatile and semi-volatile fractions and Forms I through X for the pesticide fraction. The auditors will be under a rigid time constraint and will not have sufficient time to search through the raw data to check for errors (transcription, rounding, etc.) found on these forms. The evaluators will examine raw data as needed.

There are two types of auditing forms that the evaluators will use for the Organic Data Quality Level Task. The first form (Attachment II) is a Data Usability Screening form for each fraction. On this form, 10 samples can be summarized according to the eight QC areas listed above. This form has also been provided with space enough for any pertinent comments and an overall data quality rating (to be discussed later). The second type of auditing form, Organic Data Quality Level Task (Attachment III), breaks the sample down into its specific compounds and will qualify each compound individually for blank contamination, initial and continuing calibration conformance, and internal standard area and retention time conformance. This form is also provided for each fraction and requires each compound listed to receive an overall data quality level to be used later for determining data usability by the Survey Team.

All spaces on the auditing forms *present def. of levels* are to be filled in with a number corresponding to level 1, 2, or 3. Any blank spaces left, for any reason, are to be filled in with a dash (-). Arrows may be used to indicate repeat entries.

?

Oak Ridge will provide a listing of all samples to be audited. During the validation, the auditor will check off all samples completed. These sample identifications will then be run against a master list (provided and performed by Oak Ridge) to monitor EMSL-LV's progress.

HOLDING TIMES

Expedient extraction and analysis of samples is necessary in order to ensure valid results. Any sample outside the established holding time criteria will automatically be qualified level 3, as exceeding the holding time criteria compromises the data quality. Holding times will be evaluated through the use of the laboratory's sample receipt logs, extraction logs, and from the analysis date located on the Form I (run logs will be used if the analysis date is not listed on the Form I). Addressing holding times first insures that affected samples are qualified level 3 before further validation is performed. If holding times are exceeded, all negative analyte values will be assigned level 3. Positive analyte values may be level 2. All samples will continue through the validation process.

See Attachment I, Holding Time sections.

INITIAL CALIBRATION

The initial calibration documents the linearity of the instrument within the calibration range of the method, establishes the relative response factors on which the continuing calibration criteria is based, and verifies the performance of the column before samples are analyzed. The initial calibration reflects the conditions of analysis and designates the quality of all the samples analyzed until the next initial calibration. Any samples not run under an initial calibration are considered suspect and qualified level 3. A continuing calibration found within criteria does not alter the quality level established by the preceding initial calibration found outside criteria. All assignment of quality levels based on the calibrations will be on an analyte-specific basis.

The evaluators will use the data [percent relative standard deviation (%RSD) and average relative response factors (AV-RRF)] listed on the Form VI, Organics Initial Calibration Data Form for the determination of criteria compliance of volatiles and semi-volatiles. Form VIIIs, Pesticide Evaluation Standards Summary, will be used for the pesticide fraction where Evals A, B, C, and Individual A and B will be evaluated for correct sequencing. The Form VIIIs will also be used to evaluate the linearity of the analytical system and the breakdown of 4,4'-DDT and Endrin. Data Quality levels will be assigned as described in Attachment I.

See Attachment I, Initial Calibration sections.

CONTINUING CALIBRATION

The continuing calibration determines if an instrument is still within the linear calibration range established by the preceding initial calibration. The continuing calibration affects all those samples run until the next calibration. Any samples run under a continuing calibration outside criteria, or not run under any calibration, are questionable and will be qualified level 3. All samples will be carried through the established validation process. All assignment of quality levels based on the continuing calibrations will be on an analyte-specific basis.

The validation of the continuing calibration data [percent deviations (%D) and response factors (RF)] will be done using the Form VIIs, Continuing Calibration Check Form, for both the volatile and semi-volatile fractions. The Form VIIIs will be used to evaluate the Individual A/B run and the breakdown of 4,4'-DDT and Endrin for the pesticide fraction. Data Quality levels will be assigned as described in Attachment I.

See Attachment I, Continuing Calibration sections.

METHOD BLANK ANALYSIS

Method blanks are carried through the entire sample analysis and are instrumental in evaluating the type and magnitude of laboratory contamination. Blank contamination is found in two forms; Common Laboratory Contaminants and other TCL compounds at contamination levels. The Common Laboratory Contaminants are: VOLATILE FRACTION- Methylene Chloride, Acetone, Toluene, and 2-Butanone; SEMI-VOLATILE FRACTION- Phthalate esters; PESTICIDE FRACTION-None. Blanks are to run at least once per day of extraction for semi-volatiles and pesticides and once per day of analysis for volatiles.

The validation of the method blank analysis will be done utilizing the information given on the Form Is, Organics Analysis Data Sheet, of the blank and the Form IVs, Method Blank Summary, which summarizes all samples associated with that blank. Data Quality levels will be assigned as described in Attachment I.

See Attachment I, Method Blank sections.

TUNING

Tuning establishes that a GC/MS system meets the established mass spectral criteria before beginning calibrations or sample analysis. The compounds used for tuning are 50ng p-Bromofluorobenzene (BFB) for the volatile fraction and 50ng Decafluorotriphenylphosphine (DFTPP) for the semi-volatile fraction.

Tuning evaluation will be performed by use of the Form V, GC/MS Tuning and Mass Calibration Form, for both the volatile and semi-volatile fractions. The Form V lists all samples associated with the tune, as well as showing ion percent relative abundance. Data Quality levels will be assigned as described in Attachment I.

See Attachment I, Tuning Criteria sections.

SURROGATES

Surrogates are necessary in monitoring the preparation and analysis of all samples and blanks. Surrogate recovery may be affected due to sample interference, high concentrations of analytes, and poor extraction techniques. Surrogate recovery acceptance limits are as follows:

FRACTION	SURRE. CMPD	% RECOVERY LIMITS	
		WATER	LOW/MED SOIL
VOLATILE	Toluene-d8	88-110	81-117
	4-Bromofluorobenzene	86-115	74-121
	1,2-Dichloroethane-d4	76-114	70-121
SEMI-VOLATILE	Nitrobenzene-d5	35-114	23-120
	2-Fluorobiphenyl	43-116	30-115
	p-Terphenyl-d14	33-141	18-137
	Phenol-d5	10-94	24-113
	2-Fluorophenol	21-100	25-121
	2,4,6-Tribromophenol	10-123	19-122
PESTICIDE	Dibutylchloroendate	Advisory limits	
		24-154	20-150

Surrogate recoveries will be validated through use of the Form II, Surrogate Recovery Form. Data Quality levels will be assigned as described in Attachment I.

See Attachment I, Surrogate Sections.

INTERNAL STANDARDS

Internal standards and retention times are used to check system performance for quantitative purposes of the volatile and semi-volatile fractions. Internal standard responses and retention times in all standards must be evaluated during or immediately after data acquisition. For the purposes at Oak Ridge, there will only be two levels of qualification (levels 1 and 3). The data will either be level 1 - within criteria or level 3 - outside criteria. The auditors will use the volatile and semi-volatile Form VIIIs, Internal Standard Summary, for validation of the internal standards associated with that fraction.

See Attachment I, Internal Standards sections.

PESTICIDE RETENTION STANDARD

The retention time shift for Dibutylchlorodate (DBC) or Mirex must be verified for each sample due to the fact that excessive shift in RT indicates instability of the system (ie. carrier gas leaks, uncontrolled oven temperature).

Data which uses only Mirex as a retention time standard is not considered comparable to that which uses DBC as a retention time standard. Therefore, data using only Mirex will be classified no better than level 2.

Pesticide Form VIII will be used by the evaluators to determine criteria conformance. Data Quality levels will be assigned as described in Attachment I

See Attachment I, Pesticide Retention Standard section.

ANALYTE RETENTION TIME

According to the Organic Statement of Work, the analyte retention time windows are set by calculating the standard deviation of the three absolute retention times for each single component pesticide. For multiresponse pesticides or PCBs, choose one major peak from the envelope and calculate the standard deviation of the three retention times for that peak.

The standard deviations determined above shall be used to determine the retention time windows for a particular 72-hour sequence. Apply plus or minus three times the standard deviations above to the retention time of each pesticide/PCB determined for the first analysis of the pesticide/PCB standard in a given 72-hour sequence. This range of retention times defines the retention time window for the compound of interest for that 72-hour sequence.

If a peak is found within a retention time window for a primary column, a tentative hit is established for that analyte. A true pesticide hit must be confirmed on a dissimilar column using the same procedure followed for the primary column.

If the analyte was quantitated on a narrow-bore capillary column, the data can be assigned a quality level no better than level 2.

Data Quality levels will be assigned as described in Attachment I.

See Attachment I, Analyte Retention Time section.

TENTATIVELY IDENTIFIED COMPOUNDS (TICs)

Non-target compounds (TICs) will begin the validation procedure at level 2 due to their estimated nature. They will be examined further for blank contamination and mass spectral interpretation. Blank contamination will be assessed by the same criteria as TCL compounds.

The mass spectra of the TIC hits will be examined by the evaluators for goodness of fit as compared to the reported NBS library spectra. If a compound has been reported by the laboratory as unknown and the evaluator feels, in his or her professional judgement, that one of the library hits is more appropriate, the corrected identification will be reported, and the comment "TIC Mis-id", will be written in the comment section of the summary form.

Data Quality levels will be assigned as described in Attachment I.

See Attachment I, Tentatively Identified Compounds section.

OVERALL QUALITY LEVEL

The overall quality level of a sample is determined by the lowest degree of usability found over the course of that sample's validation. The overall data quality level of a sample is determined by the lowest degree of quality found over the course of that sample's evaluation. Overall data quality levels are not assigned to samples for which individual analyte qualifiers were used. In this case, the overall quality level column on the summary data form will contain the 'A' flag.

The summary data qualifier on the individual analyte form may also include qualifiers from the summary form. The value in the summary column on the individual analyte form is the overall qualifier for that analyte in that sample. If the summary data qualifier is level 3, there may still be usable data reported on the individual analyte form.

All analytes with reported values which exceed the initial calibration range will be assigned a quality level no better than level 2. All analytes with reported values lower than the CLP quantitation limits will be assigned a quality level no better than level 2.

FLAGS and ABBREVIATIONS

The following flags and abbreviations are used by the data evaluation team.

- A - Analyte specific. Refer to the analyte specific form for the quality levels assigned to the sample. Quality levels are assigned on an analyte-by-analyte basis for this sample.
- C - See comments. Alerts the user to a comment on the summary form which must be used when interpreting usability for this sample.
- E - Analyte result exceeds the method initial calibration range.
- HA- Holding time from extraction to analysis exceeded.
- HE- Holding time from receipt of sample to extraction exceeded.
- M - Mirex used for retention time standard. The data is assigned a level no better than 2.
- Q - Quantitation limit was not adjusted for sample percent moisture and/or sample amount. The data is assigned a level no better than 2. The sample percent moisture and amount follow this flag.
- Q1- Sample result was not adjusted for sample percent moisture and/or sample amount. The data is assigned a level no better than 2. The sample percent moisture and amount follow this flag.
- TIC ID - Usable qualitative TIC information is on the individual analyte form.
- TIC MIS-ID - The original laboratory identification on TIC is in error. Usable qualitative TIC information is on the individual analyte form.
- UNK- Unknown. Used on the individual analyte form when reporting TICs.
- HC - Hydrocarbon. Used on the individual analyte form when reporting unknown Hydrocarbon TICs.

MATRIX ABBREVIATIONS

S - Soil. The sample matrix was soil or sediment.

W - Water. The sample matrix was water.

O - Other. The sample matrix was not soil/sediment or water.
The matrix may be biota, vegetation, or drum samples.

RE- The reported results are a reanalysis of the indicated sample.
The original results may or may not have been reported.

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ATTACHMENT I

Volatile Analysis
 Sample Group Defects

Initial Calibration - Affects all samples run until the next Init. Cal.
 Affects quantitative results.
 Does not affect qualitative results.

- | | | | |
|----|---|--|---------|
| 1. | Initial calibration not performed before running samples. | Entire sample, + or - results | Level 3 |
| 2. | %RSD | 30% or less | Level 1 |
| | %RSD | 30 to 70 % | Level 2 |
| | %RSD | above 70 % | Level 3 |
| | AV-RRF | 0.300 or greater (0.250 for Bromoform) | Level 1 |
| | AV-RRF | 0.10 to 0.299 (0.10 to 0.249 for bromoform) | Level 2 |
| | AV RRF | Less than 0.10 (may increase chances for false negative results) | Level 3 |

Continuing Calibration - Affects all samples until the next calibration.
 Affects quantitative results.
 Does not affect qualitative results.

- | | | | |
|----|--|---|---------|
| | %D | 25% or less | Level 1 |
| | %D | 25 to 70 % | Level 2 |
| | %D | Above 70 % | Level 3 |
| | RRF | 0.300 or greater (0.250 for Bromoform) | Level 1 |
| | RRF | 0.10 to 0.299 (0.10 to 0.249 for Bromoform) | Level 2 |
| | RRF | Less than 0.10 (may increase chances of false negative results) | Level 3 |
| 1. | Instrument calibrated at beginning of 12 hour sequence. | | Level 1 |
| 2. | Instrument calibrated between 12 and 24 hours before analysis of sample. | | Level 2 |
| 3. | Instrument calibrated more than 24 hours before analysis of sample. | | Level 3 |

Tuning Criteria - May affect qualitative identifications.
Does not affect quantitative results.

1. Instrument tuned at beginning of 12 hour sequence; all ions in compliance with expanded criteria (see list). Level 1
2. Tune performed at beginning of 12 hour sequence, any critical ion out of criteria for expanded criteria list
OR
Instrument tuned between 12 and 24 hours of sample analysis Level 2
3. Tune not performed or tuned more than 24 hours before sample analysis Level 3

BFB Expanded Criteria List

m/z	ION ABUNDANCE CRITERIA
50	11.0 - 50.0% of base peak
75	22.0 - 75.0% of base peak
95*	base peak, 100% relative abundance
96*	5.0 - 9.0% of base peak
173	less than 1% of base peak
174*	greater than 50% of base peak
175*	5.0 -9.0% of m/z 174
176*	greater than 95% but less than 101% of m/z 174
177*	5.0 -9.0% of m/z 176

* denotes critical ions or ratios

Method Blank Analysis - Affects quantitative and qualitative results.
False positive results may be indicated.

1. Method performed as required, blank uncontaminated Level 1
2. If a method blank is not performed for a group of samples
All positive hits are Level 3
(May cause false positive results)
All negative results are acceptable Level 1

3. Blank Contamination encountered in the method blank

Common laboratory contaminants

Sample result greater than or equal to 10x amount in the blank	Level 1
Sample result between 5x and 10x amount in the blank	Level 2
Sample result less than 5x the amount in the blank	Level 3

Other TCL compounds

Sample result greater than or equal to 5x amount in the blank	Level 1
Sample result between 2.5x and 5x the amount in the blank	Level 2
Sample result less than 2.5x the amount in the blank	Level 3

Volatile Sample Analysis
Individual Sample Defects

Holding Times- May affect quantitative results.
Does not affect qualitative results.

1. Within 10 days Level 1
2. 11-28 days Level 2
3. Greater than 28 days (May increase chances of false negative and false positive results) Level 3

Surrogate Recovery - Affects quantitative results.
Does not affect qualitative results.

1. All surrogates within criteria Level 1
2. One surrogate outside SOW limits or less than 10% recovery for one surrogate (but greater than zero recovery) Level 2
3. Any surrogate not recovered at all, or 2 or more surrogates outside of limits in SOW (May increase chances of false negative results) Level 3

Internal Standards - Affects quantitative results.
Does not affect qualitative results.

1. Change in absolute area less than -50% to +100% RT of IS-sample within +/- 30 sec of IS-calibration std Level 1
2. Outside of criteria above (May increase chances of false negative results) Level 3

Tentatively Identified Compounds (TICs)- Qualitative identification affected.

1. All TICs can have a quality level no better than Level 2
2. All TICs without a complete identification, i.e., Unknown. Level 3
3. In special cases, i.e. PCBs, Identification of compound without specific isomer ID. Level 2
4. Blanks are assessed using the same criteria as TCL compounds.

Semi-Volatile Analysis
Sample Group Defects

Initial Calibration - Affects all samples run until the next Init. Cal.
Affects quantitative results.
Does not affect qualitative results.

- | | | | |
|----|---|---|---------|
| 1. | Initial calibration not performed before running samples. | Entire sample, + or - results | Level 3 |
| 2. | %RSD | 30% or less | Level 1 |
| | %RSD | 30 to 70 % | Level 2 |
| | %RSD | Above 70 % | Level 3 |
| | AV-RRF | 0.05 or greater | Level 1 |
| | AV-RRF | Less than 0.05 all + hits become | Level 2 |
| | AV RRF | Less than 0.05 all - hits become | Level 3 |
| | | (May increase chances for false negative results) | |

Continuing Calibration - Affects all samples until the next calibration.
Affects quantitative results.
Does not affect qualitative results.

- | | | | |
|----|--|---|---------|
| | %D | 25% or less | Level 1 |
| | %D | 25 to 50 % <i>70%</i> | Level 2 |
| | %D | Above 50 % <i>70%</i> | Level 3 |
| | RRF | 0.05 or greater | Level 1 |
| | RRF | Less than 0.05 all + hits become | Level 2 |
| | RRF | Less than 0.05 all - hits become | Level 3 |
| | | (May increase chances for false negative results) | |
| 1. | Instrument calibrated at beginning of 12 hour sequence. | | Level 1 |
| 2. | Instrument calibrated between 12 and 24 hours before analysis of sample. | | Level 2 |
| 3. | Instrument calibrated more than 24 hours before analysis of sample. | | Level 3 |

Tuning Criteria - May affect qualitative identifications.
Does not affect quantitative results.

1. Instrument tuned at beginning of 12 hour sequence; all ions in compliance with expanded criteria (see list). Level 1
2. Tune performed at beginning of 12 hour sequence, any critical ion out of criteria for expanded criteria list
OR
Instrument tuned between 12 and 24 hours of sample analysis Level 2
3. Tune not performed or tuned more than 24 hours before sample analysis Level 3

DFTPP Expanded Criteria List

m/z	ION ABUNDANCE CRITERIA
51	22.0% - 75.0% of m/z 198
68*	less than 2.0% of m/z 69
70*	less than 2.0% of m/z 69
127	30.0 - 70.0% of m/z 198
197*	less than 1.0% of m/z 198
198*	base peak, 100% relative abundance
199*	5.0 - 9.0% of m/z 198
275	7.0 - 37.0% of m/z 198
365	greater than 0.75% of m/z 198
441*	present but less than m/z 443
442*	greater than 30.0% of m/z 198
443*	17.0% - 23.0% of m/z 198

* denotes critical ions or ratios

Method Blank Analysis - Affects quantitative and qualitative results.
False positive results may be indicated.

1. Method performed as required, blank uncontaminated Level 1
2. Method blank not performed for a group of samples
Common lab contaminants (phthalates)
 (+) results Level 3
 (-) results Level 1
Other TCL compounds
 (+) results Level 2
 (-) results Level 1

3. Blank Contamination encountered in the method blank

Common laboratory contaminants (phthalates)

Sample result greater than or equal to 10X amount in the blank	Level 1
Sample result between 5x and 10x amount in the blank	Level 2
Sample result less than 5x the amount in the blank	Level 3

Other TCL compounds

Sample result greater than or equal to 5x amount in blank	Level 1
Sample result between 2.5x and 5x amount in the blank	Level 2
Sample result less than 2.5x the amount in the blank	Level 3

Semi-Volatile Sample Analysis
Individual Sample Defects :

Holding Times- May affect quantitative results.
Does not affect qualitative results.

Holding Times (Extractions)

- | | |
|---|---------|
| 1. Within 5 days for water or 10 days for soil | Level 1 |
| 2. 6-20 days for water, 11-20 days for soil | Level 2 |
| 3. Greater than 20 days (water and soil)
(May increase chances for false negative results) | Level 3 |

Holding times until analysis

- | | |
|---|---------|
| 1. 40 days or less | Level 1 |
| 2. 41 to 60 days | Level 2 |
| 3. More than 60 days
(May increase chances for false negative results) | Level 3 |

Surrogate Recovery - By Acid or Base/Neutral fractions
Affects quantitative results.
Does not affect qualitative results.

- | | |
|---|---------|
| 1. All surrogates within criteria | Level 1 |
| 2. Two surrogates within either fraction outside SOW limits
or less than 10% recovery for one surrogate (but greater
than zero recovery) | Level 2 |
| 3. Any surrogate not recovered at all, or 3 or more surrogates
from either fraction outside of limits in SOW
(May increase chances of false negative results) | Level 3 |

Internal Standards - Affects quantitative results.
Does not affect qualitative results.

- | | |
|---|---------|
| 1. Change in absolute area less than -50% to +100%
RT of IS-sample within +/- 30 sec of IS-calibration std | Level 1 |
| 2. Outside of criteria above
(May increase chances of false negative results) | Level 3 |

Tentatively Identified Compounds (TICs)- Qualitative identification affected:

1. All TICs can have a quality level no better than Level 2
2. All TICs without a complete identification, i.e., Unknown. Level 3
3. In special cases, i.e. PCBs, Identification of compound without specific isomer ID. Level 2
4. Blanks are assessed using the same criteria as TCL compounds.

Pesticides Analysis
Sample Group Defects

Initial and Continuing Calibrations - Affects all samples run during the 72 hour sequence, on packed and capillary columns, evaluated separately.

- | | |
|--|---------|
| 1. Initial calibration using Eval. A, B, C and Ind. A, B not run as required. Entire sample, + or - results. | Level 3 |
| 2. Failure to run the evaluation mixes A and B as required during the 72 hour sequence. Affected sub-group only. | Level 2 |
| 3. Calibration sequences run as required. | Level 1 |
| 4. Linearity (Initial Calibration): | |

Linearity will be Analyte-Specific and Column-Specific.

Aldrin - Analytes	100 - 105
Endrin - Analytes	106 - 113
DDT - Analytes	114 - 126

<10% RSD	Level 1
10 - 20% RSD	Level 2
>20% RSD	Level 3

5. Continuing Calibration Stability:
Quality level for %D is determined by the %D of the IND AB which follows a sample group. Analyte-Specific and Column-Specific for all analytes - 114. DDT used for analytes 115 - 126.

<15 %D	Level 1
15 - 25%D	Level 2
>25% D	Level 3

- | | |
|---|---------|
| 6. Analytes quantitated on capillary column will be judged for IC and CC on capillary column, but will be Q2 or Q3. | Level 2 |
|---|---------|

4,4'-DDT and Endrin Breakdown Requirement (Column-Specific):
Quality level for % Breakdown is determined by % Breakdown of the Eval B preceeding the sample group.

- | | |
|--|---------|
| 1. % Breakdown for Endrin and DDT is less than 20%. | Level 1 |
| 2. % Breakdown for Endrin and DDT is between 20 and 30%. | Level 2 |
| 3. % Breakdown for either DDT or Endrin exceeds 30%. | Level 3 |

DDT Retention Time - Affects all subsequent samples, all analytes
(Column-Specific):

- | | |
|--|---------|
| 1. DDT RT is greater than or equal to 12 minutes. | Level 1 |
| 2. DDT RT is less than 12 minutes and visual examination of the chromatogram indicates adequate separation of individual analytes has been achieved. | Level 2 |
| 3. DDT retention time less than 12 minutes. Visual examination indicates inadequate separation. | Level 3 |

Method Blank Analysis:

- | | |
|---|---------|
| 1. Method performed as required, blank uncontaminated. | Level 1 |
| 2. If a method blank is not performed for a group of samples all positive hits are All negative results are acceptable. | Level 3 |
| 3. Blank Contamination encountered in the method blank: | |
| + Results greater than 5x contamination level | Level 1 |
| + Results less than 5x contamination level | Level 3 |
| - Results | Level 1 |

Pesticide Sample Analysis
Individual Sample Defect

Holding Times:

Holding times until extraction:

- | | |
|---|---------|
| 1. Within 5 days for water or 10 days for soil | Level 1 |
| 2. 6 to 10 days for water samples; 11 - 20 days for soil | Level 2 |
| 3. Greater than 10 days for water; 20 days for soil samples | Level 3 |

Holding times until analysis:

- | | |
|---------------------------------|---------|
| 1. 40 days or less | Level 1 |
| 2. 41 to 60 days | Level 2 |
| 3. More than 60 days | Level 3 |
| 4. Q3 hits may be considered Q2 | |

Surrogate Retention Time (Column-Specific):

- | | |
|---|---------|
| 1. %D for DBC retention time of the sample compared to the initial evaluation mix standard is less than 2% for packed column and 0.3% for capillary column. | Level 1 |
| 2. %D for DBC or Mirex retention time RT sample - RT initial eval mix is greater than 2% for packed column and 0.3% for capillary column. | Level 3 |
| 3. DBC not used as surrogate. | Level 2 |
| 4. No surrogate analyzed. | Level 3 |

Surrogate Recovery:

Due to the problems with loss of DBC, surrogate recovery is not considered to be a factor in assigning data quality levels. However, if no surrogate is recovered, data may be considered non-usable for all compounds except multi-component analytes, where pattern recognition is possible.

Pesticide Sample Analysis
Individual Sample Defect

Analyte Retention Time:

Retention Time Windows - Affects the individual analyte in that sample only.

1. Retention time windows met as required by SOW and confirmation performed. Level 1
2. Retention time window met, confirmation not performed. Level 3

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ATTACHMENT B
EXAMPLE OF 1 PAGE
MASTER SHEET

(blank page)

EXAMPLE

ATTACHMENT B

Data Usability Screening for Volatile Organics

Site _____ Page ___ of ___ Auditor _____

SAMPLE NUMBER	SGG	MATRIX	DATE		ASSOC	IATE	CALIB	RATE	INT	VOA	STD	SURR	COMMENTS	OVER-	ENV.
			RECEIVED	ANALYZED										ALL	PRB
					TUNE	BLANK	INIT	CONT	OUT	OUT				LEVEL	NUM
PX037030	PXV24		7 15JUN87	18JUN87	1	A	A	A	A	3	2	SURR OUTSD CRIT(BFB&DCE) 2 INT.ST. OUTSD CRIT(BCM&CBZ).Q-28Z MOIST,	5 G. 5&6 BLANK 13-RRF 30-EXCEEDING CAL. RANGE	A	8
18			05JUN87	05JUN87											11
1			12JUN87	15JUN87	1	A	A	A	1	1	5-ZD, RANGE EXCEEDED 13-RRF Q-7Z MOIST, 5.2 G.		A	11	
1			12JUN87	15JUN87	1	A	A	A	1	2	5-ZD, RANGE EXCEEDED 13-BLANK/RRF 6-BLANK S1 OUT Q-12Z MOIST, 5.2 G.		A	11	
1			12JUN87	15JUN87	1	A	A	A	1	1	5-ZD, RANGE EXCEEDED 13-BLANK/RRF Q-7Z MOIST, 5.2 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5-ZD 13-RRF Q-11Z MOIST, 5 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5-ZD, RANGE EXCEEDED 13-BLANK/RRF Q-14Z MOIST, 5 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5-ZD, RANGE EXCEEDED 13-RRF Q-17Z MOIST, 4.9 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5-BLANK 6-BLANK 13-RRF Q-15Z MOIST, 5 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5&6-BLANK 13-RRF Q-20Z MOIST, 5.4 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5&6-BLANK 13-RRF Q-17Z MOIST, 5.1 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5-BLANK 13-RRF Q-16Z MOIST, 5.1 G.		A	11	
1			12JUN87	16JUN87	1	A	A	A	1	1	5-BLANK 13-RRF Q-19Z, 5.1 G.		A	11	
1			15JUN87	18JUN87	1	A	A	A	1	1	Q-14Z MOIST, 5 G. 13-RRF 6-BLANK		A	11	
1			15JUN87	18JUN87	1	A	A	A	1	1	Q-17Z MOIST, 5 G. 13-RRF 5&6-BLANK		A	11	
1			05JUN87	05JUN87	1	A	A	A	3	3	ALL INTNL STNDS OUT OF CRIT 13-BLANK/RRF Q-6ZMOIST,5.3 G.	TWO SURROGATES OUTSIDE CRITERIA	3	11	
1			05JUN87	05JUN87	1	A	A	A	3	2	ALL INTNL STNDS OUT OF CRIT 13-RRF Q-9ZMOIST,5.3 G. 1 SURR OUTSD CRIT		3	11	
1			05JUN87	05JUN87	1	A	A	A	1	2	Q-5Z MOIST,4.8 G. 13-RRF 1 SURR OUTSD CRIT		A	11	
1			05JUN87	06JUN87	1	A	A	A	1	1	6-BLANK 13-BLANK/RRF Q-5Z MOIST, 4.90 G.		A	11	
1			05JUN87	05JUN87	1	A	A	A	1	1	13-RRF Q-7Z MOIST, 5.10 G.		A	11	
1			06JUN87	06JUN87	1	A	A	A	A	2	5-BLANK 6-BLANK IS3 OUT Q-3Z MOIST, 5 G.		A	11	
1			06JUN87	07JUN87	1	A	A	A	1	1	6-BLANK Q-9Z MOIST, 5 G.		A	11	
1			06JUN87	06JUN87	1	A	A	A	1	1	5-BLANK 6-BLANK 13-BLANK Q-3Z MOIST, 4.89 G.		A	11	
1			06JUN87	06JUN87	1	A	A	A	1	1	5-BLANK 6-BLANK 13-BLANK Q-6Z MOIST, 4.9 G.		A	11	
1			05JUN87	06JUN87	2	A	A	A	A	2	IS2 & IS3 LOW, BFB SENSITIVITY TIME OUT, S1 HIGH Q-11Z MOIST, 5.2 G.		A	11	
1			06JUN87	06JUN87	1	A	A	A	1	1	5-BLANK 6-BLANK 13-BLANK Q-9Z MOIST, 5 G.		A	11	

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ATTACHMENT C
ENV. PROBLEM FILE
(EXAMPLE)

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ATTACHMENT D
GUIDELINES

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Title: GUIDELINES FOR EVALUATING USABILITY

The following are guidelines for evaluating usability of volatile and semivolatile organic data:

1. For volatile organic analysis data, both the blanks and the samples can contain common laboratory contaminants such as methylene chloride, acetone, and 2-butanone. These common laboratory contaminants are not considered "hits" under the following criteria:
 - a. if their concentrations are less than 10X the concentration of the method blank (which will be noted just to the left of the "BL" column), or less than 10X the concentration in the associated trip blank; or
 - b. if these contaminants are not in the method or trip blanks and their concentration is less than 10X the CRQL. Even if the quality level = 1, these contaminants must be at least 10X the contract required quantitation limit (CRQL) before the values are considered actual "hits".

The CRQL levels for these contaminants in both water and soil matrices are:

methylene chloride	5 ppb
acetone	10 ppb
2-butanone	10 ppb

2. In general, for those data where the quality level is 3, hits above the CRQL can be considered real. However, it must be noted that this type of data is qualitative but not quantitative. For example, a hit at 10 ppb toluene with quality level 3 could actually have a toluene concentration of 1 to 25 ppb.
3. All tentatively identified compounds (TIC) data should be evaluated relative to compounds known to be used at the DOE sites. Mass spectra libraries may be limited and not contain the spectrum of analytes characteristic at the DOE sites. All TIC data will be reported to the Survey Team regardless of the data quality level. For this evaluation, all TIC-unknown data are classified Q3 based on the limitations of the mass spectrum interpretation.
4. Examples of increased probability of false negatives are:
 - 2 or more surrogates are out-of-limits for volatiles
 - internal standard is out-of-limits or has a low percent recovery (%R)
 - holding times exceeded

5. Examples of increased probability of false positive are:
- no method blank was run with the SDG
 - no trip blank was run with the VOA SDG
 - holding times exceeded along with no trip blank analysis for the VOA SDGs
6. When quality level 3 data is accepted for usability, a footnote which explains why the data is accepted should be noted and included in the summary table (Appendix E).
7. Analyte values which are below the CRQL are reported, but will not be classified as Q1 data. These data will generally be classified as Q3 data because they are semi-quantitative.
8. Semivolatile analysis data for both blanks and the samples can contain common laboratory contaminants such as bis(2-ethylhexyl) phthalate, diethylphthalate, and di-n-octylphthalate. These common laboratory contaminants are not considered "hits" under the following criteria:
- a. if their concentrations are less than 10X the concentration of the method blank or 10X the CRQL, and/or
 - b. if the quality level = 1, these contaminants must be at least 10X the CRQL before the values are considered actual "hits".

The CRQL level for these contaminants are:

<u>Organic compound</u>	<u>Water matrix</u>	<u>Soil matrix</u>
bis(2-ethylhexyl) phthalate	10 ppb	330 ppb
di-n-octyl phthalate	10 ppb	330 ppb
diethylphthalate	10 ppb	330 ppb

ATTACHMENT E
SUMMARY TABLE

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ATTACHMENT E

ENV PROBLEM # - 3 SAMPLES (No analysis data available)

ENV PROBLEM # - 9 SAMPLES

o	Toluene	21ppb	Q3 (IS)(SU) No Trip Blank
	TIC-Trifluorochloromethane	8ppb	Q3 (MS)(SU) No Trip Blank
	TIC-Unknown	11ppb	Q3 (MS)(SU) No Trip Blank
o	No analysis data		

NOTE: 2 of the 8 samples, analyzed have no hits but the overall quality level is QL=3; hence the potential for false negatives exists.

ENV PROBLEM # - 3 SAMPLES

o	Toluene	7ppb	Q2
o	Toluene	64ppb	Q2
o	Toluene	7ppb	Q2

NOTE: No toluene in trip blank.

ENV PROBLEM # - 9 SAMPLES

o	Chloroform	6ppb	Q2
o	TIC-Methane(bis)thio	226ppb	Q2
o	Toluene	101ppb	Q2
o	Toluene	9ppb	Q2

NOTE: Trip blank and samples contained the normal laboratory contaminants, methylene chloride, acetone, and 2-butanone. Neither chloroform nor toluene was detected in the trip blank.

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Oak Ridge National Laboratory
Analytical Chemistry Division

Method:

ANALYSIS QUALITY LEVEL EVALUATION

SDG No.:

SITE NAME:

Date(s) Received:

Date(s) prepared:

QC Request:

Date(s) analyzed:

Completed

Description

Page 1 of 4

DOCUMENTATION COMPLETENESS

Case Narrative Review

Preparer: _____

Reviewer: _____

Method Description

Reporting Forms Review

Preparer: _____

Reviewer: _____

Analyst Worksheets/Notebook Review

ANALYSIS QUALITY

Representativeness

Samples Preserved and Stored Properly

Appropriate Percentages of Holding Times Met (as listed in Table 1)

Actual % Compliance

Deviation From Holding Times Requirements

Oak Ridge National Laboratory
 Analytical Chemistry Division
ANALYSIS QUALITY LEVEL EVALUATION

Method:

SDG No.:

SITE NAME:

Page 2 of 4

Completed	Description
	<p>ANALYSIS QUALITY (continued)</p> <p><u>Comparability</u></p> <p>Participation in EPA quarterly Performance Evaluation _____</p> <hr/> <p><u>Precision</u></p> <p>80% of duplicate results for aqueous samples in compliance with requirements _____</p> <hr/> <p>_____ Actual % Compliance _____ Deviation from 80% Compliance</p> <p>70% of duplicate results for soil samples in compliance with requirements _____</p> <hr/> <p>_____ Actual % Compliance _____ Deviation from 70% Compliance</p> <p>Other matrix: _____</p> <p>70% of precision control limits met _____</p> <p>_____ Actual % Compliance _____ Deviation From 70% Compliance</p> <p>COMMENTS</p> <p>_____</p> <p>_____</p> <p>_____</p>

Method:

SDG No.:

SITE NAME:

Page 4 of 4

TABLES

Table 1. Criteria for Holding Times

<u>Method</u>	<u>% Criteria</u>
CVAA	90
ICP, GFAA, Total U	98
Anions	50
Cyanide	75
Other analytes	90

Table 2. % Criteria for Continuing Calibration Verification Data

<u>Method</u>	<u>% Criteria</u>
ICP, GFAA, CVAA	90
Rads	75
Inorganic Exotics	75
Anions	90
Other	90

Table 3. Summary of Levels

- Level 1: Percent Criteria for Compliance met
- Level 2: $\leq 20\%$ deviation from above conditions
- Level 3: $> 20\%$ deviation from above conditions

Comments

DATA QUALITY EVALUATION
PRELIMINARY OPERATING PROCEDURE
ICP (INCLUDING K)

DATE IN USE: 10-1-88
SITE(S) : LL/SN/ANL/BNL/INEL
PREPARER : Katherine Whalcy

- REFERENCES: 1) EPA Document: Standard Operating Procedure For Contract Compliance Screening (CCS) of Routine Analytical Services Of Inorganics Data Under SOW No. 787
2) EPA Document: Data Quality Objectives For Remedial Response Activities - Development Process
3) EPA Document: Laboratory Data Validation - Functional Guidelines For Evaluating Inorganic Analyses

PROCEDURE SUMMARY: Designed to allow determination of utility or quality levels for DOE Site Survey ICP and potassium analyses, the format for this procedure also provides a summary of all problem areas. The review occurs at the analyte level and results in an overall quality for each sample with provisions for individual analyte exceptions. The central document is the series of comments (see attachment A) which serve both to summarize specific nonconformances (as defined in CLP protocol) and to define data quality levels associated with these nonconformances. While an overall sample quality level is the final product, all analyte review results and comments appear on one sample specific form (see attachment B). Therefore no step in the process is lost. Overall levels can be reevaluated as needed.

Attachment C is an example of a completed data quality evaluation form (older version of form). The ICP-QA information requested (see attachment B top) can be used to indicate SDG number. Current ORNL inorganics practice is to provide separate electronic and hard copy files for each day's quality control results to the site data management group. The level assigned for arsenic spike results is level 2, comment 27(see attachment A) with potential detection limit elevation of 40%. Calibration blank results are evaluated together under the "CCB" column. The level assigned for aluminum preparation blanks is level 1, comment 6. If a category is left blank it is assumed that the level is 1 without comments. Quality table identification numbers are assigned for each table and current ORNL ICP practice is to store quality levels, exceptions, sample numbers, environmental problem numbers, and data quality table numbers on disk.

Potassium should be included in this procedure if determined by ICP or AA under CLP protocols. If flame emission is used, the data quality level must determined while keeping in mind that flame emission is not a CLP method.

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Attachment A

COMMENT CODES

CODE

COMMENT

- 1 The calibration verification falls outside the control windows but within the ranges of 50-89% . Sample results are considered as estimated but usable. Reported results could be negatively biased by % amount indicated by " - X " appearing after code descriptor in " () ". LEVEL 2
- 2 The calibration verification falls outside the control windows but within the ranges of 111-150% . The sample results are considered as estimated but usable. Reported results could be positively biased by % amount indicated by " + X " appearing after code descriptor in " () ". LEVEL 2
- 3 The calibration verification result is greater than 110%, but the element was not detected in the sample. The usability of the analytical sample determination is acceptable . LEVEL 1
- 4 The calibration verification result is less than 90% and the element was not detected in the sample. The detection limit may be elevated by % amount indicated by " + X " appearing after code descriptor in " () ". The data is considered marginally usable. LEVEL 3
- 5 The calibration verification result falls less than 50% or greater than 150% . This is indicative of a severe analytical deficiency. The data is rejected as unusable. LEVEL 3
- 5A The calibration verification result for the secondary channel out of control. Only primary channel results reported. Primary channel was in compliance. Data not affected. LEVEL 1
- 6 Positive value observed in the preparation blank which is less than the CRDL. This is acceptable according to CLP protocol. LEVEL 1
- 7 Positive value observed in the calibration blank which is less than the CRDL, but greater than 2X the IDL. The sample result was less than 5X the blank result. The possibility of a false positive exists. The data is considered marginally usable. LEVEL 3
- 8 Positive value observed in the blank which is greater than the CRDL. The sample result was less than 10X the blank result. It is not possible to verify whether the level of analyte detected in the sample was due to contamination. The data is rejected as unusable. LEVEL 3
- 8A Positive value observed in the blank which is greater than the CRDL. The element however was not detected in the sample. The data is acceptable. LEVEL 1
- 9 Positive value observed in the blank which is greater than the CRDL. The sample result was > than 10X the blank result. The data is acceptable according to the CLP protocol. LEVEL 1

COMMENT CODES

CODE

COMMENT

- 10 % Recovery value for interference check standard is outside the control windows. The AL, CA, FE, and MG concentrations in the sample are less than 60% of their values in the ICS standard. No other potentially interfering elements are present in concentrations exceeding 10 ppm. The data is judged to be acceptable. LEVEL 1
- 11 % Recovery value for interference check standard is > 120% and the sample contains any of the following in concentrations at the levels of the ICS standard: AL,CA,FE,MG . The sample result is < IDL. The data is judged to be acceptable. LEVEL 1
- 12 % Recovery value for interference check standard is > 120% and the sample contains any of the following in concentrations at the levels of the ICS standard: AL,CA,FE,MG . The sample result is > IDL. The sample result is considered estimated but acceptable. Reported results could be positively biased by % amount indicated by " + X " appearing after code descriptor in " () ". LEVEL 2
- 13 % Recovery value for interference check standard falls between 30 and 79 % and the sample contains any of the following in concentrations at the level of the ICS standard: AL,CA,FE,MG. Positive sample results were reported. The sample results are considered as estimated but acceptable. Reported results could be negatively biased by % amount indicated by " - X " appearing after code descriptor in " () ". LEVEL 2
- 14 % Recovery value for interference check standard falls between 30 and 79% and the sample contains any of the following in concentrations at the level of the ICS standard: AL,CA,FE,MG. The element was not detected in the sample. The possibility for false negatives exists. The detection limit may be elevated by % amount indicated by " - X " appearing after code descriptor in " () ". LEVEL 2
- 15 The % recovery value for the laboratory control standard falls within the range of 30-79% and a positive sample result was reported. The data is considered estimated but acceptable. Reported result could be negatively biased by % amount indicated by " - X " appearing after code descriptor in " () ". LEVEL 2
- 16 The % recovery value for the laboratory control standard is greater than 120% and a positive sample result was reported. The data is considered as estimated but acceptable. Reported result could be positively biased by % amount indicated by " + X " appearing after code descriptor in " () ". LEVEL 2
- 17 The % recovery value for the laboratory control standard falls within the range of 30-79% and the element was not detected in the sample. The possibility for false negatives exists. The data is considered as estimated but acceptable. The actual detection limit could be elevated by % amount indicated by " + X " appearing after code descriptor in " () ". LEVEL 2

COMMENT CODES

CODE

COMMENT

- 18 The % recovery value for the laboratory control standard is > 120% and the element was not detected in the sample. The data is considered acceptable LEVEL 1
- 18A The % recovery value for the laboratory control standard is < 30% and the element was not detected in the sample. The detection limit may be greatly elevated or the element not recovered in this sample. The data is rejected as unusable. LEVEL 3
- 18B The % recovery value for the laboratory control standard is < 30% and a positive sample result was reported. The data is considered as confirmation of the qualitative presence of the analyte only. LEVEL 3
- General comments regarding duplicate analysis review: Actions taken as a result of duplicate sample analysis must be weighed carefully since it may be difficult to determine if poor precision is a result of sample non-homogeneity, method defects or laboratory technique. The non-homogeneous nature of soil samples often makes it more difficult to achieve good duplicate results compared to aqueous samples. However, aqueous samples containing high levels of solids can produce erratic duplicate results as well. In general, the results of duplicate sample analysis should be used to support conclusions drawn about the quality of the data rather than as a basis for these conclusions.
- 19 RPD value for duplicate analysis out of control. This sample in the SDG was not the sample prepared in duplicate and it appears evident that its matrix is of a different chemical and physical nature than the sample chosen for duplication. The data is judged to be acceptable. LEVEL 2
- 20 RPD value for duplicate analysis > 50% . The data is considered as confirmation of the qualitative presence of the analyte only. LEVEL 3
- 21 RPD value for duplicate analysis > 20%, but < 50% . The data is considered as estimated but acceptable. LEVEL 2
- 22 Control limits for concentration of duplicate < 5X CRDL exceeded. The data is considered as estimated but acceptable. LEVEL 2
- 23 % Recovery for spike outside control limits, but the sample result exceeds the spike result by a factor of 4 or greater. The results are not flagged, as the percent recovery results can not be considered accurate in this case. This is acceptable under the CLP protocol. LEVEL 1
- 23A % Recovery for spike outside control limits, but the sample result is close to 4X the spiking level. The accuracy of the % R result is questionable. The result has been flagged but considered acceptable and usable. LEVEL 2

COMMENT CODES

<u>CODE</u>	<u>COMMENT</u>
24	% Recovery for spike outside control limits. This sample in the SDG was not the sample spiked during preparation and it appears evident that its matrix is of a different chemical and physical nature than the sample chosen for spiking. The data is judged to be acceptable. <u>LEVEL 2</u>
25	% Recovery for spike is > 125% and the reported sample result is less than the IDL. The data is acceptable. <u>LEVEL 1</u>
26	% Recovery for spike is > 125% and the reported sample result is positive. The results are considered as estimated but acceptable. Reported results could be positively biased by % amount indicated by " + X " appearing after code descriptor in " () ". <u>LEVEL 2</u>
27	% Recovery for spike falls within the range of 30-74% and the reported sample result is less than the IDL. The possibility for false negatives exists. The actual detection limit may be elevated by the % amount indicated by " + X " appearing after code descriptor in " () ". The data is considered as estimated but acceptable. <u>LEVEL 2</u>
28	% Recovery for spike falls within the range of 30-74% and the reported sample result is positive. The possibility for false negatives exists. The data is considered as estimated but acceptable. The reported result could be considered to be negatively biased by % amount indicated by " - X " appearing after code descriptor in " () ". <u>LEVEL 2</u>
29	% Recovery for spike < 30% and the reported sample result is positive. The data may be biased significantly low and should be considered as as qualitative analyte presence only. <u>LEVEL 3</u>
30	% Recovery for spike < 30% and the reported sample result is less than the IDL. This is indicative of severe analytical deficiencies. The detection limit may be substantially elevated. The data is rejected as as unusable. <u>LEVEL 3</u>
30A	% Recovery for spike < 30% due to choice of spiking level within a factor of 2 of the IDL. Nothing can be said about the accuracy of sample digestion. The data is marginally acceptable. <u>LEVEL 3</u>

General comments regarding review of serial dilution results: This analysis is required so that the reviewer can ascertain whether significant physical or chemical interferences exist due to sample matrix.

31	10% criteria for serial dilution result not met. A matrix interference is suspected. The data is considered as estimated but usable. <u>LEVEL 2</u>
----	---

** Indicates that additional comments appear on individual quality level table form (sample specific - see summary sheet for each site to find quality table number for particular sample).
 h. Whaley
 10-24-88

Attachment B

ICP-QA: _____

DOE SITE SURVEY - DATA VALIDATION
ICP

QUALITY TABLE: _____

SITE: _____
 DOE SAMPLE NO: _____
 LABORATORY SAMPLE NO: _____
 SDG NO: _____
 MATRIX: _____

REVIEWER: _____
 DATE: _____
 SAMPLE VALIDATION QUALITY LEVEL: _____
 EXCEPTIONS: see below

LEVEL	ELEMENT	DATA QUALITY LEVEL								
		ICV	CCV	CCB	PB	ICS	LCS	DUP	SPK	SD
	ALUMINUM									
	ANTIMONY									
	ARSENIC									
	BARIUM									
	BERYLLIUM									
	CADMIUM									
	CALCIUM									
	CHROMIUM									
	COBALT									
	COPPER									
	IRON									
	LEAD									
	MAGNESIUM									
	MANGANESE									
	NICKEL									
	SELENIUM									
	SILVER									
	SODIUM									
	VANADIUM									
	ZINC									

COMMENT CODES APPEAR IN () AFTER EACH CATAGORY
 ONLY DEVIATIONS FROM LEVEL 1 AND QUALIFIED LEVEL 1 WILL BE NOTED ON FORM
 IGV/CCV: Initial and cont. calib. verification ICS: Interference chk std
 LCS: Laboratory control std CCB/PB: Calib. and preparation blanks

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CPA 63005 Attachment C

Quality Table : A1D
A2D
(K.C.D)

if category left blank, assume Level 1

DOE SITE SURVEY - INORGANIC
ICP

SITE: LL
DOE SAMPLE NO: LL011010C
LABORATORY SAMPLE NO: 370814-104
SDG NO: LL011010C
MATRIX: S

REVIEWER: Katherine Whaley
DATE: 10-18-85

Overall Quality Level (sample): 1
Mn: 2, Se: 2, Ni: 2

cat level	ELEMENT	DATA QUALITY LEVEL								
		ICV	CCV	CCB	PB	ICS	LCS	DUP	SPK	SD
	ALUMINUM				1(6)			2(21)		
	ANTIMONY									
	ARSENIC								2(27) + 40	
	BARIUM				1(6)					
	BERYLLIUM									
	CADMIUM									
	CALCIUM							2(21)		
	CHROMIUM									2(31)
	COBALT									
	COPPER									
	IRON				1(6)			2(21)		
	LEAD									
	MAGNESIUM				1(6)					
2	MANGANESE							3(20)		
2	NICKEL							2(22)	2(28) - 30	
	POTASSIUM <u>Kw.</u>									
2	SELENIUM								3(30)	
	SILVER									
	SODIUM									
	VANADIUM									
	ZINC									

COMMENT CODES APPEAR IN () AFTER EACH CATAGORY

ICV: Initial calibration verification
 CCV: Continuing calibration verification
 CCB: Continuing calibration blank (includes initial results)
 PB: Preparation blank
 ICS: Interference Chk Std.
 LCS: Laboratory Control Std.

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ARGONNE NATIONAL LABORATORY

9700 SOUTH CASS AVENUE, ARGONNE, ILLINOIS 60439

April 6, 1989

Mr. Robert Fitts
Program Manager
Oak Ridge Environmental Survey
Program
Environmental Sciences Division
Oak Ridge National Laboratory
P.O. Box 2008
Oak Ridge, TN 37831

Dear Bob,

Per Renee Tucker's letter of March 6, 1989, I am sending you a copy of the SOP that I have been using to determine the Oak Ridge organic data usability.

I trust this is what you need.

Sincerely,



Peter C. Lindahl
Analytical Chemistry Laboratory
Chemical Technology Division

PCL:amb

Enclosure NOTE: The enclosure for this letter was DRT-SOP-002 Rev 3 with attachments (see pages D-iii through D-bii).

cc: w/o Encl.
D. Green
F. Martino
M. Steindler (2)
P. Nelson
R. Tucker (ORNL)

w/Encl.
DES FILE

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TABLE D.1.1 DIRECTORY FOR ANIONS AND CYANIDE QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
2	BR306018J	BR306018J	D.1.2 (D-3)
2	BR306018K	BR306018J	D.1.2 (D-3)
2	BR306029J	BR306018J	D.1.2 (D-3)
2	BR306029K	BR306018J	D.1.2 (D-3)
2	BR306030J	BR306018J	D.1.2 (D-3)
2	BR306030K	BR306018J	D.1.2 (D-3)
2	BR306041E	BR306018J	D.1.2 (D-3)
2	BR306041F	BR306018J	D.1.2 (D-3)
2	BR308010I	BR308010I	D.1.3 (D-4)
2	BR308021I	BR308010I	D.1.3 (D-4)
2	BR308032I	BR308010I	D.1.3 (D-4)
2	BR308043I	BR308010I	D.1.3 (D-4)
2	BR310014I	BR306018J	D.1.2 (D-3)
2	BR310025I	BR306018J	D.1.2 (D-3)
2	BR310036I	BR306018J	D.1.2 (D-3)

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TABLE D.1.2 BROOKHAVEN ANIONS AND CYANIDE - SDG NUMBER: BR306018J

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CALIBRATION VER TRUE BRCVA1168 WATER UG/L	CALIBRATION VER TRUE BRCVB1171 WATER UG/L	CALIBRATION VER TRUE BRCVC1173 WATER UG/L	CALIBRATION VER TRUE BRCVD1175 WATER UG/L	CALIBRATION VER FOUND BRCVA1166 WATER UG/L	CALIBRATION VER FOUND BRCVB1170 WATER UG/L	CALIBRATION VER FOUND BRCVC1172 WATER UG/L
CYANIDE, TOTAL	603	320	2100	448	541	333	2420
AREA							
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 975 CESSPOOL BR306018J WATER UG/L 2	B. 479 CESSPOOL BR306029J WATER UG/L 2	B. 479 CESSPOOL BR306030J WATER UG/L 2	B. 975 CESSPOOL BR306018K WATER UG/L 2	B. 479 CESSPOOL BR306029K WATER UG/L 2	B. 479 CESSPOOL BR306030K WATER UG/L 2	B. 479 CESSPOOL BR306041E WATER UG/L 2
CYANIDE, TOTAL	2 U	2 U	2 U	2 U	2 U	2 U	2 U
AREA		QA	QA				QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 479 CESSPOOL BR306041F WATER UG/L 2	DUPLICATE BR306041F WATER UG/L 2	CALIBRATION VER FOUND BRCVD1174 WATER UG/L	B. 905 CESSPOOL BR310014I WATER UG/L 2	B. 905 CESSPOOL BR310025I WATER UG/L 2	B. 905 CESSPOOL BR310036I WATER UG/L 2	DUPLICATE BR310036I WATER UG/L 2
CYANIDE, TOTAL	2 U	2 U	491	2 U	2 U	2 U	2 U
AREA	QA	QA					
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR310036I WATER UG/L 2	MS % RECOVERY BR310036I % 2					
CYANIDE, TOTAL	33	41					

D-3

TABLE D.1.3 BROOKHAVEN ANIONS AND CYANIDE - SDG NUMBER: BR308010I

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CALIBRATION VER TRUE BRCVA1169 WATER UG/L	CALIBRATION VER FOUND BRCVA1167 WATER UG/L	B. 422 CESSPOOL BR308010I WATER UG/L	DUPLICATE BR308010I WATER UG/L	MATRIX SPIKE BR308010I WATER UG/L	MS % RECOVERY BR308010I %	B. 422 CESSPOOL BR308021I WATER UG/L
	448	477	2 U	2 U	283	354	162
CYANIDE, TOTAL							
AREA		QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 422 CESSPOOL BR308032I WATER UG/L	MATRIX SPIKE BR308032I WATER UG/L	MS % RECOVERY BR308032I %	B. 422 CESSPOOL BR308043I WATER UG/L			
	70	244	218	2 U			
CYANIDE, TOTAL							

D-4

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
0	BR809016F	BR303015K	D.2.11 (D-43)
0	BR809016F	BR308010F	D.2.15 (D-62)
0	BR809016G	BR800119G	D.2.27 (D-98)
0	BR809027F	BR303015K	D.2.11 (D-43)
0	BR809027F	BR308010F	D.2.15 (D-62)
0	BR809027G	BR800119G	D.2.27 (D-98)
0	BR809038F	BR303015K	D.2.11 (D-43)
0	BR809038F	BR308010F	D.2.15 (D-62)
0	BR809038G	BR800119G	D.2.27 (D-98)
0	BR810019C	BR313017C	D.2.20 (D-81)
0	BR810019C	BR313017K	D.2.21 (D-85)
0	BR810019D	BR810019D	D.2.32 (D-114)
0	BR810019E	BR800062D	D.2.26 (D-97)
0	BR810019F	BR501015B	D.2.23 (D-88)
0	BR810020C	BR313017C	D.2.20 (D-81)
0	BR810020C	BR313017K	D.2.21 (D-85)
0	BR810020D	BR810019D	D.2.32 (D-114)
0	BR810020E	BR800062D	D.2.26 (D-96)
0	BR810020F	BR501015B	D.2.23 (D-88)
0	BR810031C	BR313017C	D.2.20 (D-82)
0	BR810031C	BR313017K	D.2.21 (D-85)
0	BR810031D	BR810019D	D.2.32 (D-114)
0	BR810031E	BR800062D	D.2.26 (D-96)
0	BR810031F	BR501015B	D.2.23 (D-89)
1	BR300012G	BR300012G	D.2.3 (D-21)
1	BR300012G	BR300012K	D.2.7 (D-30)
1	BR300012H	BR300012H	D.2.4 (D-25)
1	BR300012I	BR300012I	D.2.5 (D-27)
1	BR300012J	BR300012J	D.2.6 (D-29)
1	BR300023G	BR300012G	D.2.3 (D-22)
1	BR300023G	BR300012K	D.2.7 (D-30)
1	BR300023H	BR300012H	D.2.4 (D-25)
1	BR300023I	BR300012I	D.2.5 (D-27)
1	BR300023J	BR300012J	D.2.6 (D-29)
1	BR300034G	BR300012G	D.2.3 (D-22)
1	BR300034G	BR300012K	D.2.7 (D-30)
1	BR300034H	BR300012H	D.2.4 (D-25)
1	BR300034I	BR300012I	D.2.5 (D-27)
1	BR300034J	BR300012J	D.2.6 (D-29)
1	BR301013F	BR300012G	D.2.3 (D-22)
1	BR301013F	BR300012K	D.2.7 (D-30)
1	BR301013G	BR300012H	D.2.4 (D-25)
1	BR301013H	BR300012I	D.2.5 (D-27)
1	BR301013I	BR300012J	D.2.6 (D-29)
1	BR301024F	BR300012G	D.2.3 (D-22)
1	BR301024F	BR300012K	D.2.7 (D-30)
1	BR301024G	BR300012H	D.2.4 (D-25)
1	BR301024H	BR300012I	D.2.5 (D-27)
1	BR301024I	BR300012J	D.2.6 (D-29)
1	BR301035F	BR300012G	D.2.3 (D-22)
1	BR301035F	BR300012K	D.2.7 (D-30)

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
1	BR301035G	BR300012H	D.2.4 (D-25)
1	BR301035H	BR300012I	D.2.5 (D-27)
1	BR301035I	BR300012J	D.2.6 (D-29)
1	BR301046F	BR300012G	D.2.3 (D-22)
1	BR301046F	BR300012K	D.2.7 (D-30)
1	BR301046G	BR300012H	D.2.4 (D-25)
1	BR301046H	BR300012I	D.2.5 (D-27)
1	BR301046I	BR300012J	D.2.6 (D-29)
1	BR302014F	BR300012G	D.2.3 (D-20)
1	BR302014F	BR300012K	D.2.7 (D-30)
1	BR302014G	BR300012H	D.2.4 (D-26)
1	BR302014H	BR300012I	D.2.5 (D-27)
1	BR302014I	BR300012J	D.2.6 (D-29)
1	BR302025F	BR300012G	D.2.3 (D-20)
1	BR302025F	BR300012K	D.2.7 (D-30)
1	BR302025G	BR300012H	D.2.4 (D-26)
1	BR302025H	BR300012I	D.2.5 (D-27)
1	BR302025I	BR300012J	D.2.6 (D-29)
1	BR302036F	BR300012G	D.2.3 (D-21)
1	BR302036F	BR300012K	D.2.7 (D-30)
1	BR302036G	BR300012H	D.2.4 (D-26)
1	BR302036H	BR300012I	D.2.5 (D-28)
1	BR302036I	BR300012J	D.2.6 (D-29)
1	BR302047A	BR300012G	D.2.3 (D-21)
1	BR302047A	BR300012K	D.2.7 (D-30)
1	BR302047B	BR300012H	D.2.4 (D-26)
1	BR302047C	BR300012I	D.2.5 (D-28)
1	BR303015C	BR303015C	D.2.8 (D-35)
1	BR303015C	BR303015K	D.2.11 (D-42)
1	BR303015D	BR303015D	D.2.9 (D-38)
1	BR303015E	BR303015E	D.2.10 (D-40)
1	BR303026C	BR303015C	D.2.8 (D-35)
1	BR303026C	BR303015K	D.2.11 (D-42)
1	BR303026D	BR303015D	D.2.9 (D-38)
1	BR303026E	BR303015E	D.2.10 (D-40)
1	BR303037C	BR303015C	D.2.8 (D-35)
1	BR303037C	BR303015K	D.2.11 (D-42)
1	BR303037D	BR303015D	D.2.9 (D-38)
1	BR303037E	BR303015E	D.2.10 (D-40)
1	BR304016C	BR303015C	D.2.8 (D-35)
1	BR304016C	BR303015K	D.2.11 (D-42)
1	BR304016D	BR303015D	D.2.9 (D-38)
1	BR304016E	BR303015E	D.2.10 (D-40)
1	BR304027C	BR303015C	D.2.8 (D-35)
1	BR304027C	BR303015K	D.2.11 (D-42)
1	BR304027D	BR303015D	D.2.9 (D-38)
1	BR304027E	BR303015E	D.2.10 (D-40)
1	BR304038C	BR303015C	D.2.8 (D-35)
1	BR304038C	BR303015K	D.2.11 (D-43)
1	BR304038D	BR303015D	D.2.9 (D-38)
1	BR304038E	BR303015E	D.2.10 (D-40)
1	BR304049F	BR300012G	D.2.3 (D-23)

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
1	BR304049F	BR300012K	D.2.7 (D-30)
1	BR304049G	BR500014G	D.2.22 (D-86)
1	BR304049H	BR300012I	D.2.5 (D-28)
1	BR305017C	BR303015C	D.2.8 (D-33)
1	BR305017C	BR303015K	D.2.11 (D-42)
1	BR305017D	BR303015D	D.2.9 (D-38)
1	BR305017E	BR303015E	D.2.10 (D-40)
1	BR305028C	BR303015C	D.2.8 (D-33)
1	BR305028C	BR303015K	D.2.11 (D-42)
1	BR305028D	BR303015D	D.2.9 (D-39)
1	BR305028E	BR303015E	D.2.10 (D-40)
1	BR305039C	BR303015C	D.2.8 (D-34)
1	BR305039C	BR303015K	D.2.11 (D-42)
1	BR305039D	BR303015D	D.2.9 (D-39)
1	BR305039E	BR303015E	D.2.10 (D-40)
2	BR306018F	BR306018F	D.2.12 (D-48)
2	BR306018F	BR306018K	D.2.14 (D-57)
2	BR306018G	BR306018G	D.2.13 (D-54)
2	BR306029F	BR306018F	D.2.12 (D-48)
2	BR306029F	BR306018K	D.2.14 (D-57)
2	BR306029G	BR306018G	D.2.13 (D-54)
2	BR306030F	BR306018F	D.2.12 (D-48)
2	BR306030F	BR306018K	D.2.14 (D-57)
2	BR306030G	BR306018G	D.2.13 (D-54)
2	BR306041A	BR306018F	D.2.12 (D-48)
2	BR306041A	BR306018K	D.2.14 (D-56)
2	BR306041B	BR306018G	D.2.13 (D-54)
2	BR308010F	BR303015K	D.2.11 (D-43)
2	BR308010F	BR308010F	D.2.15 (D-61)
2	BR308010G	BR308010G	D.2.16 (D-67)
2	BR308021F	BR303015K	D.2.11 (D-43)
2	BR308021F	BR308010F	D.2.15 (D-61)
2	BR308021G	BR308010G	D.2.16 (D-67)
2	BR308032F	BR303015K	D.2.11 (D-44)
2	BR308032F	BR308010F	D.2.15 (D-61)
2	BR308032G	BR308010G	D.2.16 (D-67)
2	BR308043F	BR303015K	D.2.11 (D-43)
2	BR308043F	BR308010F	D.2.15 (D-62)
2	BR308043G	BR308010G	D.2.16 (D-67)
2	BR310014F	BR306018F	D.2.12 (D-48)
2	BR310014F	BR306018K	D.2.14 (D-57)
2	BR310014G	BR306018G	D.2.13 (D-54)
2	BR310025F	BR306018F	D.2.12 (D-48)
2	BR310025F	BR306018K	D.2.14 (D-57)
2	BR310025G	BR306018G	D.2.13 (D-54)
2	BR310036F	BR306018F	D.2.12 (D-48)
2	BR310036F	BR306018K	D.2.14 (D-57)
2	BR310036G	BR308010G	D.2.16 (D-67)
2	BR311015C	BR311015C	D.2.17 (D-71)
2	BR311015C	BR311015K	D.2.19 (D-76)
2	BR311015D	BR311015D	D.2.18 (D-75)
2	BR311015E	BR303015E	D.2.10 (D-41)

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
2	BR311026F	BR303015K	D.2.11 (D-43)
2	BR311026F	BR308010F	D.2.15 (D-62)
2	BR311026G	BR308010G	D.2.16 (D-67)
2	BR311026H	BR300012I	D.2.5 (D-28)
2	BR313017C	BR313017C	D.2.20 (D-81)
2	BR313017C	BR313017K	D.2.21 (D-85)
2	BR313017D	BR311015D	D.2.18 (D-75)
2	BR313017E	BR303015E	D.2.10 (D-41)
2	BR315019C	BR311015C	D.2.17 (D-71)
2	BR315019C	BR311015K	D.2.19 (D-76)
2	BR315019D	BR311015D	D.2.18 (D-75)
2	BR315019E	BR303015E	D.2.10 (D-41)
3	BR316010H	BR000011A	D.2.2 (D-15)
3	BR316021H	BR000011A	D.2.2 (D-16)
3	BR316032H	BR000011A	D.2.2 (D-16)
3	BR316043H	BR000011A	D.2.2 (D-16)
4	BR500014F	BR300012G	D.2.3 (D-22)
4	BR500014F	BR300012K	D.2.7 (D-31)
4	BR500014G	BR500014G	D.2.22 (D-86)
4	BR500025F	BR300012G	D.2.3 (D-22)
4	BR500025F	BR300012K	D.2.7 (D-31)
4	BR500025G	BR500014G	D.2.22 (D-86)
4	BR500036F	BR300012G	D.2.3 (D-22)
4	BR500036F	BR300012K	D.2.7 (D-31)
4	BR500036G	BR500014G	D.2.22 (D-86)
4	BR500047C	BR303015C	D.2.8 (D-34)
4	BR500047C	BR303015K	D.2.11 (D-42)
4	BR500047D	BR303015D	D.2.9 (D-39)
4	BR500058C	BR303015C	D.2.8 (D-34)
4	BR500058C	BR303015K	D.2.11 (D-42)
4	BR500058D	BR303015D	D.2.9 (D-39)
4	BR500069C	BR303015C	D.2.8 (D-35)
4	BR500069C	BR303015K	D.2.11 (D-42)
4	BR500069D	BR303015D	D.2.9 (D-39)
4	BR507011H	BR000011A	D.2.2 (D-16)
4	BR507022H	BR000011A	D.2.2 (D-16)
4	BR507033H	BR000011A	D.2.2 (D-16)
4	BR507044H	BR000011A	D.2.2 (D-16)
4	BR507055H	BR000011A	D.2.2 (D-17)
4	BR507066H	BR000011A	D.2.2 (D-17)
4	BR507077H	BR000011A	D.2.2 (D-17)
4	BR507088H	BR000011A	D.2.2 (D-17)
4	BR508056D	BR508056D	D.2.25 (D-91)
4	BR508067D	BR508056D	D.2.25 (D-93)
4	BR508078D	BR508056D	D.2.25 (D-93)
4	BR508089D	BR508056D	D.2.25 (D-93)
4	BR508090D	BR508056D	D.2.25 (D-93)
4	BR508103D	BR508056D	D.2.25 (D-94)
4	BR508114F	BR000011A	D.2.2 (D-15)
5	BR501015A	BR308010F	D.2.15 (D-62)
5	BR501015A	BR501015K	D.2.24 (D-90)
5	BR501015B	BR501015B	D.2.23 (D-88)

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
5	BR501026A	BR308010F	D.2.15 (D-63)
5	BR501026A	BR501015K	D.2.24 (D-90)
5	BR501026B	BR501015B	D.2.23 (D-88)
5	BR501037A	BR308010F	D.2.15 (D-63)
5	BR501037A	BR501015K	D.2.24 (D-90)
5	BR501037B	BR501015B	D.2.23 (D-88)
5	BR501048A	BR308010F	D.2.15 (D-63)
5	BR501048A	BR501015K	D.2.24 (D-90)
5	BR501048B	BR501015B	D.2.23 (D-88)
5	BR501093A	BR306018F	D.2.12 (D-47)
5	BR501093A	BR306018K	D.2.14 (D-56)
5	BR501093B	BR300012I	D.2.5 (D-28)
6	BR503017D	BR303015C	D.2.8 (D-35)
6	BR503017D	BR303015K	D.2.11 (D-43)
6	BR503028D	BR303015C	D.2.8 (D-35)
6	BR503028D	BR303015K	D.2.11 (D-43)
6	BR503039D	BR303015C	D.2.8 (D-35)
6	BR503039D	BR303015K	D.2.11 (D-43)
6	BR503040D	BR303015C	D.2.8 (D-36)
6	BR503040D	BR303015K	D.2.11 (D-43)
6	BR503051G	BR306018F	D.2.12 (D-47)
6	BR503051G	BR306018K	D.2.14 (D-56)
6	BR504018D	BR313017C	D.2.20 (D-79)
6	BR504018D	BR313017K	D.2.21 (D-84)
6	BR504029D	BR313017C	D.2.20 (D-79)
6	BR504029D	BR313017K	D.2.21 (D-84)
6	BR504030D	BR313017C	D.2.20 (D-80)
6	BR504030D	BR313017K	D.2.21 (D-84)
8	BR800062C	BR313017C	D.2.20 (D-80)
8	BR800062C	BR313017K	D.2.21 (D-84)
8	BR800062D	BR800062D	D.2.26 (D-96)
8	BR800073C	BR313017C	D.2.20 (D-80)
8	BR800073C	BR313017K	D.2.21 (D-84)
8	BR800073D	BR800062D	D.2.26 (D-96)
8	BR800084C	BR313017C	D.2.20 (D-81)
8	BR800084C	BR313017K	D.2.21 (D-84)
8	BR800084D	BR800062D	D.2.26 (D-96)
8	BR800095C	BR313017C	D.2.20 (D-81)
8	BR800095C	BR313017K	D.2.21 (D-84)
8	BR800095D	BR800062D	D.2.26 (D-97)
8	BR800108C	BR313017C	D.2.20 (D-81)
8	BR800108C	BR313017K	D.2.21 (D-84)
8	BR800108D	BR800062D	D.2.26 (D-96)
8	BR800119F	BR306018F	D.2.12 (D-49)
8	BR800119F	BR306018K	D.2.14 (D-56)
8	BR800119G	BR800119G	D.2.27 (D-98)
8	BR801018G	BR306018F	D.2.12 (D-46)
8	BR801018G	BR306018K	D.2.14 (D-57)
8	BR801018H	BR500014G	D.2.22 (D-86)
8	BR801029G	BR306018F	D.2.12 (D-46)
8	BR801029G	BR306018K	D.2.14 (D-57)
8	BR801029H	BR500014G	D.2.22 (D-86)

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
8	BR801030G	BR306018F	D.2.12 (D-47)
8	BR801030G	BR306018K	D.2.14 (D-57)
8	BR801030H	BR500014G	D.2.22 (D-86)
8	BR801041G	BR306018F	D.2.12 (D-49)
8	BR801041G	BR306018K	D.2.14 (D-56)
8	BR801041H	BR306018G	D.2.13 (D-54)
8	BR802019C	BR311015C	D.2.17 (D-70)
8	BR802019C	BR311015K	D.2.19 (D-76)
8	BR802019D	BR802019D	D.2.28 (D-100)
8	BR802019E	BR303015E	D.2.10 (D-41)
8	BR802020C	BR311015C	D.2.17 (D-70)
8	BR802020C	BR311015K	D.2.19 (D-76)
8	BR802020D	BR802019D	D.2.28 (D-100)
8	BR802020E	BR303015E	D.2.10 (D-41)
8	BR802031C	BR311015C	D.2.17 (D-71)
8	BR802031C	BR311015K	D.2.19 (D-76)
8	BR802031D	BR802019D	D.2.28 (D-100)
8	BR802031E	BR303015E	D.2.10 (D-41)
8	BR803010C	BR313017C	D.2.20 (D-81)
8	BR803010C	BR313017K	D.2.21 (D-84)
8	BR803010D	BR810019D	D.2.32 (D-114)
8	BR803010E	BR501015B	D.2.23 (D-89)
8	BR803021C	BR313017C	D.2.20 (D-81)
8	BR803021C	BR313017K	D.2.21 (D-84)
8	BR803021D	BR810019D	D.2.32 (D-114)
8	BR803021E	BR501015B	D.2.23 (D-89)
8	BR803032C	BR313017C	D.2.20 (D-81)
8	BR803032C	BR313017K	D.2.21 (D-84)
8	BR803032D	BR810019D	D.2.32 (D-114)
8	BR803032E	BR501015B	D.2.23 (D-89)
8	BR803043C	BR313017C	D.2.20 (D-81)
8	BR803043C	BR313017K	D.2.21 (D-84)
8	BR803043D	BR810019D	D.2.32 (D-115)
8	BR803043E	BR501015B	D.2.23 (D-89)
9	BR804011A	BR311015C	D.2.17 (D-72)
9	BR804011A	BR311015K	D.2.19 (D-76)
9	BR804011B	BR303015E	D.2.10 (D-40)
9	BR804022A	BR311015C	D.2.17 (D-72)
9	BR804022A	BR311015K	D.2.19 (D-76)
9	BR804022B	BR303015E	D.2.10 (D-40)
9	BR804033A	BR311015C	D.2.17 (D-72)
9	BR804033A	BR311015K	D.2.19 (D-76)
9	BR804033B	BR303015E	D.2.10 (D-41)
9	BR804044A	BR311015C	D.2.17 (D-72)
9	BR804044A	BR311015K	D.2.19 (D-76)
9	BR804044B	BR303015E	D.2.10 (D-41)
9	BR804055A	BR311015C	D.2.17 (D-72)
9	BR804055A	BR311015K	D.2.19 (D-77)
9	BR804055B	BR303015E	D.2.10 (D-41)
9	BR804066A	BR311015C	D.2.17 (D-72)
9	BR804066A	BR311015K	D.2.19 (D-77)
9	BR804066B	BR303015E	D.2.10 (D-41)

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
9	BR805012F	BR306018F	D.2.12 (D-49)
9	BR805012F	BR306018K	D.2.14 (D-56)
9	BR805012G	BR800119G	D.2.27 (D-98)
9	BR805023F	BR306018F	D.2.12 (D-49)
9	BR805023F	BR306018K	D.2.14 (D-57)
9	BR805023G	BR800119G	D.2.27 (D-98)
9	BR805034F	BR306018F	D.2.12 (D-50)
9	BR805034F	BR306018K	D.2.14 (D-57)
9	BR805034G	BR800119G	D.2.27 (D-98)
10	BR806013C	BR806013C	D.2.29 (D-102)
10	BR806013C	BR806013K	D.2.30 (D-107)
10	BR806024C	BR806013C	D.2.29 (D-102)
10	BR806024C	BR806013K	D.2.30 (D-107)
10	BR806035C	BR806013C	D.2.29 (D-103)
10	BR806035C	BR806013K	D.2.30 (D-107)
10	BR806046C	BR806013C	D.2.29 (D-103)
10	BR806046C	BR806013K	D.2.30 (D-107)
10	BR806057C	BR806013C	D.2.29 (D-103)
10	BR806057C	BR806013K	D.2.30 (D-107)
10	BR806068C	BR806013C	D.2.29 (D-104)
10	BR806068C	BR806013K	D.2.30 (D-107)
10	BR806079C	BR806013C	D.2.29 (D-104)
10	BR806079C	BR806013K	D.2.30 (D-107)
10	BR806080C	BR806013C	D.2.29 (D-104)
10	BR806080C	BR806013K	D.2.30 (D-107)
10	BR806091C	BR806013C	D.2.29 (D-104)
10	BR806091C	BR806013K	D.2.30 (D-107)
10	BR806104C	BR806013C	D.2.29 (D-104)
10	BR806104C	BR806013K	D.2.30 (D-107)
10	BR806115C	BR806013C	D.2.29 (D-104)
10	BR806115C	BR806013K	D.2.30 (D-108)
10	BR806126C	BR806013C	D.2.29 (D-104)
10	BR806126C	BR806013K	D.2.30 (D-108)
10	BR806137C	BR806013C	D.2.29 (D-104)
10	BR806137C	BR806013K	D.2.30 (D-108)
10	BR806148C	BR806013C	D.2.29 (D-104)
10	BR806148C	BR806013K	D.2.30 (D-108)
10	BR806159F	BR306018F	D.2.12 (D-51)
10	BR806159F	BR306018K	D.2.14 (D-57)
10	BR807014K	BR306018F	D.2.12 (D-50)
10	BR807014K	BR306018K	D.2.14 (D-57)
10	BR807025K	BR306018F	D.2.12 (D-50)
10	BR807025K	BR306018K	D.2.14 (D-56)
10	BR807036K	BR306018F	D.2.12 (D-50)
10	BR807036K	BR306018K	D.2.14 (D-56)
10	BR807047A	BR306018F	D.2.12 (D-51)
10	BR807047A	BR306018K	D.2.14 (D-56)
10	BR809049H	BR809016H	D.2.31 (D-110)
10	BR809050H	BR809016H	D.2.31 (D-110)
10	BR809061H	BR809016H	D.2.31 (D-111)
10	BR809072H	BR809016H	D.2.31 (D-112)
10	BR809083H	BR809016H	D.2.31 (D-112)

TABLE D.2.1 DIRECTORY FOR METALS, INCLUDING CR+6 QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
10	BR809094A	BR000011A	D.2.2 (D-14)
10	BR809107H	BR000011A	D.2.2 (D-15)
10	BR809118H	BR809016H	D.2.31 (D-110)
10	BR809129H	BR809016H	D.2.31 (D-110)
10	BR809130H	BR809016H	D.2.31 (D-110)
11	BR808015C	BR311015C	D.2.17 (D-72)
11	BR808015C	BR311015K	D.2.19 (D-76)
11	BR808015D	BR800062D	D.2.26 (D-97)
11	BR808026C	BR311015C	D.2.17 (D-72)
11	BR808026C	BR311015K	D.2.19 (D-76)
11	BR808026D	BR800062D	D.2.26 (D-97)
11	BR808037C	BR311015C	D.2.17 (D-72)
11	BR808037C	BR311015K	D.2.19 (D-76)
11	BR808037D	BR800062D	D.2.26 (D-97)

TABLE D.2.2 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR000011A

DRAFT DO NOT CITE

AREA	METHOD	QA INITIAL CAL TRUE A BR2AA1001 UG/L	QA INITIAL CAL FOUND A BR2AA2001 UG/L	QA INITIAL CAL BLANK 1 BR03A0001 WATER UG/L	QA CRDL STAND TRUE BR2B10001 UG/L	QA CRDL STAND INITIAL BR2B10001 UG/L	QA CONTINUING CAL TRUE BR2AA3001 UG/L	QA CONTINUING CAL FOUND BR2AA4001 UG/L
ALUMINUM	P	1970	2010	21 U			2000	2060
ANTIMONY	P	1090	1140	58 U			5000	5150
ARSENIC	P	10000	10900	80 U			10000	11000
BARIUM	P	2120	2020	2 U			2000	2030
BERYLLIUM	P	527	491	0.2 U	10	9.1	2000	2030
CADMIUM	P	488	473	2.5 U	10	12	2000	1970
CALCIUM	P	51800	47900	20 U			50000	51400
CHROMIUM	P	529	504	2.6 U	20	20	2000	2040
COBALT	P	496	483	14 U	100	94	2000	1980
COPPER	P	524	543	1.9 U	50	51	2000	2070
IRON	P	2060	2020	11 B			2000	2040
LEAD	P	5160	4810	50 U			2000	2040
MAGNESIUM	P	25500	24600	41 U			5000	5130
MANGANESE	P	520	508	1.8 B	30	32	2000	1990
NICKEL	P	495	483	12 U	80	85	2000	2030
POTASSIUM	P	51300	50000	82 U			10000	9860
SELENIUM	P	5000	5010	97 U			5000	5220
SILVER	P	495	466	2.2 U	20	22	1000	989
SODIUM	P	50300	50700	160 B			10000	9810
THALLIUM	P	7000	7000	26 U			7000	7140
VANADIUM	P	520	525	4.9 B	100	105	2000	2070
ZINC	P	3070	2850	1.9 U	40	43	2000	2010

% SOLIDS

AREA	METHOD	QA CONTINUING CAL BLANK BR03A1001 WATER UG/L	QA INTER CHK SOL. A TRUE BR0400011 UG/L	QA INTER CHK SOL. A INIT BR0400011 UG/L	QA INTER CHK SOL. AB TRUE BR0400011 UG/L	QA INTER CHK SOL. AB INIT BR0400011 UG/L	QA PREP BLANK BR03A0001 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BR0710001 WATER UG/L
ALUMINUM	P	21 U	502000	408000	508000	467000	77 B	1000
ANTIMONY	P	58 U		88		138	58 U	5000
ARSENIC	P	80 U		-67		-89	80 U	5000
BARIUM	P	2 U		122	483	569	3.3 B	1000
BERYLLIUM	P	0.2 U		12	474	465	0.2 U	1000

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TABLE D.2.2 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR000011A

DRAFT DO NOT CITE

AREA	METHOD	QA CONTINUING CAL BLANK BR03A1001 WATER UG/L	QA INTER CHK SOL. A TRUE BR0400011 UG/L	QA INTER CHK SOL. A INIT BR0400011 UG/L	QA INTER CHK SOL. AB TRUE BR0400011 UG/L	QA INTER CHK SOL. AB INIT BR0400011 UG/L	QA PREP BLANK BR03A0001 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BR0710001 WATER UG/L
CADMIUM	P	2.5 U		5	909	856	2.5 U	1000
CALCIUM	P	20 U	506000	447000	516000	449000	54 B	1000
CHROMIUM	P	2.6 U		60	513	514	2.6 U	1000
COBALT	P	14 U		23	478	461	14 U	1000
COPPER	P	1.9 U		1	534	518	4.1 B	1000
IRON	P	4 U	196000	187000	203000	183000	45 B	1000
LEAD	P	50 U		286	4850	4630	50 U	1000
MAGNESIUM	P	-49 B	498000	451000	509000	450000	41 U	1000
MANGANESE	P	1.6 B		105	531	558	2 B	1000
NICKEL	P	12 U		24	916	874	12 U	1000
POTASSIUM	P	-86 B		-57		-58	-129 B	10000
SELENIUM	P	97 U		0		-156	97 U	5000
SILVER	P	2.2 U		-8	993	868	3.1 B	1000
SODIUM	P	-60 B		424		420	26 B	10000
THALLIUM	P	26 U		134	921	1000	33 B	5000
VANADIUM	P	2.3 U		-57	475	420	4.9 B	1000
ZINC	P	1.9 U		21	973	898	2.4 B	1000

% SOLIDS

AREA	METHOD	QA LAB CONTROL SAMPLE BR0710001 WATER UG/L	QA B-975 WELL BR809094A WATER UG/L	QA DUPLICATE BR809094A WATER UG/L	QA DUPLICATE RPD BR809094A %	QA MATRIX SPIKE BR809094A WATER UG/L	QA MS % RECOVERY BR809094A %	QA SERIAL DILUTION BR809094A WATER UG/L
ALUMINUM	P	1000	21 U	21 U		1910	96	106 U
ANTIMONY	P	4980	58 U	58 U		520	104	292 U
ARSENIC	P	5130	80 U	80 U		1950	98	402 U
BARIUM	P	966	2 U	2 U		1960	98	10 U
BERYLLIUM	P	974	0.3 B	0.2 U	200	50	99	1 B
CADMIUM	P	959	2.5 U	2.5 U		49	97	12 U
CALCIUM	P	1090	35 B	40 B	12			102 U
CHROMIUM	P	970	2.6 U	2.6 U		191	96	13 U
COBALT	P	937	14 U	14 U		481	96	70 U
COPPER	P	992	6.7 B	3.4 B	65	251	98	22 B

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TABLE D.2.2 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR000011A

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		LAB CONTROL	B-975	DUPLICATE	DUPLICATE	MATRIX	MS %	QA
TYPE OF LOCATION		SAMPLE	WELL	DUPLICATE	RPD	SPIKE	RECOVERY	SERIAL
SAMPLE NUMBER		BR0710001	BR809094A	BR809094A	BR809094A	BR809094A	BR809094A	DILUTION
MATRIX		WATER	WATER	WATER		WATER		WATER
UNITS		UG/L	UG/L	UG/L	X	UG/L	%	UG/L
ENV PROBLEM NO		10	10	10	10	10	10	10
IRON	P	983	20 B	4 U	200	1000	98	41 B
LEAD	P	951	50 U	50 U		497	99	249 U
MAGNESIUM	P	1010	41 U	41 U				205 U
MANGANESE	P	964	1.9 B	1.4 B	30	492	98	9.5 B
NICKEL	P	971	12 U	12 U		491	98	61 U
POTASSIUM	P	9120	82 U	82 U				408 B
SELENIUM	P	4940	97 U	97 U		2020	101	484 U
SILVER	P	899	3.1 B	2.5 B	21	46	86	11 B
SODIUM	P	9650	175 B	219 B	22			38 U
THALLIUM	P	5840	26 U	26 U		1960	98	129 U
VANADIUM	P	981	4.1 B	4.1 B	0	498	99	24 B
ZINC	P	945	2.4 B	2 B	18	481	96	50

% SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		B-975	U/D CUR LF	W UPTON RD	CONTINUING	INITIAL CAL	CONTINUING	INITIAL CAL
TYPE OF LOCATION		WELL	WELL AT LNDF	WELL	CAL FOUND	FOUND A	CAL BLANK	BLANK 2
SAMPLE NUMBER		BR809107H	BR508114F	BR316010H	BR2AA5001	BR2AB2001	BR03A2001	BR03B0001
MATRIX		WATER	WATER	WATER			WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		10	4	3				
ALUMINUM	P	21 U	21 U	21 U	2070		21 U	
ANTIMONY	P	58 U	58 U	58 U	5310		58 U	
ARSENIC	P	80 U	80 U	80 U	11200		80 U	
BARIUM	P	2 U	2 U	31 B	2080		2 U	
BERYLLIUM	P	0.2 U	0.2 U	0.2 U	2060		0.2 U	
CADMIUM	P	2.5 U	2.5 U	2.5 U	2010		2.5 U	
CALCIUM	P	115 B	97 B	8670	52300		30 B	
CHROMIUM	P	2.6 U	2.6 U	3.6 B	2080		2.6 U	
COBALT	P	14 U	14 U	14 U	2020		14 U	
COPPER	P	2.5 B	4.8 B	24 B	2090		1.9 U	
IRON	P	6.8 B	58 B	22 B	2060		4 U	
LEAD	P	50 U	50 U	50 U	2060		50 U	
MAGNESIUM	P	41 U	41 U	2380 B	5200		41 U	
MANGANESE	P	2 B	4.2 B	156	2020		1.5 B	1.7 B
NICKEL	P	12 U	12 U	12 U	2040		12 U	

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TABLE D.2.2 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR000011A

DRAFT DO NOT CITE

AREA	METHOD	B-975 WELL BR809107H WATER UG/L	U/D CUR LF WELL AT LNDF BR508114F WATER UG/L	W UPTON RD WELL BR316010H WATER UG/L	QA CONTINUING CAL FOUND BR2AA5001 UG/L	QA INITIAL CAL FOUND A BR2AB2001 UG/L	QA CONTINUING CAL BLANK BRO3A2001 WATER UG/L	QA INITIAL CAL BLANK 2 BR03B0001 WATER UG/L
ENV PROBLEM NO		10	4	3				
POTASSIUM	P	82 U	82 U	4990 B	10300	50500	82 U	82 U
SELENIUM	P	97 U	97 U	97 U	5360		97 U	
SILVER	P	2.2 U	2.2 U	2.2 U	999		2.2 U	
SODIUM	P	265 B	298 B	19300	9860		41 B	
THALLIUM	P	26 U	26 U	26 U	7250		26 U	
VANADIUM	P	4.4 B	4.7 B	5.3 B	2090		3.2 B	
ZINC	P	4.6 B	5.6 B	21	2050		1.9 U	

% SOLIDS

AREA	METHOD	W UPTON RD WELL BR316021H WATER UG/L	W UPTON RD WELL BR316032H WATER UG/L	W UPTON RD WELL BR316043H WATER UG/L	CURR. LNDF WELL BR507011H WATER UG/L	CURR. LNDF WELL BR507022H WATER UG/L	CURR. LNDF WELL BR507033H WATER UG/L	CURR. LNDF WELL BR507044H WATER UG/L
ENV PROBLEM NO		3	3	3	4	4	4	4
ALUMINUM	P	26 B	21 U	24 B	21 U	40 B	54 B	52 B
ANTIMONY	P	58 U	68 B	58 U	58 U	58 U	65 B	58 U
ARSENIC	P	80 U						
BARIUM	P	32 B	41 B	42 B	80 B	76 B	319	333
BERYLLIUM	P	0.2 U	0.2 U	0.2 U	0.2 B	0.2 U	0.6 B	0.6 B
CADMIUM	P	2.5 U						
CALCIUM	P	8540	3760 B	3660 B	7880	8050	59400	59600
CHROMIUM	P	2.6 U	6.7 B	4.7 B	3.6 B	6.2 B	14	15
COBALT	P	14 U	45 B	38 B				
COPPER	P	25 B	8.9 B	3.4 B	3.1 B	3.3 B	1.9 U	2.8 B
IRON	P	20 B	16 B	9.6 B	822	829	57900	58300
LEAD	P	50 U	53 B	50 U				
MAGNESIUM	P	2390 B	2100 B	2100 B	2670 B	2650 B	21700	21900
MANGANESE	P	158	469	469	2670	2650	5070	5100
NICKEL	P	15 B	12 U	12 U	24 B	27 B	17 B	14 B
POTASSIUM	P	5100	5730	5810	24800	24800	18400	18600
SELENIUM	P	97 U	97	97	97 U	97 U	97 U	97 U
SILVER	P	4.2 B	3.7 B	2.2 U	2.3 B	3.5 B	22 B	7.2 B
SODIUM	P	19200	13700	13800	18600	18800	56500	56000
THALLIUM	P	26 U	41 B					

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TABLE D.2.2 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR000011A

DRAFT DO NOT CITE

AREA	METHOD	W UPTON RD WELL BR316021H WATER UG/L	W UPTON RD WELL BR316032H WATER UG/L	W UPTON RD WELL BR316043H WATER UG/L	CURR. LNDF WELL BR507011H WATER UG/L	CURR. LNDF WELL BR507022H WATER UG/L	CURR. LNDF WELL BR507033H WATER UG/L	CURR. LNDF WELL BR507044H WATER UG/L
ENV PROBLEM NO		3	3	3	4	4	4	4
VANADIUM	P	6.1 B	7.1 B	6.1 B	7.6 B	8.2 B	32 B	32 B
ZINC	P	18 B	17 B	13 B	18 B	19 B	60	31

% SOLIDS								
AREA	METHOD	CURR. LNDF WELL BR507055H WATER UG/L	CURR. LNDF WELL BR507066H WATER UG/L	CURR. LNDF WELL BR507077H WATER UG/L	QA CONTINUING CAL FOUND BR2AB4001 UG/L	QA CURR. LNDF WELL BR507088H WATER UG/L	QA CONTINUING CAL BLANK BR03A3001 UG/L	QA CONTINUING CAL BLANK BR03B4001 WATER UG/L
ENV PROBLEM NO		4	4	4		4		
ALUMINUM	P	42 B	38 B	44 B	2070	39 B	21 U	21 U
ANTIMONY	P	65 B	58 U	58 U	5190	68 B	58 U	81 B
ARSENIC	P	80 U	80 U	80 U	11200	80 U	-96 B	80 U
BARIUM	P	269	277	184 B	2050	211	2 U	2 U
BERYLLIUM	P	0.6 B	0.6 B	0.2 U	2030	0.2 U	0.4 B	0.2 U
CADMIUM	P	2.5 U	2.5 U	2.5 U	1980	2.5 U	2.5 U	2.5 U
CALCIUM	P	77800	77200	10500	51600	10300	28 B	20 U
CHROMIUM	P	12	11	6.3 B	2050	6.7 B	2.6 U	2.6 U
COBALT	P	14 U	14 U	14 U	1970	14 U	14 U	14 U
COPPER	P	1.9 U	1.9 U	3.8 B	2100	1.9 U	1.9 U	1.9 U
IRON	P	70900	70700	13400	2030	14200	4 U	4 U
LEAD	P	65 B	50 U	50 U	2030	50 U	50 U	50 U
MAGNESIUM	P	17500	17300	1650 B	5160	1570 B	41 U	-66 B
MANGANESE	P	2740	2720	3240	2000	3220	1.4 B	
NICKEL	P	19 B	17 B	19 B	2010	14 B	12 U	12 U
POTASSIUM	P	16800	16600	8130	10200	7980		82 U
SELENIUM	P	97 U	97 U	97 U	5320	97 U	97 U	97 U
SILVER	P	6.5 B	7.4 B	2.8 B	966	3.2 B	2.2 U	2.4 B
SODIUM	P	23700	23400	22200		22400	12 B	
THALLIUM	P	26 U	26 U	26 U	7250	35 B	26 U	26 U
VANADIUM	P	28 B	27 B	9.9 B	2070	9.4 B	2.5 B	3.3 B
ZINC	P	33	25	26	2020	42	1.9 U	1.9 U

% SOLIDS								

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TABLE D.2.2 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR000011A

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A FINAL BR0400011 UG/L	QA INTER CHK SOL. AB FINA BR0400011 UG/L	QA CRDL STAND FINAL BR2B10001 UG/L
ALUMINUM	P	479000	474000	
ANTIMONY	P	122	137	
ARSENIC	P	124	170	
BARIUM	P	122	572	
BERYLLIUM	P	12	469	9.2
CADMIUM	P	2	869	11
CALCIUM	P	460000	456000	
CHROMIUM	P	61	519	19
COBALT	P	26	473	94
COPPER	P	1		53
IRON	P	191000	191000	
LEAD	P	307	4720	
MAGNESIUM	P	458000	454000	
MANGANESE	P	105	561	31
NICKEL	P	22	880	89
POTASSIUM	P	15	-21	
SELENIUM	P	-80	-63	
SILVER	P	-8	889	22
SODIUM	P	378	367	
THALLIUM	P	176	1070	
VANADIUM	P	-60	426	104
ZINC	P	20	907	42

% SOLIDS				

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TABLE D.2.3 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR3000120

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INTER CHK	INTER CHK	INITIAL CAL	INITIAL CAL	INITIAL CAL	LAB CONTROL	CRDL STAND
TYPE OF LOCATION		SOL. A TRUE	SOL. AB TRUE	TRUE A	TRUE B	TRUE C	SAMPLE TRUE	TRUE
SAMPLE NUMBER		BRICS1239	BRICS1246	BRICV1267	BRICV1288	BRICV1302	BRLCS1359	BRLRA1388
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
ALUMINUM	P	511000	508000	100000	990		970	
ANTIMONY	P				1000		990	120
ARSENIC	P				1000		1000	500
BARIUM	P		483		990		970	
BERYLLIUM	P		474		241		960	10
CADMIUM	P		909		245		940	10
CALCIUM	P	476000	470000		24900	5000	1000 B	
CHROMIUM	P		513		253		1030	20
COBALT	P		478		237		1000	100
COPPER	P		534		271		1030	50
IRON	P	219000	211000	100000	995		1020	
LEAD	P		4850		2260		1010	500
MAGNESIUM	P	513000	513000	50000		5000	1000 B	
MANGANESE	P		470	50000	257		1020	30
NICKEL	P		916		248		1020	80
SELENIUM	P				1000		990	500
SILVER	P		934		255		990	20
SODIUM	P			100000		5000	860 B	
VANADIUM	P		475		256		1010	100
ZINC	P		973		1550		1010	40

% SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		LINEAR RANGE	LINEAR RANGE	INITIAL CAL	INITIAL CAL	INITIAL CAL	INITIAL CAL	CRDL STAND
TYPE OF LOCATION				FOUND A	FOUND B	FOUND C	BLANK	INITIAL
SAMPLE NUMBER		BRRAN1427	BRRAN1434	BRICV1253	BRICV1281	BRICV1295	BRICB1197	BRLRA1381
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
ALUMINUM	P	10000	800000	100000	1170		60 U	
ANTIMONY	P	10000			1010		50 U	113
ARSENIC	P	20000			1070		60 U	505
BARIUM	P	5000			1020		2 U	
BERYLLIUM	P	1500			259		0.3 U	10
CADMIUM	P	5000			260		2 U	10
CALCIUM	P	10000	900000		25300	5410	200 U	

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TABLE D.2.3 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012G

DRAFT DO NOT CITE

AREA	METHOD	QA LINEAR RANGE	QA LINEAR RANGE	QA INITIAL CAL FOUND A	QA INITIAL CAL FOUND B	QA INITIAL CAL FOUND C	QA INITIAL CAL BLANK	QA CRDL STAND INITIAL
LOCATION								
TYPE OF LOCATION								
SAMPLE NUMBER		BRRAN1427	BRRAN1434	BRICV1253	BRICV1281	BRICV1295	BRICB1197	BRLRA1381
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
CHROMIUM	P	10000			265		6 U	20
COBALT	P	10000			255		3 U	101
COPPER	P	10000			279		10 U	51
IRON	P	12000	800000	100000	1020		20 U	
LEAD	P	50000			2210		50 U	497
MAGNESIUM	P	12000	500000	48200		5040	10 U	
MANGANESE	P	2000	200000	49900	262		5 U	31
NICKEL	P	15000			246		6 U	84
SELENIUM	P	10000			1030		60 U	503
SILVER	P	10000			253		6 U	19
SODIUM	P	10000	900000	98500		4840 B	200 U	
VANADIUM	P	10000			275		4 U	100
ZINC	P	6000			1510		7 U	37

% SOLIDS

AREA	METHOD	QA INTER CHK SOL. A INIT	QA INTER CHK SOL. AB INIT	QA PREP BLANK	QA PREP BLANK	QA LAB CONTROL SAMPLE	QA WOODED PD POND	QA WOODED PD POND
LOCATION								
TYPE OF LOCATION								
SAMPLE NUMBER		BRICS1225	BRICS1232	BRPB01395	BRPB01396	BRLCS1343	BR302014F	BR302025F
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
ALUMINUM	P	502000	508000	60 U	60 U	1170	656	536
ANTIMONY	P			50 U	50 U	1050	50 U	50 U
ARSENIC	P			60 U	60 U	1080	60 UN	60 UN
BARIUM	P	15 B	479	2.3 B	5.6 B	1110	10 BE	8.5 BE
BERYLLIUM	P	4.2 B	471	0.3 U	0.3 U	1050	0.3 U	0.3 U
CADMIUM	P	18	895	2 U	2 U	994	2 U	2 U
CALCIUM	P	487000	496000	200 U	200 U	1300 B	3800 B	3460 B
CHROMIUM	P	17	463	6 U	6 U	1040	17	13
COBALT	P	6.1 B	444	3 U	3 U	1040	3 U	3 U
COPPER	P	10 U	499	10 U	10 U	1030	10 U	10 U
IRON	P	210000	213000	20 U	45 B	1060	2610	1960
LEAD	P	50 U	4390	50 U	50 U	1020	50 U	50 U
MAGNESIUM	P	508000	512000	10 U	10 U	1020 B	1660 B	1540 B
MANGANESE	P	5 U	450	5 U	5 U	1060	120	115

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TABLE D.2.3 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012G

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A INIT BRICS1225 WATER UG/L	QA INTER CHK SOL. AB INIT BRICS1232 WATER UG/L	QA PREP BLANK BRPB01395 WATER UG/L	QA PREP BLANK BRPB01396 WATER UG/L	QA LAB CONTROL SAMPLE BRICS1343 WATER UG/L	WOODED PD POND BR302014F WATER UG/L	WOODED PD POND BR302025F WATER UG/L
NICKEL	P	13 B	857	6 U	6 U	1070	10 B	7.1 B
SELENIUM	P			60 U	60 U	1100	60 U	60 U
SILVER	P	6.8 B	888	6 U	6 U	949	6 U	6 U
SODIUM	P			200 U	200 U	913 B	6870 E	6300 E
VANADIUM	P	4 U	444	4 U	4 U	991	9 B	7.5 B
ZINC	P	7 U	894	7 U	7 U	1020	50	37

% SOLIDS

D-21

AREA	METHOD	QA WOODED PD POND BR302036F WATER UG/L	QA WOODED PD POND BR302047A WATER UG/L	QA CONTINUING CAL FOUND BRCCV1053 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1105 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1129 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1001 WATER UG/L	PRIMARY PD HWMA POND BR300012G WATER UG/L
ALUMINUM	P	610	60 U	101000	1190		60 U	186 B
ANTIMONY	P	50 U	50 U		1060		50 U	50 U
ARSENIC	P	60 UN	60 UN		1090		60 U	60 UN
BARIUM	P	9 BE	2.1 BE		1080		2 U	10 BE
BERYLLIUM	P	0.3 U	0.36 B		266		0.3 U	0.3 U
CADMIUM	P	2 U	2 U		279		2 U	2 U
CALCIUM	P	3700 B	200 U		26700	5940	200 U	4200 B
CHROMIUM	P	6 U	6 U		268		6 U	6 U
COBALT	P	3 U	3 U		260		3 U	3 U
COPPER	P	10 U	10 U		280		10 U	10 U
IRON	P	2160	23 B	104000	1040		20 U	289
LEAD	P	50 U	50 U		2240		50 U	50 U
MAGNESIUM	P	1590 B	18 B	48600		4950 B	10 U	1340 B
MANGANESE	P	119	5 U	53100	268		5 U	146
NICKEL	P	6.5 B	6 U		263		6 U	6 U
SELENIUM	P	60 U	60 U		1050		60 U	60 U
SILVER	P	6 U	6 U		238		6 U	6 U
SODIUM	P	6770 E	337 BE	94000		4870 B	200 U	1610 BE
VANADIUM	P	7.6 B	4 U		267		4 U	4 B
ZINC	P	37	15 B		1510		7 U	62

% SOLIDS

TABLE D.2.3 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR3000120

DRAFT DO NOT CITE

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AREA	METHOD	PRIMARY PD HWMA POND BR300023G WATER UG/L	PRIMARY PD HWMA POND BR300034G WATER UG/L	PRIMARY PD POND BR301013F WATER UG/L	PRIMARY PD POND BR301024F WATER UG/L	PRIMARY PD POND BR301035F WATER UG/L	PRIMARY PD POND BR301046F WATER UG/L	BNL LANDF LEACHATE BR500014F WATER UG/L
ALUMINUM	P	127 B	135 B	163 B	122 B	119 B	60 U	885
ANTIMONY	P	50 U	50 U	50 U	50 U	50 U	50 U	50 U
ARSENIC	P	60 UN	60 UN	60 UN	60 UN	60 UN	60 UN	60 UN
BARIUM	P	5.2 BE	7.6 BE	9.1 BE	7.2 BE	11 BE	13 BE	82 BE
BERYLLIUM	P	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	2 B
CADMIUM	P	2 U	2 U	2 U	2 U	2 U	2 U	4.5 B
CALCIUM	P	4830 B	5640 B	3560 B	3150 B	3470 B	200 U	146000
CHROMIUM	P	6 U	6 U	6 U	6 U	6 U	6 U	6 U
COBALT	P	3 U	3 U	3 U	3 U	3 U	3 U	14 B
COPPER	P	10 U	10 U	10 U	10 U	10 U	10 U	10 U
IRON	P	185	174	1250	1520	2230	20 U	69900
LEAD	P	50 U	50 U	50 U	50 U	50 U	50 U	50 U
MAGNESIUM	P	1380 B	1550 B	1200 B	1280 B	1360 B	10 U	15100
MANGANESE	P	25	28	59	33	48	5 U	2930
NICKEL	P	6 U	6 U	6 U	6 U	6 U	6 U	6.1 B
SELENIUM	P	60 U	60 U	60 U	60 U	60 U	60 U	60 U
SILVER	P	6 U	6 U	6 U	6 U	6 U	6 U	6 U
SODIUM	P	1460 BE	1180 BE	3420 BE	3490 BE	3870 BE	200 UE	5170 E
VANADIUM	P	4 U	4 U	4 U	4 U	4 U	4 U	14 B
ZINC	P	43	59	43	37	38	21	54

% SOLIDS								
AREA	METHOD	BNL LANDF LEACHATE BR500025F WATER UG/L	BNL LANDF LEACHATE BR500036F WATER UG/L	QA CONTINUING CAL FOUND BRCCV1054 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1106 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1130 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1002 WATER UG/L	QA SERIAL DILUTION BR500036F WATER UG/L
ALUMINUM	P	1290	58500	98600	1160		60 U	60000
ANTIMONY	P	50 U	50 U		1000		50 U	250 U
ARSENIC	P	60 UN	60 UN		1050		60 U	300 U
BARIUM	P	331 E	346 E		1030		2 U	416
BERYLLIUM	P	2.5 B	4.7 B		256		0.3 U	9.2
CADMIUM	P	14	11		264		2 U	20
CALCIUM	P	166000	187000		25300	5690	200 U	189000

TABLE D.2.3 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012G

DRAFT DO NOT CITE

D-23

AREA	METHOD	QA	QA	QA	QA	QA		
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BNL LANDF LEACHATE BR500025F WATER UG/L 4	BNL LANDF LEACHATE BR500036F WATER UG/L 4	CONTINUING CAL FOUND BRCCV1054 WATER UG/L	CONTINUING CAL FOUND BRCCV1106 WATER UG/L	CONTINUING CAL FOUND BRCCV1130 WATER UG/L	CONTINUING CAL BLANK BRCCB1002 WATER UG/L	SERIAL DILUTION BR500036F WATER UG/L 4
CHROMIUM	P	6 U	57		259		6 U	60
COBALT	P	38 B	38 B		251		3 U	30 B
COPPER	P	10 U	74		273		10 U	76
IRON	P	221000	163000	99100	1010		20 U	167000
LEAD	P	50 U	127 B		2150		50 U	250 U
MAGNESIUM	P	35600	31200	47200		4880 B	10 U	30700
MANGANESE	P	9760	7180	50900	257		5 U	6480
NICKEL	P	24 B	53		251		6 U	77
SELENIUM	P	60 U	60 U		1020		60 U	300 U
SILVER	P	7.2 B	7.3 B		238		6 U	30 U
SODIUM	P	87000 E	40200 E	94600		4650 B	200 U	47500
VANADIUM	P	20 B	111		264		4 U	134
ZINC	P	151	669		1460		7 U	702

x SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		SD x DIFFERENCE BR500036F %	DUPLICATE BR500036F WATER UG/L 4	DUPLICATE RPD BR500036F %	MATRIX SPIKE BR500036F WATER UG/L 4	MS x RECOVERY BR500036F %	N PRIM. PD POND BR304049F WATER UG/L 1	CONTINUING CAL FOUND BRCCV1055 WATER UG/L
ALUMINUM	P	2.6	51300	13	49300		60 U	96300
ANTIMONY	P		50 U		376	75	50 U	
ARSENIC	P		60 U		60 U		60 UN	
BARIUM	P	20	330	16	2360	101	6.5 BE	
BERYLLIUM	P		4.6 B		57	105	0.3 U	
CADMIUM	P		11	1	62	104	2 U	
CALCIUM	P	1.1	180000	3.8	183000		200 U	
CHROMIUM	P		50	13	245	94	6 U	
COBALT	P		36 B		529	98	3 U	
COPPER	P		70	5	315	96	10 U	
IRON	P	2.5	148000	9.6	145000		20 U	97400
LEAD	P		117 B		608	96	50 U	
MAGNESIUM	P	1.6	29400	5.9	29300		10 U	46200
MANGANESE	P	9.7	6870	4.4	7480		5 U	50800

TABLE D.2.3 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR3000120

DRAFT DO NOT CITE

AREA	METHOD	QA SD X DIFFERENCE BR500036F	QA DUPLICATE BR500036F WATER UG/L	QA DUPLICATE RPD BR500036F	QA MATRIX SPIKE BR500036F WATER UG/L	QA MS X RECOVERY BR500036F	QA N PRIM. PD POND BR304049F WATER UG/L	QA CONTINUING CAL FOUND BRCCV1055 WATER UG/L
NICKEL	P	x 4	48	5	556	101	6 U	
SELENIUM	P		60 U		2010	101	60 U	
SILVER	P		7.9 B		53	91	6 U	
SODIUM	P	18	38500	4.3	38200		200 UE	90700
VANADIUM	P		101	10	565	91	4 U	
ZINC	P	4.9	627	6.5	1100	86	7 U	

x SOLIDS

AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1107 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1131 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1003 WATER UG/L	QA CRDL STAND FINAL BRLRA1374 WATER UG/L	QA INTER CHK SOL. A FINAL BRICS1211 WATER UG/L	QA INTER CHK SOL. AB FINA BRICS1218 WATER UG/L
ALUMINUM	P	1160		60 U		489000	491000
ANTIMONY	P	1020		50 U	123		
ARSENIC	P	1050		60 U	489		
BARIUM	P	1030		2 U		14 B	473
BERYLLIUM	P	255		0.3 U	9.8	4 B	458
CADMIUM	P	267		2 U	11	17	884
CALCIUM	P	25300	5760	200 U		473000	488000
CHROMIUM	P	257		6 U	20	17	450
COBALT	P	251		3 U	95	5.8 B	435
COPPER	P	272		10 U	48	10 U	482
IRON	P	1000		20 U		203000	208000
LEAD	P	2140		50 U	465	50 U	4320
MAGNESIUM	P		4810 B	10 U		494000	496000
MANGANESE	P	257		5 U	29	5 U	438
NICKEL	P	252		6 U	86	10 B	844
SELENIUM	P	1020		60 U	469		
SILVER	P	232		6 U	19	6.6 B	848
SODIUM	P		4680 B	200 U			
VANADIUM	P	260		4 U	94	4 U	426
ZINC	P	1450		7 U	32	7 U	864

x SOLIDS

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TABLE D.2.4 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012H

DRAFT DO NOT CITE

D-25

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL BLANK 1 BR03A0001 WATER UG/L	INITIAL CAL TRUE A BR2AA1001 UG/L	INITIAL CAL FOUND A BR2AA2001 UG/L	PREP BLANK BR03A0001 WATER UG/L	CONTINUING CAL BLANK BR03A1001 WATER UG/L	CONTINUING CAL FOUND BR2AA4001 UG/L	LAB CONTROL SAMPLE TRUE BR0700101 WATER UG/L
MERCURY	CV	0.02 U	20	20	0.08 B	0.02 U	20	873
x SOLIDS								
AREA	METHOD	QA					QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		LAB CONTROL SAMPLE BR0700101 WATER UG/L	PRIMARY PD HWMA POND BR300012H WATER UG/L	PRIMARY PD HWMA POND BR300023H WATER UG/L	PRIMARY PD HWMA POND BR300034H WATER UG/L	PRIMARY PD POND BR301013G WATER UG/L	CONTINUING CAL BLANK BR03A2001 WATER UG/L	CONTINUING CAL FOUND BR2AA5001 UG/L
MERCURY	CV	860	0.12 B	0.14 B	0.11 B	0.17 B	0.02 U	20
x SOLIDS								
AREA	METHOD				QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		PRIMARY PD POND BR301024G WATER UG/L	PRIMARY PD POND BR301035G WATER UG/L	PRIMARY PD POND BR301046G WATER UG/L	DUPLICATE BR301046G WATER UG/L	MATRIX SPIKE BR301046G WATER UG/L	MS X RECOVERY BR301046G %	CONTINUING CAL BLANK BR03A3001 WATER UG/L
MERCURY	CV	0.17 B	0.2	0.12 B	0.13 B	1.4	116	0.02 U
x SOLIDS								

TABLE D.2.4 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012H

DRAFT DO NOT CITE

AREA	METHOD	QA					QA	QA
LOCATION		CONTINUING	HOODED PD	HOODED PD	HOODED PD	HOODED PD	CONTINUING	CONTINUING
TYPE OF LOCATION		CAL FOUND	POND	POND	POND	POND	CAL BLANK	CAL FOUND
SAMPLE NUMBER		BR2AB4001	BR302014G	BR302025G	BR302036G	BR302047B	BR03B4001	BR2AB5001
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO			1	1	1	1		
MERCURY	CV	20	0.09 B	0.07 B	0.07 B	0.04 B	0.02 U	20
% SOLIDS								
AREA	METHOD	QA						
LOCATION		PREP						
TYPE OF LOCATION		BLANK 2						
SAMPLE NUMBER		BR03B0001						
MATRIX		WATER						
UNITS		UG/L						
ENV PROBLEM NO								
MERCURY	CV	0.09 B						
% SOLIDS								

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TABLE D.2.5 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012I

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BLANK BRICB1111 WATER MG/L	STANDARD TRUE BRSTD1111 WATER MG/L	STANDARD FOUND BRSTD1111 WATER MG/L	STANDARD TRUE BRSTD1112 WATER MG/L	STANDARD FOUND BRSTD1112 WATER MG/L	STANDARD TRUE BRSTD1113 WATER MG/L	STANDARD FOUND BRSTD1113 WATER MG/L
URANIUM, TOTAL		10E-04 U	0.025	0.026	0.05	0.048	0.1	0.096
% SOLIDS								
AREA <th>METHOD</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th>	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		PRIMARY PD HWMA POND BR300012I WATER MG/L 1	PRIMARY PD HWMA POND BR300023I WATER MG/L 1	PRIMARY PD HWMA POND BR300034I WATER MG/L 1	PRIMARY PD POND BR301013H WATER MG/L 1	PRIMARY PD POND BR301024H WATER MG/L 1	PRIMARY PD POND BR301035H WATER MG/L 1	BLANK BRCCB1112 WATER MG/L
URANIUM, TOTAL		10E-04 U	10E-04	10E-04	10E-04	10E-04 U	10E-04	10E-04 U
% SOLIDS								
AREA <th>METHOD</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th> <th>QA</th>	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		STANDARD TRUE BRSTD1114 WATER MG/L	STANDARD FOUND BRSTD1114 WATER MG/L	MATRIX SPIKE BR301035H WATER MG/L 1	MS X RECOVERY BR301035H X 1	PRIMARY PD POND BR301046H WATER MG/L 1	WOODED PD POND BR302014H WATER MG/L 1	WOODED PD POND BR302025H WATER MG/L 1
URANIUM, TOTAL		0.05	0.05	0.036	90	10E-04 U	10E-04 U	10E-04 U
% SOLIDS								

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TABLE D.2.5 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012I

DRAFT DO NOT CITE

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AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		WOODED PD POND BR302036H WATER MG/L 1	WOODED PD POND BR302047C WATER MG/L 1	BLANK BRCCB1113 WATER MG/L	STANDARD TRUE BRSTD1115 WATER MG/L	STANDARD FOUND BRSTD1115 WATER MG/L	B. 811 SLURRY BR501093B WATER MG/L 5	DUPLICATE BR501093B WATER MG/L 5
URANIUM, TOTAL		10E-04 U	10E-04 U	10E-04 U	0.05	0.05	0.004	0.003
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		DUPLICATE RPD BR501093B %	N PRIM. PD POND BR304049H WATER MG/L 1	B. 479 CESSPOOL BR311026H WATER MG/L 2	BLANK BRCCB1114 WATER MG/L	STANDARD TRUE BRSTD1116 WATER MG/L	STANDARD FOUND BRSTD1116 WATER MG/L	STANDARD TRUE BRSTD1117 WATER MG/L
URANIUM, TOTAL		29	10E-04 U	10E-04 U	10E-04 U	0.05	0.05	0.075
% SOLIDS								
AREA	METHOD	QA						
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		STANDARD FOUND BRSTD1117 WATER MG/L						
URANIUM, TOTAL		0.076						
% SOLIDS								

TABLE D.2.6 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012J

DRAFT DO NOT CITE

AREA	METHOD	WOODED PD POND	WOODED PD POND	WOODED PD POND	PRIMARY PD HWMA POND	PRIMARY PD HWMA POND	PRIMARY PD HWMA POND	PRIMARY PD POND
LOCATION		BR302014I	BR302025I	BR302036I	BR300012J	BR300023J	BR300034J	BR301013I
TYPE OF LOCATION		WATER	WATER	WATER	WATER	WATER	WATER	WATER
SAMPLE NUMBER								
MATRIX								
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		1	1	1	1	1	1	1
TOT. DISSOLVED SOLIDS		136000	121000	114000	73000	61000	63000	86000
% SOLIDS								
AREA	METHOD	PRIMARY PD POND	PRIMARY PD POND	PRIMARY PD POND				
LOCATION		BR301024I	BR301035I	BR301046I				
TYPE OF LOCATION		WATER	WATER	WATER				
SAMPLE NUMBER								
MATRIX								
UNITS		UG/L	UG/L	UG/L				
ENV PROBLEM NO		1	1	1				
TOT. DISSOLVED SOLIDS		98000	98000	30000				
% SOLIDS								

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TABLE D.2.7 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012K

DRAFT DO NOT CITE

AREA	M	QA	QA	QA	QA	QA	QA	QA
LOCATION	E	INITIAL CAL	LAB CONTROL	INITIAL CAL	INITIAL CAL	PREP	PREP	LAB CONTROL
TYPE OF LOCATION	T	TRUE A	SAMPLE TRUE	FOUND A	BLANK	BLANK	BLANK	SAMPLE
SAMPLE NUMBER	H	BRICV1268	BRLCS1360	BRICV1254	BRICB1198	BRPB01397	BRPB01398	BRLCS1344
MATRIX	O	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	D	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
POTASSIUM	FE	1000	10000	1100	100 U	100 U	100 U	11000
x SOLIDS								
AREA	M	WOODED PD	WOODED PD	WOODED PD	WOODED PD	PRIMARY PD	QA	QA
LOCATION	E	POND	POND	POND	POND	HWMA POND	CONTINUING	CONTINUING
TYPE OF LOCATION	T	BR302014F	BR302025F	BR302036F	BR302047A	BR300012G	CAL FOUND	CAL BLANK
SAMPLE NUMBER	H	WATER	WATER	WATER	WATER	WATER	BRCCV1056	BRCCB1004
MATRIX	O	UG/L	UG/L	UG/L	UG/L	UG/L	WATER	WATER
UNITS	D	1	1	1	1	1	UG/L	UG/L
ENV PROBLEM NO								
POTASSIUM	FE	1400	1300	1400	150	2100	1100	100 U
x SOLIDS								
AREA	M	PRIMARY PD	PRIMARY PD	PRIMARY PD	PRIMARY PD	PRIMARY PD	PRIMARY PD	N PRIM. PD
LOCATION	E	HWMA POND	HWMA POND	POND	POND	POND	POND	POND
TYPE OF LOCATION	T	BR300023G	BR300034G	BR301013F	BR301024F	BR301035F	BR301046F	BR304049F
SAMPLE NUMBER	H	WATER	WATER	WATER	WATER	WATER	WATER	WATER
MATRIX	O	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
UNITS	D	1	1	1	1	1	1	1
ENV PROBLEM NO								
POTASSIUM	FE	1800	1800	1300	1300	1500	100 U	100 U
x SOLIDS								

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TABLE D.2.7 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR300012K

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	BNL LANDF LEACHATE	BNL LANDF LEACHATE	BNL LANDF LEACHATE	QA	QA
LOCATION		CONTINUING CAL FOUND	CONTINUING CAL BLANK	BR500014F	BR500025F	BR500036F	CONTINUING CAL FOUND	CONTINUING CAL BLANK
TYPE OF LOCATION		BRCCV1057	BRCCB1005				BRCCV1058	BRCCB1006
SAMPLE NUMBER								
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO				4	4	4		
POTASSIUM	FE	1100	100 U	6800	14000	29000	1100	100 U
% SOLIDS								

AREA	METHOD	QA	QA	QA	QA
LOCATION		DUPLICATE	DUPLICATE	CONTINUING CAL FOUND	CONTINUING CAL BLANK
TYPE OF LOCATION			RPD	BRCCV1059	BRCCB1007
SAMPLE NUMBER		BR500036F	BR500036F		
MATRIX		WATER	WATER	WATER	WATER
UNITS		UG/L	%	UG/L	UG/L
ENV PROBLEM NO		4	4		
POTASSIUM	FE	27000	7.1	1100	100 U
% SOLIDS					

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TABLE D.2.8 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015C

DRAFT DO NOT CITE

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AREA	METHOD	QA INTER CHK SOL. A TRUE BRICS1240 WATER UG/L	QA INTER CHK SOL. AB TRUE BRICS1247 WATER UG/L	QA INITIAL CAL TRUE A BRICV1269 WATER UG/L	QA INITIAL CAL TRUE B BRICV1289 WATER UG/L	QA INITIAL CAL TRUE C BRICV1303 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BRICS1361 SOIL MG/KG	QA CRDL STAND TRUE BRLRA1389 WATER UG/L
ALUMINUM	P	511000	508000	100000	990		15200	
ANTIMONY	P				1000		20 U	120
ARSENIC	P				1000		680	500
BARIUM	P		483		990		430	
BERYLLIUM	P		474		241		1 U	10
CADMIUM	P		909		245		1 U	10
CALCIUM	P	476000	470000		24900	5000	10500	
CHROMIUM	P		513		253		17	20
COBALT	P		478		237		6.9	100
COPPER	P		534		271		265	50
IRON	P	219000	211000	100000	995		11200	
LEAD	P		4850		2260		5830	500
MAGNESIUM	P	513000	513000	50000		5000	14700	
MANGANESE	P		470	50000	257		91700	30
NICKEL	P		916		248		22	80
SELENIUM	P				1000		1 U	500
SILVER	P		934		255		2 U	20
SODIUM	P			100000		5000	3720	
VANADIUM	P		475		256		18	100
ZINC	P		973		1550		425	40

x SOLIDS

AREA	METHOD	QA LINEAR RANGE BRRAN1428 WATER UG/L	QA LINEAR RANGE BRRAN1435 WATER UG/L	QA INITIAL CAL FOUND A BRICV1255 WATER UG/L	QA INITIAL CAL FOUND B BRICV1282 WATER UG/L	QA INITIAL CAL FOUND C BRICV1296 WATER UG/L	QA INITIAL CAL BLANK BRICB1199 WATER UG/L	QA CRDL STAND INITIAL BRLRA1382 WATER UG/L
ALUMINUM	P	10000	800000	99300	1150		60 U	
ANTIMONY	P	10000			1020		50 U	127
ARSENIC	P	20000			1040		60 U	501
BARIUM	P	5000			976		2 U	
BERYLLIUM	P	1500			249		0.3 U	9.6
CADMIUM	P	5000			240		2 U	10
CALCIUM	P	10000	900000		24600	5120	200 U	

TABLE D.2.8 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015C

DRAFT DO NOT CITE

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		LINEAR RANGE	LINEAR RANGE	INITIAL CAL	INITIAL CAL	INITIAL CAL	INITIAL CAL	CRDL STAND
TYPE OF LOCATION				FOUND A	FOUND B	FOUND C	BLANK	INITIAL
SAMPLE NUMBER		BRRAN1428	BRRAN1435	BRICV1255	BRICV1282	BRICV1296	BRICB1199	BRLRA1382
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
CHROMIUM	P	10000			250		6 U	20
COBALT	P	10000			243		3.5 B	99
COPPER	P	10000			264		10 U	50
IRON	P	12000	800000	98900	956		20 U	
LEAD	P	50000			2110		50 U	498
MAGNESIUM	P	12000	500000	47600		4840 B	10 U	
MANGANESE	P	2000	200000	49200	249		5 U	29
NICKEL	P	15000			243		6 U	81
SELENIUM	P	10000			1040		60 U	528
SILVER	P	10000			247		6 U	16
SODIUM	P	10000	900000	103000		4860 B	200 U	
VANADIUM	P	10000			252		4 U	94
ZINC	P	6000			1460		7 U	37

x SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INTER CHK	INTER CHK	PREP	PREP	LAB CONTROL	N WOODDED P	N WOODDED P
TYPE OF LOCATION		SOL. A INIT	SOL. AB INIT	BLANK	BLANK	SAMPLE	POND	POND
SAMPLE NUMBER		BRICS1226	BRICS1233	BRPB01399	BRPB01400	BRLCS1345	BR305017C	BR305028C
MATRIX		WATER	WATER	WATER	WATER	SOIL	SEDIM	SEDIM
UNITS		UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO								
ALUMINUM	P	496000	500000	60 U	60 U	16900	6880	10100
ANTIMONY	P	50 U		50 U	50 U	9.3 U	12 UN	12 UN
ARSENIC	P	60 U		60 U	60 U	630	14 UN	15 UN
BARIUM	P	9.6 B	432	2 U	2 U	415	17 B	20 B
BERYLLIUM	P	4.4 B	435	0.3 U	0.3 U	1.8	0.6 B	0.63 B
CADMIUM	P	4.4 B	800	2 U	2 U	0.41	0.47 U	0.49 U
CALCIUM	P	465000	471000	200 U	200 U	10100	2260	348 B
CHROMIUM	P	16	416	6 U	6 U	8.9	6.6	9.7
COBALT	P	6.4 B	396	3 U	3 U	6.3	1.8 B	2.1 B
COPPER	P	10 U	471	10 U	10 U	248	4.7 B	4.3 B
IRON	P	204000	205000	20 U	20 U	12800	4260	4130
LEAD	P	50 U	3900	50 U	50 U	5050	16 B	19 B
MAGNESIUM	P	497000	498000	10 U	10 U	15100	743 B	766 B
MANGANESE	P	7.1 B	425	5 U	5 U	96100	50	31

TABLE D.2.8 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015C

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	N WOODED P POND	N WOODED P POND
LOCATION		INTER CHK	INTER CHK	PREP	PREP	LAB CONTROL		
TYPE OF LOCATION		SOL. A INIT	SOL. AB INIT	BLANK	BLANK	SAMPLE		
SAMPLE NUMBER		BRICS1226	BRICS1233	BRPB01399	BRPB01400	BRICS1345	BR305017C	BR305028C
MATRIX		WATER	WATER	WATER	WATER	SOIL	SEDIM	SEDIM
UNITS		UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO							1	1
NICKEL	P	10 B	782	6 U	6 U	23	4.2 B	4.4 B
SELENIUM	P	60 U		60 U	60 U	26	15 B	16 B
SILVER	P	6 U	869	6 U	6 U	1.1 U	1.4 U	1.5 U
SODIUM	P	892 B		200 U	200 U	4450	98 B	92 B
VANADIUM	P	4 U	398	4 U	4 U	19	12 B	15
ZINC	P	32	908	7 U	8.6 B	397	23	27
% SOLIDS							57.3	53

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AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		N WOODED P POND	BNL LANDF LEACHATE	CONTINUING CAL FOUND	CONTINUING CAL FOUND	CONTINUING CAL FOUND	CONTINUING CAL BLANK	BNL LANDF LEACHATE
TYPE OF LOCATION		BR305039C	BR500047C	BRCCV1060	BRCCV1108	BRCCV1132	BRCCB1008	BR500058C
SAMPLE NUMBER		SEDIM	SEDIM	WATER	WATER	WATER	WATER	SEDIM
MATRIX		MG/KG	MG/KG	UG/L	UG/L	UG/L	UG/L	MG/KG
UNITS		1	4					4
ENV PROBLEM NO								
ALUMINUM	P	7030	3370	101000	1140		60 U	3670
ANTIMONY	P	11 UN	9.4 UN		1060		50 U	11 UN
ARSENIC	P	14 UN	11 UN		1080		60 U	13 UN
BARIUM	P	16 B	18 B		1020		2 U	20 B
BERYLLIUM	P	0.52 B	0.52 B		263		0.3 U	0.36 B
CADMIUM	P	0.46 U	0.38 U		250		2 U	0.42 U
CALCIUM	P	264 B	5330		25800	5160	200 U	635 B
CHROMIUM	P	7	4.3		257		6 U	4.9
COBALT	P	1.7 B	2.4 B		250		3 U	2.9 B
COPPER	P	4.9 B	6.7		269		10 U	8.3
IRON	P	4190	11400	103000	995		20 U	10200
LEAD	P	13 B	10 B		2180		50 U	13 B
MAGNESIUM	P	680 B	1740	48000		4780 B	10 U	574 B
MANGANESE	P	30	223	52500	261		5 U	98
NICKEL	P	4.5 B	3.7 B		258		6 U	4.2 B
SELENIUM	P	14 U	11 U		1070		60 U	13 U
SILVER	P	1.4 U	1.1 U		241		6 U	1.3 U
SODIUM	P	118 B	76 B	101000		5100	200 U	150 B
VANADIUM	P	13	9 B		251		4 U	9.3 B
ZINC	P	25	178		1500		7 U	45
% SOLIDS		57.1	74					65.1

TABLE D.2.8 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015C

DRAFT DO NOT CITE

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AREA	METHOD	BNL LANDF LEACHATE BR500069C SEDIM MG/KG	S PRIM. PD POND BR303015C SEDIM MG/KG	S PRIM. PD POND BR303026C SEDIM MG/KG	S PRIM. PD POND BR303037C SEDIM MG/KG	N PRIM. PD POND BR304016C SEDIM MG/KG	N PRIM. PD POND BR304027C SEDIM MG/KG	N PRIM. PD POND BR304038C SEDIM MG/KG
ALUMINUM	P	18600	4740	9240	8890	7840	11900	13600
ANTIMONY	P	12 UN	13 UN	22 UN	18 UN	16 UN	37 UN	33 UN
ARSENIC	P	14 UN	16 UN	26 UN	21 UN	20 UN	44 UN	40 UN
BARIUM	P	57	17 B	23 B	23 B	13 B	31 B	34 B
BERYLLIUM	P	1.4	0.44 B	0.63 B	0.63 B	0.51 B	0.82 B	1.1 B
CADMIUM	P	0.48 B	0.67 B	0.87 U	0.7 U	0.66 U	1.5 U	1.3 U
CALCIUM	P	4930	670 B	360 B	287 B	192 B	743 B	1190 B
CHROMIUM	P	20	6.6	10	8.1	7.2	16	16
COBALT	P	7.3 B	0.79 U	1.6 B	1.1 U	2 B	5.4 B	2.1 B
COPPER	P	28	8.6	11	9.5	6.1 B	42	19
IRON	P	24200	1470	3470	3210	2500	54300	6660
LEAD	P	49	63	100	212	33 B	100 B	150
MAGNESIUM	P	2800	306 B	520 B	360 B	299 B	655 B	880 B
MANGANESE	P	423	16	23	16	14	98	84
NICKEL	P	15	2.8 B	5.4 B	4.5 B	6 B	17 B	11 B
SELENIUM	P	14 U	16 U	26 U	21 U	20 U	44 U	43 B
SILVER	P	1.5 B	1.6 U	2.6 U	2.1 U	2 U	4.4 U	4 U
SODIUM	P	272 B	115 B	151 B	125 B	128 B	319 B	313 B
VANADIUM	P	35	11 B	32	19	18	66	52
ZINC	P	180	29	29	34	34	85	78
% SOLIDS		61.7	49.6	30.4	37.2	39.1	19	20.1

AREA	METHOD	B. 444 RELEASES BR503017D SOIL MG/KG	B. 444 RELEASES BR503028D SOIL MG/KG	QA CONTINUING CAL FOUND BRCCV1061 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1109 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1133 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1009 WATER UG/L	B. 444 RELEASES BR503039D SOIL MG/KG
ALUMINUM	P	7470	9300	101000	1130		60 U	6010
ANTIMONY	P	7.9 UN	7.8 UN		1060		50 U	7.6 UN
ARSENIC	P	9.4 UN	9.3 UN		1090		60 U	9.2 UN
BARIUM	P	66	55		1030		2 U	266
BERYLLIUM	P	0.6 B	0.67 B		266		0.3 U	0.63 B
CADMIUM	P	0.32 U	0.31 U		253		2 U	0.3 U
CALCIUM	P	163 B	160 B		26100	5200	200 U	229 B

TABLE D.2.8 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015C

DRAFT DO NOT CITE

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AREA	METHOD	B. 444 RELEASES BR503017D SOIL MG/KG	B. 444 RELEASES BR503028D SOIL MG/KG	QA CONTINUING CAL FOUND BRCCV1061 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1109 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1133 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1009 WATER UG/L	B. 444 RELEASES BR503039D SOIL MG/KG
CHROMIUM	P	8.3	9.6		259		6 U	6.8
COBALT	P	3.2 B	2.5 B		253		3 U	2.3 B
COPPER	P	6.9	7.1		271		10 U	8.6
IRON	P	10200	7930	104000	1010		20 U	7740
LEAD	P	9.4 B	9.2 B		2210		50 U	12 B
MAGNESIUM	P	600 B	1070	48200		4790 B	10 U	511 B
MANGANESE	P	30	42	52400	263		5 U	29
NICKEL	P	16	20		261		6 U	33
SELENIUM	P	9.4 U	9.6 B		1080		60 U	9.2 U
SILVER	P	0.94 U	0.93 U		242		6 U	0.92 U
SODIUM	P	107 B	105 B	102000		5090	200 U	84 B
VANADIUM	P	15	16		254		4 U	14
ZINC	P	15	17		1510		7 U	10

% SOLIDS | 87.2 | 86.7 | | | 86.3

AREA	METHOD	QA SERIAL DILUTION BR503040D SOIL MG/KG	QA SD % DIFFERENCE BR503040D	QA B. 444 RELEASES BR503040D SOIL MG/KG	QA DUPLICATE BR503040D SOIL MG/KG	QA DUPLICATE RPD BR503040D	QA MATRIX SPIKE BR503040D SOIL MG/KG	QA MS % RECOVERY BR503040D
ALUMINUM	P	5440	2.2	5560	5450	2	5020	
ANTIMONY	P	39 U		7.7 UN	7.6 U		41	55
ARSENIC	P	46 U		9.3 UN	9.1 U		8.9 U	
BARIUM	P	4.4 B		11 B	10 B		282	92
BERYLLIUM	P	0.62 B		0.43 B	0.43 B		8.2	105
CADMIUM	P	1.5 U		0.31 U	0.3 U		7.6	103
CALCIUM	P	154 U		123 B	114 B		123 B	
CHROMIUM	P	6.1		5.7	5.6	0.1	35	101
COBALT	P	2.6 B		1.6 B	1.5 B		74	98
COPPER	P	7.7 U		3.7 B	3.5 B		40	98
IRON	P	4600		4910	4490	8.9	4260	
LEAD	P	39 U	6.3	7.7 U	7.6 U		73	99
MAGNESIUM	P	527 B	0.57	524 B	453 B		371 B	
MANGANESE	P	32		31	28	10	102	96

TABLE D.2.8 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015C

DRAFT DO NOT CITE

AREA	METHOD	QA SERIAL DILUTION BR503040D SOIL MG/KG	QA SD % DIFFERENCE BR503040D %	B. 444 RELEASES BR503040D SOIL MG/KG	QA DUPLICATE BR503040D SOIL MG/KG	QA DUPLICATE RPD BR503040D %	QA MATRIX SPIKE BR503040D SOIL MG/KG	QA MS % RECOVERY BR503040D %
NICKEL	P	4.6 U		16	17	1	88	97
SELENIUM	P	46 U		9.3 U	9.1 U		310	105
SILVER	P	4.6 U		0.93 U	0.91 U		6	81
SODIUM	P	154 U		72 B	67 B		72 B	
VANADIUM	P	11		10	9.9	0.1	79	93
ZINC	P	12		11	11	0	84	97
% SOLIDS		89.2		89.2	89.2		89.2	

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AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1062 WATER UG/L	QA CONTINUING CAL FOUND BRCCV110 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1134 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1010 WATER UG/L	QA CRDL STAND FINAL BRLRA1375 WATER UG/L	QA INTER CHK SOL. A FINAL BRICS1212 WATER UG/L	QA INTER CHK SOL. AB FINA BRICS1219 WATER UG/L
ALUMINUM	P	94900	1120		60 U		474000	477000
ANTIMONY	P		1120		50 U	129	50 U	
ARSENIC	P		1100		60 U	542	60 U	
BARIUM	P		1060		2 U		9.2 B	473
BERYLLIUM	P		258		0.75 B	11	6	448
CADMIUM	P		255		2 U	11	2.4 B	876
CALCIUM	P		25600	5450	200 U		491000	497000
CHROMIUM	P		250		6 U	20	15	426
COBALT	P		251		3 U	104	7.8 B	425
COPPER	P		262		13 B	62	21 B	465
IRON	P	105000	999		20 U		219000	220000
LEAD	P		2140		50 U	510	50 U	4070
MAGNESIUM	P	46900		4230 B	10 U		496000	496000
MANGANESE	P	57100	262		5 U	34	13 B	457
NICKEL	P		295		6 U	98	14 B	946
SELENIUM	P		1150		60 U	570	60 U	
SILVER	P		195		6 U	14	6.4 B	696
SODIUM	P	85700		5160	200 U		1150 B	
VANADIUM	P		219		4 U	84	4 U	362
ZINC	P		1510		7 U	38	48	960
% SOLIDS								

TABLE D.2.9 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	INITIAL CAL	INITIAL CAL	PREP	CONTINUING	CONTINUING	LAB CONTROL
TYPE OF LOCATION		BLANK 1	TRUE A	FOUND A	BLANK	CAL BLANK	CAL FOUND	SAMPLE TRUE
SAMPLE NUMBER		BR03A0002	BR2AA1002	BR2AA2002	BR03A0002	BR03A1002	BR2AA4002	BR0700102
MATRIX		WATER	SOIL	SOIL	WATER	WATER	SOIL	SOIL
UNITS		MG/KG	UG/L	UG/L	MG/KG	MG/KG	UG/L	MG/KG
ENV PROBLEM NO								
MERCURY	(CV)	0.02 U	20	19	0.02 B	0.02 U	20	19
* SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		LAB CONTROL	S PRIM. PD	DUPLICATE	DUPLICATE	MATRIX	MS X	CONTINUING
TYPE OF LOCATION		SAMPLE	POND	RPD	RPD	SPIKE	RECOVERY	CAL BLANK
SAMPLE NUMBER		BR0700102	BR303015D	BR303015D	BR303015D	BR303015D	BR303015D	BR03A2002
MATRIX		SOIL	SOIL	SOIL	X	SOIL	X	WATER
UNITS		MG/KG	MG/KG	MG/KG	X	MG/KG	X	MG/KG
ENV PROBLEM NO			1	1	1	1	1	
MERCURY	(CV)	20	0.1	0.15	37	0.45	122	0.02 U
* SOLIDS			62.5					

AREA	METHOD	QA						
LOCATION		CONTINUING	S PRIM. PD	S PRIM. PD	N PRIM. PD	N PRIM. PD	N PRIM. PD	N WOODED P
TYPE OF LOCATION		CAL FOUND	POND	POND	POND	POND	POND	POND
SAMPLE NUMBER		BR2AA5002	BR303026D	BR303037D	BR304016D	BR304027D	BR304038D	BR305017D
MATRIX		SOIL						
UNITS		UG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO			1	1	1	1	1	1
MERCURY	(CV)	20	0.19	0.11	0.13	0.06	0.06	0.03 B
* SOLIDS			33.3	37.6	35.2	54.5	60.6	70.7

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TABLE D.2.9 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		CONTINUING	CONTINUING	N WOODED P	N WOODED P	BNL LANDF	BNL LANDF	BNL LANDF
TYPE OF LOCATION		CAL BLANK	CAL FOUND	POND	POND	LEACHATE	LEACHATE	LEACHATE
SAMPLE NUMBER		BR03A3002	BR2AB4002	BR305028D	BR305039D	BR500047D	BR500058D	BR500069D
MATRIX		WATER	UG/L	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS		MG/KG		MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO				1	1	4	4	4
MERCURY	CV	0.02 U	20	0.04 B	0.03 B	0.31	0.11	0.07
% SOLIDS				63.7	59.3	60.2	66.7	71.7
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		CONTINUING	CONTINUING	PREP	PREP	PREP	PREP	PREP
TYPE OF LOCATION		CAL BLANK	CAL FOUND	BLANK 2	BLANK 2	BLANK 2	BLANK 2	BLANK 2
SAMPLE NUMBER		BR03B4002	BR2AB5002	BR03B0002	BR03B0002	BR03B0002	BR03B0002	BR03B0002
MATRIX		WATER	UG/L	WATER	WATER	WATER	WATER	WATER
UNITS		MG/KG		MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO								
MERCURY	CV	0.02 U	21	0.02 B				
% SOLIDS								

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TABLE D.2.10 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015E

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BLANK BRICB1111 WATER MG/L	STANDARD TRUE BRSTD1111 WATER MG/L	STANDARD FOUND BRSTD1111 WATER MG/L	STANDARD TRUE BRSTD1112 WATER MG/L	STANDARD FOUND BRSTD1112 WATER MG/L	STANDARD TRUE BRSTD1113 WATER MG/L	STANDARD FOUND BRSTD1113 WATER MG/L
URANIUM, TOTAL		10E-04 U	0.025	0.024	0.05	0.055	0.1	0.1
x SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		S PRIM. PD POND BR303015E SOIL UG/G	S PRIM. PD POND BR303026E SOIL UG/G	S PRIM. PD POND BR303037E SOIL UG/G	N PRIM. PD POND BR304016E SOIL UG/G	N PRIM. PD POND BR304027E SOIL UG/G	N PRIM. PD POND BR304038E SOIL UG/G	BLANK BRCCB1111 WATER MG/L
URANIUM, TOTAL		10	8	8	4	4	4	10E-04 U
x SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		STANDARD TRUE BRSTD1114 WATER MG/L	STANDARD FOUND BRSTD1114 WATER MG/L	N WOODED P POND BR305017E SOIL UG/G	N WOODED P POND BR305028E SOIL UG/G	N WOODED P POND BR305039E SOIL UG/G	AGS I&II SCRAPYARD BR804011B SOIL UG/G	AGS I&II SCRAPYARD BR804022B SOIL UG/G
URANIUM, TOTAL		0.05	0.054	2	8	2	1 U	1
x SOLIDS								

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TABLE D.2.10 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015E

DRAFT DO NOT CITE

AREA	METHOD	QA						
LOCATION		AGS I&II	AGS I&II	MATRIX	MS X	AGS I&II	AGS I&II	B. 422
TYPE OF LOCATION		SCRAPYARD	SCRAPYARD	SPIKE	RECOVERY	SCRAPYARD	SCRAPYARD	CESSPOOL
SAMPLE NUMBER		BR804033B	BR804044B	BR804044B	BR804044B	BR804055B	BR804066B	BR313017E
MATRIX		SOIL	SOIL	SOIL		SOIL	SOIL	SOIL
UNITS		UG/G	UG/G	UG/G	%	UG/G	UG/G	UG/G
ENV PROBLEM NO		9	9	9	9	9	9	2
URANIUM, TOTAL		1	2	4	109	3	1	2

% SOLIDS								

AREA	METHOD	QA						
LOCATION		STP	STP	STP	B. 479	B. 905	DUPLICATE	DUPLICATE
TYPE OF LOCATION		TANK	TANK	TANK	CESSPOOL	CESSPOOL		RPD
SAMPLE NUMBER		BR802019E	BR802020E	BR802031E	BR311015E	BR315019E	BR315019E	BR315019E
MATRIX		SEDIMENT	SEDIMENT	SOIL	SOIL	SOIL	SOIL	
UNITS		UG/G	UG/G	UG/G	UG/G	UG/G	UG/G	%
ENV PROBLEM NO		8	8	8	2	2	2	2
URANIUM, TOTAL		17	17	5	5	15	15	0

% SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA
LOCATION		BLANK	STANDARD	STANDARD	STANDARD	STANDARD
TYPE OF LOCATION			TRUE	FOUND	TRUE	FOUND
SAMPLE NUMBER		BRCCB1112	BRSTD1115	BRSTD1115	BRSTD1116	BRSTD1116
MATRIX		WATER	WATER	WATER	WATER	WATER
UNITS		UG/G	MG/L	MG/L	MG/L	MG/L
ENV PROBLEM NO						
URANIUM, TOTAL		10E-04 U	0.05	0.055	0.075	0.074

% SOLIDS						

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TABLE D.2.11 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015K

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	LAB CONTROL	LAB CONTROL	INITIAL CAL	INITIAL CAL	PREP	PREP
TYPE OF LOCATION		TRUE A	SAMPLE TRUE	SAMPLE TRUE	FOUND A	BLANK	BLANK	BLANK
SAMPLE NUMBER		BRICV1270	BRLCS1362	BRLCS1363	BRICV1256	BRICB1200	BRPB01403	BRPB01404
MATRIX		WATER	SOIL	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	MG/KG	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								

POTASSIUM |FE| 1000 B 8150 50200 1100 B 100 U 100 U 150 B

% SOLIDS | |

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		LAB CONTROL	N WOODED P	N WOODED P	N WOODED P	BNL LANDF	BNL LANDF	CONTINUING
TYPE OF LOCATION		SAMPLE	POND	POND	POND	LEACHATE	LEACHATE	CAL FOUND
SAMPLE NUMBER		BRLCS1346	BR305017C	BR305028C	BR305039C	BR500047C	BR500058C	BRCCV1063
MATRIX		SOIL	SEDIM	SEDIM	SEDIM	SEDIM	SEDIM	WATER
UNITS		MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	UG/L
ENV PROBLEM NO			1	1	1	4	4	

POTASSIUM |FE| 9500 350 B 400 B 370 B 290 B 270 B 1100 B

% SOLIDS | |

57.3 53 57.1 74 65.1

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		CONTINUING	BNL LANDF	S PRIM. PD	S PRIM. PD	S PRIM. PD	N PRIM. PD	N PRIM. PD
TYPE OF LOCATION		CAL BLANK	LEACHATE	POND	POND	POND	POND	POND
SAMPLE NUMBER		BRCCB1011	BR500069C	BR303015C	BR303026C	BR303037C	BR304016C	BR304027C
MATRIX		WATER	SEDIM	SEDIM	SEDIM	SEDIM	SEDIM	SEDIM
UNITS		UG/L	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO			4	1	1	1	1	1

POTASSIUM |FE| 100 U 1400 300 B 480 B 350 B 310 B 660 B

% SOLIDS | |

61.7 49.6 30.4 37.2 39.1 19

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TABLE D.2.11 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015K

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		N PRIM. PD POND BR304038C SEDIM MG/KG 1	B. 444 RELEASES BR503017D SOIL MG/KG 6	B. 444 RELEASES BR503028D SOIL MG/KG 6	B. 444 RELEASES BR503039D SOIL MG/KG 6	CONTINUING CAL FOUND BRCCV1064 WATER UG/L	CONTINUING CAL BLANK BRCCB1012 WATER UG/L	B. 444 RELEASES BR503040D SOIL MG/KG 6
POTASSIUM	FE	800 B	360 B	470 B	370 B	1100 B	100 U	380 B
% SOLIDS		20.1	87.2	86.7	86.3			89.2
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		DUPLICATE BR503040D SOIL MG/KG 6	PREP BLANK BRPB01401 WATER UG/L	PREP BLANK BRPB01402 WATER UG/L	B. 422 CESSPOOL BR308043F WATER UG/L 2	CONTINUING CAL FOUND BRCCV1065 WATER UG/L	CONTINUING CAL BLANK BRCCB1013 WATER UG/L	LAB CONTROL SAMPLE BRLCS1347 WATER UG/L
POTASSIUM	FE	320 B	100 U	100 U	100 U	1100 B	100 U	50000
% SOLIDS		89.2						
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BOUNDRY RD WELL BR809016F WATER UG/L 0	BOUNDRY RD WELL BR809027F WATER UG/L 0	B. 479 CESSPOOL BR311026F WATER UG/L 2	BOUNDRY RD WELL BR809038F WATER UG/L 0	DUPLICATE BR809038F WATER UG/L 0	B. 422 CESSPOOL BR308010F WATER UG/L 2	B. 422 CESSPOOL BR308021F WATER UG/L 2
POTASSIUM	FE	790 B	690 B	100 U	640 B	690 B	41000	30000
% SOLIDS								

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TABLE D.2.11 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR303015K

DRAFT DO NOT CITE

AREA	METHOD	QA	QA		QA	QA
LOCATION		CONTINUING	CONTINUING	B. 422	CONTINUING	CONTINUING
TYPE OF LOCATION		CAL FOUND	CAL BLANK	CESSPOOL	CAL FOUND	CAL BLANK
SAMPLE NUMBER		BRCCV1066	BRCCB1014	BR308032F	BRCCV1067	BRCCB1015
MATRIX		WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO				2		
POTASSIUM	FE	1100 B	100 U	59000	1100 B	100 U
% SOLIDS						

TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

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AREA	METHOD	QA INTER CHK SOL. A TRUE BRICS1241 WATER UG/L	QA INTER CHK SOL. AB TRUE BRICS1248 WATER UG/L	QA INITIAL CAL TRUE A BRICV1271 WATER UG/L	QA INITIAL CAL TRUE B BRICV1290 WATER UG/L	QA INITIAL CAL TRUE C BRICV1304 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BRICS1364 WATER UG/L	QA CRDL STAND TRUE BRLRA1390 WATER UG/L
ALUMINUM	P	511000	508000	100000	990		970	
ANTIMONY	P				1000		990	120
ARSENIC	P				1000		1000	500
BARIUM	P		483		990		970	
BERYLLIUM	P		474		241		960	10
CADMIUM	P		909		245		940	10
CALCIUM	P	476000	470000		24900	5000	1000 B	
CHROMIUM	P		513		253		1030	20
COBALT	P		478		237		1000	100
COPPER	P		534		271		1030	50
IRON	P	219000	211000	100000	995		1020	
LEAD	P		4850		2260		1010	500
MAGNESIUM	P	513000	513000	50000		5000	1000 B	
MANGANESE	P		470	50000	257		1020	30
NICKEL	P		916		248		1020	80
SELENIUM	P				1000		990	500
SILVER	P		934		255		990	20
SODIUM	P			100000		5000	860 B	
VANADIUM	P		475		256		1010	100
ZINC	P		973		1550		1010	40

x SOLIDS

AREA	METHOD	QA LINEAR RANGE BRRAN1429 WATER UG/L	QA LINEAR RANGE BRRAN1436 WATER UG/L	QA INITIAL CAL FOUND A BRICV1257 WATER UG/L	QA INITIAL CAL FOUND B BRICV1283 WATER UG/L	QA INITIAL CAL FOUND C BRICV1297 WATER UG/L	QA INITIAL CAL BLANK BRICS1201 WATER UG/L	QA CRDL STAND INITIAL BRLRA1383 WATER UG/L
ALUMINUM	P	10000	800000	98800	949		60 U	
ANTIMONY	P	10000			1030		50 U	120
ARSENIC	P	20000			1050		60 U	505
BARIUM	P	5000			993		2 U	
BERYLLIUM	P	1500			252		0.3 U	9.8
CADMIUM	P	5000			241		2 U	10
CALCIUM	P	10000	900000		24600	5220	200 U	

TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

AREA	METHOD	QA LINEAR RANGE BRRAN1429 WATER UG/L	QA LINEAR RANGE BRRAN1436 WATER UG/L	QA INITIAL CAL FOUND A BRICV1257 WATER UG/L	QA INITIAL CAL FOUND B BRICV1283 WATER UG/L	QA INITIAL CAL FOUND C BRICV1297 WATER UG/L	QA INITIAL CAL BLANK BRICB1201 WATER UG/L	QA CRDL STAND INITIAL BRLRA1383 WATER UG/L
CHROMIUM	P	10000			250		6 U	20
COBALT	P	10000			244		3 U	98
COPPER	P	10000			262		10 U	51
IRON	P	12000	800000	100000	962		20 U	
LEAD	P	50000			2130		50 U	481
MAGNESIUM	P	12000	500000	47300		4920 B	10 U	
MANGANESE	P	2000	200000	49400	250		5 U	32
NICKEL	P	15000			244		6 U	83
SELENIUM	P	10000			1030		60 U	477
SILVER	P	10000			247		6 U	20
SODIUM	P	10000	900000	103000		4730 B	200 U	
VANADIUM	P	10000			253		4 U	96
ZINC	P	6000			1470		7 U	42

x SOLIDS

AREA	METHOD	QA INTER CHK SOL. A INIT BRICS1227 WATER UG/L	QA INTER CHK SOL. AB INIT BRICS1234 WATER UG/L	QA PREP BLANK BRPB01405 WATER UG/L	QA PREP BLANK BRPB01406 WATER UG/L	QA LAB CONTROL SAMPLE BRLCS1348 WATER UG/L	QA STP TANK BR8010180 WATER UG/L	QA STP TANK BR8010290 WATER UG/L
ALUMINUM	P	494000	501000	60 U	60 U	1120	270	300
ANTIMONY	P			50 U	50 U	1020	50 U	50 U
ARSENIC	P			60 U	60 U	1050	60 UN	60 UN
BARIUM	P	10 B	452	3.9 B	54 B	1060	11 B	11 B
BERYLLIUM	P	4.4 B	438	0.38 B	0.45 B	970	2.6 B	2.7 B
CADMIUM	P	4.8 B	836	2 U	2 U	909	2 U	2 U
CALCIUM	P	467000	475000	200 U	200 U	1080 B	41200	44800
CHROMIUM	P	15	418	6 U	6 U	963	6 U	6 U
COBALT	P	5.7 B	401	3 U	3 U	969	3 U	3 U
COPPER	P	10 U	476	10 U	10 U	974	10 U	10 B
IRON	P	204000	209000	23 B	22 B	1010	191	569
LEAD	P	50 U	3960	50 U	50 U	980	50 U	50 U
MAGNESIUM	P	495000	518000	10 U	10 U	963 B	5620	6160
MANGANESE	P	8 B	430	5 U	5 U	990	41	59

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TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A INIT BRICS1227 WATER UG/L	QA INTER CHK SOL. AB INIT BRICS1234 WATER UG/L	QA PREP BLANK BRPB01405 WATER UG/L	QA PREP BLANK BRPB01406 WATER UG/L	QA LAB CONTROL SAMPLE BRLCS1348 WATER UG/L	STP TANK BR801018G WATER UG/L	STP TANK BR801029G WATER UG/L
NICKEL	P	12 B	798	6 U	6 U	1010	9 B	6.7 B
SELENIUM	P			60 U	60 U	1050	60 U	60 U
SILVER	P	6.7 B	867	6 U	6 U	944	6 U	6 U
SODIUM	P			200 U	200 U	1060 B	21400 E	22400 E
VANADIUM	P	4 U	408	4 U	4 U	926	5.7 B	6.6 B
ZINC	P	15 B	923	21	14 B	1010	54	78

% SOLIDS

AREA	METHOD	QA STP TANK BR801030G WATER UG/L	QA CONTINUING CAL FOUND BRCCV1068 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1111 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1135 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1016 WATER UG/L	B. 444 RELEASES BR503051G WATER UG/L	B. 811 SLURRY BR501093A WATER UG/L
ALUMINUM	P	252	97200	955		60 U	72 B	1180
ANTIMONY	P	50 U		1030		50 U	50 U	50 U
ARSENIC	P	60 UN		1040		60 U	60 UN	60 UN
BARIUM	P	7.2 B		990		2 U	2.9 B	37 B
BERYLLIUM	P	2.6 B		245		0.3 U	0.49 B	1.7 B
CADMIUM	P	2 U		240		2 U	2 U	9.7
CALCIUM	P	40500		24500	5190	200 U	219 B	20100
CHROMIUM	P	6 U		246		6 U	6 U	58
COBALT	P	3 U		242		3 U	3 U	4.1 B
COPPER	P	10 U		258		10 U	10 U	280
IRON	P	169	101000	956		20 U	82 B	2490
LEAD	P	50 U		2100		50 U	50 U	89 B
MAGNESIUM	P	5510	47400		4800 B	10 U	33 B	2970 B
MANGANESE	P	39	50300	247		5 U	5 U	77
NICKEL	P	6.7 B		244		6 U	18 B	112
SELENIUM	P	60 U		1010		60 U	60 U	60 U
SILVER	P	6 U		235		6 U	6 U	6 U
SODIUM	P	21600 E	101000		4710 B	200 U	200 UE	13100 E
VANADIUM	P	6 B		246		4 U	4 U	4.8 B
ZINC	P	35		1460		7 U	21	1020

% SOLIDS

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TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

AREA	METHOD	B. 975 CESSPOOL BR306018F WATER UG/L	B. 479 CESSPOOL BR306029F WATER UG/L	B. 479 CESSPOOL BR306030F WATER UG/L	B. 479 CESSPOOL BR306041A WATER UG/L	B. 905 CESSPOOL BR310014F WATER UG/L	B. 905 CESSPOOL BR310025F WATER UG/L	B. 905 CESSPOOL BR310036F WATER UG/L
ENV PROBLEM NO		2	2	2	2	2	2	2
ALUMINUM	P	226	136 B	117 B	60 U	334	1200	1350
ANTIMONY	P	50 U						
ARSENIC	P	60 UN						
BARIUM	P	24 B	22 B	22 B	2.1 B	26 B	27 B	38 B
BERYLLIUM	P	1.7 B	2 B	1.9 B	0.91 B	2.6 B	2.6 B	2.7 B
CADMIUM	P	2 U	2 U	2 U	2 U	2 U	2 U	2.7 B
CALCIUM	P	16700	15900	15700	200 U	26200	26200	27500
CHROMIUM	P	6 U	6 U	6 U	6 U	6 U	13	7.1 B
COBALT	P	3 U	3 U	3 U	3 U	3 U	3 U	3 U
COPPER	P	214	141	141	10 U	97	112	169
IRON	P	427	251	255	20 U	552	1460	1850
LEAD	P	50 U						
MAGNESIUM	P	5610	5520	5500	16 B	5410	5540	5620
MANGANESE	P	46	39	38	5 U	57	67	71
NICKEL	P	6 U	6 U	6 U	6 U	6 U	14 B	13 B
SELENIUM	P	60 U						
SILVER	P	6 U	6 U	6 U	6 U	6 U	6 U	6 U
SODIUM	P	40200 E	41400 E	40600 E	200 UE	49300 E	47800 E	47600 E
VANADIUM	P	5.6 B	5.6 B	4.9 B	4 U	5.9 B	6.5 B	6.1 B
ZINC	P	130	56	48	11 B	199	219	340

% SOLIDS

AREA	METHOD	QA SERIAL DILUTION BR310036F WATER UG/L	QA SD % DIFFERENCE BR310036F %	QA CONTINUING CAL FOUND BRCCV1069 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1112 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1136 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1017 WATER UG/L	QA DUPLICATE BR310036F WATER UG/L
ENV PROBLEM NO		2	2					2
ALUMINUM	P	300 U		96100	1110		60 U	1330
ANTIMONY	P	250 U			1020		50 U	50 U
ARSENIC	P	300 U			1050		60 U	60 U
BARIUM	P	10 U			987		2 U	38 B
BERYLLIUM	P	6			244		0.81 B	3 B
CADMIUM	P	10 U			239		2 U	3.1 B
CALCIUM	P	28800	4.7		24500	5150	200 U	27800

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TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

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AREA	METHOD	QA SERIAL DILUTION BR310036F WATER UG/L	QA SD x DIFFERENCE BR310036F x	QA CONTINUING CAL FOUND BRCCV1069 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1112 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1136 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1017 WATER UG/L	QA DUPLICATE BR310036F WATER UG/L
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		2	2					2
CHROMIUM	P	30 U			245		6 U	6.7 B
COBALT	P	15 U			241		3 U	3 U
COPPER	P	183			257		10 U	164
IRON	P	1820	1.6	100000	952		20 U	1840
LEAD	P	250 U			2080		50 U	50 U
MAGNESIUM	P	5530	1.6	47100		4700 B	10 U	5700
MANGANESE	P	78		50300	247		5 U	72
NICKEL	P	30 U			243		6 U	13 B
SELENIUM	P	300 U			995		60 U	60 U
SILVER	P	30 U			231		6 U	6 U
SODIUM	P	49800	4.6	99300		4730 B	200 U	50100
VANADIUM	P	20 U			241		4 U	7 B
ZINC	P	329			1460		7 U	342

x SOLIDS								
AREA	METHOD	QA DUPLICATE RPD BR310036F x	QA MATRIX SPIKE BR310036F WATER UG/L	QA MS x RECOVERY BR310036F x	STP DREDGE MATL BR800119F WATER UG/L	STP TANK BR801041G WATER UG/L	AGS SCRAP. WELL BR805012F WATER UG/L	AGS SCRAP. WELL BR805023F WATER UG/L
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		2	2	2	8	8	9	9
ALUMINUM	P	1.5	3210	93	133 B	60 U	68 B	78 B
ANTIMONY	P		491	98	50 U	50 U	50 U	50 U
ARSENIC	P		60 U		60 UN	60 UN	60 UN	60 UN
BARIUM	P		2060	101	28 B	2.9 B	23 B	22 B
BERYLLIUM	P		53	101	0.99 B	0.98 B	0.76 B	0.71 B
CADMIUM	P		50	95	2 U	2 U	2 U	2 U
CALCIUM	P	1.1	27400		200 U	200 U	9920	9930
CHROMIUM	P		198	95	6 U	6 U	6 U	6 U
COBALT	P		478	96	3 U	3 U	3 U	3 U
COPPER	P	3	398	92	10 U	19 B	10 U	10 U
IRON	P	0.54	2750	90	505	44 B	22 B	20 U
LEAD	P		512	102	50 U	50 U	50 U	50 U
MAGNESIUM	P	80	5590		36 B	10 U	3720 B	3720 B
MANGANESE	P	1	563	98	6.1 B	5 U	5 U	5 U

TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

AREA	METHOD	QA DUPLICATE RPD BR310036F	QA MATRIX SPIKE BR310036F WATER UG/L	QA MS X RECOVERY BR310036F	STP DREDGE MATL BR800119F WATER UG/L	STP TANK BR8010410 WATER UG/L	AGS SCRAP. WELL BR805012F WATER UG/L	AGS SCRAP. WELL BR805023F WATER UG/L
ENV PROBLEM NO		2	2	2	8	8	9	9
NICKEL	P		497	97	6 U	6 U	6 U	6 U
SELENIUM	P		1950	98	60 U	60 U	60 U	60 U
SILVER	P		47	94	6 U	6 U	6 U	6 U
SODIUM	P	5.1	45800		200 UE	200 UE	11600 E	11300 E
VANADIUM	P		457	90	4 U	4 U	4 U	4 U
ZINC	P	0.59	830	98	31	16 B	11 B	7.2 B

x SOLIDS

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AREA	METHOD	QA AGS SCRAP. WELL BR805034F WATER UG/L	QA B-975 WELL BR807014K WATER UG/L	QA B-975 WELL BR807025K WATER UG/L	QA B-975 WELL BR807036K WATER UG/L	QA CONTINUING CAL FOUND BRCCV1070 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1113 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1137 WATER UG/L
ENV PROBLEM NO		9	10	10	10			
ALUMINUM	P	86 B	1900	1350	1340	96100	1120	
ANTIMONY	P	50 U	50 U	50 U	50 U		1030	
ARSENIC	P	60 UN	60 UN	60 UN	60 UN		1050	
BARIUM	P	24 B	42 B	41 B	41 B		987	
BERYLLIUM	P	0.94 B	1.4 B	1.2 B	1.2 B		244	
CADMIUM	P	2 U	2 U	2 U	2 U		240	
CALCIUM	P	9340	9800	10000	10000		24400	5140
CHROMIUM	P	6 U	6.3 B	8 B	8.1 B		246	
COBALT	P	3 U	4.4 B	3.4 B	4.3 B		240	
COPPER	P	10 U	13 B	13 B	13 B		257	
IRON	P	20 U	44200	44400	56900	100000	956	
LEAD	P	50 U	50 U	50 U	50 U		2090	
MAGNESIUM	P	3730 B	4810 B	4840 B	4840 B	47100		4720 B
MANGANESE	P	5 U	713	915	980	50300	247	
NICKEL	P	6 U	17 B	17 B	23 B		249	
SELENIUM	P	60 U	60 U	60 U	60 U		1000	
SILVER	P	6 U	6 U	6 U	6 U		235	
SODIUM	P	12300 E	17800 E	16800 E	17100 E	99800		4780 B
VANADIUM	P	5 B	12 B	9.3 B	9.6 B		244	
ZINC	P	10 B	1130	1140	1240		1460	

x SOLIDS

TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

AREA	METHOD	QA CONTINUING CAL BLANK BRCCB1018 WATER UG/L	QA SERIAL DILUTION BR807036K WATER UG/L	QA SD X DIFFERENCE BR807036K X 10	QA DUPLICATE BR807036K WATER UG/L	QA DUPLICATE RPD BR807036K X 10	QA MATRIX SPIKE BR807036K WATER UG/L	QA MS X RECOVERY BR807036K X 10
ALUMINUM	P	60 U	300 U		1340	0	3200	93
ANTIMONY	P	50 U	250 U		50 U		504	101
ARSENIC	P	60 U	300 U		60 U		60 U	
BARIUM	P	2 U	10 U		39 B		2030	99
BERYLLIUM	P	0.57 B	1.8 B		1.3 B		51	100
CADMIUM	P	2 U	10 U		2 U		50	100
CALCIUM	P	200 U	10600	6	9890	110	9930	
CHROMIUM	P	6 U	30 U		7.7 B		198	95
COBALT	P	3 U	15 U		4.8 B		473	94
COPPER	P	10 U	50 U		12 B		256	97
IRON	P	20 U	53100	6.7	56300	1.1	51600	
LEAD	P	50 U	250 U		50 U		489	98
MAGNESIUM	P	10 U	4770 B	1.4	4810 B		4780 B	
MANGANESE	P	5 U	968	1.2	973	0.72	1420	88
NICKEL	P	7.5 B	30 U		22 B		505	96
SELENIUM	P	60 U	300 U		60 U		1970	99
SILVER	P	6 U	30 U		6 U		48	96
SODIUM	P	200 U	20300	19	17400	300	15300	
VANADIUM	P	4 U	20 U		10 B		456	89
ZINC	P	7 U	1190	4	1220	1.6	1680	88

x SOLIDS

AREA	METHOD	QA B-975 WELL BR807047A WATER UG/L	QA B. 975 BUBBLE ARE BR806159F WATER UG/L	QA CONTINUING CAL FOUND BRCCV1071 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1114 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1138 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1019 WATER UG/L	QA CRDL STAND FINAL BRLRA1376 WATER UG/L
ALUMINUM	P	60 U	278	97100	1100		60 U	
ANTIMONY	P	50 U	50 U		1020		50 U	113
ARSENIC	P	60 UN	60 UN		1050		60 U	511
BARIUM	P	15 B	5.2 B		985		2 U	
BERYLLIUM	P	0.59 B	0.3 U		245		0.3 U	9.6
CADMIUM	P	2 U	2 U		240		2 U	10
CALCIUM	P	200 U	3220 B		24500	5130	200 U	

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TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA		
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV. PROBLEM NO		B-975 WELL BR807047A WATER UG/L 10	B. 975 BUBBLE ARE BR806159F WATER UG/L 10	CONTINUING CAL FOUND BRCCV1071 WATER UG/L	CONTINUING CAL FOUND BRCCV1114 WATER UG/L	CONTINUING CAL FOUND BRCCV1138 WATER UG/L	CONTINUING CAL BLANK BRCCB1019 WATER UG/L	CRDL STAND FINAL BRLRA1376 WATER UG/L
CHROMIUM	P	6 U	6 U		246		6 U	18
COBALT	P	3 U	3 U		240		3 U	97
COPPER	P	10 U	46		257		10 U	50
IRON	P	37 B	337	101000	957		20 U	
LEAD	P	50 U	67 B		2090		50 U	482
MAGNESIUM	P	10 U	1590 B	47500		4730 B	10 U	
MANGANESE	P	5 U	7.8 B	50300			5 U	30
NICKEL	P	6 U	6 U		245		6 U	81
SELENIUM	P	60 U	60 U		1010		60 U	505
SILVER	P	6 U	6 U		236		6 U	16
SODIUM	P	200 UE	200 UE	101000		4780 B	200 U	
VANADIUM	P	4 U	4 U		245		4 U	92
ZINC	P	11 B	77		1460		7 U	38

x SOLIDS

AREA	METHOD	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV. PROBLEM NO		INTER CHK SOL. A FINAL BRICS1213 WATER UG/L	INTER CHK SOL. AB FINA BRICS1220 WATER UG/L
ALUMINUM	P	484000	490000
ANTIMONY	P		
ARSENIC	P		
BARIUM	P	10 B	436
BERYLLIUM	P	4.8 B	427
CADMIUM	P	5.3	798
CALCIUM	P	457000	465000
CHROMIUM	P	15	409
COBALT	P	6.2 B	395
COPPER	P	10 U	462
IRON	P	201000	204000
LEAD	P	50 U	3910
MAGNESIUM	P	485000	490000
MANGANESE	P	8.2 B	424

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TABLE D.2.12 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018F

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A FINAL BRICS1213 WATER UG/L	QA INTER CHK SOL. AB FINA BRICS1220 WATER UG/L
NICKEL	P	14 B	792
SELENIUM	P		
SILVER	P	6.3 B	821
SODIUM	P		
VANADIUM	P	4 U	391
ZINC	P	10 B	890

* SOLIDS	I I		

TABLE D.2.13 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR3060180

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	INITIAL CAL	INITIAL CAL	PREP	CONTINUING	CONTINUING	LAB CONTROL
TYPE OF LOCATION		BLANK 1	TRUE A	FOUND A	BLANK	CAL BLANK	CAL FOUND	SAMPLE TRUE
SAMPLE NUMBER		BR03A0003	BR2AA1003	BR2AA2003	BR03A0003	BR03A1003	BR2AA4003	BR0700103
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
MERCURY	(CV)	0.02 U	20	20	0.08 B	0.02 U	20	873
x SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		LAB CONTROL	B. 975	B. 479	B. 479	B. 479	CONTINUING	
TYPE OF LOCATION		SAMPLE	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CAL BLANK	
SAMPLE NUMBER		BR0700103	BR3060180	BR3060290	BR3060300	BR306041B	BR03A2003	
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
ENV PROBLEM NO			2	2	2	2		
MERCURY	(CV)	905	0.06 B	0.07 B	0.06 B	0.11 B	0.02 U	19
x SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		STP	DUPLICATE	MATRIX	MS X	B. 905	B. 905	
TYPE OF LOCATION		TANK		SPIKE	RECOVERY	CESSPOOL	CESSPOOL	
SAMPLE NUMBER		BR801041H	BR801041H	BR801041H	BR801041H	BR3100140	BR3100250	
MATRIX		WATER	WATER	WATER	x	WATER	WATER	
UNITS		UG/L	UG/L	UG/L		UG/L	UG/L	
ENV PROBLEM NO		8	8	8	8	2	2	
MERCURY	(CV)	0.06 B	0.07 B	1.3	116	0.07 B	0.07 B	0.02 U
x SOLIDS								

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TABLE D.2.13 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR3060180

DRAFT DO NOT CITE

AREA	METHOD	QA	QA
LOCATION		CONTINUING	PREP
TYPE OF LOCATION		CAL FOUND	BLANK 2
SAMPLE NUMBER		BR2AB4003	BR03B0003
MATRIX		UG/L	WATER
UNITS			UG/L
ENV PROBLEM NO			
MERCURY	(CV)	20	0.07 B
% SOLIDS			

TABLE D.2.14 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018K

DRAFT DO NOT CITE

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL TRUE A BRICV1272 WATER UG/L	LAB CONTROL SAMPLE TRUE BRLCS1365 WATER UG/L	INITIAL CAL FOUND A BRICV1258 WATER UG/L	INITIAL CAL BLANK BRICB1202 WATER UG/L	PREP BLANK BRPB01407 WATER UG/L	PREP BLANK BRPB01408 WATER UG/L	B. 444 RELEASES BR503051G WATER UG/L 6
POTASSIUM	(FE)	1000 B	10000	1100 B	140 B	100 U	100 U	100 U
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		B. 811 SLURRY BR501093A WATER UG/L 5	CONTINUING CAL FOUND BRCCV1072 WATER UG/L	CONTINUING CAL BLANK BRCCB1020 WATER UG/L	B. 479 CESSPOOL BR306041A WATER UG/L 2	STP DREDGE MATL BR800119F WATER UG/L 8	CONTINUING CAL FOUND BRCCV1073 WATER UG/L	CONTINUING CAL BLANK BRCCB1021 WATER UG/L
POTASSIUM	(FE)	1600 B	1000 B	100 U	100 U	100 U	1000 B	100 U
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		STP TANK BR801041G WATER UG/L 8	AGS SCRAP. WELL BR805012F WATER UG/L 9	B-975 WELL BR807025K WATER UG/L 10	B-975 WELL BR807036K WATER UG/L 10	DUPLICATE BR807036K WATER UG/L 10	B-975 WELL BR807047A WATER UG/L 10	CONTINUING CAL FOUND BRCCV1074 WATER UG/L
POTASSIUM	(FE)	100 U	1600 B	1300 B	1200 B	1200 B	100 U	1100 B
% SOLIDS								

TABLE D.2.14 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018K

DRAFT DO NOT CITE

AREA	METHOD	QA						
LOCATION		CONTINUING	B. 975	STP	AGS SCRAP.	STP	AGS SCRAP.	STP
TYPE OF LOCATION		CAL BLANK	BUBBLE ARE	TANK	WELL	TANK	WELL	TANK
SAMPLE NUMBER		BRCCB1022	BR806159F	BR801018G	BR805023F	BR801029G	BR805034F	BR801030G
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		10	2	2	2	2	2	2

POTASSIUM	(FE)	100 U	120 B	17000	1500 B	17000	1600 B	17000
% SOLIDS								

AREA	METHOD							QA
LOCATION		B-975	B. 975	B. 479	B. 479	B. 905	B. 905	CONTINUING
TYPE OF LOCATION		WELL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CAL FOUND
SAMPLE NUMBER		BR807014K	BR306018F	BR306029F	BR306030F	BR310014F	BR310025F	BRCCV1075
MATRIX		WATER						
UNITS		UG/L						
ENV PROBLEM NO		10	2	2	2	2	2	

POTASSIUM	(FE)	1300 B	20000	22000	38000	38000	35000	1100 B
% SOLIDS								

AREA	METHOD	QA	QA	QA		QA	QA	QA
LOCATION		CONTINUING	CONTINUING	CONTINUING	B. 905	DUPLICATE	LAB CONTROL	DUPLICATE
TYPE OF LOCATION		CAL BLANK	CAL FOUND	CAL BLANK	CESSPOOL		SAMPLE	RPD
SAMPLE NUMBER		BRCCB1023	BRCCV1076	BRCCB1024	BR310036F	BR310036F	BR1CS1349	BR310036F
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	%
ENV PROBLEM NO					2	2		2

POTASSIUM	(FE)	100 U	1100 B	100 U	34000	35000	10000	2.9
% SOLIDS								

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TABLE D.2.14 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR306018K

DRAFT DO NOT CITE

AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1077 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1025 WATER UG/L
LOCATION			
TYPE OF LOCATION			
SAMPLE NUMBER			
MATRIX			
UNITS			
ENV PROBLEM NO			
POTASSIUM	FE	1000 B	100 U
x SOLIDS			

TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A TRUE BRICS1242 WATER UG/L	QA INTER CHK SOL. AB TRUE BRICS1249 WATER UG/L	QA INITIAL CAL TRUE A BRICV1273 WATER UG/L	QA INITIAL CAL TRUE B BRICV1291 WATER UG/L	QA INITIAL CAL TRUE C BRICV1305 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BRICS1366 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BRICS1367 SOIL MG/KG
ALUMINUM	P	511000	508000	100000	990		1980	15200
ANTIMONY	P				1000		1000	20 U
ARSENIC	P		483		1000		1000	680
BARIUM	P		474		990		1980	430
BERYLLIUM	P		909		241		481	1 U
CADMIUM	P		909		245		489	1 U
CALCIUM	P	476000	470000		24900	5000	49800	10500
CHROMIUM	P		513		253		506	17
COBALT	P		478		237		474	6.9
COPPER	P		534		271		542	265
IRON	P	219000	211000	50000	995		1990	11200
LEAD	P		4850		2260		4510	5830
MAGNESIUM	P	513000	513000	50000		5000	25000	14700
MANGANESE	P		470	50000	257		513	91700
NICKEL	P		916		248		496	22
SELENIUM	P				1000		1000	1 U
SILVER	P		916		255		509	2 U
SODIUM	P			100000		5000	50700	3720
VANADIUM	P		475		256		511	18
ZINC	P		973		1550		3100	425

x SOLIDS

AREA	METHOD	QA CRDL STAND TRUE BRLRA1391 WATER UG/L	QA LINEAR RANGE BRRAN1430 WATER UG/L	QA LINEAR RANGE BRRAN1437 WATER UG/L	QA INITIAL CAL FOUND A BRICV1259 WATER UG/L	QA INITIAL CAL FOUND B BRICV1284 WATER UG/L	QA INITIAL CAL FOUND C BRICV1298 WATER UG/L	QA INITIAL CAL BLANK BRICB1203 WATER UG/L
ALUMINUM	P		10000	800000	97400	1150		60 U
ANTIMONY	P	120	10000			1030		50 U
ARSENIC	P	500	20000			1080		60 U
BARIUM	P		5000			982		2 U
BERYLLIUM	P	10	1500			254		0.3 U
CADMIUM	P	10	5000			239		2 U
CALCIUM	P		10000	900000		25100	5260	200 U

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TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

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AREA	METHOD	QA CRDL STAND TRUE BRLRA1391 WATER UG/L	QA LINEAR RANGE BRRAN1430 WATER UG/L	QA LINEAR RANGE BRRAN1437 WATER UG/L	QA INITIAL CAL FOUND A BRICV1259 WATER UG/L	QA INITIAL CAL FOUND B BRICV1284 WATER UG/L	QA INITIAL CAL FOUND C BRICV1298 WATER UG/L	QA INITIAL CAL BLANK BRICB1203 WATER UG/L
CHROMIUM	P	20	10000			252		6 U
COBALT	P	100	10000			240		3 U
COPPER	P	50	10000			265		10 U
IRON	P		12000	800000	50900	953		20 U
LEAD	P	500	50000			2130		50 U
MAGNESIUM	P		12000	500000	48000		5000	10 U
MANGANESE	P	30	2000	200000	49000	248		5 U
NICKEL	P	80	15000			238		6 U
SELENIUM	P	500	10000			1030		60 U
SILVER	P	20	10000			254		6 U
SODIUM	P		10000	900000	103000		4650 B	200 U
VANADIUM	P	100	10000			261		4 U
ZINC	P	40	6000			1470		7 U

% SOLIDS

AREA	METHOD	QA CRDL STAND INITIAL BRLRA1384 WATER UG/L	QA INTER CHK SOL. A INIT BRICS1228 WATER UG/L	QA INTER CHK SOL. AB INIT BRICS1235 WATER UG/L	QA PREP BLANK BRPB01409 WATER UG/L	QA PREP BLANK BRPB01410 WATER UG/L	QA PREP BLANK BRPB01411 WATER UG/L	QA PREP BLANK BRPB01412 WATER UG/L
ALUMINUM	P		493000	498000	60 U	93 B	60 U	60 U
ANTIMONY	P	115			50 U	50 U	50 U	50 U
ARSENIC	P	504			60 U	60 U	60 U	60 U
BARIUM	P		10 B	444	2 U	7.2 B	2 U	2 U
BERYLLIUM	P	9.3	3.7 B	445	0.3 U	0.3 U	0.3 U	0.3 U
CADMIUM	P	10	5.9	819	2 U	2 U	2 U	2 U
CALCIUM	P		474000	482000	200 U	622 B	200 U	200 U
CHROMIUM	P	20	16	431	6 U	6 U	6 U	6 U
COBALT	P	95	3 U	406	3 U	3 U	3 U	3 U
COPPER	P	50	10 U	489	10 U	10 U	10 U	10 U
IRON	P		206000	210000	20 U	20 U	20 U	20 U
LEAD	P	484	50 U	4100	50 U	50 U	50 U	50 U
MAGNESIUM	P		495000	497000	10 U	172 B	10 U	10 U
MANGANESE	P	30	6.9 B	432	5 U	5 U	6.9 B	25

TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CRDL STAND INITIAL BRLRA1384 WATER UG/L	INTER CHK SOL. A INIT BRICS1228 WATER UG/L	INTER CHK SOL. AD INIT BRICS1235 WATER UG/L	PREP BLANK BRPB01409 WATER UG/L	PREP BLANK BRPB01410 WATER UG/L	PREP BLANK BRPB01411 WATER UG/L	PREP BLANK BRPB01412 WATER UG/L
NICKEL	P	80	14 B	791	6 U	6 U	6 U	6 U
SELENIUM	P	482			60 U	60 U	60 U	60 U
SILVER	P	20	8.7 B	918	6 U	6 U	6 U	6 U
SODIUM	P				200 U	200 U	200 U	200 U
VANADIUM	P	99	4 U	422	4 U	4 U	4 U	4 U
ZINC	P	33	7 U	875	8.3 B	13 B	7 U	7 U

* SOLIDS

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AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		LAB CONTROL SAMPLE BRLCS1350 WATER UG/L	LAB CONTROL SAMPLE BRLCS1351 SOIL MG/KG	B. 422 CESSPOOL BR308010F WATER UG/L	B. 422 CESSPOOL BR308021F WATER UG/L	B. 422 CESSPOOL BR308032F WATER UG/L	CONTINUING CAL FOUND BRCCV1078 WATER UG/L	CONTINUING CAL FOUND BRCCV1115 WATER UG/L
ALUMINUM	P	2190	48100	488000	268000	203000	96500	1120
ANTIMONY	P	1020	9.2 U	1260	677	535		1020
ARSENIC	P	1060	676	360 UN	360 UN	360 UN		1070
BARIUM	P	1920	791	1250	1560	3260		982
BERYLLIUM	P	474	2.7	35	31	26		251
CADMIUM	P	460	0.39	2820	1840	1300		238
CALCIUM	P	49200	15700	713000	584000	422000		24800
CHROMIUM	P	464	23	50300	26400	18100		249
COBALT	P	451	6.5	678	482	337		239
COPPER	P	509	272	110000	66400	53600		261
IRON	P	1870	18000	1510000	1030000	754000	50900	954
LEAD	P	4060	5380	113000	100000	55700		2110
MAGNESIUM	P	25000	17400	149000	95500	72200	47700	
MANGANESE	P	481	101000	8460	6180	4270	50500	246
NICKEL	P	460	26	46900	27300	24100		242
SELENIUM	P	1030	14	425	537	360 U		1020
SILVER	P	473	1.4	3410	3340	3530		244
SODIUM	P	43800	15100	18000 U	18000 U	18000 U	100000	
VANADIUM	P	496	29	874	601	423		253
ZINC	P	2880	438	357000	302000	191000		1460

* SOLIDS

TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		CONTINUING	CONTINUING	B. 422	BOUNDRY RD	BOUNDRY RD	BOUNDRY RD	SERIAL
TYPE OF LOCATION		CAL FOUND	CAL BLANK	CESSPOOL	WELL	WELL	WELL	DILUTION
SAMPLE NUMBER		BRCCV1139	BRCCB1026	BR308043F	BR809016F	BR809027F	BR809038F	BR809038F
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO				2	0	0	0	0
ALUMINUM	P		60 U	107 B	180 B	251	229	300 U
ANTIMONY	P		50 U	50 U	50 U	50 U	50 U	250 U
ARSENIC	P		60 U	60 UN	60 UN	60 UN	60 UN	300 U
BARIUM	P		2 U	3.9 B	24 B	26 B	26 B	10 U
BERYLLIUM	P		0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	1.5 U
CADMIUM	P		2 U	2 U	2 U	2.2 B	2	10 U
CALCIUM	P	5270	200 U	221 B	4810 B	5060	5160	5040
CHROMIUM	P		6 U	6 U	7.5 B	8.6 B	8.5 B	30 U
COBALT	P		3 U	3 U	3.2 B	3 U	4.1 B	15 U
COPPER	P		10 U	10 U	43	42	50	50 U
IRON	P		20 U	26 B	26200	27400	28900	26700
LEAD	P		50 U	50 U	60 B	50 U	56 B	250 U
MAGNESIUM	P	4920 B	10 U	34 B	1520 B	1590 B	1630 B	1570 B
MANGANESE	P		5 U	5 U	185	183	198	196
NICKEL	P		6 U	6 U	24 B	31 B	30 B	30 U
SELENIUM	P		60 U	60 U	60 U	60 U	60 U	300 U
SILVER	P		6 U	6 U	6 U	6 U	6 U	30 U
SODIUM	P	4570 B	200 U	200 U	3430 B	3400 B	3320 B	2650 B
VANADIUM	P		4 U	4 U	4 U	4.4 B	4 U	20 U
ZINC	P		7 U	65	436	429	493	479

* SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		SD X	DUPLICATE	DUPLICATE	MATRIX	MS X	B. 479	B. 811
TYPE OF LOCATION		DIFFERENCE		RPD	SPIKE	RECOVERY	CESSPOOL	SLURRY
SAMPLE NUMBER		BR809038F	BR809038F	BR809038F	BR809038F	BR809038F	BR311026F	BR501015A
MATRIX			WATER	WATER	WATER	WATER	WATER	SOLID
UNITS		%	UG/L	%	UG/L	%	UG/L	MG/KG
ENV PROBLEM NO		0	0	0	0	0	2	5
ALUMINUM	P		224	5	2220	100	60 U	21300
ANTIMONY	P		50 U		538	108	50 U	14
ARSENIC	P		60 U		60 U		60 UN	14 UN
BARIUM	P		27 B		2090	103	2 U	91 N
BERYLLIUM	P		0.3 U		51	102	0.3 U	3.2 NE
CADMIUM	P		2 U		51	98	2 U	0.48 B
CALCIUM	P		5090	70	5160		200 U	2.6 *

TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

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AREA	METHOD	QA SD X DIFFERENCE BR809038F	QA DUPLICATE BR809038F WATER UG/L	QA DUPLICATE RPD BR809038F	QA MATRIX SPIKE BR809038F WATER UG/L	QA MS X RECOVERY BR809038F	B. 479 CESSPOOL BR311026F WATER UG/L	B. 811 SLURRY BR501015A SOLID MG/KG
LOCATION								
TYPE OF LOCATION								
SAMPLE NUMBER								
MATRIX								
UNITS		x	UG/L	x	UG/L	x	UG/L	MG/KG
ENV PROBLEM NO		0	0	0	0	0	2	5
CHROMIUM	P		11	2.6	214	103	6 U	135 NE
COBALT	P		3.5 B		493	98	3 U	7.6 B
COPPER	P		49	1	303	101	10 U	22 x
IRON	P	7.6	27600	4.6	29600		58 B	13900 E
LEAD	P		50 U		563	102	50 U	12 UN
MAGNESIUM	P	3.7	1610 B		1620 B		24 B	29000
MANGANESE	P		190	4.1	703	101	5 U	256 N
NICKEL	P		28 B		533	101	6 U	48
SELENIUM	P		60 U		2130	107	60 U	14 U
SILVER	P		6 U		50	100	6 U	1.9 B
SODIUM	P		3370 B		3440 B		200 U	64900 xE
VANADIUM	P		4 U		486	97	4 U	17
ZINC	P	2.8	481	2.5	984	98	88	31
x SOLIDS								77.4

AREA	METHOD	B. 811 SLURRY BR501026A SOLID MG/KG	QA CONTINUING CAL FOUND BRCCV1079 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1116 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1140 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1027 WATER UG/L	B. 811 SLURRY BR501037A SOLID MG/KG	B. 811 SLURRY BR501048A SOLID MG/KG
LOCATION								
TYPE OF LOCATION								
SAMPLE NUMBER								
MATRIX								
UNITS		MG/KG	UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG
ENV PROBLEM NO		5					5	5
ALUMINUM	P	21600	96300	1120		60 U	17400	21500
ANTIMONY	P	12 B		1030		50 U	22	9.9 B
ARSENIC	P	13 UN		1050		60 U	19 BN	12 UN
BARIUM	P	88 N		983		2 U	60 N	73 N
BERYLLIUM	P	3.1 NE		250		0.3 U	2.9 NE	2.9 NE
CADMIUM	P	0.44 U		237		2 U	0.76 B	0.38 U
CALCIUM	P	240000 x		24700	5300	200 U	221000 x	269000 x
CHROMIUM	P	134 NE		245		6 U	128 NE	134 NE
COBALT	P	7.3 B		237		3 U	8 B	8 B
COPPER	P	9.9 x		259		10 U	34 x	58 x
IRON	P	14400 E	56100	949		20 U	13100 E	14000 E
LEAD	P	11 UN		2080		50 U	11 UN	9.6 UN
MAGNESIUM	P	29000	47600		4870 B	10 U	19800	30500
MANGANESE	P	262 N	51200	247		5 U	221 N	283 N

TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV. PROBLEM NO		B. 811 SLURRY BR501026A SOLID MG/KG 5	CONTINUING CAL FOUND BRCCV1079 WATER UG/L	CONTINUING CAL FOUND BRCCV1116 WATER UG/L	CONTINUING CAL FOUND BRCCV1140 WATER UG/L	CONTINUING CAL BLANK BRCCB1027 WATER UG/L	B. 811 SLURRY BR501037A SOLID MG/KG 5	B. 811 SLURRY BR501048A SOLID MG/KG 5
NICKEL	P	39		242		6 U	82	37
SELENIUM	P	13 U		1030		60 U	14 U	12 U
SILVER	P	1.7 B		240		6 U	1.4 U	1.6 B
SODIUM	P	33800 XE	98200		4390 B	200 U	74900 XE	19900 XE
VANADIUM	P	17		251		4 U	24	17
ZINC	P	27		1460		7 U	39	31

% SOLIDS		79.8					79	89.5

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV. PROBLEM NO		QA SERIAL DILUTION BR501048A SOIL MG/KG 5	SD X DIFFERENCE BR501048A X 5	DUPLICATE BR501048A SOIL MG/KG 5	DUPLICATE RPD BR501048A X 5	MATRIX SPIKE BR501048A SOIL MG/KG 5	MS X RECOVERY BR501048A X 5	CONTINUING CAL FOUND BRCCV1080 WATER UG/L
ALUMINUM	P	21700	0.93	18800	13	20500		89900
ANTIMONY	P	88		10 B		101	95	
ARSENIC	P	58 U		12 U		12 U		
BARIUM	P	73	0	34 B	39	181	28	
BERYLLIUM	P	5.4	86	2.5	0.4	9	64	
CADMIUM	P	1.9 U		0.38 U		8.2	85	
CALCIUM	P	242000	10	156000	53	157000		
CHROMIUM	P	154	15	126	6.2	206	189	
COBALT	P	7.5 B		9.6 B	1.7	87	82	
COPPER	P	57		72	22	103	94	
IRON	P	19800	41	13800	1.4	15200		47700
LEAD	P	48 U		9.6 U		57	59	
MAGNESIUM	P	32100	5.2	32700	7	38800		44400
MANGANESE	P	306	8.1	269	5.1	342	61	48600
NICKEL	P	5.8 U		41	10	129	96	
SELENIUM	P	58 U		12 U		378	99	
SILVER	P	5.8 U		1.3 B		9.2	79	
SODIUM	P	14200	29	14000	35	18200		89700
VANADIUM	P	27		16	1	89	75	
ZINC	P	30		35	12	118	91	

% SOLIDS		89.5		89.5		89.5		

TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1117 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1141 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1028 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1081 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1118 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1142 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1029 WATER UG/L
ALUMINUM	P	1060		60 U	94700	1100		60 U
ANTIMONY	P	956		50 U		1000		50 U
ARSENIC	P	1020		60 U		1060		60 U
BARIUM	P	922		2 U		961		2 U
BERYLLIUM	P	229		0.3 U		244		0.3 U
CADMIUM	P	224		2 U		232		2 U
CALCIUM	P	23200	4880 B	200 U		24100	5150	200 U
CHROMIUM	P	231		6 U		242		6 U
COBALT	P	223		3 U		232		3 U
COPPER	P	244		10 U		254		10 U
IRON	P	887		20 U	49800	923		20 U
LEAD	P	1950		50 U		2040		50 U
MAGNESIUM	P		4470 B	10 U	46800		4680 B	10 U
MANGANESE	P	230		5 U	50900	240		5 U
NICKEL	P	230		6 U		239		6 U
SELENIUM	P	949		60 U		1020		60 U
SILVER	P	221		6 U		232		6 U
SODIUM	P		4140 B	200 U	95900		4250 B	200 U
VANADIUM	P	229		4 U		241		4 U
ZINC	P	1370		7 U		1430		7 U

* SOLIDS

AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1082 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1119 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1030 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1143 WATER UG/L	QA CRDL STAND FINAL BRLRA1377 WATER UG/L	QA INTER CHK SOL. A FINAL BRICS1214 WATER UG/L	QA INTER CHK SOL. AB FINA BRICS1221 WATER UG/L
ALUMINUM	P	94200	1090	60 U			475000	479000
ANTIMONY	P		988	50 U				
ARSENIC	P		1050	60 U		119		
BARIUM	P		954	2 U		493		
BERYLLIUM	P		242	0.3 U			9.9 B	426
CADMIUM	P		230	2 U		8.7	3.7 B	418
CALCIUM	P		24000	200 U	5120	11	4.1 B	774
							449000	451000

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TABLE D.2.15 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR308010F

DRAFT DO NOT CITE

AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1082 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1119 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1030 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1143 WATER UG/L	QA CRDL STAND FINAL BRLRA1377 WATER UG/L	QA INTER CHK SOL. A FINAL BRICS1214 WATER UG/L	QA INTER CHK SOL. AB FINA BRICS1221 WATER UG/L
CHROMIUM	P		240	6 U		19	14	404
COBALT	P		231	3 U		91	4.1 B	381
COPPER	P		253	10 U		45	10 U	466
IRON	P	49300	917	20 U			198000	199000
LEAD	P		2020	50 U		456	50 U	3830
MAGNESIUM	P	46600		10 U	4650 B		478000	479000
MANGANESE	P	50500	238	5 U		28	6.4 B	411
NICKEL	P		236	6 U		80	13 B	771
SELENIUM	P		1020	60 U		463		
SILVER	P		230	6 U		19	6 U	835
SODIUM	P	93900		200 U	4260 B			
VANADIUM	P		240	4 U		90	4 U	388
ZINC	P		1410	7 U		31	7 U	832

x SOLIDS								

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TABLE D.2.16 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR3080100

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	INITIAL CAL	INITIAL CAL	PREP	CONTINUING	CONTINUING	LAB CONTROL
TYPE OF LOCATION		BLANK 1	TRUE A	FOUND A	BLANK	CAL BLANK	CAL FOUND	SAMPLE TRUE
SAMPLE NUMBER		BR03A0004	BR2AA1004	BR2AA2004	BR03A0004	BR03A1004	BR2AA4004	BR0700104
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								
MERCURY	CV	0.02 U	20	20	0.08 B	0.02 U	20	873
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		LAB CONTROL	B. 905	B. 422	B. 422	CONTINUING	CONTINUING	B. 422
TYPE OF LOCATION		SAMPLE	CESSPOOL	CESSPOOL	CESSPOOL	CAL BLANK	CAL FOUND	CESSPOOL
SAMPLE NUMBER		BR0700104	BR3100360	BR3080100	BR3080210	BR03A2004	BR2AA5004	BR3080320
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO			2	2	2			2
MERCURY	CV	880	0.09 B	0.44	1.8	0.02 U	20	0.17 B
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		B. 422	DUPLICATE	MATRIX	MS X	B. 479	CONTINUING	CONTINUING
TYPE OF LOCATION		CESSPOOL		SPIKE	RECOVERY	CESSPOOL	CAL BLANK	CAL FOUND
SAMPLE NUMBER		BR3080430	BR3080430	BR3080430	BR3080430	BR3110260	BR03A3004	BR2AB4004
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	X	UG/L	UG/L	UG/L
ENV PROBLEM NO		2	2	2	2	2		
MERCURY	CV	0.05 B	0.06 B	1.2	112	0.06 B	0.02 U	20
% SOLIDS								

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TABLE D.2.16 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR3080100

DRAFT DO NOT CITE

AREA LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	M E T H O D	QA PREP BLANK 2 BRO3B0004 WATER UG/L
MERCURY	ICV	0.07 B
x SOLIDS		

TABLE D.2.17 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015C

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A TRUE BRICS1243 WATER UG/L	QA INTER CHK SOL. AB TRUE BRICS1250 WATER UG/L	QA INITIAL CAL TRUE A BRICV1274 WATER UG/L	QA INITIAL CAL TRUE B BRICV1292 WATER UG/L	QA INITIAL CAL TRUE C BRICV1306 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BRICS1368 SOIL MG/KG	QA CRDL STAND TRUE BRLRA1392 WATER UG/L
ALUMINUM	P	511000	508000	100000	990		15200	
ANTIMONY	P				1000		20 U	120
ARSENIC	P				1000		680	500
BARIUM	P		483		990		430	
BERYLLIUM	P		474		241		1 U	10
CADMIUM	P		909		245		1 U	10
CALCIUM	P	476000	470000		24900	5000	10500	
CHROMIUM	P		513		253		17	20
COBALT	P		478		237		6.9	100
COPPER	P		534		271		265	50
IRON	P	219000	211000	100000	995		11200	
LEAD	P		4850		2260		5830	500
MAGNESIUM	P	513000	513000	50000		5000	14700	
MANGANESE	P		470	50000	257		91700	30
NICKEL	P		916		248		22	80
SELENIUM	P				1000		1 U	500
SILVER	P		934		255		2 U	20
SODIUM	P			100000		5000	3720	
VANADIUM	P		475		256		18	100
ZINC	P		973		1550		425	40

x SOLIDS

AREA	METHOD	QA LINEAR RANGE BRRAN1431 WATER UG/L	QA LINEAR RANGE BRRAN1438 WATER UG/L	QA INITIAL CAL FOUND A BRICV1260 WATER UG/L	QA INITIAL CAL FOUND B BRICV1285 WATER UG/L	QA INITIAL CAL FOUND C BRICV1299 WATER UG/L	QA INITIAL CAL BLANK BRICB1204 WATER UG/L	QA CRDL STAND INITIAL BRLRA1385 WATER UG/L
ALUMINUM	P	10000	800000	99600	1140		60 U	
ANTIMONY	P	10000			1040		50 U	131
ARSENIC	P	20000			1100		60 U	543
BARIUM	P	5000			1010		2 U	
BERYLLIUM	P	1500			255		0.3 U	10
CADMIUM	P	5000			244		2 U	11
CALCIUM	P	10000	900000		25000	5340	200 U	

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TABLE D.2.17 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015C

DRAFT DO NOT CITE

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AREA	METHOD	QA LINEAR RANGE BRRAN1431 WATER UG/L	QA LINEAR RANGE BRRAN1438 WATER UG/L	QA INITIAL CAL FOUND A BRICV1260 WATER UG/L	QA INITIAL CAL FOUND B BRICV1285 WATER UG/L	QA INITIAL CAL FOUND C BRICV1299 WATER UG/L	QA INITIAL CAL BLANK BRICB1204 WATER UG/L	QA CRDL STAND INITIAL BRLRA1385 WATER UG/L
CHROMIUM	P	10000			253		6 U	20
COBALT	P	10000			247		3 U	101
COPPER	P	10000			271		10 U	53
IRON	P	12000	800000	102000	978		20 U	
LEAD	P	50000			2200		50 U	512
MAGNESIUM	P	12000	500000	48200		5100	10 U	
MANGANESE	P	2000	200000	50700			5 U	31
NICKEL	P	15000			246		6 U	82
SELENIUM	P	10000			1060		60 U	531
SILVER	P	10000			259		6 U	17
SODIUM	P	10000	900000	104000		4760 B	200 U	
VANADIUM	P	10000			262		4 U	100
ZINC	P	6000			1510		7 U	37

% SOLIDS

AREA	METHOD	QA INTER CHK SOL. A INIT BRICS1229 WATER UG/L	QA INTER CHK SOL. AB INIT BRICS1236 WATER UG/L	QA PREP BLANK BRPB01413 WATER UG/L	QA PREP BLANK BRPB01414 WATER UG/L	QA LAB CONTROL SAMPLE BRLCS1352 SOIL MG/KG	QA STP TANK BR802019C SEDIM MG/KG	QA STP TANK BR802020C SEDIM MG/KG
ALUMINUM	P	492000	512000	60 U	60 U	18300	9650	11200
ANTIMONY	P			50 U	50 U	9.9 U	53 UN	29 BN
ARSENIC	P			60 U	60 U	691	64 UN	34 UN
BARIUM	P	12 B	451	2 U	2 U	434	1070 E	1140 E
BERYLLIUM	P	4.3 B	451	0.3 U	0.3 U	1.9	3.2 B	2.9 B
CADMIUM	P	4.2 B	829	2 U	2 U	0.4 U	39	42
CALCIUM	P	468000	484000	200 U	200 U	10600	11800	18700
CHROMIUM	P	17	432	6 U	6 U	6.7	923	1450
COBALT	P	7 B	411	3 U	3 U	6.8	12 B	11 B
COPPER	P	10 U	495	10 U	10 U	266	2350	1890
IRON	P	200000	206000	20 U	20 U	13500	22800	25500
LEAD	P	50 U	4120	50 U	50 U	5450	887	1270
MAGNESIUM	P	490000	500000	12 B	10 U	15800	3390 B	4670
MANGANESE	P	8.3 B	440	5 U	5 U	98900	300	444

TABLE D.2.17 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015C

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INTER CHK	INTER CHK	PREP	PREP	LAB CONTROL	STP	STP
TYPE OF LOCATION		SOL. A INIT	SOL. AB INIT	BLANK	BLANK	SAMPLE	TANK	TANK
SAMPLE NUMBER		BRICS1229	BRICS1236	BRPB01413	BRPB01414	BRLCS1352	BR802019C	BR802020C
MATRIX		WATER	WATER	WATER	WATER	SOIL	SEDIM	SEDIM
UNITS		UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO							8	8
NICKEL	P	11 B	799	6 U	6 U	22	109	59
SELENIUM	P			60 U	60 U	19	72 B	34 U
SILVER	P	7.9 B	940	6 U	6 U	1.2 U	990	525
SODIUM	P			200 U	200 U	4520	1190 B	784 B
VANADIUM	P	4 U	435	4 U	4 U	21	34 B	37
ZINC	P	7 U	894	7 U	7 U	426	4810	8250

% SOLIDS							12	22.2

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		STP	CONTINUING	CONTINUING	CONTINUING	CONTINUING	B. 905	B. 479
TYPE OF LOCATION		TANK	CAL FOUND	CAL FOUND	CAL FOUND	CAL BLANK	CESSPOOL	CESSPOOL
SAMPLE NUMBER		BR802031C	BRCCV1083	BRCCV1120	BRCCV1144	BRCCB1031	BR315019C	BR311015C
MATRIX		SEDIM	WATER	WATER	WATER	WATER	SLUDG	SLUDG
UNITS		MG/KG	UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG
ENV PROBLEM NO		8					2	2
ALUMINUM	P	10900	98200	1090		60 U	6910	1850
ANTIMONY	P	25 BN		1020		50 U	36 BN	7.5 UN
ARSENIC	P	28 UN		1100		60 U	40 UN	9 UN
BARIUM	P	1810 E		985		2 U	207 E	11 BE
BERYLLIUM	P	2.4 B		251		0.3 U	1.5 B	0.53 B
CADMIUM	P	17		239		2 U	28	0.3 U
CALCIUM	P	39700		24900	5130	200 U	17100	9600
CHROMIUM	P	287		247		6 U	34	2.7
COBALT	P	6.4 B		243		3 U	3.3 B	0.95 B
COPPER	P	419		265		10 U	3300	28
IRON	P	17800	100000	962		20 U	27800	3640
LEAD	P	576		2170		50 U	546	8.5 B
MAGNESIUM	P	12600	47200		4930 B	10 U	2100 B	5670
MANGANESE	P	121	50400	250		5 U	217	24
NICKEL	P	35		239		6 U	40	2.1 B
SELENIUM	P	28 U		1040		60 U	40 U	9 U
SILVER	P	410		255		6 U	23	0.9 U
SODIUM	P	673 B	102000		4690 B	200 U	1000 B	65 B
VANADIUM	P	27		255		4 U	11 B	14
ZINC	P	5240		1480		7 U	2770	11

% SOLIDS		25.6					18.4	82.8

TABLE D.2.17 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015C

DRAFT DO NOT CITE

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AREA	METHOD	B. 481 LEACH PIT BR808015C SOIL MG/KG	B. 481 LEACH PIT BR808026C SOIL MG/KG	B. 481 LEACH PIT BR808037C SOIL MG/KG	AGS I&II SCRAPYARD BR804011A SOIL MG/KG	AGS I&II SCRAPYARD BR804022A SOIL MG/KG	AGS I&II SCRAPYARD BR804033A SOIL MG/KG	AGS I&II SCRAPYARD BR804044A SOIL MG/KG
ENV PROBLEM NO		11	11	11	9	9	9	9
ALUMINUM	P	8410	4860	9300	5140	8620	7620	8290
ANTIMONY	P	44 N	50 N	27 UN	6.6 UN	6.6 UN	6.6 UN	6.7 UN
ARSENIC	P	26 UN	36 UN	33 UN	7.9 UN	8 UN	8 UN	8.1 UN
BARIUM	P	329 E	1480 E	422 E	11 BE	17 BE	17 BE	27 E
BERYLLIUM	P	2.6	1.3 B	6.6	0.92	1	0.83	0.93
CADMIUM	P	72	392	28	0.26 U	0.26 U	0.27 U	0.27 U
CALCIUM	P	4160	5250	3300	37100	51700	8120	16400
CHROMIUM	P	240	465	336	6.2	8.6	9.6	11
COBALT	P	85	95	37	2.3 B	3.2 B	4.2 B	3.9 B
COPPER	P	4540	5210	4800	4.2	5.4	12	6.2
IRON	P	18600	29100	26300	5860	8960	11400	9720
LEAD	P	735	1080	1460	6.6 U	6.6 U	14 B	8.5 B
MAGNESIUM	P	2200	1990 B	2540 B	20900	28700	4810	1600
MANGANESE	P	103	69	53	131	114	145	145
NICKEL	P	266	849	320	5.7	7	11	9.1
SELENIUM	P	34 B	38 B	40 B	7.9 U	8 U	8 U	8.1 U
SILVER	P	16	38	34	0.81 B	0.8 U	0.8 U	0.81 U
SODIUM	P	267 B	343 B	394 B	137 B	201 B	399 B	103 B
VANADIUM	P	852	250	2540	9.3	14	25	17
ZINC	P	2820	6480	2390	12	25	18	17
% SOLIDS		28.9	21.7	23.6	94.7	92.4	94.1	91.7

AREA	METHOD	AGS I&II SCRAPYARD BR804055A SOIL MG/KG	QA CONTINUING CAL FOUND BRCCV1084 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1121 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1145 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1032 WATER UG/L	AGS I&II SCRAPYARD BR804066A SOIL MG/KG	QA SERIAL DILUTION BR804066A SOIL MG/KG
ENV PROBLEM NO		9					9	9
ALUMINUM	P	11200	101000	1130		60 U	8110	8350
ANTIMONY	P	6.8 UN		1050		50 U	6.7 UN	34 U
ARSENIC	P	8.2 UN		1100		60 U	8 UN	40 U
BARIUM	P	28 E		1000		2 U	24 BE	30
BERYLLIUM	P	1		256		0.3 U	0.87	1.3
CADMIUM	P	0.27 U		241		2 U	0.27 U	1.6
CALCIUM	P	18400		25200	5270	200 U	8010	7970

TABLE D.2.17 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015C

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		AGS I&II SCRAPYARD BR804055A SOIL MG/KG 9	CONTINUING CAL FOUND BRCCV1084 WATER UG/L	CONTINUING CAL FOUND BRCCV1121 WATER UG/L	CONTINUING CAL FOUND BRCCV1145 WATER UG/L	CONTINUING CAL BLANK BRCCB1032 WATER UG/L	AGS I&II SCRAPYARD BR804066A SOIL MG/KG 9	SERIAL DILUTION BR804066A SOIL MG/KG 9
CHROMIUM	P	11		252		6 U	9.2	10
COBALT	P	3 B		246		3 U	3.5 B	4.9 B
COPPER	P	6.9		269		10 U	5	6.7 U
IRON	P	11600	102000	981		20 U	10000	10700
LEAD	P	12 B		2180		50 U	15 B	34 U
MAGNESIUM	P	1810	48400		5050	10 U	1650	1560
MANGANESE	P	112	51700	254		5 U	121	123
NICKEL	P	7		244		6 U	5.9	13
SELENIUM	P	8.2 U		1040		60 U	8 U	40 U
SILVER	P	0.82 U		260		6 U	0.8 U	4 U
SODIUM	P	123 B	106000		4620 B	200 U	83 B	134 U
VANADIUM	P	21		261		4 U	17	18
ZINC	P	36		1490		7 U	16	18
% SOLIDS		90.3					92.5	92.5

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AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		SD X DIFFERENCE BR804066A X 9	DUPLICATE BR804066A SOIL MG/KG 9	DUPLICATE RPD BR804066A X 9	MATRIX SPIKE BR804066A SOIL MG/KG 9	MS X RECOVERY BR804066A X 9	CONTINUING CAL FOUND BRCCV1085 WATER UG/L	CONTINUING CAL FOUND BRCCV1122 WATER UG/L
ALUMINUM	P	3	8040	0.87	7910		99700	1100
ANTIMONY	P		6.4 U		27	42		1030
ARSENIC	P		7.6 U		7.9 U			1090
BARIUM	P	25	23 B		290	102		993
BERYLLIUM	P		0.88	0.01	7.5	102		251
CADMIUM	P		0.25 U		6.4	98		237
CALCIUM	P	0.5	8290	3.4	10300			24800
CHROMIUM	P		8.9	3.3	34	95		248
COBALT	P		3.2 B		63	92		242
COPPER	P		5	0	37	97		265
IRON	P	7	10000	0	9380		101000	966
LEAD	P		14 B		85	108		2140
MAGNESIUM	P	5.5	1460	190	1260		48000	
MANGANESE	P	1.7	118	2.5	177	86	51800	250

TABLE D.2.17 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015C

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		SD X DIFFERENCE	DUPLICATE	DUPLICATE	MATRIX SPIKE	MS X RECOVERY	CONTINUING CAL FOUND	CONTINUING CAL FOUND
SAMPLE NUMBER		BR804066A	BR804066A	BR804066A	BR804066A	BR804066A	BRCCV1085	BRCCV1122
MATRIX			SOIL		SOIL		WATER	WATER
UNITS		%	MG/KG	%	MG/KG	%	UG/L	UG/L
ENV PROBLEM NO		9	9	9	9	9		
NICKEL	P		5.8	0.1	66	91		239
SELENIUM	P		7.6 U		260	99		1010
SILVER	P		0.76 U		6.9	106		251
SODIUM	P		76 B		66 B		103000	
VANADIUM	P		17	0	78	94		254
ZINC	P		15	6.5	78	95		1480
% SOLIDS			92.5		92.5			

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AREA	METHOD	QA	QA	QA	QA	QA
LOCATION		CONTINUING CAL FOUND	CONTINUING CAL BLANK	CRDL STAND FINAL	INTER CHK SOL. A FINAL	INTER CHK SOL. AB FINA
SAMPLE NUMBER		BRCCV1146	BRCCB1033	BRLRA1378	BRICS1215	BRICS1222
MATRIX		WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO						
ALUMINUM	P		60 U		487000	493000
ANTIMONY	P		50 U	121		
ARSENIC	P		60 U	543		
BARIUM	P		2 U		11 B	438
BERYLLIUM	P		0.3 U	10	4.5 B	439
CADMIUM	P		2 U	9.8	3.2 B	803
CALCIUM	P	5220	200 U		467000	471000
CHROMIUM	P		6 U	20	16	417
COBALT	P		3 U	99	6.3 B	397
COPPER	P		10 U	51	10 U	475
IRON	P		20 U		197000	200000
LEAD	P		50 U	502	50 U	3970
MAGNESIUM	P	4950 B	10 U		484000	488000
MANGANESE	P		5 U	30	8.9 B	431
NICKEL	P		6 U	79	11 B	782
SELENIUM	P		60 U	506		
SILVER	P		6 U	17	7.4 B	891
SODIUM	P	4610 B	200 U			
VANADIUM	P		4 U	97	4 U	413
ZINC	P		7 U	37	7 U	863
% SOLIDS						

TABLE D.2.18 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	INITIAL CAL	INITIAL CAL	PREP	CONTINUING	CONTINUING	LAB CONTROL
TYPE OF LOCATION		BLANK 1	TRUE A	FOUND A	BLANK	CAL BLANK	CAL FOUND	SAMPLE TRUE
SAMPLE NUMBER		BR03A0005	BR2AA1005	BR2AA2005	BR03A0005	BR03A1005	BR2AA4005	BR0700105
MATRIX		WATER			WATER	WATER		SOIL
UNITS		MG/KG	UG/L	UG/L	MG/KG	MG/KG	UG/L	MG/KG
ENV PROBLEM NO								

MERCURY	(CV)	0.02 U	20	20	0.02 B	0.02 U	20	19
x SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA
LOCATION		LAB CONTROL	B. 422	B. 479	CONTINUING	CONTINUING	B. 905
TYPE OF LOCATION		SAMPLE	CESSPOOL	CESSPOOL	CAL BLANK	CAL FOUND	CESSPOOL
SAMPLE NUMBER		BR0700105	BR313017D	BR311015D	BR03A2005	BR2AA5005	BR315019D
MATRIX		SOIL	SOIL	SOIL	WATER		SOIL
UNITS		MG/KG	MG/KG	MG/KG	MG/KG	UG/L	MG/KG
ENV PROBLEM NO			2	2			2

MERCURY	(CV)	19	5.7	0.06	0.02 U	20	2.9	2.9
x SOLIDS			15.7	74.4			17.1	

AREA	METHOD	QA	QA	QA	QA	QA	QA
LOCATION		DUPLICATE	MATRIX	MS x	CONTINUING	CONTINUING	PREP
TYPE OF LOCATION		RPD	SPIKE	RECOVERY	CAL BLANK	CAL FOUND	BLANK 2
SAMPLE NUMBER		BR315019D	BR315019D	BR315019D	BR03A3005	BR2AB4005	BR03B0005
MATRIX			SOIL		WATER		WATER
UNITS		x	MG/KG	x	MG/KG	UG/L	MG/KG
ENV PROBLEM NO		2	2	2			

MERCURY	(CV)	1	4.4	107	0.02 U	20	0.02 B
x SOLIDS							

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TABLE D.2.19 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015K

DRAFT DO NOT CITE

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL TRUE A BRICV1275 WATER UG/L	LAB CONTROL SAMPLE TRUE BRLCS1369 SOIL MG/KG	INITIAL CAL FOUND A BRICV1261 WATER UG/L	INITIAL CAL BLANK BRICB1205 WATER UG/L	PREP BLANK BRPB01415 WATER UG/L	PREP BLANK BRPB01416 WATER UG/L	LAB CONTROL SAMPLE BRLCS1353 SOIL MG/KG
POTASSIUM	FE	1000 B	8150	1100 B	100 U	100 U	100 U	9600
% SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		STP TANK BR802019C SEDIM MG/KG	STP TANK BR802020C SEDIM MG/KG	STP TANK BR802031C SEDIM MG/KG	B. 905 CESSPOOL BR315019C SLUDG MG/KG	B. 479 CESSPOOL BR311015C SLUDG MG/KG	B. 481 LEACH PIT BR808015C SOIL MG/KG	B. 481 LEACH PIT BR808026C SOIL MG/KG
POTASSIUM	FE	1700 B	1200 B	1400 B	880 B	180 B	600 B	410 B
% SOLIDS		12	22.2	25.6	18.4	82.8	28.9	21.7

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CONTINUING CAL FOUND BRCCV1086 WATER UG/L	CONTINUING CAL BLANK BRCCB1034 WATER UG/L	B. 481 LEACH PIT BR808037C SOIL MG/KG	AGS I&II SCRAPYARD BR804011A SOIL MG/KG	AGS I&II SCRAPYARD BR804022A SOIL MG/KG	AGS I&II SCRAPYARD BR804033A SOIL MG/KG	AGS I&II SCRAPYARD BR804044A SOIL MG/KG
POTASSIUM	FE	1100 B	100 U	520 B	500 B	770	550 B	610 B
% SOLIDS				23.6	94.7	92.4	94.1	91.7

TABLE D.2.19 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR311015K

DRAFT DO NOT CITE

AREA	METHOD	AGS I&II SCRAPYARD BR804055A SOIL MG/KG	AGS I&II SCRAPYARD BR804066A SOIL MG/KG	QA DUPLICATE BR804066A SOIL MG/KG	QA CONTINUING CAL FOUND BRCCV1087 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1035 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1088 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1036 WATER UG/L
POTASSIUM	(FE)	720	560 B	560 B	1100 B	100 U	1100 B	100 U
x SOLIDS		90.3	92.5	92.5				

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TABLE D.2.20 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017C

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A TRUE BRICS1244 WATER UG/L	QA INTER CHK SOL. AB TRUE BRICS1251 WATER UG/L	QA INITIAL CAL TRUE A BRICV1276 WATER UG/L	QA INITIAL CAL TRUE B BRICV1293 WATER UG/L	QA INITIAL CAL TRUE C BRICV1307 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BRICS1370 SOIL MG/KG	QA CRDL STAND TRUE BRLRA1393 WATER UG/L
ALUMINUM	P	511000	508000	100000	1050		15200	
ANTIMONY	P				1000		20 U	120
ARSENIC	P				1000		680	500
BARIUM	P		483		1010		430	
BERYLLIUM	P		474		251		1 U	10
CADMIUM	P		909		246		1 U	10
CALCIUM	P	476000	470000		25100	5000	10500	
CHROMIUM	P		513		252		17	20
COBALT	P		478		249		6.9	100
COPPER	P		534		260		265	50
IRON	P	219000	211000	100000	1040		11200	
LEAD	P		4850		2480		5830	500
MAGNESIUM	P	513000	513000	50000		5000	14700	
MANGANESE	P		470	50000	252		91700	30
NICKEL	P		916		243		22	80
SELENIUM	P				1000		1 U	500
SILVER	P		934		242		2 U	20
SODIUM	P			100000		5000	3720	
VANADIUM	P		475		253		18	100
ZINC	P		973		1460		425	40

x SOLIDS

AREA	METHOD	QA LINEAR RANGE BRRAN1432 WATER UG/L	QA LINEAR RANGE BRRAN1439 WATER UG/L	QA INITIAL CAL FOUND A BRICV1262 WATER UG/L	QA INITIAL CAL FOUND B BRICV1286 WATER UG/L	QA INITIAL CAL FOUND C BRICV1300 WATER UG/L	QA INITIAL CAL BLANK BRICB1206 WATER UG/L	QA CRDL STAND INITIAL BRLRA1386 WATER UG/L
ALUMINUM	P	10000	800000	102000	1150		60 U	
ANTIMONY	P	10000			1030		50 U	106
ARSENIC	P	20000			1050		60 U	499
BARIUM	P	5000			1000		2 U	
BERYLLIUM	P	1500			258		0.3 U	9.8
CADMIUM	P	5000			244		2 U	9.8
CALCIUM	P	10000	900000		25200	5170	200 U	

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TABLE D.2.20 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017C

DRAFT DO NOT CITE

AREA	METHOD	QA LINEAR RANGE BRRAN1432 WATER UG/L	QA LINEAR RANGE BRRAN1439 WATER UG/L	QA INITIAL CAL FOUND A BRICV1262 WATER UG/L	QA INITIAL CAL FOUND B BRICV1286 WATER UG/L	QA INITIAL CAL FOUND C BRICV1300 WATER UG/L	QA INITIAL CAL BLANK BRICB1206 WATER UG/L	QA CRDL STAND INITIAL BRLRA1386 WATER UG/L
CHROMIUM	P	10000			255		6 U	21
COBALT	P	10000			244		3 U	99
COPPER	P	10000			266		10 U	53
IRON	P	12000	800000	102000	984		20 U	
LEAD	P	50000			2150		50 U	493
MAGNESIUM	P	12000	500000	48800		4930 B	10 U	
MANGANESE	P	2000	200000	50200	254		5 U	29
NICKEL	P	15000			250		6 U	84
SELENIUM	P	10000			1020		60 U	475
SILVER	P	10000			250		6 U	18
SODIUM	P	10000	900000	104000		4880 B	200 U	
VANADIUM	P	10000			258		4 U	94
ZINC	P	6000			1490		7 U	139

x SOLIDS

AREA	METHOD	QA INTER CHK SOL. A INIT BRICS1230 WATER UG/L	QA INTER CHK SOL. AB INIT BRICS1237 WATER UG/L	QA PREP BLANK BRPB01417 WATER UG/L	QA PREP BLANK BRPB01418 WATER UG/L	QA LAB CONTROL SAMPLE BRLCS1354 SOIL MG/KG	QA B. 444 RELEASES BR504018D SOIL MG/KG	QA B. 444 RELEASES BR504029D SOIL MG/KG
ALUMINUM	P	499000	510000	60 U	60 U	17500	10100 E	5210 E
ANTIMONY	P	50 U		50 U	50 U	9.9 U	7.8 U	7.6 U
ARSENIC	P	60 U		60 U	60 U	633	9.4 U	9.1 U
BARIUM	P	9.6 B	438	2.5 B	2 U	415	54	6.9 B
BERYLLIUM	P	6.6 B	438	0.3 U	0.3 U	1.9	1	0.43 B
CADMIUM	P	3.4 B	802	2 U	2 U	0.4 U	0.31 U	0.3 U
CALCIUM	P	466000	476000	200 U	200 U	10200	973	167 B
CHROMIUM	P	16	419	6 U	6 U	9.1	15	6.3
COBALT	P	7.8 B	401	3 U	3 U	6.1	6.7 B	1.4 B
COPPER	P	10 U	465	10 U	10 U	251	12	2.6 B
IRON	P	205000	209000	20 U	20 U	13000	16200 E	6340 E
LEAD	P	50 U	4010	50 U	50 U	5090	9.8 B	7.6 U
MAGNESIUM	P	501000	509000	10 U	10 U	15500	1550 E	509 BE
MANGANESE	P	5 U	415	5 U	5 U	87200	232	25

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TABLE D.2.20 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017C

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INTER CHK	INTER CHK	PREP	PREP	LAB CONTROL	B. 444	B. 444
TYPE OF LOCATION		SOL. A INIT	SOL. AB INIT	BLANK	BLANK	SAMPLE	RELEASES	RELEASES
SAMPLE NUMBER		BRICS1230	BRICS1237	BRPB01417	BRPB01418	BRCS1354	BR504018D	BR504029D
MATRIX		WATER	WATER	WATER	WATER	SOIL	SOIL	SOIL
UNITS		UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO							6	6
NICKEL	P	13 B	794	6 U	6 U	22	8.9	3.5 B
SELENIUM	P	60 U		60 U	60 U	24	9.4 U	9.1 U
SILVER	P	6.2 B	867	6 U	6 U	1.2 U	0.94 U	0.91 U
SODIUM	P	859 B		200 U	200 U	3720	132 B	46 B
VANADIUM	P	4 U	412	4 U	4 U	20	27	11
ZINC	P	128	931	7 U	7 U	401	27	11
% SOLIDS							86	91.6

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		CONTINUING	CONTINUING	CONTINUING	CONTINUING	B. 444	STP	STP
TYPE OF LOCATION		CAL FOUND	CAL FOUND	CAL FOUND	CAL BLANK	RELEASES	DREDGE MATL	DREDGE MATL
SAMPLE NUMBER		BRCCV1089	BRCCV1123	BRCCV1147	BRCCB1037	BR504030D	BR800062C	BR800073C
MATRIX		WATER	WATER	WATER	WATER	SOIL	SOIL	SOIL
UNITS		UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO						6	8	8
ALUMINUM	P	101000	1150		60 U	7990 E	3220 E	3140 E
ANTIMONY	P		1030		50 U	7.4 U	7.3 U	7.3 U
ARSENIC	P		1030		60 U	8.9 U	8.7 U	8.7 U
BARIUM	P		998		2 U	21 B	7.3 B	5.6 B
BERYLLIUM	P		257		0.3 U	0.67 B	0.24 B	0.22 B
CADMIUM	P		243		2 U	0.3 U	0.29 U	0.29 U
CALCIUM	P		25200	5210	200 U	617 B	62 B	81 B
CHROMIUM	P		252		6 U	12	3.6	3.8
COBALT	P		243		3 U	3.6 B	1 B	0.74 B
COPPER	P		264		10 U	17	1.5 U	1.8 B
IRON	P	101000	974		20 U	11400 E	2560 E	2520 E
LEAD	P		2130		50 U	7.4 U	7.3 U	7.3 U
MAGNESIUM	P	48300		4830 B	10 U	1230 E	236 BE	271 BE
MANGANESE	P	52100	255		5 U	129	19	16
NICKEL	P		253		6 U	6.3	2 B	1.9 B
SELENIUM	P		1020		60 U	8.9 U	8.7 U	8.7 U
SILVER	P		240		6 U	0.89 U	0.87 U	0.87 U
SODIUM	P	102000		4730 B	200 U	122 B	44 B	51 B
VANADIUM	P		249		4 U	18	5.1 B	5 B
ZINC	P		1480		7 U	18	9.6	7.4
% SOLIDS						89.7	95.2	95.2

TABLE D.2.20 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017C

DRAFT DO NOT CITE

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AREA	METHOD	STP DREDGE MATL BR800084C SOIL MG/KG	STP DREDGE MATL BR800095C SOIL MG/KG	STP DREDGE MATL BR800108C SOIL MG/KG	STP SLUDGE BEDS BR803010C SOIL MG/KG	STP SLUDGE BEDS BR803021C SOIL MG/KG	STP SLUDGE BEDS BR803032C SOIL MG/KG	STP SLUDGE BEDS BR803043C SOIL MG/KG
ALUMINUM	P	2580 E	3780 E	1940 E	9310 E	8430 E	9260 E	9690 E
ANTIMONY	P	7.2 U	7 U	7 U	36 U	37 U	43 U	81 U
ARSENIC	P	8.6 U	8.4 U	8.4 U	44 U	45 U	51 U	98 U
BARIUM	P	7.8 B	8.1 B	5.2 B	925	841	918	787
BERYLLIUM	P	0.22 B	0.26 B	0.17 B	4.1	3.8	4.5	5.4 B
CADMIUM	P	0.29 U	0.28 U	0.28 U	115	101	110	100
CALCIUM	P	211 B	137 B	121 B	20800	19100	22100	15300
CHROMIUM	P	4.7	4.6	3.5	520	478	529	552
COBALT	P	1.1 B	0.95 B	0.9 B	36 B	34 B	37 B	35 B
COPPER	P	2.8 B	2.3 B	2.9 B	5190	4590	5000	4820
IRON	P	2580 E	3680 E	2430 E	28300 E	26100 E	28000 E	28700 E
LEAD	P	7.2 U	7 U	7 U	2880	2560	2870	3110
MAGNESIUM	P	432 BE	331 BE	314 BE	3530 BE	3160 BE	3520 BE	3560 BE
MANGANESE	P	25	30	24	195	177	185	154
NICKEL	P	2.6 B	2.4 B	2 B	537	477	550	770
SELENIUM	P	8.6 U	8.4 U	8.4 U	65 B	46 B	62 B	98 U
SILVER	P	0.86 U	0.84 U	0.84 U	704	650	642	662
SODIUM	P	56 B	38 B	50 B	2260 B	2160 B	2090 B	2310 B
VANADIUM	P	5.5 B	6.9 B	4.9 B	1100	1010	1240	1880
ZINC	P	14	11	9.7	2670	2410	2630	2580
x SOLIDS		94.9	93.7	95.4	19.2	17.2	16.4	8.1

AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1090 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1124 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1148 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1038 WATER UG/L	B. 422 CESSPOOL BR313017C SLUDGE MG/KG	BOUNDRY RD BACKGROUND BR810019C SOIL MG/KG	BOUNDRY RD BACKGROUND BR810020C SOIL MG/KG
ALUMINUM	P	101000	1160		60 U	2830 E	6350 E	6710 E
ANTIMONY	P		1040		50 U	62	7.4 U	7.6 U
ARSENIC	P		1040		60 U	55 U	8.9 U	9.2 U
BARIUM	P		996		2 U	5680	11 B	10 B
BERYLLIUM	P		254		0.3 U	2.6 B	0.37 B	0.4 B
CADMIUM	P		239		2 U	30	0.3 U	0.31 U
CALCIUM	P		24900	5200	200 U	39300	68 B	70 B

TABLE D.2.20 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017C

DRAFT DO NOT CITE

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AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1090 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1124 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1148 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1038 WATER UG/L	B. 422 CESSPOOL BR313017C SLUDG MG/KG	BOUNDRY RD BACKGROUND BR810019C SOIL MG/KG	BOUNDRY RD BACKGROUND BR810020C SOIL MG/KG
CHROMIUM	P		250		6 U	84	5.7	6.1
COBALT	P		241		3 U	15 B	1.1 B	1.3 B
COPPER	P		262		10 U	858	1.5 U	1.5 U
IRON	P	101000	967		20 U	37600 E	5850 E	5800 E
LEAD	P		2080		50 U	1180	7.4 U	7.6 U
MAGNESIUM	P	48400		4790 B	10 U	1870 BE	470 BE	507 BE
MANGANESE	P	52400	253		5 U	481	26	24
NICKEL	P		252		6 U	49	7.4	5.8 B
SELENIUM	P		1010		60 U	72 B	8.9 U	9.2 U
SILVER	P		237		6 U	16	0.89 U	0.92 U
SODIUM	P	100000		4750 B	200 U	4010 B	30 U	54 B
VANADIUM	P		247		4 U	10 B	11	11
ZINC	P		1470		7 U	10900	11	9.5
x SOLIDS						14.2	91	91.6

AREA	METHOD	QA BOUNDRY RD BACKGROUND BR810031C SOIL MG/KG	QA SERIAL DILUTION BR810031C SOIL MG/KG	QA SD X DIFFERENCE BR810031C %	QA DUPLICATE BR810031C SOIL MG/KG	QA DUPLICATE BR810031C %	QA MATRIX SPIKE BR810031C SOIL MG/KG	QA MS X RECOVERY BR810031C %
ALUMINUM	P	7070 E	3470	51	8080	13	7550	
ANTIMONY	P	7.5 U	37 U		7.5 U		7.5 U	
ARSENIC	P	9 U	45 U		9 U		9 U	
BARIUM	P	11 B	1.5 U		12 B		11 B	0
BERYLLIUM	P	0.4 B	0.38 B		0.43 B		0.42 B	0.27
CADMIUM	P	0.3 U	1.5 U		0.3 U		0.3 U	
CALCIUM	P	63 B	150 U		68 B		58 B	
CHROMIUM	P	6.3	4.5		7.1	0.8	6.7	1.3
COBALT	P	1.5 B	2.2 U		1.7 B		1.5 B	0
COPPER	P	1.8 B	7.5 U		1.6 B		1.5 U	4.9
IRON	P	6490 E	3120	52	7250	11	7180	
LEAD	P	7.5 U	37 U		7.5 U		7.5 U	
MAGNESIUM	P	531 BE	270 B	49	617 B		559 B	
MANGANESE	P	25	13		30	18	26	1.3

TABLE D.2.20 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017C

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		BOUNDRY RD	SERIAL	SD X	DUPLICATE	DUPLICATE	MATRIX	
TYPE OF LOCATION		BACKGROUND	DILUTION	DIFFERENCE	RPD	RPD	SPIKE	
SAMPLE NUMBER		BR810031C	BR810031C	BR810031C	BR810031C	BR810031C	BR810031C	
MATRIX		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
UNITS		MG/KG	MG/KG	X	MG/KG	X	MG/KG	
ENV PROBLEM NO		0	0	0	0	0	0	
NICKEL	P	7.9	4.5 U		8.2	0.3	7.2	-0.93
SELENIUM	P	9 U	45 U		9 U		9 U	
SILVER	P	0.9 U	4.5 U		0.9 U		0.9 U	
SODIUM	P	70 B	150 U		87 B		65 B	
VANADIUM	P	12	6.9 B		13	1	12	0
ZINC	P	10	5.4		11	1	9.4	-0.8
% SOLIDS		91.5	91.5		91.5		91.5	

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AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		CONTINUING	CONTINUING	CONTINUING	CONTINUING	CRDL STAND	INTER CHK	
TYPE OF LOCATION		CAL FOUND	CAL FOUND	CAL FOUND	CAL BLANK	FINAL	SOL. A FINAL	
SAMPLE NUMBER		BRCCV1091	BRCCV1125	BRCCV1149	BRCCB1039	BRLRA1379	BRICS1216	
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
ENV PROBLEM NO								
ALUMINUM	P	101000	1150		60 U		501000	505000
ANTIMONY	P		1040		50 U	110	50 U	
ARSENIC	P		1040		60 U	504	60 U	
BARIUM	P		997		2 U		9.4 B	439
BERYLLIUM	P		255		0.3 U	9.7	6.5	438
CADMIUM	P		240		2 U	10	3.2 B	807
CALCIUM	P		24900	5200	200 U		473000	479000
CHROMIUM	P		249		6 U	21	16	420
COBALT	P		242		3 U	100	8.1 B	400
COPPER	P		261		10 U	49	10 U	463
IRON	P	101000	969		20 U		207000	209000
LEAD	P		2100		50 U	486	50 U	4010
MAGNESIUM	P	48400		4770 B	10 U		503000	507000
MANGANESE	P	52700	254		5 U	30	5 U	421
NICKEL	P		254		6 U	85	14 B	808
SELENIUM	P		1010		60 U	492	60 U	
SILVER	P		236		6 U	18	6 U	847
SODIUM	P	101000		4760 B	200 U		890 B	
VANADIUM	P		246		4 U	94	4 U	405
ZINC	P		1470		7 U	42	37	928
% SOLIDS								

TABLE D.2.21 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017K

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL TRUE A BRICV1277 WATER UG/L	LAB CONTROL SAMPLE TRUE BRICS1371 SOIL MG/KG	PREP BLANK BRPB01420 WATER UG/L	INITIAL CAL FOUND A BRICV1263 WATER UG/L	INITIAL CAL BLANK BRICB1207 WATER UG/L	PREP BLANK BRPB01419 WATER UG/L	LAB CONTROL SAMPLE BRICS1355 SOIL MG/KG
POTASSIUM	FE	1000 B	8150	100 U	1100 B	100 U	200 B	9500
% SOLIDS								

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AREA	METHOD	QA						
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		B. 444 RELEASES BR504018D SOIL MG/KG 6	B. 444 RELEASES BR504029D SOIL MG/KG 6	B. 444 RELEASES BR504030D SOIL MG/KG 6	STP DREDGE MATL BR800062C SOIL MG/KG 8	STP DREDGE MATL BR800073C SOIL MG/KG 8	STP DREDGE MATL BR800084C SOIL MG/KG 8	STP DREDGE MATL BR800095C SOIL MG/KG 8
POTASSIUM	FE	870	260 B	700 B	120 B	140 B	230 B	190 B
% SOLIDS		86	91.6	89.7	95.2	95.2	94.9	93.7

AREA	METHOD	QA						
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CONTINUING CAL FOUND BRCCV1092 WATER UG/L	CONTINUING CAL BLANK BRCCB1040 WATER UG/L	STP DREDGE MATL BR800108C SOIL MG/KG 8	STP SLUDGE BEDS BR803010C SOIL MG/KG 8	STP SLUDGE BEDS BR803021C SOIL MG/KG 8	STP SLUDGE BEDS BR803032C SOIL MG/KG 8	STP SLUDGE BEDS BR803043C SOIL MG/KG 8
POTASSIUM	FE	1100 B	100 U	180 B	670 B	650 B	750 B	950 B
% SOLIDS				95.4	19.2	17.2	16.4	8.1

TABLE D.2.21 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR313017K

DRAFT DO NOT CITE

AREA	METHOD	BOUNDRY RD BACKGROUND	BOUNDRY RD BACKGROUND	B. 422 CESSPOOL BR313017C	BOUNDRY RD BACKGROUND	QA CONTINUING CAL FOUND	QA CONTINUING CAL BLANK	QA DUPLICATE
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BR810019C SOIL MG/KG	BR810020C SOIL MG/KG	BR313017C SLUDG MG/KG	BR810031C SOIL MG/KG	BRCCV1093 WATER UG/L	BRCCB1041 WATER UG/L	BR810031C SOIL MG/KG
		0	0	2	0			0
POTASSIUM	FE	210 B	230 B	630 B	260 B	1100 B	100 U	280 B
x SOLIDS		91	91.6	14.2	91.5			91.5

AREA	METHOD	QA CONTINUING CAL FOUND	QA CONTINUING CAL BLANK
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BRCCV1094 WATER UG/L	BRCCB1042 WATER UG/L
POTASSIUM	FE	1100 B	100 U
x SOLIDS			

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TABLE D.2.22 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR5000140

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL BLANK 1 BR03A0006 WATER UG/L	INITIAL CAL TRUE A BR2AA1006 UG/L	INITIAL CAL FOUND A BR2AA2006 UG/L	PREP BLANK BR03A0006 WATER UG/L	CONTINUING CAL BLANK BR03A1006 WATER UG/L	CONTINUING CAL FOUND BR2AA4006 UG/L	LAB CONTROL SAMPLE TRUE BR0700106 WATER UG/L
MERCURY	CV	0.02 U	20	19	0.09 B	0.02 U	20	873
% SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		LAB CONTROL SAMPLE BR0700106 WATER UG/L	BNL LANDF LEACHATE BR5000140 WATER UG/L	BNL LANDF LEACHATE BR5000250 WATER UG/L	BNL LANDF LEACHATE BR5000360 WATER UG/L	N PRIM. PD POND BR3040490 WATER UG/L	CONTINUING CAL BLANK BR03A2006 WATER UG/L	CONTINUING CAL FOUND BR2AA5006 UG/L
MERCURY	CV	880	0.07 B	0.03 B	0.08 B	0.12 B	0.02 U	20
% SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		DUPLICATE BR3040490 WATER UG/L	MATRIX SPIKE BR3040490 WATER UG/L	MS X RECOVERY BR3040490 %	STP TANK BR801018H WATER UG/L	STP TANK BR801029H WATER UG/L	STP TANK BR801030H WATER UG/L	CONTINUING CAL BLANK BR03A3006 WATER UG/L
MERCURY	CV	0.12 B	1.4	114	0.05 B	0.06 B	0.07 B	0.02 U
% SOLIDS								

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TABLE D.2.22 BROOKHAVEN METALS, INCLUDING CR+6 - SDO NUMBER: BR5000140

DRAFT DO NOT CITE

AREA	METHOD	QA CONTINUING CAL FOUND	QA PREP BLANK 2
LOCATION		BR2AB4006	BR03B0006
TYPE OF LOCATION			
SAMPLE NUMBER			
MATRIX			
UNITS		UG/L	WATER UG/L
ENV PROBLEM NO			
MERCURY	ICV	20	0.08 B
X SOLIDS	I I		

TABLE D.2.23 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR501015B

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		BLANK	STANDARD TRUE	STANDARD FOUND	STANDARD TRUE	STANDARD FOUND	STANDARD TRUE	STANDARD FOUND
TYPE OF LOCATION			BRSTD1111	BRSTD1111	BRSTD1112	BRSTD1112	BRSTD1113	BRSTD1113
SAMPLE NUMBER		BRICB1111						
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
ENV PROBLEM NO								
URANIUM, TOTAL		10E-04 U	0.025	0.026	0.05	0.049	0.1	0.095
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		B. 811	DUPLICATE	DUPLICATE	B. 811	DUPLICATE	DUPLICATE	B. 811
TYPE OF LOCATION		SLURRY		RPD	SLURRY	RPD	RPD	SLURRY
SAMPLE NUMBER		BR501015B	BR501015B	BR501015B	BR501026B	BR501026B	BR501026B	BR501037B
MATRIX		SLUDGE	SLUDGE	%	SLUDGE	SLUDGE	%	SLUDGE
UNITS		UG/G	UG/G	%	UG/G	UG/G	%	UG/G
ENV PROBLEM NO		5	5	5	5	5	5	5
URANIUM, TOTAL		169	184	8.5	42	55	27	55
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		DUPLICATE	DUPLICATE	B. 811	DUPLICATE	DUPLICATE	BOUNDRY RD	BOUNDRY RD
TYPE OF LOCATION			RPD	SLURRY		RPD	BACKGROUND	BACKGROUND
SAMPLE NUMBER		BR501037B	BR501037B	BR501048B	BR501048B	BR501048B	BR810019F	BR810020F
MATRIX		SLUDGE	SLUDGE	SLUDGE	SLUDGE	SLUDGE	SOIL	SLUDGE
UNITS		UG/G	%	UG/G	UG/G	%	UG/G	UG/G
ENV PROBLEM NO		5	5	5	5	5	0	0
URANIUM, TOTAL		77	33	72	72	0	1 U	1 U
% SOLIDS								

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TABLE D.2.23 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR501015B

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA		
LOCATION		BLANK	STANDARD TRUE	STANDARD FOUND	MATRIX SPIKE	MS X RECOVERY	BOUNDRY RD BACKGROUND	STP SLUDGE BEDS
TYPE OF LOCATION			BRSTD1114	BRSTD1114	BR810020F	BR810020F	BR810031F	BR803010E
SAMPLE NUMBER		BRCCB1112						
MATRIX		WATER	WATER	WATER	SLUDGE	X	SLUDGE	SLUDGE
UNITS		MG/L	MG/L	MG/L	UG/G		UG/G	UG/G
ENV PROBLEM NO					0	0	0	8
URANIUM, TOTAL		10E-04 U	0.05	0.051	2.8	97	1 U	6
% SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION		STP SLUDGE BEDS	STP SLUDGE BEDS	STP SLUDGE BEDS	BLANK	STANDARD TRUE	STANDARD FOUND	STANDARD TRUE
TYPE OF LOCATION		BR803021E	BR803032E	BR803043E	BRCCB1113	BRSTD1115	BRSTD1115	BRSTD1116
SAMPLE NUMBER		SLUDGE	SLUDGE	SLUDGE	WATER	WATER	WATER	WATER
MATRIX		UG/G	UG/G	UG/G	MG/L	MG/L	MG/L	MG/L
UNITS		8	8	8				
ENV PROBLEM NO								
URANIUM, TOTAL		5	7	6	10E-04 U	0.05	0.049	0.075
% SOLIDS								

AREA	METHOD	QA
LOCATION		STANDARD FOUND
TYPE OF LOCATION		BRSTD1116
SAMPLE NUMBER		WATER
MATRIX		MG/L
UNITS		
ENV PROBLEM NO		
URANIUM, TOTAL		0.076
% SOLIDS		

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TABLE D.2.24 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR501015K

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL TRUE A BRICV1278 WATER UG/L	LAB CONTROL SAMPLE TRUE BRICS1372 SOIL MG/KG	INITIAL CAL FOUND A BRICV1264 WATER UG/L	INITIAL CAL BLANK BRICB1208 WATER UG/L	PREP BLANK BRPB01421 WATER UG/L	PREP BLANK BRPB01422 WATER UG/L	LAB CONTROL SAMPLE BRICS1356 SOIL MG/KG
POTASSIUM	FEI	1000 B	8150	1100 B	100 U	100 U	150 B	21000
x SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CONTINUING CAL FOUND BRCCV1095 WATER UG/L	CONTINUING CAL BLANK BRCCB1043 WATER UG/L	B. 811 SLURRY BR501015A SOLID MG/KG 5	B. 811 SLURRY BR501026A SOLID MG/KG 5	B. 811 SLURRY BR501037A SOLID MG/KG 5	B. 811 SLURRY BR501048A SOLID MG/KG 5	CONTINUING CAL FOUND BRCCV1096 WATER UG/L
POTASSIUM	FEI	1100 B	100 U	8400	7200	8300	9900	1100 B
x SOLIDS				77.4	79.8	79	89.5	

AREA	METHOD	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CONTINUING CAL BLANK BRCCB1044 WATER UG/L	DUPLICATE BR501048A SOIL MG/KG 5	CONTINUING CAL FOUND BRCCV1097 WATER UG/L	DUPLICATE RPD BR501048A x 5	CONTINUING CAL BLANK BRCCB1045 WATER UG/L
POTASSIUM	FEI	100 U	11000	1100 B	11	100 U
x SOLIDS			89.5			

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TABLE D.2.25 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR508056D

DRAFT DO NOT CITE

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AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INTER CHK SOL. A INIT BR0400022 UG/L	INTER CHK SOL. AB TRUE BR0400022 UG/L	INTER CHK SOL. AB INIT BR0400022 UG/L	PREP BLANK BR03A0002 SOIL MG/KG	LAB CONTROL SAMPLE TRUE BR0710002 SOIL MG/KG	LAB CONTROL SAMPLE BR0710002 SOIL MG/KG	U/D CUR LF WELL AT LNDF BR508056D SOIL MG/KG 4
CADMIUM	P	5	909	856	0.5 U	45	40	0.5 U
CALCIUM	P	447000	516000	449000	20 B	196000	196000	308 B
CHROMIUM	P	60	513	514	0.52 U	100	106	10
COBALT	P	23	478	461	2.8 U	144	148	2.8 U
COPPER	P	1	534	518	1 B	6910	7410	9.3
IRON	P	187000	203000	183000	2.4 B	22400	24300	5920
LEAD	P	286	4850	4630	10 U	236	227	11 B
MAGNESIUM	P	451000	509000	450000	8.2 U	118000	118000	1290
MANGANESE	P	105	531	558	0.39 B	208	214	50
NICKEL	P	24	916	874	2.4 U	61	60	5.8 B
POTASSIUM	P	-57		-58	16 U	50	62 B	542 B
SELENIUM	P	0		-156	19 U	39	38 B	20 U
SILVER	P	-8	993	868	0.44 U	22	24	4.2 B
SODIUM	P	424		420	18 B	50	54 B	45 B
THALLIUM	P	134	921	1000	5.2 U	39	65 B	7.6 B
VANADIUM	P	-57	475	420	0.97 B	66	70	18
ZINC	P	21	973	898	0.4 B	187	188	16
-----								89.8
x SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		DUPLICATE BR508056D SOIL MG/KG 4	DUPLICATE RPD BR508056D % 4	MATRIX SPIKE BR508056D SOIL MG/KG 4	MS x RECOVERY BR508056D % 4	POST DIGEST SPIKE BR508056D SOIL MG/KG 4	POST DIGEST SPIKE x REC BR508056D % 4	SERIAL DILUTION BR508056D SOIL MG/KG 4
ALUMINUM	P	7470	2.1					40200
ANTIMONY	P	13 B	200	42 N	50	568	114	292 U
ARSENIC	P	14 U		317	95			402 U
BARIUM	P	21 B	4.2	331	92			110 U
BERYLLIUM	P	0.035 U		8.2	98			1 U
CADMIUM	P	0.44 U		7.7	92			12 U
CALCIUM	P	335 B	8.4					1600 B
CHROMIUM	P	10	0	40	90			57
COBALT	P	2.9 B	200	80	96			70 U
COPPER	P	9.7	4.2	49	95			58 B

TABLE D.2.25 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR508056D

DRAFT DO NOT CITE

AREA	METHOD	QA INITIAL CAL TRUE A BR2AA1002 UG/L	QA INITIAL CAL FOUND A BR2AA2002 UG/L	QA INITIAL CAL BLANK 1 BR03A0002 SOIL MG/KG	QA CRDL STAND TRUE BR2B10002 UG/L	QA CRDL STAND INITIAL BR2B10002 UG/L	QA CONTINUING CAL BLANK BR03A1002 SOIL MG/KG	QA INTER CHK SOL. A TRUE BR0400022 UG/L
ALUMINUM	P	1970	2010	21 U			21 U	50200
ANTIMONY	P	1090	1140	58 U			60 B	
ARSENIC	P	10000	10900	80 U			80 U	
BARIUM	P	2120	2020	2 U			2 U	
BERYLLIUM	P	527	491	0.2 U	10	9.1	0.3 B	
CADMIUM	P	488	473	2.5 U	10	12	2.5 U	
CALCIUM	P	51800	47900	20 U			25 B	506000
CHROMIUM	P	529	504	2.6 U	20	20	2.6 U	
COBALT	P	496	483	14 U	100	94	14 U	
COPPER	P	524	543	1.9 U	50	51	2.9 B	
IRON	P	2060	2020	11 B			4 U	196000
LEAD	P	5160	4810	50 U			50 U	
MAGNESIUM	P	25500	24600	41 U			-68 B	498000
MANGANESE	P	520	508	1.8 B	30	32	2.6 B	
NICKEL	P	495	483	12 U	80	85	12 U	
POTASSIUM	P	51300	50500	82 U			82 U	
SELENIUM	P	5000	5010	97 U			97 U	
SILVER	P	495	466	2.2 U	20	22	2.2 U	
SODIUM	P	50300	49800	-17 B			618 B	
THALLIUM	P	7000	7000	26 U			26 U	
VANADIUM	P	520	525	4.9 B	100	105	6.5 B	
ZINC	P	3070	2850	1.9 U	40	43	1.9 B	

x SOLIDS

AREA	METHOD	QA INTER CHK SOL. A INIT BR0400022 UG/L	QA INTER CHK SOL. AD TRUE BR0400022 UG/L	QA INTER CHK SOL. AD INIT BR0400022 UG/L	QA PREP BLANK BR03A0002 SOIL MG/KG	QA LAB CONTROL SAMPLE TRUE BR0710002 SOIL MG/KG	QA LAB CONTROL SAMPLE BR0710002 SOIL MG/KG	U/D CUR LF WELL AT LNDF BR508056D SOIL MG/KG 4
ALUMINUM	P	468000	508000	467000	4.2 U	325	294	7630
ANTIMONY	P	88		138	14 B	211	250	12 UN
ARSENIC	P	-67		-89	16 U	917	1090	16 U
BARIUM	P	122	483	569	0.4 U	4.8	21 B	22 B
BERYLLIUM	P	12	474	465	0.04 U	19	21	0.04 U

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TABLE D.2.25 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR508056D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		DUPLICATE	DUPLICATE	MATRIX SPIKE	MS X RECOVERY	POST DIGEST SPIKE	POST DIGEST SPIKE X REC	SERIAL DILUTION
TYPE OF LOCATION		BR508056D	BR508056D	BR508056D	BR508056D	BR508056D	BR508056D	BR508056D
SAMPLE NUMBER		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MATRIX		MG/KG	x	MG/KG	x	MG/KG	x	MG/KG
UNITS		4	4	4	4	4	4	4
ENV PROBLEM NO								
IRON	P	5720	3.4					30600
LEAD	P	8.7 U	200	89	94			249 U
MAGNESIUM	P	1220	5.6					6550
MANGANESE	P	48	3.1	123	88			265
NICKEL	P	4.8 B	19	84	94			61 U
POTASSIUM	P	552 B	1.8					2700 B
SELENIUM	P	17 U		319	95			484 U
SILVER	P	4 B	4.9	11	79			35 B
SODIUM	P	50 B	11					303 B
THALLIUM	P	4.5 U	200	306	89			129 U
VANADIUM	P	17	2.3	97	95			114 B
ZINC	P	16	0.6	88	87			84 B
x SOLIDS		89.8						

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		SD X DIFFERENCE	CONTINUING CAL TRUE	CONTINUING CAL FOUND	U/D CUR LF WELL AT LNDF			
TYPE OF LOCATION		BR508056D	BR2AA3002	BR2AA4002	BR508067D	BR508078D	BR508089D	BR508090D
SAMPLE NUMBER		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MATRIX		MG/KG	UG/L	UG/L	MG/KG	MG/KG	MG/KG	MG/KG
UNITS		4	4	4	4	4	4	4
ENV PROBLEM NO								
ALUMINUM	P	6.1	2000	2080	4080	1750	1680	1020
ANTIMONY	P		5000	5340	5.9 UN	6.8 UN	10 UN	55 N
ARSENIC	P		10000	10900	8.2 U	9.3 U	14 U	16 B
BARIUM	P	1.8	2000	2020	20 B	0.2 U	6 B	4.3 B
BERYLLIUM	P		2000	2020	0.1 B	0.02 U	0.04 U	0.03 U
CADMIUM	P		2000	1970	0.3 U	0.3 U	0.4 U	0.05 U
CALCIUM	P	4.6	50000	51400	201 B	90 B	56 B	118 B
CHROMIUM	P	15	2000	2010	7.9	3.7	279	2.8
COBALT	P		2000	2010	3.2 B	2.8 B	2.5 U	2 U
COPPER	P	24	2000	2090	7.2	3.6	4.2 B	3.4 B
IRON	P	4.1	2000	2040	6850	3840	2400	1520
LEAD	P		2000	2040	8.1 B	5.8 U	8.8 U	7.2 U
MAGNESIUM	P	2	5000	5100	1110	400 B	279 B	217 B
MANGANESE	P	7.3	2000	1980	107	134	182	28
NICKEL	P		2000	2020	5	2.4 B	3.7 B	2.7 B

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TABLE D.2.25 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR508056D

DRAFT DO NOT CITE

AREA	METHOD	QA SD X DIFFERENCE BR508056D	QA CONTINUING CAL TRUE BR2AA3002	QA CONTINUING CAL FOUND BR2AA4002	U/D CUR LF WELL AT LNDF BR508067D SOIL MG/KG	U/D CUR LF WELL AT LNDF BR508078D SOIL MG/KG	U/D CUR LF WELL AT LNDF BR508089D SOIL MG/KG	U/D CUR LF WELL AT LNDF BR508090D SOIL MG/KG
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		x 4	UG/L	UG/L	4	4	4	4
POTASSIUM	P	0.4	10000	10400	526	197 B	152 B	117 B
SELENIUM	P		5000	5320	9.8 U	11 U	17 U	14 U
SILVER	P		1000	996	3 B	1.3 B	1.3 B	1 B
SODIUM	P	36	10000	10300	37 B	24 B	19 B	20 B
THALLIUM	P		7000	7260	2.6 U	3 U	4.6 U	3.7 U
VANADIUM	P	29	2000	2060	14	6.6	5.5 B	4.7 B
ZINC	P	6.5	2000	2000	14	6.5	4.9	4
x SOLIDS					83.8	88.2	96.1	94.2

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AREA	METHOD	QA U/D CUR LF WELL AT LNDF BR508103D SOIL MG/KG	QA CONTINUING CAL FOUND BR2AA5002 UG/L	QA CONTINUING CAL BLANK BR03A2002 SOIL MG/KG	QA INTER CHK SOL. A FINAL BR0400022 UG/L	QA INTER CHK SOL. AB FINA BR0400022 UG/L	QA CRDL STAND FINAL BR2B10002 UG/L
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		4					
ALUMINUM	P	1130	2080	21 U	479000	474000	
ANTIMONY	P	8.3 UN	5310	58 U	122	137	
ARSENIC	P	12 U	11000	80 U	124	170	
BARIUM	P	4.3 B	2020	2 U	122	572	
BERYLLIUM	P	0.03 U	2020	0.2 U	12	469	9.2
CADMIUM	P	0.4 U	1950	2.5 U	2	869	11
CALCIUM	P	125 B	51400	20 U	460000	456000	
CHROMIUM	P	2.2	2010	2.6 U	61	519	19
COBALT	P	2 U	2010	14 U	26	473	94
COPPER	P	3.1 B	2090	1.9 U	1	524	53
IRON	P	1680	2040	4 U	191000	191000	
LEAD	P	7.1 U	2040	50 U	307	4720	
MAGNESIUM	P	247 B	5040	-97 B	458000	454000	
MANGANESE	P	29	1980	1.2 B	105	561	31
NICKEL	P	1.8 B	2010	12 U	22	880	89
POTASSIUM	P	115 B	10400	82 U	15	-21	
SELENIUM	P	14 U	5380	97 U	-80	-63	
SILVER	P	0.9 B	1000	2.2 U	-8	889	22
SODIUM	P	20 B	10000	-86 B	378	367	
THALLIUM	P	3.7 U	7200	26 U	176	1070	

TABLE D.2.25 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR508056D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	
LOCATION		U/D CUR LF	CONTINUING	CONTINUING	INTER CHK	INTER CHK	CRDL STAND
TYPE OF LOCATION		WELL AT LNDF	CAL FOUND	CAL BLANK	SOL. A FINAL	SOL. AB FINA	FINAL
SAMPLE NUMBER		BR508103D	BR2AA5002	BR03A2002	BR0400022	BR0400022	BR2B10002
MATRIX		SOIL	SOIL	SOIL			
UNITS		MG/KG	UG/L	MG/KG	UG/L	UG/L	UG/L
ENV PROBLEM NO		4					
VANADIUM	P	4.4 B	2060	2.3 U	-60	426	104
ZINC	P	4.2	2000	1.9 U	20	907	42
x SOLIDS		94.8					

TABLE D.2.26 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR800062D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	INITIAL CAL	INITIAL CAL	PREP	CRDL STAND	CRDL STAND	LAB CONTROL
TYPE OF LOCATION		TRUE A	FOUND A	BLANK 1	BLANK	TRUE	FINAL	SAMPLE TRUE
SAMPLE NUMBER		BR2AA1007	BR2AA2007	BR05A0007	BR03A0007	BR2B10001	BR2B10001	BR0700107
MATRIX		UG/L	UG/L	WATER	WATER	UG/L	UG/L	WATER
UNITS				UG/L	UG/L			UG/L
ENV PROBLEM NO								
LEAD	IF	39	40	1 U	0.2 U	5	4.8	5830
x SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		LAB CONTROL	BOUNDRY RD	BOUNDRY RD	CONTINUING	CONTINUING	DUPLICATE	DUPLICATE
TYPE OF LOCATION		SAMPLE	BACKGROUND	BACKGROUND	CAL FOUND	CAL BLANK		RPD
SAMPLE NUMBER		BR0700107	BR810020E	BR810031E	BR2AA4007	BR03A1007	BR810031E	BR810031E
MATRIX		WATER	SOIL	SOIL	UG/L	WATER	SOIL	x
UNITS		UG/L	MG/KG	MG/KG		UG/L	MG/KG	
ENV PROBLEM NO			0	0			0	0
LEAD	IF	5610	3.6	4.1	39	1 U	4	3.5
x SOLIDS			90.9	91.6				
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		MATRIX	MS x	STP	STP	STP	CONTINUING	STP
TYPE OF LOCATION		SPIKE	RECOVERY	DREDGE MATL	DREDGE MATL	DREDGE MATL	CAL FOUND	DREDGE MATL
SAMPLE NUMBER		BR810031E	BR810031E	BR800062D	BR800073D	BR800084D	BR2AA5007	BR800108D
MATRIX		SOIL	x	SOIL	SOIL	SOIL	UG/L	SOIL
UNITS		MG/KG		MG/KG	MG/KG	MG/KG		MG/KG
ENV PROBLEM NO		0	0	8	8	8		8
LEAD	IF	7.3	106	1.8	2.6	2.6	38	2.4
x SOLIDS				95.1	94.8	94.9		95.2

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TABLE D.2.26 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR800062D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		B. 481 LEACH PIT BR808015D SOIL MG/KG 11	B. 481 LEACH PIT BR808026D SOIL MG/KG 11	B. 481 LEACH PIT BR808037D SOIL MG/KG 11	CONTINUING CAL FOUND BR2AB4007 UG/L	CONTINUING CAL BLANK BR03A2007 WATER UG/L	STP DREDGE MATL BR800095D SOIL MG/KG 8	CONTINUING CAL FOUND BR2AB5007 UG/L

LEAD	IF	208	254	411	39	1 U	4.6	39
% SOLIDS		80.6	77.4	73.9			92.9	

AREA	METHOD	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL FOUND A BR2AC2001 UG/L	CRDL STAND TRUE BR2B20001 UG/L	CRDL STAND FINAL BR2B20001 UG/L	BOUNDRY RD BACKGROUND BR810019E SOIL MG/KG 0	CONTINUING CAL FOUND BR2AC4001 UG/L	CONTINUING CAL BLANK BR03A3007 WATER UG/L

LEAD	IF	40	5	5.6	4.5	38	1 U
% SOLIDS					91.1		

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TABLE D.2.27 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR800119G

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	INITIAL CAL	INITIAL CAL	PREP	LAB CONTROL	LAB CONTROL	STP
TYPE OF LOCATION		TRUE A	FOUND A	BLANK 1	BLANK	SAMPLE TRUE	SAMPLE	DREDGE MATL
SAMPLE NUMBER		BR2AA1008	BR2AA2008	BR03A0008	BR03A0008	BR0700108	BR0700108	BR800119G
MATRIX				WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO								8
LEAD	IF	39	37	1 U	1 U	100	93	1 U
% SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		DUPLICATE	MATRIX SPIKE	MS X RECOVERY	CONTINUING CAL FOUND	CONTINUING CAL BLANK	BOUNDRY RD WELL	BOUNDRY RD WELL
TYPE OF LOCATION			BR800119G	BR800119G	BR2AA4008	BR03A1008	BR809016G	BR809027G
SAMPLE NUMBER		BR800119G	BR800119G	BR800119G	BR2AA4008	BR03A1008	BR809016G	BR809027G
MATRIX		WATER	WATER	X	UG/L	WATER	WATER	WATER
UNITS		UG/L	UG/L		UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		8	8	8		0	0	0
LEAD	IF	1 U	19	94	37	1 U	75	81
% SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		BOUNDRY RD WELL	AGS SCRAP. WELL	CONTINUING CAL FOUND	CONTINUING CAL BLANK	AGS SCRAP. WELL	AGS SCRAP. WELL	CRDL STAND TRUE
TYPE OF LOCATION		BR809038G	BR805012G	BR2AA5008	BR03A2008	BR805023G	BR805034G	BR2B10002
SAMPLE NUMBER		BR809038G	BR805012G	BR2AA5008	BR03A2008	BR805023G	BR805034G	BR2B10002
MATRIX		WATER	WATER	UG/L	WATER	WATER	WATER	UG/L
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		0	9			9	9	
LEAD	IF	68	1 U	36	1 U	1 U	1 U	5
% SOLIDS								

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TABLE D.2.27 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR800119G

DRAFT DO NOT CITE

AREA	METHOD	QA CRDL STAND FINAL	QA CONTINUING CAL FOUND	QA CONTINUING CAL BLANK
LOCATION				
TYPE OF LOCATION				
SAMPLE NUMBER		BR2B10002	BR2AB4008	BR03A3008
MATRIX				WATER
UNITS		UG/L	UG/L	UG/L
ENV PROBLEM NO				
LEAD	F	4.8	38	1 U
* SOLIDS				

TABLE D.2.28 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR802019D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL BLANK 1 BR03A0009 WATER MG/KG	INITIAL CAL TRUE A BR2AA1009 UG/L	INITIAL CAL FOUND A BR2AA2009 UG/L	PREP BLANK BR03A0009 WATER MG/KG	CONTINUING CAL BLANK BR03A1009 WATER MG/KG	CONTINUING CAL FOUND BR2AA4009 UG/L	LAB CONTROL SAMPLE TRUE BR0700109 SOIL MG/KG
MERCURY	(CV)	0.02 U	20	20	0.02 B	0.02 U	20	19
% SOLIDS								
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		LAB CONTROL SAMPLE BR0700109 SOIL MG/KG	STP TANK BR802019D SOIL MG/KG	STP TANK BR802020D SOIL MG/KG	CONTINUING CAL BLANK BR03A2009 WATER MG/KG	CONTINUING CAL FOUND BR2AA5009 UG/L	DUPLICATE BR802020D SOIL MG/KG	DUPLICATE RPD BR802020D %
MERCURY	(CV)	20	175	352	0.02 U	20	392	11
% SOLIDS			12.2	22.5				
AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		MATRIX SPIKE BR802020D SOIL MG/KG	STP TANK BR802031D SOIL MG/KG	CONTINUING CAL BLANK BR03A3009 WATER MG/KG	CONTINUING CAL FOUND BR2AB4009 UG/L	PREP BLANK 2 BR03B0007 WATER MG/KG		
MERCURY	(CV)	437	12	0.02 U	20	0.02 B		
% SOLIDS			38.3					

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TABLE D.2.29 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013C

DRAFT DO NOT CITE

AREA	METHOD	QA INTER CHK SOL. A TRUE BRICS1245 WATER UG/L	QA INTER CHK SOL. AB TRUE BRICS1252 WATER UG/L	QA INITIAL CAL TRUE A BRICV1279 WATER UG/L	QA INITIAL CAL TRUE B BRICV1294 WATER UG/L	QA INITIAL CAL TRUE C BRICV1308 WATER UG/L	QA CRDL STAND TRUE BRLRA1394 WATER UG/L	QA LINEAR RANGE BRRAN1433 WATER UG/L
ALUMINUM	P	511000	508000	100000	990			10000
ANTIMONY	P				1000		120	10000
ARSENIC	P				1000		500	20000
BARIUM	P		483		990			5000
BERYLLIUM	P		474		241		10	1500
CADMIUM	P		909		245		10	5000
CALCIUM	P	476000	470000		24900	5000		10000
CHROMIUM	P		513		253		20	10000
COBALT	P		478		237		100	10000
COPPER	P		534		271		50	10000
IRON	P	219000	211000	100000	995			12000
LEAD	P		4850		2260		500	50000
MAGNESIUM	P	513000	513000	50000		5000		12000
MANGANESE	P		470	50000	257		30	2000
NICKEL	P		916		248		80	15000
SELENIUM	P				1000		500	10000
SILVER	P		934		255		20	10000
SODIUM	P			100000		5000		10000
VANADIUM	P		475		256		100	10000
ZINC	P		973		1550		40	6000

x SOLIDS

AREA	METHOD	QA LINEAR RANGE SOIL BRRAN1440 WATER UG/L	QA SOIL BRSOI1693 SOIL MG/KG	QA INITIAL CAL FOUND A BRICV1265 WATER UG/L	QA INITIAL CAL FOUND B BRICV1287 WATER UG/L	QA INITIAL CAL FOUND C BRICV1301 WATER UG/L	QA INITIAL CAL BLANK BRICB1209 WATER UG/L	QA CRDL STAND INITIAL BRLRA1387 WATER UG/L
ALUMINUM	P	800000	15200	98000	1200		60 U	
ANTIMONY	P		20 U		1090		50 U	126
ARSENIC	P		680		1130		60 U	555
BARIUM	P		430		1030		2 U	
BERYLLIUM	P		1 U		259		0.3 U	9.8
CADMIUM	P		1 U		250		2 U	11
CALCIUM	P	900000	10500		25000	5390	200 U	

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TABLE D.2.29 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013C

DRAFT DO NOT CITE

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AREA	METHOD	QA LINEAR RANGE	QA SOIL	QA INITIAL CAL FOUND A	QA INITIAL CAL FOUND B	QA INITIAL CAL FOUND C	QA INITIAL CAL BLANK	QA CRDL STAND INITIAL
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BRRAN1440 WATER UG/L	BRSOI1693 SOIL MG/KG	BRICV1265 WATER UG/L	BRICV1287 WATER UG/L	BRICV1301 WATER UG/L	BRICB1209 WATER UG/L	BRLRA1387 WATER UG/L
CHROMIUM	P		17		261		6 U	21
COBALT	P		6.9		249		3 U	100
COPPER	P		265		273		10 U	51
IRON	P	800000	11200	103000	997		20 U	
LEAD	P		5830		2240		50 U	511
MAGNESIUM	P	500000	14700	47900		5070	10 U	
MANGANESE	P	200000	91700	50500	257		5 U	30
NICKEL	P		22		258		6 U	84
SELENIUM	P		1 U		1060		60 U	512
SILVER	P		2 U		266		6 U	16
SODIUM	P	900000	3720	104000		4780 B	200 U	
VANADIUM	P		18		268		4 U	99
ZINC	P		425		1520		7 U	36

* SOLIDS

AREA	METHOD	QA INTER CHK SOL. A INIT	QA INTER CHK SOL. AB INIT	QA PREP BLANK	QA PREP BLANK	QA LAB CONTROL SAMPLE	QA B. 975 BUBBLE ARE	QA B. 975 BUBBLE ARE
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BRICS1231 WATER UG/L	BRICS1238 WATER UG/L	BRPB01423 WATER UG/L	BRPB01424 WATER UG/L	BRICS1357 SOIL MG/KG	BR806013C SOIL MG/KG	BR806024C SOIL MG/KG
ALUMINUM	P	488000	493000	60 U	60 U	18100	19500	9500
ANTIMONY	P			50 U	50 U	9.8 U	9.4 UN	7.5 UN
ARSENIC	P			60 U	60 U	701	11 UN	8.9 UN
BARIUM	P	10 B	450	2 U	2 U	441	46	25 B
BERYLLIUM	P	4.6 B	446	0.3 U	0.3 U	1.9	1.8 E	1.5 E
CADIUM	P	4.8 B	824	2 U	2 U	0.39	3.7	2.2
CALCIUM	P	463000	467000	200 U	200 U	10400	89100 *	125000 *
CHROMIUM	P	17	431	6 U	6 U	4.8	27 NE	11 NE
COBALT	P	3.7 B	406	3 U	3 U	6.2	6.9 BE	4 BE
COPPER	P	10 U	488	10 U	10 U	266	24	15
IRON	P	200000	202000	20 U	20 U	13400	23600 E	12900 E
LEAD	P	50 U	4080	50 U	50 U	5530	92 N	50 N
MAGNESIUM	P	491000	494000	14 B	10 U	15800	47800	69100
MANGANESE	P	8.6 B	439	5 U	5 U	85200	304	183

TABLE D.2.29 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013C

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INTER CHK	INTER CHK	PREP	PREP	LAB CONTROL	B. 975	B. 975
TYPE OF LOCATION		SOL. A INIT	SOL. AB INIT	BLANK	BLANK	SAMPLE	BUBBLE ARE	BUBBLE ARE
SAMPLE NUMBER		BRICS1231	BRICS1238	BRPB01423	BRPB01424	BRICS1357	BR806013C	BR806024C
MATRIX		WATER	WATER	WATER	WATER	SOIL	SOIL	SOIL
UNITS		UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG	MG/KG
ENV PROBLEM NO							10	10
NICKEL	P	12 B	802	6 U	6 U	23	16 NxE	9.5 NxE
SELENIUM	P			60 U	60 U	12 U	11 U	8.9 U
SILVER	P	8.9 B	904	6 U	6 U	1.2 U	1.8 B	1.6
SODIUM	P			200 U	200 U	4060	401 B	425 B
VANADIUM	P	4 U	427	4 U	4 U	21	38 E	19 E
ZINC	P	7 U	883	7 U	7 U	429	270 E	96 E
% SOLIDS							66.4	84.7

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AREA	METHOD	QA						
LOCATION		B. 975	CONTINUING	CONTINUING	CONTINUING	CONTINUING	B. 975	B. 975
TYPE OF LOCATION		BUBBLE ARE	CAL FOUND	CAL FOUND	CAL FOUND	CAL BLANK	BUBBLE ARE	BUBBLE ARE
SAMPLE NUMBER		BR806035C	BRCCV1098	BRCCV1126	BRCCV1150	BRCCB1046	BR806046C	BR806057C
MATRIX		SOIL	WATER	WATER	WATER	WATER	SOIL	SOIL
UNITS		MG/KG	UG/L	UG/L	UG/L	UG/L	MG/KG	MG/KG
ENV PROBLEM NO		10					10	10
ALUMINUM	P	7240	98300	1170		60 U	7260	4180
ANTIMONY	P	7.5 UN		1070		50 U	7.1 UN	6.9 UN
ARSENIC	P	9 UN		1110		60 U	8.5 UN	9.3 BN
BARIUM	P	22 B		1020		2 U	23 B	16 B
BERYLLIUM	P	1.9 E		257		0.3 U	1.3 E	1.4 E
CADMIUM	P	33		247		2 U	1.2	0.54 B
CALCIUM	P	128000 *		24800	5400	200 U	96600 *	150000 *
CHROMIUM	P	8.6 NE		256		6 U	12 NE	6.3 NE
COBALT	P	3.3 BE		249		3 U	3.9 BE	2.5 BE
COPPER	P	118		271		10 U	23	12
IRON	P	9880 E	102000	993		20 U	9990 E	7670 E
LEAD	P	55 N		2220		50 U	22 BN	12 BN
MAGNESIUM	P	70900	47700		5070	10 U	51800	82400
MANGANESE	P	180	51600	256		5 U	163	159
NICKEL	P	9.2 NxE		254		6 U	10 NxE	6.7 NxE
SELENIUM	P	9 U		1060		60 U	8.5 U	8.3 U
SILVER	P	1.5 B		254		6 U	1.9	1.5
SODIUM	P	520 B	103000			200 U	398 B	561 B
VANADIUM	P	16 E		258		4 U	18 E	12 E
ZINC	P	122 E		1510		7 U	86 E	46 E
% SOLIDS		87.1					90	92.6

TABLE D.2.29 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013C

DRAFT DO NOT CITE

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AREA	METHOD	B. 975 BUBBLE ARE BR806068C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806079C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806080C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806091C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806104C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806115C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806126C SOIL MG/KG 10
ALUMINUM	P	9230	7670	1910	2530	8320	5010	3730
ANTIMONY	P	6.8 UN	6.9 UN	6.9 UN	6.7 UN	7.2 UN	6.9 UN	6.9 UN
ARSENIC	P	8.2 UN	8.3 UN	11 BN	8 UN	8.6 UN	8.3 UN	8.3 UN
BARIUM	P	21 B	18 B	9.8 B	12 B	40	40	21 B
BERYLLIUM	P	0.98 E	0.96 E	1.4 E	1.2 E	1.6 E	1.8 E	1.4 E
CADMIUM	P	1.8	0.53 B	0.36 B	0.39 B	1.1	0.75	0.53 B
CALCIUM	P	23300 *	29300 *	177000 *	131000 *	80100 *	99400 *	141000 *
CHROMIUM	P	11 NE	8.6 NE	4.4 NE	11 NE	33 NE	44 NE	23 NE
COBALT	P	3 BE	2.4 BE	4.2 BE	2.6 BE	20 E	21 E	9.5 E
COPPER	P	13	8	8.8	16	115	129	53
IRON	P	10300 E	9120 E	5570 E	16600 E	23800 E	14900 E	9540 E
LEAD	P	22 BN	20 BN	23 BN	6.7 UN	121 N	66 N	21 BN
MAGNESIUM	P	13600	16500	93700	72000	45000	55900	77100
MANGANESE	P	109	86	130	174	168	170	160
NICKEL	P	7.9 NxE	7.3 NxE	5.7 NxE	13 NxE	64 NxE	60 NxE	25 NxE
SELENIUM	P	8.2 U	8.3 U	8.3 U	8 U	8.6 U	8.3 U	8.3 U
SILVER	P	0.82 U	0.83 U	1.7	1.4	1.5	1.4	1.4 B
SODIUM	P	138 B	147 B	582 B	442 B	391 B	784	686 B
VANADIUM	P	21 E	20 E	6.4 BE	8.3 E	19 E	25 E	17 E
ZINC	P	55 E	36 E	31 E	26 E	396 E	427 E	165 E
X SOLIDS		91.3	91.1	93	95	89.2	89.7	91

AREA	METHOD	B. 975 BUBBLE ARE BR806137C SOIL MG/KG 10	QA CONTINUING CAL FOUND BRCCV1099 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1127 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1151 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1047 WATER UG/L	B. 975 BUBBLE ARE BR806148C SOIL MG/KG 10	QA SERIAL DILUTION BR806148C SOIL MG/KG 10
ALUMINUM	P	9650	97400	1140		60 U	7920	8140
ANTIMONY	P	6.9 UN		1060		50 U	7.6 UN	38 U
ARSENIC	P	8.3 UN		1100		60 U	9.1 UN	45 U
BARIUM	P	56		1010		2 U	114	124
BERYLLIUM	P	1.8 E		253		0.3 U	3.3 E	4.7
CADMIUM	P	1.2		245		2 U	1.3	3.2
CALCIUM	P	56600 *		24400	5330	200 U	40800 *	41700

TABLE D.2.29 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013C

DRAFT DO NOT CITE

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AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		B. 975 BUBBLE ARE BR806137C SOIL MG/KG 10	CONTINUING CAL FOUND BRCCV1099 WATER UG/L	CONTINUING CAL FOUND BRCCV1127 WATER UG/L	CONTINUING CAL FOUND BRCCV1151 WATER UG/L	CONTINUING CAL BLANK BRCCB1047 WATER UG/L	B. 975 BUBBLE ARE BR806148C SOIL MG/KG 10	SERIAL DILUTION BR806148C SOIL MG/KG 10
CHROMIUM	P	73 NE		253		6 U	105 NE	118
COBALT	P	31 E		247		3 U	65 E	74
COPPER	P	200		267		10 U	408	413
IRON	P	18000 E	102000	983		20 U	28000 E	31200
LEAD	P	154 N		2200		50 U	200 N	217
MAGNESIUM	P	31400	47500		4990 B	10 U	22300	23100
MANGANESE	P	204	51900	252		5 U	273	287
NICKEL	P	118 NxE		251		6 U	195 NxE	222
SELENIUM	P	8.3 U		1050		60 U	9.1 U	45 U
SILVER	P	1.8		248		6 U	1.5	4.5 U
SODIUM	P	611 B	99100		4750 B	200 U	1340	1020
VANADIUM	P	32 E		254		4 U	54 E	67
ZINC	P	608 E		1500		7 U	1020 E	1250
X SOLIDS		92.3					84.2	84.2

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		SD X DIFFERENCE BR806148C % 10	DUPLICATE BR806148C SOIL MG/KG 10	DUPLICATE RPD BR806148C % 10	MATRIX SPIKE BR806148C SOIL MG/KG 10	MS X RECOVERY BR806148C % 10	CONTINUING CAL FOUND BRCCV1100 WATER UG/L	CONTINUING CAL FOUND BRCCV1128 WATER UG/L
ALUMINUM	P	2.8	7560	4.7	7370		96200	1130
ANTIMONY	P		11		36	48		1050
ARSENIC	P		9.1 U		9 U			1110
BARIUM	P	8.8	96	18	370	86		1010
BERYLLIUM	P	42	2.9	0.4	10	88		252
CADMIUM	P		1.4	0.1	7.7	84		244
CALCIUM	P	2.2	32900	21	45200			24300
CHROMIUM	P	12	107	1.9	125	67		251
COBALT	P	12	68	4.5	122	76		246
COPPER	P	1.2	453	10	403			265
IRON	P	11	27900	0.36	26000		101000	981
LEAD	P		232	15	241	55		2200
MAGNESIUM	P	3.6	18300	20	25500		46900	
MANGANESE	P	5.1	237	14	360	116	51300	251

TABLE D.2.29 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013C

DRAFT DO NOT CITE

AREA	METHOD	QA SD % DIFFERENCE BR806148C	QA DUPLICATE BR806148C SOIL MG/KG	QA DUPLICATE RPD BR806148C	QA MATRIX SPIKE BR806148C SOIL MG/KG	QA MS % RECOVERY BR806148C	QA CONTINUING CAL FOUND BRCCV1100 WATER UG/L	QA CONTINUING CAL FOUND BRCCV1128 WATER UG/L
NICKEL	P	14	245	23	232	49		249
SELENIUM	P		9.1 U		284	95		1050
SILVER	P		2.3	0.8	8.2	89		246
SODIUM	P		1110	230	1130		98500	
VANADIUM	P	24	52	3.8	113	79		253
ZINC	P	23	979	4.1	1130			1500
% SOLIDS			84.2		84.2			

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AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1152 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1048 WATER UG/L	QA CRDL STAND FINAL BRLRA1380 WATER UG/L	QA INTER CHK SOL. A FINAL BRICS1217 WATER UG/L	QA INTER CHK SOL. AB FINA BRICS1224 WATER UG/L
ALUMINUM	P		60 U		473000	480000
ANTIMONY	P		50 U	116		
ARSENIC	P		60 U	529		
BARIUM	P		2 U		9.9 B	445
BERYLLIUM	P		0.3 U	9.7	4.5 B	440
CADMIUM	P		2 U	10	4.9 B	820
CALCIUM	P	5270	200 U		453000	460000
CHROMIUM	P		6 U	20	17	424
COBALT	P		3 U	99	5.1 B	403
COPPER	P		10 U	51	10 U	476
IRON	P		20 U		197000	200000
LEAD	P		50 U	494	50 U	4070
MAGNESIUM	P	4920 B	10 U		476000	480000
MANGANESE	P		5 U	30	9.2 B	434
NICKEL	P		6 U	83	9.7 B	796
SELENIUM	P		60 U	491		
SILVER	P		6 U	16	6 U	870
SODIUM	P	4770 B	200 U			
VANADIUM	P		4 U	95	4 U	417
ZINC	P		7 U	36	7 U	871
% SOLIDS						

TABLE D.2.30 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013K

DRAFT DO NOT CITE

AREA	METHOD	QA						
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL TRUE A BRICV1280 WATER UG/L	LAB CONTROL SAMPLE TRUE BRLCS1373 SOIL MG/KG	INITIAL CAL FOUND A BRICV1266 WATER UG/L	INITIAL CAL BLANK BRICB1210 WATER UG/L	PREP BLANK BRPB01425 WATER UG/L	PREP BLANK BRPB01426 WATER UG/L	LAB CONTROL SAMPLE BRLCS1358 SOIL MG/KG
POTASSIUM	FEI	1000 B	8150	1100 B	100 U	100 U	100 U	8300
x SOLIDS								
AREA	METHOD				QA	QA		QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		B. 975 BUBBLE ARE BR806046C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806068C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806079C SOIL MG/KG 10	CONTINUING CAL FOUND BRCCV1101 WATER UG/L	CONTINUING CAL BLANK BRCCB1049 WATER UG/L	B. 975 BUBBLE ARE BR806013C SOIL MG/KG 10	CONTINUING CAL FOUND BRCCV1102 WATER UG/L
POTASSIUM	FEI	700 B	540 B	520 B	1000 B	100 U	1400	1100 B
x SOLIDS		90	91.3	91.1			66.4	
AREA	METHOD	QA						
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CONTINUING CAL BLANK BRCCB1050 WATER UG/L	B. 975 BUBBLE ARE BR806024C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806035C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806057C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806080C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806091C SOIL MG/KG 10	B. 975 BUBBLE ARE BR806104C SOIL MG/KG 10
POTASSIUM	FEI	100 U	960	1000	940	990	940	850
x SOLIDS			84.7	87.1	92.6	93	95	89.2

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TABLE D.2.30 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR806013K

DRAFT DO NOT CITE

AREA	METHOD	B. 975 BUBBLE ARE BR806115C SOIL MG/KG	B. 975 BUBBLE ARE BR806126C SOIL MG/KG	B. 975 BUBBLE ARE BR806137C SOIL MG/KG	QA CONTINUING CAL FOUND BRCCV1103 WATER UG/L	QA CONTINUING CAL BLANK BRCCB1051 WATER UG/L	B. 975 BUBBLE ARE BR806148C SOIL MG/KG	QA DUPLICATE BR806148C SOIL MG/KG
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		10	10	10			10	10
POTASSIUM	FEI	1000	970	810	1100 B	100 U	930	830

% SOLIDS		89.7	91	92.3			84.2	84.2
AREA	METHOD	QA CONTINUING CAL FOUND BRCCV1104 WATER UG/L	QA DUPLICATE RPD BR806148C x 10	QA CONTINUING CAL BLANK BRCCB1052 WATER UG/L				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO								
POTASSIUM	FEI	1100 B	100	100 U				

% SOLIDS								

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TABLE D.2.31 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR809016H

DRAFT DO NOT CITE

AREA	METHOD	QA INITIAL CAL TRUE A BR2AA1003 UG/L	QA INITIAL CAL FOUND A BR2AA2003 UG/L	QA INITIAL CAL BLANK 1 BR03A0003 WATER UG/L	QA CRDL STAND TRUE BR2B10003 UG/L	QA CRDL STAND INITIAL BR2B10003 UG/L	QA CONTINUING CAL TRUE BR2AA3003 UG/L	QA CONTINUING CAL FOUND BR2AA4003 UG/L
ALUMINUM	P	1970	2010	21 U			2000	2070
ANTIMONY	P	1090	1140	58 U			5000	5310
ARSENIC	P	10000	10900	80 U			10000	11200
BARIUM	P	2120	2020	2 U			2000	2080
BERYLLIUM	P	527	491	0.2 U	10	9.1	2000	2060
CADMIUM	P	488	473	2.5 U	10	12	2000	2010
CALCIUM	P	51800	47900	20 U			50000	52300
CHROMIUM	P	529	504	2.6 U	20	20	2000	2080
COBALT	P	496	483	14 U	100	94	2000	2020
COPPER	P	524	543	1.9 U	50	51	2000	2090
IRON	P	2060	2020	11 B			2000	2060
LEAD	P	5160	4810	50 U			2000	2060
MAGNESIUM	P	25500	24600	41 U			5000	5200
MANGANESE	P	520	508	1.8 B	30	32	2000	2020
NICKEL	P	495	483	12 U	80	85	2000	2040
POTASSIUM	P	51300	50500	82 U			10000	10300
SELENIUM	P	5000	5010	97 U			5000	5360
SILVER	P	495	466	2.2 U	20	22	1000	999
SODIUM	P	50300	50700	160 B			10000	9810
THALLIUM	P	7000	7000	26 U			7000	7250
VANADIUM	P	520	525	4.9 B	100	105	2000	2090
ZINC	P	3070	2850	1.9 U	40	43	2000	2050

x SOLIDS

AREA	METHOD	QA CONTINUING CAL BLANK BR03A1003 WATER UG/L	QA INTER CHK SOL. A TRUE BR0400033 UG/L	QA INTER CHK SOL. A INIT BR0400033 UG/L	QA INTER CHK SOL. AB TRUE BR0400033 UG/L	QA INTER CHK SOL. AB INIT BR0400033 UG/L	QA PREP BLANK BR03A0003 WATER UG/L	QA LAB CONTROL SAMPLE TRUE BR0710003 WATER UG/L
ALUMINUM	P	21 U	502000	408000	508000	467000	21 U	1000
ANTIMONY	P	58 U		88		138	58 U	5000
ARSENIC	P	-96 B		-67		-90	-97 B	5000
BARIUM	P	2 U		122	483	569	2 U	1000
BERYLLIUM	P	0.4 B		12	474	465	0.2 U	1000

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TABLE D.2.31 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR809016H

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CONTINUING CAL BLANK BR03A1003 WATER UG/L	INTER CHK SOL. A TRUE BR0400033 UG/L	INTER CHK SOL. A INIT BR0400033 UG/L	INTER CHK SOL. AB TRUE BR0400033 UG/L	INTER CHK SOL. AB INIT BR0400033 UG/L	PREP BLANK BR03A0003 WATER UG/L	LAB CONTROL SAMPLE TRUE BR0710003 WATER UG/L
CADMIUM	P	2.5 U		5	909	856	2.5 U	1000
CALCIUM	P	28 B	506000	447000	516000	449000	20 U	1000
CHROMIUM	P	2.6 U		60	513	514	2.6 U	1000
COBALT	P	14 U		23	478	461	14 U	1000
COPPER	P	1.9 U		1	534	518	1.9 U	1000
IRON	P	4 U	196000	187000	203000	183000	4 U	1000
LEAD	P	50 U		286	4850	4630	50 U	1000
MAGNESIUM	P	41 U	498000	451000	509000	450000	41 U	1000
MANGANESE	P	1.4 B		105	531	558	1.4 B	1000
NICKEL	P	12 U		24	916	874	12 U	1000
POTASSIUM	P	82 U		-57		-58	82 U	10000
SELENIUM	P	97 U		0		-156	97 U	5000
SILVER	P	2.2 U		-8	993	868	2.2 U	1000
SODIUM	P	41 B		424		420	14 B	10000
THALLIUM	P	26 U		134	921	1000	26 U	1000
VANADIUM	P	2.5 B		-57	475	420	3.1 B	1000
ZINC	P	1.9 U		21	973	898	1.9 U	1000

x SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		LAB CONTROL SAMPLE BR0710003 WATER UG/L	B-975 WELL BR809118H WATER UG/L	B-975 WELL BR809129H WATER UG/L	B-975 WELL BR809130H WATER UG/L	B-975 WELL BR809049H WATER UG/L	B-975 WELL BR809050H WATER UG/L	CONTINUING CAL FOUND BR2AA5003 UG/L
ALUMINUM	P	1010	40 B	40 B	28 B	21 U	21 U	2070
ANTIMONY	P	5340	58 U	5190				
ARSENIC	P	5570	80 U	11200				
BARIUM	P	1030	67 B	76 B	43 B	42 B	24 B	2050
BERYLLIUM	P	1050	0.2 U	0.2 B	0.2 U	0.2 U	0.2 U	2030
CADMIUM	P	1040	2.5 U	1980				
CALCIUM	P	1170	8570	8880	13500	13300	20800	51600
CHROMIUM	P	1040	14	14	6.3 B	7.6 B	2.6 U	2050
COBALT	P	1020	14 U	1970				
COPPER	P	1040	6 B	5.4 B	24 B	22 B	2.3 B	2100

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TABLE D.2.31 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR809016H

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA
LOCATION		LAB CONTROL	B-975	B-975	B-975	B-975	B-975
TYPE OF LOCATION		WELL	WELL	WELL	WELL	WELL	CONTINUING
SAMPLE NUMBER		BR0710003	BR809118H	BR809129H	BR809130H	BR809049H	BR809050H
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		10	10	10	10	10	10
IRON	P	1040	33 B*	32 B*	37 B*	31 B*	141 *
LEAD	P	1000	50 U	50 U	50 U	50 U	50 U
MAGNESIUM	P	1130	3520 B	3640 B	2760 B	2760 B	7040
MANGANESE	P	1030	528	549	546	552	606
NICKEL	P	1040	12 U	14 B	21 B	21 B	24 B
POTASSIUM	P	9790	10600	11000	8540	8490	1090 B
SELENIUM	P	5340	97 U	97 U	97 U	97 U	97 U
SILVER	P	950	4.8 B	2.7 B	2.2 U	2.7 B	2.2 U
SODIUM	P	9370	25800	26500	16300	15600	10300
THALLIUM	P	1030	26 U	26 U	26 U	26 U	26 U
VANADIUM	P	1040	6.8 B	7 B	6.9 B	6.8 B	8.7 B
ZINC	P	1020	54	28	48	32	16 B

* SOLIDS							
AREA	METHOD	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	CONTINUING	INITIAL CAL	B-975	DUPLICATE	DUPLICATE
TYPE OF LOCATION		FOUND A	CAL BLANK	BLANK 2	WELL	RPD	RPD
SAMPLE NUMBER		BR2AB2002	BR03A2003	BR03B0002	BR809061H	BR809061H	BR809061H
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		10	10	10	10	10	10
ALUMINUM	P		21 U		30 B	33 B	8.9
ANTIMONY	P		81 B		58 U	58 U	
ARSENIC	P		80 U		80 U	80 U	
BARIUM	P		2 U		22 B	24 B	10
BERYLLIUM	P		0.2 U		0.2 B	0.2 U	200
CADMIUM	P		2.5 U		2.5 U	2.5 U	
CALCIUM	P		20 U		21800	20900	4.2
CHROMIUM	P		2.6 U		3.2 B	8.7 B	92
COBALT	P		14 U		14 U	14 U	
COPPER	P		1.9 U		8.8 B	14 B	47
IRON	P		4 U		152 *	1090 *	151
LEAD	P		50 U		50 U	50 U	
MAGNESIUM	P		-66 B		7340	6980	5
MANGANESE	P		1.7 B		618	604	2.3
NICKEL	P		12 U		33 B	34 B	4.8

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TABLE D.2.31 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR809016H

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION		INITIAL CAL	CONTINUING	INITIAL CAL	B-975	DUPLICATE	DUPLICATE	MATRIX
TYPE OF LOCATION		FOUND A	CAL BLANK	BLANK 2	WELL		RPD	SPIKE
SAMPLE NUMBER		BR2AB2002	BR03A2003	BR03B0002	BR809061H	BR809061H	BR809061H	BR809061H
MATRIX			WATER	WATER	WATER	WATER		WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	%	UG/L
ENV. PROBLEM NO					10	10	10	10
POTASSIUM	P		82 U		1140 B	1140 B	0	
SELENIUM	P		97 U		97 U	97 U		2120
SILVER	P		2.4 B		2.9 B	3.3 B	13	47
SODIUM	P	49800	12 B	-17 B	10900	10900	0	
THALLIUM	P		26 U		26 U	35 B	200	1940
VANADIUM	P		3.3 B		9.3 B	9.9 B	6.2	517
ZINC	P		1.9 U		26	26	0.4	505

% SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA	QA
LOCATION		MS %	SERIAL	SD %	B-975	B-975	CONTINUING
TYPE OF LOCATION		RECOVERY	DILUTION	DIFFERENCE	WELL	WELL	CAL FOUND
SAMPLE NUMBER		BR809061H	BR809061H	BR809061H	BR809072H	BR809083H	BR2AB4002
MATRIX			WATER		WATER	WATER	BR2AB5002
UNITS		%	UG/L	%	UG/L	UG/L	UG/L
ENV. PROBLEM NO		10	10	10	10	10	
ALUMINUM	P	98	106 U		25 B	30 B	2080
ANTIMONY	P	111	292 U		58 U	58 U	5340
ARSENIC	P	104	402 U		80 U	80 U	10900
BARIUM	P	99	26 B		46 B	49 B	2020
BERYLLIUM	P	104	1 U		0.2 U	0.2 U	2020
CADMIUM	P	97	12 U		2.5 U	2.5 U	1970
CALCIUM	P		224000 B	2.8	10700	10600	51400
CHROMIUM	P	97	13 U		2.6 U	2.6 U	2030
COBALT	P	96	70 U		14 U	14 U	2010
COPPER	P	101	9.6 B		16 B	21 B	2090
IRON	P	100	154	1.6	16 B*	32 B*	2040
LEAD	P	93	249 U		50 U	50 U	2040
MAGNESIUM	P		7950 B	8.3	2580 B	2600 B	5100
MANGANESE	P	98	640	3.6	171	174	1980
NICKEL	P	100	61 U		30 B	29 B	2020
POTASSIUM	P		1120 B	1.8	1530 B	1660 B	10400
SELENIUM	P	106	484 U		97 U	97 U	5320
SILVER	P	89	14 B		2.2 U	3.7 B	996
SODIUM	P		10300 B	5.5	14800	14700	9940
THALLIUM	P	97	129 U		26 U	26 U	7260

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TABLE D.2.31 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR809016H

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		MS X RECOVERY BR809061H	SERIAL DILUTION BR809061H WATER UG/L	SD X DIFFERENCE BR809061H	B-975 WELL BR809072H WATER UG/L	B-975 WELL BR809083H WATER UG/L	CONTINUING CAL FOUND BR2AB4002 UG/L	CONTINUING CAL FOUND BR2AB5002 UG/L
		x 10	10	x 10	10	10		
VANADIUM	P	102	26 B		5.8 B	7.1 B	2060	
ZINC	P	96	30		33	62	2000	

x SOLIDS

AREA	METHOD	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		CONTINUING CAL BLANK BR03A3003 WATER UG/L	CONTINUING CAL BLANK BR03B4002 WATER UG/L	INTER CHK SOL. A FINAL BR0400033 UG/L	INTER CHK SOL. AB FINA BR0400033 UG/L	CRDL STAND FINAL BR2B10003 UG/L
ALUMINUM	P	21 U		479000	474000	
ANTIMONY	P	60 B		1220	137	
ARSENIC	P	80 U		124	170	
BARIUM	P	2 U		122	572	
BERYLLIUM	P	0.3 B		12	469	9.2
CADMIUM	P	2.5 U		2	869	11
CALCIUM	P	25 B		460000	456000	
CHROMIUM	P	2.6 U		61	519	19
COBALT	P	14 U		26	473	94
COPPER	P	2.9 B		1	524	53
IRON	P	4 U		191000	191000	
LEAD	P	50 U		307	4720	
MAGNESIUM	P	-68 B		458000	454000	
MANGANESE	P	2.6 B		105	561	31
NICKEL	P	12 U		22	880	89
POTASSIUM	P			15	-21	
SELENIUM	P	97 U		-80	-63	
SILVER	P	2.2 U		-8	889	22
SODIUM	P	-18 B	62 B	378	367	
THALLIUM	P	26 U		176	1070	
VANADIUM	P	6.5 B		-60	426	104
ZINC	P	1.9 B		20	907	42

x SOLIDS

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TABLE D.2.32 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR810019D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		INITIAL CAL BLANK 1 BR03A0010 WATER MG/KG	INITIAL CAL TRUE A BR2AA1010 UG/L	INITIAL CAL FOUND A BR2AA2010 UG/L	PREP BLANK BR03A0010 WATER MG/KG	CONTINUING CAL BLANK BR03A1010 WATER MG/KG	CONTINUING CAL FOUND BR2AA4010 UG/L	LAB CONTROL SAMPLE TRUE BR0700110 SOIL MG/KG
MERCURY	CV	0.02 U	20	20	0.03 B	0.02 U	20	19
x SOLIDS								

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		LAB CONTROL SAMPLE BR0700110 SOIL MG/KG	BOUNDRY RD BACKGROUND BR810019D SOIL MG/KG	DUPLICATE BR810019D SOIL MG/KG	MATRIX SPIKE BR810019D SOIL MG/KG	MS X RECOVERY BR810019D x	CONTINUING CAL BLANK BR03A2010 WATER MG/KG	CONTINUING CAL FOUND BR2AA5010 UG/L
MERCURY	CV	20	0.04 B	0.057	0.27	98	0.02 U	20
x SOLIDS			91.1					

AREA	METHOD	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO		BOUNDRY RD BACKGROUND BR810020D SOIL MG/KG	BOUNDRY RD BACKGROUND BR810031D SOIL MG/KG	STP SLUDGE BEDS BR803010D SOIL MG/KG	STP SLUDGE BEDS BR803021D SOIL MG/KG	CONTINUING CAL BLANK BR03A3010 WATER MG/KG	CONTINUING CAL FOUND BR2AB4010 UG/L	STP SLUDGE BEDS BR803032D SOIL MG/KG
MERCURY	CV	0.04	0.04 B	55	61	0.02 U	20	66
x SOLIDS		91.2	92	18.8	16.1			17

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TABLE D.2.32 BROOKHAVEN METALS, INCLUDING CR+6 - SDG NUMBER: BR810019D

DRAFT DO NOT CITE

AREA	METHOD	QA	QA	QA
LOCATION	STP	CONTINUING	CONTINUING	PREP
TYPE OF LOCATION	SLUDGE BEDS	CAL BLANK	CAL FOUND	BLANK 2
SAMPLE NUMBER	BR803043D	BR03B4008	BR2AB5010	BR03B0008
MATRIX	SOIL	WATER	UG/L	WATER
UNITS	MG/KG	MG/KG		MG/KG
ENV PROBLEM NO	8			
MERCURY	ICVI	45	0.02 U	19
				0.03 B
x SOLIDS		8.8		

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Table D.2.33. BNL Metals QC Data Interelement Correction Factors

SDGs using these Interelement Correction Factors: BR300012G, BR303015C, BR306018F, BR308010F, BR311015C, BR313017C, BR806013C

ANALYTE	INTERELEMENT CORRECTION FACTORS FOR:												
	AL	CA	FE	MG	BA	CD	CO	CR	CU	MN	NI	TI	P
Aluminum													
Antimony								1.620E-2					
Arsenic													
Barium			1.206E-5										
Beryllium													
Cadmium	7.714E-6		1.148E-4										
Calcium	9.362E-4			3.400E-4									
Chromium			9.083E-5	1.721E-5						3.260E-4			
Cobalt			6.972E-5		6.600E-4	2.720E-4					4.880E-4		
Copper		4.414E-6	6.357E-5							1.644E-5			
Iron					1.832E-3								
Lead													
Magnesium			1.157E-5										
Manganese	7.711E-6		6.939E-5	4.573E-5									
Mercury													
Nickel					3.030E-4		3.570E-3			5.750E-5			
Potassium													
Selenium													
Silver									1.458E-3				
Sodium													
Thallium													
Vanadium		4.986E-6	8.600E-5	3.146E-5				2.237E-4		4.258E-5			
Zinc			5.216E-5								3.874E-3		

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**Table D.2.33. BNL Metals QC Data Interelement Correction Factors
(continued)**

SDGs using these Interelement Correction Factors: BR000011A, BR508056D, BR809016H

ANALYTE	INTERELEMENT CORRECTION FACTORS FOR:												
	AL	CA	FE	MG	BA	CD	CO	CR	CU	MN	NI	TI	P
Aluminum													
Antimony													
Arsenic													
Barium													
Beryllium													
Cadmium			18.00										
Calcium													
Chromium	6.00												
Cobalt													
Copper		16.00											
Iron													
Lead													
Magnesium													
Manganese													
Mercury													
Nickel													
Potassium													
Selenium													
Silver				10.00									
Sodium													
Thallium													
Vanadium				44.00									
Zinc													

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Table D.2.34. BNL Metals QC Data — Linear Range

SDGs: BR300012G, BR303015C, BR306018F, BR308010F, BR311015C, BR313017C, BR806013C

ANALYTE	CONCENTRATION μG/L
Aluminum	10,000
Antimony	10,000
Arsenic	20,000
Barium	5,000
Beryllium	1,500
Cadmium	5,000
Calcium	10,000
Chromium	10,000
Cobalt	10,000
Copper	10,000
Iron	12,000
Lead	50,000
Magnesium	12,000
Manganese	2,000
Mercury	
Nickel	15,000
Potassium	
Selenium	10,000
Silver	10,000
Sodium	10,000
Thallium	
Vanadium	10,000
Zinc	6,000

**Table D.2.34. BNL Metals QC Data — Linear Range
(continued)**

SDGs: BR300012G, BR303015C, BR306018F, BR308010F, BR311015C, BR313017C,
BR806013C

ANALYTE	CONCENTRATION μG/L
Aluminum	800,000
Antimony	
Arsenic	
Barium	
Beryllium	
Cadmium	
Calcium	900,000
Chromium	
Cobalt	
Copper	
Iron	800,000
Lead	
Magnesium	500,000
Manganese	200,000
Mercury	
Nickel	
Potassium	
Selenium	
Silver	
Sodium	900,000
Thallium	
Vanadium	
Zinc	

**Table D.2.34. BNL Metals QC Data — Linear Range
(continued)**

SDGs: BR000011A, BR508056D, BR809016H

ANALYTE	CONCENTRATION μG/L
Aluminum	497,000
Antimony	20,200
Arsenic	20,200
Barium	50,600
Beryllium	5,070
Cadmium	19,600
Calcium	485,000
Chromium	47,800
Cobalt	20,100
Copper	20,100
Iron	97,200
Lead	48,300
Magnesium	490,000
Manganese	19,600
Mercury	
Nickel	50,400
Potassium	201,000
Selenium	20,800
Silver	19,800
Sodium	199,000
Thallium	20,100
Vanadium	20,000
Zinc	49,000

**Table D.2.34. BNL Metals QC Data — Linear Range
(continued)**

SDGs: BR000011A, BR508056D, BR809016H

ANALYTE	CONCENTRATION μG/L
Aluminum	
Antimony	
Arsenic	
Barium	
Beryllium	
Cadmium	
Calcium	
Chromium	
Cobalt	
Copper	
Iron	203,000
Lead	
Magnesium	
Manganese	
Mercury	
Nickel	
Potassium	
Selenium	
Silver	
Sodium	
Thallium	
Vanadium	
Zinc	

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TABLE D.3.1 DIRECTORY FOR OIL AND GREASE QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
0	BR810019G	BR503017C	D.3.3 (D-126)
0	BR810020G	BR503017C	D.3.3 (D-126)
0	BR810031G	BR503017C	D.3.3 (D-126)
2	BR306018H	BR306018H	D.3.2 (D-125)
2	BR306018I	BR306018H	D.3.2 (D-125)
2	BR306029H	BR306018H	D.3.2 (D-125)
2	BR306029I	BR306018H	D.3.2 (D-125)
2	BR306030H	BR306018H	D.3.2 (D-125)
2	BR306030I	BR306018H	D.3.2 (D-125)
2	BR306041C	BR306018H	D.3.2 (D-125)
2	BR306041D	BR306018H	D.3.2 (D-125)
2	BR308010H	BR306018H	D.3.2 (D-125)
2	BR308021H	BR306018H	D.3.2 (D-125)
2	BR308032H	BR306018H	D.3.2 (D-125)
2	BR308043H	BR306018H	D.3.2 (D-125)
2	BR310014H	BR306018H	D.3.2 (D-125)
2	BR310025H	BR306018H	D.3.2 (D-125)
2	BR310036H	BR306018H	D.3.2 (D-125)
6	BR503017C	BR503017C	D.3.3 (D-126)
6	BR503028C	BR503017C	D.3.3 (D-126)
6	BR503039C	BR503017C	D.3.3 (D-126)
6	BR503040C	BR503017C	D.3.3 (D-126)
6	BR503051F	BR306018H	D.3.2 (D-125)
6	BR504018C	BR503017C	D.3.3 (D-126)
6	BR504029C	BR503017C	D.3.3 (D-126)
6	BR504030C	BR503017C	D.3.3 (D-126)

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TABLE D.3.2 BROOKHAVEN OIL AND GREASE - SDG NUMBER: BR306018H

DRAFT DO NOT CITE

AREA	QA						
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BLANK BRICB1111 WATER MG	B. 479 CESSPOOL BR306029H WATER MG/L	B. 479 CESSPOOL BR306030H WATER MG/L	B. 975 CESSPOOL BR306018I WATER MG/L	B. 479 CESSPOOL BR306029I WATER MG/L	B. 479 CESSPOOL BR306030I WATER MG/L	B. 905 CESSPOOL BR310014H WATER MG/L
OIL AND GREASE	0.4	7	144	28	8	8	25

AREA	QA		QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 905 CESSPOOL BR310025H WATER MG/L	B. 905 CESSPOOL BR310036H WATER MG/L	LAB CONTROL SAMPLE TRUE BRCNTL111 WATER MG/L	LAB CONTROL SAMPLE BRCNTL111 WATER MG/L	B. 479 CESSPOOL BR306041C WATER MG/L	B. 479 CESSPOOL BR306041D WATER MG/L	B. 975 CESSPOOL BR306018H WATER MG/L
OIL AND GREASE	13	24	320	272	2 U	2 U	14

AREA					QA		QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 422 CESSPOOL BR308043H WATER MG/L	B. 444 RELEASES BR503051F WATER MG/L	B. 422 CESSPOOL BR308010H SLUDGE MG/L	B. 422 CESSPOOL BR308021H SLUDGE MG/L	B. 422 CESSPOOL BR308032H SLUDGE MG/L	LAB CONTROL SAMPLE TRUE BRCNTL112 WATER MG	LAB CONTROL SAMPLE BRCNTL112 WATER MG/L
OIL AND GREASE	2 U	35	8770	10100	10900	160	127

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TABLE D.3.3 BROOKHAVEN OIL AND GREASE - SDG NUMBER: BR503017C

DRAFT DO NOT CITE

AREA	QA	QA					
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	LAB CONTROL SAMPLE TRUE BRCNTL111 WATER MG	BLANK BRICB1111 WATER MG/L	B. 444 RELEASES BR503017C SOIL MG/KG	B. 444 RELEASES BR503028C SOIL MG/KG	B. 444 RELEASES BR503039C SOIL MG/KG	B. 444 RELEASES BR503040C SOIL MG/KG	BOUNDRY RD BACKGROUND BR810019G SOIL MG/KG
			6	6	6	6	0
OIL AND GREASE	160	0	2130	490	560	430	160
AREA						QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BOUNDRY RD BACKGROUND BR810020G SOIL MG/KG	BOUNDRY RD BACKGROUND BR810031G SOIL MG/KG	B. 444 RELEASES BR504018C SOIL MG/KG	B. 444 RELEASES BR504029C SOIL MG/KG	B. 444 RELEASES BR504030C SOIL MG/KG	LAB CONTROL SAMPLE TRUE BRCNTL112 WATER MG/L	LAB CONTROL SAMPLE BRCNTL111 WATER MG/L
	0	0	6	6	6		
OIL AND GREASE	380	290	220	320	13300	320	284

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TABLE D.4.1 DIRECTORY FOR PETROLEUM HYDROCARBONS QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
2	BR311015F	BR311015F	D.4.2 (D-129)
2	BR311026I	BR311015F	D.4.2 (D-129)
2	BR313017F	BR313017F	D.4.3 (D-130)
2	BR315019F	BR311015F	D.4.2 (D-129)

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TABLE D.4.2 BROOKHAVEN PETROLEUM HYDROCARBONS - SDG NUMBER: BR311015F

DRAFT DO NOT CITE

AREA	QA	QA			
LOCATION	BLANK	BLANK	B. 479	B. 905	B. 479
TYPE OF LOCATION			CESSPOOL	CESSPOOL	CESSPOOL
SAMPLE NUMBER	BRICB1111	BRICB1112	BR311015F	BR315019F	BR311026I
MATRIX	WATER	SOIL	SOIL	SOIL	WATER
UNITS	MG/L	MG	MG/G	MG/G	MG/L
ENV PROBLEM NO			2	2	2
PETROLEUM HYDROCARBONS	0.15 U	0.9 U	0.19	35	0.5 U

TABLE D.4.3 BROOKHAVEN PETROLEUM HYDROCARBONS - SDG NUMBER: BR313017F

DRAFT DO NOT CITE

AREA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BLANK BRICB1111 SOIL MG	B. 422 CESSPOOL BR313017F SOIL MG/KG 2
PETROLEUM HYDROCARBONS	1.3 U	19500

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TABLE D.5.1 DIRECTORY FOR PCBS & OTHER EXTRACTABLES QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
0	BR810019B	BR800062B	D.5.4 (D-145)
0	BR810020B	BR800062B	D.5.4 (D-145)
0	BR810031B	BR800062B	D.5.4 (D-148)
1	BR300012F	BR301057B	D.5.2 (D-134)
1	BR300023F	BR301057B	D.5.2 (D-134)
1	BR300034F	BR301057B	D.5.2 (D-135)
1	BR301013E	BR301057B	D.5.2 (D-135)
1	BR301024E	BR301057B	D.5.2 (D-135)
1	BR301035E	BR301057B	D.5.2 (D-135)
1	BR301046E	BR301057B	D.5.2 (D-135)
1	BR302014E	BR301057B	D.5.2 (D-136)
1	BR302025E	BR301057B	D.5.2 (D-136)
1	BR302036E	BR301057B	D.5.2 (D-137)
1	BR303015B	BR303015B	D.5.3 (D-140)
1	BR303026B	BR303015B	D.5.3 (D-141)
1	BR303037B	BR303015B	D.5.3 (D-141)
1	BR304016B	BR303015B	D.5.3 (D-141)
1	BR304027B	BR303015B	D.5.3 (D-141)
1	BR304038B	BR303015B	D.5.3 (D-141)
1	BR304049E	BR301057B	D.5.2 (D-138)
1	BR305017B	BR303015B	D.5.3 (D-141)
1	BR305028B	BR303015B	D.5.3 (D-142)
1	BR305039B	BR303015B	D.5.3 (D-142)
2	BR311015B	BR800062B	D.5.4 (D-148)
2	BR313017B	BR800062B	D.5.4 (D-149)
2	BR315019B	BR800062B	D.5.4 (D-147)
4	BR500014E	BR301057B	D.5.2 (D-137)
4	BR500025E	BR301057B	D.5.2 (D-137)
4	BR500036E	BR301057B	D.5.2 (D-139)
4	BR500047B	BR303015B	D.5.3 (D-142)
4	BR500058B	BR303015B	D.5.3 (D-142)
4	BR500069B	BR303015B	D.5.3 (D-142)
8	BR800062B	BR800062B	D.5.4 (D-144)
8	BR800073B	BR800062B	D.5.4 (D-145)
8	BR800084B	BR800062B	D.5.4 (D-145)
8	BR800095B	BR800062B	D.5.4 (D-145)
8	BR800108B	BR800062B	D.5.4 (D-145)
8	BR800119E	BR301057B	D.5.2 (D-139)
8	BR801018F	BR301057B	D.5.2 (D-139)
8	BR801029F	BR301057B	D.5.2 (D-139)
8	BR801030E	BR301057B	D.5.2 (D-139)
8	BR801030F	BR301057B	D.5.2 (D-139)
8	BR801041E	BR301057B	D.5.2 (D-137)
8	BR802019B	BR800062B	D.5.4 (D-146)
8	BR802020B	BR800062B	D.5.4 (D-146)
8	BR802031B	BR800062B	D.5.4 (D-147)
8	BR803010B	BR800062B	D.5.4 (D-147)
8	BR803021B	BR800062B	D.5.4 (D-146)
8	BR803032B	BR800062B	D.5.4 (D-146)
8	BR803043B	BR800062B	D.5.4 (D-146)
10	BR807014F	BR301057B	D.5.2 (D-137)

TABLE D.5.1 DIRECTORY FOR PCBS & OTHER EXTRACTABLES QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
10	BR807025F	BR301057B	D.5.2 (D-137)
10	BR807036F	BR301057B	D.5.2 (D-137)
11	BR808015B	BR800062B	D.5.4 (D-146)
11	BR808026B	BR800062B	D.5.4 (D-147)
11	BR808037B	BR800062B	D.5.4 (D-147)

TABLE D.5.2 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR301057B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	EVAL A TUNED CALIBRATION BR042888 AREA	EVAL B TUNED CALIBRATION BR042888 %	EVAL B TUNED CALIBRATION BR042888 CF	RSD BR042888 %	EVAL C TUNED CALIBRATION BR042888 AREA	METHOD BLANK PBK80415 WATER UG/L	MATRIX SPIKE BR301057B WATER UG/L 1
ALDRIN	3320000		3200000	2.3	3180000	0.05 U	0.12
ALPHA CHLORDANE						0.5 U	0.5 U
ALPHA-BHC						0.05 U	0.05 U
AROCLOR-1016						0.5 U	0.5 U
AROCLOR-1221						0.5 U	0.5 U
AROCLOR-1232						0.5 U	0.5 U
AROCLOR-1242						0.5 U	0.5 U
AROCLOR-1248						0.5 U	0.5 U
AROCLOR-1254						1 U	1 U
AROCLOR-1260						1 U	1 U
BETA-BHC						0.05 U	0.05 U
COMBINED		7.8					
DBC	3140000		3100000	1.6	3040000	0.05 U	0.05 U
DELTA-BHC						0.1 U	0.34
DIELDRIN						0.05 U	0.05 U
ENDOSULFAN I						0.1 U	0.1 U
ENDOSULFAN II						0.1 U	0.1 U
ENDOSULFAN SULFATE						0.1 U	0.1 U
ENDRIN	2210000	0	2250000	1.6	2280000	0.1 U	0.56
ENDRIN KETONE						0.1 U	0.1 U
GAMMA CHLORDANE						0.5 U	0.5 U
GAMMA-BHC (LINDANE)						0.05 U	0.12
HEPTACHLOR						0.05 U	0.12
HEPTACHLOR EPOXIDE						0.05 U	0.05 U
METHOXYCHLOR						0.5 U	0.5 U
MIREX	0		0	0	0		
TOXAPHENE						1 U	1 U
4,4'-DDD						0.1 U	0.1 U
4,4'-DDE						0.1 U	0.1 U
4,4'-DDT	2370000	0	2450000	5	2610000	0.1 U	0.34
Surr 1(DBC) %RECOVERY						65	76
ACTUAL(ALLOWED) EXTRACT TIME							4(7 D)

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TABLE D.5.2 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR301057B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA			QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MS % RECOVERY BR301057B WATER %	RPD BR301057B WATER %	MATRIX SPIKE DUPLICATE BR301057C WATER UG/L	MSD % RECOVERY BR301057C WATER %	PRIMARY PD HWMA POND BR300012F WATER UG/L	PRIMARY PD HWMA POND BR300023F WATER UG/L	CONT. CAL % BREAKDOWN BR042888 %
ALDRIN	60	2	0.12	61	0.05 U	0.05 U	
ALPHA CHLORDANE			0.5 U		0.5 U	0.5 U	
ALPHA-BHC			0.05 U		0.05 U	0.05 U	
AROCLOR-1016			0.5 U		0.5 U	0.5 U	
AROCLOR-1221			0.5 U		0.5 U	0.5 U	
AROCLOR-1232			0.5 U		0.5 U	0.5 U	
AROCLOR-1242			0.5 U		0.5 U	0.5 U	
AROCLOR-1248			0.5 U		0.5 U	0.5 U	
AROCLOR-1254			1 U		1 U	1 U	
AROCLOR-1260			1 U		1 U	1 U	
BETA-BHC			0.05 U		0.05 U	0.05 U	
COMBINED							7.4
DBC							
DELTA-BHC			0.05 U		0.05 U	0.05 U	
DIELDRIN	68	0	0.34	68	0.1 U	0.1 U	
ENDOSULFAN I			0.05 U		0.05 U	0.05 U	
ENDOSULFAN II			0.1 U		0.1 U	0.1 U	
ENDOSULFAN SULFATE			0.1 U		0.1 U	0.1 U	
ENDRIN	113	34 *	0.4	80	0.1 U	0.1 U	0
ENDRIN KETONE			0.1 U		0.1 U	0.1 U	
GAMMA CHLORDANE			0.5 U		0.5 U	0.5 U	
GAMMA-BHC (LINDANE)	60	8	0.13	65	0.05 U	0.05 U	
HEPTACHLOR	60	15	0.14	70	0.05 U	0.05 U	
HEPTACHLOR EPOXIDE			0.05 U		0.05 U	0.05 U	
METHOXYCHLOR			0.5 U		0.5 U	0.5 U	
MIREX							
TOXAPHENE			1 U		1 U	1 U	
4,4'-DDD			0.1 U		0.1 U	0.1 U	
4,4'-DDE			0.1 U		0.1 U	0.1 U	
4,4'-DDT	68	21	0.42	84	0.1 U	0.1 U	0
SURR 1(DBC) %RECOVERY			63		49	47	
ACTUAL(ALLOWED) EXTRACT TIME			4(7 D)		3(7 D)	3(7 D)	

TABLE D.5.2 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR301057B

DRAFT DO NOT CITE

AREA							QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	PRIMARY PD HWMA POND BR300034F WATER UG/L 1	PRIMARY PD POND BR301013E WATER UG/L 1	PRIMARY PD POND BR301024E WATER UG/L 1	PRIMARY PD POND BR301035E WATER UG/L 1	PRIMARY PD POND BR301046E WATER UG/L 1	METHOD BLANK PBK80421 WATER UG/L	MATRIX SPIKE BR301068B WATER UG/L 1	
ALDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.1	
ALPHA CHLORDANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
ALPHA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
AROCLOR-1016	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
AROCLOR-1221	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
AROCLOR-1232	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
AROCLOR-1242	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
AROCLOR-1248	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
AROCLOR-1254	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
AROCLOR-1260	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
BETA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
COMBINED								
DBC								
DELTA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
DIELDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.27	
ENDOSULFAN I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
ENDOSULFAN II	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
ENDOSULFAN SULFATE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
ENDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.31	
ENDRIN KETONE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
GAMMA CHLORDANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.12	
HEPTACHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.12	
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	
METHOXYCHLOR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	
MIREX								
TOXAPHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	
4,4'-DDD	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
4,4'-DDT	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.32	
SURR 1(DBC) %RECOVERY	73	89	87	102	96	78	58	
ACTUAL(ALLOWED) EXTRACT TIME	3(7 D)	3(7 D)	3(7 D)	3(7 D)	3(7 D)		4(7 D)	

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TABLE D.5.2 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR301057B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA			QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MS % RECOVERY BR301068B WATER %	RPD BR301068B WATER %	MATRIX SPIKE DUPLICATE BR301068C WATER UG/L	MSD % RECOVERY BR301068C WATER %	WOODED PD POND BR302014E WATER UG/L	WOODED PD POND BR302025E WATER UG/L	CONT. CAL % BREAKDOWN BR042988 %
ALDRIN	50	9	0.11	55	0.05 U	0.05 U	
ALPHA CHLORDANE			0.5 U		0.5 U	0.5 U	
ALPHA-BHC			0.05 U		0.05 U	0.05 U	
AROCLOR-1016			0.5 U		0.5 U	0.5 U	
AROCLOR-1221			0.5 U		0.5 U	0.5 U	
AROCLOR-1232			0.5 U		0.5 U	0.5 U	
AROCLOR-1242			0.5 U		0.5 U	0.5 U	
AROCLOR-1248			0.5 U		0.5 U	0.5 U	
AROCLOR-1254			1 U		1 U	1 U	
AROCLOR-1260			1 U		1 U	1 U	
BETA-BHC			0.05 U		0.05 U	0.05 U	
COMBINED							7.3
DBC							
DELTA-BHC			0.05 U		0.05 U	0.05 U	
DIELDRIN	54	9	0.29	59	0.1 U	0.1 U	
ENDOSULFAN I			0.05 U		0.05 U	0.05 U	
ENDOSULFAN II			0.1 U		0.1 U	0.1 U	
ENDOSULFAN SULFATE			0.1 U		0.1 U	0.1 U	
ENDRIN	62	0	0.31	62	0.1 U	0.1 U	0
ENDRIN KETONE			0.1 U		0.1 U	0.1 U	
GAMMA CHLORDANE			0.5 U		0.5 U	0.5 U	
GAMMA-BHC (LINDANE)	60	0	0.12	60	0.05 U	0.05 U	
HEPTACHLOR	60	0	0.12	60	0.05 U	0.05 U	
HEPTACHLOR EPOXIDE			0.05 U		0.05 U	0.05 U	
METHOXYCHLOR			0.5 U		0.5 U	0.5 U	
MIREX							
TOXAPHENE			1 U		1 U	1 U	
4,4'-DDD			0.1 U		0.1 U	0.1 U	
4,4'-DDE			0.1 U		0.1 U	0.1 U	
4,4'-DDT	64	9	0.35	70	0.1 U	0.1 U	0

SURR 1(DBC) %RECOVERY			54		74	47	

ACTUAL(ALLOWED) EXTRACT TIME			4(7 D)		3(7 D)	3(7 D)	

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TABLE D.5.2 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR301057B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	WOODED PD POND BR302036E WATER UG/L 1	B-975 WELL BR807036F WATER UG/L 10	B-975 WELL BR807014F WATER UG/L 10	B-975 WELL BR807025F WATER UG/L 10	STP TANK BR801041E WATER UG/L 8	BNL LANDF LEACHATE BR500014E WATER UG/L 4	BNL LANDF LEACHATE BR500025E WATER UG/L 4
ALDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA CHLORDANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ALPHA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
AROCLOR-1016	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1221	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1232	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1242	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1248	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1254	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1260	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BETA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
COMBINED							
DBC							
DELTA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DIELDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN SULFATE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN KETONE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
GAMMA CHLORDANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MIREX							
TOXAPHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4,4'-DDD	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
SURR 1(DBC) %RECOVERY	57	63	0 IP	69	74	70	74
ACTUAL(ALLOWED) EXTRACT TIME	3(7 D)	5(7 D)	5(7 D)	5(7 D)	6(7 D)	2(7 D)	2(7 D)

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TABLE D.5.2 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR301057B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	N PRIM. PD POND BR304049E WATER UG/L 1	MATRIX SPIKE BR301079B WATER UG/L 1	MS % RECOVERY BR301079B WATER % 1	RPD BR301079B WATER % 1	MATRIX SPIKE DUPLICATE BR301079C WATER UG/L 1	MSD % RECOVERY BR301079C WATER % 1	CONT. CAL % BREAKDOWN BR042988 %
ALDRIN	0.05 U	0.11	55	0	0.11	55	
ALPHA CHLORDANE	0.5 U	0.5 U			0.5 U		
ALPHA-BHC	0.05 U	0.05 U			0.05 U		
AROCLOR-1016	0.5 U	0.5 U			0.5 U		
AROCLOR-1221	0.5 U	0.5 U			0.5 U		
AROCLOR-1232	0.5 U	0.5 U			0.5 U		
AROCLOR-1242	0.5 U	0.5 U			0.5 U		
AROCLOR-1248	0.5 U	0.5 U			0.5 U		
AROCLOR-1254	1 U	1 U			1 U		
AROCLOR-1260	1 U	1 U			1 U		
BETA-BHC	0.05 U	0.05 U			0.05 U		
COMBINED							7.2
DBC							
DELTA-BHC	0.05 U	0.05 U			0.05 U		
DIENDRIN	0.1 U	0.3	60	3	0.31	62	
ENDOSULFAN I	0.05 U	0.05 U			0.05 U		
ENDOSULFAN II	0.1 U	0.1 U			0.1 U		
ENDOSULFAN SULFATE	0.1 U	0.1 U			0.1 U		
ENDRIN	0.1 U	0.31	62	6	0.33	66	0
ENDRIN KETONE	0.1 U	0.1 U			0.1 U		
GAMMA CHLORDANE	0.5 U	0.5 U			0.5 U		
GAMMA-BHC (LINDANE)	0.05 U	0.13	65	7	0.14	70	
HEPTACHLOR	0.05 U	0.13	65	7	0.14	70	
HEPTACHLOR EPOXIDE	0.05 U	0.05 U			0.05 U		
METHOXYCHLOR	0.5 U	0.5 U			0.5 U		
MIREX							
TOXAPHENE	1 U	1 U			1 U		
4,4'-DDD	0.1 U	0.1 U			0.1 U		
4,4'-DDE	0.1 U	0.1 U			0.1 U		
4,4'-DDT	0.1 U	0.35	70	6	0.37	74	0
SURR 1(DBC) %RECOVERY	59	64			64		
ACTUAL(ALLOWED) EXTRACT TIME	3(7 D)	4(7 D)			4(7 D)		

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TABLE D.5.2 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR301057B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP TANK BR801030F WATER UG/L 8	STP TANK BR801018F WATER UG/L 8	BNL LANDF LEACHATE BR500036E WATER UG/L 4	STP TANK BR801030E WATER UG/L 8	STP TANK BR801029F WATER UG/L 8	STP DREDGE MATL BR800119E WATER UG/L 8
ALDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA CHLORDANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
ALPHA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
AROCLOR-1016	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1221	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1232	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1242	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1248	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1254	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1260	1 U	1 U	1 U	1 U	1 U	1 U
BETA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
COMBINED						
DBC						
DELTA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DIELDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN SULFATE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN KETONE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
GAMMA CHLORDANE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MIREX						
TOXAPHENE	1 U	1 U	1 U	1 U	1 U	1 U
4,4'-DDD	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.1 U	0.53	0.1 U	0.23	0.1 U	0.1 U
SURR 1(DBC) %RECOVERY	69	76	59	84	84	93
ACTUAL(ALLOWED) EXTRACT TIME	6(7 D)	6(7 D)	2(7 D)	6(7 D)	6(7 D)	6(7 D)

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TABLE D.5.3 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	EVAL A TUNED CALIBRATION BR060288	EVAL B TUNED CALIBRATION BR060288	EVAL B TUNED CALIBRATION BR060288	RSD BR060288	EVAL C TUNED CALIBRATION BR060288	METHOD BLANK PBKBR303 SOIL UG/KG	S PRIM. PD POND BR303015B SOIL UG/KG 1
	AREA	%	CF	%	AREA		
ALDRIN	4210000		4150000	1.1	4240000	8 U	8 U
ALPHA CHLORDANE						80 U	80 U
ALPHA-BHC						8 U	8 U
AROCLOR-1016						80 U	80 U
AROCLOR-1221						80 U	80 U
AROCLOR-1232						80 U	80 U
AROCLOR-1242						80 U	80 U
AROCLOR-1248						80 U	80 U
AROCLOR-1254						160 U	160 U
AROCLOR-1260						160 U	246
BETA-BHC						8 U	8 U
COMBINED		19					
DBC	4160000		4080000	1.6	4030000	8 U	8 U
DELTA-BHC						16 U	16 U
DIELDRIN						8 U	8 U
ENDOSULFAN I						16 U	16 U
ENDOSULFAN II						16 U	16 U
ENDOSULFAN SULFATE						16 U	16 U
ENDRIN	3030000	0	3010000	2.1	3130000	16 U	16 U
ENDRIN KETONE						16 U	16 U
GAMMA CHLORDANE						80 U	80 U
GAMMA-BHC (LINDANE)						8 U	8 U
HEPTACHLOR						8 U	8 U
HEPTACHLOR EPOXIDE						8 U	8 U
METHOXYCHLOR						80 U	80 U
MIREX	0		0	0	0		
TOXAPHENE						160 U	160 U
4,4'-DDD						16 U	16 U
4,4'-DDE						16 U	42
4,4'-DDT	2670000	0	2670000	6.7	2990000	16 U	16 U
SURR 1(DBC) %RECOVERY						102	121
ACTUAL(ALLOWED) EXTRACT TIME							7(14 D)

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TABLE D.5.3 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA							
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	S PRIM. PD POND BR303026B SOIL UG/KG	CONT. CAL % BREAKDOWN BR060288 %	S PRIM. PD POND BR303037B SOIL UG/KG	N PRIM. PD POND BR304016B SOIL UG/KG	N PRIM. PD POND BR304027B SOIL UG/KG	N PRIM. PD POND BR304038B SOIL UG/KG	N WOODED P POND BR305017B SOIL UG/KG
	ALDRIN	8 U		8 U	8 U	8 U	8 U	8 U
	ALPHA CHLORDANE	80 U		80 U				
	ALPHA-BHC	8 U		8 U	8 U	8 U	8 U	8 U
	AROCLOR-1016	80 U		80 U				
	AROCLOR-1221	80 U		80 U				
	AROCLOR-1232	80 U		80 U				
	AROCLOR-1242	80 U		80 U				
	AROCLOR-1248	80 U		80 U				
	AROCLOR-1254	160 U		160 U				
	AROCLOR-1260	144 J		229 U	160 U	160 U	160 U	160 U
	BETA-BHC	8 U		8 U	8 U	8 U	8 U	8 U
	COMBINED		12					
	DBC							
	DELTA-BHC	8 U		8 U	8 U	8 U	8 U	8 U
	DIELDRIN	16 U		16 U				
	ENDOSULFAN I	8 U		8 U	8 U	8 U	8 U	8 U
	ENDOSULFAN II	16 U		16 U				
	ENDOSULFAN SULFATE	16 U		16 U				
	ENDRIN	16 U	0	16 U				
	ENDRIN KETONE	16 U		16 U				
	GAMMA CHLORDANE	80 U		80 U				
	GAMMA-BHC (LINDANE)	8 U		8 U	8 U	8 U	8 U	8 U
	HEPTACHLOR	8 U		8 U	8 U	8 U	8 U	8 U
	HEPTACHLOR EPOXIDE	8 U		8 U	8 U	8 U	8 U	8 U
	METHOXYCHLOR	80 U		80 U				
	MIREX							
	TOXAPHENE	160 U		160 U				
	4,4'-DDD	16 U		16 U	50	50	16 U	16 U
	4,4'-DDE	42		80	44	98	16 U	16 U
	4,4'-DDT	16 U	0	16 U	75	195	16 U	16 U
	SURR 1(DBC) %RECOVERY	125		105	75	114	88	71
	ACTUAL(ALLOWED) EXTRACT TIME	7(14 D)		7(14 D)				

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TABLE D.5.3 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

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AREA	QA				QA			
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONT. CAL % BREAKDOWN BR060288 %	N WOODED P POND BR305028B SOIL UG/KG 1	N WOODED P POND BR305039B SOIL UG/KG 1	BNL LANDF LEACHATE BR500058B SOIL UG/KG 4	BNL LANDF LEACHATE BR500069B SOIL UG/KG 4	CONT. CAL % BREAKDOWN BR060388 %	BNL LANDF LEACHATE BR500047B SOIL UG/KG 4
ALDRIN		8 U	8 U	8 U	40 U		40 U	
ALPHA CHLORDANE		80 U	80 U	80 U	400 U		400 U	
ALPHA-BHC		8 U	8 U	8 U	40 U		40 U	
AROCLOR-1016		80 U	80 U	80 U	400 U		400 U	
AROCLOR-1221		80 U	80 U	80 U	400 U		400 U	
AROCLOR-1232		80 U	80 U	80 U	400 U		400 U	
AROCLOR-1242		80 U	80 U	80 U	400 U		400 U	
AROCLOR-1248		80 U	80 U	80 U	400 U		400 U	
AROCLOR-1254		160 U	160 U	160 U	800 U		800 U	
AROCLOR-1260		160 U	160 U	160 U	800 U		800 U	
BETA-BHC		8 U	8 U	8 U	40 U		40 U	
COMBINED	24					23		
DBC								
DELTA-BHC		8 U	8 U	8 U	40 U		40 U	
DIELDRIN		16 U	16 U	16 U	80 U		80 U	
ENDOSULFAN I		8 U	8 U	8 U	40 U		40 U	
ENDOSULFAN II		16 U	16 U	16 U	80 U		80 U	
ENDOSULFAN SULFATE		16 U	16 U	16 U	80 U		80 U	
ENDRIN	0	16 U	16 U	16 U	80 U	0	80 U	
ENDRIN KETONE		16 U	16 U	16 U	80 U		80 U	
GAMMA CHLORDANE		80 U	80 U	80 U	400 U		400 U	
GAMMA-BHC (LINDANE)		8 U	8 U	8 U	40 U		40 U	
HEPTACHLOR		8 U	8 U	8 U	40 U		40 U	
HEPTACHLOR EPOXIDE		8 U	8 U	8 U	40 U		40 U	
METHOXYCHLOR		80 U	80 U	80 U	400 U		400 U	
MIREX								
TOXAPHENE		160 U	160 U	160 U	800 U		800 U	
4,4'-DDD		16 U	16 U	16 U	80 U		80 U	
4,4'-DDE		16 U	16 U	16 U	80 U		80 U	
4,4'-DDT	0	16 U	16 U	16 U	80 U	0	80 U	
SURR 1(DBC) %RECOVERY		82	76	147	156 *		104	
ACTUAL(ALLOWED) EXTRACT TIME		7(14 D)	7(14 D)	6(14 D)	6(14 D)		6(14 D)	

TABLE D.5.3 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR500069B SOIL UG/KG 4	MS % RECOVERY BR500069B SOIL % 4	RPD BR500069B SOIL % 4	MATRIX SPIKE DUPLICATE BR500069B SOIL UG/KG 4	MSD % RECOVERY BR500069B SOIL % 4
ALDRIN	50 J	130	9	54 J	142 *
ALPHA CHLORDANE	800 U			800 U	
ALPHA-BHC	80 U			80 U	
AROCLOR-1016	800 U			800 U	
AROCLOR-1221	800 U			800 U	
AROCLOR-1232	800 U			800 U	
AROCLOR-1242	800 U			800 U	
AROCLOR-1248	800 U			800 U	
AROCLOR-1254	1600 U			1600 U	
AROCLOR-1260	1600 U			1600 U	
BETA-BHC	80 U			80 U	
COMBINED					
DBC					
DELTA-BHC	80 U			80 U	
DIELDRIN	88 J	92	23	110 J	116
ENDOSULFAN I	80 U			80 U	
ENDOSULFAN II	160 U			160 U	
ENDOSULFAN SULFATE	160 U			160 U	
ENDRIN	140 J	150 *	3	150 J	154 *
ENDRIN KETONE	160 U			160 U	
GAMMA CHLORDANE	800 U			800 U	
GAMMA-BHC (LINDANE)	33 J	86	22	26 J	69
HEPTACHLOR	33 J	87	11	37 J	97
HEPTACHLOR EPOXIDE	80 U			80 U	
METHOXYCHLOR	800 U			800 U	
MIREX					
TOXAPHENE	1600 U			1600 U	
4,4'-DDD	160 U			160 U	
4,4'-DDE	160 U			160 U	
4,4'-DDT	86 J	90	8	94 J	98

SURR 1(DBC) %RECOVERY	107			130	

ACTUAL(ALLOWED) EXTRACT TIME	6(14 D)			6(14 D)	

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TABLE D.5.4 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR800062B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	EVAL A TUNED CALIBRATION BR071888 AREA	EVAL B TUNED CALIBRATION BR071888 %	EVAL B TUNED CALIBRATION BR071888 CF	RSD BR071888 %	EVAL C TUNED CALIBRATION BR071888 AREA	METHOD BLANK PBK80429 SOIL UG/KG	STP DREDGE MATL BR800062B SOIL UG/KG 8
ALDRIN	3910000		3830000	1.1	3860000	8 U	8 U
ALPHA CHLORDANE						80 U	80 U
ALPHA-BHC						8 U	8 U
AROCLOR-1016						80 U	80 U
AROCLOR-1221						80 U	80 U
AROCLOR-1232						80 U	80 U
AROCLOR-1242						80 U	80 U
AROCLOR-1248						80 U	80 U
AROCLOR-1254						160 U	160 U
AROCLOR-1260						160 U	160 U
BETA-BHC						8 U	8 U
COMBINED		16					
DBC	3630000		3660000	0.5	3630000		
DELTA-BHC						8 U	8 U
DIELDRIN						16 U	16 U
ENDOSULFAN I						8 U	8 U
ENDOSULFAN II						16 U	16 U
ENDOSULFAN SULFATE						16 U	16 U
ENDRIN	3220000	0	3190000	2.6	3350000	16 U	16 U
ENDRIN KETONE						16 U	16 U
GAMMA CHLORDANE						80 U	80 U
GAMMA-BHC (LINDANE)						8 U	8 U
HEPTACHLOR						8 U	8 U
HEPTACHLOR EPOXIDE						8 U	8 U
METHOXYCHLOR						80 U	80 U
MIREX	0		0	0	0		
TOXAPHENE						160 U	160 U
4,4'-DDD						16 U	16 U
4,4'-DDE						16 U	16 U
4,4'-DDT	2760000	0	2790000	5.4	3040000	16 U	16 U
Surr 1(DBC) %RECOVERY						95	185 *
ACTUAL(ALLOWED) EXTRACT TIME							11(14 D)

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TABLE D.5.4 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR800062B

DRAFT DO NOT CITE

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AREA	QA						
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP DREDGE MATL BR800073B SOIL UG/KG 8	CONT. CAL % BREAKDOWN BR071888 %	STP DREDGE MATL BR800084B SOIL UG/KG 8	STP DREDGE MATL BR800095B SOIL UG/KG 8	STP DREDGE MATL BR800108B SOIL UG/KG 8	BOUNDRY RD BACKGROUND BR810019B SOIL UG/KG 0	BOUNDRY RD BACKGROUND BR810020B SOIL UG/KG 0
ALDRIN	8 U		8 U	8 U	8 U	8 U	8 U
ALPHA CHLORDANE	80 U		80 U	80 U	80 U	80 U	80 U
ALPHA-BHC	8 U		8 U	8 U	8 U	8 U	8 U
AROCLOR-1016	80 U		80 U	80 U	80 U	80 U	80 U
AROCLOR-1221	80 U		80 U	80 U	80 U	80 U	80 U
AROCLOR-1232	80 U		80 U	80 U	80 U	80 U	80 U
AROCLOR-1242	80 U		80 U	80 U	80 U	80 U	80 U
AROCLOR-1248	80 U		80 U	80 U	80 U	80 U	80 U
AROCLOR-1254	160 U		160 U	160 U	160 U	160 U	160 U
AROCLOR-1260	160 U		160 U	160 U	160 U	160 U	160 U
BETA-BHC	8 U		8 U	8 U	8 U	8 U	8 U
COMBINED		12					
DBC							
DELTA-BHC	8 U		8 U	8 U	8 U	8 U	8 U
DIELDRIN	16 U		16 U	16 U	16 U	16 U	16 U
ENDOSULFAN I	8 U		8 U	8 U	8 U	8 U	8 U
ENDOSULFAN II	16 U		16 U	16 U	16 U	16 U	16 U
ENDOSULFAN SULFATE	16 U		16 U	16 U	16 U	16 U	16 U
ENDRIN	16 U	0	16 U	16 U	16 U	16 U	16 U
ENDRIN KETONE	16 U		16 U	16 U	16 U	16 U	16 U
GAMMA CHLORDANE	80 U		80 U	80 U	80 U	80 U	80 U
GAMMA-BHC (LINDANE)	8 U		8 U	8 U	8 U	8 U	8 U
HEPTACHLOR	8 U		8 U	8 U	8 U	8 U	8 U
HEPTACHLOR EPOXIDE	8 U		8 U	8 U	8 U	8 U	8 U
METHOXYCHLOR	80 U		80 U	80 U	80 U	80 U	80 U
MIREX							
TOXAPHENE	160 U		160 U	160 U	160 U	160 U	160 U
4,4'-DDD	16 U		16 U	16 U	16 U	16 U	16 U
4,4'-DDE	16 U		16 U	16 U	16 U	16 U	16 U
4,4'-DDT	16 U	0	16 U	16 U	16 U	16 U	16 U
SURR 1(DBC) %RECOVERY	139		183 *	128	121	144	157 *
ACTUAL(ALLOWED) EXTRACT TIME	11(14 D)		11(14 D)	11(14 D)	11(14 D)	11(14 D)	11(14 D)

TABLE D.5.4 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR800062B

DRAFT DO NOT CITE

AREA	QA							
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP SLUDGE BEDS BR803021B SOIL UG/KG 8	STP SLUDGE BEDS BR803032B SOIL UG/KG 8	STP SLUDGE BEDS BR803043B SOIL UG/KG 8	CONT. CAL % BREAKDOWN BR071988 %	B. 481 LEACH PIT BR808015B SOIL UG/KG 11	STP TANK BR802019B SOIL UG/KG 8	STP TANK BR802020B SOIL UG/KG 8
D-146	ALDRIN	80 U	80 U	80 U		80 U	80 U	80 U
	ALPHA CHLORDANE	800 U	800 U	800 U		800 U	800 U	800 U
	ALPHA-BHC	80 U	80 U	80 U		80 U	80 U	80 U
	AROCLOR-1016	800 U	800 U	800 U		800 U	800 U	800 U
	AROCLOR-1221	800 U	800 U	800 U		800 U	800 U	800 U
	AROCLOR-1232	800 U	800 U	800 U		800 U	800 U	800 U
	AROCLOR-1242	800 U	800 U	800 U		800 U	800 U	800 U
	AROCLOR-1248	800 U	800 U	800 U		800 U	800 U	800 U
	AROCLOR-1254	12000	12000	5700		2400	29000	16000
	AROCLOR-1260	1600 U	1600 U	1600 U		1600 U	1600 U	1600 U
	BETA-BHC	80 U	80 U	80 U		80 U	80 U	80 U
	COMBINED				15			
	DBC							
	DELTA-BHC	80 U	80 U	80 U		80 U	80 U	80 U
	DIELDRIN	160 U	160 U	160 U		160 U	160 U	160 U
	ENDOSULFAN I	80 U	80 U	80 U		80 U	80 U	80 U
	ENDOSULFAN II	160 U	160 U	160 U		160 U	160 U	160 U
	ENDOSULFAN SULFATE	160 U	160 U	160 U		160 U	160 U	160 U
	ENDRIN	160 U	160 U	160 U	0	160 U	160 U	160 U
	ENDRIN KETONE	160 U	160 U	160 U		160 U	160 U	160 U
	GAMMA CHLORDANE	800 U	800 U	800 U		800 U	800 U	800 U
	GAMMA-BHC (LINDANE)	80 U	80 U	80 U		80 U	80 U	80 U
	HEPTACHLOR	80 U	80 U	80 U		80 U	80 U	80 U
	HEPTACHLOR EPOXIDE	80 U	80 U	80 U		80 U	80 U	80 U
	METHOXYCHLOR	800 U	800 U	800 U		800 U	800 U	800 U
	MIREX							
	TOXAPHENE	1600 U	1600 U	1600 U		1600 U	1600 U	1600 U
	4,4'-DDD	160 U	160 U	160 U		160 U	160 U	160 U
4,4'-DDE	160 U	160 U	160 U		160 U	160 U	160 U	
4,4'-DDT	160 U	160 U	160 U	0	160 U	160 U	160 U	
SURR 1(DBC) %RECOVERY	0 D	0 D	0 D		0 D	0 IP	203 *	
ACTUAL(ALLOWED) EXTRACT TIME	10(14 D)	10(14 D)	10(14 D)		8(14 D)	11(14 D)	10(14 D)	

TABLE D.5.4 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR800062B

DRAFT DO NOT CITE

AREA				QA				QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP TANK BR802031B SOIL UG/KG 8	B. 905 CESSPOOL BR315019B SOIL UG/KG 2	STP SLUDGE BEDS BR803010B SOIL UG/KG 8	METHOD BLANK PBK80620 SOIL UG/KG	B. 481 LEACH PIT BR808026B SOIL UG/KG 11	B. 481 LEACH PIT BR808037B SOIL UG/KG 11	CONT. CAL % BREAKDOWN BR071988 %	
ALDRIN	80 U	80 U	160 U	8 U	80 U	80 U		
ALPHA CHLORDANE	800 U	800 U	1600 U	80 U	800 U	800 U		
ALPHA-BHC	80 U	80 U	160 U	8 U	80 U	80 U		
AROCLOR-1016	800 U	800 U	1600 U	80 U	800 U	800 U		
AROCLOR-1221	800 U	800 U	1600 U	80 U	800 U	800 U		
AROCLOR-1232	800 U	800 U	1600 U	80 U	800 U	800 U		
AROCLOR-1242	800 U	800 U	1600 U	80 U	800 U	800 U		
AROCLOR-1248	800 U	800 U	1600 U	80 U	800 U	800 U		
AROCLOR-1254	2000 U	4800 U	24000 U	160 U	1600 U	1600 U		
AROCLOR-1260	1600 U	1600 U	3200 U	160 U	1600 U	1600 U		
BETA-BHC	80 U	80 U	160 U	8 U	80 U	80 U		
COMBINED							16	
DBC								
DELTA-BHC	80 U	80 U	160 U	8 U	80 U	80 U		
DIELDRIN	160 U	160 U	320 U	16 U	160 U	160 U		
ENDOSULFAN I	80 U	80 U	160 U	8 U	80 U	80 U		
ENDOSULFAN II	160 U	160 U	320 U	16 U	160 U	160 U		
ENDOSULFAN SULFATE	160 U	160 U	320 U	16 U	160 U	160 U		
ENDRIN	160 U	160 U	320 U	16 U	160 U	160 U		
ENDRIN KETONE	160 U	160 U	320 U	16 U	160 U	160 U	0	
GAMMA CHLORDANE	800 U	800 U	1600 U	80 U	800 U	800 U		
GAMMA-BHC (LINDANE)	80 U	80 U	160 U	8 U	80 U	80 U		
HEPTACHLOR	80 U	80 U	160 U	8 U	80 U	80 U		
HEPTACHLOR EPOXIDE	80 U	80 U	160 U	8 U	80 U	80 U		
METHOXYCHLOR	800 U	800 U	1600 U	80 U	800 U	800 U		
MIREX								
TOXAPHENE	1600 U	1600 U	3200 U	160 U	1600 U	1600 U		
4,4'-DDD	160 U	160 U	320 U	16 U	160 U	160 U		
4,4'-DDE	160 U	160 U	320 U	16 U	160 U	160 U		
4,4'-DDT	160 U	160 U	320 U	16 U	160 U	160 U	0	
SURR 1(DBC) %RECOVERY	19 *	169 *	0 D	170 *	0 D	0 D		
ACTUAL(ALLOWED) EXTRACT TIME	10(14 D)	10(14 D)	10(14 D)		57(14 D)	57(14 D)		

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TABLE D.5.4 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR800062B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA		
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR800062B SOIL UG/KG 8	MS % RECOVERY BR800062B SOIL % 8	RPD BR800062B SOIL % 8	MATRIX SPIKE DUPLICATE BR800062B SOIL UG/KG 8	MSD % RECOVERY BR800062B SOIL % 8	BOUNDRY RD BACKGROUND BR810031B SOIL UG/KG 0	B. 479 CESSPOOL BR311015B SOIL UG/KG 2
ALDRIN	49 J	177 *	14	43 J	154 *	80 U	80 U
ALPHA CHLORDANE	800 U			800 U		800 U	800 U
ALPHA-BHC	80 U			80 U		80 U	80 U
AROCLOR-1016	800 U			800 U		800 U	800 U
AROCLOR-1221	800 U			800 U		800 U	800 U
AROCLOR-1232	800 U			800 U		800 U	800 U
AROCLOR-1242	800 U			800 U		800 U	800 U
AROCLOR-1248	800 U			800 U		800 U	800 U
AROCLOR-1254	1600 U			1600 U		1600 U	1600 U
AROCLOR-1260	1600 U			1600 U		1600 U	1600 U
BETA-BHC	80 U			80 U		80 U	80 U
COMBINED							
DBC							
DELTA-BHC	80 U			80 U		80 U	80 U
DIELDRIN	240	348 *	3.7	250	361 *	160 U	160 U
ENDOSULFAN I	80 U			80 U		80 U	80 U
ENDOSULFAN II	160 U			160 U		160 U	160 U
ENDOSULFAN SULFATE	160 U			160 U		160 U	160 U
ENDRIN	220	311 *	25	280	401 *	160 U	160 U
ENDRIN KETONE	160 U			160 U		160 U	160 U
GAMMA CHLORDANE	800 U			800 U		800 U	800 U
GAMMA-BHC (LINDANE)	84	300 *	19	100	364 *	80 U	80 U
HEPTACHLOR	82	294 *	19	67 J	243 *	80 U	80 U
HEPTACHLOR EPOXIDE	80 U			80 U		80 U	80 U
METHOXYCHLOR	800 U			800 U		800 U	800 U
MIREX							
TOXAPHENE	1600 U			1600 U		1600 U	1600 U
4,4'-DDD	160 U			160 U		160 U	160 U
4,4'-DDE	160 U			160 U		160 U	160 U
4,4'-DDT	65 J	93	27	49 J	71	160 U	160 U
SURR 1(DBC) %RECOVERY	202 *			159 *		137	3 *
ACTUAL(ALLOWED) EXTRACT TIME	11(14 D)			11(14 D)		11(14 D)	10(14 D)

TABLE D.5.4 BROOKHAVEN PCBS & OTHER EXTRACTABLES - SDG NUMBER: BR800062B

DRAFT DO NOT CITE

AREA	QA		
LOCATION	CONT. CAL	B. 422	
TYPE OF LOCATION	% BREAKDOWN	CESSPOOL	
SAMPLE NUMBER	BR071988	BR313017B	
MATRIX		SOIL	
UNITS	x	UG/KG	
ENV PROBLEM NO		2	
ALDRIN		800 U	
ALPHA CHLORDANE		8000 U	
ALPHA-BHC		800 U	
AROCLOR-1016		8000 U	
AROCLOR-1221		8000 U	
AROCLOR-1232		8000 U	
AROCLOR-1242		8000 U	
AROCLOR-1248		8000 U	
AROCLOR-1254		78000 U	
AROCLOR-1260		16000 U	
BETA-BHC		800 U	
COMBINED	12		
DBC			
DELTA-BHC		800 U	
DIELDRIN		1600 U	
ENDOSULFAN I		800 U	
ENDOSULFAN II		1600 U	
ENDOSULFAN SULFATE		1600 U	
ENDRIN	0	1600 U	
ENDRIN KETONE		1600 U	
GAMMA CHLORDANE		8000 U	
GAMMA-BHC (LINDANE)		800 U	
HEPTACHLOR		800 U	
HEPTACHLOR EPOXIDE		800 U	
METHOXYCHLOR		8000 U	
MIREX			
TOXAPHENE		16000 U	
4,4'-DDD		1600 U	
4,4'-DDE		1600 U	
4,4'-DDT	0	1600 U	
SURR 1(DBC) %RECOVERY			0 IP
ACTUAL(ALLOWED) EXTRACT TIME			10(14 D)

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TABLE D.6.1 DIRECTORY FOR EXTRACTABLE ORGANICS QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
0	BR809016E	BR306018E	D.6.6 (D-229)
0	BR809027E	BR306018E	D.6.6 (D-229)
0	BR809038E	BR306018E	D.6.6 (D-232)
0	BR810019B	BR311015B	D.6.8 (D-250)
0	BR810020B	BR311015B	D.6.8 (D-250)
0	BR810031B	BR311015B	D.6.8 (D-253)
1	BR300012F	BR300012F	D.6.3 (D-187)
1	BR300023F	BR300012F	D.6.3 (D-187)
1	BR300034F	BR300012F	D.6.3 (D-187)
1	BR301057A	BR301057A	D.6.4 (D-199)
1	BR301068A	BR301057A	D.6.4 (D-199)
1	BR301079A	BR301057A	D.6.4 (D-199)
1	BR302058A	BR301057A	D.6.4 (D-193)
1	BR302069A	BR301057A	D.6.4 (D-193)
1	BR302070A	BR301057A	D.6.4 (D-193)
1	BR303015B	BR303015B	D.6.5 (D-205)
1	BR303026B	BR303015B	D.6.5 (D-208)
1	BR303037B	BR303015B	D.6.5 (D-208)
1	BR304016B	BR303015B	D.6.5 (D-208)
1	BR304027B	BR303015B	D.6.5 (D-208)
1	BR304038B	BR303015B	D.6.5 (D-208)
1	BR305017B	BR303015B	D.6.5 (D-208)
1	BR305028B	BR303015B	D.6.5 (D-211)
1	BR305039B	BR303015B	D.6.5 (D-211)
2	BR306018E	BR306018E	D.6.6 (D-232)
2	BR306029E	BR306018E	D.6.6 (D-232)
2	BR306030E	BR306018E	D.6.6 (D-232)
2	BR308010E	BR306018E	D.6.6 (D-223)
2	BR308021E	BR306018E	D.6.6 (D-223)
2	BR308032E	BR306018E	D.6.6 (D-223)
2	BR310014E	BR306018E	D.6.6 (D-232)
2	BR310025E	BR310025E	D.6.7 (D-241)
2	BR310036E	BR310025E	D.6.7 (D-241)
2	BR311015B	BR311015B	D.6.8 (D-256)
2	BR311026E	BR306018E	D.6.6 (D-229)
2	BR313017B	BR311015B	D.6.8 (D-262)
2	BR315019B	BR311015B	D.6.8 (D-262)
3	BR316010F	BR000022B	D.6.2 (D-178)
3	BR316021E	BR000022B	D.6.2 (D-175)
3	BR316032E	BR000022B	D.6.2 (D-178)
3	BR316043F	BR000022B	D.6.2 (D-181)
4	BR500047B	BR303015B	D.6.5 (D-211)
4	BR500058B	BR303015B	D.6.5 (D-214)
4	BR500069B	BR303015B	D.6.5 (D-211)
4	BR500070A	BR306018E	D.6.6 (D-232)
4	BR500081A	BR306018E	D.6.6 (D-232)
4	BR500092A	BR306018E	D.6.6 (D-235)
4	BR507011E	BR000022B	D.6.2 (D-163)
4	BR507022E	BR000022B	D.6.2 (D-163)
4	BR507033E	BR000022B	D.6.2 (D-163)
4	BR507044E	BR000022B	D.6.2 (D-166)

TABLE D.6.1 DIRECTORY FOR EXTRACTABLE ORGANICS QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
4	BR507055E	BR000022B	D.6.2 (D-169)
4	BR507066E	BR000022B	D.6.2 (D-169)
4	BR507077E	BR000022B	D.6.2 (D-169)
4	BR507088E	BR000022B	D.6.2 (D-172)
4	BR508056C	BR000022B	D.6.2 (D-157)
4	BR508067C	BR000022B	D.6.2 (D-157)
4	BR508078C	BR000022B	D.6.2 (D-157)
4	BR508089C	BR000022B	D.6.2 (D-157)
4	BR508090C	BR000022B	D.6.2 (D-157)
4	BR508103C	BR000022B	D.6.2 (D-157)
4	BR508114E	BR000022B	D.6.2 (D-163)
6	BR503017B	BR503017B	D.6.9 (D-271)
6	BR503028B	BR503017B	D.6.9 (D-271)
6	BR503039B	BR503017B	D.6.9 (D-271)
6	BR503040B	BR503017B	D.6.9 (D-271)
6	BR503051E	BR306018E	D.6.6 (D-220)
6	BR504018B	BR503017B	D.6.9 (D-268)
6	BR504029B	BR503017B	D.6.9 (D-271)
6	BR504030B	BR503017B	D.6.9 (D-271)
7	BR506010B	BR503017B	D.6.9 (D-274)
8	BR800062B	BR311015B	D.6.8 (D-247)
8	BR800073B	BR311015B	D.6.8 (D-250)
8	BR800084B	BR311015B	D.6.8 (D-250)
8	BR800095B	BR311015B	D.6.8 (D-250)
8	BR800108B	BR311015B	D.6.8 (D-250)
8	BR801018E	BR306018E	D.6.6 (D-220)
8	BR801029E	BR306018E	D.6.6 (D-220)
8	BR801030E	BR306018E	D.6.6 (D-220)
8	BR801030F	BR306018E	D.6.6 (D-220)
8	BR801041E	BR306018E	D.6.6 (D-220)
8	BR802019B	BR311015B	D.6.8 (D-256)
8	BR802020B	BR311015B	D.6.8 (D-259)
8	BR802031B	BR311015B	D.6.8 (D-259)
8	BR803010B	BR311015B	D.6.8 (D-253)
8	BR803021B	BR311015B	D.6.8 (D-253)
8	BR803032B	BR311015B	D.6.8 (D-253)
8	BR803043B	BR311015B	D.6.8 (D-256)
9	BR805012E	BR306018E	D.6.6 (D-226)
9	BR805023E	BR306018E	D.6.6 (D-226)
9	BR805034E	BR306018E	D.6.6 (D-226)
10	BR806013B	BR806013B	D.6.10 (D-280)
10	BR806024B	BR806013B	D.6.10 (D-283)
10	BR806035B	BR806013B	D.6.10 (D-283)
10	BR806046B	BR806013B	D.6.10 (D-283)
10	BR806057B	BR806013B	D.6.10 (D-286)
10	BR806068B	BR806013B	D.6.10 (D-286)
10	BR806079B	BR806013B	D.6.10 (D-286)
10	BR806080B	BR806013B	D.6.10 (D-286)
10	BR806091B	BR806013B	D.6.10 (D-286)
10	BR806104B	BR806013B	D.6.10 (D-286)
10	BR806115B	BR806013B	D.6.10 (D-286)
10	BR806126B	BR806013B	D.6.10 (D-289)

TABLE D.6.1 DIRECTORY FOR EXTRACTABLE ORGANICS QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
10	BR806137B	BR806013B	D.6.10 (D-289)
10	BR806148B	BR806013B	D.6.10 (D-289)
10	BR806159E	BR306018E	D.6.6 (D-226)
10	BR807014E	BR306018E	D.6.6 (D-226)
10	BR807025E	BR306018E	D.6.6 (D-226)
10	BR807036E	BR306018E	D.6.6 (D-226)
10	BR809049G	BR000022B	D.6.2 (D-172)
10	BR809050E	BR000022B	D.6.2 (D-178)
10	BR809061F	BR000022B	D.6.2 (D-181)
10	BR809072F	BR000022B	D.6.2 (D-181)
10	BR809083F	BR000022B	D.6.2 (D-181)
10	BR809107F	BR000022B	D.6.2 (D-178)
10	BR809118F	BR000022B	D.6.2 (D-172)
10	BR809129G	BR000022B	D.6.2 (D-172)
10	BR809130G	BR000022B	D.6.2 (D-172)
11	BR808015B	BR311015B	D.6.8 (D-256)
11	BR808026B	BR808026B	D.6.11 (D-295)
11	BR808037B	BR808026B	D.6.11 (D-295)

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0930886	INITIAL CAL % RSD BR0930886	TUNED CALIBRATION BR0930885	TUNED CALIBRATION BR1004885	CONTINUING CALIBRATION BR1004887	CONTINUING CAL %D BR1004887	ISTD RET TIM SHIFT BR1004888
	RRF	%	%	%	RRF	%	AREA
ACENAPHTHENE	0.984	12.5			1.061	-7.8	
ACENAPHTHYLENE	1.55	11.6			1.696	-9.4	
ANTHRACENE	0.942	18.5			1.009	-7.1	
BENZO(A)ANTHRACENE	0.985	12.4			1.015	-3	
BENZO(A)PYRENE	0.903	8.4			0.877	2.9	
BENZO(B)FLUORANTHENE	0.957	12.2			0.791	17.4	
BENZO(G,H,I)PERYLENE	0.665	22.2			0.557	16.2	
BENZO(K)FLUORANTHENE	0.823	12.6			0.791	3.9	
BENZOIC ACID	0.12	14			0.122	-1.7	
BENZYL ALCOHOL	0.817	8.4			0.796	2.6	
BIS(2-CHLOROETHOXY)METHANE	0.403	8.2			0.392	2.7	
BIS(2-CHLOROETHYL)ETHER	2.214	37.2			2.724	-23	
BIS(2-CHLOROISOPROPYL)ETHER	1.64	3.4			1.585	3.4	
BIS(2-ETHYLHEXYL)PHthalate	1.424	11.6			1.45	-1.8	
BUTYLBENZYLPHthalate	0.997	11.3			1.009	-1.2	
CHRYSENE	0.811	8.1			0.837	-3.2	
DI-N-BUTYLPHthalate	1.415	14.3			1.478	-4.5	
DI-N-OCTYLPHthalate	2.519	8.2			2.443	3	
DIBENZ(A,H)ANTHRACENE	0.652	23.4			0.675	-3.5	
DIBENZOFURAN	1.45	16			1.511	-4.2	
DIETHYLPHthalate	1.345	9.4			1.394	-3.6	
DIMETHYLPHthalate	1.233	9.4			1.29	-4.6	
FLUORANTHENE	0.919	17.1			0.985	-7.2	
FLUORENE	1.107	12.2			1.184	-7	
HEXACHLORO BENZENE	0.179	17.4			0.179	0	
HEXACHLOROBUTADIENE	0.11	16.4			0.114	-3.6	
HEXACHLOROCYCLOPENTADIENE	0.132	7			0.144	-9.1	
HEXACHLOROETHANE	0.595	2.2			0.591	0.7	
INDENO(1,2,3-CD)PYRENE	0.655	39.2			0.397	39.4	
ISOPHORONE	0.651	4.6			0.667	-2.5	
N-NITROSO-DI-N-PROPYLAMINE	0.921	1.8			0.908	1.4	
N-NITROSODIPHENYLAMINE	0.419	18.5			0.426	-1.7	
NAPHTHALENE	0.908	9			0.923	-1.7	
NITROBENZENE	0.321	4			0.298	7.2	
NITROBENZENE-D5	0.317	4.1			0.3	5.4	
PENTACHLOROPHENOL	0.086	4			0.1	-16.3	
PHENANTHRENE	0.964	13.7			0.996	-3.3	
PHENOL	1.581	3.1			1.623	-2.7	
PHENOL-D5	1.202	3.5			1.227	-2.1	

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0930886	BR0930886	BR0930885	BR1004885	BR1004887	BR1004887	BR1004888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
PYRENE	1.34	20.3			1.436	-7.2	
TERPHENYL-D14	0.745	11.7			0.76	-2	
1,2-DICHLOROBENZENE	1.308	7.4			1.386	-6	
1,2,4-TRICHLOROBENZENE	0.249	11.2			0.257	-3.2	
1,3-DICHLOROBENZENE	1.405	5.1			1.465	-4.3	
1,4-DICHLOROBENZENE	1.375	6.2			1.365	0.7	
2-CHLORONAPHTHALENE	0.997	9.6			1.064	-6.7	
2-CHLOROPHENOL	1.319	2.4			1.363	-3.3	
2-FLUOROBIPHENYL	0.987	9.5			1.051	-6.5	
2-FLUOROPHENOL	1.202	3.1			1.225	-1.9	
2-METHYLNAPHTHALENE	0.595	13.9			0.614	-3.2	
2-METHYLPHENOL	1.055	5.3			1.079	-2.3	
2-NITROANILINE	0.371	2.2			0.387	-4.3	
2-NITROPHENOL	0.216	24.5			0.238	-10.2	
2,4-DICHLOROPHENOL	0.242	4.9			0.254	-5	
2,4-DIMETHYLPHENOL	0.32	2.7			0.316	1.3	
2,4-DINITROPHENOL	0.078	6.9			0.078	0	
2,4-DINITROTOLUENE	0.339	6.8			0.357	-5.3	
2,4,5-TRICHLOROPHENOL	0.262	7			0.295	-12.6	
2,4,6-TRIBROMOPHENOL	0.128	7.8			0.143	-11.7	
2,4,6-TRICHLOROPHENOL	0.271	8			0.303	-11.8	
2,6-DINITROTOLUENE	0.268	5.1			0.273	-1.9	
3-NITROANILINE	0.092	32			0.069	25	
3,3'-DICHLOROBENZIDINE	0.15	13.6			0.15	0	
4-BROMOPHENYL-PHENYLETHER	0.152	16.4			0.159	-4.6	
4-CHLORO-3-METHYLPHENOL	0.295	2.2			0.32	-8.5	
4-CHLOROANILINE	0.198	44.2			0.172	13.1	
4-CHLOROPHENYL-PHENYLETHER	0.457	14.6			0.502	-9.8	
4-METHYLPHENOL	1.123	4.1			1.166	-3.8	
4-NITROANILINE	0.101	58.3			0.194	-92.1	
4-NITROPHENOL	0.124	5.1			0.126	-1.6	
4,6-DINITRO-2-METHYLPHENOL	0.077	7.8			0.072	6.5	

SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0930886	INITIAL CAL % RSD BR0930886	TUNED CALIBRATION BR0930885	TUNED CALIBRATION BR1004885	CONTINUING CALIBRATION BR1004887	CONTINUING CAL %D BR1004887	ISTD RET TIM SHIFT BR1004888 AREA
	RRF	%	%	%	RRF	%	

M/E 51			36	31			
M/E 68-1			0	0.6			
M/E 68-2			0	1.6			
M/E 69			40	37			
M/E 70-1			0	0			
M/E 70-2			0	0			
M/E 127			50	47			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			7.1	6.8			
M/E 275			17	18			
M/E 365			3.3	2.6			
M/E 441			6.5	7.6			
M/E 442			58	58			
M/E 443-1			10	12			
M/E 443-2			18	20			

INTERNAL STD AREA(ANT)							48900
INTERNAL STD AREA(CRY)							55100
INTERNAL STD AREA(DCB)							21500
INTERNAL STD AREA(NPT)							90700
INTERNAL STD AREA(PHN)							82800
INTERNAL STD AREA(PRY)							53700

DILUTION FACTOR
PERCENT MOISTURE
ACTUAL(ALLOWED) EXTRACT TIME

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK00706 SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508056C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508067C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508078C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508089C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508090C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508103C SOIL UG/KG
ACENAPHTHENE	660 U	760 U	800 U	780 U	1300	710 U	690 U

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA							
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK00706 SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508056C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508067C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508078C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508089C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508090C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508103C SOIL UG/KG
		4	4	4	4	4	4	
D-158	ACENAPHTHYLENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	ANTHRACENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BENZO(A)ANTHRACENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BENZO(A)PYRENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BENZO(B)FLUORANTHENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BENZO(G,H,I)PERYLENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BENZO(K)FLUORANTHENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BENZOIC ACID	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	BENZYL ALCOHOL	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BIS(2-CHLOROETHOXY)METHANE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BIS(2-CHLOROETHYL)ETHER	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BIS(2-CHLOROISOPROPYL)ETHER	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	BIS(2-ETHYLHEXYL)PHTHALATE	660 U	140 J	210 J	170 J	690 U	710 U	690 U
	BUTYL BENZYL PHTHALATE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	CHRYSENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	DI-N-BUTYL PHTHALATE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	DI-N-OCTYL PHTHALATE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	DIBENZ(A,H)ANTHRACENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	DIBENZOFURAN	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	DIETHYL PHTHALATE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	DIMETHYL PHTHALATE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	FLUORANTHENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	FLUORENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	HEXACHLORO BENZENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	HEXACHLORO BUTADIENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	HEXACHLORO CYCLOPENTADIENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	HEXACHLORO ETHANE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	INDENO(1,2,3-CD)PYRENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	ISOPHORONE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	N-NITROSO-DI-N-PROPYLAMINE	660 U	760 U	800 U	780 U	470 J	710 U	690 U
	N-NITROSODIPHENYLAMINE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	NAPHTHALENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	NITROBENZENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	NITROBENZENE-D5							
	PENTACHLOROPHENOL	3200 U	3700 U	3900 U	3800 U	4000	3500 U	3400 U
	PHENANTHRENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	PHENOL	660 U	760 U	800 U	780 U	2500	710 U	690 U
	PHENOL-D5							
	PYRENE	660 U	760 U	800 U	780 U	3300	710 U	690 U

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA							
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK00706 SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508056C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508067C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508078C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508089C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508090C SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508103C SOIL UG/KG
		4	4	4	4	4	4	4
D-159	TERPHENYL-D14							
	1,2-DICHLOROBENZENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	1,2,4-TRICHLOROBENZENE	660 U	760 U	800 U	780 U	1500	710 U	690 U
	1,3-DICHLOROBENZENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	1,4-DICHLOROBENZENE	660 U	760 U	800 U	780 U	1700	710 U	690 U
	2-CHLORONAPHTHALENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	2-CHLOROPHENOL	660 U	760 U	800 U	780 U	2200	710 U	690 U
	2-FLUOROBIPHENYL							
	2-FLUOROPHENOL							
	2-METHYLNAPHTHALENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	2-METHYLPHENOL	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	2-NITROANILINE	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	2-NITROPHENOL	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	2,4-DICHLOROPHENOL	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	2,4-DIMETHYLPHENOL	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	2,4-DINITROPHENOL	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	2,4-DINITROTOLUENE	660 U	760 U	800 U	780 U	1100	710 U	690 U
	2,4,5-TRICHLOROPHENOL	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	2,4,6-TRIBROMOPHENOL							
	2,4,6-TRICHLOROPHENOL	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	2,6-DINITROTOLUENE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	3-NITROANILINE	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	3,3'-DICHLOROBENZIDINE	1300 U	1500 U	1600 U	1600 U	1400 U	1400 U	1400 U
	4-BROMOPHENYL-PHENYLETHER	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	4-CHLORO-3-METHYLPHENOL	660 U	760 U	800 U	780 U	2700	710 U	690 U
	4-CHLOROANILINE	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	4-CHLOROPHENYL-PHENYLETHER	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	4-METHYLPHENOL	660 U	760 U	800 U	780 U	690 U	710 U	690 U
	4-NITROANILINE	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	4-NITROPHENOL	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	4,6-DINITRO-2-METHYLPHENOL	3200 U	3700 U	3900 U	3800 U	3400 U	3500 U	3400 U
	SURR 1(NBZ) %RECOVERY	45	45	43	14 *	20 *	19 *	37
	SURR 2(FBP) %RECOVERY	50	49	44	17 *	21 *	22 *	42
	SURR 3(TPH) %RECOVERY	67	67	63	49	45	39	57
	SURR 4(PHL) %RECOVERY	42	38	39	14 *	18 *	19 *	36
	SURR 5(2FP) %RECOVERY	39	35	33	12 *	18 *	19 *	35
	SURR 6(TBP) %RECOVERY	37	38	35	14 *	21	16 *	35

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

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AREA	QA						
LOCATION	METHOD	U/D CUR LF					
TYPE OF LOCATION	BLANK	WELL AT LNDF					
SAMPLE NUMBER	SBK00706	BR508056C	BR508067C	BR508078C	BR508089C	BR508090C	BR508103C
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	4	4	4	4	4	4	4
M/E 68-1							
M/E 68-2							
M/E 69							
M/E 70-1							
M/E 70-2							
M/E 127							
M/E 197							
M/E 198							
M/E 199							
M/E 275							
M/E 365							
M/E 441							
M/E 442							
M/E 443-1							
M/E 443-2							
INTERNAL STD AREA(ANT)	37100	43200	43000	39000	40300	38500	43700
INTERNAL STD AREA(CRY)	36000	41300	41500	38000	41500	35600	43300
INTERNAL STD AREA(DCB)	17600	20900	18400	18000	16800	17500	19700
INTERNAL STD AREA(NPT)	65100	73000	67000	66800	60900	63700	73200
INTERNAL STD AREA(PHN)	65700	72600	73400	67700	69600	63800	72300
INTERNAL STD AREA(PRY)	39700	44400	45100	39500	44700	37400	45300
DILUTION FACTOR	2	2	2	2	2	2	2
PERCENT MOISTURE		14	18	16	6	8	6
ACTUAL(ALLOWED) EXTRACT TIME		7(14 D)	7(14 D)	16(14 D)	16(14 D)	16(14 D)	16(14 D)
AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MATRIX	MS %	RPD	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	SPIKE	RECOVERY		CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR508103C	BR508103C	BR508103C	BR1005885	BR1005887	BR1005887	BR1005888
MATRIX	SOIL	SOIL	SOIL	%	RRF	%	AREA
UNITS	UG/KG	%	%				
ENV PROBLEM NO	4	4	4				
ACENAPHTHENE	1370	39	200 *		1.074	-9.1	

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR508103C SOIL UG/KG 4	MS % RECOVERY BR508103C SOIL % 4	RPD BR508103C SOIL % 4	TUNED CALIBRATION BR1005885 %	CONTINUING CALIBRATION BR1005887 RRF	CONTINUING CAL %D BR1005887 %	ISTD RET TIM SHIFT BR1005888 AREA
ACENAPHTHYLENE	700 U				1.582	-2.1	
ANTHRACENE	700 U				0.99	-5.1	
BENZO(A)ANTHRACENE	700 U				1	-1.5	
BENZO(A)PYRENE	700 U				0.818	9.4	
BENZO(B)FLUORANTHENE	700 U				0.937	2.1	
BENZO(G, H, I)PERYLENE	700 U				0.603	9.3	
BENZO(K)FLUORANTHENE	700 U				0.794	3.5	
BENZOIC ACID	3400 U				0.129	-7.5	
BENZYL ALCOHOL	700 U				0.762	6.7	
BIS(2-CHLOROETHOXY)METHANE	700 U				0.403	0	
BIS(2-CHLOROETHYL)ETHER	700 U				2.507	-13.2	
BIS(2-CHLOROISOPROPYL)ETHER	700 U				1.653	-0.8	
BIS(2-ETHYLHEXYL)PHTHALATE	700 U				1.502	-5.5	
BUTYLBENZYLPHthalATE	700 U				1.001	-0.4	
CHRYSENE	700 U				0.819	-1	
DI-N-BUTYLPHthalATE	700 U				1.504	-6.3	
DI-N-OCTYLPHthalATE	700 U				2.469	2	
DIBENZ(A, H)ANTHRACENE	700 U				0.599	8.1	
DIBENZOFURAN	700 U				1.483	-2.3	
DIETHYLPHthalATE	700 U				1.386	-3	
DIMETHYLPHthalATE	700 U				1.289	-4.5	
FLUORANTHENE	700 U				0.959	-4.4	
FLUORENE	700 U				1.168	-5.5	
HEXACHLORO BENZENE	700 U				0.186	-3.9	
HEXACHLOROBUTADIENE	700 U				0.115	-4.5	
HEXACHLOROCYCLOPENTADIENE	700 U				0.137	-3.8	
HEXACHLOROETHANE	700 U				0.593	0.3	
INDENO(1, 2, 3-CD)PYRENE	700 U				0.742	-13.3	
ISOPHORONE	700 U				0.654	-0.5	
N-NITROSO-DI-N-PROPYLAMINE	553	16 *	200 *		0.86	6.6	
N-NITROSODIPHENYLAMINE	700 U				0.412	1.7	
NAPHTHALENE	700 U				0.953	-5	
NITROBENZENE	700 U				0.331	-3.1	
NITROBENZENE-D5					0.294	7.3	
PENTACHLOROPHENOL	3660	52	200 *		0.102	-18.6	
PHENANTHRENE	700 U				1.047	-8.6	
PHENOL	2710	38	200 *		1.586	-0.3	
PHENOL-D5					1.203	-0.1	
PYRENE	3070	87	200 *		1.466	-9.4	

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR508103C SOIL UG/KG 4	MS % RECOVERY BR508103C SOIL % 4	RPD BR508103C SOIL % 4	TUNED CALIBRATION BR1005885 % 4	CONTINUING CALIBRATION BR1005887 RRF	CONTINUING CAL %D BR1005887 %	ISTD RET TIM SHIFT BR1005888 AREA
TERPHENYL-D14					0.794	-6.6	
1,2-DICHLOROBENZENE	700 U				1.37	-4.7	
1,2,4-TRICHLOROBENZENE	1380	39	200 *		0.268	-7.6	
1,3-DICHLOROBENZENE	700 U				1.37	2.5	
1,4-DICHLOROBENZENE	1700	48	200 *		1.443	-4.9	
2-CHLORONAPHTHALENE	700 U				1.029	-3.2	
2-CHLOROPHENOL	2320	33	200 *		1.393	-5.6	
2-FLUOROBIPHENYL					0.998	-1.1	
2-FLUOROPHENOL					1.195	0.6	
2-METHYLNAPHTHALENE	700 U				0.6	-0.8	
2-METHYLPHENOL	700 U				1.079	-2.3	
2-NITROANILINE	3400 U				0.369	0.5	
2-NITROPHENOL	700 U				0.263	-21.8	
2,4-DICHLOROPHENOL	700 U				0.255	-5.4	
2,4-DIMETHYLPHENOL	700 U				0.322	-0.6	
2,4-DINITROPHENOL	3400 U				0.078	0	
2,4-DINITROTOLUENE	1700	48	200 *		0.353	-4.1	
2,4,5-TRICHLOROPHENOL	3400 U				0.298	-13.7	
2,4,6-TRIBROMOPHENOL					0.153	-19.5	
2,4,6-TRICHLOROPHENOL	700 U				0.291	-7.4	
2,6-DINITROTOLUENE	700 U				0.28	-4.5	
3-NITROANILINE	3400 U				0.057	38	
3,3'-DICHLOROBENZIDINE	1400 U				0.125	-16.7	
4-BROMOPHENYL-PHENYLETHER	700 U				0.163	-7.2	
4-CHLORO-3-METHYLPHENOL	2880	41	200 *		0.302	-2.4	
4-CHLOROANILINE	700 U				0.124	37.4	
4-CHLOROPHENYL-PHENYLETHER	700 U				0.493	-7.9	
4-METHYLPHENOL	700 U				1.121	0.2	
4-NITROANILINE	3400 U				0.12	-18.8	
4-NITROPHENOL		0 *	0		0.11	11.3	
4,6-DINITRO-2-METHYLPHENOL	3400 U				0.077	0	
SURR 1(NBZ) %RECOVERY	20 *						
SURR 2(FBP) %RECOVERY	22 *						
SURR 3(TPH) %RECOVERY	45						
SURR 4(PHL) %RECOVERY	20 *						
SURR 5(2FP) %RECOVERY	19 *						
SURR 6(TBP) %RECOVERY	20						

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MATRIX	MS %	RPD	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	SPIKE	RECOVERY		CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR508103C	BR508103C	BR508103C	BR1005885	BR1005887	BR1005887	BR1005888
MATRIX	SOIL	SOIL	SOIL				
UNITS	UG/KG	%	%	%	RRF	%	AREA
ENV PROBLEM NO	4	4	4				
M/E 68-1				0			
M/E 68-2				0			
M/E 69				36			
M/E 70-1				0			
M/E 70-2				0			
M/E 127				48			
M/E 197				0			
M/E 198				100			
M/E 199				7.5			
M/E 275				20			
M/E 365				2.6			
M/E 441				7.8			
M/E 442				61			
M/E 443-1				12			
M/E 443-2				20			
INTERNAL STD AREA(ANT)	40800						46500
INTERNAL STD AREA(CRY)	43200						51000
INTERNAL STD AREA(DCB)	17600						20300
INTERNAL STD AREA(NPT)	65100						83800
INTERNAL STD AREA(PHN)	69800						77200
INTERNAL STD AREA(PRY)	46900						48100
DILUTION FACTOR	2						
PERCENT MOISTURE	6						
ACTUAL(ALLOWED) EXTRACT TIME	16(14 D)						

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	U/D CUR LF	CURR. LNDF	CURR. LNDF	CURR. LNDF	MS %	RPD
TYPE OF LOCATION	BLANK	WELL AT LNDF	WELL	WELL	WELL	RECOVERY	
SAMPLE NUMBER	SBK00706	BR508114E	BR507011E	BR507022E	BR507033E	BR507044E	BR507044E
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	%	%
ENV PROBLEM NO		4	4	4	4	4	4
ACENAPHTHENE	10 U	10 U	10 U	10 U	11 U	81	-12

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

AREA	QA					QA		QA
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK00706 WATER UG/L	U/D CUR LF WELL AT LNDF BR508114E WATER UG/L	CURR. LNDF WELL BR507011E WATER UG/L	CURR. LNDF WELL BR507022E WATER UG/L	CURR. LNDF WELL BR507033E WATER UG/L	MS % RECOVERY BR507044E WATER %	RPD BR507044E WATER %
		4	4	4	4	4	4	
TERPHENYL-D14								
1,2-DICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U			
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U	72	-9	
1,3-DICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U			
1,4-DICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U	91	-11	
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	11 U			
2-CHLOROPHENOL	10 U	10 U	10 U	10 U	11 U	47	0	
2-FLUOROBIPHENYL								
2-FLUOROPHENOL								
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	11 U			
2-METHYLPHENOL	10 U	10 U	10 U	10 U	11 U			
2-NITROANILINE	50 U	50 U	52 U	51 U	53 U			
2-NITROPHENOL	10 U	10 U	10 U	10 U	11 U			
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	11 U			
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	11 U			
2,4-DINITROPHENOL	50 U	50 U	52 U	51 U	53 U			
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	11 U	83	-5	
2,4,5-TRICHLOROPHENOL	50 U	50 U	52 U	51 U	53 U			
2,4,6-TRIBROMOPHENOL								
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U	11 U			
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	11 U			
3-NITROANILINE	50 U	50 U	52 U	51 U	53 U			
3,3'-DICHLOROBENZIDINE	20 U	20 U	21 U	20 U	21 U			
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	11 U			
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	11 U	83	-1	
4-CHLOROANILINE	10 U	10 U	10 U	10 U	11 U			
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	11 U			
4-METHYLPHENOL	10 U	10 U	10 U	10 U	11 U			
4-NITROANILINE	50 U	50 U	52 U	51 U	53 U			
4-NITROPHENOL	50 U	50 U	52 U	51 U	53 U	0 *	0	
4,6-DINITRO-2-METHYLPHENOL	50 U	50 U	52 U	51 U	53 U			
SURR 1(NBZ) %RECOVERY	62	95	94	68	78			
SURR 2(FBP) %RECOVERY	66	101	100	79	85			
SURR 3(TPH) %RECOVERY	111	135	77	83	107			
SURR 4(PHL) %RECOVERY	70	87	79	116 *	69			
SURR 5(2FP) %RECOVERY	66	73	72	90	47			
SURR 6(TBP) %RECOVERY	85	89	83	124 *	60			

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

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AREA	QA					QA	QA
LOCATION	METHOD	U/D CUR LF	CURR. LNDF	CURR. LNDF	CURR. LNDF	MS %	RPD
TYPE OF LOCATION	BLANK	WELL AT LNDF	WELL	WELL	WELL	RECOVERY	
SAMPLE NUMBER	SBK00706	BR508114E	BR507011E	BR507022E	BR507033E	BR507044E	BR507044E
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	%	%
ENV PROBLEM NO		4	4	4	4	4	4
M/E 68-1							
M/E 68-2							
M/E 69							
M/E 70-1							
M/E 70-2							
M/E 127							
M/E 197							
M/E 198							
M/E 199							
M/E 275							
M/E 365							
M/E 441							
M/E 442							
M/E 443-1							
M/E 443-2							
INTERNAL STD AREA(ANT)	41500	46100	42800	41500	44400		
INTERNAL STD AREA(CRY)	37300	40100	40400	39400	41200		
INTERNAL STD AREA(DCB)	19600	20200	17600	18200	20100		
INTERNAL STD AREA(NPT)	69300	74500	68100	66000	73200		
INTERNAL STD AREA(PHN)	69200	71200	72700	67600	71800		
INTERNAL STD AREA(PRY)	39000	39800	41700	40100	44600		
DILUTION FACTOR	1	1	0.998	1	0.998		
PERCENT MOISTURE							
ACTUAL(ALLOWED) EXTRACT TIME		7(7 D)	6(7 D)	6(7 D)	6(7 D)		
AREA	QA	QA	QA	QA	QA		QA
LOCATION	MATRIX	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	CURR. LNDF	MATRIX SPIKE
TYPE OF LOCATION	SPIKE	CALIBRATION	CALIBRATION	CAL %D	SHIFT	WELL	DUPLICATE
SAMPLE NUMBER	BR507044F	BR1006885	BR1006887	BR1006887	BR1006888	BR507044E	BR507044E
MATRIX	WATER	%	RRF	%	AREA	WATER	WATER
UNITS	UG/L					UG/L	UG/L
ENV PROBLEM NO	4					4	4
ACENAPHTHENE	80		1.022	-3.9		10 U	88

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR507044F WATER UG/L 4	TUNED CALIBRATION BR1006885 %	CONTINUING CALIBRATION BR1006887 RRF	CONTINUING CAL %D BR1006887 %	ISTD RET TIM SHIFT BR1006888 AREA	CURR. LNDF WELL BR507044E WATER UG/L 4	MATRIX SPIKE DUPLICATE BR507044E WATER UG/L 4
ACENAPHTHYLENE	10 U		1.67	-7.7		10 U	10 U
ANTHRACENE	10 U		0.953	-1.2		10 U	10 U
BENZO(A)ANTHRACENE	10 U		0.976	0.9		10 U	10 U
BENZO(A)PYRENE	10 U		0.888	1.7		10 U	10 U
BENZO(B)FLUORANTHENE	10 U		0.982	-2.6		10 U	10 U
BENZO(G,H,I)PERYLENE	10 U		0.622	6.5		10 U	10 U
BENZO(K)FLUORANTHENE	10 U		0.746	9.4		10 U	10 U
BENZOIC ACID	50 U		0.16	-33.3		22 J	49 U
BENZYL ALCOHOL	10 U		0.811	0.7		10 U	10 U
BIS(2-CHLOROETHOXY)METHANE	10 U		0.403	0		10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U		1.615	27.1		10 U	10 U
BIS(2-CHLOROISOPROPYL)ETHER	10 U		1.558	5		10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	17		1.263	11.3		10	8 J
BUTYL BENZYL PHTHALATE	10 B		0.859	13.8		6 BJ	11 B
CHRYSENE	10 U		0.799	1.5		10 U	10 U
DI-N-BUTYL PHTHALATE	10 U		1.381	2.4		10 U	10 U
DI-N-OCTYL PHTHALATE	10 U		2.142	15		10 U	10 U
DIBENZ(A,H)ANTHRACENE	10 U		0.58	11		10 U	10 U
DIBENZOFURAN	10 U		1.364	5.9		10 U	10 U
DIETHYL PHTHALATE	10 U		1.28	4.8		10 U	10 U
DIMETHYL PHTHALATE	10 U		1.225	0.6		10 U	10 U
FLUORANTHENE	10 U		0.884	3.8		10 U	10 U
FLUORENE	10 U		1.104	0.3		10 U	10 U
HEXACHLORO BENZENE	10 U		0.173	3.4		10 U	10 U
HEXACHLOROBUTADIENE	10 U		0.098	10.9		10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 U		0.132	0		10 U	10 U
HEXACHLOROETHANE	10 U		0.558	6.2		10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U		0.741	-13.1		10 U	10 U
ISOPHORONE	10 U		0.645	0.9		10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	51		0.875	5		10 U	59
N-NITROSODIPHENYLAMINE	10 U		0.379	9.5		10 U	10 U
NAPHTHALENE	10 U		0.927	-2.1		10 U	10 U
NITROBENZENE	10 U		0.345	-7.5		10 U	10 U
NITROBENZENE-D5			0.329	-3.8			
PENTACHLOROPHENOL	166		0.101	-17.4		50 U	155
PHENANTHRENE	10 U		0.96	0.4		10 U	10 U
PHENOL	127		1.76	-11.3		11	124
PHENOL-D5			1.328	-10.5			
PYRENE	109		1.295	3.4		10 U	106

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	MATRIX SPIKE	TUNED CALIBRATION	CONTINUING CALIBRATION	CONTINUING CAL %D	ISTD RET TIM SHIFT	CURR. LNDF WELL	MATRIX SPIKE DUPLICATE
TYPE OF LOCATION	BR507044F	BR1006885	BR1006887	BR1006887	BR1006888	BR507044E	BR507044E
SAMPLE NUMBER	WATER	%	RRF	%	AREA	WATER	WATER
MATRIX	UG/L					UG/L	UG/L
UNITS	4					4	4
ENV PROBLEM NO							
TERPHENYL-D14			0.696	6.6			
1,2-DICHLOROBENZENE	10 U		1.301	0.5		10 U	10 U
1,2,4-TRICHLOROBENZENE	71		0.244	2		10 U	77
1,3-DICHLOROBENZENE	10 U		1.4	0.4		10 U	10 U
1,4-DICHLOROBENZENE	90		1.374	0.1		10 U	100
2-CHLORONAPHTHALENE	10 U		1.03	-3.3		10 U	10 U
2-CHLOROPHENOL	92		1.426	-8.1		10 U	93
2-FLUOROBIPHENYL			0.983	0.4			
2-FLUOROPHENOL			1.191	0.9			
2-METHYLNAPHTHALENE	10 U		0.572	3.9		10 U	10 U
2-METHYLPHENOL	10 U		1.112	-5.4		10 U	10 U
2-NITROANILINE	50 U		0.433	-16.7		50 U	49 U
2-NITROPHENOL	10 U		0.219	-1.4		10 U	10 U
2,4-DICHLOROPHENOL	10 U		0.258	-6.6		10 U	10 U
2,4-DIMETHYLPHENOL	10 U		0.34	-6.3		10 U	10 U
2,4-DINITROPHENOL	50 U		0.087	-11.5		50 U	49 U
2,4-DINITROTOLUENE	82		0.345	-1.8		10 U	85
2,4,5-TRICHLOROPHENOL	50 U		0.283	-8		50 U	49 U
2,4,6-TRIBROMOPHENOL			0.14	-9.4			
2,4,6-TRICHLOROPHENOL	10 U		0.289	-6.6		10 U	10 U
2,6-DINITROTOLUENE	10 U		0.264	1.5		10 U	10 U
3-NITROANILINE	50 U		0.11	-19.6		50 U	49 U
3,3'-DICHLOROBENZIDINE	20 U		0.121	19.3		20 U	20 U
4-BROMOPHENYL-PHENYLETHER	10 U		0.148	2.6		10 U	10 U
4-CHLORO-3-METHYLPHENOL	165		0.312	-5.8		10 U	10 U
4-CHLOROANILINE	10 U		0.272	-37.4		10 U	163
4-CHLOROPHENYL-PHENYLETHER	10 U		0.453	0.9		10 U	10 U
4-METHYLPHENOL	10 U		1.177	-4.8		10 U	10 U
4-NITROANILINE	50 U		0.071	29.7		50 U	49 U
4-NITROPHENOL	0		0.132	-6.5		50 U	0
4,6-DINITRO-2-METHYLPHENOL	50 U		0.087	-13		50 U	49 U
SURR 1(NBZ) %RECOVERY	77					63	78
SURR 2(FBP) %RECOVERY	79					75	85
SURR 3(TPH) %RECOVERY	104					91	93
SURR 4(PHL) %RECOVERY	57					23	59
SURR 5(2FP) %RECOVERY	32					7 *	31
SURR 6(TBP) %RECOVERY	27					14	28

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	
LOCATION	MATRIX	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	CURR. LNDF	MATRIX SPIKE
TYPE OF LOCATION	SPIKE	CALIBRATION	CALIBRATION	CAL %D	SHIFT	WELL	DUPLICATE
SAMPLE NUMBER	BR507044F	BR1006885	BR1006887	BR1006887	BR1006888	BR507044E	BR507044E
MATRIX	WATER					WATER	WATER
UNITS	UG/L	%	RRF	%	AREA	UG/L	UG/L
ENV PROBLEM NO	4					4	4
M/E 68-1		0					
M/E 68-2		0					
M/E 69		40					
M/E 70-1		0					
M/E 70-2		0					
M/E 127		50					
M/E 197		0					
M/E 198		100					
M/E 199		8.9					
M/E 275		18					
M/E 365		4.8					
M/E 441		9.8					
M/E 442		55					
M/E 443-1		12					
M/E 443-2		23					
INTERNAL STD AREA(ANT)	44800				71900	40800	44000
INTERNAL STD AREA(CRY)	41900				76700	39300	41900
INTERNAL STD AREA(DCB)	20000				34800	20800	19200
INTERNAL STD AREA(NPT)	77300				140000	73200	78800
INTERNAL STD AREA(PHN)	69400				115000	66100	69100
INTERNAL STD AREA(PRY)	42600				72000	40600	40800
DILUTION FACTOR	0.98					1	1.01
PERCENT MOISTURE							
ACTUAL(ALLOWED) EXTRACT TIME	6(7 D)					6(7 D)	6(7 D)
AREA	QA				QA	QA	QA
LOCATION	MSD %	CURR. LNDF	CURR. LNDF	CURR. LNDF	TUNED	CONTINUING	CONTINUING
TYPE OF LOCATION	RECOVERY	WELL	WELL	WELL	CALIBRATION	CALIBRATION	CAL %D
SAMPLE NUMBER	BR507044E	BR507055E	BR507066E	BR507077E	BR1007885	BR1007887	BR1007887
MATRIX	WATER	WATER	WATER	WATER			
UNITS	%	UG/L	UG/L	UG/L	%	RRF	%
ENV PROBLEM NO	4	4	4	4			
ACENAPHTHENE	91	11 U	10 U	11 U		1.027	-4.4

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MSD % RECOVERY BR507044E WATER %	CURR. LNDF WELL BR507055E WATER UG/L	CURR. LNDF WELL BR507066E WATER UG/L	CURR. LNDF WELL BR507077E WATER UG/L	TUNED CALIBRATION BR1007885 %	CONTINUING CALIBRATION BR1007887 RRF	CONTINUING CAL %D BR1007887 %
	4	4	4	4			
ACENAPHTHYLENE		11 U	10 U	11 U		1.631	-5.2
ANTHRACENE		11 U	10 U	11 U		1.027	-9
BENZO(A)ANTHRACENE		11 U	10 U	11 U		1.024	-4
BENZO(A)PYRENE		11 U	10 U	11 U		0.825	8.6
BENZO(B)FLUORANTHENE		11 U	10 U	11 U		0.916	4.3
BENZO(G,H,I)PERYLENE		11 U	10 U	11 U		0.602	9.5
BENZO(K)FLUORANTHENE		11 U	10 U	11 U		0.758	7.9
BENZOIC ACID		53 U	24 J	56 U		0.151	-25.8
BENZYL ALCOHOL		11 U	10 U	11 U		1.436	-75.8
BIS(2-CHLOROETHOXY)METHANE		11 U	10 U	11 U		0.404	-0.2
BIS(2-CHLOROETHYL)ETHER		11 U	10 U	11 U		1.74	21.4
BIS(2-CHLOROISOPROPYL)ETHER		11 U	10 U	11 U		1.644	-0.2
BIS(2-ETHYLHEXYL)PHTHALATE		8 J	8 J	8 J		1.526	-7.2
BUTYLBENZYLPHTHALATE		8 BJ	7 BJ	11 U		1.055	-5.8
CHRYSENE		11 U	10 U	11 U		0.778	4.1
DI-N-BUTYLPHTHALATE		11 U	10 U	11 U		1.585	-12
DI-N-OCTYLPHTHALATE		11 U	10 U	11 U		2.438	3.2
DIBENZ(A,H)ANTHRACENE		11 U	10 U	11 U		0.692	-6.1
DIBENZOFURAN		11 U	10 U	11 U		2.507	-72.9
DIETHYLPHTHALATE		11 U	10 U	11 U		1.352	-0.5
DIMETHYLPHTHALATE		11 U	10 U	11 U		1.245	-1
FLUORANTHENE		11 U	10 U	11 U		0.935	-1.7
FLUORENE		11 U	10 U	11 U		1.118	-1
HEXACHLOROBENZENE		11 U	10 U	11 U		0.18	-0.6
HEXACHLOROBUTADIENE		11 U	10 U	11 U		0.11	0
HEXACHLOROCYCLOPENTADIENE		11 U	10 U	11 U		0.128	3
HEXACHLOROETHANE		11 U	10 U	11 U		0.552	7.2
INDENO(1,2,3-CD)PYRENE		11 U	10 U	11 U		0.74	-13
ISOPHORONE		11 U	10 U	11 U		0.668	-2.6
N-NITROSO-DI-N-PROPYLAMINE	61	11 U	10 U	11 U		0.855	7.2
N-NITROSODIPHENYLAMINE		11 U	10 U	11 U		0.435	-3.8
NAPHTHALENE		11 U	10 U	11 U		0.983	-8.3
NITROBENZENE		11 U	10 U	11 U		0.333	-3.7
NITROBENZENE-D5						0.312	1.6
PENTACHLOROPHENOL	79	53 U	49 U	56 U		0.085	1.2
PHENANTHRENE		11 U	10 U	11 U		1.014	-5.2
PHENOL	58	11 U	10 U	11 U		1.596	-0.9
PHENOL-D5						1.204	-0.2
PYRENE	109	11 U	10 U	11 U		1.452	-8.4

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MSD %	CURR. LNDF	CURR. LNDF	CURR. LNDF	TUNED	CONTINUING	CONTINUING
TYPE OF LOCATION	RECOVERY	WELL	WELL	WELL	CALIBRATION	CALIBRATION	CAL %D
SAMPLE NUMBER	BR507044E	BR507055E	BR507066E	BR507077E	BR1007885	BR1007887	BR1007887
MATRIX	WATER	WATER	WATER	WATER	%	RRF	%
UNITS	%	UG/L	UG/L	UG/L			
ENV PROBLEM NO	4	4	4	4			
TERPHENYL-D14						0.79	-6
1,2-DICHLOROBENZENE		11 U	10 U	11 U		1.31	-0.2
1,2,4-TRICHLOROBENZENE	79	11 U	10 U	11 U		0.256	-2.8
1,3-DICHLOROBENZENE		11 U	10 U	11 U		1.411	-0.4
1,4-DICHLOROBENZENE	102 *	11 U	10 U	11 U		1.361	1
2-CHLORONAPHTHALENE		11 U	10 U	11 U		1.008	-1.1
2-CHLOROPHENOL	47	11 U	10 U	11 U		1.338	-1.4
2-FLUOROBIPHENYL						0.99	-0.3
2-FLUOROPHENOL						1.138	5.3
2-METHYLNAPHTHALENE		11 U	10 U	11 U		1.046	-75.8
2-METHYLPHENOL		11 U	10 U	11 U		1.061	-0.6
2-NITROANILINE		53 U	49 U	56 U		0.681	-83.6
2-NITROPHENOL		11 U	10 U	11 U		0.238	-10.2
2,4-DICHLOROPHENOL		11 U	10 U	11 U		0.271	-12
2,4-DIMETHYLPHENOL		11 U	10 U	11 U		0.326	-1.9
2,4-DINITROPHENOL		53 U	49 U	56 U		0.064	18
2,4-DINITROTOLUENE	87	11 U	10 U	11 U		0.348	-2.7
2,4,5-TRICHLOROPHENOL		53 U	49 U	56 U		0.283	-8
2,4,6-TRIBROMOPHENOL						0.133	-3.9
2,4,6-TRICHLOROPHENOL		11 U	10 U	11 U		0.285	-5.2
2,6-DINITROTOLUENE		11 U	10 U	11 U		0.28	-4.5
3-NITROANILINE		53 U	49 U	56 U		0.214	-99.9
3,3'-DICHLOROBENZIDINE		21 U	20 U	22 U		0.12	20
4-BROMOPHENYL-PHENYLETHER		11 U	10 U	11 U		0.15	1.3
4-CHLORO-3-METHYLPHENOL	84	11 U	10 U	11 U		0.312	-5.8
4-CHLOROANILINE		11 U	10 U	11 U		0.478	-99.9
4-CHLOROPHENYL-PHENYLETHER		11 U	10 U	11 U		0.469	-2.6
4-METHYLPHENOL		11 U	10 U	11 U		1.111	1.1
4-NITROANILINE		53 U	49 U	56 U		0.095	5.9
4-NITROPHENOL	0 *	53 U	49 U	56 U		0.116	6.5
4,6-DINITRO-2-METHYLPHENOL		53 U	49 U	56 U		0.062	19.5

SURR 1(NBZ) %RECOVERY		66	67	63			
SURR 2(FBP) %RECOVERY		70	71	68			
SURR 3(TPH) %RECOVERY		90	69	95			
SURR 4(PHL) %RECOVERY		67	15	23			
SURR 5(2FP) %RECOVERY		59	34	0 *			
SURR 6(TBP) %RECOVERY		67	30	111			

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MSD %	CURR. LNDF	CURR. LNDF	CURR. LNDF	TUNED	CONTINUING	CONTINUING
TYPE OF LOCATION	RECOVERY	WELL	WELL	WELL	CALIBRATION	CALIBRATION	CAL %D
SAMPLE NUMBER	BR507044E	BR507055E	BR507066E	BR507077E	BR1007885	BR1007887	BR1007887
MATRIX	WATER	WATER	WATER	WATER			
UNITS	%	UG/L	UG/L	UG/L	%	RRF	%
ENV PROBLEM NO	4	4	4	4			
M/E 68-1					0		
M/E 68-2					0		
M/E 69					38		
M/E 70-1					0		
M/E 70-2					0		
M/E 127					52		
M/E 197					0		
M/E 198					100		
M/E 199					7.7		
M/E 275					18		
M/E 365					2.1		
M/E 441					5.1		
M/E 442					62		
M/E 443-1					12		
M/E 443-2					20		
INTERNAL STD AREA(ANT)		44200	43700	45000			
INTERNAL STD AREA(CRY)		41700	41000	43500			
INTERNAL STD AREA(DCB)		19800	19600	20500			
INTERNAL STD AREA(NPT)		74900	75200	75000			
INTERNAL STD AREA(PHN)		70600	69500	76100			
INTERNAL STD AREA(PRY)		43800	41800	45300			
DILUTION FACTOR	0.996	1	0.999				
PERCENT MOISTURE							
ACTUAL(ALLOWED) EXTRACT TIME	6(7 D)	6(7 D)	6(7 D)				
AREA	QA	QA					
LOCATION	ISTD RET TIM	METHOD	CURR. LNDF	B-975	B-975	B-975	B-975
TYPE OF LOCATION	SHIFT	BLANK	WELL	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR1007888	SBK00628	BR507088E	BR809129G	BR809118F	BR809130G	BR809049G
MATRIX	AREA	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO			4	10	10	10	10
ACENAPHTHENE		10 U	10 U	10 U	10 U	10 U	10 U

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA						
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	ISTD RET TIM SHIFT BR1007888 AREA	METHOD BLANK SBK00628 WATER UG/L	CURR. LNDF WELL BR507088E WATER UG/L 4	B-975 WELL BR809129G WATER UG/L 10	B-975 WELL BR809118F WATER UG/L 10	B-975 WELL BR809130G WATER UG/L 10	B-975 WELL BR809049G WATER UG/L 10
	ACENAPHTHYLENE		10 U	10 U	10 U	10 U	10 U	10 U
	ANTHRACENE		10 U	10 U	10 U	10 U	10 U	10 U
	BENZO(A)ANTHRACENE		10 U	10 U	10 U	10 U	10 U	10 U
	BENZO(A)PYRENE		10 U	10 U	10 U	10 U	10 U	10 U
	BENZO(B)FLUORANTHENE		10 U	10 U	10 U	10 U	10 U	10 U
	BENZO(G, H, I)PERYLENE		10 U	10 U	10 U	10 U	10 U	10 U
	BENZO(K)FLUORANTHENE		10 U	10 U	10 U	10 U	10 U	10 U
	BENZOIC ACID		50 U	52 U	51 U	52 U	50 U	50 U
	BENZYL ALCOHOL		10 U	10 U	10 U	10 U	10 U	10 U
D-173	BIS(2-CHLOROETHOXY)METHANE		10 U	10 U	10 U	10 U	10 U	10 U
	BIS(2-CHLOROETHYL)ETHER		10 U	10 U	10 U	10 U	10 U	10 U
	BIS(2-CHLOROISOPROPYL)ETHER		10 U	10 U	10 U	10 U	10 U	10 U
	BIS(2-ETHYLHEXYL)PHTHALATE		13	7 BJ	150 B	20 B	46 B	52 B
	BUTYLBENZYLPHthalate		9 J	6 BJ	11 B	12 B	8 BJ	15 B
	CHRYSENE		10 U	10 U	10 U	10 U	10 U	10 U
	DI-N-BUTYLPHthalate		10 U	10 U	10 U	10 U	10 U	10 U
	DI-N-OCTYLPHthalate		10 U	10 U	10 U	10 U	10 U	10 U
	DIBENZ(A, H)ANTHRACENE		10 U	10 U	10 U	10 U	10 U	10 U
	DIBENZOFURAN		10 U	10 U	10 U	10 U	10 U	10 U
	DIETHYLPHthalate		10 U	10 U	10 U	10 U	10 U	10 U
	DIMETHYLPHthalate		10 U	10 U	10 U	10 U	10 U	10 U
	FLUORANTHENE		10 U	10 U	10 U	10 U	10 U	10 U
	FLUORENE		10 U	10 U	10 U	10 U	10 U	10 U
	HEXACHLORO BENZENE		10 U	10 U	10 U	10 U	10 U	10 U
	HEXACHLORO BUTADIENE		10 U	10 U	10 U	10 U	10 U	10 U
	HEXACHLORO CYCLOPENTADIENE		10 U	10 U	10 U	10 U	10 U	10 U
	HEXACHLOROETHANE		10 U	10 U	10 U	10 U	10 U	10 U
	INDENO(1, 2, 3-CD)PYRENE		10 U	10 U	10 U	10 U	10 U	10 U
	ISOPHORONE		10 U	10 U	10 U	10 U	10 U	10 U
	N-NITROSO-DI-N-PROPYLAMINE		10 U	10 U	10 U	10 U	10 U	10 U
	N-NITROSODIPHENYLAMINE		10 U	10 U	10 U	10 U	10 U	10 U
	NAPHTHALENE		10 U	10 U	10 U	10 U	10 U	10 U
	NITROBENZENE		10 U	10 U	10 U	10 U	10 U	10 U
	NITROBENZENE-D5							
	PENTACHLOROPHENOL		50 U	52 U	51 U	52 U	50 U	50 U
	PHENANTHRENE		10 U	10 U	10 U	10 U	10 U	10 U
	PHENOL		10 U	10 U	10 U	10 U	10 U	10 U
	PHENOL-D5							
	PYRENE		10 U	10 U	10 U	10 U	10 U	10 U

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA		QA		QA		QA			
	LOCATION	TYPE OF LOCATION	ISTD RET TIM	METHOD	CURR. LNDF	B-975	B-975	B-975	B-975	
SAMPLE NUMBER	MATRIX	UNITS	SHIFT	BLANK	WELL	WELL	WELL	WELL	WELL	
ENV PROBLEM NO	AREA	UG/L	BR1007888	SBK00628	BR507088E	BR809129G	BR809118F	BR809130G	BR809049G	
					UG/L	UG/L	UG/L	UG/L	UG/L	
					4	10	10	10	10	
D-174	TERPHENYL-D14									
	1,2-DICHLOROBENZENE	10 U			10 U	10 U	10 U	10 U	10 U	
	1,2,4-TRICHLOROBENZENE	10 U			10 U	10 U	10 U	10 U	10 U	
	1,3-DICHLOROBENZENE	10 U			10 U	10 U	10 U	10 U	10 U	
	1,4-DICHLOROBENZENE	10 U			10 U	10 U	10 U	10 U	10 U	
	2-CHLORONAPHTHALENE	10 U			10 U	10 U	10 U	10 U	10 U	
	2-CHLOROPHENOL	10 U			10 U	10 U	10 U	10 U	10 U	
	2-FLUOROBIPHENYL									
	2-FLUOROPHENOL									
	2-METHYLNAPHTHALENE	10 U				10 U	10 U	10 U	10 U	
	2-METHYLPHENOL	10 U				10 U	10 U	10 U	10 U	
	2-NITROANILINE	50 U				52 U	51 U	52 U	50 U	
	2-NITROPHENOL	10 U				10 U	10 U	10 U	10 U	
	2,4-DICHLOROPHENOL	10 U				10 U	10 U	10 U	10 U	
	2,4-DIMETHYLPHENOL	10 U				10 U	10 U	10 U	10 U	
	2,4-DINITROPHENOL	50 U				52 U	51 U	52 U	50 U	
	2,4-DINITROTOLUENE	10 U				10 U	10 U	10 U	10 U	
	2,4,5-TRICHLOROPHENOL	50 U				52 U	51 U	52 U	50 U	
	2,4,6-TRIBROMOPHENOL									
	2,4,6-TRICHLOROPHENOL	10 U				10 U	10 U	10 U	10 U	
	2,6-DINITROTOLUENE	10 U				10 U	10 U	10 U	10 U	
	3-NITROANILINE	50 U				52 U	51 U	52 U	50 U	
	3,3'-DICHLOROBENZIDINE	20 U				21 U	20 U	21 U	20 U	
	4-BROMOPHENYL-PHENYLETHER	10 U				10 U	10 U	10 U	10 U	
	4-CHLORO-3-METHYLPHENOL	10 U				10 U	10 U	10 U	10 U	
	4-CHLOROANILINE	10 U				10 U	10 U	10 U	10 U	
	4-CHLOROPHENYL-PHENYLETHER	10 U				10 U	10 U	10 U	10 U	
	4-METHYLPHENOL	10 U				10 U	10 U	10 U	10 U	
	4-NITROANILINE	50 U				52 U	51 U	52 U	50 U	
	4-NITROPHENOL	50 U				52 U	51 U	52 U	50 U	
	4,6-DINITRO-2-METHYLPHENOL	50 U				52 U	51 U	52 U	50 U	
	SURR 1(NBZ) %RECOVERY		74			56	59	63	131 *	150 *
	SURR 2(FBP) %RECOVERY		77			61	69	72	141 *	163 *
	SURR 3(TPH) %RECOVERY		130			93	121	103	200 *	170 *
	SURR 4(PHL) %RECOVERY		73			29	68	75	146 *	150 *
SURR 5(2FP) %RECOVERY		68			22	64	69	139 *	134 *	
SURR 6(TBP) %RECOVERY		74			39	57	60	145 *	146 *	

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA						
LOCATION	ISTD RET TIM	METHOD	CURR. LNDF	B-975	B-975	B-975	B-975	B-975
TYPE OF LOCATION	SHIFT	BLANK	WELL	WELL	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR1007888	SBK00628	BR507088E	BR809129G	BR809118F	BR809130G	BR809049G	
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	
UNITS	AREA	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO			4	10	10	10	10	10

M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

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INTERNAL STD AREA(ANT)	44500	43400	50400	43500	46600	46300	43700
INTERNAL STD AREA(CRY)	45400	34000	39200	34100	39200	38300	37700
INTERNAL STD AREA(DCB)	19500	20300	21900	20000	20500	20700	19300
INTERNAL STD AREA(NPT)	78500	76500	85600	75500	79100	78400	74500
INTERNAL STD AREA(PHN)	70900	69000	77600	69100	71500	72400	71700
INTERNAL STD AREA(PRY)	44100	37500	43900	38000	43200	42100	41700

DILUTION FACTOR		1	0.999	1	0.999	1	1
PERCENT MOISTURE							
ACTUAL (ALLOWED) EXTRACT TIME			6(7 D)	11(7 D)	11(7 D)	4(7 D)	4(7 D)

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MATRIX SPIKE	MS % RECOVERY	RPD	MATRIX SPIKE DUPLICATE	MSD % RECOVERY	W UPTON RD WELL	TUNED CALIBRATION
TYPE OF LOCATION	BR809049F	BR809049F	BR809049F	BR809049E	BR809049E	BR316021E	BR1010885
SAMPLE NUMBER							
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	%
UNITS	UG/L	%	%	UG/L	%	UG/L	
ENV PROBLEM NO	10	10	10	10	10	3	
ACENAPHTHENE	104	97	-9	126	106	10 U	

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR809049F WATER UG/L 10	MS % RECOVERY BR809049F WATER % 10	RPD BR809049F WATER % 10	MATRIX SPIKE DUPLICATE BR809049E WATER UG/L 10	MSD % RECOVERY BR809049E WATER % 10	W UPTON RD WELL BR316021E WATER UG/L 3	TUNED CALIBRATION BR1010885 % 10
ACENAPHTHYLENE	11 U			12 U		10 U	
ANTHRACENE	11 U			12 U		10 U	
BENZO(A)ANTHRACENE	11 U			12 U		10 U	
BENZO(A)PYRENE	11 U			12 U		10 U	
BENZO(B)FLUORANTHENE	11 U			12 U		10 U	
BENZO(G, H, I)PERYLENE	11 U			12 U		10 U	
BENZO(K)FLUORANTHENE	11 U			12 U		10 U	
BENZOIC ACID	54 U			59 U		52 U	
BENZYL ALCOHOL	11 U			12 U		10 U	
BIS(2-CHLOROETHOXY)METHANE	11 U			12 U		10 U	
BIS(2-CHLOROETHYL)ETHER	11 U			12 U		10 U	
BIS(2-CHLOROISOPROPYL)ETHER	11 U			12 U		10 U	
BIS(2-ETHYLHEXYL)PHTHALATE	58 B			74 B		37 B	
BUTYL BENZYL PHTHALATE	11 B			19 B		10 U	
CHRYSENE	11 U			12 U		10 U	
DI-N-BUTYL PHTHALATE	11 U			12 U		10 U	
DI-N-OCTYL PHTHALATE	11 U			9 J		10 U	
DIBENZ(A, H)ANTHRACENE	11 U			12 U		10 U	
DIBENZOFURAN	11 U			12 U		10 U	
DIETHYL PHTHALATE	11 U			12 U		10 U	
DIMETHYL PHTHALATE	11 U			12 U		10 U	
FLUORANTHENE	11 U			12 U		10 U	
FLUORENE	11 U			12 U		10 U	
HEXACHLOROBENZENE	11 U			12 U		10 U	
HEXACHLOROBUTADIENE	11 U			12 U		10 U	
HEXACHLOROCYCLOPENTADIENE	11 U			12 U		10 U	
HEXACHLOROETHANE	11 U			12 U		10 U	
INDENO(1, 2, 3-CD)PYRENE	11 U			12 U		10 U	
ISOPHORONE	11 U			12 U		10 U	
N-NITROSO-DI-N-PROPYLAMINE	67	63	0	75	63	10 U	
N-NITROSODIPHENYLAMINE	11 U			12 U		10 U	
NAPHTHALENE	11 U			12 U		10 U	
NITROBENZENE	11 U			12 U		10 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	97	46	22	88	37	52 U	
PHENANTHRENE	11 U			12 U		10 U	
PHENOL	162	76	11	162	68	10 U	
PHENOL-D5							
PYRENE	138	129 *	-8	166	140 *	10 U	

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR809049F WATER UG/L 10	MS % RECOVERY BR809049F WATER % 10	RPD BR809049F WATER % 10	MATRIX SPIKE DUPLICATE BR809049E WATER UG/L 10	MSD % RECOVERY BR809049E WATER % 10	W UPTON RD WELL BR316021E WATER UG/L 3	TUNED CALIBRATION BR1010885 % %
TERPHENYL-D14							
1,2-DICHLOROBENZENE	11 U			12 U		10 U	
1,2,4-TRICHLOROBENZENE	101	94	2	109	92	10 U	
1,3-DICHLOROBENZENE	11 U			12 U		10 U	
1,4-DICHLOROBENZENE	116	108 *	5	123	103 *	10 U	
2-CHLORONAPHTHALENE	11 U			12 U		10 U	
2-CHLOROPHENOL	155	72	15	146	62	10 U	
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	11 U			12 U		10 U	
2-METHYLPHENOL	11 U			12 U		10 U	
2-NITROANILINE	54 U			59 U		52 U	
2-NITROPHENOL	11 U			12 U		10 U	
2,4-DICHLOROPHENOL	11 U			12 U		10 U	
2,4-DIMETHYLPHENOL	11 U			12 U		10 U	
2,4-DINITROPHENOL	54 U			59 U		52 U	
2,4-DINITROTOLUENE	96	90	-6	114	96	10 U	
2,4,5-TRICHLOROPHENOL	54 U			59 U		52 U	
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	11 U			12 U		10 U	
2,6-DINITROTOLUENE	11 U			12 U		10 U	
3-NITROANILINE	54 U			59 U		52 U	
3,3'-DICHLOROBENZIDINE	21 U			24 U		21 U	
4-BROMOPHENYL-PHENYLETHER	11 U			12 U		10 U	
4-CHLORO-3-METHYLPHENOL	198	93	8	203	86	10 U	
4-CHLOROANILINE	11 U			12 U		10 U	
4-CHLOROPHENYL-PHENYLETHER	11 U			12 U		10 U	
4-METHYLPHENOL	11 U			12 U		10 U	
4-NITROANILINE	54 U			59 U		52 U	
4-NITROPHENOL	0	0 *	0	0	0 *	52 U	
4,6-DINITRO-2-METHYLPHENOL	54 U			59 U		52 U	
SURR 1(NBZ) %RECOVERY	86			83		81	
SURR 2(FBP) %RECOVERY	90			95		86	
SURR 3(TPH) %RECOVERY	88			118		106	
SURR 4(PHL) %RECOVERY	83			69		74	
SURR 5(2FP) %RECOVERY	74			61		65	
SURR 6(TBP) %RECOVERY	81			70		65	

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %	W UPTON RD	TUNED
TYPE OF LOCATION	SPIKE	RECOVERY		DUPLICATE	RECOVERY	WELL	CALIBRATION
SAMPLE NUMBER	BR809049F	BR809049F	BR809049F	BR809049E	BR809049E	BR316021E	BR1010885
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	
UNITS	UG/L	%	%	UG/L	%	UG/L	%
ENV PROBLEM NO	10	10	10	10	10	3	
M/E 68-1							0
M/E 68-2							0
M/E 69							38
M/E 70-1							0
M/E 70-2							0
M/E 127							52
M/E 197							0
M/E 198							100
M/E 199							6.5
M/E 275							19
M/E 365							4.2
M/E 441							7
M/E 442							63
M/E 443-1							14
M/E 443-2							23
INTERNAL STD AREA(ANT)	48800			44900		48500	
INTERNAL STD AREA(CRY)	40200			37300		40000	
INTERNAL STD AREA(DCB)	21300			21200		22400	
INTERNAL STD AREA(NPT)	79700			79400		82200	
INTERNAL STD AREA(PHN)	75800			70700		75500	
INTERNAL STD AREA(PRY)	43400			37600		44000	
DILUTION FACTOR	1			0.997		0.998	
PERCENT MOISTURE							
ACTUAL(ALLOWED) EXTRACT TIME	4(7 D)			4(7 D)		4(7 D)	
AREA	QA	QA	QA				
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	W UPTON RD	B-975	B-975	W UPTON RD
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR1010887	BR1010887	BR1010888	BR316032E	BR809050E	BR809107F	BR316010F
MATRIX				WATER	WATER	WATER	WATER
UNITS	RRF	%	AREA	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO				3	10	10	3
ACENAPHTHENE	1.082	-10		10 U	10 U	10 U	10 U

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR1010887 RRF	CONTINUING CAL %D BR1010887 %	ISTD RET TIM SHIFT BR1010888 AREA	W UPTON RD WELL BR316032E WATER UG/L 3	B-975 WELL BR809050E WATER UG/L 10	B-975 WELL BR809107F WATER UG/L 10	W UPTON RD WELL BR316010F WATER UG/L 3
D-179							
ACENAPHTHYLENE	1.674	-8		10 U	10 U	10 U	10 U
ANTHRACENE	0.947	-0.5		10 U	10 U	10 U	10 U
BENZO(A)ANTHRACENE	1.029	-4.5		10 U	10 U	10 U	10 U
BENZO(A)PYRENE	0.821	9.1		10 U	10 U	10 U	10 U
BENZO(B)FLUORANTHENE	0.882	7.8		10 U	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	0.517	22.3		10 U	10 U	10 U	10 U
BENZO(K)FLUORANTHENE	0.771	6.3		10 U	10 U	10 U	10 U
BENZOIC ACID	0.137	-14.2		50 U	52 U	52 U	50 U
BENZYL ALCOHOL	0.804	1.6		10 U	10 U	10 U	10 U
BIS(2-CHLOROETHOXY)METHANE	0.394	2.2		10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	2.412	-8.9		10 U	10 U	10 U	10 U
BIS(2-CHLOROISOPROPYL)ETHER	1.715	-4.6		10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	1.741	-22.3		23 B	9 BJ	19 B	66 B
BUTYL BENZYL PHTHALATE	1.11	-11.3		7 BJ	6 BJ	10	11 B
CHRYSENE	0.805	0.7		10 U	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	1.481	-4.7		10 U	10 U	10 U	3 J
DI-N-OCTYL PHTHALATE	2.42	3.9		10 U	10 U	10 U	10 U
DIBENZ(A,H)ANTHRACENE	0.569	12.7		10 U	10 U	10 U	10 U
DIBENZOFURAN	1.489	-2.7		10 U	10 U	10 U	10 U
DIETHYL PHTHALATE	1.328	1.3		10 U	10 U	10 U	10 U
DIMETHYL PHTHALATE	1.262	-2.4		10 U	10 U	10 U	10 U
FLUORANTHENE	0.873	5		10 U	10 U	10 U	10 U
FLUORENE	1.102	0.5		10 U	10 U	10 U	10 U
HEXACHLOROBENZENE	0.192	-7.3		10 U	10 U	10 U	10 U
HEXACHLOROBUTADIENE	0.112	-1.8		10 U	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	0.15	-13.6		10 U	10 U	10 U	10 U
HEXACHLOROETHANE	0.59	0.8		10 U	10 U	10 U	10 U
INDENO(1,2,3-CD)PYRENE	0.75	-14.5		10 U	10 U	10 U	10 U
ISOPHORONE	0.661	-1.5		10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	0.858	6.8		10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	0.415	1		10 U	10 U	10 U	10 U
NAPHTHALENE	0.936	-3.1		10 U	10 U	10 U	10 U
NITROBENZENE	0.325	-1.2		10 U	10 U	10 U	10 U
NITROBENZENE-D5	0.299	5.7					
PENTACHLOROPHENOL	0.097	-12.8		50 U	52 U	52 U	50 U
PHENANTHRENE	0.984	-2.1		10 U	10 U	10 U	10 U
PHENOL	1.679	-6.2		10 U	10 U	10 U	10 U
PHENOL-D5	1.248	-3.8					
PYRENE	1.592	-18.8		10 U	10 U	10 U	10 U

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
	CONTINUING CALIBRATION BR1010887	CONTINUING CAL %D BR1010887	ISTD RET TIM SHIFT BR1010888	W UPTON RD WELL BR316032E WATER UG/L	B-975 WELL BR809050E WATER UG/L	B-975 WELL BR809107F WATER UG/L	W UPTON RD WELL BR316010F WATER UG/L
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	RRF	%	AREA	3	10	10	3
TERPHENYL-D14	0.838	-12.5					
1,2-DICHLOROBENZENE	1.381	-5.6		10 U	10 U	10 U	10 U
1,2,4-TRICHLOROBENZENE	0.266	-6.8		10 U	10 U	10 U	10 U
1,3-DICHLOROBENZENE	1.442	-2.6		10 U	10 U	10 U	10 U
1,4-DICHLOROBENZENE	1.439	-4.7		10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	1.05	-5.3		10 U	10 U	10 U	10 U
2-CHLOROPHENOL	1.37	-3.9		10 U	10 U	10 U	10 U
2-FLUOROBIPHENYL	1.015	-2.8					
2-FLUOROPHENOL	1.363	-13.4					
2-METHYLNAPHTHALENE	0.609	-2.4		10 U	10 U	10 U	10 U
2-METHYLPHENOL	1.128	-6.9		10 U	10 U	10 U	10 U
2-NITROANILINE	0.371	0		50 U	52 U	52 U	50 U
2-NITROPHENOL	0.238	-10.2		10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	0.263	-8.7		10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	0.307	4.1		10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	0.071	9		50 U	52 U	52 U	50 U
2,4-DINITROTOLUENE	0.35	-3.2		10 U	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	0.29	-10.7		50 U	52 U	52 U	50 U
2,4,6-TRIBROMOPHENOL	0.146	-14.1					
2,4,6-TRICHLOROPHENOL	0.286	-5.5		10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	0.277	-3.4		10 U	10 U	10 U	10 U
3-NITROANILINE	0.061	33.7		50 U	52 U	52 U	50 U
3,3'-DICHLOROBENZIDINE	0.132	12		20 U	21 U	21 U	20 U
4-BROMOPHENYL-PHENYLETHER	0.16	-5.3		10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	0.297	-0.7		10 U	10 U	10 U	10 U
4-CHLOROANILINE	0.103	48		10 U	10 U	10 U	10 U
4-CHLOROPHENYL-PHENYLETHER	0.473	-3.5		10 U	10 U	10 U	10 U
4-METHYLPHENOL	1.188	-5.8		10 U	10 U	10 U	10 U
4-NITROANILINE	0.039	61.4		50 U	52 U	52 U	50 U
4-NITROPHENOL	0.093	25		50 U	52 U	52 U	50 U
4,6-DINITRO-2-METHYLPHENOL	0.074	3.9		50 U	52 U	52 U	50 U
SURR 1(NBZ) %RECOVERY				75	82	62	69
SURR 2(FBP) %RECOVERY				90	84	75	74
SURR 3(TPH) %RECOVERY				113	117	100	86
SURR 4(PHL) %RECOVERY				61	62	73	66
SURR 5(2FP) %RECOVERY				55	54	69	59
SURR 6(TBP) %RECOVERY				30	58	78	71

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	W UPTON RD	B-975	B-975	W UPTON RD
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR1010887	BR1010887	BR1010888	BR316032E	BR809050E	BR809107F	BR316010F
MATRIX				WATER	WATER	WATER	WATER
UNITS	RRF	%	AREA	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO				3	10	10	3

M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

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INTERNAL STD AREA(ANT)	49600	49600	53100	54700	53600
INTERNAL STD AREA(CRY)	43100	38500	38800	44700	42400
INTERNAL STD AREA(DCB)	22400	23400	23800	24100	23600
INTERNAL STD AREA(NPT)	91400	84800	87800	88400	93200
INTERNAL STD AREA(PHN)	77600	78800	80100	85400	80500
INTERNAL STD AREA(PRY)	42300	39100	40700	46100	40500

DILUTION FACTOR		1	0.998	0.998	1
PERCENT MOISTURE					
ACTUAL(ALLOWED) EXTRACT TIME		4(7 D)	5(7 D)	4(7 D)	4(7 D)

AREA

LOCATION	W UPTON RD	B-975	B-975	B-975
TYPE OF LOCATION	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR316043F	BR809061F	BR809072F	BR809083F
MATRIX	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	3	10	10	10
ACENAPHTHENE	10 U	10 U	10 U	11 U

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	M UPTON RD WELL BR316043F WATER UG/L 3	B-975 WELL BR809061F WATER UG/L 10	B-975 WELL BR809072F WATER UG/L 10	B-975 WELL BR809083F WATER UG/L 10
ACENAPHTHYLENE	10 U	10 U	10 U	11 U
ANTHRACENE	10 U	10 U	10 U	11 U
BENZO(A)ANTHRACENE	10 U	10 U	10 U	11 U
BENZO(A)PYRENE	10 U	10 U	10 U	11 U
BENZO(B)FLUORANTHENE	10 U	10 U	10 U	11 U
BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	11 U
BENZO(K)FLUORANTHENE	10 U	10 U	10 U	11 U
BENZOIC ACID	50 U	51 U	51 U	53 U
BENZYL ALCOHOL	10 U	10 U	10 U	11 U
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	11 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	11 U
BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U	10 U	11 U
BIS(2-ETHYLHEXYL)PHTHALATE	14 B	9 BJ	29 B	20 B
BUTYLBENZYLPHthalate	10 U	10 U	10 U	11 U
CHRYSENE	10 U	10 U	10 U	11 U
DI-N-BUTYLPHthalate	10 U	10 U	10 U	11 U
DI-N-OCTYLPHthalate	10 U	10 U	10 U	11 U
DIBENZ(A,H)ANTHRACENE	10 U	10 U	10 U	11 U
DIBENZOFURAN	10 U	10 U	10 U	11 U
DIETHYLPHthalate	10 U	10 U	10 U	11 U
DIMETHYLPHthalate	10 U	10 U	10 U	11 U
FLUORANTHENE	10 U	10 U	10 U	11 U
FLUORENE	10 U	10 U	10 U	11 U
HEXACHLOROBENZENE	10 U	10 U	10 U	11 U
HEXACHLOROBUTADIENE	10 U	10 U	10 U	11 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 U	11 U
HEXACHLOROETHANE	10 U	10 U	10 U	11 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	11 U
ISOPHORONE	10 U	10 U	10 U	11 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	11 U
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	11 U
NAPHTHALENE	10 U	10 U	10 U	11 U
NITROBENZENE	10 U	10 U	10 U	11 U
NITROBENZENE-D5				
PENTACHLOROPHENOL	50 U	51 U	51 U	53 U
PHENANTHRENE	10 U	10 U	10 U	11 U
PHENOL	10 U	10 U	10 U	11 U
PHENOL-D5				
PYRENE	10 U	10 U	10 U	11 U

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TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA

D-183

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	W UPTON RD WELL BR316043F WATER UG/L 3	B-975 WELL BR809061F WATER UG/L 10	B-975 WELL BR809072F WATER UG/L 10	B-975 WELL BR809083F WATER UG/L 10
TERPHENYL-D14				
1,2-DICHLORO BENZENE	10 U	10 U	10 U	11 U
1,2,4-TRICHLORO BENZENE	10 U	10 U	10 U	11 U
1,3-DICHLORO BENZENE	10 U	10 U	10 U	11 U
1,4-DICHLORO BENZENE	10 U	10 U	10 U	11 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U	11 U
2-CHLOROPHENOL	10 U	10 U	10 U	11 U
2-FLUOROBIPHENYL				
2-FLUOROPHENOL				
2-METHYLNAPHTHALENE	10 U	10 U	10 U	11 U
2-METHYLPHENOL	10 U	10 U	10 U	11 U
2-NITROANILINE	50 U	51 U	51 U	53 U
2-NITROPHENOL	10 U	10 U	10 U	11 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U	11 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	11 U
2,4-DINITROPHENOL	50 U	51 U	51 U	53 U
2,4-DINITROTOLUENE	10 U	10 U	10 U	11 U
2,4,5-TRICHLOROPHENOL	50 U	51 U	51 U	53 U
2,4,6-TRIBROMOPHENOL				
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	11 U
2,6-DINITROTOLUENE	10 U	10 U	10 U	11 U
3-NITROANILINE	50 U	51 U	51 U	53 U
3,3'-DICHLORO BENZIDINE	20 U	20 U	20 U	21 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	11 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	11 U
4-CHLOROANILINE	10 U	10 U	10 U	11 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	11 U
4-METHYLPHENOL	10 U	10 U	10 U	11 U
4-NITROANILINE	50 U	51 U	51 U	53 U
4-NITROPHENOL	50 U	51 U	51 U	53 U
4,6-DINITRO-2-METHYLPHENOL	50 U	51 U	51 U	53 U

SURR 1(NBZ) %RECOVERY	83	92	76	75
SURR 2(FBP) %RECOVERY	92	94	84	86
SURR 3(TPH) %RECOVERY	119	109	94	98
SURR 4(PHL) %RECOVERY	64	70	71	71
SURR 5(2FP) %RECOVERY	55	61	63	63
SURR 6(TBP) %RECOVERY	48	71	75	80

TABLE D.6.2 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	W UPTON RD WELL BR316043F WATER UG/L 3	B-975 WELL BR809061F WATER UG/L 10	B-975 WELL BR809072F WATER UG/L 10	B-975 WELL BR809083F WATER UG/L 10
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M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

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INTERNAL STD AREA(ANT)	52800	54600	49600	48900
INTERNAL STD AREA(CRY)	39600	45700	41600	41000
INTERNAL STD AREA(DCB)	24300	25100	22000	22900
INTERNAL STD AREA(NPT)	90900	92100	83400	84500
INTERNAL STD AREA(PHN)	80600	85900	75300	74800
INTERNAL STD AREA(PRY)	41700	47500	44000	45200

DILUTION FACTOR	1	1	1	1
PERCENT MOISTURE				
ACTUAL(ALLOWED) EXTRACT TIME	4(7 D)	5(7 D)	5(7 D)	5(7 D)

TABLE D.6.3 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR300012F

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL X#D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0427885	BR0427887	BR0427887	BR0427888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
D-185							
ACENAPHTHENE	1.232	5.9			1.216	1.3	
ACENAPHTHYLENE	1.886	9.6			1.772	6.1	
ANTHRACENE	1.012	8.4			0.91	10.1	
BENZO(A)ANTHRACENE	1.032	8.2			0.956	7.3	
BENZO(A)PYRENE	1.088	8.6			1.097	0.8	
BENZO(B)FLUORANTHENE	1.375	11.3			1.315	4.4	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.983	29.1	
BENZO(K)FLUORANTHENE	1.148	3.6			1.218	6.1	
BENZOIC ACID	0.137	13.6			0.105	23.5	
BENZYL ALCOHOL	0.84	10.8			0.65	22.6	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.805	2.9	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.697	2.9	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.595	36.6	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.33	0	
BUTYLBENZYLPHTHALATE	0.956	11.4			1.005	5.1	
CHRYSENE	1.022	5.5			0.953	6.8	
DI-N-BUTYLPHTHALATE	2.033	13.6			1.637	19.5	
DI-N-OCTYLPHTHALATE	2.778	18.9			2.488	10.4	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.861	16	
DIBENZOFURAN	1.455	6.1			1.43	1.8	
DIETHYLPHTHALATE	1.557	22.1			1.652	6.1	
DIMETHYLPHTHALATE	1.491	9.3			1.57	5.3	
FLUORANTHENE	0.982	17.9			0.783	20.3	
FLUORENE	1.096	8.1			1.056	3.6	
HEXACHLORO BENZENE	0.392	7.8			0.398	1.7	
HEXACHLOROBUTADIENE	0.188	3.2			0.168	10.4	
HEXACHLOROCYCLOPENTADIENE	0.433	13.3			0.251	42	
HEXACHLOROETHANE	0.882	4.2			0.821	7	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.943	17.5	
ISOPHORONE	0.92	11.2			0.965	4.9	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.706	19.1	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.607	1.4	
NAPHTHALENE	1.075	6.4			1.066	0.9	
NITROBENZENE	0.54	4.1			0.55	1.8	
NITROBENZENE-D5	0.519	5.1			0.483	6.9	
PENTACHLOROPHENOL	0.132	19.5			0.139	5.4	
PHENANTHRENE	1.064	9.8			0.994	6.6	
PHENOL	2.514	16.4			2.136	15	
PHENOL-D5	1.957	16.3			1.752	10.5	

TABLE D.6.3 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR300012F

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0427885	BR0427887	BR0427887	BR0427888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
PYRENE	1.365	1.5			1.518	11.2	
TERPHENYL-D14	1.059	5.9			1.211	14.3	
1,2-DICHLOROBENZENE	1.399	9.2			1.371	2	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.284	1.7	
1,3-DICHLOROBENZENE	1.44	8.8			1.425	1	
1,4-DICHLOROBENZENE	1.501	9.4			1.474	1.8	
2-CHLORONAPHTHALENE	1.22	13.6			1.248	2.3	
2-CHLOROPHENOL	1.517	13.7			1.385	8.7	
2-FLUOROBIPHENYL	1.311	9.3			1.374	4.8	
2-FLUOROPHENOL	1.323	11.1			1.29	2.5	
2-METHYLNAPHTHALENE	0.439	15.3			0.493	12.4	
2-METHYLPHENOL	1.148	13.9			1.164	1.3	
2-NITROANILINE	0.432	16.2			0.505	16.8	
2-NITROPHENOL	0.184	8.3			0.19	3.4	
2,4-DICHLOROPHENOL	0.247	8.9			0.235	4.8	
2,4-DIMETHYLPHENOL	0.242	18.5			0.258	6.3	
2,4-DINITROPHENOL	0.102	20.1			0.065	36	
2,4-DINITROTOLUENE	0.312	14.8			0.332	6.2	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.283	17.2	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.231	1.2	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.304	14.6	
2,6-DINITROTOLUENE	0.321	11.5			0.331	3	
3-NITROANILINE	0.386	13.1			0.316	17.9	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.08	56.6	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.317	5.3	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.288	3.2	
4-CHLOROANILINE	0.395	12.7			0.376	4.7	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.6	1.4	
4-METHYLPHENOL	1.314	17.4			1.159	11.8	
4-NITROANILINE	0.231	18.7			0.164	29	
4-NITROPHENOL	0.197	12.4			0.163	17.2	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.084	20.3	
SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

TABLE D.6.3 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR300012F

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0427885	CONTINUING CALIBRATION BR0427887	CONTINUING CAL %D BR0427887	ISTD RET TIM SHIFT BR0427888 AREA
	RRF	%	%	%	RRF	%	

M/E 51			35	41			
M/E 68-1			0	0			
M/E 68-2			0	0			
M/E 69			69	77			
M/E 70-1			0.2	0.2			
M/E 70-2			0.3	0.2			
M/E 127			57	55			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	6.4			
M/E 275			27	26			
M/E 365			2.1	2.6			
M/E 441			10	15			
M/E 442			62	85			
M/E 443-1			11	17			
M/E 443-2			17	19			

INTERNAL STD AREA(ANT)	86600
INTERNAL STD AREA(CRY)	50400
INTERNAL STD AREA(DCB)	68900
INTERNAL STD AREA(NPT)	229000
INTERNAL STD AREA(PHN)	114000
INTERNAL STD AREA(PRY)	33000

DILUTION FACTOR
ACTUAL(ALLOWED) EXTRACT TIME

AREA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08032	PRIMARY PD HWMA POND BR300012F	PRIMARY PD HWMA POND BR300023F	PRIMARY PD HWMA POND BR300034F
	WATER UG/L	WATER UG/L	WATER UG/L	WATER UG/L

ACENAPHTHENE	10 U	10 U	10 U	10 U
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TABLE D.6.3 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR300012F

DRAFT DO NOT CITE

AREA	QA				
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08032 WATER UG/L	PRIMARY PD HWMA POND BR300012F WATER UG/L	PRIMARY PD HWMA POND BR300023F WATER UG/L	PRIMARY PD HWMA POND BR300034F WATER UG/L
		1	1	1	
D-188	ACENAPHTHYLENE	10 U	10 U	10 U	10 U
	ANTHRACENE	10 U	10 U	10 U	10 U
	BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U
	BENZO(A)PYRENE	10 U	10 U	10 U	10 U
	BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U
	BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 U
	BENZO(K)FLUORANTHENE	10 U	10 U	10 U	10 U
	BENZOIC ACID	50 U	50 U	50 U	50 U
	BENZYL ALCOHOL	10 U	10 U	10 U	10 U
	BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U
	BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U
	BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U	10 U	10 U
	BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U	10 U	10 U
	BUTYLBENZYLPHthalate	10 U	10 U	10 U	10 U
	CHRYSENE	10 U	10 U	10 U	10 U
	DI-N-BUTYLPHthalate	1 J	10 U	10 U	10 U
	DI-N-OCTYLPHthalate	10 U	0.8 J	2 J	0.5 J
	DIBENZ(A,H)ANTHRACENE	10 U	10 U	10 U	10 U
	DIBENZOFURAN	10 U	10 U	10 U	10 U
	DIETHYLPHthalate	10 U	10 U	0.8 J	0.7 J
	DIMETHYLPHthalate	10 U	10 U	10 U	10 U
	FLUORANTHENE	10 U	10 U	10 U	10 U
	FLUORENE	10 U	10 U	10 U	10 U
	HEXACHLOROBENZENE	10 U	10 U	10 U	10 U
	HEXACHLOROBUTADIENE	10 U	10 U	10 U	10 U
	HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 U	10 U
	HEXACHLOROETHANE	10 U	10 U	10 U	10 U
	INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 U
	ISOPHORONE	10 U	10 U	10 U	10 U
	N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 U
	N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	10 U
	NAPHTHALENE	10 U	10 U	10 U	10 U
	NITROBENZENE	10 U	10 U	10 U	10 U
	NITROBENZENE-D5				
	PENTACHLOROPHENOL	50 U	50 U	50 U	50 U
	PHENANTHRENE	10 U	10 U	10 U	10 U
	PHENOL	10 U	10 U	10 U	10 U
	PHENOL-D5				
	PYRENE	10 U	10 U	10 U	10 U

TABLE D.6.3 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR300012F

DRAFT DO NOT CITE

AREA	QA			
	METHOD BLANK SBK08032 WATER UG/L	PRIMARY PD HWMA POND BR300012F WATER UG/L	PRIMARY PD HWMA POND BR300023F WATER UG/L	PRIMARY PD HWMA POND BR300034F WATER UG/L
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO				
TERPHENYL-D14				
1,2-DICHLOROBENZENE	10 U	10 U	10 U	10 U
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U
1,3-DICHLOROBENZENE	10 U	10 U	10 U	10 U
1,4-DICHLOROBENZENE	10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U	10 U
2-FLUOROBIPHENYL				
2-FLUOROPHENOL				
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U
2-METHYLPHENOL	10 U	10 U	10 U	10 U
2-NITROANILINE	50 U	50 U	50 U	50 U
2-NITROPHENOL	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	50 U	50 U	50 U	50 U
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	50 U	50 U	50 U	50 U
2,4,6-TRIBROMOPHENOL				
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U
3-NITROANILINE	50 U	50 U	50 U	50 U
3,3'-DICHLOROBENZIDINE	20 U	20 U	20 U	20 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U
4-CHLOROANILINE	10 U	10 U	10 U	10 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U
4-METHYLPHENOL	10 U	10 U	10 U	10 U
4-NITROANILINE	50 U	50 U	50 U	50 U
4-NITROPHENOL	50 U	50 U	50 U	50 U
4,6-DINITRO-2-METHYLPHENOL	50 U	50 U	50 U	50 U
SURR 1(NBZ) %RECOVERY	101	76	88	78
SURR 2(FBP) %RECOVERY	72	60	64	58
SURR 3(TPH) %RECOVERY	103	85	86	75
SURR 4(PHL) %RECOVERY	39	20	31	21
SURR 5(2FP) %RECOVERY	71	34	57	37
SURR 6(TBP) %RECOVERY	121	53	89	67

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AREA

QA

LOCATION
TYPE OF LOCATION
SAMPLE NUMBER
MATRIX
UNITS
ENV PROBLEM NO

METHOD	PRIMARY PD	PRIMARY PD	PRIMARY PD
BLANK	HWMA POND	HWMA POND	HWMA POND
SBK08032	BR300012F	BR300023F	BR300034F
WATER	WATER	WATER	WATER
UG/L	UG/L	UG/L	UG/L

1 1 1

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M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

INTERNAL STD AREA(ANT)	81900	76800	80100	79900
INTERNAL STD AREA(CRY)	73800	51700	67000	77900
INTERNAL STD AREA(DCB)	55700	54500	53800	53800
INTERNAL STD AREA(NPT)	179000	170000	168000	175000
INTERNAL STD AREA(PHN)	117000	102000	116000	120000
INTERNAL STD AREA(PRY)	55800	35100	46400	59000

DILUTION FACTOR	2	2	2	2
ACTUAL(ALLOWED) EXTRACT TIME		6(7 D)	6(7 D)	6(7 D)

TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0518885	BR0518887	BR0518887	BR0518888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACENAPHTHENE	1.232	5.9			1.198	2.8	
ACENAPHTHYLENE	1.886	9.6			1.686	10.6	
ANTHRACENE	1.012	8.4			0.934	7.8	
BENZO(A)ANTHRACENE	1.032	8.2			0.932	9.6	
BENZO(A)PYRENE	1.088	8.6			1.065	2.1	
BENZO(B)FLUORANTHENE	1.375	11.3			1.275	7.3	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.935	22.7	
BENZO(K)FLUORANTHENE	1.148	3.6			1.345	17.2	
BENZOIC ACID	0.137	13.6			0.124	9.1	
BENZYL ALCOHOL	0.84	10.8			0.719	14.4	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.753	3.7	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.744	4.7	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.349	15.6	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.155	13.1	
BUTYLBENZYLPHTHALATE	0.956	11.4			0.966	1	
CHRYSENE	1.022	5.5			0.933	8.7	
DI-N-BUTYLPHTHALATE	2.033	13.6			1.66	18.4	
DI-N-OCTYLPHTHALATE	2.778	18.9			2.539	8.6	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.858	12.9	
DIBENZOFURAN	1.455	6.1			1.414	2.8	
DIETHYLPHTHALATE	1.557	22.1			1.598	2.6	
DIMETHYLPHTHALATE	1.491	9.3			1.534	2.8	
FLUORANTHENE	0.982	17.9			0.754	23.3	
FLUORENE	1.096	8.1			1.112	1.5	
HEXACHLOROENZENE	0.392	7.8			0.381	2.8	
HEXACHLOROBUTADIENE	0.188	3.2			0.157	16.6	
HEXACHLOROCYCLOPENTADIENE	0.433	13.3			0.208	51.9	
HEXACHLOROETHANE	0.882	4.2			0.78	11.6	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.823	2.5	
ISOPHORONE	0.92	11.2			0.916	0.5	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.541	7.6	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.57	7.4	
NAPHTHALENE	1.075	6.4			1.116	3.8	
NITROBENZENE	0.54	4.1			0.532	1.5	
NITROBENZENE-D5	0.519	5.1			0.46	11.3	
PENTACHLOROPHENOL	0.132	19.5			0.16	20.9	
PHENANTHRENE	1.064	9.8			0.988	7.1	
PHENOL	2.514	16.4			2.12	15.7	
PHENOL-D5	1.957	16.3			1.809	7.6	

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TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0518885	BR0518887	BR0518887	BR0518888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
PYRENE	1.365	1.5			1.557	14.1	
TERPHENYL-D14	1.059	5.9			1.277	20.5	
1,2-DICHLOROBENZENE	1.399	9.2			1.393	0.5	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.289	0.2	
1,3-DICHLOROBENZENE	1.44	8.8			1.424	1.1	
1,4-DICHLOROBENZENE	1.501	9.4			1.462	2.6	
2-CHLORONAPHTHALENE	1.22	13.6			1.121	8.1	
2-CHLOROPHENOL	1.517	13.7			1.456	4	
2-FLUOROBIPHENYL	1.311	9.3			1.241	5.3	
2-FLUOROPHENOL	1.323	11.1			1.212	8.4	
2-METHYLNAPHTHALENE	0.439	15.3			0.629	43.3	
2-METHYLPHENOL	1.148	13.9			1.212	5.6	
2-NITROANILINE	0.432	16.2			0.449	4	
2-NITROPHENOL	0.184	8.3			0.192	4.4	
2,4-DICHLOROPHENOL	0.247	8.9			0.234	5	
2,4-DIMETHYLPHENOL	0.242	18.5			0.272	12.1	
2,4-DINITROPHENOL	0.102	20.1			0.078	23.6	
2,4-DINITROTOLUENE	0.312	14.8			0.309	1.2	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.284	17.1	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.244	7.2	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.288	18.9	
2,6-DINITROTOLUENE	0.321	11.5			0.315	1.9	
3-NITROANILINE	0.386	13.1			0.198	48.6	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.06	67.7	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.31	7.2	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.305	2.6	
4-CHLOROANILINE	0.395	12.7			0.298	24.7	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.603	2	
4-METHYLPHENOL	1.314	17.4			1.265	3.7	
4-NITROANILINE	0.231	18.7			0.162	30.1	
4-NITROPHENOL	0.197	12.4			0.181	8	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.092	13.7	
SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

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TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0518885	CONTINUING CALIBRATION BR0518887	CONTINUING CAL %D BR0518887	ISTD RET TIM SHIFT BR0518888 AREA
	RRF	%	%	%	RRF	%	

M/E 51			35	38			
M/E 68-1			0	0			
M/E 68-2			0	0			
M/E 69			69	73			
M/E 70-1			0.2	0			
M/E 70-2			0.3	0			
M/E 127			57	58			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	6.1			
M/E 275			27	26			
M/E 365			2.1	2.4			
M/E 441			10	12			
M/E 442			62	76			
M/E 443-1			11	14			
M/E 443-2			17	18			

INTERNAL STD AREA(ANT)							74500
INTERNAL STD AREA(CRY)							46900
INTERNAL STD AREA(DCB)							47200
INTERNAL STD AREA(NPT)							162000
INTERNAL STD AREA(PHN)							103000
INTERNAL STD AREA(PRY)							26200

DILUTION FACTOR
ACTUAL(ALLOWED) EXTRACT TIME

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08171 WATER UG/L	WOODED PD POND BR302058A WATER UG/L	WOODED PD POND BR302069A WATER UG/L	WOODED PD POND BR302070A WATER UG/L	MATRIX SPIKE BR302058B WATER UG/L	MS % RECOVERY BR302058B WATER %	RPD BR302058B WATER %
ACENAPHTHENE	10 U	10 U	10 U	10 U	40	40 %	4

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TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA				QA	QA	QA	
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08171 WATER UG/L	WOODED PD POND BR302058A WATER UG/L	WOODED PD POND BR302069A WATER UG/L	WOODED PD POND BR302070A WATER UG/L	MATRIX SPIKE BR302058B WATER UG/L	MS % RECOVERY BR302058B WATER %	RPD BR302058B WATER %
D-194	ACENAPHTHYLENE	10 U	10 U	10 U	10 U	10 U		
	ANTHRACENE	10 U	10 U	10 U	10 U	10 U		
	BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U	10 U		
	BENZO(A)PYRENE	10 U	10 U	10 U	10 U	10 U		
	BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U		
	BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 U	10 U		
	BENZO(K)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U		
	BENZOIC ACID	50 U	50 U	50 U	50 U	50 U		
	BENZYL ALCOHOL	10 U	10 U	10 U	10 U	10 U		
	BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U	10 U		
	BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U	10 U		
	BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U	10 U	10 U	10 U		
	BIS(2-ETHYLHEXYL)PHTHALATE	10 U	7 J	46	10 U	10 U		
	BUTYLBENZYLPHTHALATE	10 U	3 J	10 U	10 U	10 U		
	CHRYSENE	10 U	10 U	10 U	10 U	10 U		
	DI-N-BUTYLPHTHALATE	2 J	3 J	10 U	0.7 J	10 U		
	DI-N-OCTYLPHTHALATE	10 U	10 U	10 U	10 U	10 U		
	DIBENZ(A,H)ANTHRACENE	10 U	10 U	10 U	10 U	10 U		
	DIBENZOFURAN	10 U	10 U	10 U	10 U	10 U		
	DIETHYLPHTHALATE	10 U	2 J	10 U	10 U	10 U		
	DIMETHYLPHTHALATE	10 U	10 U	10 U	10 U	10 U		
	FLUORANTHENE	10 U	10 U	10 U	10 U	10 U		
	FLUORENE	10 U	10 U	10 U	10 U	10 U		
	HEXACHLOROBENZENE	10 U	10 U	10 U	10 U	10 U		
	HEXACHLOROBUTADIENE	10 U	10 U	10 U	10 U	10 U		
	HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 U	10 U	10 U		
	HEXACHLOROETHANE	10 U	10 U	10 U	10 U	10 U		
	INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 U	10 U		
	ISOPHORONE	10 U	10 U	10 U	10 U	10 U		
	N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 U	30	29 *	6
	N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	10 U	10 U		
	NAPHTHALENE	10 U	10 U	10 U	10 U	10 U		
	NITROBENZENE	10 U	10 U	10 U	10 U	10 U		
	NITROBENZENE-D5							
	PENTACHLOROPHENOL	50 U	50 U	50 U	50 U	59	29	23
	PHENANTHRENE	10 U	10 U	10 U	10 U	10 U		
	PHENOL	10 U	10 U	10 U	2 J	44	22	4
	PHENOL-D5							
	PYRENE	10 U	10 U	10 U	10 U	40	40	5

TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08171 WATER UG/L	WOODED PD POND BR302058A WATER UG/L	WOODED PD POND BR302069A WATER UG/L	WOODED PD POND BR302070A WATER UG/L	MATRIX SPIKE BR302058B WATER UG/L	MS % RECOVERY BR302058B WATER %	RPD BR302058B WATER %
TERPHENYL-D14							
1,2-DICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U		
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	32	31 *	14
1,3-DICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U		
1,4-DICHLOROBENZENE	10 U	10 U	10 U	10 U	38	38	19
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	10 U		
2-CHLOROPHENOL	10 U	10 U	10 U	10 U	79	39	14
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	10 U		
2-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U		
2-NITROANILINE	50 U	50 U	50 U	50 U	50 U		
2-NITROPHENOL	10 U	10 U	10 U	10 U	10 U		
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U		
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	10 U		
2,4-DINITROPHENOL	50 U	50 U	50 U	50 U	50 U		
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	42	41	0
2,4,5-TRICHLOROPHENOL	50 U	50 U	50 U	50 U	50 U		
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U		
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U		
3-NITROANILINE	50 U	50 U	50 U	50 U	50 U		
3,3'-DICHLOROBENZIDINE	20 U	20 U	20 U	20 U	20 U		
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U		
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	85	42	2
4-CHLOROANILINE	10 U	10 U	10 U	10 U	10 U		
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U		
4-METHYLPHENOL	10 U	3 J	4 J	6 J	5 J		
4-NITROANILINE	50 U	50 U	50 U	50 U	50 U		
4-NITROPHENOL	50 U	50 U	50 U	50 U	12 J	12	45
4,6-DINITRO-2-METHYLPHENOL	50 U	50 U	50 U	50 U	50 U		
SURR 1(NBZ) %RECOVERY	37	30 *	37	45	43		
SURR 2(FBP) %RECOVERY	34 *	24 *	33 *	35 *	34 *		
SURR 3(TPH) %RECOVERY	55	36	49	57	37		
SURR 4(PHL) %RECOVERY	13	23	19	24	23		
SURR 5(2FP) %RECOVERY	27	33	37	48	38		
SURR 6(TBP) %RECOVERY	38	41	48	48	45		

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TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

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AREA	QA				QA	QA	QA
LOCATION	METHOD	WOODED PD	WOODED PD	WOODED PD	MATRIX	MS %	RPD
TYPE OF LOCATION	BLANK	POND	POND	POND	SPIKE	RECOVERY	
SAMPLE NUMBER	SBK08171	BR302058A	BR302069A	BR302070A	BR302058B	BR302058B	BR302058B
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	%	%
ENV PROBLEM NO		1	1	1	1	1	1
M/E 68-1							
M/E 68-2							
M/E 69							
M/E 70-1							
M/E 70-2							
M/E 127							
M/E 197							
M/E 198							
M/E 199							
M/E 275							
M/E 365							
M/E 441							
M/E 442							
M/E 443-1							
M/E 443-2							
INTERNAL STD AREA(ANT)	62900	65100	68600	67300	66700		
INTERNAL STD AREA(CRY)	35700	41500	48400	38900	43500		
INTERNAL STD AREA(DCB)	40500	41400	43200	42300	43700		
INTERNAL STD AREA(NPT)	130000	140000	152000	143000	149000		
INTERNAL STD AREA(PHN)	88400	96800	106000	95800	95000		
INTERNAL STD AREA(PRY)	19900	25100	28600	22100	26900		
DILUTION FACTOR	2	2	2	2	2		
ACTUAL(ALLOWED) EXTRACT TIME		6(7 D)	6(7 D)	6(7 D)	6(7 D)		
AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %	MATRIX SPIKE	MSD %
TYPE OF LOCATION	SPIKE	RECOVERY		DUPLICATE	RECOVERY	DUPLICATE	RECOVERY
SAMPLE NUMBER	BR302069B	BR302069B	BR302069B	BR302058C	BR302058C	BR302069C	BR302069C
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	%	%	UG/L	%	UG/L	%
ENV PROBLEM NO	1	1	1	1	1	1	1
ACENAPHTHENE	47	46	13	42	42 *	40	40 *
ACENAPHTHYLENE	10 U			10 U		10 U	

TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR302069B WATER UG/L	MS % RECOVERY BR302069B WATER %	RPD BR302069B WATER %	MATRIX SPIKE DUPLICATE BR302058C WATER UG/L	MSD % RECOVERY BR302058C WATER %	MATRIX SPIKE DUPLICATE BR302069C WATER UG/L	MSD % RECOVERY BR302069C WATER %
D-197							
ANTHRACENE	10 U			10 U		10 U	
BENZO(A)ANTHRACENE	10 U			10 U		10 U	
BENZO(A)PYRENE	10 U			10 U		10 U	
BENZO(B)FLUORANTHENE	10 U			10 U		10 U	
BENZO(G,H,I)PERYLENE	10 U			10 U		10 U	
BENZO(K)FLUORANTHENE	10 U			10 U		10 U	
BENZOIC ACID	50 U			50 U		50 U	
BENZYL ALCOHOL	10 U			10 U		10 U	
BIS(2-CHLOROETHOXY)METHANE	10 U			10 U		10 U	
BIS(2-CHLOROETHYL)ETHER	10 U			10 U		10 U	
BIS(2-CHLOROISOPROPYL)ETHER	10 U			10 U		10 U	
BIS(2-ETHYLHEXYL)PHTHALATE	10 U			8 J		10 U	
BUTYLBENZYLPHTHALATE	10 U			10 U		10 U	
CHRYSENE	10 U			10 U		10 U	
DI-N-BUTYLPHTHALATE	10 U			10 U		0.8 J	
DI-N-OCTYLPHTHALATE	10 U			10 U		10 U	
DIBENZ(A,H)ANTHRACENE	10 U			10 U		10 U	
DIBENZOFURAN	10 U			10 U		10 U	
DIETHYLPHTHALATE	10 U			10 U		10 U	
DIMETHYLPHTHALATE	10 U			10 U		10 U	
FLUORANTHENE	10 U			10 U		10 U	
FLUORENE	10 U			10 U		10 U	
HEXACHLORO BENZENE	10 U			10 U		10 U	
HEXACHLORO BUTADIENE	10 U			10 U		10 U	
HEXACHLORO CYCLOPENTADIENE	10 U			10 U		10 U	
HEXACHLOROETHANE	10 U			10 U		10 U	
INDENO(1,2,3-CD)PYRENE	10 U			10 U		10 U	
ISOPHORONE	10 U			10 U		10 U	
N-NITROSO-DI-N-PROPYLAMINE	33	33 *	12	32	31 *	29	29 *
N-NITROSODIPHENYLAMINE	10 U			10 U		10 U	
NAPHTHALENE	10 U			10 U		10 U	
NITROBENZENE	10 U			10 U		10 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	60	29	41	46 J	23	39 J	19
PHENANTHRENE	10 U			10 U		10 U	
PHENOL	41	20	5	47	23	39	19
PHENOL-D5							
PYRENE	49	48	13	39	38	42	42
TERPHENYL-D14							

TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE BR302069B WATER UG/L 1	MS % RECOVERY BR302069B WATER % 1	RPD BR302069B WATER % 1	MATRIX SPIKE DUPLICATE BR302058C WATER UG/L 1	MSD % RECOVERY BR302058C WATER % 1	MATRIX SPIKE DUPLICATE BR302069C WATER UG/L 1	MSD % RECOVERY BR302069C WATER % 1
D-198							
1,2-DICHLOROBENZENE	10 U			10 U		10 U	
1,2,4-TRICHLOROBENZENE	33	33 *	2	37	36 *	34	34 *
1,3-DICHLOROBENZENE	10 U			10 U		10 U	
1,4-DICHLOROBENZENE	39	38	2	46	46	39	39
2-CHLORONAPHTHALENE	10 U			10 U		10 U	
2-CHLOROPHENOL	84	41	7	91	45	77	38
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	10 U			10 U		10 U	
2-METHYLPHENOL	10 U			10 U		10 U	
2-NITROANILINE	50 U			50 U		50 U	
2-NITROPHENOL	10 U			10 U		10 U	
2,4-DICHLOROPHENOL	10 U			10 U		10 U	
2,4-DIMETHYLPHENOL	10 U			10 U		10 U	
2,4-DINITROPHENOL	50 U			50 U		50 U	
2,4-DINITROTOLUENE	50	49	27	41	41	38	37
2,4,5-TRICHLOROPHENOL	50 U			50 U		50 U	
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	10 U			10 U		10 U	
2,6-DINITROTOLUENE	10 U			10 U		10 U	
3-NITROANILINE	50 U			50 U		50 U	
3,3'-DICHLOROBENZIDINE	20 U			20 U		20 U	
4-BROMOPHENYL-PHENYLETHER	10 U			10 U		10 U	
4-CHLORO-3-METHYLPHENOL	96	48	18	83	41	80	40
4-CHLOROANILINE	10 U			10 U		10 U	
4-CHLOROPHENYL-PHENYLETHER	10 U			10 U		10 U	
4-METHYLPHENOL	4 J			6 J		4 J	
4-NITROANILINE	50 U			50 U		50 U	
4-NITROPHENOL	9 J	8 *	60 *	20 J	19	15 J	15
4,6-DINITRO-2-METHYLPHENOL	50 U			50 U		50 U	
SURR 1(NBZ) %RECOVERY	52			49		44	
SURR 2(FBP) %RECOVERY	38 *			35 *		35 *	
SURR 3(TPH) %RECOVERY	44			35		41	
SURR 4(PHL) %RECOVERY	23			23		21	
SURR 5(2FP) %RECOVERY	33			41		35	
SURR 6(TBP) %RECOVERY	57			41		40	

TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MATRIX SPIKE	MS % RECOVERY	RPD	MATRIX SPIKE DUPLICATE	MSD % RECOVERY	MATRIX SPIKE DUPLICATE	MSD % RECOVERY
TYPE OF LOCATION	BR302069B	BR302069B	BR302069B	BR302058C	BR302058C	BR302069C	BR302069C
SAMPLE NUMBER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
MATRIX	UG/L	%	%	UG/L	%	UG/L	%
UNITS	1	1	1	1	1	1	1
ENV PROBLEM NO							

M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

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INTERNAL STD AREA(ANT)	71000	65400	69700
INTERNAL STD AREA(CRY)	42500	39900	41400
INTERNAL STD AREA(DCB)	45100	45100	47500
INTERNAL STD AREA(NPT)	149000	150000	153000
INTERNAL STD AREA(PHN)	105000	95300	99700
INTERNAL STD AREA(PRY)	22600	26000	25300

DILUTION FACTOR	2	2	2
ACTUAL(ALLOWED) EXTRACT TIME	6(7 D)	6(7 D)	6(7 D)

AREA	QA	QA	QA	QA
LOCATION	PRIMARY PD POND	PRIMARY PD POND	TUNED CALIBRATION	CONTINUING CALIBRATION
TYPE OF LOCATION	BR301057A	BR301068A	BR0519885	BR0519887
SAMPLE NUMBER	WATER	WATER	%	RRF
MATRIX	UG/L	UG/L		%
UNITS	1	1		
ENV PROBLEM NO				
ACENAPHTHENE	10 U	10 U	1.187	3.7
ACENAPHTHYLENE	10 U	10 U	1.713	9.2
				10 U
				10 U

TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA			QA	QA	QA	QA	
LOCATION	PRIMARY PD	PRIMARY PD	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	PRIMARY PD
TYPE OF LOCATION	POND	POND	CALIBRATION	CALIBRATION	CAL XD	SHIFT	POND
SAMPLE NUMBER	BR301057A	BR301068A	BR0519885	BR0519887	BR0519887	BR0519888	BR301079A
MATRIX	WATER	WATER	%	RRF	%	AREA	WATER
UNITS	UG/L	UG/L					UG/L
ENV PROBLEM NO	1	1					1
ANTHRACENE	10 U	10 U		0.943	6.8		10 U
BENZO(A)ANTHRACENE	10 U	10 U		0.91	11.8		10 U
BENZO(A)PYRENE	10 U	10 U		1.108	1.9		10 U
BENZO(B)FLUORANTHENE	10 U	10 U		1.454	5.7		10 U
BENZO(G,H,I)PERYLENE	10 U	10 U		0.819	7.4		10 U
BENZO(K)FLUORANTHENE	10 U	10 U		1.346	17.2		10 U
BENZOIC ACID	50 U	50 U		0.093	31.8		50 U
BENZYL ALCOHOL	10 U	10 U		0.696	17.1		10 U
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U		0.766	2.1		10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U		2.737	4.4		10 U
BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U		1.774	52		10 U
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U		1.289	3.1		10 U
BUTYLBENZYLPHthalATE	10 U	10 U		1.114	16.5		10 U
CHRYSENE	10 U	10 U		0.903	11.6		10 U
DI-N-BUTYLPHthalATE	10 U	10 U		1.727	15.1		10 U
DI-N-OCTYLPHthalATE	10 U	10 U		2.916	5		10 U
DIBENZ(A,H)ANTHRACENE	10 U	10 U		0.678	8.7		10 U
DIBENZOFURAN	10 U	10 U		1.37	5.8		10 U
DIETHYLPHthalATE	10 U	0.5 J		1.47	5.6		10 U
DIMETHYLPHthalATE	10 U	10 U		1.503	0.8		10 U
FLUORANTHENE	10 U	10 U		0.805	18.1		10 U
FLUORENE	10 U	10 U		0.998	8.9		10 U
HEXACHLOROBENZENE	10 U	10 U		0.431	9.9		10 U
HEXACHLOROBUTADIENE	10 U	10 U		0.149	20.9		10 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U		0.188	56.4		10 U
HEXACHLOROETHANE	10 U	10 U		0.781	11.5		10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U		0.691	14		10 U
ISOPHORONE	10 U	10 U		0.952	3.4		10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U		1.608	12.3		10 U
N-NITROSODIPHENYLAMINE	10 U	10 U		0.626	1.7		10 U
NAPHTHALENE	10 U	10 U		1.072	0.3		10 U
NITROBENZENE	10 U	10 U		0.534	1.1		10 U
NITROBENZENE-D5				0.456	12		
PENTACHLOROPHENOL	50 U	50 U		0.105	20.7		50 U
PHENANTHRENE	10 U	10 U		0.979	8		10 U
PHENOL	10 U	10 U		2.192	12.8		10 U
PHENOL-D5				1.802	7.9		
PYRENE	10 U	10 U		1.529	12.1		10 U
TERPHENYL-D14				1.552	46.5		

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TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA		QA		QA		QA	
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	PRIMARY PD POND BR301057A WATER UG/L 1	PRIMARY PD POND BR301068A WATER UG/L 1	TUNED CALIBRATION BR0519885 %	CONTINUING CALIBRATION BR0519887 RRF	CONTINUING CAL %D BR0519887 %	ISTD RET TIM SHIFT BR0519888 AREA	PRIMARY PD POND BR301079A WATER UG/L 1
D-201	1,2-DICHLOROBENZENE	10 U	10 U		1.407	0.6		10 U
	1,2,4-TRICHLOROBENZENE	10 U	10 U		0.284	1.9		10 U
	1,3-DICHLOROBENZENE	10 U	10 U		1.418	1.6		10 U
	1,4-DICHLOROBENZENE	10 U	10 U		1.473	1.9		10 U
	2-CHLORONAPHTHALENE	10 U	10 U		1.182	3.1		10 U
	2-CHLOROPHENOL	10 U	10 U		1.402	7.6		10 U
	2-FLUOROBIPHENYL				1.3	0.8		
	2-FLUOROPHENOL				1.199	9.4		
	2-METHYLNAPHTHALENE	10 U	10 U		0.62	41.3		10 U
	2-METHYLPHENOL	10 U	10 U		1.194	3.9		10 U
	2-NITROANILINE	50 U	50 U		0.478	10.5		50 U
	2-NITROPHENOL	10 U	10 U		0.193	4.9		10 U
	2,4-DICHLOROPHENOL	10 U	10 U		0.195	20.9		10 U
	2,4-DIMETHYLPHENOL	10 U	10 U		0.26	7.2		10 U
	2,4-DINITROPHENOL	50 U	50 U		0.034	66.6		50 U
	2,4-DINITROTOLUENE	10 U	10 U		0.294	5.9		10 U
	2,4,5-TRICHLOROPHENOL	50 U	50 U		0.269	21.4		50 U
	2,4,6-TRIBROMOPHENOL				0.213	6.6		
	2,4,6-TRICHLOROPHENOL	10 U	10 U		0.286	19.7		10 U
	2,6-DINITROTOLUENE	10 U	10 U		0.305	5		10 U
	3-NITROANILINE	50 U	50 U		0.066	82.8		50 U
	3,3'-DICHLOROBENZIDINE	20 U	20 U		0.046	75.2		20 U
	4-BROMOPHENYL-PHENYLETHER	10 U	10 U		0.337	0.8		10 U
	4-CHLORO-3-METHYLPHENOL	10 U	10 U		0.274	7.9		10 U
	4-CHLOROANILINE	10 U	10 U		0.303	23.4		10 U
	4-CHLOROPHENYL-PHENYLETHER	10 U	10 U		0.562	4.9		10 U
	4-METHYLPHENOL	10 U	10 U		1.258	4.2		10 U
	4-NITROANILINE	50 U	50 U		0.131	43.4		50 U
	4-NITROPHENOL	50 U	50 U		0.122	38.1		50 U
	4,6-DINITRO-2-METHYLPHENOL	50 U	50 U		0.065	38.5		50 U
	SURR 1(NBZ) %RECOVERY	37	38					36
	SURR 2(FBP) %RECOVERY	23 *	33 *					25 *
	SURR 3(TPH) %RECOVERY	40	54					45
	SURR 4(PHL) %RECOVERY	16	18					20
	SURR 5(2FP) %RECOVERY	33	35					40
	SURR 6(TBP) %RECOVERY	41	49					40

TABLE D.6.4 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR301057A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA			
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	PRIMARY PD POND BR301057A WATER UG/L 1	PRIMARY PD POND BR301068A WATER UG/L 1	TUNED CALIBRATION BR0519885 %	CONTINUING CALIBRATION BR0519887 RRF	CONTINUING CAL %D BR0519887 %	ISTD RET TIM SHIFT BR0519888 AREA	PRIMARY PD POND BR301079A WATER UG/L 1
M/E 68-1			0.2				
M/E 68-2			0.3				
M/E 69			79				
M/E 70-1			0				
M/E 70-2			0				
M/E 127			58				
M/E 197			0				
M/E 198			100				
M/E 199			5.6				
M/E 275			26				
M/E 365			1.8				
M/E 441			15				
M/E 442			91				
M/E 443-1			17				
M/E 443-2			18				
INTERNAL STD AREA(ANT)	69200	67400				68700	61900
INTERNAL STD AREA(CRY)	47200	43400				26000	33300
INTERNAL STD AREA(DCB)	44000	42300				48000	42000
INTERNAL STD AREA(NPT)	145000	142000				165000	138000
INTERNAL STD AREA(PHN)	101000	101000				81100	89100
INTERNAL STD AREA(PRY)	27300	27500				12800	19000
DILUTION FACTOR	2	2					2
ACTUAL(ALLOWED) EXTRACT TIME	6(7 D)	6(7 D)					6(7 D)

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL XD	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0429885	BR0429887	BR0429887	BR0429888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
ACENAPHTHENE	1.232	5.9			1.267	2.8	
ACENAPHTHYLENE	1.886	9.6			1.764	6.5	
ANTHRACENE	1.012	8.4			0.923	8.8	
BENZO(A)ANTHRACENE	1.032	8.2			0.969	6.1	
BENZO(A)PYRENE	1.088	8.6			1.148	5.5	
BENZO(B)FLUORANTHENE	1.375	11.3			1.431	4.1	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.946	24.1	
BENZO(K)FLUORANTHENE	1.148	3.6			1.376	19.8	
BENZOIC ACID	0.137	13.6			0.097	29.2	
BENZYL ALCOHOL	0.84	10.8			0.596	29	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.757	3.2	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.567	2.1	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.453	24.4	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.135	14.6	
BUTYLBENZYLPHTHALATE	0.956	11.4			0.854	10.7	
CHRYSENE	1.022	5.5			0.95	7	
DI-N-BUTYLPHTHALATE	2.033	13.6			1.608	20.9	
DI-N-OCTYLPHTHALATE	2.778	18.9			2.45	11.8	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.75	1	
DIBENZOFURAN	1.455	6.1			1.5	3.1	
DIETHYLPHTHALATE	1.557	22.1			1.718	10.3	
DIMETHYLPHTHALATE	1.491	9.3			1.672	12.1	
FLUORANTHENE	0.982	17.9			0.738	24.8	
FLUORENE	1.096	8.1			1.125	2.7	
HEXACHLORO BENZENE	0.392	7.8			0.397	1.3	
HEXACHLORO BUTADIENE	0.188	3.2			0.159	15.5	
HEXACHLORO CYCLOPENTADIENE	0.433	13.3			0.22	49	
HEXACHLOROETHANE	0.882	4.2			0.782	11.3	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.82	2.1	
ISOPHORONE	0.92	11.2			0.953	3.6	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.506	5.2	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.618	0.4	
NAPHTHALENE	1.075	6.4			1.102	2.5	
NITROBENZENE	0.54	4.1			0.558	3.2	
NITROBENZENE-D5	0.519	5.1			0.481	7.3	
PENTACHLOROPHENOL	0.132	19.5			0.121	8.3	
PHENANTHRENE	1.064	9.8			0.965	9.3	
PHENOL	2.514	16.4			2.038	18.9	
PHENOL-D5	1.957	16.3			1.772	9.4	

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0429885	CONTINUING CALIBRATION BR0429887	CONTINUING CAL %D BR0429887	ISTD RET TIM SHIFT BR0429888 AREA
	RRF	x	x	x	RRF	x	
PYRENE	1.365	1.5			1.377	0.9	
TERPHENYL-D14	1.059	5.9			1.106	4.4	
1,2-DICHLOROBENZENE	1.399	9.2			1.367	2.3	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.292	0.8	
1,3-DICHLOROBENZENE	1.44	8.8			1.439	0.1	
1,4-DICHLOROBENZENE	1.501	9.4			1.477	1.6	
2-CHLORONAPHTHALENE	1.22	13.6			1.21	0.8	
2-CHLOROPHENOL	1.517	13.7			1.402	7.6	
2-FLUOROBIPHENYL	1.311	9.3			1.341	2.3	
2-FLUOROPHENOL	1.323	11.1			1.218	7.9	
2-METHYLNAPHTHALENE	0.439	15.3			0.507	15.5	
2-METHYLPHENOL	1.148	13.9			1.144	0.4	
2-NITROANILINE	0.432	16.2			0.504	16.5	
2-NITROPHENOL	0.184	8.3			0.189	2.5	
2,4-DICHLOROPHENOL	0.247	8.9			0.235	4.8	
2,4-DIMETHYLPHENOL	0.242	18.5			0.256	5.6	
2,4-DINITROPHENOL	0.102	20.1			0.054	47.1	
2,4-DINITROTOLUENE	0.312	14.8			0.348	11.4	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.31	9.5	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.221	3.2	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.288	19	
2,6-DINITROTOLUENE	0.321	11.5			0.343	6.8	
3-NITROANILINE	0.386	13.1			0.322	16.5	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.085	54	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.327	2.4	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.291	2.2	
4-CHLOROANILINE	0.395	12.7			0.386	2.4	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.587	0.7	
4-METHYLPHENOL	1.314	17.4			1.189	9.5	
4-NITROANILINE	0.231	18.7			0.144	37.9	
4-NITROPHENOL	0.197	12.4			0.155	21.1	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.081	23.2	
SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0429885	CONTINUING CALIBRATION BR0429887	CONTINUING CAL %D BR0429887	ISTD RET TIM SHIFT BR0429888
	RRF	%	%	%	RRF	%	AREA
M/E 51			35		38		
M/E 68-1			0		0		
M/E 68-2			0		0		
M/E 69			69		77		
M/E 70-1			0.2		0		
M/E 70-2			0.3		0		
M/E 127			57		60		
M/E 197			0		0		
M/E 198			100		100		
M/E 199			5.7		5.7		
M/E 275			27		26		
M/E 365			2.1		2.4		
M/E 441			10		13		
M/E 442			62		87		
M/E 443-1			11		16		
M/E 443-2			17		19		
INTERNAL STD AREA(ANT)							70800
INTERNAL STD AREA(CRY)							48000
INTERNAL STD AREA(DCB)							55200
INTERNAL STD AREA(NPT)							176000
INTERNAL STD AREA(PHN)							97300
INTERNAL STD AREA(PRY)							28400
DILUTION FACTOR							
PERCENT MOISTURE							
ACTUAL(ALLOWED) EXTRACT TIME							
AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08059	MATRIX SPIKE BR500069B	MS % RECOVERY BR500069B	RPD BR500069B	MATRIX SPIKE DUPLICATE BR500069B	MSD % RECOVERY BR500069B	S PRIM. PD POND BR303015B
	SOIL UG/KG	SOIL UG/KG	SOIL %	SOIL %	SOIL UG/KG	SOIL %	SOIL UG/KG
ACENAPHTHENE	330 U	4	4	4	4	4	1
		2000	42	7	1900	39	590 U

TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08059 SOIL UG/KG	MATRIX SPIKE BR500069B SOIL UG/KG	MS % RECOVERY BR500069B SOIL %	RPD BR500069B SOIL %	MATRIX SPIKE DUPLICATE BR500069B SOIL UG/KG	MSD % RECOVERY BR500069B SOIL %	S PRIM. PD POND BR303015B SOIL UG/KG
		4	4	4	4	4	1
ACENAPHTHYLENE	330 U	480 U			480 U		590 U
ANTHRACENE	330 U	50 J			39 J		590 U
BENZO(A)ANTHRACENE	330 U	460 J			380 J		110 J
BENZO(A)PYRENE	330 U	460 J			380 J		140 J
BENZO(B)FLUORANTHENE	330 U	560			720		170 J
BENZO(G,H,I)PERYLENE	330 U	330 J			330 J		110 J
BENZO(K)FLUORANTHENE	330 U	480 U			480 U		590 U
BENZOIC ACID	1700 U	89 J			92 J		2900 U
BENZYL ALCOHOL	330 U	480 U			480 U		590 U
BIS(2-CHLOROETHOXY)METHANE	330 U	480 U			480 U		590 U
BIS(2-CHLOROETHYL)ETHER	330 U	480 U			480 U		590 U
BIS(2-CHLOROISOPROPYL)ETHER	330 U	480 U			480 U		590 U
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	270 J			250 J		160 J
BUTYLBENZYLPHthalATE	330 U	63 J			480 U		590 U
CHRYSENE	330 U	490			420 J		200 J
DI-N-BUTYLPHthalATE	150 J	120 JB			100 JB		140 JB
DI-N-OCTYLPHthalATE	9 J	18 JB			480 U		51 JB
DIBENZ(A,H)ANTHRACENE	330 U	110 J			95 J		590 U
DIBENZOFURAN	330 U	8 J			7 J		590 U
DIETHYLPHthalATE	34 J	480 U			32 J		37 JB
DIMETHYLPHthalATE	330 U	480 U			480 U		590 U
FLUORANTHENE	330 U	870			670		360 J
FLUORENE	330 U	480 U			480 U		590 U
HEXACHLOROBENZENE	330 U	480 U			480 U		590 U
HEXACHLOROBUTADIENE	330 U	480 U			480 U		590 U
HEXACHLOROCYCLOPENTADIENE	330 U	480 U			480 U		590 U
HEXACHLOROETHANE	330 U	480 U			480 U		590 U
INDENO(1,2,3-CD)PYRENE	330 U	470 J			430 J		140 J
ISOPHORONE	330 U	9 J			480 U		590 U
N-NITROSO-DI-N-PROPYLAMINE	330 U	1000	22 *	15	920	19 *	590 U
N-NITROSODIPHENYLAMINE	330 U	480 U			480 U		590 U
NAPHTHALENE	330 U	480 U			480 U		590 U
NITROBENZENE	330 U	480 U			480 U		590 U
NITROBENZENE-D5							
PENTACHLOROPHENOL	1700 U	3900	41	7	4200	44	2900 U
PHENANTHRENE	330 U	200 J			160 J		130 J
PHENOL	330 U	3300	34	9	3000	31	34 J
PHENOL-D5							
PYRENE	330 U	3600	64	10	3900	71	330 J

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08Q59 SOIL UG/KG	MATRIX SPIKE BR500069B SOIL UG/KG	MS % RECOVERY BR500069B SOIL %	RPD BR500069B SOIL %	MATRIX SPIKE DUPLICATE BR500069B SOIL UG/KG	MSD % RECOVERY BR500069B SOIL %	S PRIM. PD POND BR303015B SOIL UG/KG
		4	4	4	4	4	1
TERPHENYL-D14							
1,2-DICHLOROBENZENE	330 U	480 U			480 U		590 U
1,2,4-TRICHLOROBENZENE	330 U	950	20 *	10	1100	22 *	590 U
1,3-DICHLOROBENZENE	330 U	480 U			480 U		590 U
1,4-DICHLOROBENZENE	330 U	550	12 *	22	730	15 *	590 U
2-CHLORONAPHTHALENE	330 U	480 U			480 U		590 U
2-CHLOROPHENOL	330 U	2800	29	7	2600	27	590 U
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	330 U	480 U			480 U		590 U
2-METHYLPHENOL	330 U	480 U			480 U		590 U
2-NITROANILINE	1700 U	2400 U			2400 U		2900 U
2-NITROPHENOL	330 U	480 U			480 U		590 U
2,4-DICHLOROPHENOL	330 U	480 U			480 U		590 U
2,4-DIMETHYLPHENOL	330 U	480 U			480 U		590 U
2,4-DINITROPHENOL	1700 U	2400 U			2400 U		2900 U
2,4-DINITROTOLUENE	330 U	1700	35	13	1900	40	590 U
2,4,5-TRICHLOROPHENOL	1700 U	2400 U			2400 U		2900 U
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	330 U	480 U			480 U		590 U
2,6-DINITROTOLUENE	330 U	480 U			480 U		590 U
3-NITROANILINE	1700 U	2400 U			2400 U		2900 U
3,3'-DICHLOROBENZIDINE	660 U	960 U			960 U		1200 U
4-BROMOPHENYL-PHENYLETHER	330 U	480 U			480 U		590 U
4-CHLORO-3-METHYLPHENOL	330 U	5300	55	2	5400	56	590 U
4-CHLOROANILINE	330 U	480 U			480 U		590 U
4-CHLOROPHENYL-PHENYLETHER	330 U	480 U			480 U		590 U
4-METHYLPHENOL	330 U	480 U			480 U		590 U
4-NITROANILINE	1700 U	2400 U			2400 U		2900 U
4-NITROPHENOL	1700 U	5600	58	13	6400	66	2900 U
4,6-DINITRO-2-METHYLPHENOL	1700 U	2400 U			2400 U		2900 U
SURR 1(NBZ) %RECOVERY	70	45			46		77
SURR 2(FBP) %RECOVERY	72	60			54		100
SURR 3(TPH) %RECOVERY	158 *	139 *			138 *		160 *
SURR 4(PHL) %RECOVERY	70	76			64		113
SURR 5(2FP) %RECOVERY	74	70			67		118
SURR 6(TBP) %RECOVERY	152 *	135 *			153 *		176 *

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %	S PRIM. PD
TYPE OF LOCATION	BLANK	SPIKE	RECOVERY		DUPLICATE	RECOVERY	POND
SAMPLE NUMBER	SBK08059	BR500069B	BR500069B	BR500069B	BR500069B	BR500069B	BR303015B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	%	%	UG/KG	%	UG/KG
ENV PROBLEM NO		4	4	4	4	4	1

M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

INTERNAL STD AREA(ANT)	71700	104000		93000		112000
INTERNAL STD AREA(CRY)	51100	85300		61700		77700
INTERNAL STD AREA(DCB)	47600	66400		63400		70200
INTERNAL STD AREA(NPT)	154000	225000		196000		238000
INTERNAL STD AREA(PHN)	105000	132000		120000		148000
INTERNAL STD AREA(PRY)	31300	59400		45800		48700

DILUTION FACTOR	1	1		1		1
PERCENT MOISTURE	0	31		31		44
ACTUAL(ALLOWED) EXTRACT TIME		6(14 D)		6(14 D)		7(14 D)

AREA	QA						
LOCATION	S PRIM. PD	S PRIM. PD	N PRIM. PD	N PRIM. PD	N PRIM. PD	N WOODED P	TUNED
TYPE OF LOCATION	POND	POND	POND	POND	POND	POND	CALIBRATION
SAMPLE NUMBER	BR303026B	BR303037B	BR304016B	BR304027B	BR304038B	BR305017B	BR0509885
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	%
ENV PROBLEM NO	1	1	1	1	1	1	
ACENAPHTHENE	610 U	650 U	570 U	640 U	460 U	460 U	

TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA							QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	S PRIM. PD POND BR303026B SOIL UG/KG 1	S PRIM. PD POND BR303037B SOIL UG/KG 1	N PRIM. PD POND BR304016B SOIL UG/KG 1	N PRIM. PD POND BR304027B SOIL UG/KG 1	N PRIM. PD POND BR304038B SOIL UG/KG 1	N WOODED P POND BR305017B SOIL UG/KG 1	TUNED CALIBRATION BR0509885 %
ACENAPHTHYLENE	610 U	650 U	570 U	640 U	460 U	12 J	
ANTHRACENE	610 U	650 U	570 U	640 U	460 U	460 U	
BENZO(A)ANTHRACENE	45 J	130 J	570 U	640 U	460 U	87 J	
BENZO(A)PYRENE	50 J	170 J	570 U	53 J	460 U	88 J	
BENZO(B)FLUORANTHENE	66 J	230 J	570 U	640 U	460 U	200 J	
BENZO(G,H,I)PERYLENE	610 U	110 J	570 U	640 U	460 U	81 J	
BENZO(K)FLUORANTHENE	610 U	650 U	570 U	640 U	460 U	460 U	
BENZOIC ACID	3000 U	3300 U	230 J	260 J	110 J	2300 U	
BENZYL ALCOHOL	610 U	650 U	570 U	640 U	460 U	460 U	
BIS(2-CHLOROETHOXY)METHANE	610 U	650 U	570 U	640 U	460 U	460 U	
BIS(2-CHLOROETHYL)ETHER	610 U	650 U	570 U	640 U	460 U	460 U	
BIS(2-CHLOROISOPROPYL)ETHER	610 U	650 U	570 U	640 U	460 U	460 U	
BIS(2-ETHYLHEXYL)PHTHALATE	180 J	120 J	570 U	430 J	210 J	100 J	
BUTYLBENZYLPHthalate	610 U	650 U	570 U	40 J	19 J	460 U	
CHRYSENE	610 U	200 J	570 U	75 J	460 U	120 J	
DI-N-BUTYLPHthalate	310 JB	170 JB	220 JB	180 JB	310 JB	380 JB	
DI-N-OCTYLPHthalate	18 JB	39 JB	16 JB	40 JB	16 JB	460 U	
DIBENZ(A,H)ANTHRACENE	610 U	650 U	570 U	640 U	460 U	460 U	
DIBENZOFURAN	610 U	650 U	570 U	640 U	460 U	460 U	
DIETHYLPHthalate	40 JB	50 JB	40 JB	59 JB	42 JB	55 JB	
DIMETHYLPHthalate	610 U	650 U	570 U	640 U	460 U	460 U	
FLUORANTHENE	98 J	320 J	570 U	150 J	22 J	150 J	
FLUORENE	610 U	650 U	570 U	640 U	460 U	460 U	
HEXACHLOROBENZENE	610 U	650 U	570 U	640 U	460 U	460 U	
HEXACHLOROBUTADIENE	610 U	650 U	570 U	640 U	460 U	460 U	
HEXACHLOROCYCLOPENTADIENE	610 U	650 U	570 U	640 U	460 U	460 U	
HEXACHLOROETHANE	610 U	650 U	570 U	640 U	460 U	460 U	
INDENO(1,2,3-CD)PYRENE	610 U	110 J	570 U	640 U	460 U	91 J	
ISOPHORONE	610 U	650 U	570 U	640 U	15 J	460 U	
N-NITROSO-DI-N-PROPYLAMINE	610 U	650 U	570 U	640 U	460 U	460 U	
N-NITROSODIPHENYLAMINE	610 U	650 U	570 U	640 U	460 U	460 U	
NAPHTHALENE	610 U	650 U	570 U	640 U	460 U	460 U	
NITROBENZENE	610 U	650 U	570 U	640 U	460 U	460 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
PHENANTHRENE	40 J	120 J	570 U	74 J	460 U	35 J	
PHENOL	26 J	650 U	570 U	640 U	460 U	460 U	
PHENOL-D5							
PYRENE	110 J	390 J	53 J	150 J	30 J	140 J	

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA							QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	S PRIM. PD POND BR303026B SOIL UG/KG 1	S PRIM. PD POND BR303037B SOIL UG/KG 1	N PRIM. PD POND BR304016B SOIL UG/KG 1	N PRIM. PD POND BR304027B SOIL UG/KG 1	N PRIM. PD POND BR304038B SOIL UG/KG 1	N WOODED P POND BR305017B SOIL UG/KG 1	TUNED CALIBRATION BR0509885 %
D-210							
TERPHENYL-D14							
1,2-DICHLOROBENZENE	610 U	650 U	570 U	640 U	460 U	460 U	
1,2,4-TRICHLOROBENZENE	610 U	650 U	570 U	640 U	460 U	460 U	
1,3-DICHLOROBENZENE	610 U	650 U	570 U	640 U	460 U	460 U	
1,4-DICHLOROBENZENE	610 U	650 U	570 U	640 U	460 U	460 U	
2-CHLORONAPHTHALENE	610 U	650 U	570 U	640 U	460 U	460 U	
2-CHLOROPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	610 U	650 U	570 U	640 U	460 U	460 U	
2-METHYLPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
2-NITROANILINE	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
2-NITROPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
2,4-DICHLOROPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
2,4-DIMETHYLPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
2,4-DINITROPHENOL	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
2,4-DINITROTOLUENE	610 U	650 U	570 U	640 U	460 U	460 U	
2,4,5-TRICHLOROPHENOL	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
2,6-DINITROTOLUENE	610 U	650 U	570 U	640 U	460 U	460 U	
3-NITROANILINE	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
3,3'-DICHLOROBENZIDINE	1200 U	1300 U	1100 U	1300 U	930 U	910 U	
4-BROMOPHENYL-PHENYLETHER	610 U	650 U	570 U	640 U	460 U	460 U	
4-CHLORO-3-METHYLPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
4-CHLOROANILINE	610 U	650 U	570 U	640 U	460 U	460 U	
4-CHLOROPHENYL-PHENYLETHER	610 U	650 U	570 U	640 U	460 U	460 U	
4-METHYLPHENOL	610 U	650 U	570 U	640 U	460 U	460 U	
4-NITROANILINE	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
4-NITROPHENOL	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
4,6-DINITRO-2-METHYLPHENOL	3000 U	3300 U	2800 U	3200 U	2300 U	2300 U	
SURR 1(NBZ) %RECOVERY	44	49	59	41	46	53	
SURR 2(FBP) %RECOVERY	68	73	82	78	78	76	
SURR 3(TPH) %RECOVERY	117	131	159 *	146 *	164 *	182 *	
SURR 4(PHL) %RECOVERY	79	78	86	72	89	82	
SURR 5(2FP) %RECOVERY	68	78	82	63	82	80	
SURR 6(TBP) %RECOVERY	131 *	134 *	313 *	142 *	156 *	174 *	

TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

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AREA							QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	S PRIM. PD POND BR303026B SOIL UG/KG	S PRIM. PD POND BR303037B SOIL UG/KG	N PRIM. PD POND BR304016B SOIL UG/KG	N PRIM. PD POND BR304027B SOIL UG/KG	N PRIM. PD POND BR304038B SOIL UG/KG	N WOODED P POND BR305017B SOIL UG/KG	TUNED CALIBRATION BR0509885 %
M/E 68-1							0
M/E 68-2							0
M/E 69							73
M/E 70-1							0
M/E 70-2							0
M/E 127							56
M/E 197							0
M/E 198							100
M/E 199							5.8
M/E 275							27
M/E 365							2.9
M/E 441							15
M/E 442							94
M/E 443-1							18
M/E 443-2							20

INTERNAL STD AREA(ANT)	109000	107000	116000	110000	108000	116000	
INTERNAL STD AREA(CRY)	66100	59800	69300	65900	56500	70700	
INTERNAL STD AREA(DCB)	69700	73200	74500	79000	71400	80800	
INTERNAL STD AREA(NPT)	227000	230000	244000	246000	231000	259000	
INTERNAL STD AREA(PHN)	138000	135000	146000	140000	133000	142000	
INTERNAL STD AREA(PRY)	42700	30800	41600	33900	42500	44700	

DILUTION FACTOR	1	1	1	1	1	1	
PERCENT MOISTURE	46	50	42	49	29	27	
ACTUAL(ALLOWED) EXTRACT TIME	7(14 D)	7(14 D)	7(14 D)	7(14 D)	7(14 D)	7(14 D)	

AREA	QA	QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR0509887 RRF	CONTINUING CAL %D BR0509887 %	ISTD RET TIM SHIFT BR0509888 AREA	BNL LANDF LEACHATE BR500069B SOIL UG/KG	BNL LANDF LEACHATE BR500047B SOIL UG/KG	N WOODED P POND BR305028B SOIL UG/KG	N WOODED P POND BR305039B SOIL UG/KG
ACENAPHTHENE	1.207	2.1		470 U	410 U	490 U	570 U

TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
	CONTINUING CALIBRATION BR0509887	CONTINUING CAL %D BR0509887	ISTD RET TIM SHIFT BR0509888	BNL LANDF LEACHATE BR500069B SOIL UG/KG	BNL LANDF LEACHATE BR500047B SOIL UG/KG	N WOODDED P POND BR305028B SOIL UG/KG	N WOODDED P POND BR305039B SOIL UG/KG
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	RRF	%	AREA	4	4	1	1
ACENAPHTHYLENE	1.721	8.8		470 U	410 U	490 U	49 J
ANTHRACENE	0.938	7.3		470 U	24 J	490 U	570 U
BENZO(A)ANTHRACENE	0.948	8.1		340 J	120 J	490 U	230 J
BENZO(A)PYRENE	1.121	3		410 J	110 J	21 J	290 J
BENZO(B)FLUORANTHENE	1.316	4.3		490	210 J	490 U	630
BENZO(G,H,I)PERYLENE	1.025	34.5		470 J	410 U	490 U	210 J
BENZO(K)FLUORANTHENE	1.219	6.2		530	410 U	490 U	570 U
BENZOIC ACID	0.137	0.4		2400 U	2000 U	36 J	2800 U
BENZYL ALCOHOL	0.667	20.6		470 U	410 U	490 U	570 U
BIS(2-CHLOROETHOXY)METHANE	0.789	0.9		470 U	410 U	490 U	570 U
BIS(2-CHLOROETHYL)ETHER	2.778	5.9		470 U	410 U	490 U	570 U
BIS(2-CHLOROISOPROPYL)ETHER	1.393	19.3		470 U	410 U	490 U	570 U
BIS(2-ETHYLHEXYL)PHTHALATE	1.35	1.5		330 J	120 J	490 U	570 U
BUTYL BENZYL PHTHALATE	0.937	2		470 U	410 U	490 U	570 U
CHRYSENE	0.906	11.3		380 J	110 J	29 J	300 J
DI-N-BUTYL PHTHALATE	1.888	7.2		110 JB	59 JB	99 JB	95 JB
DI-N-OCTYL PHTHALATE	2.575	7.3		30 JB	11 JB	490 U	570 U
DIBENZ(A,H)ANTHRACENE	0.878	18.3		200 J	410 U	490 U	77 J
DIBENZOFURAN	1.528	5		470 U	410 U	490 U	570 U
DIETHYL PHTHALATE	1.776	14.1		45 JB	26 JB	29 JB	40 JB
DIMETHYL PHTHALATE	1.652	10.8		470 U	410 U	490 U	570 U
FLUORANTHENE	0.903	8.1		580	230 J	43 J	390 J
FLUORENE	1.128	2.9		470 U	410 U	490 U	570 U
HEXACHLORO BENZENE	0.362	7.5		470 U	410 U	490 U	570 U
HEXACHLOROBUTADIENE	0.172	8.7		470 U	410 U	490 U	570 U
HEXACHLOROCYCLOPENTADIENE	0.234	46		470 U	410 U	490 U	570 U
HEXACHLOROETHANE	0.826	6.3		470 U	410 U	490 U	570 U
INDENO(1,2,3-CD)PYRENE	0.991	23.4		450 J	95 J	490 U	260 J
ISOPHORONE	0.945	2.7		470 U	410 U	490 U	570 U
N-NITROSO-DI-N-PROPYLAMINE	1.505	5.1		470 U	410 U	490 U	570 U
N-NITROSODIPHENYLAMINE	0.553	10.2		470 U	410 U	490 U	570 U
NAPHTHALENE	1.085	0.9		470 U	410 U	490 U	570 U
NITROBENZENE	0.543	0.5		470 U	410 U	490 U	570 U
NITROBENZENE-D5	0.476	8.1					
PENTACHLOROPHENOL	0.157	19.3		2400 U	2000 U	2500 U	2800 U
PHENANTHRENE	1.013	4.8		170 J	100 J	490 U	110 J
PHENOL	2.248	10.6		470 U	410 U	490 U	570 U
PHENOL-D5	1.84	6					
PYRENE	1.306	4.3		480	190 J	41 J	380 J

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR0509887 RRF	CONTINUING CAL %D BR0509887 %	ISTD RET TIM SHIFT BR0509888 AREA	BNL LANDF LEACHATE BR500069B SOIL UG/KG 4	BNL LANDF LEACHATE BR500047B SOIL UG/KG 4	N WOODED P POND BR305028B SOIL UG/KG 1	N WOODED P POND BR305039B SOIL UG/KG 1
TERPHENYL-D14	1.106	4.4					
1,2-DICHLOROBENZENE	1.406	0.5		470 U	410 U	490 U	570 U
1,2,4-TRICHLOROBENZENE	0.286	1.1		470 U	410 U	490 U	570 U
1,3-DICHLOROBENZENE	1.412	1.9		470 U	410 U	490 U	570 U
1,4-DICHLOROBENZENE	1.493	0.6		470 U	410 U	490 U	570 U
2-CHLORONAPHTHALENE	1.175	3.7		470 U	410 U	490 U	570 U
2-CHLOROPHENOL	1.43	5.8		470 U	410 U	490 U	570 U
2-FLUOROBIPHENYL	1.286	1.8					
2-FLUOROPHENOL	1.234	6.7					
2-METHYLNAPHTHALENE	0.642	46.3		470 U	410 U	490 U	570 U
2-METHYLPHENOL	1.186	3.3		470 U	410 U	490 U	570 U
2-NITROANILINE	0.517	19.5		2400 U	2000 U	2500 U	2800 U
2-NITROPHENOL	0.2	8.6		470 U	410 U	490 U	570 U
2,4-DICHLOROPHENOL	0.246	0.3		470 U	410 U	490 U	570 U
2,4-DIMETHYLPHENOL	0.256	5.6		470 U	410 U	490 U	570 U
2,4-DINITROPHENOL	0.108	6.7		2400 U	2000 U	2500 U	2800 U
2,4-DINITROTOLUENE	0.351	12.3		470 U	410 U	490 U	570 U
2,4,5-TRICHLOROPHENOL	0.331	3.2		2400 U	2000 U	2500 U	2800 U
2,4,6-TRIBROMOPHENOL	0.29	27.2					
2,4,6-TRICHLOROPHENOL	0.303	14.8		470 U	410 U	490 U	570 U
2,6-DINITROTOLUENE	0.352	9.6		470 U	410 U	490 U	570 U
3-NITROANILINE	0.36	6.7		2400 U	2000 U	2500 U	2800 U
3,3'-DICHLOROBENZIDINE	0.134	27.4		940 U	820 U	990 U	1100 U
4-BROMOPHENYL-PHENYLETHER	0.303	9.3		470 U	410 U	490 U	570 U
4-CHLORO-3-METHYLPHENOL	0.312	5		470 U	410 U	490 U	570 U
4-CHLOROANILINE	0.4	1.2		470 U	410 U	490 U	570 U
4-CHLOROPHENYL-PHENYLETHER	0.636	7.5		470 U	410 U	490 U	570 U
4-METHYLPHENOL	1.266	3.6		470 U	410 U	490 U	570 U
4-NITROANILINE	0.254	9.6		2400 U	2000 U	2500 U	2800 U
4-NITROPHENOL	0.225	14.1		2400 U	2000 U	2500 U	2800 U
4,6-DINITRO-2-METHYLPHENOL	0.098	7.9		2400 U	2000 U	2500 U	2800 U
SURR 1(NBZ) %RECOVERY				30	30	31	24
SURR 2(FBP) %RECOVERY				51	46	57	40
SURR 3(TPH) %RECOVERY				102	102	128	89
SURR 4(PHL) %RECOVERY				34	36	54	38
SURR 5(2FP) %RECOVERY				35	39	51	35
SURR 6(TBP) %RECOVERY				77	83	3 *	80

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TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

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AREA	QA	QA	QA				
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	BNL LANDF	BNL LANDF	N WOODED P	N WOODED P
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	LEACHATE	LEACHATE	POND	POND
SAMPLE NUMBER	BR0509887	BR0509887	BR0509888	BR500069B	BR500047B	BR305028B	BR305039B
MATRIX				SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	AREA	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO				4	4	1	1
M/E 68-1							
M/E 68-2							
M/E 69							
M/E 70-1							
M/E 70-2							
M/E 127							
M/E 197							
M/E 198							
M/E 199							
M/E 275							
M/E 365							
M/E 441							
M/E 442							
M/E 443-1							
M/E 443-2							
INTERNAL STD AREA(ANT)			83300	48100	80800	87700	91400
INTERNAL STD AREA(CRY)			92900	47100	69500	80600	74200
INTERNAL STD AREA(DCB)			57300	56300	72100	79600	78800
INTERNAL STD AREA(NPT)			191000	150000	207000	244000	235000
INTERNAL STD AREA(PHN)			139000	63200	98800	117000	120000
INTERNAL STD AREA(PRY)			64600	32800	50700	60600	47600
DILUTION FACTOR				1	1	1	1
PERCENT MOISTURE				31	19	33	42
ACTUAL(ALLOWED) EXTRACT TIME				6(14 D)	6(14 D)	7(14 D)	7(14 D)

AREA

LOCATION	BNL LANDF
TYPE OF LOCATION	LEACHATE
SAMPLE NUMBER	BR500058B
MATRIX	SOIL
UNITS	UG/KG
ENV PROBLEM NO	4
ACENAPHTHENE	400 U

TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA

LOCATION
 TYPE OF LOCATION
 SAMPLE NUMBER
 MATRIX
 UNITS
 ENV PROBLEM NO

BNL LANDF
 LEACHATE
 BR500058B
 SOIL
 UG/KG
 4

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ACENAPHTHYLENE	400 U
ANTHRACENE	400 U
BENZO(A)ANTHRACENE	100 J
BENZO(A)PYRENE	87 J
BENZO(B)FLUORANTHENE	120 J
BENZO(G,H,I)PERYLENE	61 J
BENZO(K)FLUORANTHENE	400 U
BENZOIC ACID	2000 U
BENZYL ALCOHOL	400 U
BIS(2-CHLOROETHOXY)METHANE	400 U
BIS(2-CHLOROETHYL)ETHER	400 U
BIS(2-CHLOROISOPROPYL)ETHER	400 U
BIS(2-ETHYLHEXYL)PHTHALATE	400 U
BUTYLBENZYLPHthalate	400 U
CHRYSENE	110 J
DI-N-BUTYLPHthalate	400 U
DI-N-OCTYLPHthalate	11 JB
DIBENZ(A,H)ANTHRACENE	400 U
DIBENZOFURAN	400 U
DIETHYLPHthalate	30 JB
DIMETHYLPHthalate	400 U
FLUORANTHENE	180 J
FLUORENE	400 U
HEXACHLOROBENZENE	400 U
HEXACHLOROBUTADIENE	400 U
HEXACHLOROCYCLOPENTADIENE	400 U
HEXACHLOROETHANE	400 U
INDENO(1,2,3-CD)PYRENE	71 J
ISOPHORONE	400 U
N-NITROSO-DI-N-PROPYLAMINE	400 U
N-NITROSODIPHENYLAMINE	400 U
NAPHTHALENE	400 U
NITROBENZENE	400 U
NITROBENZENE-D5	
PENTACHLOROPHENOL	2000 U
PHENANTHRENE	73 J
PHENOL	400 U
PHENOL-D5	
PYRENE	170 J

TABLE D.6.5 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR303015B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BNL LANDF LEACHATE BR500058B SOIL UG/KG 4
--	--

TERPHENYL-D14	
1,2-DICHLOROBENZENE	400 U
1,2,4-TRICHLOROBENZENE	400 U
1,3-DICHLOROBENZENE	400 U
1,4-DICHLOROBENZENE	400 U
2-CHLORONAPHTHALENE	400 U
2-CHLOROPHENOL	400 U
2-FLUOROBIPHENYL	
2-FLUOROPHENOL	
2-METHYLNAPHTHALENE	400 U
2-METHYLPHENOL	400 U
2-NITROANILINE	2000 U
2-NITROPHENOL	400 U
2,4-DICHLOROPHENOL	400 U
2,4-DIMETHYLPHENOL	400 U
2,4-DINITROPHENOL	2000 U
2,4-DINITROTOLUENE	400 U
2,4,5-TRICHLOROPHENOL	2000 U
2,4,6-TRIBROMOPHENOL	
2,4,6-TRICHLOROPHENOL	400 U
2,6-DINITROTOLUENE	400 U
3-NITROANILINE	2000 U
3,3'-DICHLOROBENZIDINE	800 U
4-BROMOPHENYL-PHENYLETHER	400 U
4-CHLORO-3-METHYLPHENOL	400 U
4-CHLOROANILINE	400 U
4-CHLOROPHENYL-PHENYLETHER	400 U
4-METHYLPHENOL	400 U
4-NITROANILINE	2000 U
4-NITROPHENOL	2000 U
4,6-DINITRO-2-METHYLPHENOL	2000 U

SURR 1(NBZ) %RECOVERY	20 *
SURR 2(FBP) %RECOVERY	46
SURR 3(TPH) %RECOVERY	100
SURR 4(PHL) %RECOVERY	34
SURR 5(2FP) %RECOVERY	33
SURR 6(TBP) %RECOVERY	87

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AREA

LOCATION	BNL LANDF
TYPE OF LOCATION	LEACHATE
SAMPLE NUMBER	BR500058B
MATRIX	SOIL
UNITS	UG/KG
ENV PROBLEM NO	4

M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

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INTERNAL STD AREA(ANT)	83100
INTERNAL STD AREA(CRY)	69200
INTERNAL STD AREA(DCB)	79800
INTERNAL STD AREA(NPT)	216000
INTERNAL STD AREA(PHN)	114000
INTERNAL STD AREA(PRY)	50500

DILUTION FACTOR	1
PERCENT MOISTURE	18
ACTUAL(ALLOWED) EXTRACT TIME	6(14 D)

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0512885	BR0512887	BR0512887	BR0512888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
D-218							
ACENAPHTHENE	1.232	5.9			1.256	1.9	
ACENAPHTHYLENE	1.886	9.6			1.853	1.8	
ANTHRACENE	1.012	8.4			0.976	3.6	
BENZO(A)ANTHRACENE	1.032	8.2			0.962	6.7	
BENZO(A)PYRENE	1.088	8.6			1.087	0.1	
BENZO(B)FLUORANTHENE	1.375	11.3			1.304	5.2	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.904	18.7	
BENZO(K)FLUORANTHENE	1.148	3.6			1.265	10.2	
BENZOIC ACID	0.137	13.6			0.131	4.4	
BENZYL ALCOHOL	0.84	10.8			0.746	11.2	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.766	2.1	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.661	1.5	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.45	24.2	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.163	12.5	
BUTYLBENZYLPHthalATE	0.956	11.4			0.908	5.1	
CHRYSENE	1.022	5.5			0.915	10.5	
DI-N-BUTYLPHthalATE	2.033	13.6			1.7	16.4	
DI-N-OCTYLPHthalATE	2.778	18.9			2.44	12.1	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.861	16	
DIBENZOFURAN	1.455	6.1			1.475	1.4	
DIETHYLPHthalATE	1.557	22.1			1.65	6	
DIMETHYLPHthalATE	1.491	9.3			1.552	4.1	
FLUORANTHENE	0.982	17.9			0.824	16.2	
FLUORENE	1.096	8.1			1.119	2.2	
HEXACHLOROBENZENE	0.392	7.8			0.381	2.8	
HEXACHLOROBUTADIENE	0.188	3.2			0.151	19.5	
HEXACHLOROCYCLOPENTADIENE	0.433	13.3			0.263	39.1	
HEXACHLOROETHANE	0.882	4.2			0.76	13.9	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.894	11.3	
ISOPHORONE	0.92	11.2			0.944	2.5	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.406	1.8	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.56	9	
NAPHTHALENE	1.075	6.4			1.084	0.8	
NITROBENZENE	0.54	4.1			0.512	5.2	
NITROBENZENE-D5	0.519	5.1			0.475	8.5	
PENTACHLOROPHENOL	0.132	19.5			0.163	23.1	
PHENANTHRENE	1.064	9.8			1.006	5.5	
PHENOL	2.514	16.4			2.027	19.4	
PHENOL-D5	1.957	16.3			1.82	7	

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0512885	BR0512887	BR0512887	BR0512888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
PYRENE	1.365	1.5			1.41	3.3	
TERPHENYL-D14	1.059	5.9			1.182	11.6	
1,2-DICHLOROBENZENE	1.399	9.2			1.366	2.4	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.277	4.4	
1,3-DICHLOROBENZENE	1.44	8.8			1.417	1.6	
1,4-DICHLOROBENZENE	1.501	9.4			1.447	3.6	
2-CHLORONAPHTHALENE	1.22	13.6			1.238	1.5	
2-CHLOROPHENOL	1.517	13.7			1.401	7.7	
2-FLUOROBIPHENYL	1.311	9.3			1.292	1.4	
2-FLUOROPHENOL	1.323	11.1			1.304	1.5	
2-METHYLNAPHTHALENE	0.439	15.3			0.476	8.5	
2-METHYLPHENOL	1.148	13.9			1.184	3.1	
2-NITROANILINE	0.432	16.2			0.515	19.2	
2-NITROPHENOL	0.184	8.3			0.196	6.4	
2,4-DICHLOROPHENOL	0.247	8.9			0.241	2.4	
2,4-DIMETHYLPHENOL	0.242	18.5			0.268	10.4	
2,4-DINITROPHENOL	0.102	20.1			0.108	6.1	
2,4-DINITROTOLUENE	0.312	14.8			0.347	11	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.311	9.2	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.283	24.1	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.323	9.3	
2,6-DINITROTOLUENE	0.321	11.5			0.338	5.3	
3-NITROANILINE	0.386	13.1			0.347	9.9	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.077	58.6	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.31	7.3	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.312	4.9	
4-CHLOROANILINE	0.395	12.7			0.393	0.6	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.611	3.4	
4-METHYLPHENOL	1.314	17.4			1.281	2.5	
4-NITROANILINE	0.231	18.7			0.196	15.1	
4-NITROPHENOL	0.197	12.4			0.228	15.8	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.102	3.9	

SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0512885	BR0512887	BR0512887	BR0512888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
M/E 51			35	39			
M/E 68-1			0	0.3			
M/E 68-2			0	0.3			
M/E 69			69	78			
M/E 70-1			0.2	0			
M/E 70-2			0.3	0			
M/E 127			57	59			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	6.1			
M/E 275			27	27			
M/E 365			2.1	2.6			
M/E 441			10	15			
M/E 442			62	87			
M/E 443-1			11	17			
M/E 443-2			17	20			
INTERNAL STD AREA(ANT)							67600
INTERNAL STD AREA(CRY)							57600
INTERNAL STD AREA(DCB)							48000
INTERNAL STD AREA(NPT)							160000
INTERNAL STD AREA(PHH)							105000
INTERNAL STD AREA(PRY)							34000
DILUTION FACTOR							
ACTUAL(ALLOWED) EXTRACT TIME							
AREA	QA						
LOCATION	METHOD	STP	STP	STP	B. 444	STP	STP
TYPE OF LOCATION	BLANK	TANK	TANK	TANK	RELEASES	TANK	TANK
SAMPLE NUMBER	SBK08124	BR801041E	BR801030E	BR801030F	BR503051E	BR801018E	BR801029E
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		8	8	8	6	8	8
ACENAPHTHENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	QA						
		METHOD BLANK SBK08124 WATER UG/L	STP TANK BR801041E WATER UG/L	STP TANK BR801030E WATER UG/L	STP TANK BR801030F WATER UG/L	B. 444 RELEASES BR503051E WATER UG/L	STP TANK BR801018E WATER UG/L	STP TANK BR801029E WATER UG/L
D-221	ACENAPHTHYLENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	ANTHRACENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BENZO(A)PYRENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BENZO(K)FLUORANTHENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BENZOIC ACID	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	BENZYL ALCOHOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U	10 U	10 U	300	10 U	3 J
	BUTYL BENZYL PHTHALATE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	CHRYSENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	DI-N-BUTYL PHTHALATE	10 U	10 U	10 U	10 U	10 J	10 U	10 U
	DI-N-OCTYL PHTHALATE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	DIBENZ(A,H)ANTHRACENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	DIBENZOFURAN	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	DIETHYL PHTHALATE	10 U	10 U	10 U	10 U	26	10 U	10 U
	DIMETHYL PHTHALATE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	FLUORANTHENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	FLUORENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	HEXACHLORO BENZENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	HEXACHLORO BUTADIENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	HEXACHLORO CYCLOPENTADIENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	HEXACHLOROETHANE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	ISOPHORONE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	NAPHTHALENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	NITROBENZENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	NITROBENZENE-D5							
PENTACHLOROPHENOL	50 U	50 U	50 U	50 U	54 U	50 U	50 U	
PHENANTHRENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U	
PHENOL	10 U	10 U	10 U	10 U	9 J	10 U	10 U	
PHENOL-D5								
PYRENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U	

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	QA						
		METHOD BLANK SBK08124 WATER UG/L	STP TANK BR801041E WATER UG/L	STP TANK BR801030E WATER UG/L	STP TANK BR801030F WATER UG/L	B. 444 RELEASES BR503051E WATER UG/L	STP TANK BR801018E WATER UG/L	STP TANK BR801029E WATER UG/L
D-222	TERPHENYL-D14							
	1,2-DICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	1,3-DICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	1,4-DICHLOROBENZENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2-CHLOROPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2-FLUOROBIPHENYL							
	2-FLUOROPHENOL							
	2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2-METHYLPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2-NITROANILINE	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	2-NITROPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2,4-DINITROPHENOL	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2,4,5-TRICHLOROPHENOL	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	2,4,6-TRIBROMOPHENOL							
	2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	3-NITROANILINE	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	3,3'-DICHLOROBENZIDINE	20 U	20 U	20 U	20 U	22 U	20 U	20 U
	4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	4-CHLOROANILINE	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	4-METHYLPHENOL	10 U	10 U	10 U	10 U	11 U	10 U	10 U
	4-NITROANILINE	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	4-NITROPHENOL	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	4,6-DINITRO-2-METHYLPHENOL	50 U	50 U	50 U	50 U	54 U	50 U	50 U
	SURR 1(NBZ) %RECOVERY	58	66	77	51	86	52	78
	SURR 2(FBP) %RECOVERY	48	58	67	46	79	46	61
	SURR 3(TPH) %RECOVERY	77	76	84	60	79	64	86
	SURR 4(PHL) %RECOVERY	21	24	25	18	14	18	27
SURR 5(2FP) %RECOVERY	41	46	51	35	57	35	53	
SURR 6(TBP) %RECOVERY	53	78	86	58	72	62	89	

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	QA							
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08124 WATER UG/L	STP TANK BR801041E WATER UG/L	STP TANK BR801030E WATER UG/L	STP TANK BR801030F WATER UG/L	B. 444 RELEASES BR503051E WATER UG/L	STP TANK BR801018E WATER UG/L	STP TANK BR801029E WATER UG/L
		8	8	8	6	8	8	
M/E 68-1								
M/E 68-2								
M/E 69								
M/E 70-1								
M/E 70-2								
M/E 127								
M/E 197								
M/E 198								
M/E 199								
M/E 275								
M/E 365								
M/E 441								
M/E 442								
M/E 443-1								
M/E 443-2								

INTERNAL STD AREA(ANT)	54800	55100	54900	54800	49800	61600	67300	
INTERNAL STD AREA(CRY)	43700	55100	52800	46800	43600	48300	57800	
INTERNAL STD AREA(DCB)	38200	38600	37800	38600	38200	46500	44200	
INTERNAL STD AREA(NPT)	125000	127000	122000	130000	122000	146000	144000	
INTERNAL STD AREA(PHN)	82100	82700	83400	84000	72600	92700	103000	
INTERNAL STD AREA(PRY)	64700	38900	41800	41500	27300	33200	36600	

DILUTION FACTOR	2	2	2	2	2	2	2	
ACTUAL(ALLOWED) EXTRACT TIME		7(7 D)	7(7 D)	7(7 D)	8(7 D)	7(7 D)	7(7 D)	
AREA				QA	QA	QA	QA	
LOCATION	B. 422	B. 422	B. 422	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	
TYPE OF LOCATION	CESSPOOL	CESSPOOL	CESSPOOL	CALIBRATION	CALIBRATION	CAL X D	SHIFT	
SAMPLE NUMBER	BR308010E	BR308021E	BR308032E	BR0513885	BR0513887	BR0513887	BR0513888	
MATRIX	WATER	WATER	WATER					
UNITS	UG/L	UG/L	UG/L	%	RRF	%	AREA	
ENV PROBLEM NO	2	2	2					
ACENAPHTHENE	33 U	24 U	15 U		1.217	1.2		
ACENAPHTHYLENE	33 U	24 U	15 U		1.691	10.3		

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	B. 422			QA	QA	QA	QA
	CESSPOOL BR308010E	CESSPOOL BR308021E	CESSPOOL BR308032E	TUNED CALIBRATION BR0513885	CONTINUING CALIBRATION BR0513887	CONTINUING CAL %D BR0513887	ISTD RET TIM SHIFT BR0513888
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	WATER UG/L 2	WATER UG/L 2	WATER UG/L 2	%	RRF	%	AREA
D-224							
ANTHRACENE	33 U	24 U	15 U		0.955	5.6	
BENZO(A)ANTHRACENE	33 U	24 U	15 U		0.962	6.8	
BENZO(A)PYRENE	33 U	24 U	15 U		1.086	0.1	
BENZO(B)FLUORANTHENE	33 U	24 U	15 U		1.389	1	
BENZO(G,H,I)PERYLENE	33 U	24 U	15 U		0.896	17.6	
BENZO(K)FLUORANTHENE	33 U	24 U	15 U		1.191	3.7	
BENZOIC ACID	170 U	120 U	77 U		0.163	19.1	
BENZYL ALCOHOL	33 U	24 U	15 U		0.679	19.1	
BIS(2-CHLOROETHOXY)METHANE	33 U	24 U	15 U		0.758	3	
BIS(2-CHLOROETHYL)ETHER	33 U	24 U	15 U		2.66	1.5	
BIS(2-CHLOROISOPROPYL)ETHER	33 U	24 U	15 U		1.409	20.7	
BIS(2-ETHYLHEXYL)PHTHALATE	62	81	90		1.253	5.7	
BUTYLBENZYLPHthalate	1 J	24 U	3 J		1.062	11.1	
CHRYSENE	33 U	24 U	15 U		0.952	6.8	
DI-N-BUTYLPHthalate	4 J	4 J	4 J		1.544	24.1	
DI-N-OCTYLPHthalate	0.8 J	1 J	2 J		2.797	0.7	
DIBENZ(A,H)ANTHRACENE	33 U	24 U	15 U		0.839	13.1	
DIBENZOFURAN	33 U	24 U	15 U		1.407	3.3	
DIETHYLPHthalate	33 U	24 U	0.6 J		1.648	5.9	
DIMETHYLPHthalate	33 U	24 U	15 U		1.57	5.3	
FLUORANTHENE	33 U	24 U	1 J		0.747	24	
FLUORENE	33 U	24 U	15 U		1.11	1.3	
HEXACHLORO BENZENE	33 U	24 U	15 U		0.393	0.3	
HEXACHLORO BUTADIENE	33 U	24 U	15 U		0.157	16.7	
HEXACHLORO CYCLOPENTADIENE	33 U	24 U	15 U		0.165	61.9	
HEXACHLOROETHANE	33 U	24 U	15 U		0.751	14.9	
INDENO(1,2,3-CD)PYRENE	33 U	24 U	15 U		0.816	1.6	
ISOPHORONE	33 U	24 U	15 U		0.927	0.7	
N-NITROSO-DI-N-PROPYLAMINE	33 U	24 U	15 U		1.484	3.6	
N-NITROSODIPHENYLAMINE	33 U	2 J	2 J		0.599	2.6	
NAPHTHALENE	6 J	14 J	20		1.071	0.4	
NITROBENZENE	33 U	24 U	15 U		0.519	4	
NITROBENZENE-D5					0.462	10.8	
PENTACHLOROPHENOL	170 U	120 U	77 U		0.155	17.5	
PHENANTHRENE	33 U	1 J	1 J		0.957	10.1	
PHENOL	13 J	74	66		2.109	16.1	
PHENOL-D5					1.799	8.1	
PYRENE	33 U	24 U	1 J		1.697	24.3	
TERPHENYL-D14					1.234	16.5	

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA				QA	QA	QA	QA
LOCATION	B. 422	B. 422	B. 422	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	CESSPOOL	CESSPOOL	CESSPOOL	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR308010E	BR308021E	BR308032E	BR0513885	BR0513887	BR0513887	BR0513888
MATRIX	WATER	WATER	WATER	%	RRF	%	AREA
UNITS	UG/L	UG/L	UG/L				
ENV PROBLEM NO	2	2	2				
1,2-DICHLOROBENZENE	33 U	24 U	15 U		1.398	0.1	
1,2,4-TRICHLOROBENZENE	33 U	24 U	15 U		0.28	3.3	
1,3-DICHLOROBENZENE	33 U	24 U	15 U		1.441	0.1	
1,4-DICHLOROBENZENE	33 U	24 U	15 U		1.457	2.9	
2-CHLORONAPHTHALENE	33 U	24 U	15 U		1.15	5.7	
2-CHLOROPHENOL	33 U	24 U	15 U		1.444	4.8	
2-FLUOROBIPHENYL					1.232	6	
2-FLUOROPHENOL					1.318	0.4	
2-METHYLNAPHTHALENE	33 U	24 U	18 J		0.616	40.4	
2-METHYLPHENOL	33 U	24 U	15 U		1.216	5.9	
2-NITROANILINE	170 U	120 U	77 U		0.465	7.5	
2-NITROPHENOL	33 U	24 U	15 U		0.195	6.2	
2,4-DICHLOROPHENOL	33 U	24 U	15 U		0.246	0.4	
2,4-DIMETHYLPHENOL	33 U	24 U	15 U		0.269	10.8	
2,4-DINITROPHENOL	170 U	120 U	77 U		0.079	22.4	
2,4-DINITROTOLUENE	33 U	24 U	15 U		0.325	4.1	
2,4,5-TRICHLOROPHENOL	170 U	120 U	77 U		0.335	2.1	
2,4,6-TRIBROMOPHENOL					0.27	18.3	
2,4,6-TRICHLOROPHENOL	33 U	24 U	15 U		0.312	12.3	
2,6-DINITROTOLUENE	33 U	24 U	15 U		0.328	2.1	
3-NITROANILINE	170 U	120 U	77 U		0.327	15.1	
3,3'-DICHLOROBENZIDINE	67 U	47 U	31 U		0.082	55.9	
4-BROMOPHENYL-PHENYLETHER	33 U	24 U	15 U		0.314	6.2	
4-CHLORO-3-METHYLPHENOL	33 U	24 U	15 U		0.31	4.3	
4-CHLOROANILINE	33 U	24 U	15 U		0.357	9.7	
4-CHLOROPHENYL-PHENYLETHER	33 U	24 U	15 U		0.618	4.5	
4-METHYLPHENOL	94	260	830		1.28	2.6	
4-NITROANILINE	170 U	120 U	77 U		0.194	16.2	
4-NITROPHENOL	170 U	120 U	77 U		0.174	11.9	
4,6-DINITRO-2-METHYLPHENOL	170 U	120 U	77 U		0.087	18.1	

SURR 1(NBZ) %RECOVERY	61	77	77				
SURR 2(FBP) %RECOVERY	61	82	76				
SURR 3(TPH) %RECOVERY	64	83	99				
SURR 4(PHL) %RECOVERY	50	64	49				
SURR 5(2FP) %RECOVERY	63	79	69				
SURR 6(TBP) %RECOVERY	71	86	106				

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA				QA	QA	QA	QA
LOCATION	B. 422	B. 422	B. 422	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	CESSPOOL	CESSPOOL	CESSPOOL	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR308010E	BR308021E	BR308032E	BR0513885	BR0513887	BR0513887	BR0513888
MATRIX	WATER	WATER	WATER				
UNITS	UG/L	UG/L	UG/L	%	RRF	%	AREA
ENV PROBLEM NO	2	2	2				
M/E 68-1				0			
M/E 68-2				0			
M/E 69				72			
M/E 70-1				0			
M/E 70-2				0			
M/E 127				58			
M/E 197				0			
M/E 198				100			
M/E 199				5.7			
M/E 275				27			
M/E 365				1.8			
M/E 441				15			
M/E 442				99			
M/E 443-1				19			
M/E 443-2				19			
INTERNAL STD AREA(ANT)	58700	58400	74300				88500
INTERNAL STD AREA(CRY)	50200	33200	41100				48800
INTERNAL STD AREA(DCB)	44000	50700	54300				59000
INTERNAL STD AREA(NPT)	153000	172000	192000				194000
INTERNAL STD AREA(PHN)	87000	80400	114000				126000
INTERNAL STD AREA(PRY)	32200	22900	27600				26300
DILUTION FACTOR	2	2	2				
ACTUAL(ALLOWED) EXTRACT TIME	8(7 D)	8(7 D)	8(7 D)				
AREA							
LOCATION	AGS SCRAP.	AGS SCRAP.	AGS SCRAP.	B. 975	B-975	B-975	B-975
TYPE OF LOCATION	WELL	WELL	WELL	BUBBLE ARE	WELL	WELL	WELL
SAMPLE NUMBER	BR805012E	BR805023E	BR805034E	BR806159E	BR807014E	BR807025E	BR807036E
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	9	9	9	10	10	10	10
ACENAPHTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ACENAPHTHYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	AGS SCRAP. WELL BR805012E WATER UG/L 9	AGS SCRAP. WELL BR805023E WATER UG/L 9	AGS SCRAP. WELL BR805034E WATER UG/L 9	B. 975 BUBBLE ARE BR806159E WATER UG/L 10	B-975 WELL BR807014E WATER UG/L 10	B-975 WELL BR807025E WATER UG/L 10	B-975 WELL BR807036E WATER UG/L 10
ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(A)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(B)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(G,H,I)PERYLENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZO(K)FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BENZOIC ACID	50 U	50 U	50 U	50 U	50 U	50 U	52 U
BENZYL ALCOHOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BUTYLBENZYLPHthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CHRYSENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-BUTYLPHthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-OCTYLPHthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIBENZ(A,H)ANTHRACENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIBENZOFURAN	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIETHYLPHthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIMETHYLPHthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORANTHENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
FLUORENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLORO BENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLORO BUTADIENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLORO CYCLOPENTADIENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
HEXACHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ISOPHORONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NITROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
NITROBENZENE-D5							
PENTACHLOROPHENOL	50 U	50 U	50 U	50 U	50 U	50 U	52 U
PHENANTHRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
PHENOL-D5							
PYRENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
TERPHENYL-D14							

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	AGS SCRAP. WELL BR805012E WATER UG/L 9	AGS SCRAP. WELL BR805023E WATER UG/L 9	AGS SCRAP. WELL BR805034E WATER UG/L 9	B. 975 BUBBLE ARE BR806159E WATER UG/L 10	B-975 WELL BR807014E WATER UG/L 10	B-975 WELL BR807025E WATER UG/L 10	B-975 WELL BR807036E WATER UG/L 10
1,2-DICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-DICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,4-DICHLOROBENZENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-NITROANILINE	50 U	50 U	50 U	50 U	50 U	50 U	52 U
2-NITROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	50 U	50 U	50 U	50 U	50 U	50 U	52 U
2,4-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	50 U	50 U	50 U	50 U	50 U	50 U	52 U
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-NITROANILINE	50 U	50 U	50 U	50 U	50 U	50 U	52 U
3,3'-DICHLOROENZIDINE	20 U	20 U	20 U	20 U	20 U	20 U	21 U
4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROANILINE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-NITROANILINE	50 U	50 U	50 U	50 U	50 U	50 U	52 U
4-NITROPHENOL	50 U	50 U	50 U	50 U	50 U	50 U	52 U
4,6-DINITRO-2-METHYLPHENOL	50 U	50 U	50 U	50 U	50 U	50 U	52 U

SURR 1(NBZ) %RECOVERY	68	64	79	69	58	66	73
SURR 2(FBP) %RECOVERY	62	57	65	57	55	60	62
SURR 3(TPH) %RECOVERY	77	75	79	67	72	79	76
SURR 4(PHL) %RECOVERY	22	21	25	24	21	23	26
SURR 5(2FP) %RECOVERY	42	43	50	43	41	46	50
SURR 6(TBP) %RECOVERY	72	67	71	57	59	71	75

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	AGS SCRAP. WELL BR805012E WATER UG/L 9	AGS SCRAP. WELL BR805023E WATER UG/L 9	AGS SCRAP. WELL BR805034E WATER UG/L 9	B. 975 BUBBLE ARE BR806159E WATER UG/L 10	B-975 WELL BR807014E WATER UG/L 10	B-975 WELL BR807025E WATER UG/L 10	B-975 WELL BR807036E WATER UG/L 10
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- M/E 68-1
- M/E 68-2
- M/E 69
- M/E 70-1
- M/E 70-2
- M/E 127
- M/E 197
- M/E 198
- M/E 199
- M/E 275
- M/E 365
- M/E 441
- M/E 442
- M/E 443-1
- M/E 443-2

INTERNAL STD AREA(ANT)	67900	67300	62400	63400	60500	63200	68300
INTERNAL STD AREA(CRY)	42700	42300	41300	40200	37300	41200	48500
INTERNAL STD AREA(DCB)	51700	47700	45500	43900	45100	45600	44400
INTERNAL STD AREA(NPT)	163000	159000	144000	146000	148000	149000	146000
INTERNAL STD AREA(PHN)	97600	96500	87200	91500	86000	90100	99500
INTERNAL STD AREA(PRY)	29200	25300	26300	23100	21200	25400	28300

DILUTION FACTOR	2	2	2	2	2	2	2
ACTUAL(ALLOWED) EXTRACT TIME	6(7 D)	6(7 D)	6(7 D)	6(7 D)	5(7 D)	5(7 D)	5(7 D)

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 479 CESSPOOL BR311026E WATER UG/L 2	BOUNDRY RD WELL BR809016E WATER UG/L 0	BOUNDRY RD WELL BR809027E WATER UG/L 0	TUNED CALIBRATION BR0516885 %	CONTINUING CALIBRATION BR0516887 RRF	CONTINUING CAL %D BR0516887 %	ISTD RET TIM SHIFT BR0516888 AREA
ACENAPHTHENE	10 U	10 U	10 U		1.194	3.1	
ACENAPHTHYLENE	10 U	10 U	10 U		1.631	13.6	

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA				QA	QA	QA	QA
LOCATION	B. 479	BOUNDRY RD	BOUNDRY RD	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	CESSPOOL	WELL	WELL	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR311026E	BR809016E	BR809027E	BR0516885	BR0516887	BR0516887	BR0516888
MATRIX	WATER	WATER	WATER	%	RRF	%	AREA
UNITS	UG/L	UG/L	UG/L				
ENV PROBLEM NO	2	0	0				
ANTHRACENE	10 U	10 U	10 U		0.985	2.7	
BENZO(A)ANTHRACENE	10 U	10 U	10 U		0.944	8.5	
BENZO(A)PYRENE	10 U	10 U	10 U		1.104	1.5	
BENZO(B)FLUORANTHENE	10 U	10 U	10 U		1.25	9.1	
BENZO(G,H,I)PERYLENE	10 U	10 U	10 U		0.949	24.6	
BENZO(K)FLUORANTHENE	10 U	10 U	10 U		1.272	10.8	
BENZOIC ACID	50 U	50 U	8 J		0.141	2.8	
BENZYL ALCOHOL	10 U	10 U	10 U		0.674	19.8	
D-230 BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U		0.754	3.6	
BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U		2.694	2.8	
BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U	10 U		1.558	33.5	
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U	10 U		1.07	19.5	
BUTYLBENZYLPHthalate	10 U	10 U	10 U		0.913	4.6	
CHRYSENE	10 U	10 U	10 U		0.928	9.1	
DI-N-BUTYLPHthalate	10 U	10 U	10 U		1.719	15.5	
DI-N-OCTYLPHthalate	10 U	10 U	10 U		2.422	12.8	
DIBENZ(A,H)ANTHRACENE	10 U	10 U	10 U		0.84	13.2	
DIBENZOFURAN	10 U	10 U	10 U		1.402	3.6	
DIETHYLPHthalate	10 U	10 U	10 U		1.663	6.8	
DIMETHYLPHthalate	10 U	10 U	10 U		1.494	0.1	
FLUORANTHENE	10 U	10 U	10 U		0.818	16.7	
FLUORENE	10 U	10 U	10 U		1.124	2.5	
HEXACHLOROBENZENE	10 U	10 U	10 U		0.398	1.6	
HEXACHLOROBUTADIENE	10 U	10 U	10 U		0.153	18.4	
HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 U		0.218	49.5	
HEXACHLOROETHANE	10 U	10 U	10 U		0.781	11.5	
INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U		0.882	9.9	
ISOPHORONE	10 U	10 U	10 U		0.936	1.7	
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U		1.623	13.3	
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U		0.59	4.1	
NAPHTHALENE	10 U	10 U	10 U		1.102	2.5	
NITROBENZENE	10 U	10 U	10 U		0.53	1.8	
NITROBENZENE-D5					0.461	11	
PENTACHLOROPHENOL	50 U	50 U	50 U		0.164	24.1	
PHENANTHRENE	10 U	10 U	10 U		1.003	5.8	
PHENOL	10 U	10 U	10 U		2.078	17.3	
PHENOL-D5					1.828	6.6	
PYRENE	10 U	10 U	10 U		1.559	14.2	
TERPHENYL-D14					1.251	18.1	

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA				QA	QA	QA	QA	
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 479 CESSPOOL BR311026E WATER UG/L 2	BOUNDRY RD WELL BR809016E WATER UG/L 0	BOUNDRY RD WELL BR809027E WATER UG/L 0	TUNED CALIBRATION BR0516885 %	CONTINUING CALIBRATION BR0516887 RRF	CONTINUING CAL %D BR0516887 %	ISTD RET TIM SHIFT BR0516888 AREA
D-231	1,2-DICHLOROBENZENE	10 U	10 U	10 U		1.358	3	
	1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U		0.278	3.9	
	1,3-DICHLOROBENZENE	10 U	10 U	10 U		1.436	0.3	
	1,4-DICHLOROBENZENE	10 U	10 U	10 U		1.474	1.8	
	2-CHLORONAPHTHALENE	10 U	10 U	10 U		1.093	10.4	
	2-CHLOROPHENOL	10 U	10 U	10 U		1.589	8.4	
	2-FLUOROBIPHENYL					1.158	11.7	
	2-FLUOROPHENOL					1.261	4.7	
	2-METHYLNAPHTHALENE	10 U	10 U	10 U		0.627	43	
	2-METHYLPHENOL	10 U	10 U	10 U		1.195	4	
	2-NITROANILINE	50 U	50 U	50 U		0.5	15.6	
	2-NITROPHENOL	10 U	10 U	10 U		0.194	5.4	
	2,4-DICHLOROPHENOL	10 U	10 U	10 U		0.211	14.5	
	2,4-DIMETHYLPHENOL	10 U	10 U	10 U		0.258	6.3	
	2,4-DINITROPHENOL	50 U	50 U	50 U		0.095	6.4	
	2,4-DINITROTOLUENE	10 U	10 U	10 U		0.34	9	
	2,4,5-TRICHLOROPHENOL	50 U	50 U	50 U		0.278	18.8	
	2,4,6-TRIBROMOPHENOL					0.268	17.6	
	2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U		0.283	20.6	
	2,6-DINITROTOLUENE	10 U	10 U	10 U		0.321	0.1	
	3-NITROANILINE	50 U	50 U	50 U		0.272	29.6	
	3,3'-DICHLOROBENZIDINE	20 U	20 U	20 U		0.057	69.3	
	4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U		0.336	0.4	
	4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U		0.318	6.8	
	4-CHLOROANILINE	10 U	10 U	10 U		0.376	4.9	
	4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U		0.599	1.3	
	4-METHYLPHENOL	10 U	10 U	10 U		1.269	3.4	
	4-NITROANILINE	50 U	50 U	50 U		0.165	28.6	
	4-NITROPHENOL	50 U	50 U	50 U		0.213	8.1	
	4,6-DINITRO-2-METHYLPHENOL	50 U	50 U	50 U		0.104	1.8	

	SURR 1(NBZ) %RECOVERY	64	79	73				
	SURR 2(FBP) %RECOVERY	57	64	61				
	SURR 3(TPH) %RECOVERY	66	82	80				
	SURR 4(PHL) %RECOVERY	23	29	27				
	SURR 5(2FP) %RECOVERY	46	52	52				
	SURR 6(TBP) %RECOVERY	73	84	1 *				

TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BOUNDRY RD WELL BR809038E WATER UG/L 0	B. 479 CESSPOOL BR306029E WATER UG/L 2	B. 479 CESSPOOL BR306030E WATER UG/L 2	B. 905 CESSPOOL BR310014E WATER UG/L 2	B. 975 CESSPOOL BR306018E WATER UG/L 2	BNL LANDF LEACHATE BR500070A WATER UG/L 4	BNL LANDF LEACHATE BR500081A WATER UG/L 4
ANTHRACENE	10 U	10 U					
BENZO(A)ANTHRACENE	10 U	10 U					
BENZO(A)PYRENE	10 U	10 U					
BENZO(B)FLUORANTHENE	10 U	10 U					
BENZO(G,H,I)PERYLENE	10 U	10 U					
BENZO(K)FLUORANTHENE	10 U	10 U					
BENZOIC ACID	50 U	50 U	64	50 U	50 U	40 J	390
BENZYL ALCOHOL	10 U	10 U					
BIS(2-CHLOROETHOXY)METHANE	10 U	10 J	10 U				
BIS(2-CHLOROETHYL)ETHER	10 U	10 U					
BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U					
BIS(2-ETHYLHEXYL)PHTHALATE	10 U	10 U	10 U	5 J	54	9 J	630
BUTYLBENZYLPHthalate	10 U	10 U					
CHRYSENE	10 U	10 U					
DI-N-BUTYLPHthalate	10 U	10 U	1 J	10 U	3 J	10 U	3 J
DI-N-OCTYLPHthalate	10 U	10 U	10 U	10 U	3 J	10 U	10 U
DIBENZ(A,H)ANTHRACENE	10 U	10 U					
DIBENZOFURAN	10 U	10 U					
DIETHYLPHthalate	10 U	0.7 J					
DIMETHYLPHthalate	10 U	10 U					
FLUORANTHENE	10 U	10 U					
FLUORENE	10 U	10 U					
HEXACHLOROBENZENE	10 U	10 U					
HEXACHLOROBUTADIENE	10 U	10 U					
HEXACHLOROCYCLOPENTADIENE	10 U	10 U					
HEXACHLOROETHANE	10 U	10 U					
INDENO(1,2,3-CD)PYRENE	10 U	10 U					
ISOPHORONE	10 U	10 U					
N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U					
N-NITROSODIPHENYLAMINE	10 U	10 U					
NAPHTHALENE	10 U	10 U					
NITROBENZENE	10 U	10 U					
NITROBENZENE-D5	10 U	10 U					
PENTACHLOROPHENOL	50 U	50 U					
PHENANTHRENE	10 U	10 U					
PHENOL	10 U	11	12	31	18	12 U	14
PHENOL-D5	10 U	10 U					
PYRENE	10 U	10 U					
TERPHENYL-D14	10 U	10 U					

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BOUNDRY RD WELL BR809038E WATER UG/L 0	B. 479 CESSPOOL BR306029E WATER UG/L 2	B. 479 CESSPOOL BR306030E WATER UG/L 2	B. 905 CESSPOOL BR310014E WATER UG/L 2	B. 975 CESSPOOL BR306018E WATER UG/L 2	BNL LANDF LEACHATE BR500070A WATER UG/L 4	BNL LANDF LEACHATE BR500081A WATER UG/L 4
1,2-DICHLOROBENZENE	10 U	10 U					
1,2,4-TRICHLOROBENZENE	10 U	10 U					
1,3-DICHLOROBENZENE	10 U	10 U					
1,4-DICHLOROBENZENE	10 U	10 U					
2-CHLORONAPHTHALENE	10 U	10 U					
2-CHLOROPHENOL	10 U	10 U					
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	10 U	10 U					
2-METHYLPHENOL	10 U	10 U	10 U	2 J	10 U	3 J	0.8
2-NITROANILINE	50 U	50 U					
2-NITROPHENOL	10 U	10 U					
2,4-DICHLOROPHENOL	10 U	10 U					
2,4-DIMETHYLPHENOL	10 U	2 J	10 U				
2,4-DINITROPHENOL	50 U	50 U					
2,4-DINITROTOLUENE	10 U	10 U					
2,4,5-TRICHLOROPHENOL	50 U	50 U					
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	10 U	10 U					
2,6-DINITROTOLUENE	10 U	10 U					
3-NITROANILINE	50 U	50 U					
3,3'-DICHLOROBENZIDINE	20 U	20 U					
4-BROMOPHENYL-PHENYLETHER	10 U	10 U					
4-CHLORO-3-METHYLPHENOL	10 U	10 U					
4-CHLOROANILINE	10 U	10 U					
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U					
4-METHYLPHENOL	10 U	280	270	97	390	47	100
4-NITROANILINE	50 U	50 U					
4-NITROPHENOL	50 U	50 U					
4,6-DINITRO-2-METHYLPHENOL	50 U	50 U					
SURR 1(NBZ) %RECOVERY	76	64	57	67	70	80	100
SURR 2(FBP) %RECOVERY	66	53	51	66	90	89	124 *
SURR 3(TPH) %RECOVERY	82	55	64	65	85	89	122
SURR 4(PHL) %RECOVERY	26	27	27	30	30	32	40
SURR 5(2FP) %RECOVERY	51	45	43	52	54	58	73
SURR 6(TBP) %RECOVERY	83	60	67	76	80	95	138 *

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDO NUMBER BR306018E

DRAFT DO NOT CITE

AREA		BOUNDRY RD	B. 479	B. 479	B. 905	B. 975	BNL LANDF	BNL LANDF
LOCATION	TYPE OF LOCATION	WELL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	LEACHATE	LEACHATE
SAMPLE NUMBER		BR809038E	BR306029E	BR306030E	BR310014E	BR306018E	BR500070A	BR500081A
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		0	2	2	2	2	4	4
M/E 68-1								
M/E 68-2								
M/E 69								
M/E 70-1								
M/E 70-2								
M/E 127								
M/E 197								
M/E 198								
M/E 199								
M/E 275								
M/E 365								
M/E 441								
M/E 442								
M/E 443-1								
M/E 443-2								
INTERNAL STD AREA(ANT)		62500	65500	69500	67300	62200	87300	85700
INTERNAL STD AREA(CRY)		37100	46200	51200	52700	50400	62500	64300
INTERNAL STD AREA(DCB)		41400	40900	45000	47400	53400	57800	55300
INTERNAL STD AREA(NPT)		129000	149000	161000	172000	180000	202000	199000
INTERNAL STD AREA(PHN)		84800	88700	105000	103000	98100	122000	124000
INTERNAL STD AREA(PRY)		22200	26800	31600	29600	35800	40300	39700
DILUTION FACTOR		2	2	2	2	2	2	2
ACTUAL(ALLOWED) EXTRACT TIME		9(7 D)	8(7 D)	8(7 D)	8(7 D)	10(7 D)	12(7 D)	12(7 D)
AREA			QA	QA	QA	QA	QA	
LOCATION		BNL LANDF	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %	
TYPE OF LOCATION		LEACHATE	SPIKE	RECOVERY		DUPLICATE	RECOVERY	
SAMPLE NUMBER		BR500092A	BR807036G	BR807036G	BR807036G	BR807036H	BR807036H	
MATRIX		WATER	WATER	WATER	WATER	WATER	WATER	
UNITS		UG/L	UG/L	%	%	UG/L	%	
ENV PROBLEM NO		4	10	10	10	10	10	
ACENAPHTHENE		10 U	90	86	0	89	86	
ACENAPHTHYLENE		10 U	10 U			11 U		

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BNL LANDF LEACHATE BR500092A WATER UG/L 4	MATRIX SPIKE BR807036G WATER UG/L 10	MS % RECOVERY BR807036G WATER % 10	RPD BR807036G WATER % 10	MATRIX SPIKE DUPLICATE BR807036H WATER UG/L 10	MSD % RECOVERY BR807036H WATER % 10
ANTHRACENE	10 U	10 U			11 U	
BENZO(A)ANTHRACENE	10 U	10 U			11 U	
BENZO(A)PYRENE	10 U	10 U			11 U	
BENZO(B)FLUORANTHENE	10 U	10 U			11 U	
BENZO(G,H,I)PERYLENE	10 U	10 U			11 U	
BENZO(K)FLUORANTHENE	10 U	10 U			11 U	
BENZOIC ACID	20 J	52 U			56 U	
BENZYL ALCOHOL	10 U	10 U			11 U	
BIS(2-CHLOROETHOXY)METHANE	0.5 J	10 U			11 U	
BIS(2-CHLOROETHYL)ETHER	10 U	10 U			11 U	
BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U			11 U	
BIS(2-ETHYLHEXYL)PHTHALATE	20	10 U			11 U	
BUTYLBENZYL PHTHALATE	10 U	10 U			11 U	
CHRYSENE	10 U	10 U			11 U	
DI-N-BUTYL PHTHALATE	10 U	10 U			11 U	
DI-N-OCTYL PHTHALATE	0.9 J	10 U			11 U	
DIBENZ(A,H)ANTHRACENE	10 U	10 U			11 U	
DIBENZOFURAN	10 U	10 U			11 U	
DIETHYL PHTHALATE	10 U	10 U			11 U	
DIMETHYL PHTHALATE	10 U	10 U			11 U	
FLUORANTHENE	10 U	10 U			11 U	
FLUORENE	10 U	10 U			11 U	
HEXACHLORO BENZENE	10 U	10 U			11 U	
HEXACHLORO BUTADIENE	10 U	10 U			11 U	
HEXACHLORO CYCLOPENTADIENE	10 U	10 U			11 U	
HEXACHLORO ETHANE	10 U	10 U			11 U	
INDENO(1,2,3-CD)PYRENE	10 U	10 U			11 U	
ISOPHORONE	10 U	10 U			11 U	
N-NITROSO-DI-N-PROPYLAMINE	10 U	50	48	2	49	47
N-NITROSODIPHENYLAMINE	10 U	10 U			11 U	
NAPHTHALENE	10 U	10 U			11 U	
NITROBENZENE	10 U	10 U			11 U	
NITROBENZENE-D5						
PENTACHLOROPHENOL	50 U	77	37	8	83	40
PHENANTHRENE	10 U	10 U			11 U	
PHENOL	4 J	66	31	3	66	32
PHENOL-D5						
PYRENE	10 U	98	94	3	95	91
TERPHENYL-D14						

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	BNL LANDF LEACHATE BR500092A WATER UG/L 4	MATRIX SPIKE BR807036G WATER UG/L 10	MS % RECOVERY BR807036G WATER % 10	RPD BR807036G WATER % 10	MATRIX SPIKE DUPLICATE BR807036H WATER UG/L 10	MSD % RECOVERY BR807036H WATER % 10
1,2-DICHLOROBENZENE	10 U	10 U			11 U	
1,2,4-TRICHLOROBENZENE	10 U	75	73	3	73	71
1,3-DICHLOROBENZENE	10 U	10 U			11 U	
1,4-DICHLOROBENZENE	10 U	84	81	4	81	78
2-CHLORONAPHTHALENE	10 U	10 U			11 U	
2-CHLOROPHENOL	10 U	150	71	1	140	69
2-FLUOROBIPHENYL						
2-FLUOROPHENOL						
2-METHYLNAPHTHALENE	10 U	10 U			11 U	
2-METHYLPHENOL	1 J	10 U			11 U	
2-NITROANILINE	50 U	52 U			56 U	
2-NITROPHENOL	10 U	10 U			11 U	
2,4-DICHLOROPHENOL	10 U	10 U			11 U	
2,4-DIMETHYLPHENOL	10 U	10 U			11 U	
2,4-DINITROPHENOL	50 U	52 U			56 U	
2,4-DINITROTOLUENE	10 U	84	81	9	93	89
2,4,5-TRICHLOROPHENOL	50 U	52 U			56 U	
2,4,6-TRIBROMOPHENOL						
2,4,6-TRICHLOROPHENOL	10 U	10 U			11 U	
2,6-DINITROTOLUENE	10 U	10 U			11 U	
3-NITROANILINE	50 U	52 U			56 U	
3,3'-DICHLOROBENZIDINE	20 U	21 U			22 U	
4-BROMOPHENYL-PHENYLETHER	10 U	10 U			11 U	
4-CHLORO-3-METHYLPHENOL	10 U	160	76	4	150	73
4-CHLOROANILINE	10 U	10 U			11 U	
4-CHLOROPHENYL-PHENYLETHER	10 U	10 U			11 U	
4-METHYLPHENOL	38	10 U			11 U	
4-NITROANILINE	50 U	52 U			56 U	
4-NITROPHENOL	50 U	35 J	17	6	38 J	18
4,6-DINITRO-2-METHYLPHENOL	50 U	52 U			56 U	
SURR 1(NBZ) %RECOVERY	80	93			86	
SURR 2(FBP) %RECOVERY	91	106			102	
SURR 3(TPH) %RECOVERY	104	118			109	
SURR 4(PHL) %RECOVERY	28	40			39	
SURR 5(2FP) %RECOVERY	55	66			66	
SURR 6(TBP) %RECOVERY	104	107			108	

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TABLE D.6.6 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR306018E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA
LOCATION	BNL LANDF	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	LEACHATE	SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	BR500092A	BR807036G	BR807036G	BR807036G	BR807036H
MATRIX	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	%	%	UG/L
ENV PROBLEM NO	4	10	10	10	10
M/E 68-1					
M/E 68-2					
M/E 69					
M/E 70-1					
M/E 70-2					
M/E 127					
M/E 197					
M/E 198					
M/E 199					
M/E 275					
M/E 365					
M/E 441					
M/E 442					
M/E 443-1					
M/E 443-2					
INTERNAL STD AREA(ANT)	79900	72300		69800	
INTERNAL STD AREA(CRY)	52700	44800		51900	
INTERNAL STD AREA(DCB)	50700	48600		45900	
INTERNAL STD AREA(NPT)	179000	160000		154000	
INTERNAL STD AREA(PHN)	115000	104000		102000	
INTERNAL STD AREA(PRY)	30600	27400		33900	
DILUTION FACTOR	2	2		2	
ACTUAL(ALLOWED) EXTRACT TIME	12(7 D)	7(7 D)		7(7 D)	

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TABLE D.6.7 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR310025E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0509885	CONTINUING CALIBRATION BR0509887	CONTINUING CAL %D BR0509887	ISTD RET TIM SHIFT BR0509888 AREA
	RRF	%	%	%	RRF	%	
ACENAPHTHENE	1.232	5.9			1.207	2.1	
ACENAPHTHYLENE	1.886	9.6			1.721	8.8	
ANTHRACENE	1.012	8.4			0.938	7.3	
BENZO(A)ANTHRACENE	1.032	8.2			0.948	8.1	
BENZO(A)PYRENE	1.088	8.6			1.121	3	
BENZO(B)FLUORANTHENE	1.375	11.3			1.316	4.3	
BENZO(G,H,I)PERYLENE	0.762	11.3			1.025	34.5	
BENZO(K)FLUORANTHENE	1.148	3.6			1.219	6.2	
BENZOIC ACID	0.137	13.6			0.137	0.4	
BENZYL ALCOHOL	0.84	10.8			0.667	20.6	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.789	0.9	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.778	5.9	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.393	19.3	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.35	1.5	
BUTYL BENZYL PHTHALATE	0.956	11.4			0.937	2	
CHRYSENE	1.022	5.5			0.906	11.3	
DI-N-BUTYL PHTHALATE	2.033	13.6			1.888	7.2	
DI-N-OCTYL PHTHALATE	2.778	18.9			2.575	7.3	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.878	18.3	
DIBENZOFURAN	1.455	6.1			1.528	5	
DIETHYL PHTHALATE	1.557	22.1			1.776	14.1	
DIMETHYL PHTHALATE	1.491	9.3			1.652	10.8	
FLUORANTHENE	0.982	17.9			0.903	8.1	
FLUORENE	1.096	8.1			1.128	2.9	
HEXACHLORO BENZENE	0.392	7.8			0.362	7.5	
HEXACHLORO BUTADIENE	0.188	3.2			0.172	8.7	
HEXACHLORO CYCLOPENTADIENE	0.433	13.3			0.234	46	
HEXACHLOROETHANE	0.882	4.2			0.826	6.3	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.991	23.4	
ISOPHORONE	0.92	11.2			0.945	2.7	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.505	5.1	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.553	10.2	
NAPHTHALENE	1.075	6.4			1.085	0.9	
NITROBENZENE	0.54	4.1			0.543	0.5	
NITROBENZENE-D5	0.519	5.1			0.476	8.1	
PENTACHLOROPHENOL	0.132	19.5			0.157	19.3	
PHENANTHRENE	1.064	9.8			1.013	4.8	
PHENOL	2.514	16.4			2.248	10.6	
PHENOL-D5	1.957	16.3			1.84	6	

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TABLE D.6.7 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR310025E

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0509885	BR0509887	BR0509887	BR0509888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
PYRENE	1.365	1.5			1.306	4.3	
TERPHENYL-D14	1.059	5.9			1.106	4.4	
1,2-DICHLOROBENZENE	1.399	9.2			1.406	0.5	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.286	1.1	
1,3-DICHLOROBENZENE	1.44	8.8			1.412	1.9	
1,4-DICHLOROBENZENE	1.501	9.4			1.493	0.6	
2-CHLORONAPHTHALENE	1.22	13.6			1.175	3.7	
2-CHLOROPHENOL	1.517	13.7			1.43	5.8	
2-FLUOROBIPHENYL	1.311	9.3			1.286	1.8	
2-FLUOROPHENOL	1.323	11.1			1.234	6.7	
2-METHYLNAPHTHALENE	0.439	15.3			0.642	46.3	
2-METHYLPHENOL	1.148	13.9			1.186	3.3	
2-NITROANILINE	0.432	16.2			0.517	19.5	
2-NITROPHENOL	0.184	8.3			0.2	8.6	
2,4-DICHLOROPHENOL	0.247	8.9			0.246	0.3	
2,4-DIMETHYLPHENOL	0.242	18.5			0.256	5.6	
2,4-DINITROPHENOL	0.102	20.1			0.108	6.7	
2,4-DINITROTOLUENE	0.312	14.8			0.351	12.3	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.331	3.2	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.29	27.2	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.303	14.8	
2,6-DINITROTOLUENE	0.321	11.5			0.352	9.6	
3-NITROANILINE	0.386	13.1			0.36	6.7	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.134	27.4	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.303	9.3	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.312	5	
4-CHLOROANILINE	0.395	12.7			0.4	1.2	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.636	7.5	
4-METHYLPHENOL	1.314	17.4			1.266	3.6	
4-NITROANILINE	0.231	18.7			0.254	9.6	
4-NITROPHENOL	0.197	12.4			0.225	14.1	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.098	7.9	

SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0509885	CONTINUING CALIBRATION BR0509887	CONTINUING CAL %D BR0509887	ISTD RET TIM SHIFT BR0509888 AREA
	RRF	%	%	%	RRF	%	

M/E 51			35	34			
M/E 68-1			0	0			
M/E 68-2			0	0			
M/E 69			69	73			
M/E 70-1			0.2	0			
M/E 70-2			0.3	0			
M/E 127			57	56			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	5.8			
M/E 275			27	27			
M/E 365			2.1	2.9			
M/E 441			10	15			
M/E 442			62	94			
M/E 443-1			11	18			
M/E 443-2			17	20			

INTERNAL STD AREA(ANT)							83300
INTERNAL STD AREA(CRY)							92900
INTERNAL STD AREA(DCB)							57300
INTERNAL STD AREA(NPT)							191000
INTERNAL STD AREA(PHN)							139000
INTERNAL STD AREA(PRY)							64600

DILUTION FACTOR
ACTUAL(ALLOWED) EXTRACT TIME

AREA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08102	B. 905 CESSPOOL BR310025E WATER UG/L	B. 905 CESSPOOL BR310036E WATER UG/L
ACENAPHTHENE		2	2
	10 U	10 U	10 U

TABLE D.6.7 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR310025E

DRAFT DO NOT CITE

AREA	QA			
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08102 WATER UG/L	B. 905 CESSPOOL BR310025E WATER UG/L	B. 905 CESSPOOL BR310036E WATER UG/L
		2	2	
D-242	ACENAPHTHYLENE	10 U	10 U	10 U
	ANTHRACENE	10 U	10 U	10 U
	BENZO(A)ANTHRACENE	10 U	10 U	10 U
	BENZO(A)PYRENE	10 U	10 U	10 U
	BENZO(B)FLUORANTHENE	10 U	10 U	10 U
	BENZO(G,H,I)PERYLENE	10 U	10 U	10 U
	BENZO(K)FLUORANTHENE	10 U	10 U	10 U
	BENZOIC ACID	50 U	50 U	10 U
	BENZYL ALCOHOL	10 U	10 U	10 U
	BIS(2-CHLOROETHOXY)METHANE	10 U	10 U	10 U
	BIS(2-CHLOROETHYL)ETHER	10 U	10 U	10 U
	BIS(2-CHLOROISOPROPYL)ETHER	10 U	10 U	10 U
	BIS(2-ETHYLHEXYL)PHTHALATE	62	3 JB	6 JB
	BUTYLBENZYLPHTHALATE	10 U	1 J	1 J
	CHRYSENE	10 U	10 U	10 U
	DI-N-BUTYLPHTHALATE	4 J	10 U	4 JB
	DI-N-OCTYLPHTHALATE	10 U	0.6 J	10 U
	DIBENZ(A,H)ANTHRACENE	10 U	10 U	10 U
	DIBENZOFURAN	10 U	10 U	10 U
	DIETHYLPHTHALATE	1 J	10 U	10 U
	DIMETHYLPHTHALATE	10 U	10 U	10 U
	FLUORANTHENE	10 U	10 U	10 U
	FLUORENE	10 U	10 U	10 U
	HEXACHLOROENZENE	10 U	10 U	10 U
	HEXACHLOROBUTADIENE	10 U	10 U	10 U
	HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 U
	HEXACHLOROETHANE	10 U	10 U	10 U
	INDENO(1,2,3-CD)PYRENE	10 U	10 U	10 U
	ISOPHORONE	10 U	10 U	10 U
	N-NITROSO-DI-N-PROPYLAMINE	10 U	10 U	10 U
	N-NITROSODIPHENYLAMINE	10 U	10 U	10 U
	NAPHTHALENE	10 U	10 U	10 U
	NITROBENZENE	10 U	10 U	10 U
	NITROBENZENE-D5			
	PENTACHLOROPHENOL	50 U	50 U	50 U
	PHENANTHRENE	10 U	10 U	10 U
	PHENOL	10 U	28	13
	PHENOL-D5			
	PYRENE	10 U	10 U	10 U

TABLE D.6.7 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR310025E

DRAFT DO NOT CITE

AREA	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	QA		
		METHOD BLANK SBK08102 WATER UG/L	B. 905 CESSPOOL BR310025E WATER UG/L	B. 905 CESSPOOL BR310036E WATER UG/L
			2	2
	TERPHENYL-D14			
	1,2-DICHLOROBENZENE	10 U	10 U	10 U
	1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U
	1,3-DICHLOROBENZENE	10 U	10 U	10 U
	1,4-DICHLOROBENZENE	10 U	10 U	10 U
	2-CHLORONAPHTHALENE	10 U	10 U	10 U
	2-CHLOROPHENOL	10 U	10 U	10 U
	2-FLUOROBIPHENYL			
	2-FLUOROPHENOL			
	2-METHYLNAPHTHALENE	10 U	10 U	10 U
	2-METHYLPHENOL	10 U	1 J	10 U
	2-NITROANILINE	50 U	50 U	50 U
	2-NITROPHENOL	10 U	10 U	10 U
	2,4-DICHLOROPHENOL	10 U	10 U	10 U
	2,4-DIMETHYLPHENOL	10 U	10 U	10 U
	2,4-DINITROPHENOL	50 U	50 U	50 U
	2,4-DINITROTOLUENE	10 U	10 U	10 U
	2,4,5-TRICHLOROPHENOL	50 U	50 U	50 U
	2,4,6-TRIBROMOPHENOL			
	2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U
	2,6-DINITROTOLUENE	10 U	10 U	10 U
	3-NITROANILINE	50 U	50 U	50 U
	3,3'-DICHLOROBENZIDINE	20 U	20 U	20 U
	4-BROMOPHENYL-PHENYLETHER	10 U	10 U	10 U
	4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U
	4-CHLOROANILINE	10 U	10 U	10 U
	4-CHLOROPHENYL-PHENYLETHER	10 U	10 U	10 U
	4-METHYLPHENOL	10 U	100	45
	4-NITROANILINE	50 U	50 U	50 U
	4-NITROPHENOL	50 U	50 U	50 U
	4,6-DINITRO-2-METHYLPHENOL	50 U	50 U	50 U
	SURR 1(NBZ) %RECOVERY	44	58	26 *
	SURR 2(FBP) %RECOVERY	46	52	22 *
	SURR 3(TPH) %RECOVERY	70	56	27 *
	SURR 4(PHL) %RECOVERY	14	23	10 *
	SURR 5(2FP) %RECOVERY	34	42	19 *
	SURR 6(TBP) %RECOVERY	50	66	29

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TABLE D.6.7 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR310025E

DRAFT DO NOT CITE

AREA	QA		
	METHOD	B. 905	B. 905
LOCATION	BLANK	CESSPOOL	CESSPOOL
TYPE OF LOCATION	SBK08102	BR310025E	BR310036E
SAMPLE NUMBER			
MATRIX	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L
ENV PROBLEM NO		2	2
M/E 68-1			
M/E 68-2			
M/E 69			
M/E 70-1			
M/E 70-2			
M/E 127			
M/E 197			
M/E 198			
M/E 199			
M/E 275			
M/E 365			
M/E 441			
M/E 442			
M/E 443-1			
M/E 443-2			
INTERNAL STD AREA(ANT)	90300	84800	92400
INTERNAL STD AREA(CRY)	66800	82000	77000
INTERNAL STD AREA(DCB)	68900	64900	68800
INTERNAL STD AREA(NPT)	189000	200000	197000
INTERNAL STD AREA(PHN)	123000	122000	128000
INTERNAL STD AREA(PRY)	49000	54600	54800
DILUTION FACTOR	2	2	2
ACTUAL(ALLOWED) EXTRACT TIME		8(7 D)	8(7 D)

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0526885	CONTINUING CALIBRATION BR0526887	CONTINUING CAL %D BR0526887	ISTD RET TIM SHIFT BR0526888
	RRF	%	%	%	RRF	%	AREA
ACENAPHTHENE	1.232	5.9			1.229	0.3	
ACENAPHTHYLENE	1.886	9.6			1.839	2.5	
ANTHRACENE	1.012	8.4			0.963	4.9	
BENZO(A)ANTHRACENE	1.032	8.2			0.957	7.3	
BENZO(A)PYRENE	1.088	8.6			1.131	4	
BENZO(B)FLUORANTHENE	1.375	11.3			1.378	0.2	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.919	20.6	
BENZO(K)FLUORANTHENE	1.148	3.6			1.386	20.7	
BENZOIC ACID	0.137	13.6			0.146	7	
BENZYL ALCOHOL	0.84	10.8			0.633	24.6	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.795	1.6	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.701	3	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.887	61.6	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.114	16.2	
BUTYL BENZYL PHTHALATE	0.956	11.4			0.968	1.3	
CHRYSENE	1.022	5.5			0.964	5.7	
DI-N-BUTYL PHTHALATE	2.033	13.6			1.833	9.8	
DI-N-OCTYL PHTHALATE	2.778	18.9			2.485	10.6	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.855	15.3	
DIBENZOFURAN	1.455	6.1			1.425	2.1	
DIETHYL PHTHALATE	1.557	22.1			1.671	7.3	
DIMETHYL PHTHALATE	1.491	9.3			1.631	9.4	
FLUORANTHENE	0.982	17.9			0.808	17.7	
FLUORENE	1.096	8.1			1.099	0.3	
HEXACHLOROBENZENE	0.392	7.8			0.387	1.2	
HEXACHLOROBUTADIENE	0.188	3.2			0.147	22	
HEXACHLOROCYCLOPENTADIENE	0.433	13.3			0.239	44.8	
HEXACHLOROETHANE	0.882	4.2			0.814	7.7	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.825	2.7	
ISOPHORONE	0.92	11.2			0.932	1.3	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.583	10.6	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.602	2.3	
NAPHTHALENE	1.075	6.4			1.074	0.1	
NITROBENZENE	0.54	4.1			0.577	6.8	
NITROBENZENE-D5	0.519	5.1			0.476	8.2	
PENTACHLOROPHENOL	0.132	19.5			0.141	6.5	
PHENANTHRENE	1.064	9.8			1.002	5.8	
PHENOL	2.514	16.4			2.249	10.5	
PHENOL-D5	1.957	16.3			1.911	2.3	

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0526885	CONTINUING CALIBRATION BR0526887	CONTINUING CAL %D BR0526887	ISTD RET TIM SHIFT BR0526888
	RRF	%	%	%	RRF	%	AREA
PYRENE	1.365	1.5			1.642	20.3	
TERPHENYL-D14	1.059	5.9			1.351	27.6	
1,2-DICHLOROBENZENE	1.399	9.2			1.411	0.8	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.283	2.3	
1,3-DICHLOROBENZENE	1.44	8.8			1.454	1	
1,4-DICHLOROBENZENE	1.501	9.4			1.522	1.4	
2-CHLORONAPHTHALENE	1.22	13.6			1.253	2.7	
2-CHLOROPHENOL	1.517	13.7			1.402	7.6	
2-FLUOROBIPHENYL	1.311	9.3			1.297	1	
2-FLUOROPHENOL	1.323	11.1			1.239	6.4	
2-METHYLNAPHTHALENE	0.439	15.3			0.614	40	
2-METHYLPHENOL	1.148	13.9			1.291	12.4	
2-NITROANILINE	0.432	16.2			0.536	24.1	
2-NITROPHENOL	0.184	8.3			0.202	10	
2,4-DICHLOROPHENOL	0.247	8.9			0.236	4.3	
2,4-DIMETHYLPHENOL	0.242	18.5			0.26	7.3	
2,4-DINITROPHENOL	0.102	20.1			0.086	15.6	
2,4-DINITROTOLUENE	0.312	14.8			0.34	8.8	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.324	5.3	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.244	6.8	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.308	13.3	
2,6-DINITROTOLUENE	0.321	11.5			0.342	6.6	
3-NITROANILINE	0.386	13.1			0.293	24.1	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.061	67.2	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.318	5	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.31	4.2	
4-CHLOROANILINE	0.395	12.7			0.395	0	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.59	0.2	
4-METHYLPHENOL	1.314	17.4			1.296	1.4	
4-NITROANILINE	0.231	18.7			0.158	32	
4-NITROPHENOL	0.197	12.4			0.203	3.3	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.098	7.2	
SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0526885	BR0526887	BR0526887	BR0526888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							

M/E 51			35	39			
M/E 68-1			0	0			
M/E 68-2			0	0			
M/E 69			69	72			
M/E 70-1			0.2	0			
M/E 70-2			0.3	0			
M/E 127			57	56			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	5.5			
M/E 275			27	26			
M/E 365			2.1	1.9			
M/E 441			10	12			
M/E 442			62	74			
M/E 443-1			11	14			
M/E 443-2			17	19			

INTERNAL STD AREA(ANT)							64700
INTERNAL STD AREA(CRY)							42300
INTERNAL STD AREA(DCB)							46000
INTERNAL STD AREA(NPT)							156000
INTERNAL STD AREA(PHN)							90700
INTERNAL STD AREA(PRY)							21400

DILUTION FACTOR
 PERCENT MOISTURE
 ACTUAL(ALLOWED) EXTRACT TIME

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	STP	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	DREDGE MATL	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	SBK08222	BR800062B	BR800062B	BR800062B	BR800062B	BR800062B	BR800062B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		8	8	8	8	8	8

ACENAPHTHENE	330 U	340 U	2300	66	1	2300	65
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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08222 SOIL UG/KG	STP DREDGE MATL BR800062B SOIL UG/KG	MATRIX SPIKE BR800062B SOIL UG/KG	MS % RECOVERY BR800062B SOIL %	RPD BR800062B SOIL %	MATRIX SPIKE DUPLICATE BR800062B SOIL UG/KG	MSD % RECOVERY BR800062B SOIL %
	8	8	8	8	8	8	8
ACENAPHTHYLENE	330 U	340 U	350 U			350 U	
ANTHRACENE	330 U	340 U	350 U			350 U	
BENZO(A)ANTHRACENE	330 U	340 U	350 U			350 U	
BENZO(A)PYRENE	330 U	340 U	350 U			350 U	
BENZO(B)FLUORANTHENE	330 U	340 U	350 U			350 U	
BENZO(G,H,I)PERYLENE	330 U	340 U	350 U			350 U	
BENZO(K)FLUORANTHENE	330 U	340 U	350 U			350 U	
BENZOIC ACID	1600 U	1700 U	1700 U			1700 U	
BENZYL ALCOHOL	330 U	340 U	350 U			350 U	
BIS(2-CHLOROETHOXY)METHANE	330 U	340 U	350 U			350 U	
BIS(2-CHLOROETHYL)ETHER	330 U	340 U	350 U			350 U	
BIS(2-CHLOROISOPROPYL)ETHER	330 U	340 U	350 U			350 U	
BIS(2-ETHYLHEXYL)PHTHALATE	330 U	570	300 J			170 J	
BUTYLBENZYLPHTHALATE	110 J	48 JB	350 U			350 U	
CHRYSENE	330 U	340 U	350 U			350 U	
DI-N-BUTYLPHTHALATE	130 J	97 JB	100 JB			98 JB	
DI-N-OCTYLPHTHALATE	10 J	9 JB	350 U			350 U	
DIBENZ(A,H)ANTHRACENE	330 U	340 U	350 U			350 U	
DIBENZOFURAN	330 U	340 U	350 U			350 U	
DIETHYLPHTHALATE	57 J	70 JB	80 JB			59 JB	
DIMETHYLPHTHALATE	330 U	340 U	350 U			350 U	
FLUORANTHENE	330 U	340 U	350 U			350 U	
FLUORENE	330 U	340 U	350 U			350 U	
HEXACHLOROBENZENE	330 U	340 U	350 U			350 U	
HEXACHLOROBUTADIENE	330 U	340 U	350 U			350 U	
HEXACHLOROCYCLOPENTADIENE	330 U	340 U	350 U			350 U	
HEXACHLOROETHANE	330 U	340 U	350 U			350 U	
INDENO(1,2,3-CD)PYRENE	330 U	340 U	350 U			350 U	
ISOPHORONE	330 U	340 U	350 U			350 U	
N-NITROSO-DI-N-PROPYLAMINE	330 U	340 U	1300	35 *	5	1200	33 *
N-NITROSODIPHENYLAMINE	330 U	340 U	350 U			350 U	
NAPHTHALENE	330 U	340 U	350 U			350 U	
NITROBENZENE	330 U	340 U	350 U			350 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	1600 U	1700 U	5900 E	84	21	7300 E	104
PHENANTHRENE	7 J	340 U	350 U			350 U	
PHENOL	330 U	340 U	3200	45	8	3500	49
PHENOL-D5							
PYRENE	7 J	6 JB	3000 B	86	17	3600 B	103

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08222 SOIL UG/KG	STP DREDGE MATL BR800062B SOIL UG/KG	MATRIX SPIKE BR800062B SOIL UG/KG	MS % RECOVERY BR800062B SOIL %	RPD BR800062B SOIL %	MATRIX SPIKE DUPLICATE BR800062B SOIL UG/KG	MSD % RECOVERY BR800062B SOIL %
	8	8	8	8	8	8	8
TERPHENYL-D14							
1,2-DICHLOROBENZENE	330 U	340 U	350 U			350 U	
1,2,4-TRICHLOROBENZENE	330 U	340 U	990	28 *	22	1300	35 *
1,3-DICHLOROBENZENE	330 U	340 U	350 U			350 U	
1,4-DICHLOROBENZENE	330 U	340 U	860	24 *	25	1100	31
2-CHLORONAPHTHALENE	330 U	340 U	350 U			350 U	
2-CHLOROPHENOL	330 U	340 U	2600	37	15	3000	43
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	330 U	340 U	350 U			350 U	
2-METHYLPHENOL	330 U	340 U	350 U			350 U	
2-NITROANILINE	1600 U	1700 U	1700 U			1700 U	
2-NITROPHENOL	330 U	340 U	350 U			350 U	
2,4-DICHLOROPHENOL	330 U	340 U	350 U			350 U	
2,4-DIMETHYLPHENOL	330 U	340 U	350 U			350 U	
2,4-DINITROPHENOL	1600 U	1700 U	1700 U			1700 U	
2,4-DINITROTOLUENE	330 U	340 U	3100	88	4	3000	84
2,4,5-TRICHLOROPHENOL	1600 U	1700 U	1700 U			1700 U	
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	330 U	340 U	350 U			350 U	
2,6-DINITROTOLUENE	330 U	340 U	350 U			350 U	
3-NITROANILINE	1600 U	1700 U	1700 U			1700 U	
3,3'-DICHLOROBENZIDINE	650 U	690 U	700 U			690 U	
4-BROMOPHENYL-PHENYLETHER	330 U	340 U	350 U			350 U	
4-CHLORO-3-METHYLPHENOL	330 U	340 U	5600	79	0	5500	79
4-CHLOROANILINE	330 U	340 U	350 U			350 U	
4-CHLOROPHENYL-PHENYLETHER	330 U	340 U	350 U			350 U	
4-METHYLPHENOL	330 U	340 U	350 U			350 U	
4-NITROANILINE	1600 U	1700 U	1700 U			1700 U	
4-NITROPHENOL	1600 U	1700 U	5200	74	32	7200	103
4,6-DINITRO-2-METHYLPHENOL	1600 U	1700 U	1700 U			1700 U	
SURR 1(NBZ) %RECOVERY	29	31	19 *			25	
SURR 2(FBP) %RECOVERY	31	35	33			33	
SURR 3(TPH) %RECOVERY	41	56	59			66	
SURR 4(PHL) %RECOVERY	31	35	35			35	
SURR 5(2FP) %RECOVERY	36	36	28			31	
SURR 6(TBP) %RECOVERY	60	77	75			71	

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	STP	MATRIX	MS %	RPD	MATRIX SPIKE	
TYPE OF LOCATION	BLANK	DREDGE MATL	SPIKE	RECOVERY		DUPLICATE	
SAMPLE NUMBER	SBK08222	BR800062B	BR800062B	BR800062B	BR800062B	BR800062B	
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	
ENV PROBLEM NO	8	8	8	8	8	8	
M/E 68-1							
M/E 68-2							
M/E 69							
M/E 70-1							
M/E 70-2							
M/E 127							
M/E 197							
M/E 198							
M/E 199							
M/E 275							
M/E 365							
M/E 441							
M/E 442							
M/E 443-1							
M/E 443-2							
INTERNAL STD AREA(ANT)	70700	70000	51000			72900	
INTERNAL STD AREA(CRY)	88100	75400	39400			52000	
INTERNAL STD AREA(DCB)	47500	48300	39400			51400	
INTERNAL STD AREA(NPT)	161000	156000	127000			177000	
INTERNAL STD AREA(PHM)	112000	109000	77100			107000	
INTERNAL STD AREA(PRY)	94300	58900	84500			31900	
DILUTION FACTOR	1	1	1			1	
PERCENT MOISTURE	0	5	5			5	
ACTUAL(ALLOWED) EXTRACT TIME		11(14 D)	11(14 D)			11(14 D)	
AREA						QA	
LOCATION	STP	STP	STP	STP	BOUNDRY RD	BOUNDRY RD	TUNED
TYPE OF LOCATION	DREDGE MATL	DREDGE MATL	DREDGE MATL	DREDGE MATL	BACKGROUND	BACKGROUND	CALIBRATION
SAMPLE NUMBER	BR800073B	BR800084B	BR800095B	BR800108B	BR810019B	BR810020B	BR0527885
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	%
ENV PROBLEM NO	8	8	8	8	0	0	
ACENAPHTHENE	350 U	350 U	360 U	350 U	360 U	360 U	

TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA							QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP DREDGE MATL BR800073B SOIL UG/KG 8	STP DREDGE MATL BR800084B SOIL UG/KG 8	STP DREDGE MATL BR800095B SOIL UG/KG 8	STP DREDGE MATL BR800108B SOIL UG/KG 8	BOUNDRY RD BACKGROUND BR810019B SOIL UG/KG 0	BOUNDRY RD BACKGROUND BR810020B SOIL UG/KG 0	TUNED CALIBRATION BR0527885 %
ACENAPHTHYLENE	350 U	350 U	360 U	350 U	360 U	360 U	
ANTHRACENE	350 U	350 U	360 U	350 U	360 U	360 U	
BENZO(A)ANTHRACENE	350 U	350 U	360 U	350 U	360 U	360 U	
BENZO(A)PYRENE	350 U	350 U	360 U	350 U	360 U	360 U	
BENZO(B)FLUORANTHENE	350 U	350 U	360 U	350 U	360 U	360 U	
BENZO(G,H,I)PERYLENE	350 U	350 U	360 U	350 U	360 U	360 U	
BENZO(K)FLUORANTHENE	350 U	350 U	360 U	350 U	360 U	360 U	
BENZOIC ACID	1800 U	1800 U					
BENZYL ALCOHOL	350 U	350 U	360 U	350 U	360 U	360 U	
BIS(2-CHLOROETHOXY)METHANE	350 U	350 U	360 U	350 U	360 U	360 U	
BIS(2-CHLOROETHYL)ETHER	350 U	350 U	360 U	350 U	360 U	360 U	
BIS(2-CHLOROISOPROPYL)ETHER	350 U	350 U	360 U	350 U	360 U	360 U	
BIS(2-ETHYLHEXYL)PHTHALATE	110 J	450	270 J	350 U	360 U	360 U	
BUTYLBENZYLPHTHALATE	80 JB	52 JB	100 JB	46 JB	57 JB	170 JB	
CHRYSENE	350 U	350 U	360 U	350 U	360 U	360 U	
DI-N-BUTYLPHTHALATE	160 JB	87 JB	190 JB	110 JB	57 JB	130 JB	
DI-N-OCTYLPHTHALATE	10 JB	5 JB	360 U	350 U	360 U	360 U	
DIBENZ(A,H)ANTHRACENE	350 U	350 U	360 U	350 U	360 U	360 U	
DIBENZOFURAN	350 U	350 U	360 U	350 U	360 U	360 U	
DIETHYLPHTHALATE	85 JB	60 JB	84 JB	63 JB	360 U	76 JB	
DIMETHYLPHTHALATE	350 U	350 U	360 U	350 U	360 U	360 U	
FLUORANTHENE	350 U	350 U	360 U	350 U	360 U	360 U	
FLUORENE	350 U	350 U	360 U	350 U	360 U	360 U	
HEXACHLOROENZENE	350 U	350 U	360 U	350 U	360 U	360 U	
HEXACHLOROBUTADIENE	350 U	350 U	360 U	350 U	360 U	360 U	
HEXACHLOROCYCLOPENTADIENE	350 U	350 U	360 U	350 U	360 U	360 U	
HEXACHLOROETHANE	350 U	350 U	360 U	350 U	360 U	360 U	
INDENO(1,2,3-CD)PYRENE	350 U	350 U	360 U	350 U	360 U	360 U	
ISOPHORONE	350 U	350 U	360 U	350 U	360 U	360 U	
N-NITROSO-DI-N-PROPYLAMINE	350 U	350 U	360 U	350 U	360 U	360 U	
N-NITROSODIPHENYLAMINE	350 U	350 U	360 U	350 U	360 U	360 U	
NAPHTHALENE	350 U	350 U	360 U	350 U	360 U	360 U	
NITROBENZENE	350 U	350 U	360 U	350 U	360 U	360 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	1800 U	1800 U					
PHENANTHRENE	350 U	350 U	360 U	350 U	360 U	360 U	
PHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
PHENOL-D5							
PYRENE	14 JB	9 JB	12 JB	350 U	360 U	360 U	

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA							QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP DREDGE MATL BR800073B SOIL UG/KG 8	STP DREDGE MATL BR800084B SOIL UG/KG 8	STP DREDGE MATL BR800095B SOIL UG/KG 8	STP DREDGE MATL BR800108B SOIL UG/KG 8	BOUNDRY RD BACKGROUND BR810019B SOIL UG/KG 0	BOUNDRY RD BACKGROUND BR810020B SOIL UG/KG 0	TUNED CALIBRATION BR0527885 %
D-252							
TERPHENYL-D14							
1,2-DICHLOROBENZENE	350 U	350 U	360 U	350 U	360 U	360 U	
1,2,4-TRICHLOROBENZENE	350 U	350 U	360 U	350 U	360 U	360 U	
1,3-DICHLOROBENZENE	350 U	350 U	360 U	350 U	360 U	360 U	
1,4-DICHLOROBENZENE	350 U	350 U	360 U	350 U	360 U	360 U	
2-CHLORONAPHTHALENE	350 U	350 U	360 U	350 U	360 U	360 U	
2-CHLOROPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	350 U	350 U	360 U	350 U	360 U	360 U	
2-METHYLPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
2-NITROANILINE	1800 U	1800 U					
2-NITROPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
2,4-DICHLOROPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
2,4-DIMETHYLPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
2,4-DINITROPHENOL	1800 U	1800 U					
2,4-DINITROTOLUENE	350 U	350 U	360 U	350 U	360 U	360 U	
2,4,5-TRICHLOROPHENOL	1800 U	1800 U					
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
2,6-DINITROTOLUENE	350 U	350 U	360 U	350 U	360 U	360 U	
3-NITROANILINE	1800 U	1800 U					
3,3'-DICHLOROBENZIDINE	710 U	710 U	720 U	700 U	720 U	720 U	
4-BROMOPHENYL-PHENYLETHER	350 U	350 U	360 U	350 U	360 U	360 U	
4-CHLORO-3-METHYLPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
4-CHLOROANILINE	350 U	350 U	360 U	350 U	360 U	360 U	
4-CHLOROPHENYL-PHENYLETHER	350 U	350 U	360 U	350 U	360 U	360 U	
4-METHYLPHENOL	350 U	350 U	360 U	350 U	360 U	360 U	
4-NITROANILINE	1800 U	1800 U					
4-NITROPHENOL	1800 U	1800 U					
4,6-DINITRO-2-METHYLPHENOL	1800 U	1800 U					
SURR 1(NBZ) %RECOVERY	39	36	24	32	24	26	
SURR 2(FBP) %RECOVERY	42	39	33	34	36	33	
SURR 3(TPH) %RECOVERY	62	59	59	42	54	57	
SURR 4(PHL) %RECOVERY	41	41	32	35	28	33	
SURR 5(2FP) %RECOVERY	47	48	31	41	31	35	
SURR 6(TBP) %RECOVERY	75	65	73	54	53	65	

TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA								QA
LOCATION	STP	STP	STP	STP	BOUNDRY RD	BOUNDRY RD	TUNED	
TYPE OF LOCATION	DREDGE MATL	DREDGE MATL	DREDGE MATL	DREDGE MATL	BACKGROUND	BACKGROUND	CALIBRATION	
SAMPLE NUMBER	BR800073B	BR800084B	BR800095B	BR800108B	BR810019B	BR810020B	BR0527885	
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	%	
ENV PROBLEM NO	8	8	8	8	0	0		
M/E 68-1							0.2	
M/E 68-2							0.2	
M/E 69							71	
M/E 70-1							0.2	
M/E 70-2							0.3	
M/E 127							54	
M/E 197							0	
M/E 198							100	
M/E 199							5.7	
M/E 275							26	
M/E 365							2.4	
M/E 441							14	
M/E 442							86	
M/E 443-1							17	
M/E 443-2							19	

INTERNAL STD AREA(ANT)	65100	79100	64600	68500	54700	71100		
INTERNAL STD AREA(CRY)	48400	71500	49800	64000	35000	49800		
INTERNAL STD AREA(DCB)	50700	55500	44200	50200	44700	49500		
INTERNAL STD AREA(NPT)	160000	181000	151000	159000	140000	168000		
INTERNAL STD AREA(PHN)	92500	117000	95500	96900	76900	105000		
INTERNAL STD AREA(PRY)	29800	55000	30300	48100	22700	31400		

DILUTION FACTOR	1	1	1	1	1	1		
PERCENT MOISTURE	6	6	7	5	9	8		
ACTUAL(ALLOWED) EXTRACT TIME	11(14 D)	11(14 D)	11(14 D)	11(14 D)	9(14 D)	9(14 D)		

AREA	QA	QA	QA					
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	BOUNDRY RD	STP	STP	STP	
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	BACKGROUND	SLUDGE BEDS	SLUDGE BEDS	SLUDGE BEDS	
SAMPLE NUMBER	BR0527887	BR0527887	BR0527888	BR810031B	BR803010B	BR803021B	BR803032B	
MATRIX	RRF	%	AREA	SOIL	SOIL	SOIL	SOIL	
UNITS				UG/KG	UG/KG	UG/KG	UG/KG	
ENV PROBLEM NO				0	8	8	8	
ACENAPHTHENE	1.204	2.3		370 U	1600 U	260 J	370 J	

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	BOUNDRY RD	STP	STP	STP
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	BACKGROUND	SLUDGE BEDS	SLUDGE BEDS	SLUDGE BEDS
SAMPLE NUMBER	BR0527887	BR0527887	BR0527888	BR810031B	BR803010B	BR803021B	BR803032B
MATRIX				SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	AREA	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO				0	8	8	8
ACENAPHTHYLENE	1.628	13.7		370 U	1600 U	1900 U	68 J
ANTHRACENE	0.948	6.4		370 U	970 J	880 J	910 J
BENZO(A)ANTHRACENE	0.95	7.9		370 U	1100 J	1100 J	1400 J
BENZO(A)PYRENE	1.057	2.8		370 U	960 J	950 J	1200 J
BENZO(B)FLUORANTHENE	1.317	4.2		370 U	1600 U	1900 U	1900 U
BENZO(G,H,I)PERYLENE	0.924	21.3		370 U	1600 U	610 J	1900 U
BENZO(K)FLUORANTHENE	1.116	2.8		370 U	1600 U	1900 U	1900 U
BENZOIC ACID	0.163	19.6		1800 U	8200 U	9600 U	140 J
BENZYL ALCOHOL	0.625	25.5		370 U	1600 U	1900 U	1900 U
BIS(2-CHLOROETHOXY)METHANE	0.752	3.8		370 U	1600 U	1900 U	1900 U
BIS(2-CHLOROETHYL)ETHER	2.644	0.9		370 U	1600 U	1900 U	1900 U
BIS(2-CHLOROISOPROPYL)ETHER	1.664	42.6		370 U	1600 U	96 J	1900 U
BIS(2-ETHYLHEXYL)PHTHALATE	1.147	13.8		370 U	50000 E	43000 E	41000 E
BUTYLBENZYLPHTHALATE	0.887	7.2		200 JB	4400 B	4200 B	4800 B
CHRYSENE	0.942	7.8		370 U	1300 J	1300 J	1500 J
DI-N-BUTYLPHTHALATE	1.819	10.6		150 JB	1100 JB	1200 JB	950 JB
DI-N-OCTYLPHTHALATE	2.286	17.7		5 JB	830 JB	920 JB	980 JB
DIBENZ(A,H)ANTHRACENE	0.923	24.5		370 U	1600 U	1900 U	1900 U
DIBENZOFURAN	1.386	4.7		370 U	1600 U	310 J	300 J
DIETHYLPHTHALATE	1.603	3		84 JB	800 JB	770 JB	690 JB
DIMETHYLPHTHALATE	1.552	4		370 U	1600 U	100 J	150 J
FLUORANTHENE	0.82	16.5		370 U	2600 U	2600 U	2600 U
FLUORENE	1.112	1.5		370 U	440 J	400 J	350 J
HEXACHLORO BENZENE	0.374	4.6		370 U	1600 U	1900 U	1900 U
HEXACHLOROBUTADIENE	0.155	17.4		370 U	1600 U	1900 U	1900 U
HEXACHLOROCYCLOPENTADIENE	0.255	41		370 U	1600 U	1900 U	1900 U
HEXACHLOROETHANE	0.78	11.6		370 U	1600 U	1900 U	1900 U
INDENO(1,2,3-CD)PYRENE	0.957	19.2		370 U	1600 U	620 J	440 J
ISOPHORONE	0.895	2.7		370 U	1600 U	100 J	1900 U
N-NITROSO-DI-N-PROPYLAMINE	1.561	9		370 U	1600 U	1900 U	1900 U
N-NITROSODIPHENYLAMINE	0.58	5.7		370 U	1600 U	1900 U	200 J
NAPHTHALENE	1.082	0.7		370 U	1600 U	170 J	180 J
NITROBENZENE	0.5	7.4		370 U	1600 U	1900 U	1900 U
NITROBENZENE-D5	0.452	12.8					
PENTACHLOROPHENOL	0.157	19.1		1800 U	8200 U	9600 U	9500 U
PHENANTHRENE	0.954	10.4		370 U	3200 B	3200 B	3400 B
PHENOL	2.104	16.3		370 U	1600 U	1900 U	570 J
PHENOL-D5	1.816	7.2					
PYRENE	1.408	3.2		370 U	4000 B	3600 B	4000 B

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
	CONTINUING CALIBRATION BR0527887	CONTINUING CAL %D BR0527887	ISTD RET TIM SHIFT BR0527888	BOUNDRY RD BACKGROUND BR810031B SOIL UG/KG 0	STP SLUDGE BEDS BR803010B SOIL UG/KG 8	STP SLUDGE BEDS BR803021B SOIL UG/KG 8	STP SLUDGE BEDS BR803032B SOIL UG/KG 8
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	RRF	%	AREA				
TERPHENYL-D14	1.178	11.2					
1,2-DICHLOROBENZENE	1.356	3.1		370 U	1600 U	1900 U	1900 U
1,2,4-TRICHLOROBENZENE	0.282	2.6		370 U	1600 U	1900 U	1900 U
1,3-DICHLOROBENZENE	1.407	2.3		370 U	1600 U	1900 U	1900 U
1,4-DICHLOROBENZENE	1.492	0.6		370 U	1600 U	1900 U	1900 U
2-CHLORONAPHTHALENE	1.127	7.6		370 U	1600 U	1900 U	1900 U
2-CHLOROPHENOL	1.409	7.1		370 U	1600 U	1900 U	1900 U
2-FLUOROBIPHENYL	1.197	8.7					
2-FLUOROPHENOL	1.203	9.1					
2-METHYLNAPHTHALENE	0.609	38.8		370 U	680 J	740 J	610 J
2-METHYLPHENOL	1.197	4.3		370 U	1600 U	1900 U	1900 U
2-NITROANILINE	0.498	15.3		1800 U	8200 U	100 J	260 J
2-NITROPHENOL	0.189	3		370 U	1600 U	400 J	210 J
2,4-DICHLOROPHENOL	0.206	16.3		370 U	1600 U	1900 U	1900 U
2,4-DIMETHYLPHENOL	0.27	11.3		370 U	1600 U	1900 U	1900 U
2,4-DINITROPHENOL	0.118	15.7		1800 U	8200 U	9600 U	9500 U
2,4-DINITROTOLUENE	0.317	1.4		370 U	1600 U	1900 U	1900 U
2,4,5-TRICHLOROPHENOL	0.302	11.8		1800 U	8200 U	9600 U	9500 U
2,4,6-TRIBROMOPHENOL	0.296	29.9					
2,4,6-TRICHLOROPHENOL	0.294	17.4		370 U	1600 U	1900 U	1900 U
2,6-DINITROTOLUENE	0.321	0.1		370 U	1600 U	1900 U	1900 U
3-NITROANILINE	0.36	6.7		1800 U	8200 U	9600 U	9500 U
3,3'-DICHLOROBENZIDINE	0.095	48.9		730 U	3300 U	3900 U	3800 U
4-BROMOPHENYL-PHENYLETHER	0.311	7.1		370 U	1600 U	1900 U	1900 U
4-CHLORO-3-METHYLPHENOL	0.326	9.7		370 U	1600 U	180 J	170 J
4-CHLOROANILINE	0.398	0.8		370 U	1600 U	470 J	120 J
4-CHLOROPHENYL-PHENYLETHER	0.606	2.5		370 U	1600 U	1900 U	190 J
4-METHYLPHENOL	1.345	2.4		370 U	1600 U	620 J	1900 U
4-NITROANILINE	0.202	12.8		1800 U	8200 U	9600 U	9500 U
4-NITROPHENOL	0.236	19.9		1800 U	8200 U	9600 U	9500 U
4,6-DINITRO-2-METHYLPHENOL	0.114	7.7		1800 U	8200 U	9600 U	9500 U
SURR 1(NBZ) %RECOVERY				28	35	45	73
SURR 2(FBP) %RECOVERY				41	54	54	112
SURR 3(TPH) %RECOVERY				47	61	52	116
SURR 4(PHL) %RECOVERY				33	43	49	89
SURR 5(2FP) %RECOVERY				37	44	59	106
SURR 6(TBP) %RECOVERY				52	44	47	84

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

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AREA	QA	QA	QA				
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	BOUNDRY RD	STP	STP	STP
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	BACKGROUND	SLUDGE BEDS	SLUDGE BEDS	SLUDGE BEDS
SAMPLE NUMBER	BR0527887	BR0527887	BR0527888	BR810031B	BR803010B	BR803021B	BR803032B
MATRIX				SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	AREA	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO				0	8	8	8
M/E 68-1							
M/E 68-2							
M/E 69							
M/E 70-1							
M/E 70-2							
M/E 127							
M/E 197							
M/E 198							
M/E 199							
M/E 275							
M/E 365							
M/E 441							
M/E 442							
M/E 443-1							
M/E 443-2							
INTERNAL STD AREA(ANT)			87300	60500	56900	74800	64100
INTERNAL STD AREA(CRY)			76000	65400	20600	32700	17700
INTERNAL STD AREA(DCB)			52500	42400	38900	52100	52300
INTERNAL STD AREA(NPT)			180000	139000	134000	184000	174000
INTERNAL STD AREA(PHN)			136000	92700	74000	98800	69700
INTERNAL STD AREA(PRY)			53200	111000	16200	23200	12200
DILUTION FACTOR				1	1	1	1
PERCENT MOISTURE				9	80	83	83
ACTUAL(ALLOWED) EXTRACT TIME				11(14 D)	10(14 D)	10(14 D)	10(14 D)
AREA					QA	QA	QA
LOCATION	STP	B. 481	B. 479	STP	TUNED	CONTINUING	CONTINUING
TYPE OF LOCATION	SLUDGE BEDS	LEACH PIT	CESSPOOL	TANK	CALIBRATION	CALIBRATION	CAL %D
SAMPLE NUMBER	BR803043B	BR808015B	BR311015B	BR802019B	BR0531885	BR0531887	BR0531887
MATRIX	SOIL	SOIL	SOIL	SOIL			
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	%	RRF	%
ENV PROBLEM NO	8	11	2	8			
ACENAPHTHENE	300 J	570 J	400 U	11000		1.188	3.6

TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	STP	B. 481	B. 479	STP	QA	QA	QA
LOCATION	SLUDGE BEDS	LEACH PIT	CESSPOOL	TANK	TUNED	CONTINUING	CONTINUING
TYPE OF LOCATION	BR803043B	BR808015B	BR311015B	BR802019B	CALIBRATION	CALIBRATION	CAL %D
SAMPLE NUMBER	SOIL	SOIL	SOIL	SOIL	BR0531885	BR0531887	BR0531887
MATRIX	UG/KG	UG/KG	UG/KG	UG/KG	%	RRF	%
UNITS	8	11	2	8			
ENV PROBLEM NO							
ACENAPHTHYLENE	88 J	100 J	400 U	100 J		1.707	9.5
ANTHRACENE	680 J	180 J	400 U	12000		0.916	9.5
BENZO(A)ANTHRACENE	3300 U	2100 U	400 U	5100		0.965	6.5
BENZO(A)PYRENE	560 J	460 J	400 U	2700		1.077	1
BENZO(B)FLUORANTHENE	3300 U	2100 U	400 U	2900		1.269	7.7
BENZO(G,H,I)PERYLENE	3300 U	2100 U	400 U	1500 J		0.982	28.9
BENZO(K)FLUORANTHENE	3300 U	2100 U	400 U	3400		1.092	4.9
BENZOIC ACID	1200 J	10000 U	2000 U	9800 U		0.167	22.5
BENZYL ALCOHOL	3300 U	2100 U	400 U	2000 U		0.643	23.5
BIS(2-CHLOROETHOXY)METHANE	3300 U	2100 U	400 U	2000 U		0.793	1.4
BIS(2-CHLOROETHYL)ETHER	3300 U	2100 U	400 U	2000 U		2.286	12.8
BIS(2-CHLOROISOPROPYL)ETHER	3300 U	2100 U	400 U	110 J		1.447	24
BIS(2-ETHYLHEXYL)PHTHALATE	56000 E	13000	200 J	14000		1.547	16.4
BUTYLBENZYLPHTHALATE	4000 B	4100 B	640 B	5100 B		1.003	4.9
CHRYSENE	1200 J	2100 U	400 U	5600		0.936	8.4
DI-N-BUTYLPHTHALATE	1200 JB	730 JB	210 JB	1700 JB		2.012	1
DI-N-OCTYLPHTHALATE	1900 JB	680 JB	78 JB	1100 JB		2.719	2.1
DIBENZ(A,H)ANTHRACENE	3300 U	2100 U	400 U	460 J		0.992	33.7
DIBENZOFURAN	230 J	680 J	400 U	8400		1.415	2.8
DIETHYLPHTHALATE	1600 JB	450 JB	96 JB	830 JB		1.923	23.5
DIMETHYLPHTHALATE	200 J	80 J	400 U	170 J		1.619	8.6
FLUORANTHENE	1700 J	600 J	11 J	14000		0.783	20.2
FLUORENE	3300 U	570 J	400 U	12000		1.078	1.6
HEXACHLOROBENZENE	3300 U	2100 U	400 U	2000 U		0.399	1.9
HEXACHLOROBUTADIENE	3300 U	2100 U	400 U	2000 U		0.159	15.4
HEXACHLOROCYCLOPENTADIENE	3300 U	2100 U	400 U	2000 U		0.205	52.6
HEXACHLOROETHANE	3300 U	2100 U	400 U	2000 U		0.744	15.7
INDENO(1,2,3-CD)PYRENE	3300 U	2100 U	330 J	2200		1.077	34.1
ISOPHORONE	240 J	300 J	400 U	74 J		0.918	0.2
N-NITROSO-DI-N-PROPYLAMINE	3300 U	2100 U	400 U	2000 U		1.304	8.9
N-NITROSODIPHENYLAMINE	3300 U	2100 U	400 U	2000 U		0.574	6.8
NAPHTHALENE	3300 U	1000 J	400 U	6100		1.083	0.7
NITROBENZENE	170 J	2100 U	400 U	2000 U		0.632	17
NITROBENZENE-D5						0.456	12
PENTACHLOROPHENOL	16000 U	10000 U	2000 U	9800 U		0.163	23.5
PHENANTHRENE	2300 JB	2000 JB	400 U	47000 BE		0.953	10.4
PHENOL	3300 U	2100 U	30 J	37 J		2.04	18.9
PHENOL-D5						1.635	16.4
PYRENE	3100 JB	1400 JB	400 U	20000 B		1.161	14.9

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA					QA	QA	QA
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP SLUDGE BEDS BR803043B SOIL UG/KG 8	B. 481 LEACH PIT BR808015B SOIL UG/KG 11	B. 479 CESSPOOL BR311015B SOIL UG/KG 2	STP TANK BR802019B SOIL UG/KG 8	TUNED CALIBRATION BR0531885 %	CONTINUING CALIBRATION BR0531887 RRF
	TERPHENYL-D14					1.025	3.3
	1,2-DICHLOROBENZENE	3300 U	2100 U	400 U	2000 U	1.368	2.3
	1,2,4-TRICHLOROBENZENE	3300 U	2100 U	400 U	320 J	0.285	1.4
	1,3-DICHLOROBENZENE	3300 U	2100 U	400 U	650 J	1.418	1.5
	1,4-DICHLOROBENZENE	3300 U	2100 U	400 U	2300	1.401	6.6
	2-CHLORONAPHTHALENE	3300 U	2100 U	400 U	470 J	1.217	0.2
	2-CHLOROPHENOL	3300 U	2100 U	400 U	2000 U	1.358	10.5
	2-FLUOROBIPHENYL					1.299	0.9
	2-FLUOROPHENOL					1.257	5
	2-METHYLNAPHTHALENE	610 J	1800 J	400 U	4800	0.597	36.1
	2-METHYLPHENOL	3300 U	100 J	400 U	2000 U	1.138	0.9
	2-NITROANILINE	390 J	10000 U	2000 U	190 J	0.431	0.3
	2-NITROPHENOL	3300 U	170 J	400 U	2000 U	0.211	14.9
	2,4-DICHLOROPHENOL	3300 U	2100 U	400 U	2000 U	0.246	0.2
	2,4-DIMETHYLPHENOL	3300 U	2100 U	400 U	2000 U	0.275	13.3
	2,4-DINITROPHENOL	16000 U	10000 U	2000 U	9800 U	0.055	45.7
	2,4-DINITROTOLUENE	3300 U	310 J	400 U	2000 U	0.336	7.7
	2,4,5-TRICHLOROPHENOL	16000 U	10000 U	2000 U	9800 U	0.351	2.6
	2,4,6-TRIBROMOPHENOL					0.354	55.4
	2,4,6-TRICHLOROPHENOL	3300 U	2100 U	400 U	2000 U	0.331	6.9
	2,6-DINITROTOLUENE	670 J	2100 U	400 U	200 J	0.323	0.4
	3-NITROANILINE	16000 U	10000 U	2000 U	9800 U	0.302	21.8
	3,3'-DICHLOROBENZIDINE	6600 U	4100 U	800 U	3900 U	0.168	8.9
	4-BROMOPHENYL-PHENYLETHER	3300 U	2100 U	400 U	2000 U	0.316	5.4
	4-CHLORO-3-METHYLPHENOL	3300 U	2100 U	400 U	410 J	0.287	3.5
	4-CHLOROANILINE	3300 U	390 J	400 U	200 J	0	100
	4-CHLOROPHENYL-PHENYLETHER	3300 U	570 J	400 U	2000 U	0.586	0.8
	4-METHYLPHENOL	3300 U	750 J	270 J	140 J	1.208	8.1
	4-NITROANILINE	16000 U	10000 U	2000 U	9800 U	0.264	14.1
	4-NITROPHENOL	16000 U	410 J	2000 U	9800 U	0.199	1.1
	4,6-DINITRO-2-METHYLPHENOL	16000 U	10000 U	2000 U	9800 U	0.051	52
	SURR 1(NBZ) %RECOVERY	52	18 *	54	46		
	SURR 2(FBP) %RECOVERY	67	24 *	64	66		
	SURR 3(TPH) %RECOVERY	73	29	58	73		
	SURR 4(PHL) %RECOVERY	55	28	55	55		
	SURR 5(2FP) %RECOVERY	67	31	72	69		
	SURR 6(TBP) %RECOVERY	50	20	56	56		

TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP SLUDGE BEDS BR803043B SOIL UG/KG 8	B. 481 LEACH PIT BR808015B SOIL UG/KG 11	B. 479 CESSPOOL BR311015B SOIL UG/KG 2	STP TANK BR802019B SOIL UG/KG 8	TUNED CALIBRATION BR0531885 %	CONTINUING CALIBRATION BR0531887 RRF	CONTINUING CAL %D BR0531887 %
M/E 68-1					0		
M/E 68-2					0		
M/E 69					66		
M/E 70-1					0		
M/E 70-2					0		
M/E 127					56		
M/E 197					0		
M/E 198					100		
M/E 199					6.3		
M/E 275					28		
M/E 365					2.9		
M/E 441					15		
M/E 442					90		
M/E 443-1					18		
M/E 443-2					19		
INTERNAL STD AREA(ANT)	66400	78600	87500	81100			
INTERNAL STD AREA(CRY)	17200	25600	47300	28200			
INTERNAL STD AREA(DCB)	53100	55700	59700	57700			
INTERNAL STD AREA(NPT)	177000	196000	208000	201000			
INTERNAL STD AREA(PHN)	69800	88800	106000	97500			
INTERNAL STD AREA(PRY)	12000	18400	41300	22900			
DILUTION FACTOR	1	1	1	1			
PERCENT MOISTURE	90	84	18	83			
ACTUAL(ALLOWED) EXTRACT TIME	10(14 D)	8(14 D)	10(14 D)	11(14 D)			

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	ISTD RET TIM SHIFT BR0531888 AREA	STP TANK BR802020B SOIL UG/KG 8	STP TANK BR802031B SOIL UG/KG 8	TUNED CALIBRATION BR0603885 %	CONTINUING CALIBRATION BR0603887 RRF	CONTINUING CAL %D BR0603887 %	ISTD RET TIM SHIFT BR0603888 AREA
ACENAPHTHENE		8600	15000		1.165	5.5	

TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA		
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	ISTD RET TIM SHIFT BR0531888 AREA	STP TANK BR802020B SOIL UG/KG 8	STP TANK BR802031B SOIL UG/KG 8	TUNED CALIBRATION BR0603885 %	CONTINUING CALIBRATION BR0603887 RRF	CONTINUING CAL %D BR0603887 %	ISTD RET TIM SHIFT BR0603888 AREA
ACENAPHTHYLENE		37 J	81 J		1.566		17
ANTHRACENE		21000	11000 J		0.922		8.9
BENZO(A)ANTHRACENE		3800	3900		0.929		10
BENZO(A)PYRENE		2000	2000		1.048		3.6
BENZO(B)FLUORANTHENE		2200	4100		1.165		15.2
BENZO(G,H,I)PERYLENE		1300 J	1300		0.943		23.8
BENZO(K)FLUORANTHENE		2600	4800		1.073		6.5
BENZOIC ACID		6600 U	5100 U		0.16		17.4
BENZYL ALCOHOL		1300 U	1000 U		0.734		12.6
BIS(2-CHLOROETHOXY)METHANE		1300 U	19 J		0.86		9.9
BIS(2-CHLOROETHYL)ETHER		1300 U	1000 U		2.861		9.1
BIS(2-CHLOROISOPROPYL)ETHER		1300 U	1000 U		1.536		31.5
BIS(2-ETHYLHEXYL)PHTHALATE		3100	2700		1.625		22.2
BUTYL BENZYL PHTHALATE		1200 JB	2300 B		1.147		20
CHRYSENE		3800	3900		0.905		11.4
DI-N-BUTYL PHTHALATE		2100 B	1100 B		2.161		6.3
DI-N-OCTYL PHTHALATE		370 JB	510 JB		2.555		8
DIBENZ(A,H)ANTHRACENE		320 J	420 J		0.937		26.4
DIBENZOFURAN		6400	11000		1.356		6.8
DIETHYL PHTHALATE		530 JB	380 JB		1.831		17.6
DIMETHYL PHTHALATE		81 J	70 J		1.745		17
FLUORANTHENE		12000	16000		0.81		17.5
FLUORENE		11000	15000		1.029		6.1
HEXACHLORO BENZENE		1300 U	1000 U		0.448		14.3
HEXACHLOROBUTADIENE		1300 U	1000 U		0.189		0.5
HEXACHLOROCYCLOPENTADIENE		1300 U	1000 U		0.17		60.6
HEXACHLOROETHANE		1300 U	1000 U		0.806		8.7
INDENO(1,2,3-CD)PYRENE		1100 J	1300		1		24.5
ISOPHORONE		1300 U	83 J		1.085		17.9
N-NITROSO-DI-N-PROPYLAMINE		1300 U	1000 U		1.571		9.7
N-NITROSODIPHENYLAMINE		1300 U	980 J		0.573		6.9
NAPHTHALENE		2600	2800		1.016		5.5
NITROBENZENE		1300 U	1000 U		0.632		16.9
NITROBENZENE-D5					0.534		3
PENTACHLOROPHENOL		6600 U	5100 U		0.15		13.7
PHENANTHRENE		37000 BE	46000 BE		0.919		13.7
PHENOL		27 J	830 J		2.164		13.9
PHENOL-D5					1.755		10.3
PYRENE		17000 B	17000 BE		1.307		4.2

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA		
LOCATION	ISTD RET TIM	STP	STP	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	SHIFT	TANK	TANK	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0531888	BR802020B	BR802031B	BR0603885	BR0603887	BR0603887	BR0603888
MATRIX	AREA	SOIL	SOIL	%	RRF	%	AREA
UNITS	UG/KG	UG/KG	UG/KG				
ENV PROBLEM NO	8	8	8				
TERPHENYL-D14					1.116	5.3	
1,2-DICHLOROBENZENE		1300 U	1000 U		1.397	0.2	
1,2,4-TRICHLOROBENZENE		330 J	1000 U		0.309	7	
1,3-DICHLOROBENZENE		550 J	1000 U		1.408	2.2	
1,4-DICHLOROBENZENE		1500 U	1000 U		1.417	5.6	
2-CHLORONAPHTHALENE		360 J	34 J		1.15	5.7	
2-CHLOROPHENOL		1300 U	1000 U		1.405	7.4	
2-FLUOROBIPHENYL					1.211	7.6	
2-FLUOROPHENOL					1.188	10.2	
2-METHYLNAPHTHALENE		5300	8400		0.577	31.5	
2-METHYLPHENOL		1300 U	1000 U		1.187	3.4	
2-NITROANILINE		420 J	280 J		0.488	12.8	
2-NITROPHENOL		1300 U	1000 U		0.208	12.9	
2,4-DICHLOROPHENOL		1300 U	1000 U		0.204	17.4	
2,4-DIMETHYLPHENOL		120 J	1000 U		0.292	20.5	
2,4-DINITROPHENOL		6600 U	5100 U		0.024	76.1	
2,4-DINITROTOLUENE		170 J	240 J		0.304	2.7	
2,4,5-TRICHLOROPHENOL		6600 U	5100 U		0.368	7.4	
2,4,6-TRIBROMOPHENOL					0.282	23.8	
2,4,6-TRICHLOROPHENOL		1300 U	1000 U		0.344	3.4	
2,6-DINITROTOLUENE		300 J	400 J		0.338	5.1	
3-NITROANILINE		6600 U	5100 U		0.211	45.4	
3,3'-DICHLOROBENZIDINE		2600 U	2000 U		0.125	32.6	
4-BROMOPHENYL-PHENYLETHER		1300 U	1000 U		0.367	9.7	
4-CHLORO-3-METHYLPHENOL		310 J	600 J		0.338	13.7	
4-CHLOROANILINE		190 J	1000 U		0.324	18.1	
4-CHLOROPHENYL-PHENYLETHER		280 J	1000 U		0.563	4.8	
4-METHYLPHENOL		200 J	220 J		1.184	9.9	
4-NITROANILINE		6600 U	250 J		0.198	14.5	
4-NITROPHENOL		840 J	640 J		0.185	5.9	
4,6-DINITRO-2-METHYLPHENOL		6600 U	5100 U		0.033	68.4	
SURR 1(NBZ) %RECOVERY		55	53				
SURR 2(FBP) %RECOVERY		61	64				
SURR 3(TPH) %RECOVERY		79	67				
SURR 4(PHL) %RECOVERY		66	60				
SURR 5(2FP) %RECOVERY		69	68				
SURR 6(TBP) %RECOVERY		52	42				

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA		
LOCATION	ISTD RET TIM	STP	STP	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	SHIFT	TANK	TANK	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0531888	BR802020B	BR802031B	BR0603885	BR0603887	BR0603887	BR0603888
MATRIX	SOIL	SOIL	SOIL	%	RRF	%	AREA
UNITS	UG/KG	UG/KG	UG/KG				
ENV PROBLEM NO	8	8					
M/E 68-1				0			
M/E 68-2				0			
M/E 69				58			
M/E 70-1				0			
M/E 70-2				0			
M/E 127				49			
M/E 197				0			
M/E 198				100			
M/E 199				5.8			
M/E 275				28			
M/E 365				2			
M/E 441				12			
M/E 442				75			
M/E 443-1				14			
M/E 443-2				19			

INTERNAL STD AREA(ANT)	75700	73700	64000				56800
INTERNAL STD AREA(CRY)	80700	34300	32900				35300
INTERNAL STD AREA(DCB)	59600	49200	49300				44300
INTERNAL STD AREA(NPT)	182000	171000	164000				132000
INTERNAL STD AREA(PHN)	121000	97000	74100				71300
INTERNAL STD AREA(PRY)	65800	24600	23800				29600

DILUTION FACTOR		1	1				
PERCENT MOISTURE		.75	.68				
ACTUAL(ALLOWED) EXTRACT TIME		10(14 D)	10(14 D)				
AREA							
LOCATION	B. 422	B. 905					
TYPE OF LOCATION	CESSPOOL	CESSPOOL					
SAMPLE NUMBER	BR313017B	BR315019B					
MATRIX	SOIL	SOIL					
UNITS	UG/KG	UG/KG					
ENV PROBLEM NO	2	2					
ACENAPHTHENE	6900	520 J					

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA

LOCATION	B. 422	B. 905
TYPE OF LOCATION	CESSPOOL	CESSPOOL
SAMPLE NUMBER	BR313017B	BR315019B
MATRIX	SOIL	SOIL
UNITS	UG/KG	UG/KG
ENV PROBLEM NO	2	2
ACENAPHTHYLENE	170 J	1700 U
ANTHRACENE	590 J	810 J
BENZO(A)ANTHRACENE	2100	3800
BENZO(A)PYRENE	750 JB	2300 B
BENZO(B)FLUORANTHENE	2100 B	4800 B
BENZO(G,H,I)PERYLENE	2000	1700
BENZO(K)FLUORANTHENE	2300 B	5200 B
BENZOIC ACID	9400 J	8300 U
BENZYL ALCOHOL	1900 U	1700 U
BIS(2-CHLOROETHOXY)METHANE	1900 U	1700 U
BIS(2-CHLOROETHYL)ETHER	1900 U	1700 U
BIS(2-CHLOROISOPROPYL)ETHER	1800 J	1700 U
BIS(2-ETHYLHEXYL)PHTHALATE	19000 B	5300 B
BUTYL BENZYL PHTHALATE	4500 B	2300 B
CHRYSENE	3300	3900
DI-N-BUTYL PHTHALATE	970 JB	420 JB
DI-N-OCTYL PHTHALATE	360 JB	300 JB
DIBENZ(A,H)ANTHRACENE	1900 U	720 J
DIBENZOFURAN	4400	340 J
DIETHYL PHTHALATE	780 J	330 J
DIMETHYL PHTHALATE	230 J	1700 U
FLUORANTHENE	9100 B	6000 B
FLUORENE	5400	510 J
HEXACHLORO BENZENE	1900 U	1700 U
HEXACHLORO BUTADIENE	1900 U	1700 U
HEXACHLORO CYCLOPENTADIENE	1900 U	1700 U
HEXACHLOROETHANE	1900 U	1700 U
INDENO(1,2,3-CD)PYRENE	1500 J	2700
ISOPHORONE	1900 U	91 J
N-NITROSO-DI-N-PROPYLAMINE	1700 J	1700 U
N-NITROSODIPHENYLAMINE	1900 U	120 J
NAPHTHALENE	4900	160 J
NITROBENZENE	1900 U	1700 U
NITROBENZENE-D5		
PENTACHLOROPHENOL	9600 U	8300 U
PHENANTHRENE	24000	4800
PHENOL	8600	5700
PHENOL-D5		
PYRENE	8700 B	8900 B

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TABLE D.6.8 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR311015B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 422 CESSPOOL BR313017B SOIL UG/KG 2	B. 905 CESSPOOL BR315019B SOIL UG/KG 2
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TERPHENYL-D14		
1,2-DICHLOROBENZENE	1900 U	1700 U
1,2,4-TRICHLOROBENZENE	1900 U	1700 U
1,3-DICHLOROBENZENE	1900 U	1700 U
1,4-DICHLOROBENZENE	11000	1700 U
2-CHLORONAPHTHALENE	1900 U	1700 U
2-CHLOROPHENOL	1900 U	1700 U
2-FLUOROBIPHENYL		
2-FLUOROPHENOL		
2-METHYLNAPHTHALENE	8600	550 J
2-METHYLPHENOL	100 J	1700 U
2-NITROANILINE	200 J	8300 U
2-NITROPHENOL	380 J	1700 U
2,4-DICHLOROPHENOL	1900 U	1700 U
2,4-DIMETHYLPHENOL	400 J	1700 U
2,4-DINITROPHENOL	9600 U	8300 U
2,4-DINITROTOLUENE	1900 U	1700 U
2,4,5-TRICHLOROPHENOL	9600 U	8300 U
2,4,6-TRIBROMOPHENOL		
2,4,6-TRICHLOROPHENOL	1900 U	1700 U
2,6-DINITROTOLUENE	1900 U	1700 U
3-NITROANILINE	9600 U	8300 U
3,3'-DICHLOROBENZIDINE	3900 U	3300 U
4-BROMOPHENYL-PHENYLETHER	1900 U	1700 U
4-CHLORO-3-METHYLPHENOL	1900 U	1700 U
4-CHLOROANILINE	180 J	770 J
4-CHLOROPHENYL-PHENYLETHER	1900 U	1700 U
4-METHYLPHENOL	130000 E	100000 E
4-NITROANILINE	9600 U	8300 U
4-NITROPHENOL	830 J	8300 U
4,6-DINITRO-2-METHYLPHENOL	9600 U	8300 U

SURR 1(NBZ) %RECOVERY	51	25
SURR 2(FBP) %RECOVERY	57	33
SURR 3(TPH) %RECOVERY	52	38
SURR 4(PHL) %RECOVERY	56	32
SURR 5(2FP) %RECOVERY	79	36
SURR 6(TBP) %RECOVERY	54	35

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 422 CESSPOOL BR313017B SOIL UG/KG 2	B. 905 CESSPOOL BR315019B SOIL UG/KG 2
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M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

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INTERNAL STD AREA(ANT)	48300	52500
INTERNAL STD AREA(CRY)	22700	22000
INTERNAL STD AREA(DCB)	37500	45900
INTERNAL STD AREA(NPT)	129000	141000
INTERNAL STD AREA(PHN)	54600	61400
INTERNAL STD AREA(PRY)	16300	17500

DILUTION FACTOR	1	1
PERCENT MOISTURE	83	80
ACTUAL(ALLOWED) EXTRACT TIME	10(14 D)	10(14 D)

TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0523885	BR0523887	BR0523887	BR0523888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
ACENAPHTHENE	1.232	5.9			1.191	3.3	
ACENAPHTHYLENE	1.886	9.6			1.73	8.3	
ANTHRACENE	1.012	8.4			0.934	7.7	
BENZO(A)ANTHRACENE	1.032	8.2			0.972	5.8	
BENZO(A)PYRENE	1.088	8.6			1.152	5.9	
BENZO(B)FLUORANTHENE	1.375	11.3			1.387	0.9	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.933	22.5	
BENZO(K)FLUORANTHENE	1.148	3.6			1.214	5.7	
BENZOIC ACID	0.137	13.6			0.118	13.5	
BENZYL ALCOHOL	0.84	10.8			0.647	23	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.732	6.4	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.524	3.7	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.408	20.6	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.226	7.8	
BUTYL BENZYL PHTHALATE	0.956	11.4			0.848	11.4	
CHRYSENE	1.022	5.5			0.961	5.9	
DI-N-BUTYL PHTHALATE	2.033	13.6			1.874	7.9	
DI-N-OCTYL PHTHALATE	2.778	18.9			2.403	13.5	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.912	22.9	
DIBENZOFURAN	1.455	6.1			1.43	1.7	
DIETHYL PHTHALATE	1.557	22.1			1.76	13	
DIMETHYL PHTHALATE	1.491	9.3			1.505	0.9	
FLUORANTHENE	0.982	17.9			0.96	2.3	
FLUORENE	1.096	8.1			1.052	4	
HEXACHLOROBENZENE	0.392	7.8			0.379	3.1	
HEXACHLOROBUTADIENE	0.188	3.2			0.16	14.8	
HEXACHLOROCYCLOPENTADIENE	0.433	13.3			0.309	28.6	
HEXACHLOROETHANE	0.882	4.2			0.778	11.8	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.992	23.5	
ISOPHORONE	0.92	11.2			0.802	12.8	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.235	13.7	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.522	15.2	
NAPHTHALENE	1.075	6.4			1.067	0.7	
NITROBENZENE	0.54	4.1			0.494	8.7	
NITROBENZENE-D5	0.519	5.1			0.45	13.3	
PENTACHLOROPHENOL	0.132	19.5			0.162	23	
PHENANTHRENE	1.064	9.8			0.955	10.2	
PHENOL	2.514	16.4			2	20.4	
PHENOL-D5	1.957	16.3			1.749	10.6	

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0523885	BR0523887	BR0523887	BR0523888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
EHV PROBLEM NO							
PYRENE	1.365	1.5			1.275	6.5	
TERPHENYL-D14	1.059	5.9			1.063	0.4	
1,2-DICHLOROBENZENE	1.399	9.2			1.345	3.9	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.288	0.3	
1,3-DICHLOROBENZENE	1.44	8.8			1.447	0.5	
1,4-DICHLOROBENZENE	1.501	9.4			1.447	3.6	
2-CHLORONAPHTHALENE	1.22	13.6			1.156	5.2	
2-CHLOROPHENOL	1.517	13.7			1.355	10.7	
2-FLUOROBIPHENYL	1.311	9.3			1.32	0.7	
2-FLUOROPHENOL	1.323	11.1			1.235	6.7	
2-METHYLNAPHTHALENE	0.439	15.3			0.574	30.9	
2-METHYLPHENOL	1.148	13.9			1.114	3	
2-NITROANILINE	0.432	16.2			0.43	0.5	
2-NITROPHENOL	0.184	8.3			0.186	1.1	
2,4-DICHLOROPHENOL	0.247	8.9			0.226	8.5	
2,4-DIMETHYLPHENOL	0.242	18.5			0.246	1.4	
2,4-DINITROPHENOL	0.102	20.1			0.127	24.6	
2,4-DINITROTOLUENE	0.312	14.8			0.358	14.7	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.295	13.8	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.285	25.2	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.318	10.7	
2,6-DINITROTOLUENE	0.321	11.5			0.324	0.9	
3-NITROANILINE	0.386	13.1			0.362	6.1	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.101	45.6	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.284	15	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.25	15.9	
4-CHLOROANILINE	0.395	12.7			0.35	11.5	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.62	4.9	
4-METHYLPHENOL	1.314	17.4			1.171	10.9	
4-NITROANILINE	0.231	18.7			0.243	5.1	
4-NITROPHENOL	0.197	12.4			0.239	21.2	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.113	6.5	

SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

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TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0229886	INITIAL CAL % RSD BR0229886	TUNED CALIBRATION BR0229885	TUNED CALIBRATION BR0523885	CONTINUING CALIBRATION BR0523887	CONTINUING CAL %D BR0523887	ISTD RET TIM SHIFT BR0523888 AREA
	RRF	%	%	%	RRF	%	

M/E 51			35	32			
M/E 68-1			0	0			
M/E 68-2			0	0			
M/E 69			69	65			
M/E 70-1			0.2	0			
M/E 70-2			0.3	0			
M/E 127			57	54			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	6.5			
M/E 275			27	28			
M/E 365			2.1	1.8			
M/E 441			10	16			
M/E 442			62	99			
M/E 443-1			11	20			
M/E 443-2			17	20			

INTERNAL STD AREA(ANT)	59400
INTERNAL STD AREA(CRY)	75600
INTERNAL STD AREA(DCB)	51800
INTERNAL STD AREA(NPT)	162000
INTERNAL STD AREA(PHN)	103000
INTERNAL STD AREA(PRY)	53600

DILUTION FACTOR
PERCENT MOISTURE
ACTUAL(ALLOWED) EXTRACT TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08197 SOIL UG/KG	B. 444 RELEASES BR504018B SOIL UG/KG	MATRIX SPIKE BR504018B SOIL UG/KG	MS % RECOVERY BR504018B SOIL %	RPD BR504018B SOIL %	MATRIX SPIKE DUPLICATE BR504018B SOIL UG/KG	MSD % RECOVERY BR504018B SOIL %
ACENAPHTHENE	330 U	380 U	2300	63	0	2400	63

TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	B. 444	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	RELEASES	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	SBK08197	BR504018B	BR504018B	BR504018B	BR504018B	BR504018B	BR504018B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		6	6	6	6	6	6
ACENAPHTHYLENE	330 U	380 U	370 U			380 U	
ANTHRACENE	330 U	380 U	370 U			380 U	
BENZO(A)ANTHRACENE	330 U	380 U	370 U			380 U	
BENZO(A)PYRENE	330 U	380 U	370 U			380 U	
BENZO(B)FLUORANTHENE	330 U	380 U	370 U			380 U	
BENZO(G,H,I)PERYLENE	330 U	380 U	370 U			380 U	
BENZO(K)FLUORANTHENE	330 U	380 U	370 U			380 U	
BENZOIC ACID	1600 U	1900 U	1900 U			1900 U	
BENZYL ALCOHOL	330 U	380 U	370 U			380 U	
BIS(2-CHLOROETHOXY)METHANE	330 U	380 U	370 U			380 U	
BIS(2-CHLOROETHYL)ETHER	330 U	380 U	370 U			380 U	
BIS(2-CHLOROISOPROPYL)ETHER	330 U	380 U	370 U			380 U	
BIS(2-ETHYLHEXYL)PHTHALATE	79 J	320 JB	370 U			380 U	
BUTYLBENZYLPHthalate	330 U	380 U	56 J			55 J	
CHRYSENE	330 U	380 U	370 U			380 U	
DI-N-BUTYLPHthalate	330 U	55 J	95 J			88 J	
DI-N-OCTYLPHthalate	7 J	11 JB	370 U			380 U	
DIBENZ(A,H)ANTHRACENE	330 U	380 U	370 U			380 U	
DIBENZOFURAN	330 U	380 U	370 U			380 U	
DIETHYLPHthalate	20 J	380 U	43 JB			54 JB	
DIMETHYLPHthalate	330 U	380 U	370 U			380 U	
FLUORANTHENE	330 U	380 U	370 U			380 U	
FLUORENE	330 U	380 U	370 U			380 U	
HEXACHLORO BENZENE	330 U	380 U	370 U			380 U	
HEXACHLOROBUTADIENE	330 U	380 U	370 U			380 U	
HEXACHLOROCYCLOPENTADIENE	330 U	380 U	370 U			380 U	
HEXACHLOROETHANE	330 U	380 U	370 U			380 U	
INDENO(1,2,3-CD)PYRENE	330 U	380 U	370 U			380 U	
ISOPHORONE	8 J	380 U	370 U			380 U	
N-NITROSO-DI-N-PROPYLAMINE	330 U	380 U	2000	53	1	2000	52
N-NITROSODIPHENYLAMINE	330 U	380 U	370 U			380 U	
NAPHTHALENE	330 U	380 U	370 U			380 U	
NITROBENZENE	330 U	380 U	370 U			380 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	1600 U	1900 U	1800 J	24	8	2000	26
PHENANTHRENE	330 U	380 U	370 U			380 U	
PHENOL	330 U	380 U	4800	64	6	4500	60
PHENOL-D5							
PYRENE	330 U	380 U	2700	71	1	2600	70

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TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08197 SOIL UG/KG	B. 444 RELEASES BR504018B SOIL UG/KG	MATRIX SPIKE BR504018B SOIL UG/KG	MS % RECOVERY BR504018B SOIL %	RPD BR504018B SOIL %	MATRIX SPIKE DUPLICATE BR504018B SOIL UG/KG	MSD % RECOVERY BR504018B SOIL %
		6	6	6	6	6	6
TERPHENYL-D14							
1,2-DICHLOROBENZENE	330 U	380 U	370 U			380 U	
1,2,4-TRICHLOROBENZENE	330 U	380 U	2200 U	58	10	1900 U	52
1,3-DICHLOROBENZENE	330 U	380 U	370 U			380 U	
1,4-DICHLOROBENZENE	330 U	380 U	2600 U	69	9	2400 U	63
2-CHLORONAPHTHALENE	330 U	380 U	370 U			380 U	
2-CHLOROPHENOL	330 U	380 U	4400 U	59	1	4400 U	58
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	330 U	380 U	370 U			380 U	
2-METHYLPHENOL	330 U	380 U	370 U			380 U	
2-NITROANILINE	1600 U	1900 U	1900 U			1900 U	
2-NITROPHENOL	330 U	380 U	370 U			380 U	
2,4-DICHLOROPHENOL	330 U	380 U	370 U			380 U	
2,4-DIMETHYLPHENOL	330 U	380 U	370 U			380 U	
2,4-DINITROPHENOL	1600 U	1900 U	1900 U			1900 U	
2,4-DINITROTOLUENE	330 U	380 U	2100 U	57	9	2000 U	52
2,4,5-TRICHLOROPHENOL	1600 U	1900 U	1900 U			1900 U	
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	330 U	380 U	370 U			380 U	
2,6-DINITROTOLUENE	330 U	380 U	370 U			380 U	
3-NITROANILINE	1600 U	1900 U	1900 U			1900 U	
3,3'-DICHLOROBENZIDINE	660 U	750 U	740 U			750 U	
4-BROMOPHENYL-PHENYLETHER	330 U	380 U	370 U			380 U	
4-CHLORO-3-METHYLPHENOL	330 U	380 U	5300 U	71	4	5100 U	68
4-CHLOROANILINE	330 U	380 U	370 U			380 U	
4-CHLOROPHENYL-PHENYLETHER	330 U	380 U	370 U			380 U	
4-METHYLPHENOL	330 U	380 U	370 U			380 U	
4-NITROANILINE	1600 U	1900 U	1900 U			1900 U	
4-NITROPHENOL	1600 U	1900 U	3200 U	42	7	3000 U	39
4,6-DINITRO-2-METHYLPHENOL	1600 U	1900 U	1900 U			1900 U	
SURR 1(NBZ) %RECOVERY	53	45	53			53	
SURR 2(FBP) %RECOVERY	49	40	53			49	
SURR 3(TPH) %RECOVERY	65	55	70			67	
SURR 4(PHL) %RECOVERY	49	46	61			60	
SURR 5(2FP) %RECOVERY	60	50	61			60	
SURR 6(TBP) %RECOVERY	56	48	46			46	

TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	B. 444	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	RELEASES	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	SBK08197	BR504018B	BR504018B	BR504018B	BR504018B	BR504018B	BR504018B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		6	6	6	6	6	6

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M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

INTERNAL STD AREA(ANT)	72100	79400	82200		81500	
INTERNAL STD AREA(CRY)	75600	83500	66800		62900	
INTERNAL STD AREA(DCB)	48900	52500	52700		51400	
INTERNAL STD AREA(NPT)	168000	181000	188000		183000	
INTERNAL STD AREA(PHN)	104000	115000	112000		116000	
INTERNAL STD AREA(PRY)	58600	63700	47500		41100	

DILUTION FACTOR	1	1	1		1	
PERCENT MOISTURE	0	12	12		12	
ACTUAL(ALLOWED) EXTRACT TIME		12(14 D)	12(14 D)		12(14 D)	

AREA	QA						
LOCATION	B. 444	TUNED					
TYPE OF LOCATION	RELEASES	RELEASES	RELEASES	RELEASES	RELEASES	RELEASES	CALIBRATION
SAMPLE NUMBER	BR504029B	BR504030B	BR503017B	BR503028B	BR503039B	BR503040B	BR0525885
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	%
ENV PROBLEM NO	6	6	6	6	6	6	
ACENAPHTHENE	360 U	19000 E	25 J	370 U	22 J	10 J	

TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA							QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 444 RELEASES BR504029B SOIL UG/KG 6	B. 444 RELEASES BR504030B SOIL UG/KG 6	B. 444 RELEASES BR503017B SOIL UG/KG 6	B. 444 RELEASES BR503028B SOIL UG/KG 6	B. 444 RELEASES BR503039B SOIL UG/KG 6	B. 444 RELEASES BR503040B SOIL UG/KG 6	TUNED CALIBRATION BR0525885 %
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ACENAPHTHYLENE	360 U	3300	39 J	370 U	380 U	370 U	
ANTHRACENE	360 U	170000 E	190 J	110 J	26 J	49 J	
BENZO(A)ANTHRACENE	360 U	62000 E	330 J	110 J	77 J	370 U	
BENZO(A)PYRENE	360 U	360 U	630	130 J	56 J	17 J	
BENZO(B)FLUORANTHENE	360 U	360 U	340 J	70 J	62 J	370 U	
BENZO(G,H,I)PERYLENE	360 U	21000 E	660	390	250 J	65 J	
BENZO(K)FLUORANTHENE	360 U	47000 E	380 U	370 U	380 U	370 U	
BENZOIC ACID	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
BENZYL ALCOHOL	360 U	360 U	380 U	370 U	380 U	370 U	
BIS(2-CHLOROETHOXY)METHANE	360 U	360 U	380 U	370 U	380 U	370 U	
BIS(2-CHLOROETHYL)ETHER	360 U	360 U	380 U	370 U	380 U	370 U	
BIS(2-CHLORDISOPROPYL)ETHER	360 U	360 U	380 U	370 U	380 U	370 U	
BIS(2-ETHYLHEXYL)PHTHALATE	360 U	360 U	260 JB	370 U	380 U	370 U	
BUTYLBENZYLPHthalATE	360 U	360 U	380 U	370 U	380 U	370 U	
CHRYSENE	360 U	50000 E	320 J	110 J	75 J	39 J	
DI-N-BUTYLPHthalATE	46 J	360 U	88 J	61 JB	380 U	370 U	
DI-N-OCTYLPHthalATE	360 U	31 JB	17 JB	370 U	380 U	370 U	
DIBENZ(A,H)ANTHRACENE	360 U	5300	180 J	100 J	51 J	370 U	
DIBENZOFURAN	360 U	18000 E	380 U	8 J	380 U	370 U	
DIETHYLPHthalATE	15 JB	360 U	180 JB	370 U	380 U	11 JB	
DIMETHYLPHthalATE	360 U	360 U	380 U	370 U	380 U	370 U	
FLUORANTHENE	360 U	68000 E	430	150 J	66 J	72 J	
FLUORENE	360 U	45000 E	55 J	370 U	380 U	370 U	
HEXACHLOROBENZENE	360 U	360 U	380 U	370 U	380 U	370 U	
HEXACHLOROBUTADIENE	360 U	360 U	380 U	370 U	380 U	370 U	
HEXACHLOROCYCLOPENTADIENE	360 U	360 U	380 U	370 U	380 U	370 U	
HEXACHLOROETHANE	360 U	360 U	380 U	370 U	380 U	370 U	
INDENO(1,2,3-CD)PYRENE	360 U	23000 E	580	360 J	160 J	38 J	
ISOPHORONE	360 U	360 U	380 U	370 U	380 U	370 U	
N-NITROSO-DI-N-PROPYLAMINE	360 U	360 U	380 U	370 U	380 U	370 U	
N-NITROSODIPHENYLAMINE	360 U	360 U	380 U	370 U	380 U	370 U	
NAPHTHALENE	360 U	4400	380 U	370 U	380 U	370 U	
NITROBENZENE	360 U	360 U	380 U	370 U	380 U	370 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
PHENANTHRENE	360 U	360 U	360 J	190 J	34 J	81 J	
PHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
PHENOL-D5							
PYRENE	360 U	170000 E	580	230 J	160 J	120 J	

TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA							QA
LOCATION	B. 444	TUNED					
TYPE OF LOCATION	RELEASES	RELEASES	RELEASES	RELEASES	RELEASES	RELEASES	CALIBRATION
SAMPLE NUMBER	BR504029B	BR504030B	BR503017B	BR503028B	BR503039B	BR503040B	BR0525885
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	%
ENV PROBLEM NO	6	6	6	6	6	6	
TERPHENYL-D14							
1,2-DICHLOROBENZENE	360 U	360 U	380 U	370 U	380 U	370 U	
1,2,4-TRICHLOROBENZENE	360 U	360 U	380 U	370 U	380 U	370 U	
1,3-DICHLOROBENZENE	360 U	360 U	380 U	370 U	380 U	370 U	
1,4-DICHLOROBENZENE	360 U	360 U	380 U	370 U	380 U	370 U	
2-CHLORONAPHTHALENE	360 U	360 U	380 U	370 U	380 U	370 U	
2-CHLOROPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	360 U	17000 E	24 J	15 J	380 U	370 U	
2-METHYLPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
2-NITROANILINE	1800 U	360 U	1900 U	1900 U	1900 U	1900 U	
2-NITROPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
2,4-DICHLOROPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
2,4-DIMETHYLPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
2,4-DINITROPHENOL	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
2,4-DINITROTOLUENE	360 U	360 U	380 U	370 U	380 U	370 U	
2,4,5-TRICHLOROPHENOL	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
2,6-DINITROTOLUENE	360 U	360 U	380 U	370 U	380 U	370 U	
3-NITROANILINE	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
3,3'-DICHLOROBENZIDINE	710 U	360 U	760 U	740 U	760 U	740 U	
4-BROMOPHENYL-PHENYLETHER	360 U	360 U	380 U	370 U	380 U	370 U	
4-CHLORO-3-METHYLPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
4-CHLOROANILINE	360 U	360 U	380 U	370 U	380 U	370 U	
4-CHLOROPHENYL-PHENYLETHER	360 U	360 U	380 U	370 U	380 U	370 U	
4-METHYLPHENOL	360 U	360 U	380 U	370 U	380 U	370 U	
4-NITROANILINE	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
4-NITROPHENOL	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
4,6-DINITRO-2-METHYLPHENOL	1800 U	1800 U	1900 U	1900 U	1900 U	1900 U	
SURR 1(NBZ) %RECOVERY	56	53	46	29	52	41	
SURR 2(FBP) %RECOVERY	51	55	44	29 *	46	42	
SURR 3(TPH) %RECOVERY	59	82	60	67	91	66	
SURR 4(PHL) %RECOVERY	55	58	51	34	52	45	
SURR 5(2FP) %RECOVERY	66	61	59	35	62	55	
SURR 6(TBP) %RECOVERY	34	48	53	52	60	61	

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TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA	B. 444						QA
LOCATION	RELEAS	RELEAS	RELEAS	RELEAS	RELEAS	RELEAS	TUNED
TYPE OF LOCATION	BR504029B	BR504030B	BR503017B	BR503028B	BR503039B	BR503040B	CALIBRATION
SAMPLE NUMBER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	BR0525885
MATRIX	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	%
UNITS	6	6	6	6	6	6	
ENV PROBLEM NO							
M/E 68-1							0
M/E 68-2							0
M/E 69							60
M/E 70-1							0
M/E 70-2							0
M/E 127							55
M/E 197							0
M/E 198							100
M/E 199							6.3
M/E 275							26
M/E 365							2.7
M/E 441							13
M/E 442							83
M/E 443-1							15
M/E 443-2							18

INTERNAL STD AREA(ANT)	72300	56500	88600	82800	89500	91400	
INTERNAL STD AREA(CRY)	46500	19000	79700	58000	53200	69100	
INTERNAL STD AREA(DCB)	51100	44400	61400	60000	64200	63900	
INTERNAL STD AREA(NPT)	181000	152000	219000	197000	225000	210000	
INTERNAL STD AREA(PHN)	82900	62600	122000	114000	128000	129000	
INTERNAL STD AREA(PRY)	34100	16200	66000	39400	28800	57300	

DILUTION FACTOR	1	1	1	1	1	1	
PERCENT MOISTURE	9	7	13	13	13	12	
ACTUAL(ALLOWED) EXTRACT TIME	12(14 D)	12(14 D)	12(14 D)	12(14 D)	12(14 D)	12(14 D)	
AREA	QA	QA	QA				
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	HWMA SPRAY			
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	AERATION			
SAMPLE NUMBER	BR0525887	BR0525887	BR0525888	BR506010B			
MATRIX				SOIL			
UNITS	RRF	%	AREA	UG/KG			
ENV PROBLEM NO				7			
ACENAPHTHENE	1.189	3.5		10 J			

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TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA	QA	QA	QA		
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	HMMA SPRAY	
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	AERATION	
SAMPLE NUMBER	BR0525887	BR0525887	BR0525888	BR506010B	
MATRIX				SOIL	
UNITS	RRF	%	AREA	UG/KG	
ENV PROBLEM NO				7	
ACENAPHTHYLENE	1.737	7.9		370 U	
ANTHRACENE	0.952	5.9		370 U	
BENZO(A)ANTHRACENE	0.984	4.6		370 U	
BENZO(A)PYRENE	1.098	1		370 U	
BENZO(B)FLUORANTHENE	1.233	10.3		23 J	
BENZO(G,H,I)PERYLENE	0.925	21.4		370 U	
BENZO(K)FLUORANTHENE	1.179	2.7		370 U	
BENZOIC ACID	0.13	4.7		1800 U	
BENZYL ALCOHOL	0.668	20.5		370 U	
BIS(2-CHLOROETHOXY)METHANE	0.782	0		370 U	
BIS(2-CHLOROETHYL)ETHER	2.719	3.7		370 U	
BIS(2-CHLOROISOPROPYL)ETHER	1.61	37.9		370 U	
BIS(2-ETHYLHEXYL)PHTHALATE	1.193	10.3		90 JB	
BUTYL BENZYL PHTHALATE	0.918	4		36 J	
CHRYSENE	0.977	4.4		370 U	
DI-N-BUTYL PHTHALATE	1.761	13.4		370 U	
DI-N-OCTYL PHTHALATE	2.542	8.5		13 JB	
DIBENZ(A,H)ANTHRACENE	0.864	16.5		370 U	
DIBENZOFURAN	1.387	4.7		370 U	
DIETHYL PHTHALATE	1.401	10		370 U	
DIMETHYL PHTHALATE	1.46	2.1		370 U	
FLUORANTHENE	0.867	11.7		25 J	
FLUORENE	0.974	11.1		370 U	
HEXACHLORO BENZENE	0.399	2		370 U	
HEXACHLOROBUTADIENE	0.161	14.4		370 U	
HEXACHLOROCYCLOPENTADIENE	0.289	33.2		370 U	
HEXACHLOROETHANE	0.783	11.3		370 U	
INDENO(1,2,3-CD)PYRENE	0.896	11.6		370 U	
ISOPHORONE	0.876	4.8		370 U	
N-NITROSO-DI-N-PROPYLAMINE	1.532	7		370 U	
N-NITROSODIPHENYLAMINE	0.624	1.4		370 U	
NAPHTHALENE	1.044	2.9		370 U	
NITROBENZENE	0.5	7.4		370 U	
NITROBENZENE-D5	0.452	12.9			
PENTACHLOROPHENOL	0.158	19.8		1800 U	
PHENANTHRENE	0.979	8		370 U	
PHENOL	2.15	14.4		370 U	
PHENOL-D5	1.835	6.2			
PYRENE	1.321	3.2		32 J	

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AREA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR0525887 RRF	CONTINUING CAL %D BR0525887 %	ISTD RET TIM SHIFT BR0525888 AREA	HMMA SPRAY AERATION BR506010B SOIL UG/KG 7
TERPHENYL-D14	1.098	3.6		
1,2-DICHLOROBENZENE	1.406	0.5		370 U
1,2,4-TRICHLOROBENZENE	0.295	1.9		370 U
1,3-DICHLOROBENZENE	1.451	0.7		370 U
1,4-DICHLOROBENZENE	1.496	0.3		370 U
2-CHLORONAPHTHALENE	1.23	0.9		370 U
2-CHLOROPHENOL	1.457	3.9		370 U
2-FLUOROBIPHENYL	1.345	2.6		
2-FLUOROPHENOL	1.342	1.4		
2-METHYLNAPHTHALENE	0.613	39.7		370 U
2-METHYLPHENOL	1.205	4.9		370 U
2-NITROANILINE	0.451	4.4		1800 U
2-NITROPHENOL	0.201	9		370 U
2,4-DICHLOROPHENOL	0.244	1.2		370 U
2,4-DIMETHYLPHENOL	0.264	9		370 U
2,4-DINITROPHENOL	0.082	19.6		1800 U
2,4-DINITROTOLUENE	0.258	17.3		370 U
2,4,5-TRICHLOROPHENOL	0.351	2.6		1800 U
2,4,6-TRIBROMOPHENOL	0.234	2.5		
2,4,6-TRICHLOROPHENOL	0.326	8.5		370 U
2,6-DINITROTOLUENE	0.31	3.4		370 U
3-NITROANILINE	0.312	19.1		1800 U
3,3'-DICHLOROBENZIDINE	0.141	23.7		740 U
4-BROMOPHENYL-PHENYLETHER	0.342	2.3		370 U
4-CHLORO-3-METHYLPHENOL	0.299	0.6		370 U
4-CHLOROANILINE	0.388	1.8		370 U
4-CHLOROPHENYL-PHENYLETHER	0.576	2.6		370 U
4-METHYLPHENOL	1.254	4.6		370 U
4-NITROANILINE	0.175	24.4		1800 U
4-NITROPHENOL	0.176	10.5		1800 U
4,6-DINITRO-2-METHYLPHENOL	0.098	7.7		1800 U

SURR 1(NBZ) %RECOVERY				38
SURR 2(FBP) %RECOVERY				35
SURR 3(TPH) %RECOVERY				45
SURR 4(PHL) %RECOVERY				36
SURR 5(2FP) %RECOVERY				41
SURR 6(TBP) %RECOVERY				54

TABLE D.6.9 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR503017B

DRAFT DO NOT CITE

AREA	QA	QA	QA	
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	HMMA SPRAY
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	AERATION
SAMPLE NUMBER	BR0525887	BR0525887	BR0525888	BR506010B
MATRIX				SOIL
UNITS	RRF	%	AREA	UG/KG
ENV PROBLEM NO				7
M/E 68-1				
M/E 68-2				
M/E 69				
M/E 70-1				
M/E 70-2				
M/E 127				
M/E 197				
M/E 198				
M/E 199				
M/E 275				
M/E 365				
M/E 441				
M/E 442				
M/E 443-1				
M/E 443-2				
INTERNAL STD AREA(ANT)			78700	73700
INTERNAL STD AREA(CRY)			61100	75400
INTERNAL STD AREA(DCB)			58100	53200
INTERNAL STD AREA(NPT)			195000	171000
INTERNAL STD AREA(PHN)			94800	108000
INTERNAL STD AREA(PRY)			41500	58100
DILUTION FACTOR				1
PERCENT MOISTURE				12
ACTUAL(ALLOWED) EXTRACT TIME				12(14 D)

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0531885	BR0531887	BR0531887	BR0531888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
ACENAPHTHENE	1.232	5.9			1.188	3.6	
ACENAPHTHYLENE	1.886	9.6			1.707	9.5	
ANTHRACENE	1.012	8.4			0.916	9.5	
BENZO(A)ANTHRACENE	1.032	8.2			0.965	6.5	
BENZO(A)PYRENE	1.088	8.6			1.077	1	
BENZO(B)FLUORANTHENE	1.375	11.3			1.269	7.7	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.982	28.9	
BENZO(K)FLUORANTHENE	1.148	3.6			1.092	4.9	
BENZOIC ACID	0.137	13.6			0.167	22.5	
BENZYL ALCOHOL	0.84	10.8			0.643	23.5	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.793	1.4	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.286	12.8	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.447	24	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.547	16.4	
BUTYLBENZYL PHTHALATE	0.956	11.4			1.003	4.9	
CHRYSENE	1.022	5.5			0.936	8.4	
DI-N-BUTYL PHTHALATE	2.033	13.6			2.012	1	
DI-N-OCTYL PHTHALATE	2.778	18.9			2.719	2.1	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.992	33.7	
DIBENZOFURAN	1.455	6.1			1.415	2.8	
DIETHYL PHTHALATE	1.557	22.1			1.923	23.5	
DIMETHYL PHTHALATE	1.491	9.3			1.619	8.6	
FLUORANTHENE	0.982	17.9			0.783	20.2	
FLUORENE	1.096	8.1			1.078	1.6	
HEXACHLOROBENZENE	0.392	7.8			0.399	1.9	
HEXACHLOROBUTADIENE	0.188	3.2			0.159	15.4	
HEXACHLOROCYCLOPENTADIENE	0.433	13.3			0.205	52.6	
HEXACHLOROETHANE	0.882	4.2			0.744	15.7	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			1.077	34.1	
ISOPHORONE	0.92	11.2			0.918	0.2	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.304	8.9	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.574	6.8	
NAPHTHALENE	1.075	6.4			1.083	0.7	
NITROBENZENE	0.54	4.1			0.632	17	
NITROBENZENE-D5	0.519	5.1			0.456	12	
PENTACHLOROPHENOL	0.132	19.5			0.163	23.5	
PHENANTHRENE	1.064	9.8			0.953	10.4	
PHENOL	2.514	16.4			2.04	18.9	
PHENOL-D5	1.957	16.3			1.635	16.4	

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013D

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0531885	BR0531887	BR0531887	BR0531888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO	RRF	%	%	%	RRF	%	AREA
PYRENE	1.365	1.5			1.161	14.9	
TERPHENYL-D14	1.059	5.9			1.025	3.3	
1,2-DICHLOROBENZENE	1.399	9.2			1.368	2.3	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.285	1.4	
1,3-DICHLOROBENZENE	1.44	8.8			1.418	1.5	
1,4-DICHLOROBENZENE	1.501	9.4			1.401	6.6	
2-CHLORONAPHTHALENE	1.22	13.6			1.217	0.2	
2-CHLOROPHENOL	1.517	13.7			1.358	10.5	
2-FLUOROBIPHENYL	1.311	9.3			1.299	0.9	
2-FLUOROPHENOL	1.323	11.1			1.257	5	
2-METHYLNAPHTHALENE	0.439	15.3			0.597	36.1	
2-METHYLPHENOL	1.148	13.9			1.138	0.9	
2-NITROANILINE	0.432	16.2			0.431	0.3	
2-NITROPHENOL	0.184	8.3			0.211	14.9	
2,4-DICHLOROPHENOL	0.247	8.9			0.246	0.2	
2,4-DIMETHYLPHENOL	0.242	18.5			0.275	13.3	
2,4-DINITROPHENOL	0.102	20.1			0.055	45.7	
2,4-DINITROTOLUENE	0.312	14.8			0.336	7.7	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.351	2.6	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.354	55.4	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.331	6.9	
2,6-DINITROTOLUENE	0.321	11.5			0.323	0.4	
3-NITROANILINE	0.386	13.1			0.302	21.8	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.168	8.9	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.316	5.4	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.287	3.5	
4-CHLOROANILINE	0.395	12.7			0	100	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.586	0.8	
4-METHYLPHENOL	1.314	17.4			1.208	8.1	
4-NITROANILINE	0.231	18.7			0.264	14.1	
4-NITROPHENOL	0.197	12.4			0.199	1.1	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.051	52	
SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0531885	BR0531887	BR0531887	BR0531888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
M/E 51			35	31			
M/E 68-1			0	0			
M/E 68-2			0	0			
M/E 69			69	66			
M/E 70-1			0.2	0			
M/E 70-2			0.3	0			
M/E 127			57	56			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	6.3			
M/E 275			27	28			
M/E 365			2.1	2.9			
M/E 441			10	15			
M/E 442			62	90			
M/E 443-1			11	18			
M/E 443-2			17	19			

INTERNAL STD AREA(ANT)							75700
INTERNAL STD AREA(CRY)							80700
INTERNAL STD AREA(DCB)							59600
INTERNAL STD AREA(NPT)							182000
INTERNAL STD AREA(PHN)							121000
INTERNAL STD AREA(PRY)							65800

DILUTION FACTOR							
PERCENT MOISTURE							
ACTUAL(ALLOWED) EXTRACT TIME							
AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	B. 975	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	BUBBLE ARE	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	SBK08253	BR806013B	BR806013B	BR806013B	BR806013B	BR806013B	BR806013B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		10	10	10	10	10	10
ACENAPHTHENE	330 U	440 U	3900	90	4	3700	86

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	B. 975	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	BUBBLE ARE	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	SBK08253	BR806013B	BR806013B	BR806013B	BR806013B	BR806013B	BR806013B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO	10	10	10	10	10	10	10
ACENAPHTHYLENE	330 U	440 U	430 U			440 U	
ANTHRACENE	330 U	440 U	430 U			440 U	
BENZO(A)ANTHRACENE	330 U	440 U	430 U			440 U	
BENZO(A)PYRENE	24 J	440 U	430 U			440 U	
BENZO(B)FLUORANTHENE	18 J	440 U	430 U			440 U	
BENZO(G,H,I)PERYLENE	330 U	440 U	430 U			440 U	
BENZO(K)FLUORANTHENE	330 U	440 U	430 U			440 U	
BENZOIC ACID	1700 U	2200 U	2200 U			2200 U	
BENZYL ALCOHOL	330 U	440 U	430 U			440 U	
BIS(2-CHLOROETHOXY)METHANE	330 U	440 U	430 U			440 U	
BIS(2-CHLOROETHYL)ETHER	330 U	440 U	430 U			440 U	
BIS(2-CHLOROISOPROPYL)ETHER	330 U	440 U	430 U			440 U	
BIS(2-ETHYLHEXYL)PHTHALATE	82 J	140 JB	140 JB			140 JB	
BUTYLBENZYLPHthalate	21 J	100 JB	430 U			39 JB	
CHRYSENE	330 U	440 U	39 J			440 U	
DI-N-BUTYLPHthalate	49 J	67 JB	69 JB			76 JB	
DI-N-OCTYLPHthalate	140 J	72 JB	430 U			440 U	
DIBENZ(A,H)ANTHRACENE	330 U	440 U	430 U			440 U	
DIBENZOFURAN	330 U	440 U	430 U			440 U	
DIETHYLPHthalate	330 U	20 J	430 U			440 U	
DIMETHYLPHthalate	330 U	440 U	430 U			440 U	
FLUORANTHENE	31 J	56 JB	85 JB			66 JB	
FLUORENE	330 U	440 U	430 U			440 U	
HEXACHLORO BENZENE	330 U	440 U	430 U			440 U	
HEXACHLOROBUTADIENE	330 U	440 U	430 U			440 U	
HEXACHLOROCYCLOPENTADIENE	330 U	440 U	430 U			440 U	
HEXACHLOROETHANE	330 U	440 U	430 U			440 U	
INDENO(1,2,3-CD)PYRENE	330 U	48 J	430 U			440 U	
ISOPHORONE	330 U	440 U	430 U			440 U	
N-NITROSO-DI-N-PROPYLAMINE	330 U	440 U	2500	58	1	2500	57
N-NITROSODIPHENYLAMINE	330 U	440 U	430 U			440 U	
NAPHTHALENE	330 U	440 U	430 U			440 U	
NITROBENZENE	330 U	440 U	430 U			440 U	
NITROBENZENE-D5							
PENTACHLOROPHENOL	1700 U	2200 U	2200	25	56 *	1300 J	14 *
PHENANTHRENE	330 U	35 J	430 U			34 J	
PHENOL	330 U	440 U	6500	75	2	6300	73
PHENOL-D5							
PYRENE	28 J	74 JB	3900 B	89	6	4200 B	95

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	B. 975	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	BUBBLE ARE	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	SBK08253	BR806013B	BR806013B	BR806013B	BR806013B	BR806013B	BR806013B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO	10	10	10	10	10	10	10
TERPHENYL-D14							
1,2-DICHLOROBENZENE	330 U	440 U	430 U			440 U	
1,2,4-TRICHLOROBENZENE	330 U	440 U	3400	77	12	3000	68
1,3-DICHLOROBENZENE	330 U	440 U	430 U			440 U	
1,4-DICHLOROBENZENE	330 U	440 U	3500	81	33 *	2500	58
2-CHLORONAPHTHALENE	330 U	440 U	430 U			440 U	
2-CHLOROPHENOL	330 U	440 U	6600	76	4	6300	73
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	330 U	440 U	430 U			440 U	
2-METHYLPHENOL	330 U	440 U	430 U			440 U	
2-NITROANILINE	1700 U	2200 U	2200 U			2200 U	
2-NITROPHENOL	330 U	440 U	430 U			440 U	
2,4-DICHLOROPHENOL	330 U	440 U	430 U			440 U	
2,4-DIMETHYLPHENOL	330 U	440 U	430 U			440 U	
2,4-DINITROPHENOL	1700 U	2200 U	2200 U			2200 U	
2,4-DINITROTOLUENE	330 U	440 U	1800	42	11	2100	47
2,4,5-TRICHLOROPHENOL	1700 U	2200 U	2200 U			2200 U	
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	330 U	440 U	430 U			440 U	
2,6-DINITROTOLUENE	330 U	440 U	430 U			440 U	
3-NITROANILINE	1700 U	2200 U	2200 U			2200 U	
3,3'-DICHLOROBENZIDINE	660 U	870 U	860 U			870 U	
4-BROMOPHENYL-PHENYLETHER	330 U	440 U	430 U			440 U	
4-CHLORO-3-METHYLPHENOL	330 U	440 U	7000 E	81	5	6700	77
4-CHLOROANILINE	330 U	440 U	430 U			440 U	
4-CHLOROPHENYL-PHENYLETHER	330 U	440 U	430 U			440 U	
4-METHYLPHENOL	330 U	440 U	430 U			440 U	
4-NITROANILINE	1700 U	2200 U	2200 U			2200 U	
4-NITROPHENOL	1700 U	2200 U	6000	69	50	3500	41
4,6-DINITRO-2-METHYLPHENOL	1700 U	2200 U	2200 U			2200 U	
SURR 1(NBZ) %RECOVERY	64	82	64			57	
SURR 2(FBP) %RECOVERY	65	77	77			69	
SURR 3(TPH) %RECOVERY	74	95	80			83	
SURR 4(PHL) %RECOVERY	62	72	71			70	
SURR 5(2FP) %RECOVERY	75	81	74			70	
SURR 6(TBP) %RECOVERY	59	58	65			58	

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	B. 975	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	BLANK	BUBBLE ARE	SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	SBK08253	BR806013B	BR806013B	BR806013B	BR806013B	BR806013B
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG
ENV PROBLEM NO		10	10	10	10	10

M/E 68-1
M/E 68-2
M/E 69
M/E 70-1
M/E 70-2
M/E 127
M/E 197
M/E 198
M/E 199
M/E 275
M/E 365
M/E 441
M/E 442
M/E 443-1
M/E 443-2

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INTERNAL STD AREA(ANT)	68400	62000	57800	56300
INTERNAL STD AREA(CRY)	56900	33200	44400	38600
INTERNAL STD AREA(DCB)	48800	49900	49900	51500
INTERNAL STD AREA(NPT)	160000	130000	152000	155000
INTERNAL STD AREA(PHN)	89600	78600	72400	64100
INTERNAL STD AREA(PRY)	47100	24100	33600	28500

DILUTION FACTOR	1	1	1	1
PERCENT MOISTURE	0	24	24	24
ACTUAL(ALLOWED) EXTRACT TIME		8(14 D)	8(14 D)	8(14 D)

AREA	QA	QA	QA	QA
LOCATION	B. 975	B. 975	TUNED	CONTINUING
TYPE OF LOCATION	BUBBLE ARE	BUBBLE ARE	CALIBRATION	CALIBRATION
SAMPLE NUMBER	BR806024B	BR806035B	BR0601885	BR0601887
MATRIX	SOIL	SOIL		CONTINUING
UNITS	UG/KG	UG/KG	%	CAL %D
ENV PROBLEM NO	10	10	RRF	BR0601887

ACENAPHTHENE	390 U	440 U	1.313	6.5	440 U
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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA			
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 975 BUBBLE ARE BR806024B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806035B SOIL UG/KG 10	TUNED CALIBRATION BR0601885 % RRF	CONTINUING CALIBRATION BR0601887 % RRF	CONTINUING CAL %D BR0601887 % RRF	ISTD RET TIM SHIFT BR0601888 AREA	B. 975 BUBBLE ARE BR806046B SOIL UG/KG 10
ACENAPHTHYLENE	390 U	440 U		1.766	6.4		440 U
ANTHRACENE	390 U	440 U		0.905	10.6		440 U
BENZO(A)ANTHRACENE	390 U	440 U		0.955	7.4		73 J
BENZO(A)PYRENE	390 U	440 U		1.161	6.7		210 JB
BENZO(B)FLUORANTHENE	390 U	440 U		1.236	10.1		170 JB
BENZO(G,H,I)PERYLENE	390 U	440 U		1.18	54.8		220 J
BENZO(K)FLUORANTHENE	390 U	440 U		1.219	6.1		130 J
BENZOIC ACID	1900 U	2200 U		0.156	13.8		2200 U
BENZYL ALCOHOL	390 U	440 U		0.695	17.3		440 U
BIS(2-CHLOROETHOXY)METHANE	390 U	440 U		0.789	0.9		440 U
BIS(2-CHLOROETHYL)ETHER	390 U	440 U		2.703	3.1		440 U
BIS(2-CHLOROISOPROPYL)ETHER	390 U	440 U		1.433	22.7		440 U
BIS(2-ETHYLHEXYL)PHTHALATE	1000 B	210 JB		1.404	5.6		84000 BE
BUTYLBENZYLPHthalATE	390 U	440 U		1.017	6.4		170 JB
CHRYSENE	390 U	440 U		0.922	9.8		110 J
DI-N-BUTYLPHthalATE	65 JB	62 JB		1.857	8.7		230 JB
DI-N-OCTYLPHthalATE	390 U	440 U		2.568	7.5		2000 B
DIBENZ(A,H)ANTHRACENE	390 U	440 U		1.047	41.1		250 J
DIBENZOFURAN	390 U	440 U		1.342	7.8		440 U
DIETHYLPHthalATE	390 U	440 U		1.74	11.8		82 J
DIMETHYLPHthalATE	390 U	440 U		1.772	18.8		440 U
FLUORANTHENE	80 JB	52 JB		0.787	19.9		440 U
FLUORENE	390 U	440 U		0.955	12.8		440 U
HEXACHLOROBENZENE	390 U	440 U		0.481	22.8		440 U
HEXACHLOROBUTADIENE	390 U	440 U		0.179	5		440 U
HEXACHLOROCYCLOPENTADIENE	390 U	440 U		0.126	70.8		440 U
HEXACHLOROETHANE	390 U	440 U		0.693	21.5		440 U
INDENO(1,2,3-CD)PYRENE	390 U	440 U		1.13	40.8		330 J
ISOPHORONE	390 U	440 U		0.993	7.9		440 U
N-NITROSO-DI-N-PROPYLAMINE	390 U	440 U		1.32	7.8		440 U
N-NITROSODIPHENYLAMINE	390 U	440 U		0.75	21.9		440 U
NAPHTHALENE	390 U	440 U		0.992	7.8		440 U
NITROBENZENE	390 U	440 U		0.65	20.3		440 U
NITROBENZENE-D5				0.505	2.5		
PENTACHLOROPHENOL	1900 U	2200 U		0.148	11.9		2200 U
PHENANTHRENE	390 U	440 U		0.955	10.3		43 J
PHENOL	390 U	440 U		2.155	14.2		440 U
PHENOL-D5				1.631	16.6		
PYRENE	110 JB	52 JB		1.405	3		82 JB

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	B. 975		QA	QA	QA	QA	B. 975
LOCATION	BUBBLE ARE	BUBBLE ARE	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	BUBBLE ARE
TYPE OF LOCATION	BR806024B	BR806035B	CALIBRATION	CALIBRATION	CAL %D	SHIFT	BR806046B
SAMPLE NUMBER	SOIL	SOIL	BR0601885	BR0601887	BR0601887	BR0601888	SOIL
MATRIX	UG/KG	UG/KG	%	RRF	%	AREA	UG/KG
UNITS	10	10					10
ENV PROBLEM NO							
TERPHENYL-D14				1.237	16.8		
1,2-DICHLOROBENZENE	390 U	440 U		1.324	5.4		440 U
1,2,4-TRICHLOROBENZENE	390 U	440 U		0.321	11		440 U
1,3-DICHLOROBENZENE	390 U	440 U		1.426	1		440 U
1,4-DICHLOROBENZENE	390 U	440 U		1.438	4.2		440 U
2-CHLORONAPHTHALENE	390 U	440 U		1.072	12.1		440 U
2-CHLOROPHENOL	390 U	440 U		1.395	8.1		440 U
2-FLUOROBIPHENYL				1.355	3.4		
2-FLUOROPHENOL				1.287	2.8		
2-METHYLNAPHTHALENE	390 U	440 U		0.45	2.6		440 U
2-METHYLPHENOL	390 U	440 U		1.098	4.4		440 U
2-NITROANILINE	1900 U	2200 U		0.371	14.2		2200 U
2-NITROPHENOL	390 U	440 U		0.217	18.2		440 U
2,4-DICHLOROPHENOL	390 U	440 U		0.239	3.2		440 U
2,4-DIMETHYLPHENOL	390 U	440 U		0.288	18.8		440 U
2,4-DINITROPHENOL	1900 U	2200 U		0.014	85.8		2200 U
2,4-DINITROTOLUENE	390 U	440 U		0.238	23.7		440 U
2,4,5-TRICHLOROPHENOL	1900 U	2200 U		0.306	10.5		2200 U
2,4,6-TRIBROMOPHENOL				0.247	8.5		
2,4,6-TRICHLOROPHENOL	390 U	440 U		0.374	5.2		440 U
2,6-DINITROTOLUENE	390 U	440 U		0.318	0.9		440 U
3-NITROANILINE	1900 U	2200 U		0.054	86.1		2200 U
3,3'-DICHLOROBENZIDINE	780 U	880 U		0.164	11.5		880 U
4-BROMOPHENYL-PHENYLEETHER	390 U	440 U		0.383	14.5		440 U
4-CHLORO-3-METHYLPHENOL	390 U	440 U		0.286	3.8		440 U
4-CHLOROANILINE	390 U	440 U		0.335	15.1		440 U
4-CHLOROPHENYL-PHENYLEETHER	390 U	440 U		0.564	4.6		440 U
4-METHYLPHENOL	390 U	440 U		1.145	12.8		440 U
4-NITROANILINE	1900 U	2200 U		0.13	43.9		2200 U
4-NITROPHENOL	1900 U	2200 U		0.114	42		2200 U
4,6-DINITRO-2-METHYLPHENOL	1900 U	2200 U		0.03	71.4		2200 U

SURR 1(NBZ) %RECOVERY	27	69					65
SURR 2(FBP) %RECOVERY	71	81					69
SURR 3(TPH) %RECOVERY	91	94					75
SURR 4(PHL) %RECOVERY	43	66					63
SURR 5(2FP) %RECOVERY	38	82					75
SURR 6(TBP) %RECOVERY	54	67					92

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AREA	QA	QA	QA	QA
LOCATION	B. 975	B. 975	TUNED	CONTINUING
TYPE OF LOCATION	BUBBLE ARE	BUBBLE ARE	CALIBRATION	CALIBRATION
SAMPLE NUMBER	BR806024B	BR806035B	BR0601885	BR0601887
MATRIX	SOIL	SOIL		BR0601887
UNITS	UG/KG	UG/KG	%	%
ENV PROBLEM NO	10	10	RRF	AREA
M/E 68-1			0.2	
M/E 68-2			0.3	
M/E 69			56	
M/E 70-1			0	
M/E 70-2			0	
M/E 127			48	
M/E 197			0	
M/E 198			100	
M/E 199			6	
M/E 275			29	
M/E 365			2.6	
M/E 441			13	
M/E 442			83	
M/E 443-1			16	
M/E 443-2			19	
INTERNAL STD AREA(ANT)	34800	65800		45900
INTERNAL STD AREA(CRY)	14100	38200		16600
INTERNAL STD AREA(DCB)	31700	50000		47100
INTERNAL STD AREA(NPT)	99300	155000		125000
INTERNAL STD AREA(PHN)	34500	73900		45400
INTERNAL STD AREA(PRY)	7500	25500		11400
DILUTION FACTOR	1.2	1		1
PERCENT MOISTURE	16	25		25
ACTUAL(ALLOWED) EXTRACT TIME	8(14 D)	8(14 D)		8(14 D)

AREA

LOCATION	B. 975						
TYPE OF LOCATION	BUBBLE ARE						
SAMPLE NUMBER	BR806057B	BR806068B	BR806079B	BR806080B	BR806091B	BR806104B	BR806115B
MATRIX	SOIL						
UNITS	UG/KG						
ENV PROBLEM NO	10	10	10	10	10	10	10
ACENAPHTHENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U

TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA							
LOCATION	B. 975						
TYPE OF LOCATION	BUBBLE ARE						
SAMPLE NUMBER	BR806057B	BR806068B	BR806079B	BR806080B	BR806091B	BR806104B	BR806115B
MATRIX	SOIL						
UNITS	UG/KG						
ENV PROBLEM NO	10	10	10	10	10	10	10
ACENAPHTHYLENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
ANTHRACENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BENZO(A)ANTHRACENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BENZO(A)PYRENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BENZO(B)FLUORANTHENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BENZO(G,H,I)PERYLENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BENZO(K)FLUORANTHENE	350 U	370 U	67 J	360 U	350 U	370 U	370 U
BENZOIC ACID	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
BENZYL ALCOHOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BIS(2-CHLOROETHOXY)METHANE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BIS(2-CHLOROETHYL)ETHER	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BIS(2-CHLOROISOPROPYL)ETHER	350 U	370 U	370 U	360 U	350 U	370 U	370 U
BIS(2-ETHYLHEXYL)PHTHALATE	1100 B	360 JB	460 B	290 JB	460 B	840 B	990 B
BUTYL BENZYL PHTHALATE	350 U	370 U	370 U	360 U	350 U	370 U	72 JB
CHRYSENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
DI-N-BUTYL PHTHALATE	350 U	64 JB	57 JB	63 JB	350 U	180 JB	300 JB
DI-N-OCTYL PHTHALATE	65 JB	37 JB	17 JB	360 U	350 U	370 U	370 U
DIBENZ(A,H)ANTHRACENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
DIBENZOFURAN	350 U	370 U	370 U	360 U	350 U	370 U	370 U
DIETHYL PHTHALATE	350 U	370 U	370 U	360 U	350 U	370 U	24 J
DIMETHYL PHTHALATE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
FLUORANTHENE	350 U	32 JB	69 JB	360 U	350 U	370 U	91 JB
FLUORENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
HEXACHLORO BENZENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
HEXACHLORO BUTADIENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
HEXACHLORO CYCLOPENTADIENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
HEXACHLORO ETHANE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
INDENO(1,2,3-CD)PYRENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
ISOPHORONE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
N-NITROSO-DI-N-PROPYLAMINE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
N-NITROSODIPHENYLAMINE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
NAPHTHALENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
NITROBENZENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
NITROBENZENE-D5							
PENTACHLOROPHENOL	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
PHENANTHRENE	350 U	370 U	370 U	360 U	350 U	36 J	40 J
PHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
PHENOL-D5							
PYRENE	350 U	28 JB	65 JB	360 U	350 U	76 JB	85 JB

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 975 BUBBLE ARE BR806057B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806068B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806079B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806080B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806091B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806104B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806115B SOIL UG/KG 10
TERPHENYL-D14							
1,2-DICHLORO BENZENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
1,2,4-TRICHLORO BENZENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
1,3-DICHLORO BENZENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
1,4-DICHLORO BENZENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2-CHLORONAPHTHALENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2-CHLOROPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2-FLUOROBIPHENYL							
2-FLUOROPHENOL							
2-METHYLNAPHTHALENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2-METHYLPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2-NITROANILINE	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
2-NITROPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2,4-DICHLOROPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2,4-DIMETHYLPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2,4-DINITROPHENOL	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
2,4-DINITROTOLUENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2,4,5-TRICHLOROPHENOL	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
2,4,6-TRIBROMOPHENOL							
2,4,6-TRICHLOROPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
2,6-DINITROTOLUENE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
3-NITROANILINE	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
3,3'-DICHLOROBENZIDINE	710 U	730 U	730 U	720 U	700 U	740 U	740 U
4-BROMOPHENYL-PHENYLETHER	350 U	370 U	370 U	360 U	350 U	370 U	370 U
4-CHLORO-3-METHYLPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
4-CHLOROANILINE	350 U	370 U	370 U	360 U	350 U	370 U	370 U
4-CHLOROPHENYL-PHENYLETHER	350 U	370 U	370 U	360 U	350 U	370 U	370 U
4-METHYLPHENOL	350 U	370 U	370 U	360 U	350 U	370 U	370 U
4-NITROANILINE	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
4-NITROPHENOL	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
4,6-DINITRO-2-METHYLPHENOL	1800 U	1800 U	1800 U	1800 U	1700 U	1800 U	1900 U
SURR 1(HBZ) %RECOVERY	50	49	73	55	57	57	65
SURR 2(FBP) %RECOVERY	59	58	67	63	78	64	78
SURR 3(TPH) %RECOVERY	64	67	77	73	88	62	75
SURR 4(PHL) %RECOVERY	55	53	68	61	84	67	69
SURR 5(2FP) %RECOVERY	63	59	76	75	97	79	81
SURR 6(TBP) %RECOVERY	74	0 *	89	85	111	89	99

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	B. 975		QA	QA	QA	QA	B. 975
LOCATION	BUBBLE ARE	BUBBLE ARE	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	BUBBLE ARE
TYPE OF LOCATION	BR806126B	BR806137B	CALIBRATION	CALIBRATION	CAL %D	SHIFT	BR806148B
SAMPLE NUMBER	SOIL	SOIL	BR0603885	BR0603887	BR0603887	BR0603888	BR806148B
MATRIX	UG/KG	UG/KG	%	RRF	%	AREA	SOIL
UNITS	10	10					UG/KG
ENV PROBLEM NO							10
ACENAPHTHYLENE	360 U	420 U		1.566	17		390 U
ANTHRACENE	360 U	420 U		0.922	8.9		390 U
BENZO(A)ANTHRACENE	360 U	420 U		0.929	10		390 U
BENZO(A)PYRENE	360 U	420 U		1.048	3.6		380 JB
BENZO(B)FLUORANTHENE	360 U	420 U		1.165	15.2		290 JB
BENZO(G,H,I)PERYLENE	360 U	420 U		0.943	23.8		510
BENZO(K)FLUORANTHENE	360 U	420 U		1.073	6.5		270 J
BENZOIC ACID	1800 U	2100 U		0.16	17.4		2000 U
BENZYL ALCOHOL	360 U	420 U		0.734	12.6		390 U
BIS(2-CHLOROETHOXY)METHANE	360 U	420 U		0.86	9.9		390 U
BIS(2-CHLOROETHYL)ETHER	360 U	420 U		2.861	9.1		390 U
BIS(2-CHLOROISOPROPYL)ETHER	360 U	420 U		1.536	31.5		390 U
BIS(2-ETHYLHEXYL)PHTHALATE	380 B	12000 BE		1.625	22.2		1000 B
BUTYLBENZYLPHthalATE	52 JB	330 JB		1.147	20		93 JB
CHRYSENE	360 U	99 J		0.905	11.4		390 U
DI-N-BUTYLPHthalATE	310 JB	330 JB		2.161	6.3		320 JB
DI-N-OCTYLPHthalATE	37 JB	32000 BE		2.555	8		71 JB
DIBENZ(A,H)ANTHRACENE	360 U	420 U		0.937	26.4		480
DIBENZOFURAN	360 U	420 U		1.356	6.8		390 U
DIETHYLPHthalATE	360 U	35 J		1.831	17.6		390 U
DIMETHYLPHthalATE	360 U	420 U		1.745	17		390 U
FLUORANTHENE	82 JB	130 JB		0.81	17.5		110 JB
FLUORENE	360 U	420 U		1.029	6.1		390 U
HEXACHLORO BENZENE	360 U	420 U		0.448	14.3		390 U
HEXACHLOROBUTADIENE	360 U	420 U		0.189	0.5		390 U
HEXACHLOROCYCLOPENTADIENE	360 U	420 U		0.17	60.6		390 U
HEXACHLOROETHANE	360 U	420 U		0.806	8.7		390 U
INDENO(1,2,3-CD)PYRENE	360 U	420 U		1	24.5		480
ISOPHORONE	360 U	420 U		1.085	17.9		390 U
N-NITROSO-DI-N-PROPYLAMINE	360 U	420 U		1.571	9.7		390 U
N-NITROSODIPHENYLAMINE	360 U	420 U		0.573	6.9		390 U
NAPHTHALENE	360 U	420 U		1.016	5.5		390 U
NITROBENZENE	360 U	420 U		0.632	16.9		390 U
NITROBENZENE-D5				0.534	3		
PENTACHLOROPHENOL	1800 U	2100 U		0.15	13.7		2000 U
PHENANTHRENE	43 J	69 J		0.919	13.7		390 U
PHENOL	360 U	420 U		2.164	13.9		390 U
PHENOL-D5				1.755	10.3		
PYRENE	68 JB	110 JB		1.307	4.2		100 JB

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	B. 975		QA	QA	QA	QA	B. 975
LOCATION	BUBBLE ARE	BUBBLE ARE	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	BUBBLE ARE
TYPE OF LOCATION	BR806126B	BR806137B	CALIBRATION	CALIBRATION	CAL %D	SHIFT	BR806148B
SAMPLE NUMBER	SOIL	SOIL	BR0603885	BR0603887	BR0603887	BR0603888	SOIL
MATRIX	UG/KG	UG/KG	%	RRF	%	AREA	SOIL
UNITS	10	10					UG/KG
ENV PROBLEM NO							10
TERPHENYL-D14				1.116	5.3		
1,2-DICHLOROBENZENE	360 U	420 U		1.397	0.2		390 U
1,2,4-TRICHLOROBENZENE	360 U	420 U		0.309	7		390 U
1,3-DICHLOROBENZENE	360 U	420 U		1.408	2.2		390 U
1,4-DICHLOROBENZENE	360 U	420 U		1.417	5.6		390 U
2-CHLORONAPHTHALENE	360 U	420 U		1.15	5.7		390 U
2-CHLOROPHENOL	360 U	420 U		1.405	7.4		390 U
2-FLUOROBIPHENYL				1.211	7.6		
2-FLUOROPHENOL				1.188	10.2		
2-METHYLNAPHTHALENE	360 U	420 U		0.577	31.5		390 U
2-METHYLPHENOL	360 U	420 U		1.187	3.4		390 U
2-NITROANILINE	1800 U	2100 U		0.488	12.8		2000 U
2-NITROPHENOL	360 U	420 U		0.208	12.9		390 U
2,4-DICHLOROPHENOL	360 U	420 U		0.204	17.4		390 U
2,4-DIMETHYLPHENOL	360 U	420 U		0.292	20.5		390 U
2,4-DINITROPHENOL	1800 U	2100 U		0.026	74.3		2000 U
2,4-DINITROTOLUENE	360 U	420 U		0.304	2.7		390 U
2,4,5-TRICHLOROPHENOL	1800 U	2100 U		0.368	7.4		2000 U
2,4,6-TRIBROMOPHENOL				0.282	23.8		
2,4,6-TRICHLOROPHENOL	360 U	420 U		0.344	3.4		390 U
2,6-DINITROTOLUENE	360 U	420 U		0.338	5.1		390 U
3-NITROANILINE	1800 U	2100 U		0.211	45.4		2000 U
3,3'-DICHLOROBENZIDINE	730 U	840 U		0.125	32.6		790 U
4-BROMOPHENYL-PHENYLETHER	360 U	420 U		0.367	9.7		390 U
4-CHLORO-3-METHYLPHENOL	360 U	420 U		0.338	13.7		390 U
4-CHLOROANILINE	360 U	420 U		0.324	18.1		390 U
4-CHLOROPHENYL-PHENYLETHER	360 U	420 U		0.563	4.8		390 U
4-METHYLPHENOL	360 U	420 U		1.184	9.9		390 U
4-NITROANILINE	1800 U	2100 U		0.198	14.5		2000 U
4-NITROPHENOL	1800 U	2100 U		0.185	5.9		2000 U
4,6-DINITRO-2-METHYLPHENOL	1800 U	2100 U		0.033	68.4		2000 U
SURR 1(NBZ) %RECOVERY	65	63					69
SURR 2(FBP) %RECOVERY	78	66					84
SURR 3(TPH) %RECOVERY	85	67					76
SURR 4(PHL) %RECOVERY	74	64					64
SURR 5(2FP) %RECOVERY	81	76					88
SURR 6(TBP) %RECOVERY	113	90					71

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TABLE D.6.10 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR806013B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA			
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	B. 975 BUBBLE ARE BR806126B SOIL UG/KG 10	B. 975 BUBBLE ARE BR806137B SOIL UG/KG 10	TUNED CALIBRATION BR0603885 %	CONTINUING CALIBRATION BR0603887 RRF	CONTINUING CAL %D BR0603887 %	ISTD RET TIM SHIFT BR0603888 AREA	B. 975 BUBBLE ARE BR806148B SOIL UG/KG 10
M/E 68-1			0				
M/E 68-2			0				
M/E 69			58				
M/E 70-1			0				
M/E 70-2			0				
M/E 127			49				
M/E 197			0				
M/E 198			100				
M/E 199			5.8				
M/E 275			28				
M/E 365			2				
M/E 441			12				
M/E 442			75				
M/E 443-1			14				
M/E 443-2			19				

INTERNAL STD AREA(ANT)	66100	51000				56800	44900
INTERNAL STD AREA(CRY)	37700	35100				35300	22600
INTERNAL STD AREA(DCB)	57700	49800				44300	42100
INTERNAL STD AREA(NPT)	158000	128000				132000	121000
INTERNAL STD AREA(PHN)	83200	57800				71300	50700
INTERNAL STD AREA(PRY)	32500	19900				29600	22800

DILUTION FACTOR	1	1					1
PERCENT MOISTURE	10	22					16
ACTUAL(ALLOWED) EXTRACT TIME	8(14 D)	8(14 D)					8(14 D)

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TABLE D.6.11 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR808026B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0624885	BR0624887	BR0624887	BR0624888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACENAPHTHENE	1.232	5.9			1.188	3.6	
ACENAPHTHYLENE	1.886	9.6			1.721	8.8	
ANTHRACENE	1.012	8.4			0.953	5.9	
BENZO(A)ANTHRACENE	1.032	8.2			0.942	8.7	
BENZO(A)PYRENE	1.088	8.6			1.047	3.7	
BENZO(B)FLUORANTHENE	1.375	11.3			1.213	11.8	
BENZO(G,H,I)PERYLENE	0.762	11.3			0.872	14.5	
BENZO(K)FLUORANTHENE	1.148	3.6			1.299	13.2	
BENZOIC ACID	0.137	13.6			0.143	4.8	
BENZYL ALCOHOL	0.84	10.8			0.736	12.4	
BIS(2-CHLOROETHOXY)METHANE	0.782	16.6			0.837	7.1	
BIS(2-CHLOROETHYL)ETHER	2.622	18.2			2.84	8.3	
BIS(2-CHLOROISOPROPYL)ETHER	1.167	19.2			1.413	21.1	
BIS(2-ETHYLHEXYL)PHTHALATE	1.33	11.4			1.541	15.9	
BUTYL BENZYL PHTHALATE	0.956	11.4			1.183	23.7	
CHRYSENE	1.022	5.5			0.958	6.3	
DI-N-BUTYL PHTHALATE	2.033	13.6			2.429	19.5	
DI-N-OCTYL PHTHALATE	2.778	18.9			3.409	22.7	
DIBENZ(A,H)ANTHRACENE	0.742	20.3			0.793	6.8	
DIBENZOFURAN	1.455	6.1			1.394	4.2	
DIETHYL PHTHALATE	1.557	22.1			4.53	191	
DIMETHYL PHTHALATE	1.491	9.3			1.81	21.3	
FLUORANTHENE	0.982	17.9			0.763	22.3	
FLUORENE	1.096	8.1			1.055	3.7	
HEXACHLORO BENZENE	0.392	7.8			0.424	8.3	
HEXACHLORO BUTADIENE	0.188	3.2			0.178	5.5	
HEXACHLORO CYCLOPENTADIENE	0.433	13.3			0.197	54.5	
HEXACHLOROETHANE	0.882	4.2			0.872	1.2	
INDENO(1,2,3-CD)PYRENE	0.803	13.9			0.756	5.9	
ISOPHORONE	0.92	11.2			1.055	14.6	
N-NITROSO-DI-N-PROPYLAMINE	1.432	4.7			1.691	18.1	
N-NITROSODIPHENYLAMINE	0.615	12.3			0.648	5.3	
NAPHTHALENE	1.075	6.4			1.048	2.5	
NITROBENZENE	0.54	4.1			0.572	5.8	
NITROBENZENE-D5	0.519	5.1			0.51	1.6	
PENTACHLOROPHENOL	0.132	19.5			0.145	10	
PHENANTHRENE	1.064	9.8			0.947	11	
PHENOL	2.514	16.4			2.163	14	
PHENOL-D5	1.957	16.3			1.851	5.4	

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TABLE D.6.11 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR808026B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0624885	BR0624887	BR0624887	BR0624888
MATRIX							
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
PYRENE	1.365	1.5			1.516	11.1	
TERPHENYL-D14	1.059	5.9			1.323	24.9	
1,2-DICHLOROBENZENE	1.399	9.2			1.421	1.6	
1,2,4-TRICHLOROBENZENE	0.289	1.7			0.291	0.4	
1,3-DICHLOROBENZENE	1.44	8.8			1.456	1.1	
1,4-DICHLOROBENZENE	1.501	9.4			1.434	4.4	
2-CHLORONAPHTHALENE	1.22	13.6			1.167	4.3	
2-CHLOROPHENOL	1.517	13.7			1.405	7.4	
2-FLUOROBIPHENYL	1.311	9.3			1.268	3.3	
2-FLUOROPHENOL	1.323	11.1			1.265	4.4	
2-METHYLNAPHTHALENE	0.439	15.3			0.583	33	
2-METHYLPHENOL	1.148	13.9			1.168	1.7	
2-NITROANILINE	0.432	16.2			0.507	17.2	
2-NITROPHENOL	0.184	8.3			0.205	11.4	
2,4-DICHLOROPHENOL	0.247	8.9			0.249	1	
2,4-DIMETHYLPHENOL	0.242	18.5			0.277	14.2	
2,4-DINITROPHENOL	0.102	20.1			0.052	49	
2,4-DINITROTOLUENE	0.312	14.8			0.332	6.4	
2,4,5-TRICHLOROPHENOL	0.342	1.8			0.305	11	
2,4,6-TRIBROMOPHENOL	0.228	14.6			0.266	16.6	
2,4,6-TRICHLOROPHENOL	0.356	23.8			0.329	7.6	
2,6-DINITROTOLUENE	0.321	11.5			0.322	0.3	
3-NITROANILINE	0.386	13.1			0.3	22.2	
3,3'-DICHLOROBENZIDINE	0.185	29.7			0.153	17.2	
4-BROMOPHENYL-PHENYLETHER	0.335	6.8			0.352	5.1	
4-CHLORO-3-METHYLPHENOL	0.297	12.8			0.35	17.9	
4-CHLOROANILINE	0.395	12.7			0.328	17.1	
4-CHLOROPHENYL-PHENYLETHER	0.591	7.7			0.581	1.8	
4-METHYLPHENOL	1.314	17.4			1.297	1.3	
4-NITROANILINE	0.231	18.7			0.204	12.1	
4-NITROPHENOL	0.197	12.4			0.178	9.7	
4,6-DINITRO-2-METHYLPHENOL	0.106	19.4			0.06	43.6	
SURR 1(NBZ) %RECOVERY							
SURR 2(FBP) %RECOVERY							
SURR 3(TPH) %RECOVERY							
SURR 4(PHL) %RECOVERY							
SURR 5(2FP) %RECOVERY							
SURR 6(TBP) %RECOVERY							

TABLE D.6.11 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR808026B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0229886	BR0229886	BR0229885	BR0624885	BR0624887	BR0624887	BR0624888
MATRIX	RRF	%	%	%	RRF	%	AREA
UNITS							
ENV PROBLEM NO							
M/E 51			35	40			
M/E 68-1			0	0			
M/E 68-2			0	0			
M/E 69			69	65			
M/E 70-1			0.2	0.4			
M/E 70-2			0.3	0.7			
M/E 127			57	52			
M/E 197			0	0			
M/E 198			100	100			
M/E 199			5.7	6.3			
M/E 275			27	27			
M/E 365			2.1	2.7			
M/E 441			10	14			
M/E 442			62	85			
M/E 443-1			11	16			
M/E 443-2			17	19			
INTERNAL STD AREA(ANT)							68200
INTERNAL STD AREA(CRY)							43100
INTERNAL STD AREA(DCB)							44800
INTERNAL STD AREA(NPT)							154000
INTERNAL STD AREA(PHN)							90700
INTERNAL STD AREA(PRY)							28200
DILUTION FACTOR							
PERCENT MOISTURE							
ACTUAL(ALLOWED) EXTRACT TIME							
AREA	QA						
LOCATION	METHOD	B. 481	B. 481				
TYPE OF LOCATION	BLANK	LEACH PIT	LEACH PIT				
SAMPLE NUMBER	SBK08335	BR808026B	BR808037B				
MATRIX	SOIL	SOIL	SOIL				
UNITS	UG/KG	UG/KG	UG/KG				
ENV PROBLEM NO		11	11				
ACENAPHTHENE	330 U	16000 U	15000 U				

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TABLE D.6.11 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR808026B

DRAFT DO NOT CITE

AREA	QA	METHOD		
		BLANK	B. 481	B. 481
LOCATION		LEACH PIT	LEACH PIT	LEACH PIT
TYPE OF LOCATION		BR808026B	BR808037B	BR808037B
SAMPLE NUMBER		SOIL	SOIL	SOIL
MATRIX		UG/KG	UG/KG	UG/KG
UNITS		11	11	11
ENV PROBLEM NO				
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ACENAPHTHYLENE	330 U	16000 U	15000 U	
ANTHRACENE	330 U	16000 U	790 J	
BENZO(A)ANTHRACENE	330 U	16000 U	15000 U	
BENZO(A)PYRENE	240 J	16000 U	15000 U	
BENZO(B)FLUORANTHENE	150 J	16000 U	15000 U	
BENZO(G,H,I)PERYLENE	390	16000 U	15000 U	
BENZO(K)FLUORANTHENE	330 U	16000 U	15000 U	
BENZOIC ACID	1700 U	78000 U	77000 U	
BENZYL ALCOHOL	330 U	16000 U	15000 U	
BIS(2-CHLOROETHOXY)METHANE	330 U	16000 U	15000 U	
BIS(2-CHLOROETHYL)ETHER	330 U	16000 U	15000 U	
BIS(2-CHLOROISOPROPYL)ETHER	330 U	16000 U	15000 U	
BIS(2-ETHYLHEXYL)PHTHALATE	580	42000 B	25000 B	
BUTYL BENZYL PHTHALATE	74 J	3300 JB	2700 JB	
CHRYSENE	330 U	16000 U	15000 U	
DI-N-BUTYL PHTHALATE	90 J	740 JB	580 JB	
DI-N-OCTYL PHTHALATE	42 J	1700 JB	15000 U	
DIBENZ(A,H)ANTHRACENE	360	16000 U	15000 U	
DIBENZOFURAN	330 U	16000 U	15000 U	
DIETHYL PHTHALATE	330 U	16000 U	190 J	
DIMETHYL PHTHALATE	330 U	16000 U	15000 U	
FLUORANTHENE	23 J	1700 JB	1800 JB	
FLUORENE	330 U	16000 U	1100 J	
HEXACHLORO BENZENE	330 U	16000 U	15000 U	
HEXACHLORO BUTADIENE	330 U	16000 U	15000 U	
HEXACHLORO CYCLOPENTADIENE	330 U	16000 U	15000 U	
HEXACHLORO ETHANE	330 U	16000 U	15000 U	
INDENO(1,2,3-CD)PYRENE	540	2900 JB	1000 JB	
ISOPHORONE	330 U	16000 U	15000 U	
N-NITROSO-DI-N-PROPYLAMINE	330 U	16000 U	15000 U	
N-NITROSODIPHENYLAMINE	330 U	16000 U	15000 U	
NAPHTHALENE	330 U	16000 U	15000 U	
NITROBENZENE	330 U	16000 U	15000 U	
NITROBENZENE-D5				
PENTACHLOROPHENOL	1700 U	78000 U	77000 U	
PHENANTHRENE	330 U	3000 J	3800 J	
PHENOL	330 U	16000 U	15000 U	
PHENOL-D5				
PYRENE	17 J	3300 JB	2700 JB	

TABLE D.6.11 BROOKHAVEN EXTRACTABLE ORGANICS - SDG NUMBER: BR808026B

DRAFT DO NOT CITE

AREA	QA			
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK SBK08335 SOIL UG/KG	B. 481 LEACH PIT BR808026B SOIL UG/KG 11	B. 481 LEACH PIT BR808037B SOIL UG/KG 11
D-297	TERPHENYL-D14			
	1,2-DICHLOROBENZENE	330 U	16000 U	15000 U
	1,2,4-TRICHLOROBENZENE	330 U	16000 U	15000 U
	1,3-DICHLOROBENZENE	330 U	16000 U	15000 U
	1,4-DICHLOROBENZENE	330 U	16000 U	15000 U
	2-CHLORONAPHTHALENE	330 U	16000 U	15000 U
	2-CHLOROPHENOL	330 U	16000 U	15000 U
	2-FLUOROBIPHENYL			
	2-FLUOROPHENOL			
	2-METHYLNAPHTHALENE	330 U	1800 J	2900 J
	2-METHYLPHENOL	330 U	16000 U	15000 U
	2-NITROANILINE	1700 U	78000 U	77000 U
	2-NITROPHENOL	330 U	16000 U	15000 U
	2,4-DICHLOROPHENOL	330 U	16000 U	15000 U
	2,4-DIMETHYLPHENOL	330 U	16000 U	15000 U
	2,4-DINITROPHENOL	1700 U	78000 U	77000 U
	2,4-DINITROTOLUENE	330 U	16000 U	15000 U
	2,4,5-TRICHLOROPHENOL	1700 U	78000 U	77000 U
	2,4,6-TRIBROMOPHENOL			
	2,4,6-TRICHLOROPHENOL	330 U	16000 U	15000 U
	2,6-DINITROTOLUENE	330 U	16000 U	15000 U
	3-NITROANILINE	1700 U	78000 U	77000 U
	3,3'-DICHLOROBENZIDINE	660 U	31000 U	31000 U
	4-BROMOPHENYL-PHENYLETHER	330 U	16000 U	15000 U
	4-CHLORO-3-METHYLPHENOL	330 U	16000 U	15000 U
	4-CHLOROANILINE	330 U	16000 U	15000 U
	4-CHLOROPHENYL-PHENYLETHER	330 U	16000 U	15000 U
	4-METHYLPHENOL	330 U	16000 U	15000 U
	4-NITROANILINE	1700 U	78000 U	77000 U
	4-NITROPHENOL	1700 U	78000 U	77000 U
	4,6-DINITRO-2-METHYLPHENOL	1700 U	78000 U	77000 U

	SURR 1(NBZ) %RECOVERY	23	29	25
	SURR 2(FBP) %RECOVERY	22 *	47	42
	SURR 3(TPH) %RECOVERY	28	56	45
SURR 4(PHL) %RECOVERY	24	3 *	0 *	
SURR 5(2FP) %RECOVERY	27	46	40	
SURR 6(TBP) %RECOVERY	27	55	56	

AREA	QA		
	METHOD	B. 481	B. 481
LOCATION	BLANK	LEACH PIT	LEACH PIT
TYPE OF LOCATION	SBK08335	BR808026B	BR808037B
SAMPLE NUMBER	SOIL	SOIL	SOIL
MATRIX	UG/KG	UG/KG	UG/KG
UNITS	11	11	11
ENV PROBLEM NO			
M/E 68-1			
M/E 68-2			
M/E 69			
M/E 70-1			
M/E 70-2			
M/E 127			
M/E 197			
M/E 198			
M/E 199			
M/E 275			
M/E 365			
M/E 441			
M/E 442			
M/E 443-1			
M/E 443-2			
INTERNAL STD AREA(ANT)	56800	66200	77400
INTERNAL STD AREA(CRY)	48800	36300	47000
INTERNAL STD AREA(DCB)	39500	44200	49600
INTERNAL STD AREA(NPT)	123000	152000	179000
INTERNAL STD AREA(PHN)	78700	94700	107000
INTERNAL STD AREA(PRY)	49200	24700	40900
DILUTION FACTOR	1	10	10
PERCENT MOISTURE	0	81	79
ACTUAL(ALLOWED) EXTRACT TIME		57(14 D)	57(14 D)

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TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR000022B					
	BR316010F		UNKNOWN(12.38)	11 J	12.38
	BR316010F		UNKNOWN(16.52)	11 J	16.52
	BR316010F		UNKNOWN(27.90)	22 J	27.90
	BR316010F	123-79-5	HEXANEDIOIC ACID DIOCTY(25.63)	39 J	25.63
	BR316021E		UNKNOWN(16.52)	9 J	16.52
	BR316021E		UNKNOWN(23.30)	12 J	23.30
	BR316021E		UNKNOWN(27.87)	16 J	27.87
	BR316021E	123-79-5	HEXANEDIOIC ACID DIOCTY(25.62)	19 J	25.62
	BR316032E	123-79-5	HEXANEDIOIC ACID DIOCTY(25.63)	92 J	25.63
	BR507011E		UNKNOWN(7.45)	18 J	7.45
	BR507022E		UNKNOWN(7.45)	13 J	7.45
	BR507033E		UNKNOWN(10.63)	17 J	10.63
	BR507033E		UNKNOWN(11.85)	9 J	11.85
	BR507033E		UNKNOWN(13.08)	13 J	13.08
	BR507033E		UNKNOWN(24.62)	14 J	24.62
	BR507033E		UNKNOWN(25.12)	15 J	25.12
	BR507033E	101-84-8	1,1'-OXYBIS-BENZINE(15.65)	300 J	15.65
	BR507033E	105-60-2	CAPROLACTAM(13.48)	16 J	13.48
	BR507033E	115-96-8	2-CHLORETHANOLPHOSPHATE(19.70)	22 J	19.70
	BR507033E	123-79-5	HEXANEDIOIC ACID DIOCTY(25.58)	73 J	25.58
	BR507033E	144-19-4	2,2,4-TRIMETHYL-1,3-PEN(11.77)	33 J	11.77
	BR507033E	831-82-3	4-PHENOXYPHENOL(19.47)	13 J	19.47
	BR507033E	92-52-4	1,1'-BIPHENYL(15.40)	200 J	15.40
	BR507044E		UNKNOWN(10.70)	20 J	10.70
	BR507044E		UNKNOWN(11.92)	9 J	11.92
	BR507044E		UNKNOWN(13.13)	12 J	13.13
	BR507044E	101-84-8	1,1'-OXYBISBENZENE(15.73)	220 J	15.73
	BR507044E	105-60-2	CAPROLACTAM(13.53)	9 J	13.53
	BR507044E	115-96-8	2-CHLOROETHANOLPHOSPHAT(19.78)	15 J	19.78
	BR507044E	144-19-4	2,2,4-TRIMETHYL1,3PENTA(11.83)	19 J	11.83
	BR507044E	831-82-3	4-PHENOXYPHEND(19.53)	12 J	19.53
	BR507044E	92-52-4	1,1'-BIPHENYL(15.48)	150 J	15.48
	BR507055E		UNKNOWN HYDROCARBON(28.77)	15 J	28.77
	BR507055E	105-60-2	CAPROLACTAM(13.45)	8 J	13.45
	BR507055E	91-61-0	2-METHYLPENTANOIZ-ACID	15 J	8.02
	BR507066E	123-79-5	HEXANEDIOIC ACID DIOCTY(25.62)	21 J	25.62
	BR507066E	646-07-01	4-METHYL-PENTANOICACID	8 J	8.25
	BR507066E	97-61-0	2-METHLY-PENTANOICACID(8.17)	31 J	8.17
	BR508056C		UNKNOWN(8.28)	380 J	8.28
	BR508056C		UNKNOWN(9.03)	360 J	9.03
	BR508067C		UNKNOWN GLYCOL(19.98)	4900 J	19.98
	BR508067C		UNKNOWN GLYCOL(22.83)	870 J	22.83
	BR508067C		UNKNOWN(9.03)	520 J	9.03
	BR508067C	112-27-6	TRIETHYLENE GLYCOL	6500 J	16.72
	BR508067C	112-27-6	TRIETHYLENE GLYCOL(12.92)	3900 J	12.92
	BR508089C		UNKNOWN(14.08)	3600 J	14.08
	BR508089C		UNKNOWN(16.37)	1300 J	16.37

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR000022B					
	BR508114E	134-62-3	N,N-DIETHYL-3-METHYLBEN(17.80)	46 J	17.80
	BR809049G		UNKNOWN(16.30)	98 J	16.30
	BR809049G		UNKNOWN(16.52)	20 J	16.52
	BR809049G		UNKNOWN(23.32)	19 J	23.32
	BR809049G		UNKNOWN(27.88)	27 J	27.88
	BR809050E	123-79-5	HEXANEDIOIC ACID DIOCTY(25.63)	18 J	25.63
	BR809072F		UNKNOWN(16.52)	8 J	16.52
	BR809072F		UNKNOWN(23.33)	25 J	23.33
	BR809072F		UNKNOWN(27.90)	25 J	27.90
	BR809072F	123-79-5	HEXANEDIOIC ACID DIOCTY(25.63)	31 J	25.63
	BR809083F		UNKNOWN(23.33)	23 J	23.33
	BR809083F		UNKNOWN(27.92)	32 J	27.92
	BR809083F		UNKNOWN(35.53)	19 J	35.53
	BR809083F	123-79-5	HEXANEDIOIC ACID DIOCTY(25.65)	14 J	25.65
	BR809107F	123-79-5	HEXANEDIOIC ACID DIOCTY(25.65)	34 J	25.65
	BR809118F	123-79-5	HEXANEDIOIC ACID DIOCTY(25.62)	32 J	25.62
	BR809129G	123-79-5	HEXANEDIOIC ACID DIOCTY(25.63)	790 J	25.63
	BR809130G		UNKNOWN(16.30)	85 J	16.30
	BR809130G		UNKNOWN(16.55)	14 J	16.55
	BR809130G		UNKNOWN(23.33)	16 J	23.33
	BR809130G		UNKNOWN(27.90)	20 J	27.90
	BR809130G	123-79-5	HEXANEDIOIC ACID DIOCTY(25.63)	140 J	25.63
BR300012F					
	BR300012F		POSSIBLE ALIPHATIC HYDR(6.95)	3 J	6.95
	BR300012F		PROB ALDOL-CONDENSATION(4.86)	77 JAB	4.86
	BR300012F		UNKNOWN(3.62)	4 J	3.62
	BR300012F		UNKNOWN(4.98)	7 J	4.98
	BR300012F		UNKNOWN(5.89)	4 J	5.89
	BR300012F		UNKNOWN(6.74)	3 J	6.74
	BR300012F	123422	DIACETONE ALCOHOL(6.05)	12 JAB	6.05
	BR300012F	541059	HEXAMETHYLCYCLOTRISILOX(5.79)	4 JB	5.79
	BR300023F		ALIPHATIC HYDROCARBON(6.76)	6 JB	6.76
	BR300023F		ALIPHATIC HYDROCARBON(6.95)	7 JB	6.95
	BR300023F		PROB ALDOL-CONDENSATION(4.88)	110 JAB	4.88
	BR300023F		UNKNOWN(3.64)	5 J	3.64
	BR300023F	123422	DIACETONE ALCOHOL(6.07)	9 JAB	6.07
	BR300034F		PROB ALDOL-CONDENSATION(4.86)	68 JAB	4.86
	BR300034F	123422	DIACETONE ALCOHOL(6.06)	8 JAB	6.06
	BR300034F	123795	DIOCTYL ADIPATE(31.20)	6 J	31.20
	SBK08032		ALIPHATIC HYDROCARBON(6.79)	5 J	6.79
	SBK08032		ALIPHATIC HYDROCARBON(6.98)	5 J	6.98
	SBK08032		PROB ALDOL-CONDENSATION(4.92)	110 JA	4.92
	SBK08032		UNKNOWN(3.70)	4 J	3.70
	SBK08032		UNKNOWN(7.22)	8 J	7.22
	SBK08032	123422	DIACETONE ALCOHOL(6.10)	17 JA	6.10
	SBK08032	541059	HEXAMETHYLCYCLOTRISILOX(5.84)	5 J	5.84

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR301057A					
	BR301057A		UNKNOWN ACID(20.90)	37 J	20.90
	BR301057A		UNKNOWN SILOXANE(13.80)	8 J	13.80
	BR301057A		UNKNOWN SILOXANE(22.40)	8 JB	22.40
	BR301057A		UNKNOWN SILOXANE(24.60)	7 JB	24.60
	BR301057A		UNKNOWN SILOXANE(26.60)	6 JB	26.60
	BR301057A		UNKNOWN SILOXANE(28.40)	12 JB	28.40
	BR301057A		UNKNOWN SILOXANE(30.00)	10 JB	30.00
	BR301057A		UNKNOWN SILOXANE(31.50)	11 JB	31.50
	BR301057A		UNKNOWN SILOXANE(33.00)	9 JB	33.00
	BR301057A		UNKNOWN SILOXANE(34.30)	17 JB	34.30
	BR301057A		UNKNOWN SILOXANE(35.50)	15 J	35.50
	BR301057A		UNKNOWN SILOXANE(36.70)	11 JB	36.70
	BR301057A		UNKNOWN SILOXANE(37.80)	10 J	37.80
	BR301057A		UNKNOWN(5.70)	4 J	5.70
	BR301057A		UNKNOWN(24.10)	4 J	24.10
	BR301057A		UNKNOWN(35.30)	9 J	35.30
	BR301057A	108883	METHYL BENZENE(3.82)	4 J	3.82
	BR301057A	123795	DIOCTYL ADIPATE(31.10)	9 J	31.10
	BR301068A		UNKNOWN ACID(20.90)	32 J	20.90
	BR301068A		UNKNOWN SILOXANE(13.70)	5 J	13.70
	BR301068A		UNKNOWN SILOXANE(19.80)	4 J	19.80
	BR301068A		UNKNOWN SILOXANE(22.40)	11 JB	22.40
	BR301068A		UNKNOWN SILOXANE(24.60)	13 JB	24.60
	BR301068A		UNKNOWN SILOXANE(26.60)	10 JB	26.60
	BR301068A		UNKNOWN SILOXANE(28.40)	19 JB	28.40
	BR301068A		UNKNOWN SILOXANE(30.00)	19 JB	30.00
	BR301068A		UNKNOWN SILOXANE(31.50)	17 JB	31.50
	BR301068A		UNKNOWN SILOXANE(33.00)	17 JB	33.00
	BR301068A		UNKNOWN SILOXANE(34.30)	27 JB	34.30
	BR301068A		UNKNOWN SILOXANE(35.50)	24 J	35.50
	BR301068A		UNKNOWN SILOXANE(36.70)	21 JB	36.70
	BR301068A		UNKNOWN SILOXANE(37.80)	16 J	37.80
	BR301068A		UNKNOWN SILOXANE(39.00)	12 J	39.00
	BR301068A		UNKNOWN(24.20)	4 J	24.20
	BR301068A		UNKNOWN(35.30)	17 J	35.30
	BR301068A	108883	METHYL BENZENE(3.84)	9 J	3.84
	BR301068A	123795	DIOCTYL ADIPATE(31.20)	81 J	31.20
	BR301068A	556672	OCTAMETHYLCYCLOTETRASIL(10.40)	23 J	10.40
	BR301079A		POSS ALIPHATIC HYDROCAR(23.30)	5 J	23.30
	BR301079A		POSS UNSAT. HYDROCARBON(24.10)	16 J	24.10
	BR301079A		UNKNOWN ACID(20.80)	20 J	20.80
	BR301079A		UNKNOWN SILOXANE(19.80)	4 J	19.80
	BR301079A		UNKNOWN SILOXANE(22.40)	9 JB	22.40
	BR301079A		UNKNOWN SILOXANE(24.60)	11 JB	24.60
	BR301079A		UNKNOWN SILOXANE(26.50)	7 JB	26.50
	BR301079A		UNKNOWN SILOXANE(28.30)	20 JB	28.30
	BR301079A		UNKNOWN SILOXANE(30.00)	16 JB	30.00

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR301057A					
	BR301079A		UNKNOWN SILOXANE(31.50)	14 JB	31.50
	BR301079A		UNKNOWN SILOXANE(32.90)	13 JB	32.90
	BR301079A		UNKNOWN SILOXANE(34.30)	21 JB	34.30
	BR301079A		UNKNOWN SILOXANE(35.50)	22 J	35.50
	BR301079A		UNKNOWN SILOXANE(36.70)	23 JB	36.70
	BR301079A		UNKNOWN SILOXANE(37.80)	14 J	37.80
	BR301079A		UNKNOWN(23.60)	2 J	23.60
	BR301079A		UNKNOWN(24.40)	2 J	24.40
	BR301079A	108883	METHYL BENZENE(3.89)	3 J	3.89
	BR301079A	123795	DIOCTYL ADIPATE(31.10)	47 J	31.10
	BR301079A	541026	DECAMETHYLCYCLOPENTASIL(13.70)	4 J	13.70
	BR302058A		UNKNOWN ACID(20.90)	200 J	20.90
	BR302058A		UNKNOWN ACID(23.60)	52 J	23.60
	BR302058A		UNKNOWN PHTHALATE ESTER(25.00)	14 J	25.00
	BR302058A		UNKNOWN SILOXANE(22.40)	26 JB	22.40
	BR302058A		UNKNOWN SILOXANE(24.60)	28 JB	24.60
	BR302058A		UNKNOWN SILOXANE(26.60)	23 JB	26.60
	BR302058A		UNKNOWN SILOXANE(28.40)	41 JB	28.40
	BR302058A		UNKNOWN SILOXANE(30.00)	37 JB	30.00
	BR302058A		UNKNOWN SILOXANE(31.50)	40 JB	31.50
	BR302058A		UNKNOWN SILOXANE(32.90)	40 JB	32.90
	BR302058A		UNKNOWN SILOXANE(35.50)	31 J	35.50
	BR302058A		UNKNOWN SILOXANE(36.70)	28 JB	36.70
	BR302058A		UNKNOWN SILOXANE(37.80)	20 J	37.80
	BR302058A		UNKNOWN SILOXANE(39.00)	15 J	39.00
	BR302058A		UNKNOWN SILOXANE(40.40)	11 J	40.40
	BR302058A		UNKNOWN(13.70)	9 J	13.70
	BR302058A		UNKNOWN(19.80)	8 J	19.80
	BR302058A	123795	DIOCTYL ADIPATE(31.20)	960 J	31.20
	BR302058A	541059	HEXAMETHYLCYCLOTTRISILOX(5.72)	6 J	5.72
	BR302058A	556672	OCTAMETHYLCYCLOTETRASIL(10.40)	70 J	10.40
	BR302069A		ALIPHATIC HYDROCARBON(24.10)	3 J	24.10
	BR302069A		UNKNOWN ACID(20.90)	100 J	20.90
	BR302069A		UNKNOWN ACID(23.60)	4 J	23.60
	BR302069A		UNKNOWN SILOXANE(19.80)	5 J	19.80
	BR302069A		UNKNOWN SILOXANE(22.40)	17 JB	22.40
	BR302069A		UNKNOWN SILOXANE(24.60)	18 JB	24.60
	BR302069A		UNKNOWN SILOXANE(26.60)	14 JB	26.60
	BR302069A		UNKNOWN SILOXANE(28.30)	27 JB	28.30
	BR302069A		UNKNOWN SILOXANE(30.00)	24 JB	30.00
	BR302069A		UNKNOWN SILOXANE(31.50)	23 JB	31.50
	BR302069A		UNKNOWN SILOXANE(32.90)	24 JB	32.90
	BR302069A		UNKNOWN SILOXANE(35.50)	30 J	35.50
	BR302069A		UNKNOWN SILOXANE(36.70)	24 JB	36.70
	BR302069A		UNKNOWN SILOXANE(37.80)	19 J	37.80
	BR302069A		UNKNOWN SILOXANE(39.00)	16 J	39.00
	BR302069A		UNKNOWN(25.00)	4 J	25.00
	BR302069A	123795	DIOCTYL ADIPATE(31.10)	150 J	31.10

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR301057A					
	BR302069A	541026	DECAMETHYLCYCLOPENTASIL(13.70)	11 J	13.70
	BR302069A	541059	HEXAMETHYLCYCLOTRISILOX(5.71)	5 J	5.71
	BR302069A	556672	OCTAMETHYLCYCLOTETRASIL(10.40)	33 J	10.40
	BR302070A		UNKNOWN ACID(20.90)	93 J	20.90
	BR302070A		UNKNOWN ACID(23.60)	5 J	23.60
	BR302070A		UNKNOWN SILOXANE(13.70)	12 J	13.70
	BR302070A		UNKNOWN SILOXANE(19.80)	6 J	19.80
	BR302070A		UNKNOWN SILOXANE(22.40)	18 JB	22.40
	BR302070A		UNKNOWN SILOXANE(24.60)	20 JB	24.60
	BR302070A		UNKNOWN SILOXANE(26.60)	17 JB	26.60
	BR302070A		UNKNOWN SILOXANE(28.40)	37 JB	28.40
	BR302070A		UNKNOWN SILOXANE(30.00)	34 JB	30.00
	BR302070A		UNKNOWN SILOXANE(31.50)	30 JB	31.50
	BR302070A		UNKNOWN SILOXANE(32.90)	28 JB	32.90
	BR302070A		UNKNOWN SILOXANE(34.30)	43 JB	34.30
	BR302070A		UNKNOWN SILOXANE(35.50)	41 J	35.50
	BR302070A		UNKNOWN SILOXANE(36.70)	31 JB	36.70
	BR302070A		UNKNOWN SILOXANE(37.80)	27 J	37.80
	BR302070A		UNKNOWN SILOXANE(39.00)	19 J	39.00
	BR302070A	108883	METHYL BENZENE(3.84)	5 J	3.84
	BR302070A	123795	DIOCTYL ADIPATE(31.10)	24 J	31.10
	BR302070A	541059	HEXAMETHYLCYCLOTRISILOX(5.71)	7 J	5.71
	BR302070A	556672	OCTAMETHYLCYCLOTETRASIL(10.40)	70 J	10.40
	SBK08171		UNKNOWN SILOXANE(22.40)	4 J	22.40
	SBK08171		UNKNOWN SILOXANE(24.60)	4 J	24.60
	SBK08171		UNKNOWN SILOXANE(26.50)	4 J	26.50
	SBK08171		UNKNOWN SILOXANE(28.30)	9 J	28.30
	SBK08171		UNKNOWN SILOXANE(30.00)	8 J	30.00
	SBK08171		UNKNOWN SILOXANE(31.50)	8 J	31.50
	SBK08171		UNKNOWN SILOXANE(32.90)	6 J	32.90
	SBK08171		UNKNOWN SILOXANE(34.20)	9 J	34.20
	SBK08171		UNKNOWN SILOXANE(36.60)	9 J	36.60
	SBK08171		UNKNOWN(14.00)	2 J	14.00
	SBK08171		UNKNOWN(20.70)	3 J	20.70
	SBK08171		UNSATURATED HYDROCARBON(24.10)	6 J	24.10
BR303015B					
	BR303015B		ALIPHATIC HYDROCARBON(6.73)	340 JB	6.73
	BR303015B		ALIPHATIC HYDROCARBON(6.94)	520 JB	6.94
	BR303015B		POSSIBLE KEYTONE(9.25)	450 J	9.25
	BR303015B		PROB ALDOL-CONDENSATION(4.79)	290 JA	4.79
	BR303015B		UNKNOWN(5.72)	340 J	5.72
	BR303015B	123422	DIACETONE ALCOHOL(6.37)	20000 JAB	6.37
	BR303015B	123795	DIOCTYL ADIPATE(31.20)	2400 JB	31.20
	BR303026B		ALIPHATIC HYDROCARBON(6.93)	530 JB	6.93
	BR303026B		ALIPHATIC HYRDOCARBON(6.72)	320 JB	6.72
	BR303026B		PROB ALDOL-CONDENSATION(4.78)	390 JA	4.78

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR303015B					
			UNKNOWN(5.26)	600 JB	5.26
			UNKNOWN(8.05)	250 J	8.05
			UNKNOWN(9.21)	690 J	9.21
		123422	DIACETONE ALCOHOL(6.29)	20000 JAB	6.29
		123795	DIOCTYL ADIPATE(31.20)	2400 JB	31.20
			ALIPHATIC HYDROCARBON(6.73)	73 JB	6.73
			ALIPHATIC HYDROCARBON(6.93)	110 JB	6.93
			POSSIBLE KETONE(9.23)	95 J	9.23
			PROB ALDO-CONDENSATION (4.86)	610 JA	4.86
			UNKNOWN(5.61)	96 JB	5.61
		123422	DIACETONE ALCOHOL(6.46)	4900 JAB	6.46
		123795	DIOCTYL ADIPATE(31.20)	2600 JB	31.20
			ALIPHATIC HYDROCARBON(6.72)	530 JB	6.72
			ALIPHATIC HYDROCARBON(6.93)	680 JB	6.93
			PROB ALDO-CONDENSATION (3.53)	800 JA	3.53
			PROB ALDO-CONDENSATION (5.02)	22000 JA	5.02
			UNKNOWN(5.08)	650 J	5.08
			UNKNOWN(10.10)	350 J	10.10
			UNKNOWN(39.10)	280 J	39.10
		123422	DIACETONE ALCOHOL(6.15)	2300 JAB	6.15
		123795	DIOCTYL ADIPATE(31.20)	2300 JB	31.20
			ALIPHATIC HYDROCARBON(6.71)	910 JB	6.71
			ALIPHATIC HYDROCARBON(6.92)	1100 JB	6.92
			POSS ALIPHATIC HYDROCAR(5.03)	1200 J	5.03
			POSS ALIPHATIC HYDROCAR(32.40)	150 J	32.40
			POSSIBLE KETONE(10.10)	1200 J	10.10
			PROB ALDO-CONDENSATION (3.54)	1400 JA	3.54
			PROB ALDO-CONDENSATION (4.96)	46000 JA	4.96
			PROB ALIPHATIC HYDROCAR(37.50)	170 J	37.50
			TRIMETHYLBENZENE(9.36)	480 J	9.36
			UNKNOWN ALKYL/HYDROXYL (28.30)	100 J	28.30
			UNKNOWN ALKYL/HYDROXYL (34.30)	220 J	34.30
			UNKNOWN ALKYL/HYDROXYL (36.10)	150 J	36.10
			UNKNOWN(3.68)	550 J	3.68
			UNKNOWN(24.70)	650 J	24.70
			UNKNOWN(25.00)	640 J	25.00
			UNKNOWN(35.30)	100 J	35.30
			UNKNOWN(39.00)	610 J	39.00
			UNKNOWN(42.70)	180 J	42.70
		123422	DIACETONE ALCOHOL(6.11)	6100 JAB	6.11
		123795	DIOCTYL ADIPATE(31.20)	2600 JB	31.20
			ALIPHATIC HYDROCARBON(6.73)	320 JB	6.73
			ALIPHATIC HYDROCARBON(6.92)	400 JB	6.92
			PROB ALDOL-CONDENSATION(3.55)	560 JA	3.55
			PROB ALDOL-CONDENSATION(5.02)	14000 JA	5.02
			UNKNOWN(5.07)	430 J	5.07
			UNKNOWN(8.96)	190 J	8.96
		123422	DIACETONE ALCOHOL(6.16)	1900 JAB	6.16

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR303015B					
	BR304038B	123795	DIOCTYL ADIPATE(31.20)	1900 JB	31.20
	BR305017B		ALIPHATIC HYDROCARBON(6.72)	580 JB	6.72
	BR305017B		ALIPHATIC HYDROCARBON(6.93)	730 JB	6.93
	BR305017B		POSS ALIPHATIC HYDROCAR(6.47)	180 J	6.47
	BR305017B		PROB ALDO-CONDENSATION (3.52)	870 JA	3.52
	BR305017B		PROB ALDO-CONDENSATION (5.01)	22000 JA	5.01
	BR305017B		TRIMETHYLBENZENE(9.35)	190 J	9.35
	BR305017B		UNKNOWN(6.54)	240 J	6.54
	BR305017B	123422	DIACETONE ALCOHOL(6.12)	1800 JAB	6.12
	BR305017B	123795	DIOCTYL ADIPATE(31.20)	1800 JB	31.20
	BR305028B		PROB ALDOL-CONDENSATION(3.57)	840 JA	3.57
	BR305028B		PROB ALDOL-CONDENSATION(5.00)	20000 JA	5.00
	BR305028B		UNKNOWN(5.04)	400 J	5.04
	BR305028B		UNKNOWN(10.10)	390 J	10.10
	BR305028B		UNKNOWN(11.30)	210 J	11.30
	BR305028B	123422	DIACETONE ALCOHOL(6.10)	2000 JAB	6.10
	BR305028B	123795	DIOCTYL ADIPATE(31.20)	2000 JB	31.20
	BR305039B		ALIPHATIC HYDROCARBON(6.71)	280 JB	6.71
	BR305039B		ALIPHATIC HYDROCARBON(6.92)	370 JB	6.92
	BR305039B		POSSIBLE KETONE(10.10)	510 J	10.10
	BR305039B		PROB ALDOL-CONDENSATION(3.59)	920 JA	3.59
	BR305039B		PROB ALDOL-CONDENSATION(4.99)	22000 JA	4.99
	BR305039B		PROB ALIPHATIC HYDROCAR(35.90)	130 J	35.90
	BR305039B		PROB ALIPHATIC HYDROCAR(37.50)	92 J	37.50
	BR305039B		UNKNOWN ALKYL/HYDROXYL (34.40)	110 J	34.40
	BR305039B		UNKNOWN(5.05)	650 J	5.05
	BR305039B		UNKNOWN(11.30)	340 J	11.30
	BR305039B	123422	DIACETONE ALCOHOL(6.11)	2300 JAB	6.11
	BR305039B	123795	DIOCTYL ADIPATE(31.20)	2300 JB	31.20
	BR500047B		ALIPHATIC HYDROCARBON(6.71)	350 JB	6.71
	BR500047B		ALIPHATIC HYDROCARBON(6.91)	450 JB	6.91
	BR500047B		PROB ALDOL-CONDENSATION(3.58)	1100 JA	3.58
	BR500047B		PROB ALDOL-CONDENSATION(4.98)	25000 JA	4.98
	BR500047B		PROB ALIPHATIC HYDROCAR(5.02)	380 J	5.02
	BR500047B		UNKNOWN(10.10)	280 J	10.10
	BR500047B	123422	DIACETONE ALCOHOL(6.08)	1600 JAB	6.08
	BR500047B	123795	DIOCTYL ADIPATE(31.20)	1600 JB	31.20
	BR500058B		ALIPHATIC HYDROCARBON(6.71)	280 JB	6.71
	BR500058B		ALIPHATIC HYDROCARBON(6.92)	330 JB	6.92
	BR500058B		POSS ALIPHATIC HYDROCAR(5.02)	440 J	5.02
	BR500058B		PROB ALDOL-CONDENSATION(3.59)	810 JA	3.59
	BR500058B		PROB ALDOL-CONDENSATION(4.96)	20000 JA	4.96
	BR500058B		UNKNOWN CARBOXYLIC ACID(26.20)	75 J	26.20
	BR500058B		UNKNOWN(8.92)	170 J	8.92
	BR500058B		UNKNOWN(10.10)	310 J	10.10
	BR500058B	123422	DIACETONE ALCOHOL(6.08)	1600 JAB	6.08
	BR500058B	123795	DIOCTYL ADIPATE(31.20)	1600 JB	31.20
	BR500069B		ALIPHATIC HYDROCARBON(6.75)	390 JB	6.75

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR303015B					
			ALIPHATIC HYDROCARBON(6.94)	550 JB	6.94
			POSSIBLE KETONE(10.10)	350 J	10.10
			PROB ALDOL-CONDENSATION(3.64)	1300 JA	3.64
			PROB ALDOL-CONDENSATION(5.04)	30000 JA	5.04
			UNKNOWN(5.08)	700 J	5.08
			UNKNOWN(8.93)	200 J	8.93
		123422	DIACETONE ALCOHOL(6.11)	1900 JAB	6.11
		123795	DIOCTYL ADIPATE(32.20)	1900 JB	32.20
			ALIPHATIC HYDROCARBON(6.76)	37 J	6.76
			DIOCTYL ADIPATE(31.20)	1300 J	31.20
			UNKNOWN(5.58)	35 J	5.58
		123422	DIACETONE ALCOHOL(6.47)	1300 JA	6.47
		123795	ALIPHATIC HYDROCARBON(6.97)	60 J	6.97
BR306018E					
			UNKNOWN ACID(20.90)	23 J	20.90
			UNKNOWN ACID(23.70)	20 J	23.70
			UNKNOWN ACID(25.00)	21 J	25.00
			UNKNOWN ACID(26.40)	200 J	26.40
			UNKNOWN ACID(26.50)	180 J	26.50
			UNKNOWN ACID(27.50)	8 J	27.50
			UNKNOWN ALKYL/HYDROXYL (28.50)	170 J	28.50
			UNKNOWN ALKYL/HYDROXYL (28.60)	150 J	28.60
			UNKNOWN ARYL CPD(16.00)	26 J	16.00
			UNKNOWN CHOLESTEROL CPD(37.50)	77 J	37.50
			UNKNOWN ERGOSTANOL CPD(38.90)	42 J	38.90
			UNKNOWN(28.80)	130 J	28.80
			UNKNOWN(39.10)	17 J	39.10
			UNKNOWN(39.40)	140 J	39.40
			UNKNOWN(39.80)	42 J	39.80
		10544500	SULFUR(27.10)	8 J	27.10
		123795	DIOCTYL ADIPATE(31.20)	80 J	31.20
		501520	HYDROCINNAMIC ACID(17.20)	27 J	17.20
		6538029	POSSIBLE ERGOSTANOL(38.50)	43 J	38.50
		80977	CHOLESTANOL(37.60)	750 J	37.60
			POSS ALIPHATIC HYDROCAR(28.40)	42 J	28.40
			POSS UNSAT. HYDROCARBON(28.10)	14 J	28.10
			POSSIBLE ESTER(17.80)	7 J	17.80
			UNKNOWN ACID(20.70)	11 J	20.70
			UNKNOWN ACID(23.60)	38 J	23.60
			UNKNOWN ACID(24.50)	7 J	24.50
			UNKNOWN ACID(24.90)	13 J	24.90
			UNKNOWN ACID(26.30)	170 J	26.30
			UNKNOWN ACID(28.70)	190 J	28.70
			UNKNOWN ALKYL/HYDROXYL (25.90)	16 J	25.90
			UNKNOWN CHOLESTEROL CPD(37.70)	100 J	37.70
			UNKNOWN CHOLESTEROL CPD(37.80)	190 J	37.80

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR306018E					
			UNKNOWN(14.10)	14 J	14.10
			UNKNOWN(19.50)	13 J	19.50
			UNKNOWN(24.70)	5 J	24.70
			UNKNOWN(28.20)	12 J	28.20
			UNKNOWN(28.30)	42 J	28.30
		103822	PHENYLACETIC ACID(15.80)	110 J	15.80
		10544500	SULFUR(27.10)	200 J	27.10
		501520	HYDROCINNAMIC ACID(17.10)	22 J	17.10
			POSS UNSAT. HYDROCARBON(28.20)	16 J	28.20
			POSS UNSAT. HYDROCARBON(28.30)	62 J	28.30
			POSSIBLE CYANOARYL CPD(16.20)	10 J	16.20
			UNKNOWN ACID(20.80)	14 J	20.80
			UNKNOWN ACID(23.60)	57 J	23.60
			UNKNOWN ACID(24.50)	11 J	24.50
			UNKNOWN ACID(26.30)	150 J	26.30
			UNKNOWN ALKYL/HYDROXYL (28.40)	68 J	28.40
			UNKNOWN CHOLESTEROL CPD(37.60)	280 J	37.60
			UNKNOWN CHOLESTEROL CPD(37.80)	140 J	37.80
			UNKNOWN CHOLESTEROL CPD(38.00)	62 J	38.00
			UNKNOWN(17.80)	11 J	17.80
			UNKNOWN(19.50)	12 J	19.50
			UNKNOWN(26.00)	21 J	26.00
			UNKWON ACID(24.90)	20 J	24.90
			UNKOWN ACID(28.70)	260 J	28.70
		103822	PHENYLACETIC ACID(15.90)	150 J	15.90
		10544500	SULFUR(27.10)	260 J	27.10
		501520	HYDROCINNAMIC ACID(17.10)	24 J	17.10
			ALIPHATIC HYDROCARBON(7.66)	54 J	7.66
			ALIPHATIC HYDROCARBON(10.80)	89 J	10.80
			ALIPHATIC HYDROCARBON(10.90)	65 J	10.90
			ALIPHATIC HYDROCARBON(11.00)	61 J	11.00
			ALIPHATIC HYDROCARBON(11.40)	55 J	11.40
			ALIPHATIC HYDROCARBON(11.50)	54 J	11.50
			ALIPHATIC HYDROCARBON(11.70)	56 J	11.70
			ALIPHATIC HYDROCARBON(12.50)	420 J	12.50
			ALIPHATIC HYDROCARBON(13.60)	160 J	13.60
			ALIPHATIC HYDROCARBON(14.50)	200 J	14.50
			ALIPHATIC HYDROCARBON(15.70)	220 J	15.70
			UNKNOWN ACID(23.60)	160 J	23.60
			UNKNOWN ACID(26.40)	1600 J	26.40
			UNKNOWN ACID(28.50)	700 J	28.50
			UNKNOWN ACID(28.70)	2500 J	28.70
			UNKNOWN CHOLESTEROL CPD(37.80)	57 J	37.80
			UNKNOWN CHOLESTEROL CPD(39.40)	46 J	39.40
			UNKNOWN(27.10)	340 J	27.10
		108883	METHYL BENZENE(3.82)	110 J	3.82
		80977	CHOLESTANOL(37.60)	270 J	37.60
			ALIPHATIC HYDROCARBON(7.67)	55 J	7.67

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR306018E					
			ALIPHATIC HYDROCARBON(8.33)	33 J	8.33
			ALIPHATIC HYDROCARBON(8.57)	33 J	8.57
			ALIPHATIC HYDROCARBON(9.51)	49 J	9.51
			ALIPHATIC HYDROCARBON(10.80)	80 J	10.80
			ALIPHATIC HYDROCARBON(10.90)	33 J	10.90
			ALIPHATIC HYDROCARBON(11.00)	50 J	11.00
			ALIPHATIC HYDROCARBON(11.40)	82 J	11.40
			ALIPHATIC HYDROCARBON(11.70)	48 J	11.70
			ALIPHATIC HYDROCARBON(12.50)	1500 J	12.50
			DIMETHYL BENZENE(6.68)	52 J	6.68
			UNKNOWN ACID(26.30)	460 J	26.30
			UNKNOWN ACID(26.50)	1700 J	26.50
			UNKNOWN ACID(28.80)	1600 J	28.80
			UNKNOWN CHOLESTEROL CPD(37.90)	51 J	37.90
			UNKNOWN CHOLESTEROL CPD(39.40)	32 J	39.40
			UNKNOWN(10.60)	58 J	10.60
		10544500	SULFUR(27.10)	670 J	27.10
		108883	METHYL BENZENE(3.83)	36 J	3.83
		80977	CHOLESTANOL(37.60)	190 J	37.60
			ALIPHATIC HYDROCARBON(7.69)	31 J	7.69
			ALIPHATIC HYDROCARBON(9.52)	37 J	9.52
			ALIPHATIC HYDROCARBON(10.80)	56 J	10.80
			ALIPHATIC HYDROCARBON(11.00)	35 J	11.00
			ALIPHATIC HYDROCARBON(11.40)	52 J	11.40
			ALIPHATIC HYDROCARBON(11.70)	33 J	11.70
			ALIPHATIC HYDROCARBON(12.50)	770 J	12.50
			ALIPHATIC HYDROCARBON(16.40)	210 J	16.40
			ARYL HYDROCARBON(10.60)	40 J	10.60
			DIMETHYL BENZENE(7.70)	39 J	7.70
			POSSIBLE AMIDE/AMINE(13.40)	230 J	13.40
			UNKNOWN ACID(26.40)	230 J	26.40
			UNKNOWN ACID(26.50)	120 J	26.50
			UNKNOWN ACID(26.50)	140 J	26.50
			UNKNOWN ACID(28.80)	130 J	28.80
			UNKNOWN CHOLESTEROL CPD(37.90)	43 J	37.90
			UNKNOWN CHOLESTEROL CPD(39.40)	25 J	39.40
		10544500	SULFUR(27.20)	300 J	27.20
		108883	METHYL BENZENE(3.85)	25 J	3.85
		80977	CHOLESTANOL(37.60)	120 J	37.60
			PHENYL HYDROCARBON(21.40)	380 J	21.40
			PHENYL HYDROCARBON(22.20)	26 J	22.20
			PHENYL HYDROCARBON(22.80)	46 J	22.80
			PHENYL HYDROCARBON(23.00)	61 J	23.00
			PHENYL HYDROCARBON(23.10)	45 J	23.10
			PHENYL HYDROCARBON(23.50)	36 J	23.50
			POSS PHENYL/HYDROCARBON(25.00)	47 J	25.00
			UNKNOWN ACID(20.80)	19 J	20.80
			UNKNOWN ACID(26.40)	690 J	26.40

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR306018E					
	BR310014E		UNKNOWN ACID(28.80)	600 J	28.80
	BR310014E		UNKNOWN ALKYL/HYDROXYL (28.40)	46 J	28.40
	BR310014E		UNKNOWN(17.30)	57 J	17.30
	BR310014E		UNKNOWN(17.70)	61 J	17.70
	BR310014E		UNKNOWN(17.80)	25 J	17.80
	BR310014E		UNKNOWN(23.60)	49 J	23.60
	BR310014E		UNKNOWN(31.40)	140 J	31.40
	BR310014E	10544500	SULFUR(27.10)	240 J	27.10
	BR310014E	57885	CHOLESTEROL(37.90)	75 J	37.90
	BR310014E	58082	CAFFEINE(24.70)	20 J	24.70
	BR310014E	80977	CHOLESTANOL(37.50)	80 J	37.50
	BR311026E		UNKNOWN(24.20)	3 J	24.20
	BR311026E	108883	METHYL BENZENE(3.82)	3 J	3.82
	BR311026E	128370	BUTYLATED HYDROXYTOLUEN(20.00)	18 J	20.00
	BR500070A		ARYL HYDROCARBON(20.80)	18 J	20.80
	BR500070A		DIOCTYL ADIPATE(31.10)	24 J	31.10
	BR500070A		POSS. AMIDE/AMINE(13.40)	17 J	13.40
	BR500070A		UNKNOWN ACID(13.00)	79 J	13.00
	BR500070A		UNKNOWN ACID(13.60)	16 J	13.60
	BR500070A		UNKNOWN ACID(13.80)	77 J	13.80
	BR500070A		UNKNOWN ACID(14.50)	28 J	14.50
	BR500070A		UNKNOWN ACID(16.00)	8 J	16.00
	BR500070A		UNKNOWN HYDROXYL CPD(7.47)	36 J	7.47
	BR500070A		UNKNOWN KETONE(4.60)	10 J	4.60
	BR500070A		UNKNOWN KETONE(7.41)	50 J	7.41
	BR500070A		UNKNOWN KETONE(12.10)	40 J	12.10
	BR500070A		UNKNOWN KETONE(13.30)	10 J	13.30
	BR500070A		UNKNOWN(8.47)	19 J	8.47
	BR500070A		UNKNOWN(8.82)	69 J	8.82
	BR500070A		UNKNOWN(11.10)	140 J	11.10
	BR500070A		UNKNOWN(12.60)	27 J	12.60
	BR500070A	103822	PHENYLACETIC ACID(15.60)	10 J	15.60
	BR500070A	108883	METHYL BENZENE(3.84)	18 J	3.84
	BR500070A	501520	HYDROCINNAMIC ACID(17.30)	100 J	17.30
	BR500081A		ARYL HYDROCARBON(18.20)	13 J	18.20
	BR500081A		ETHYL PHENOL(13.90)	130 J	13.90
	BR500081A		PHENYLACETIC ACID(15.80)	74 J	15.80
	BR500081A		UNKNOWN ACID(12.50)	20 J	12.50
	BR500081A		UNKNOWN ARYL COMPOUND(17.60)	17 J	17.60
	BR500081A		UNKNOWN ARYL COMPOUND(20.90)	59 J	20.90
	BR500081A		UNKNOWN ETHER(17.90)	19 J	17.90
	BR500081A		UNKNOWN KETONE(13.30)	18 J	13.30
	BR500081A		UNKNOWN(10.40)	32 J	10.40
	BR500081A		UNKNOWN(10.60)	66 J	10.60
	BR500081A		UNKNOWN(10.70)	18 J	10.70
	BR500081A		UNKNOWN(12.20)	19 J	12.20
	BR500081A		UNKNOWN(12.40)	23 J	12.40
	BR500081A		UNKNOWN(13.00)	14 J	13.00

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR306018E					
			UNKNOWN(13.70)	100 J	13.70
			UNKNOWN(26.5)	28 J	26.50
			UNKNOWN(31.6)	22 J	31.60
			UNKNOWN(31.7)	26 J	31.70
		501520	HYDROCINNAMIC ACID(17.40)	110 J	17.40
			DIOCTYL ADIPATE(31.10)	100 J	31.10
			POSS. AMIDE/AMINE(13.30)	87 J	13.30
			POSS. AMIDE/AMINE(13.70)	4 J	13.70
			UNKNOWN ACID(13.10)	7 J	13.10
			UNKNOWN ACID(13.40)	3 J	13.40
			UNKNOWN ARYL CPD(20.80)	17 J	20.80
			UNKNOWN HYDROXYL CPD(4.96)	7 J	4.96
			UNKNOWN HYDROXYL CPD(7.72)	19 J	7.72
			UNKNOWN KETONE(4.60)	7 J	4.60
			UNKNOWN KETONE(7.40)	21 J	7.40
			UNKNOWN PYRIDINE CPD(18.00)	4 J	18.00
			UNKNOWN(4.91)	9 J	4.91
			UNKNOWN(5.84)	5 J	5.84
			UNKNOWN(9.68)	7 J	9.68
			UNKNOWN(11.60)	12 J	11.60
			UNKNOWN(11.80)	7 J	11.80
			UNKNOWN(14.50)	3 J	14.50
			UNKNOWN(18.40)	5 J	18.40
		108883	METHYL BENZENE(3.84)	7 J	3.84
		501520	HYDROCINNAMIC ACID(17.10)	7 J	17.10
			ARYL HYDROCARBON(22.80)	2 J	22.80
			ARYL HYDROCARBON(23.30)	2 J	23.30
			ARYL HYDROCARBON(24.50)	2 J	24.50
			POSSIBLE UNSAT HYDROCAR(10.80)	87 J	10.80
			POSSIBLE UNSAT HYDROCAR(19.40)	47 J	19.40
			UNKNOWN ACID(21.00)	46 J	21.00
			UNKNOWN ALKYL/HYDROXYL (29.10)	22 J	29.10
			UNKNOWN ALKYL/HYDROXYL (35.30)	87 J	35.30
			UNKNOWN AMIDE(23.20)	87 J	23.20
			UNKNOWN AMIDE(25.90)	28 J	25.90
			UNKNOWN ETHER(29.90)	51 J	29.90
			UNKNOWN ETHER(37.00)	28 J	37.00
			UNKNOWN HYDROXYL CPD(32.10)	16 J	32.10
			UNKNOWN HYDROXYL CPD(32.80)	23 J	32.80
			UNKNOWN HYDROXYL/ALKYL (26.60)	5 J	26.60
			UNKNOWN(27.20)	2 J	27.20
			UNKNOWN(28.10)	650 J	28.10
			UNKNOWN(30.30)	100 J	30.30
		123422	DIACETONE ALCOHOL(6.00)	51 JA	6.00
		872504	1-METHYL-2-PYRROLIDONE(11.00)	33 J	11.00
			ALIPHATIC HYDROCARBON(22.70)	3 J	22.70
			POSS ALIPHATIC HYDROCAR(34.70)	19 J	34.70
			TETRACHLOROETHANE(7.84)	5 J	7.84

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR306018E					
			UNKNOWN ALKYL/HYDROXYL (36.40)	11 J	36.40
			UNKNOWN ALKYL/HYDROXYL (37.60)	10 J	37.60
			UNKNOWN(4.93)	74 J	4.93
			UNKNOWN(5.84)	50 J	5.84
			UNKNOWN(23.10)	7 J	23.10
			UNKNOWN(25.90)	3 J	25.90
			UNKNOWN(30.00)	7 J	30.00
			UNKNOWN(32.80)	11 J	32.80
			UNKNOWN(35.30)	19 J	35.30
			UNKNOWN(37.00)	8 J	37.00
			UNKNOWN(3.42)	4 J	3.42
			UNKNOWN(3.64)	8 J	3.64
			UNKNOWN(4.89)	13 J	4.89
			UNKNOWN(5.80)	29 J	5.80
			UNKNOWN(6.35)	4 J	6.35
			UNKNOWN(8.21)	10 J	8.21
			UNKNOWN(8.52)	11 J	8.52
			UNKNOWN(31.10)	6 J	31.10
			UNKNOWN(35.20)	10 J	35.20
		108883	METHYL BENZENE(3.82)	8 J	3.82
			TETRACHLOROETHANE(7.83)	8 J	7.83
			TETRACHLOROETHANE(7.83)	13 J	7.83
			UNKNOWN HYDROXYL COMPOU(4.94)	140 J	4.94
			UNKNOWN HYDROXYL COMPOU(5.85)	110 J	5.85
			UNKNOWN(3.28)	6 J	3.28
			UNKNOWN(3.67)	5 J	3.67
			UNKNOWN(4.95)	150 J	4.95
			UNKNOWN(5.86)	150 J	5.86
			UNKNOWN(8.53)	7 J	8.53
			POSSIBLE AMIDE/AMINE(34.80)	8 J	34.80
			UNKNOWN(3.30)	7 J	3.30
			POSSIBLE UNSAT HYDROCAR(24.10)	10 J	24.10
			ALIPHATIC HYDROCARBON(24.10)	4 J	24.10
			UNKNOWN(3.23)	4 J	3.23
			UNKNOWN(4.88)	2 J	4.88
			UNKNOWN(24.10)	3 J	24.10
			UNKNOWN(3.28)	5 J	3.28
			UNKNOWN(19.40)	2 J	19.40
			UNKNOWN(22.80)	6 J	22.80
			UNKNOWN(24.10)	2 J	24.10
			UNKNOWN(26.30)	4 J	26.30
			UNKNOWN(26.40)	3 J	26.40
			UNKNOWN(29.50)	10 J	29.50
			UNKNOWN(32.30)	9 J	32.30
			UNKNOWN(34.80)	31 J	34.80
			UNKNOWN(37.00)	16 J	37.00
			UNKNOWN(24.10)	3 J	24.10
		10544500	SULFUR(27.00)	8 J	27.00

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR306018E					
			UNKNOWN(19.40)	2 J	19.40
			UNKNOWN(24.10)	3 J	24.10
		10544500	SULFUR(27.00)	14 J	27.00
			UNKNOWN(14.00)	2 J	14.00
			UNKNOWN(24.10)	2 J	24.10
		10544500	SULFUR(27.00)	12 J	27.00
			UNKNOWN ACID(26.20)	5 J	26.20
			UNKNOWN(24.10)	3 J	24.10
		501520	HYDROCINNAMIC ACID(17.30)	160 J	17.30
			UNKNOWN(24.10)	3 J	24.10
		501520	HYDROCINNAMIC ACID(17.30)	150 J	17.30
			POSS UNSAT. HYDROCARBON(24.10)	14 J	24.10
			POSS. PYRRODIAZOLE CPD(24.40)	2 J	24.40
			UNKNOWN(11.60)	2 J	11.60
			UNKNOWN(17.60)	2 J	17.60
			UNKNOWN(26.20)	2 J	26.20
		501520	HYDROCINNAMIC ACID(17.30)	150 J	17.30
BR310025E					
			ALKYL SUBSTITUTED PHENO(21.40)	300 J	21.40
			ALKYL SUBSTITUTED PHENO(22.30)	21 J	22.30
			ALKYL SUBSTITUTED PHENO(22.90)	35 J	22.90
			ALKYL SUBSTITUTED PHENO(23.00)	43 J	23.00
			ALKYL SUBSTITUTED PHENO(23.10)	29 J	23.10
			ALKYL SUBSTITUTED PHENO(23.50)	29 J	23.50
			ALKYL SUBSTITUTED PHENO(23.60)	49 J	23.60
			POSSIBLE PHENYL COMPOUN(25.10)	26 J	25.10
			POSSIBLE UNKNOWN ESTER(17.40)	20 J	17.40
			POSSIBLE UNKNOWN ESTER(17.80)	52 J	17.80
			UNKNOWN ARYL COMPOUND(15.70)	19 J	15.70
			UNKNOWN CARBOXYLIC ACID(26.40)	280 J	26.40
			UNKNOWN CARBOXYLIC ACID(28.70)	180 J	28.70
			UNKNOWN CHOLESTEROL COM(37.90)	140 J	37.90
			UNKNOWN CHOLESTEROL COM(38.00)	250 J	38.00
			UNKNOWN(19.60)	17 J	19.60
			UNKNOWN(23.10)	20 J	23.10
			UNKNOWN(27.10)	89 J	27.10
		516950	POSSIBLE EPICHOLESTANOL(37.70)	210 J	37.70
		78513	2-BUTOXYETHANOL PHOSPHA(31.40)	120 J	31.40
			ALKYL SUBSTITUTED PHENO(21.50)	160 J	21.50
			ALKYL SUBSTITUTED PHENO(22.30)	12 J	22.30
			ALKYL SUBSTITUTED PHENO(22.90)	24 J	22.90
			ALKYL SUBSTITUTED PHENO(23.10)	29 J	23.10
			ALKYL SUBSTITUTED PHENO(23.20)	23 J	23.20
			ALKYL SUBSTITUTED PHENO(23.50)	18 J	23.50
			ALKYL SUBSTITUTED PHENO(23.60)	19 J	23.60
			UNKNOWN CARBOXYLIC ACID(23.70)	35 J	23.70

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR310025E					
	BR310036E		UNKNOWN CARBOXYLIC ACID(26.40)	70 J	26.40
	BR310036E		UNKNOWN CARBOXYLIC ACID(28.80)	150 J	28.80
	BR310036E		UNKNOWN CHOLESTEROL COM(37.90)	150 J	37.90
	BR310036E		UNKNOWN CHOLESTEROL COM(38.10)	200 J	38.10
	BR310036E		UNKNOWN(11.80)	14 J	11.80
	BR310036E		UNKNOWN(17.50)	12 J	17.50
	BR310036E		UNKNOWN(17.80)	31 J	17.80
	BR310036E		UNKNOWN(27.10)	42 J	27.10
	BR310036E		UNKNOWN(28.50)	25 J	28.50
	BR310036E	123795	DIOCTYL ADIPATE(31.20)	28 J	31.20
	BR310036E	516950	POSSIBLE EPICHOLESTANOL(37.80)	160 J	37.80
	BR310036E	78513	2-BUTOXYETHANOL PHOSPHA(31.40)	59 J	31.40
BR311015B					
	BR311015B		ALICYCLIC ALCOHOL/STERO(35.10)	25 J	35.10
	BR311015B		ALICYCLIC ALCOHOL/STERO(35.30)	50 J	35.30
	BR311015B		ALICYCLIC ALCOHOL/STERO(36.70)	33 J	36.70
	BR311015B		ALICYCLIC ALCOHOL/STERO(36.90)	16 J	36.90
	BR311015B		ALICYCLIC ALCOHOL/STERO(37.70)	1600 J	37.70
	BR311015B		ALICYCLIC ALCOHOL/STERO(38.30)	40 J	38.30
	BR311015B		ALICYCLIC ALCOHOL/STERO(38.70)	110 J	38.70
	BR311015B		ALICYCLIC ALCOHOL/STERO(39.00)	62 J	39.00
	BR311015B		ALICYCLIC ALCOHOL/STERO(39.60)	450 J	39.60
	BR311015B		ALICYCLIC ALCOHOL/STERO(39.90)	110 J	39.90
	BR311015B		ALICYCLIC ALCOHOL/STERO(40.10)	26 J	40.10
	BR311015B		ALKOXY/HYDROXY/ALKYL CP(28.50)	420 J	28.50
	BR311015B		POSSIBLE KETONE(6.51)	2100 J	6.51
	BR311015B		UNKNOWN ACID(26.40)	1400 J	26.40
	BR311015B		UNKNOWN ACID(28.70)	1400 J	28.70
	BR311015B		UNKNOWN(25.40)	89 J	25.40
	BR311015B		UNKNOWN(28.40)	250 J	28.40
	BR311015B		UNKNOWN(37.40)	34 J	37.40
	BR311015B	10544500	SULFUR(27.10)	280 J	27.10
	BR311015B	123422	DIACETONE ALCOHOL(6.19)	14000 JAB	6.19
	BR313017B		ALICYCLIC ALCOHOL/STERO(37.80)	54000 J	37.80
	BR313017B		ALICYCLIC ALCOHOL/STERO(37.90)	16000 J	37.90
	BR313017B		ALICYCLIC ALCOHOL/STERO(39.40)	26000 J	39.40
	BR313017B		ALICYCLIC ALCOHOL/STERO(39.70)	17000 J	39.70
	BR313017B		ALKOXY/HYDROXY/ALKYL CP(9.79)	4300 J	9.79
	BR313017B		ALKOXY/HYDROXY/ALKYL CP(14.20)	398000 J	14.20
	BR313017B		ALKOXY/HYDROXY/ALKYL CP(30.60)	1900000 J	30.60
	BR313017B		ALKYL HYDROCARBON(7.69)	5400 J	7.69
	BR313017B		ALKYL HYDROCARBON(10.80)	5800 J	10.80
	BR313017B		ALKYL HYDROCARBON(11.60)	3800 J	11.60
	BR313017B		ALKYL HYDROCARBON(14.60)	39000 J	14.60
	BR313017B		ALKYL HYDROCARBON(15.90)	19000 J	15.90
	BR313017B		ALKYL HYDROCARBON(16.40)	22000 J	16.40

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015B					
	BR313017B		ALKYL HYDROCARBON(19.20)	23000 J	19.20
	BR313017B		UNKNOWN(27.90)	13000 J	27.90
	BR313017B		UNKNOWN(31.60)	7700 J	31.60
	BR313017B		UNKNOWN(37.50)	45000 J	37.50
	BR313017B	10544500	SULFUR(27.10)	36000 J	27.10
	BR313017B	108883	METHYL BENZENE(3.91)	15000 J	3.91
	BR313017B	123422	DIACETONE ALCOHOL(6.34)	14000 JAB	6.34
	BR315019B		ALICYCLIC ALCOHOL/STERO(37.60)	6600 J	37.60
	BR315019B		ALICYCLIC ALCOHOL/STERO(39.80)	1700 J	39.80
	BR315019B		ALKOXY/HYDROXY/ALKYL CP(30.40)	6200000 J	30.40
	BR315019B		ALKYL HYDROCARBON(12.50)	12000 J	12.50
	BR315019B		ALKYL HYDROCARBON(16.40)	23000 J	16.40
	BR315019B		ALKYL HYDROCARBON(18.20)	13000 J	18.20
	BR315019B		ALKYL HYDROCARBON(21.30)	31000 J	21.30
	BR315019B		ALKYL HYDROCARBON(22.80)	9700 J	22.80
	BR315019B		ALKYL HYDROCARBON(24.20)	42000 J	24.20
	BR315019B		ALKYL HYDROCARBON(24.90)	13000 J	24.90
	BR315019B		ALKYL HYDROCARBON(25.50)	9000 J	25.50
	BR315019B		UNKNOWN ACID(25.30)	13000 J	25.30
	BR315019B		UNKNOWN ACID(25.40)	13000 J	25.40
	BR315019B		UNKNOWN ACID(27.30)	510000 J	27.30
	BR315019B		UNKNOWN ACID(27.90)	12000 J	27.90
	BR315019B		UNKNOWN ACID(29.30)	210000 J	29.30
	BR315019B		UNKNOWN(24.30)	40000 J	24.30
	BR315019B		UNKNOWN(25.00)	22000 J	25.00
	BR315019B		UNKNOWN(31.00)	6600 J	31.00
	BR315019B	123422	DIACETONE ALCOHOL(6.08)	21000 JAB	6.08
	BR800062B		ALKYL HYDROCARBON(6.68)	380 JB	6.68
	BR800062B		ALKYL HYDROCARBON(6.89)	470 JB	6.89
	BR800062B		PROB ALDOL-CONDENSATION(5.00)	16000 JAB	5.00
	BR800062B		UNKNOWN(3.56)	860 JB	3.56
	BR800062B	123422	DIACETONE ALCOHOL(6.06)	1400 JAB	6.06
	BR800073B		ALKYL HYDROCARBON(6.70)	400 JB	6.70
	BR800073B		ALKYL HYDROCARBON(6.90)	490 JB	6.90
	BR800073B		PROB ALDOL-CONDENSATION(5.06)	14000 JAB	5.06
	BR800073B		UNKNOWN(3.59)	820 JB	3.59
	BR800073B	123422	DIACETONE ALCOHOL(6.11)	1400 JAB	6.11
	BR800084B		ALKYL HYDROCARBON(6.70)	370 JB	6.70
	BR800084B		ALKYL HYDROCARBON(6.90)	450 JB	6.90
	BR800084B		PROB ALDOL-CONDENSATION(5.06)	13000 JAB	5.06
	BR800084B		UNKNOWN(3.59)	770 JB	3.59
	BR800084B	123422	DIACETONE ALCOHOL(6.11)	1400 JAB	6.11
	BR800095B		ALKYL HYDROCARBON(6.68)	430 JB	6.68
	BR800095B		ALKYL HYDROCARBON(6.88)	520 JB	6.88
	BR800095B		PROB ALDOL-CONDENSATION(4.99)	16000 JAB	4.99
	BR800095B		UNKNOWN(3.56)	820 JB	3.56
	BR800095B	123422	DIACETONE ALCOHOL(6.05)	1400 JAB	6.05
	BR800108B		ALKYL HYDROCARBON(6.73)	350 JB	6.73

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015B					
			ALKYL HYDROCARBON(6.92)	440 JB	6.92
			PROB ALDOL-CONDENSATION(5.03)	11000 JAB	5.03
			UNKNOWN(3.59)	810 JB	3.59
	123422		DIACETONE ALCOHOL(6.14)	1400 JAB	6.14
			ALICYCLIC ALCOHOL/STERO(35.30)	7800 J	35.30
			ALICYCLIC ALCOHOL/STERO(36.80)	10000 J	36.80
			ALICYCLIC ALCOHOL/STERO(37.70)	66000 J	37.70
			ALICYCLIC ALCOHOL/STERO(38.10)	35000 J	38.10
			ALICYCLIC ALCOHOL/STERO(39.90)	16000 J	39.90
			ALICYCLIC ALCOHOL/STERO(38.00)	56000 J	38.00
			ALKOXY/HYDROXY/ALKYL CP(10.90)	5900 J	10.90
			ALKOXY/HYDROXY/ALKYL CP(30.00)	4700000 J	30.00
			ALKYL HYDROCARBON(10.80)	11000 J	10.80
			ALKYL HYDROCARBON(14.80)	14000 J	14.80
			ALKYL HYDROCARBON(15.90)	16000 J	15.90
			ALKYL HYDROCARBON(19.20)	9900 J	19.20
			ALKYL HYDROCARBON(22.90)	3400 J	22.90
			ALKYL HYDROCARBON(24.30)	2700 J	24.30
			POSSIBLE KETONE(6.53)	9400 J	6.53
			UNKNOWN ACID(26.40)	5100 J	26.40
			UNKNOWN(27.00)	3500 J	27.00
			UNKNOWN(28.00)	3900 J	28.00
	10544500		SULFUR(27.20)	8300 J	27.20
	123422		DIACETONE ALCOHOL(6.23)	78000 JAB	6.23
			ALICYCLIC ALCOHOL/STERO(37.60)	44000 J	37.60
			ALICYCLIC ALCOHOL/STERO(38.00)	29000 J	38.00
			ALICYCLIC ALCOHOL/STERO(39.90)	13000 J	39.90
			ALKOXY/HYDROXY/ALKYL CP(30.00)	4400000 J	30.00
			ALKYL HYDROCARBON(10.80)	23000 J	10.80
			ALKYL HYDROCARBON(13.60)	10000 J	13.60
			ALKYL HYDROCARBON(14.80)	21000 J	14.80
			ALKYL HYDROCARBON(15.90)	22000 J	15.90
			ALKYL HYDROCARBON(19.20)	18000 J	19.20
			ALKYL HYDROCARBON(22.10)	12000 J	22.10
			ALKYL HYDROCARBON(22.90)	21000 J	22.90
			ALKYL HYDROCARBON(24.30)	18000 J	24.30
			DIMETHYL NAPHTHALENE(18.20)	12000 J	18.20
			POSSIBLE KETONE(6.53)	9800 J	6.53
			UNKNOWN(10.90)	8400 J	10.90
			UNKNOWN(28.00)	18000 J	28.00
			UNKNOWN(38.10)	13000 J	38.10
			UNKNOWN(39.60)	15000 J	39.60
	123422		DIACETONE ALCOHOL*(6.24)	93000 JAB	6.24
			ALICYCLIC ALCOHOL/STERO(39.60)	22000 J	39.60
			ALICYCLIC ALCOHOL/STERO(40.00)	12000 J	40.00
			ALKOXY/HYDROXY/ALKYL CP(17.10)	740000 J	17.10
			ALKOXY/HYDROXY/ALKYL CP(30.00)	1700000 J	30.00
			ALKYL HYDROCARBON(12.50)	21000 J	12.50

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015B					
			ALKYL HYDROCARBON(14.60)	15000 J	14.60
			ALKYL HYDROCARBON(14.80)	14000 J	14.80
			ALKYL HYDROCARBON(15.90)	11000 J	15.90
			ALKYL HYDROCARBON(16.40)	11000 J	16.40
			ALKYL HYDROCARBON(17.80)	4800 J	17.80
			ALKYL HYDROCARBON(22.90)	2400 J	22.90
			DIMETHYLNAPHTHALENE(18.20)	4700 J	18.20
			POSSIBLE ALKYL HYDROCAR(18.90)	2800 J	18.90
			UNKNOWN(26.60)	3600 J	26.60
			UNKNOWN(27.10)	5900 J	27.10
			UNKNOWN(28.00)	7700 J	28.00
			UNKNOWN(31.70)	4600 J	31.70
			UNKNOWN(37.70)	68000 J	37.70
			SULFUR(27.30)	3100 J	27.30
	10544500		DIACETONE ALCOHOL(6.20)	19000 JAB	6.20
	123422		ALICYCLIC ALCOHOL/STERO(37.60)	94000 J	37.60
			ALICYCLIC ALCOHOL/STERO(38.00)	93000 J	38.00
			ALICYCLIC ALCOHOL/STERO(38.00)	120000 J	38.00
			ALICYCLIC ALCOHOL/STERO(38.30)	26000 J	38.30
			ALICYCLIC ALCOHOL/STERO(38.90)	14000 J	38.90
			ALICYCLIC ALCOHOL/STERO(39.90)	34000 J	39.90
			ALICYCLIC ALCOHOL/STERO(40.10)	14000 J	40.10
			ALKYL HYDROCARBON(19.20)	6700 J	19.20
			ALKYL HYDROCARBON(22.00)	5900 J	22.00
			ALKYL HYDROCARBON(22.90)	17000 J	22.90
			ALKYL HYDROCARBON(24.30)	11000 J	24.30
			PROBABLE PHENYL COMPOUN(23.60)	6500 J	23.60
			UNKNOWN ACID(26.40)	27000 J	26.40
			UNKNOWN ACID(28.70)	10000 J	28.70
			UNKNOWN HYDROCARBON(30.00)	760000 J	30.00
			UNKNOWN(39.40)	15000 J	39.40
			UNKNOWN(39.50)	33000 J	39.50
	104405		4-NONYLPHENOL(23.00)	10000 J	23.00
	10544500		SULFUR(27.10)	7900 J	27.10
	123422		DIACETONE ALCOHOL(6.05)	170000 JAB	6.05
			ALICYCLIC ALCOHOL/STERO(37.60)	110000 J	37.60
			ALICYCLIC ALCOHOL/STERO(38.00)	110000 J	38.00
			ALICYCLIC ALCOHOL/STERO(38.00)	140000 J	38.00
			ALICYCLIC ALCOHOL/STERO(38.30)	20000 J	38.30
			ALICYCLIC ALCOHOL/STERO(39.50)	51000 J	39.50
			ALICYCLIC ALCOHOL/STERO(39.90)	34000 J	39.90
			ALKOXY/HYDROXY/ALKYL CP(30.00)	6000000 J	30.00
			ALKYL HYDROCARBON(12.40)	20000 J	12.40
			ALKYL HYDROCARBON(15.90)	19000 J	15.90
			ALKYL HYDROCARBON(19.20)	20000 J	19.20
			ALKYL HYDROCARBON(22.90)	21000 J	22.90
			ALKYL HYDROCARBON(24.30)	11000 J	24.30
			UNKNOWN ACID(26.40)	18000 J	26.40

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015B					
			UNKNOWN ACID(26.50)	42000 J	26.50
			UNKNOWN ACID(28.70)	23000 J	28.70
			UNKNOWN(23.10)	8100 J	23.10
			UNKNOWN(23.40)	8300 J	23.40
		104405	4-NONYLPHENOL(23.00)	10000 J	23.00
		10544500	SULFUR(27.10)	9600 J	27.10
		123422	DIACETONE ALCOHOL(6.13)	110000 JAB	6.13
			ALICYCLIC ALCOHOL/STERO(37.60)	64000 J	37.60
			ALICYCLIC ALCOHOL/STERO(37.90)	82000 J	37.90
			ALICYCLIC ALCOHOL/STERO(38.30)	22000 J	38.30
			ALICYCLIC ALCOHOL/STERO(39.90)	29000 J	39.90
			ALKOXY/HYDROXY/ALKYL CP(29.90)	7200000 J	29.90
			ALKYL HYDROCARBON(12.40)	14000 J	12.40
			ALKYL HYDROCARBON(14.50)	16000 J	14.50
			ALKYL HYDROCARBON(15.90)	14000 J	15.90
			ALKYL HYDROCARBON(17.70)	17000 J	17.70
			ALKYL HYDROCARBON(19.20)	18000 J	19.20
			ALKYL HYDROCARBON(22.00)	16000 J	22.00
			ALKYL HYDROCARBON(22.90)	47000 J	22.90
			ALKYL HYDROCARBON(24.30)	22000 J	24.30
			POSSIBLE ARYL HYDROCARB(23.40)	16000 J	23.40
			POSSIBLE KETONE(6.48)	23000 J	6.48
			UNKNOWN ACID(26.30)	43000 J	26.30
			UNKNOWN(23.10)	19000 J	23.10
		104405	4-NONYLPHENOL(23.00)	20000 J	23.00
		10544500	SULFUR(27.10)	33000 J	27.10
		123422	DIACETONE ALCOHOL(6.12)	140000 JAB	6.12
			ALICYCLIC ALCOHOL/STERO(37.60)	120000 J	37.60
			ALICYCLIC ALCOHOL/STERO(37.90)	180000 J	37.90
			ALICYCLIC ALCOHOL/STERO(38.00)	68000 J	38.00
			ALICYCLIC ALCOHOL/STERO(38.30)	21000 J	38.30
			ALICYCLIC ALCOHOL/STERO(39.80)	34000 J	39.80
			ALKOXY/HYDROXY/ALKYL CP(30.00)	7500000 J	30.00
			ALKYL HYDROCARBON(12.40)	21000 J	12.40
			ALKYL HYDROCARBON(14.50)	22000 J	14.50
			ALKYL HYDROCARBON(14.80)	17000 J	14.80
			ALKYL HYDROCARBON(15.90)	18000 J	15.90
			ALKYL HYDROCARBON(19.20)	15000 J	19.20
			ALKYL HYDROCARBON(24.30)	21000 J	24.30
			POSSIBLE KETONE(6.49)	32000 J	6.49
			POSSIBLE PHENYL COMPOUN(22.80)	33000 J	22.80
			UNKNOWN ACID(26.30)	20000 J	26.30
			UNKNOWN(23.10)	16000 J	23.10
			UNKNOWN(23.40)	13000 J	23.40
		104405	4-NONYLPHENOL(23.00)	17000 J	23.00
		10544500	SULFUR(27.10)	41000 J	27.10
		123422	DIACETONE ALCOHOL(6.13)	180000 JAB	6.13
			ALICYCLIC ALCOHOL/STERO(37.80)	8300 J	37.80

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015B					
			ALKOXY/HYDROXY/ALKYL CP(30.00)	6900000 J	30.00
			ALKYL HYDROCARBON(10.80)	830 J	10.80
			ALKYL HYDROCARBON(11.00)	570 J	11.00
			ALKYL HYDROCARBON(11.40)	680 J	11.40
			ALKYL HYDROCARBON(11.70)	520 J	11.70
			ALKYL HYDROCARBON(14.80)	9100 J	14.80
			ALKYL HYDROCARBON(15.90)	10000 J	15.90
			ALKYL HYDROCARBON(17.70)	9700 J	17.70
			ARYL HYDROCARBON(8.18)	510 J	8.18
			ARYL HYDROCARBON(8.94)	1300 J	8.94
			ARYL HYDROCARBON(9.25)	7500 J	9.25
			ARYL HYDROCARBON(9.40)	3400 J	9.40
			ARYL HYDROCARBON(9.64)	2600 J	9.64
			ARYL HYDROCARBON(10.60)	3100 J	10.60
			ARYL HYDROCARBON(10.90)	940 J	10.90
			PHENYL HYDROCARBON(20.00)	8200 J	20.00
			PHENYL HYDROCARBON(22.90)	15000 J	22.90
			SULFUR(27.20)	37000 J	27.20
		10544500	DIACETONE ALCOHOL(6.10)	1800 JAB	6.10
		123422	ALKYL HYDROCARBON(6.66)	910 JB	6.66
			ALKYL HYDROCARBON(6.86)	850 JB	6.86
			POSSIBLE ALKYL HYDROCAR(6.42)	370 J	6.42
			POSSIBLE KETONE(8.87)	130 J	8.87
			PROB ALDOL-CONDENSATION(4.82)	8800 JAB	4.82
			UNKNOWN KETONE(6.45)	1900 J	6.45
			UNKNOWN PHTHALATE ESTER(25.00)	160 J	25.00
			UNKNOWN(3.54)	420 JB	3.54
			UNKNOWN(5.32)	380 J	5.32
			UNKNOWN(7.97)	110 J	7.97
			UNKNOWN(8.37)	410 J	8.37
			UNKNOWN(11.30)	900 J	11.30
			UNKNOWN(42.50)	540 J	42.50
		123422	DIACETONE ALCOHOL(6.07)	13000 JAB	6.07
			ALKYL HYDROCARBON(6.69)	1000 JB	6.69
			ALKYL HYDROCARBON(6.89)	960 JB	6.89
			POSS ALKYL HYDROCARBON(6.45)	440 J	6.45
			POSSIBLE UNSAT HYDROCAR(4.98)	150 J	4.98
			POSSIBLE UNSAT HYDROCAR(24.10)	100 J	24.10
			PROB ALDOL-CONDENSATION(4.85)	8700 JAB	4.85
			UNKNOWN KETONE(6.50)	2100 J	6.50
			UNKNOWN PHTHALATE ESTER(25.00)	430 J	25.00
			UNKNOWN(3.55)	450 JB	3.55
			UNKNOWN(5.33)	330 J	5.33
			UNKNOWN(6.14)	110 J	6.14
			UNKNOWN(8.00)	88 J	8.00
			UNKNOWN(8.41)	220 J	8.41
			UNKNOWN(8.88)	180 J	8.88
			UNKNOWN(10.00)	440 J	10.00

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015B					
			UNKNOWN(11.30)	1100 J	11.30
			UNKNOWN(21.30)	200 J	21.30
			UNKNOWN(25.70)	95 J	25.70
			UNKNOWN(42.60)	860 J	42.60
		123422	DIACETONE ALCOHOL(6.11)	12000 JAB	6.11
			ALKYL HYDROCARBON(6.70)	1200 JB	6.70
			ALKYL HYDROCARBON(6.90)	1100 JB	6.90
			POSSIBLE KETONE(5.35)	410 J	5.35
			POSSIBLE UNSAT HYDROCAR(5.00)	200 J	5.00
			POSSIBLE UNSAT HYDROCAR(24.10)	320 J	24.10
			PROB ALDOL-CONDENSATION(4.87)	8500 JAB	4.87
			UNKNOWN KETONE(6.50)	2700 J	6.50
			UNKNOWN PHTHALATE ESTER(24.90)	430 J	24.90
			UNKNOWN(3.59)	390 JB	3.59
			UNKNOWN(8.38)	510 J	8.38
			UNKNOWN(10.00)	520 J	10.00
			UNKNOWN(11.20)	840 J	11.20
			UNKNOWN(17.60)	110 J	17.60
			UNKNOWN(21.20)	190 J	21.20
			UNKNOWN(26.90)	120 J	26.90
			UNKNOWN(37.30)	140 J	37.30
			UNKNOWN(39.00)	540 J	39.00
			UNKNOWN(39.60)	120 J	39.60
			UNKNOWN(42.60)	2900 J	42.60
		123422	DIACETONE ALCOHOL(6.13)	15000 JAB	6.13
			ALKYL HYDROCARBON(6.72)	350 J	6.72
			ALKYL HYDROCARBON(6.91)	450 J	6.91
			PROB ALDOL-CONDENSATION(5.08)	16000 JA	5.08
			UNKNOWN(3.63)	890 J	3.63
		123422	DIACETONE ALCOHOL(6.10)	1300 JA	6.10
BR503017B					
			ALIPHATIC HYDROCARBON(6.74)	520 JB	6.74
			ALIPHATIC HYDROCARBON(6.95)	650 JB	6.95
			POSS ALIPHATIC HYDROCAR(6.49)	160 JB	6.49
			POSS AROMATIC AMINE(28.40)	300 J	28.40
			PROB ALDOL-CONDENSATION(5.18)	15000 JAB	5.18
			UNKNOWN(3.65)	960 JB	3.65
			UNKNOWN(8.41)	190 J	8.41
			UNKNOWN(36.30)	310 J	36.30
		10544500	SULFUR(27.10)	750 J	27.10
		123422	DIACETONE ALCOHOL(6.19)	1500 JAB	6.19
		123795	DIOCTYL ADIPATE(31.20)	1500 JB	31.20
			ALIPHATIC HYDROCARBON(6.73)	620 JB	6.73
			ALIPHATIC HYDROCARBON(6.95)	810 JB	6.95
			POSS ALIPHATIC HYDROCAR(6.50)	220 JB	6.50
			PROB ALDOL-CONDENSATION(5.13)	17000 JAB	5.13

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR503017B					
			UNKNOWN(3.64)	990 JB	3.64
			UNKNOWN(8.41)	170 J	8.41
		10544500	SULFUR(27.20)	1500 J	27.20
		123422	DIACETONE ALCOHOL(6.15)	1500 JAB	6.15
		123795	DIOCTYL ADIPATE(31.20)	1500 JB	31.20
			ALIPHATIC HYDROCARBON(6.70)	910 J	6.70
			ALIPHATIC HYDROCARBON(6.86)	240 JB	6.86
			ALIPHATIC HYDROCARBON(6.91)	660 JB	6.91
			ARYL HYDROCARBON(9.29)	230 J	9.29
			PROB ALDOL-CONDENSATION(5.04)	28000 JAB	5.04
			UNKNOWN ACID(27.00)	69 J	27.00
			UNKNOWN(3.64)	1400 JB	3.64
			UNKNOWN(5.82)	170 J	5.82
			UNKNOWN(8.59)	520 J	8.59
			UNKNOWN(9.00)	300 J	9.00
			UNKNOWN(24.40)	81 J	24.40
		10544500	SULFUR(27.10)	1500 J	27.10
		123422	DIACETONE ALCOHOL(6.50)	13000 JAB	6.50
		123795	DIOCTYL ADIPATE(31.20)	1500 JB	31.20
			ALIPHATIC HYDROCARBON(5.91)	260 J	5.91
			ALIPHATIC HYDROCARBON(6.74)	3100 JB	6.74
			ALIPHATIC HYDROCARBON(6.93)	2900 JB	6.93
			POSS ALIPHATIC HYDROCAR(6.49)	1300 JB	6.49
			POSS UNSAT HYDROCARBON(5.03)	170 J	5.03
			PROB ALDOL-CONDENSATION(4.93)	21000 JAB	4.93
			UNKNOWN ACID(27.00)	150 J	27.00
			UNKNOWN KETONE(6.56)	4300 J	6.56
			UNKNOWN(3.60)	950 JB	3.60
			UNKNOWN(5.41)	730 J	5.41
			UNKNOWN(8.01)	170 J	8.01
			UNKNOWN(8.40)	570 J	8.40
			UNKNOWN(8.89)	410 J	8.89
			UNKNOWN(24.40)	160 J	24.40
		123422	DIACETONE ALCOHOL(6.15)	23000 JAB	6.15
		123795	DIOCTYL ADIPATE(31.20)	1500 JB	31.20
			ALIPHATIC HYDROCARBON(6.75)	410 JB	6.75
			ALIPHATIC HYDROCARBON(6.94)	500 JB	6.94
			POSS ALIPHATIC HYDROCAR(6.50)	150 JB	6.50
			PROB ALDOL-CONDENSATION(5.13)	14000 JAB	5.13
			UNKNOWN(3.65)	780 JB	3.65
		123422	DIACETONE ALCOHOL(6.17)	1500 JAB	6.17
		123795	DIOCTYL ADIPATE(31.20)	1500 JB	31.20
			ALIPHATIC HYDROCARBON(6.57)	140 J	6.57
			ALIPHATIC HYDROCARBON(6.76)	660 JB	6.76
			ALIPHATIC HYDROCARBON(6.95)	770 JB	6.95
			POSS ALIPHATIC HYDROCAR(6.51)	250 JB	6.51
			PROB ALDOL-CONDENSATION(5.17)	17000 JAB	5.17
			UNKNOWN(3.67)	1000 JB	3.67

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR503017B					
	BR504029B	123422	DIACETONE ALCOHOL(6.17)	1400 JAB	6.17
	BR504029B	123795	DIOCTYL ADIPATE(31.20)	1400 JB	31.20
	BR504030B		DIMETHYL NAPHTHALENE(18.30)	1500 J	18.30
	BR504030B		DIMETHYL NAPHTHALENE(18.50)	2100 J	18.50
	BR504030B		DIMETHYL NAPHTHALENE(18.80)	800 J	18.80
	BR504030B		METHYL FLUORENE(22.80)	310 J	22.80
	BR504030B		METHYL FLUORENE(22.90)	220 J	22.90
	BR504030B		POSS. ARYLTHIOLE COMPOU(23.60)	240 J	23.60
	BR504030B		PROB ALDOL-CONDENSATION(4.96)	27000 JA	4.96
	BR504030B		PROB ALDOL-CONDENSATION(5.02)	4900 JAB	5.02
	BR504030B		TRIMETHYL NAPHTHALENE(20.20)	620 J	20.20
	BR504030B		TRIMETHYL NAPHTHALENE(20.80)	760 J	20.80
	BR504030B		UNKNOWN PNA HYDROCARBON(25.50)	530 J	25.50
	BR504030B		UNKNOWN PNA HYDROCARBON(25.60)	310 J	25.60
	BR504030B		UNKNOWN PNA HYDROCARBON(25.80)	220 J	25.80
	BR504030B		UNKNOWN PNA HYDROCARBON(25.90)	330 J	25.90
	BR504030B		UNKNOWN PNA HYDROCARBON(27.30)	210 J	27.30
	BR504030B		UNKNOWN PNA HYDROCARBON(29.30)	1100 J	29.30
	BR504030B		UNKNOWN(21.40)	840 J	21.40
	BR504030B	123422	DIACETONE ALCOHOL(6.11)	4000 JAB	6.11
	BR504030B	123795	DIOCTYL ADIPATE(31.20)	1300 JB	31.20
	BR504030B	90120	1-METHYL NAPHTHALENE(16.60)	6100 J	16.60
	BR506010B		ALIPHATIC HYDROCARBON(5.95)	150 J	5.95
	BR506010B		ALIPHATIC HYDROCARBON(6.74)	2600 JB	6.74
	BR506010B		ALIPHATIC HYDROCARBON(6.94)	2300 JB	6.94
	BR506010B		POSS ALIPHATIC HYDROCAR(6.50)	1100 JB	6.50
	BR506010B		POSS UNSAT HYDROCARBON(24.10)	410 J	24.10
	BR506010B		PROB ALDOL-CONDENSATION(4.96)	18000 JAB	4.96
	BR506010B		UNKNOWN ACID(24.40)	270 J	24.40
	BR506010B		UNKNOWN ACID(26.90)	310 J	26.90
	BR506010B		UNKNOWN ACID(31.20)	18000 JB	31.20
	BR506010B		UNKNOWN KETONE(6.56)	3800 J	6.56
	BR506010B		UNKNOWN(3.68)	900 JB	3.68
	BR506010B		UNKNOWN(5.46)	340 J	5.46
	BR506010B		UNKNOWN(8.02)	130 J	8.02
	BR506010B		UNKNOWN(8.41)	590 J	8.41
	BR506010B		UNKNOWN(8.88)	570 J	8.88
	BR506010B		UNKNOWN(10.00)	530 J	10.00
	BR506010B	123422	DIACETONE ALCOHOL(6.22)	22000 JAB	6.22
	BR506010B	123795	DIOCTYL ADIPATE(42.60)	170 J	42.60
	SBK08197		ALIPHATIC HYDROCARBON(6.80)	570 J	6.80
	SBK08197		ALIPHATIC HYDROCARBON(6.99)	720 J	6.99
	SBK08197		POSS ALIPHATIC HYDROCAR(6.55)	170 J	6.55
	SBK08197		PROB ALDOL-CONDENSATION(5.22)	17000 JA	5.22
	SBK08197		UNKNOWN(3.75)	980 J	3.75
	SBK08197	123422	DIACETONE ALCOHOL(6.21)	1300 JA	6.21
	SBK08197	123795	DIOCTYL ADIPATE(31.20)	1300 J	31.20

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR806013B					
			ALDOL-CONDENSATION PROD(4.84)	1100 JA	4.84
			ALICYCLIC ALCOHOL/STERO(35.30)	1300 JB	35.30
			ALICYCLIC ALCOHOL/STERO(36.80)	940 JB	36.80
			ALICYCLIC ALCOHOL/STERO(37.00)	520 JB	37.00
			ALICYCLIC ALCOHOL/STERO(37.70)	1800 JB	37.70
			ALICYCLIC ALCOHOL/STERO(37.90)	4300 JB	37.90
			ALICYCLIC ALCOHOL/STERO(39.90)	620 JB	39.90
			ALKYL HYDROCARBON(6.68)	1800 JB	6.68
			ALKYL HYDROCARBON(6.87)	1400 JB	6.87
			UNKNOWN ALKENE/ETHER/AL(36.50)	140000 J	36.50
			UNKNOWN KETONE(6.51)	5200 JB	6.51
			UNKNOWN KETONE(8.12)	370 J	8.12
			UNKNOWN(5.67)	490 J	5.67
			UNKNOWN(8.96)	810 J	8.96
			UNKNOWN(26.10)	250 J	26.10
			UNKNOWN(41.60)	300 J	41.60
	123422		DIACETONE ALCOHOL (6.37)	28000 JAB	6.37
	123795		DIOCTYL ADIPATE(31.20)	1800 JB	31.20
	541059		HEXAMETHYLCYCLOTRISILOX(5.72)	1100 J	5.72
			ALDOL-CONDENSATION PROD(4.79)	150 JA	4.79
			ALKYL HYDROCARBON(6.64)	460 JB	6.64
			ALKYL HYDROCARBON(6.85)	360 J	6.85
			PHENYL HYDROCARBON(20.00)	380 J	20.00
			UNKNOWN ALKENE/ETHER/AL(18.50)	150 J	18.50
			UNKNOWN ALKENE/ETHER/AL(36.50)	3400000 J	36.50
			UNKNOWN KETONE(6.45)	1500 J	6.45
			UNKNOWN KETONE(18.20)	150 J	18.20
			UNKNOWN(6.39)	160 J	6.39
			UNKNOWN(8.36)	170 J	8.36
			UNKNOWN(8.89)	250 J	8.89
			UNKNOWN(9.06)	160 J	9.06
			UNKNOWN(11.60)	120 J	11.60
			UNKNOWN(18.70)	120 J	18.70
			UNKNOWN(19.20)	150 J	19.20
			UNKNOWN(22.40)	260 J	22.40
			UNKNOWN(26.10)	890 J	26.10
	123422		DIACETONE ALCOHOL (6.01)	9500 JAB	6.01
	123795		DIOCTYL ADIPATE(31.20)	1900 JB	31.20
			ALKYL HYDROCARBON(6.47)	1900 J	6.47
			ALKYL HYDROCARBON(6.61)	750 JB	6.61
			ALKYL HYDROCARBON(6.70)	2500 JB	6.70
			ALKYL HYDROCARBON(6.91)	2400 JB	6.91
			UNKNOWN ALKENE/ETHER/AL(37.0)	430000 J	37.00
			UNKNOWN KETONE(6.54)	5700 JB	6.54
			UNKNOWN(3.71)	250 J	3.71
			UNKNOWN(5.41)	1200 JB	5.41
			UNKNOWN(8.04)	410 J	8.04
			UNKNOWN(8.38)	980 J	8.38

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR806013B					
			UNKNOWN(8.89)	360 J	8.89
			UNKNOWN(9.59)	250 J	9.59
		123422	DIACETONE ALCOHOL(6.22)	34000 JAB	6.22
		123795	DIOCTYL ADIPATE *(31.20)	1800 J	31.20
		541059	HEXAMETHYLCYCLOTRISILOX(5.74)	320 J	5.74
			ALKYL HYDROCARBON(6.51)	620 J	6.51
			ALKYL HYDROCARBON(6.75)	1500 JB	6.75
			ALKYL HYDROCARBON(6.94)	1300 JB	6.94
			UNKNOWN ALKENE/ETHER/AL(25.30)	9 J	25.30
			UNKNOWN KETONE(6.59)	3400 JB	6.59
			UNKNOWN PHTHALATE ESTER(36.10)	95 J	36.10
			UNKNOWN PHTHALATE ESTER(37.70)	40 J	37.70
			UNKNOWN(5.47)	600 JB	5.47
			UNKNOWN(8.06)	210 J	8.06
			UNKNOWN(8.40)	610 J	8.40
			UNKNOWN(8.91)	250 J	8.91
		123422	DIACETONE ALCOHOL(6.28)	21000 JAB	6.28
		123795	DIOCTYL ADIPATE(31.20)	1800 JB	31.20
			ALKYL HYDROCARBON(4.94)	280 J	4.94
			ALKYL HYDROCARBON(6.42)	700 J	6.42
			ALKYL HYDROCARBON(6.67)	1300 J	6.67
			ALKYL HYDROCARBON(6.87)	1100 J	6.87
			UNKNOWN ALKENE/ETHER/AL(25.40)	390 J	25.40
			UNKNOWN KETONE(5.35)	600 J	5.35
			UNKNOWN KETONE(6.50)	2900 JB	6.50
			UNKNOWN PHTHALATE ESTER(26.10)	130 J	26.10
			UNKNOWN PHTHALATE ESTER(37.70)	23 J	37.70
			UNKNOWN(8.01)	230 J	8.01
			UNKNOWN(8.35)	620 J	8.35
			UNKNOWN(8.88)	250 J	8.88
			UNKNOWN(31.90)	34 J	31.90
			UNKNOWN(37.00)	24 J	37.00
		123422	DIACETONE ALCOHOL (6.12)	20000 JAB	6.12
		123795	DIOCTYL ADIPATE(31.10)	1400 JB	31.10
			ALKYL HYDROCARBON(5.01)	140 J	5.01
			ALKYL HYDROCARBON(5.90)	150 J	5.90
			ALKYL HYDROCARBON(6.48)	900 J	6.48
			ALKYL HYDROCARBON(6.62)	200 JB	6.62
			ALKYL HYDROCARBON(6.71)	1900 JB	6.71
			ALKYL HYDROCARBON(6.87)	420 JB	6.87
			ALKYL HYDROCARBON(6.92)	1400 JB	6.92
			UNKNOWN ALKENE/ETHER/AL(37.3)	56000 J	37.30
			UNKNOWN KETONE(6.54)	4000 JB	6.54
			UNKNOWN(5.42)	600 JB	5.42
			UNKNOWN(8.05)	270 J	8.05
			UNKNOWN(8.39)	870 J	8.39
			UNKNOWN(8.91)	380 J	8.91
			UNKNOWN(35.20)	28 J	35.20

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR806013B					
			UNKNOWN(36.60)	94 J	36.60
			UNKNOWN(36.90)	33 J	36.90
		123422	DIACETONE ALCOHOL(6.21)	25000 JAB	6.21
		541059	HEXAMETHYLCYCLOTRISILOX(5.76)	160 J	5.76
			ALDOL-CONDENSATION PROD(4.86)	140 JA	4.86
			ALKYL HYDROCARBON(6.67)	1400 JB	6.67
			ALKYL HYDROCARBON(6.88)	1500 JB	6.88
			UNKNOWN ALKENE/ETHER/AL(36.30)	46000 J	36.30
			UNKNOWN KETONE(8.25)	340 J	8.25
			UNKNOWN PHTHALATE ESTER(24.90)	200 J	24.90
			UNKNOWN(5.88)	130 J	5.88
			UNKNOWN(5.95)	380 J	5.95
			UNKNOWN(8.57)	930 J	8.57
			UNKNOWN(9.04)	270 J	9.04
			UNKNOWN(35.40)	45 J	35.40
			UNKNOWN(36.00)	20 J	36.00
			UNKNOWN(37.60)	59 J	37.60
			UNKNOWN(40.00)	30 J	40.00
			UNKNOWN(41.30)	28 J	41.30
			UNKNOWN(42.50)	32 J	42.50
		123422	DIACETONE ALCOHOL (6.55)	39000 JAB	6.55
		123795	DIOCTYL ADIPATE(31.10)	1500 JB	31.10
			ALKYL HYDROCARBON(6.46)	390 J	6.46
			ALKYL HYDROCARBON(6.70)	890 JB	6.70
			ALKYL HYDROCARBON(6.81)	95 JB	6.81
			ALKYL HYDROCARBON(6.90)	810 JB	6.90
			UNKNOWN ALKENE/ETHER/AL(35.7)	110000 J	35.70
			UNKNOWN PHTHALATE ESTER(31.10)	1400 J	31.10
			UNKNOWN(5.40)	480 JB	5.40
			UNKNOWN(8.05)	150 J	8.05
			UNKNOWN(8.39)	490 J	8.39
			UNKNOWN(8.90)	200 J	8.90
			UNKNOWN(35.00)	85 J	35.00
			UNKOWN KETONE(6.54)	2100 JB	6.54
		123795	DIACETONE ALCOHOL(6.21)	15000 JAB	6.21
			ALDOL-CONDENSATION PROD(4.74)	660 JA	4.74
			ALKYL HYDROCARBON (6.86)	2200 J	6.86
			ALKYL HYDROCARBON(5.83)	280 J	5.83
			ALKYL HYDROCARBON(6.42)	1400 J	6.42
			ALKYL HYDROCARBON(6.66)	2800 JB	6.66
			HYDROXY AROMATIC HYDROC(18.40)	120 J	18.40
			HYDROXY AROMATIC HYDROC(19.00)	120 J	19.00
			UNKNOWN ALKENE/ETHER/AL(4.90)	190 J	4.90
			UNKNOWN ALKENE/ETHER/AL(22.10)	210 J	22.10
			UNKNOWN ALKENE/ETHER/AL(30.60)	110000 J	30.60
			UNKNOWN KETONE(6.48)	4600 J	6.48
			UNKNOWN KETONE(9.06)	300 J	9.06
			UNKNOWN(5.33)	890 J	5.33

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR806013B					
			UNKNOWN(8.36)	970 J	8.36
			UNKNOWN(8.88)	290 J	8.88
		123422	DIACETONE ALCOHOL(6.16)	26000 JAB	6.16
		123795	DIOCTYL ADIPATE(31.20)	1400 JB	31.20
			ALDOL-CONDENSATION PROD(4.72)	610 JA	4.72
			ALKYL HYDROCARBON(5.79)	280 J	5.79
			ALKYL HYDROCARBON(6.39)	1400 J	6.39
			ALKYL HYDROCARBON(6.65)	3300 JB	6.65
			ALKYL HYDROCARBON(6.85)	3000 J	6.85
			CHLORINATED HYDROCARBON(7.84)	130 J	7.84
			HYDROXY AROMATIC HYDROC(18.40)	180 J	18.40
			HYDROXY AROMATIC HYDROC(19.00)	240 J	19.00
			UNKNOWN *(30.50)	1400000 J	30.50
			UNKNOWN ALKENE/ETHER/AL(4.86)	170 J	4.86
			UNKNOWN KETONE(6.45)	5100 J	6.45
			UNKNOWN(5.31)	840 J	5.31
			UNKNOWN(8.00)	250 J	8.00
			UNKNOWN(8.34)	850 J	8.34
			UNKNOWN(8.88)	250 J	8.88
			UNKNOWN(20.50)	170 J	20.50
			UNKNOWN(35.30)	1500 J	35.30
			UNKNOWN(38.10)	1100 J	38.10
		123422	DIACETONE ALCOHOL (6.09)	23000 JAB	6.09
			ALKYL HYDROCARBON(6.72)	1700 JB	6.72
			ALKYL HYDROCARBON(22.00)	2300 J	22.00
			ALKYL HYDROCARBON(22.70)	2200 J	22.70
			ALKYL HYDROCARBON(22.80)	6400 J	22.80
			ALKYL HYDROCARBON(22.90)	1400 J	22.90
			ALKYL HYDROCARBON(23.40)	2600 J	23.40
			ALKYL HYDROCARBON(24.20)	1900 J	24.20
			ALKYL HYDROCARBON(24.30)	7900 J	24.30
			ALKYL HYDROCARBON(24.60)	1400 J	24.60
			ALKYL HYDROCARBON(24.70)	1900 J	24.70
			ALKYL HYDROCARBON(25.40)	3000 J	25.40
			ALKYL HYDROCARBON(25.50)	2600 J	25.50
			ALKYL HYDROCARBON(26.00)	1700 J	26.00
			ALKYL HYDROCARBON(26.70)	1500 J	26.70
			UNKNOWN ALKENE/ETHER/AL(25.3)	180000 J	25.30
			UNKNOWN ALKENE/ETHER/AL(30.8)	410000 J	30.80
			UNKNOWN KETONE(6.54)	3900 JB	6.54
			UNKNOWN PHTHALATE ESTER(25.00)	2100 J	25.00
			UNKNOWN(25.60)	1400 J	25.60
		123422	DIACETONE ALCOHOL(6.20)	23000 JAB	6.20
			ALDOL-CONDENSATION PROD(4.90)	140 JA	4.90
			ALKYL HYDROCARBON(6.46)	1200 J	6.46
			ALKYL HYDROCARBON(6.71)	1900 JB	6.71
			ALKYL HYDROCARBON(6.90)	1900 JB	6.90
			UNKNOWN ALKENE/ETHER/AL(34.90)	97000 J	34.90

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR806013B					
			UNKNOWN KETONE(6.54)	4200 JB	6.54
			UNKNOWN PHTHALATE ESTER(24.90)	440 J	24.90
			UNKNOWN(5.45)	280 JB	5.45
			UNKNOWN(6.61)	350 J	6.61
			UNKNOWN(8.07)	270 J	8.07
			UNKNOWN(8.40)	810 J	8.40
			UNKNOWN(8.90)	650 J	8.90
		123422	DIACETONE ALCOHOL (6.18)	21000 JAB	6.18
		123795	DIOCTYL ADIPATE(31.10)	800 JB	31.10
		541059	HEXAMETHYLCYCLOTRISILOX(5.75)	240 J	5.75
			ALKYL HYDROCARBON(6.45)	1500 J	6.45
			ALKYL HYDROCARBON(6.70)	2900 JB	6.70
			ALKYL HYDROCARBON(6.90)	2400 JB	6.90
			HYDROXY AROMATIC HYDROC(37.30)	1100 J	37.30
			UNKNOWN ALKENE/ETHER/AL(32.4)	600000 J	32.40
			UNKNOWN KETONE(6.52)	5600 JB	6.52
			UNKNOWN PHTHALATE ESTER(32.60)	5700 J	32.60
			UNKNOWN PHTHALATE ESTER(32.70)	2100 J	32.70
			UNKNOWN PHTHALATE ESTER(33.00)	7000 J	33.00
			UNKNOWN PHTHALATE ESTER(33.70)	4500 J	33.70
			UNKNOWN PHTHALATE ESTER(33.80)	2100 J	33.80
			UNKNOWN PHTHALATE ESTER(35.50)	3200 J	35.50
			UNKNOWN PHTHALATE ESTER(35.60)	2700 J	35.60
			UNKNOWN PHTHALATE ESTER(36.10)	1800 J	36.10
			UNKNOWN PHTHALATE ESTER(36.20)	4500 J	36.20
			UNKNOWN PHTHALATE ESTER(37.80)	2400 J	37.80
			UNKNOWN PHTHALATE ESTER(39.60)	780 J	39.60
			UNKNOWN(8.39)	1100 J	8.39
			UNKNOWN(38.00)	980 J	38.00
		123422	DIACETONE ALCOHOL(6.20)	29000 JAB	6.20
			ALDOL-CONDENSATION PROD(4.94)	110 JA	4.94
			ALICYCLIC HYDROCARBON(9.48)	91 J	9.48
			ALKYL HYDROCARBON(5.92)	99 J	5.92
			ALKYL HYDROCARBON(6.50)	850 J	6.50
			ALKYL HYDROCARBON(6.73)	1600 JB	6.73
			ALKYL HYDROCARBON(6.92)	1300 JB	6.92
			UNKNOWN ALKENE/ETHER/AL(24.00)	290 J	24.00
			UNKNOWN ALKENE/ETHER/AL(26.00)	290 J	26.00
			UNKNOWN ALKENE/ETHER/AL(30.10)	26000 J	30.10
			UNKNOWN KETONE(6.55)	3100 JB	6.55
			UNKNOWN PHTHALATE ESTER(24.90)	500 J	24.90
			UNKNOWN(5.44)	570 JB	5.44
			UNKNOWN(8.06)	96 J	8.06
			UNKNOWN(8.39)	500 J	8.39
			UNKNOWN(8.91)	250 J	8.91
			UNKNOWN(31.90)	280 J	31.90
		123422	DIACETONE ALCOHOL (6.22)	15000 JAB	6.22
		123795	DIOCTYL ADIPATE(31.10)	1600 JB	31.10

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR806013B					
			ALICYCLIC ALCOHOL/STERO(35.40)	1300 J	35.40
			ALICYCLIC ALCOHOL/STERO(36.00)	160 J	36.00
			ALICYCLIC ALCOHOL/STERO(36.80)	750 J	36.80
			ALICYCLIC ALCOHOL/STERO(37.00)	400 J	37.00
			ALICYCLIC ALCOHOL/STERO(37.70)	2100 J	37.70
			ALICYCLIC ALCOHOL/STERO(38.00)	2900 J	38.00
			ALICYCLIC ALCOHOL/STERO(38.20)	170 J	38.20
			ALICYCLIC ALCOHOL/STERO(39.80)	270 J	39.80
			ALICYCLIC ALCOHOL/STERO(39.90)	410 J	39.90
			ALKYL HYDROCARBON(6.63)	760 J	6.63
			ALKYL HYDROCARBON(6.73)	2100 J	6.73
			ALKYL HYDROCARBON(6.92)	1400 J	6.92
			ALKYL HYDROCARBON(37.60)	280 J	37.60
			UNKNOWN ACID(27.00)	540 J	27.00
			UNKNOWN KETONE(6.56)	6500 J	6.56
			UNKNOWN(5.45)	820 J	5.45
			UNKNOWN(6.84)	430 J	6.84
			UNKNOWN(39.10)	130 J	39.10
		123422	DIACETONE ALCOHOL(6.23)	24000 JA	6.23
		123795	DIOCTYL ADIPATE(31.30)	1300 J	31.30
BR808026B					
			ALDOL-CONDENSATION PROD(4.85)	370000 JA	4.85
			ALICYCLIC ALCOHOL/STERO(37.60)	63000 J	37.60
			ALICYCLIC ALCOHOL/STERO(37.90)	26000 J	37.90
			ALICYCLIC ALCOHOL/STERO(38.10)	24000 J	38.10
			ALICYCLIC ALCOHOL/STERO(39.70)	9100 J	39.70
			ALKYL HYDROCARBON(8.55)	41000 J	8.55
			ALKYL HYDROCARBON(10.70)	140000 J	10.70
			ALKYL HYDROCARBON(10.90)	55000 J	10.90
			ALKYL HYDROCARBON(11.10)	39000 J	11.10
			ALKYL HYDROCARBON(11.40)	46000 J	11.40
			ALKYL HYDROCARBON(12.50)	110000 J	12.50
			ALKYL HYDROCARBON(14.50)	85000 J	14.50
			ALKYL HYDROCARBON(14.80)	67000 J	14.80
			ARYL HYDROCARBON(9.90)	37000 J	9.90
			PHENYL HYDROCARBON(22.90)	110000 J	22.90
			UNKNOWN ACID(26.40)	74000 J	26.40
			UNKNOWN ALKENE/ETHER/AL(30.0)	2E+07 J	30.00
			UNKNOWN(27.30)	340000 J	27.30
		104405	4-NONYLPHENOL(23.00)	79000 J	23.00
		123422	DIACETONE ALCOHOL(6.15)	500000 JAB	6.15
			ALDOL-CONDENSATION PROD(4.83)	340000 JA	4.83
			ALICYCLIC ALCOHOL/STERO(37.70)	62000 J	37.70
			ALICYCLIC ALCOHOL/STERO(38.00)	25000 J	38.00
			ALICYCLIC ALCOHOL/STERO(38.10)	27000 J	38.10
			ALKYL HYDROCARBON(8.57)	67000 J	8.57

TABLE D 6.12 BROOKHAVEN QC TIC EXTRACTABLE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR808026B					
			ALKYL HYDROCARBON(9.29)	96000 J	9.29
			ALKYL HYDROCARBON(9.51)	71000 J	9.51
			ALKYL HYDROCARBON(10.80)	180000 J	10.80
			ALKYL HYDROCARBON(10.90)	94000 J	10.90
			ALKYL HYDROCARBON(14.80)	49000 J	14.80
			ALKYL HYDROCARBON(22.90)	62000 J	22.90
			ARYL HYDROCARBON(9.16)	160000 J	9.16
			ARYL HYDROCARBON(9.33)	140000 J	9.33
			ARYL HYDROCARBON(9.92)	180000 J	9.92
			ARYL HYDROCARBON(10.60)	140000 J	10.60
			UNKNOWN ALKENE/ETHER/AL(30.5)	1E+07 J	30.50
			UNKNOWN(27.20)	260000 J	27.20
			UNKNOWN(39.60)	21000 J	39.60
			UNKNOWN(40.20)	13000 J	40.20
		123422	DIACETONE ALCOHOL(6.15)	780000 JAB	6.15
			ALDOL-CONDENSATION PROD(5.10)	4800 JA	5.10
			ALKYL HYDROCARBON(6.94)	170 J	6.94
			UNKNOWN(3.64)	240 J	3.64
		123422	DIACETONE ALCOHOL(6.25)	1300 JA	6.25

TABLE D.7.1 DIRECTORY FOR VOLATILE ORGANICS QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
0	BR809016A	BRN28015A	D.7.5 (D-354)
0	BR809027A	BRN28015A	D.7.5 (D-354)
0	BR809038A	BRN28015A	D.7.5 (D-354)
0	BR810019A	BR305028A	D.7.10 (D-405)
0	BR810020A	BR305028A	D.7.10 (D-405)
0	BR810031A	BR305028A	D.7.10 (D-405)
1	BR300012A	BR301046A	D.7.8 (D-391)
1	BR300023A	BR301046A	D.7.8 (D-393)
1	BR300034A	BR301046A	D.7.8 (D-393)
1	BR301013A	BR301046A	D.7.8 (D-393)
1	BR301024A	BR301046A	D.7.8 (D-393)
1	BR301035A	BR301046A	D.7.8 (D-393)
1	BR301046A	BR301046A	D.7.8 (D-391)
1	BR302014A	BR301046A	D.7.8 (D-393)
1	BR302025A	BRN11016A	D.7.2 (D-334)
1	BR302036A	BRN11016A	D.7.2 (D-336)
1	BR303015A	BR303015A	D.7.9 (D-397)
1	BR303026A	BR303015A	D.7.9 (D-399)
1	BR303037A	BR303015A	D.7.9 (D-399)
1	BR304016A	BR303015A	D.7.9 (D-399)
1	BR304027A	BR303015A	D.7.9 (D-399)
1	BR304038A	BR303015A	D.7.9 (D-399)
1	BR304049A	BRN11016A	D.7.2 (D-334)
1	BR305017A	BR303015A	D.7.9 (D-399)
1	BR305028A	BR305028A	D.7.10 (D-403)
1	BR305039A	BR305028A	D.7.10 (D-405)
2	BR306018A	BRN20017A	D.7.4 (D-346)
2	BR306029A	BRN20017A	D.7.4 (D-348)
2	BR306030A	BRN20017A	D.7.4 (D-348)
2	BR308010B	BRN36015A	D.7.6 (D-360)
2	BR308021B	BRN36015A	D.7.6 (D-360)
2	BR308032B	BRN36015A	D.7.6 (D-360)
2	BR308043A	BRN16011A	D.7.3 (D-342)
2	BR310014A	BRN20017A	D.7.4 (D-348)
2	BR310025A	BRN20017A	D.7.4 (D-348)
2	BR310036A	BRN20017A	D.7.4 (D-348)
2	BR311026A	BRN28015A	D.7.5 (D-352)
3	BR316010B	BR000022B	D.7.7 (D-370)
3	BR316021B	BR000022B	D.7.7 (D-372)
3	BR316032C	BR000022B	D.7.7 (D-372)
3	BR316043B	BR000022B	D.7.7 (D-372)
4	BR500014A	BRN11016A	D.7.2 (D-336)
4	BR500025A	BRN11016A	D.7.2 (D-336)
4	BR500036A	BRN11016A	D.7.2 (D-336)
4	BR500047A	BR305028A	D.7.10 (D-405)
4	BR500058A	BR305028A	D.7.10 (D-405)
4	BR500069A	BR305028A	D.7.10 (D-405)
4	BR507011A	BR000022B	D.7.7 (D-381)
4	BR507022A	BR000022B	D.7.7 (D-378)
4	BR507033A	BR000022B	D.7.7 (D-378)
4	BR507044A	BR000022B	D.7.7 (D-378)

TABLE D.7.1 DIRECTORY FOR VOLATILE ORGANICS QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER (PG)
4	BR507055A	BR000022B	D.7.7 (D-379)
4	BR507066A	BR000022B	D.7.7 (D-379)
4	BR507077A	BR000022B	D.7.7 (D-379)
4	BR507088A	BR000022B	D.7.7 (D-379)
4	BR508056A	BR000022B	D.7.7 (D-374)
4	BR508067A	BR000022B	D.7.7 (D-385)
4	BR508078A	BR000022B	D.7.7 (D-383)
4	BR508089A	BR000022B	D.7.7 (D-374)
4	BR508090A	BR000022B	D.7.7 (D-376)
4	BR508103A	BR000022B	D.7.7 (D-376)
4	BR508114A	BR000022B	D.7.7 (D-376)
6	BR503028A	BR503028A	D.7.14 (D-431)
6	BR503040A	BR503017A	D.7.13 (D-423)
6	BR503051A	BR801041A	D.7.15 (D-437)
6	BR504029A	BR503017A	D.7.13 (D-425)
6	BR504030A	BR503017A	D.7.13 (D-425)
8	BR800062A	BR503028A	D.7.14 (D-429)
8	BR800073A	BR503028A	D.7.14 (D-431)
8	BR800084A	BR503028A	D.7.14 (D-431)
8	BR800095A	BR503028A	D.7.14 (D-431)
8	BR800108A	BR503028A	D.7.14 (D-431)
8	BR800119A	BR801041A	D.7.15 (D-437)
8	BR801018A	BR801041A	D.7.15 (D-437)
8	BR801029A	BR801041A	D.7.15 (D-437)
8	BR801030A	BR801041A	D.7.15 (D-437)
8	BR801041A	BR801041A	D.7.15 (D-435)
9	BR805012A	BRN28015A	D.7.5 (D-354)
9	BR805023A	BRN16011A	D.7.3 (D-340)
9	BR805034A	BRN16011A	D.7.3 (D-342)
10	BR806159A	BRN36015A	D.7.6 (D-360)
10	BR807014A	BRN36015A	D.7.6 (D-358)
10	BR807025A	BRN36015A	D.7.6 (D-360)
10	BR807036A	BRN36015A	D.7.6 (D-360)
10	BR809049B	BR000022B	D.7.7 (D-366)
10	BR809050B	BR000022B	D.7.7 (D-372)
10	BR809061B	BR000022B	D.7.7 (D-372)
10	BR809072B	BR000022B	D.7.7 (D-372)
10	BR809083B	BR000022B	D.7.7 (D-372)
10	BR809107B	BR000022B	D.7.7 (D-370)
10	BR809118B	BR000022B	D.7.7 (D-368)
10	BR809129B	BR000022B	D.7.7 (D-366)
10	BR809130B	BR000022B	D.7.7 (D-368)
11	BR808026A	BR503017A	D.7.13 (D-425)
99	BRN09012A	BRN11016A	D.7.2 (D-334)
99	BRN11016A	BRN11016A	D.7.2 (D-334)
99	BRN13018A	BR801041A	D.7.15 (D-437)
99	BRN16011A	BRN16011A	D.7.3 (D-340)
99	BRN17012A	BR801041A	D.7.15 (D-437)
99	BRN20017A	BRN20017A	D.7.4 (D-346)
99	BRN21018A	BRN20017A	D.7.4 (D-346)
99	BRN22019A	BRN16011A	D.7.3 (D-340)
99	BRN28015A	BRN28015A	D.7.5 (D-352)

TABLE D.7.1 DIRECTORY FOR VOLATILE ORGANICS QA/QC DATA

PROBLEM NUMBER	SAMPLE NUMBER	QA/QC ANALYTICAL SDG NUMBER	QA/QC TABLE NUMBER(PG)
99	BRN33012A	BRN28015A	D.7.5 (D-352)
99	BRN34013A	BRN16011A	D.7.3 (D-340)
99	BRN35014A	BRN16011A	D.7.3 (D-340)
99	BRN36015A	BRN36015A	D.7.6 (D-358)
99	BRN37016A	BRN28015A	D.7.5 (D-352)
99	BR316054A	BR000022B	D.7.7 (D-370)
99	BR507099A	BR000022B	D.7.7 (D-381)
99	BR508125A	BR000022B	D.7.7 (D-376)
99	BR809141A	BR000022B	D.7.7 (D-368)
99	BR809152A	BR000022B	D.7.7 (D-368)

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TABLE D.7.2 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN11016A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0419885	BR0419887	BR0419887	BR0419888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACETONE	0.296	48.1			0.383	29.4	
BENZENE	0.993	2.2			0.958	3.5	
BROMODICHLOROMETHANE	0.476	2.1			0.527	10.7	
BROMOFORM	0.277	7.9			0.271	2.2	
BROMOMETHANE	0.904	35.5			1.269	40.4	
CARBON DISULFIDE	5.423	1.2			5.788	6.7	
CARBON TETRACHLORIDE	0.472	1.5			0.538	14.1	
CHLOROBENZENE	0.97	3.5			0.972	0.2	
CHLOROETHANE	0.757	5.3			0.874	15.5	
CHLOROFORM	2.946	3.6			3.212	9	
CHLOROMETHANE	1.777	2.2			2.093	17.8	
CIS-1,3-DICHLOROPROPENE	0.465	0.7			0.467	0.4	
DIBROMOCHLOROMETHANE	0.393	0.2			0.417	6	
ETHYLBENZENE	0.486	2.3			0.485	0.3	
METHYLENE CHLORIDE	1.251	7			1.35	8	
STYRENE	0.7	1.9			0.752	7.4	
TETRACHLOROETHENE	0.473	3.3			0.495	4.5	
TOLUENE	0.776	3.4			0.747	3.7	
TOLUENE-D8	0.456	1.7			0.432	5.2	
TRANS-1,3-DICHLOROPROPENE	0.368	3			0.396	7.7	
TRICHLOROETHENE	0.423	8.7			0.423	0.1	
VINYL ACETATE	0.33	41.1			0.495	50	
VINYL CHLORIDE	1.387	8.2			1.696	22.3	
XYLENE (TOTAL)	0.58	3			0.633	9.1	
1,1-DICHLOROETHANE	2.797	2.8			2.716	2.9	
1,1-DICHLOROETHENE	1.454	1.2			1.536	5.6	
1,1,1-TRICHLOROETHANE	0.486	0.9			0.536	10.4	
1,1,2-TRICHLOROETHANE	0.238	3			0.239	0.4	
1,1,2,2-TETRACHLOROETHANE	0.344	8.3			0.332	3.4	
1,2-DICHLOROETHANE	1.935	3.2			2.04	5.4	
1,2-DICHLOROETHANE-D4	0.838	1.2			0.853	1.8	
1,2-DICHLOROETHENE	1.544	2			1.553	0.6	
1,2-DICHLOROPROPANE	0.358	2.3			0.339	5.2	
1,4-BROMOFLUOROBENZENE	0.578	1.8			0.606	4.8	
2-BUTANONE	0.022	11.3			0.024	11.8	
2-HEXANONE	0.179	14.9			0.143	19.9	
4-METHYL-2-PENTANONE	0.248	9.5			0.226	9	

SURR 1(TOL) %RECOVERY							

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TABLE D.7.2 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN11016A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0419885	BR0419887	BR0419887	BR0419888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	21	21
M/E 75	52	43
M/E 95	100	100
M/E 96	8.1	8.7
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	97	92
M/E 175-1	7.1	7.6
M/E 175-2	7.4	8.2
M/E 176-1	95	90
M/E 176-2	98	98
M/E 177-1	8	6.7
M/E 177-2	8.4	7.5

INTERNAL STD AREA(BCM) 22100
 INTERNAL STD AREA(CBZ) 86300
 INTERNAL STD AREA(DFB) 103000

DILUTION FACTOR
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	TRIP BLANK	N PRIM. PD	TRIP BLANK	WOODED PD	MATRIX
TYPE OF LOCATION	BLANK	TRIP BLANK	POND	TRIP BLANK	POND	SPIKE
SAMPLE NUMBER	VBK07289	BRN11016A	BR304049A	BRN09012A	BR302025A	BR302025A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		99	1	99	1	1
ACETONE	18	14 B	12 B	9 JB	10 U	10 U
BENZENE	5 U	5 U	5 U	5 U	5 U	50 S
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U

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TABLE D.7.2 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN11016A

DRAFT DO NOT CITE

AREA	QA			QA			QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK07289 WATER UG/L	TRIP BLANK TRIP BLANK BRN11016A WATER UG/L 99	N PRIM. PD POND BR304049A WATER UG/L 1	TRIP BLANK TRIP BLANK BRN09012A WATER UG/L 99	WOODED PD POND BR302025A WATER UG/L 1	MATRIX SPIKE BR302025A WATER UG/L 1	MS % RECOVERY BR302025A WATER % 1
BROMOMETHANE	10 U	10 U	10 U	10 U	10 U	10 U	
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U	5 U	
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	
CHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	54 S	107
CHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	
CHLOROFORM	2 J	5 U	5 U	5 U	5 U	5 U	
CHLOROMETHANE	10 U	10 U	10 U	10 U	10 U	10 U	
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	
METHYLENE CHLORIDE	1 J	5 U	5 U	5 U	0.6 JB	5 U	
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	
TOLUENE	0.3 J	11 B	2 JB	11 B	0.3 JB	52 SB	102
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	
TRICHLOROETHENE	5 U	2 J	5 U	2 J	5 U	52 S	103
VINYL ACETATE	10 U	10 U	10 U	10 U	10 U	10 U	
VINYL CHLORIDE	10 U	10 U	10 U	10 U	10 U	10 U	
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U	5 U	
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	48 S	95
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U	10 U	10 U	10 U	
2-HEXANONE	10 U	10 U	10 U	10 U	10 U	10 U	
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U	10 U	10 U	
SURR 1(TOL) %RECOVERY	104	100	103	106	105	101	
SURR 2(BFB) %RECOVERY	101	97	99	99	97	96	
SURR 3(DCE) %RECOVERY	92	95	98	94	94	94	

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TABLE D.7.2 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN11016A

DRAFT DO NOT CITE

AREA	QA					QA	QA
LOCATION	METHOD	TRIP BLANK	N PRIM. PD	TRIP BLANK	WOODED PD	MATRIX	MS %
TYPE OF LOCATION	BLANK	TRIP BLANK	POND	TRIP BLANK	POND	SPIKE	RECOVERY
SAMPLE NUMBER	VBK07289	BRN11016A	BR304049A	BRN09012A	BR302025A	BR302025A	BR302025A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	%
ENV PROBLEM NO		99	1	99	1	1	1

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	17500	20400	16600	19800	19800	21500
INTERNAL STD AREA(CBZ)	65500	82200	64900	80300	82400	88600
INTERNAL STD AREA(DFB)	78800	98400	76700	99300	97800	105000

DILUTION FACTOR	1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		5(14 D)	7(14 D)	5(14 D)	7(14 D)	7(14 D)

AREA	QA	QA	QA				
LOCATION	RPD	MATRIX SPIKE	MSD %	WOODED PD	BNL LANDF	BNL LANDF	BNL LANDF
TYPE OF LOCATION		DUPLICATE	RECOVERY	POND	LEACHATE	LEACHATE	LEACHATE
SAMPLE NUMBER	BR302025A	BR302025A	BR302025A	BR302036A	BR500014A	BR500025A	BR500036A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	%	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	1	1	1	1	4	4	4

ACETONE		10 U		5 JB	17 B	140 B	81 B
BENZENE	3	52 S	103	5 U	5 U	3 J	5 U
BROMODICHLOROMETHANE		5 U		5 U	5 U	5 U	5 U
BROMOFORM		5 U		5 U	5 U	5 U	5 U
BROMOMETHANE		10 U		10 U	10 U	10 U	10 U
CARBON DISULFIDE		5 U		5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE		5 U		5 U	5 U	5 U	5 U
CHLOROBENZENE	3	56 S	111	5 U	5 U	5 U	5 U

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TABLE D.7.2 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN11016A

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION	RPD	MATRIX SPIKE	MSD %	WOODED PD	BNL LANDF	BNL LANDF	BNL LANDF
TYPE OF LOCATION	BR302025A	DUPLICATE	RECOVERY	POND	LEACHATE	LEACHATE	LEACHATE
SAMPLE NUMBER	BR302025A	BR302025A	BR302025A	BR302036A	BR500014A	BR500025A	BR500036A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	%	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	1	1	1	1	4	4	4
CHLOROETHANE		10 U		10 U	140	15	12
CHLOROFORM		5 U		5 U	5 U	5 U	5 U
CHLOROMETHANE		10 U		10 U	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE		5 U		5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE		5 U		5 U	5 U	5 U	5 U
ETHYLBENZENE		5 U		5 U	5 U	2 J	5 U
METHYLENE CHLORIDE		5 U		5 U	2 JB	5 B	6 B
STYRENE		5 U		5 U	5 U	5 U	5 U
TETRACHLOROETHENE		5 U		5 U	5 U	5 U	5 U
TOLUENE	2	53 SB	105	0.9 JB	5 B	3 JB	21 B
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE		5 U		5 U	5 U	5 U	5 U
TRICHLOROETHENE	3	54 S	107	5 U	5 U	5 U	5 U
VINYL ACETATE		10 U		10 U	10 U	10 U	10 U
VINYL CHLORIDE		10 U		10 U	10 U	10 U	10 U
XYLENE (TOTAL)		5 U		5 U	3 J	5 U	5
1,1-DICHLOROETHANE		5 U		5 U	100	5 U	5 U
1,1-DICHLOROETHENE	1	48 S	96	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE		5 U		5 U	110	5 U	5 U
1,1,2-TRICHLOROETHANE		5 U		5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE		5 U		5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE		5 U		5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE		5 U		5 U	0.7 J	5 U	1 J
1,2-DICHLOROPROPANE		5 U		5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE		10 U		10 U	10 U	67	44
2-HEXANONE		10 U		10 U	10 U	10 U	47
4-METHYL-2-PENTANONE		10 U		10 U	10 U	15	13
SURR 1(TOL) %RECOVERY		101		104	102	102	94
SURR 2(BFB) %RECOVERY		95		94	95	95	91
SURR 3(DCE) %RECOVERY		91		90	90	93	87
M/E 50							
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							

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TABLE D.7.2 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN11016A

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION	RPD	MATRIX SPIKE	MSD %	WOODED PD	BNL LANDF	BNL LANDF	BNL LANDF
TYPE OF LOCATION		DUPLICATE	RECOVERY	POND	LEACHATE	LEACHATE	LEACHATE
SAMPLE NUMBER	BR302025A	BR302025A	BR302025A	BR302036A	BR500014A	BR500025A	BR500036A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	%	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	1	1	1	1	4	4	4
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)		21700		37800	23800	23200	21000
INTERNAL STD AREA(CBZ)		86700		151000	94500	96000	85100
INTERNAL STD AREA(DFB)		102000		181000	112000	114000	101000
DILUTION FACTOR		1		1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		7(14 D)		7(14 D)	6(14 D)	6(14 D)	6(14 D)

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TABLE D.7.3 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN16011A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0426885	BR0426887	BR0426887	BR0426888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACETONE	0.296	48.1			0.372	25.8	
BENZENE	0.993	2.2			0.955	3.9	
BROMODICHLOROMETHANE	0.476	2.1			0.53	11.5	
BROMOFORM	0.277	7.9			0.291	5.2	
BROMOMETHANE	0.904	35.5			1.019	12.8	
CARBON DISULFIDE	5.423	1.2			5.753	6.1	
CARBON TETRACHLORIDE	0.472	1.5			0.545	15.6	
CHLOROBENZENE	0.97	3.5			0.976	0.7	
CHLOROETHANE	0.757	5.3			0.751	0.8	
CHLOROFORM	2.946	3.6			2.926	0.7	
CHLOROMETHANE	1.777	2.2			1.989	12	
CIS-1,3-DICHLOROPROPENE	0.465	0.7			0.483	3.7	
DIBROMOCHLOROMETHANE	0.393	2			0.442	12.5	
ETHYLBENZENE	0.486	2.3			0.488	0.5	
METHYLENE CHLORIDE	1.251	7			1.227	1.9	
STYRENE	0.7	1.9			0.757	8.1	
TETRACHLOROETHENE	0.473	3.3			0.479	1.1	
TOLUENE	0.776	3.4			0.751	3.2	
TOLUENE-D8	0.456	1.7			0.437	4.1	
TRANS-1,3-DICHLOROPROPENE	0.368	3			0.406	10.3	
TRICHLOROETHENE	0.423	8.7			0.426	0.9	
VINYL ACETATE	0.33	41.1			0.519	57.3	
VINYL CHLORIDE	1.387	8.2			1.503	8.4	
XYLENE (TOTAL)	0.58	3			0.636	9.6	
1,1-DICHLOROETHANE	2.797	2.8			2.567	8.2	
1,1-DICHLOROETHENE	1.454	1.2			1.437	1.2	
1,1,1-TRICHLOROETHANE	0.486	0.9			0.545	12.1	
1,1,2-TRICHLOROETHANE	0.238	3			0.253	6.3	
1,1,2,2-TETRACHLOROETHANE	0.344	8.3			0.363	5.6	
1,2-DICHLOROETHANE	1.935	3.2			1.97	1.8	
1,2-DICHLOROETHANE-D4	0.838	1.2			0.842	0.5	
1,2-DICHLOROETHENE	1.544	2			1.477	4.4	
1,2-DICHLOROPROPANE	0.358	2.3			0.341	4.8	
1,4-BROMOFLUOROBENZENE	0.578	1.8			0.617	6.7	
2-BUTANONE	0.022	11.3			0.026	20.1	
2-HEXANONE	0.179	14.9			0.173	3	
4-METHYL-2-PENTANONE	0.248	9.5			0.252	1.2	

SURR 1(TOL) %RECOVERY							

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TABLE D.7.3 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN16011A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0426885	BR0426887	BR0426887	BR0426888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	21	21
M/E 75	52	48
M/E 95	100	100
M/E 96	8.1	7.2
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	97	95
M/E 175-1	7.1	6
M/E 175-2	7.4	6.4
M/E 176-1	95	92
M/E 176-2	98	97
M/E 177-1	8	6.6
M/E 177-2	8.4	7.2

INTERNAL STD AREA(BCM)	21800
INTERNAL STD AREA(CBZ)	83000
INTERNAL STD AREA(DFB)	95800

DILUTION FACTOR
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	AGS SCRAP.	MATRIX
TYPE OF LOCATION	BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	WELL	SPIKE
SAMPLE NUMBER	VBK07354	BRN16011A	BRN34013A	BRN22019A	BRN35014A	BR805023A	BR805023A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO		99	99	99	99	9	9
ACETONE	27	13 B	10 U	10 U	10 U	5 JB	10 U
BENZENE	5 U	5 U	5 U	5 U	5 U	5 U	52 S
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U

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TABLE D.7.3 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN16011A

DRAFT DO NOT CITE

AREA	QA						QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK07354 WATER UG/L	TRIP BLANK TRIP BLANK BRN16011A WATER UG/L	TRIP BLANK TRIP BLANK BRN34013A WATER UG/L	TRIP BLANK TRIP BLANK BRN22019A WATER UG/L	TRIP BLANK TRIP BLANK BRN35014A WATER UG/L	AGS SCRAP. WELL BR805023A WATER UG/L	MATRIX SPIKE BR805023A WATER UG/L
		99	99	99	99	9	9
BROMOMETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	54 S
CHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CHLOROFORM	0.9 J	5 U	5 U	5 U	5 U	2 JB	2 JB
CHLOROMETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	2 J	5 U	5 U	5 U	5 U	5 U	5 U
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	0.6 J	11 B	11 B	11 B	11 B	0.5 JB	53 BS
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	5 U	2 J	2 J	2 J	2 J	5 U	52 S
VINYL ACETATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
VINYL CHLORIDE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	30	29
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	3 J	51 S
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	55	52
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U	10 U	10 U	10 U	16
2-HEXANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SURR 1(TOL) %RECOVERY	103	101	99	102	101	99	100
SURR 2(BFB) %RECOVERY	101	96	97	97	95	96	95
SURR 3(DCE) %RECOVERY	95	97	101	94	97	94	93

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TABLE D.7.3 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN16011A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	AGS SCRAP.	MATRIX
TYPE OF LOCATION	BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	WELL	SPIKE
SAMPLE NUMBER	VBK07354	BRN16011A	BRN34013A	BRN22019A	BRN35014A	BR805023A	BR805023A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	99	99	99	99	99	9	9

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	16200	20500	16300	21000	21400	22400	22600
INTERNAL STD AREA(CBZ)	61600	79400	64800	83200	85900	89300	88600
INTERNAL STD AREA(DFB)	71800	92800	74900	98800	99300	105000	103000
DILUTION FACTOR	1	1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		11(14 D)	6(14 D)	8(14 D)	5(14 D)	6(14 D)	6(14 D)

AREA	QA	QA	QA	QA	QA	QA
LOCATION	MS %	RPD	MATRIX SPIKE	MSD %	AGS SCRAP.	B. 422
TYPE OF LOCATION	RECOVERY		DUPLICATE	RECOVERY	WELL	CESSPOOL
SAMPLE NUMBER	BR805023A	BR805023A	BR805023A	BR805023A	BR805034A	BR308043A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	%	UG/L	%	UG/L	UG/L
ENV PROBLEM NO	9	9	9	9	9	2

ACETONE			8 JB		10 U	18 B
BENZENE	103	0	52 S	104	5 U	5 U
BROMODICHLOROMETHANE			5 U		5 U	5 U
BROMOFORM			5 U		5 U	5 U
BROMOMETHANE			10 U		10 U	10 U
CARBON DISULFIDE			5 U		5 U	5 U
CARBON TETRACHLORIDE			5 U		5 U	5 U
CHLOROBENZENE	108	0	54 S	108	5 U	5 U

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TABLE D.7.3 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN16011A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA		
LOCATION	MS %	RPD	MATRIX SPIKE	MSD %	AGS SCRAP.	B. 422
TYPE OF LOCATION	RECOVERY		DUPLICATE	RECOVERY	WELL	CESSPOOL
SAMPLE NUMBER	BR805023A	BR805023A	BR805023A	BR805023A	BR805034A	BR308043A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	%	UG/L	%	UG/L	UG/L
ENV PROBLEM NO	9	9	9	9	9	2
CHLOROETHANE			10 U		10 U	10 U
CHLOROFORM			2 JB		2 JB	5 U
CHLOROMETHANE			10 U		10 U	10 U
CIS-1,3-DICHLOROPROPENE			5 U		5 U	5 U
DIBROMOCHLOROMETHANE			5 U		5 U	5 U
ETHYLBENZENE			5 U		5 U	5 U
METHYLENE CHLORIDE			5 U		5 U	5 U
STYRENE			5 U		5 U	5 U
TETRACHLOROETHENE			5 U		5 U	5 U
TOLUENE	104	0	53 BS	104	0.8 JB	3 JB
TOLUENE-D8						
TRANS-1,3-DICHLOROPROPENE			5 U		5 U	5 U
TRICHLOROETHENE	104	0	52 S	103	5 U	5 U
VINYL ACETATE			10 U		10 U	10 U
VINYL CHLORIDE			10 U		10 U	10 U
XYLENE (TOTAL)			5 U		5 U	5 U
1,1-DICHLOROETHANE			28		31	5 U
1,1-DICHLOROETHENE	96	0	52 S	96	4 J	5 U
1,1,1-TRICHLOROETHANE			51		56	5 U
1,1,2-TRICHLOROETHANE			5 U		5 U	5 U
1,1,2,2-TETRACHLOROETHANE			5 U		5 U	5 U
1,2-DICHLOROETHANE			5 U		5 U	5 U
1,2-DICHLOROETHANE-D4						
1,2-DICHLOROETHENE			5 U		5 U	5 U
1,2-DICHLOROPROPANE			5 U		5 U	5 U
1,4-BROMOFLUOROBENZENE						
2-BUTANONE			16		10 U	10 U
2-HEXANONE			10 U		10 U	10 U
4-METHYL-2-PENTANONE			10 U		10 U	10 U
SURR 1(TOL) %RECOVERY			101		103	99
SURR 2(BFB) %RECOVERY			92		95	95
SURR 3(DCE) %RECOVERY			90		89	91
M/E 50						
M/E 75						
M/E 95						
M/E 96						
M/E 173-1						

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TABLE D.7.3 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN16011A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA		
LOCATION	MS %	RPD	MATRIX SPIKE	MSD %	AGS SCRAP.	B. 422
TYPE OF LOCATION	RECOVERY		DUPLICATE	RECOVERY	WELL	CESSPOOL
SAMPLE NUMBER	BR805023A	BR805023A	BR805023A	BR805023A	BR805034A	BR308043A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	%	UG/L	%	UG/L	UG/L
ENV PROBLEM NO	9	9	9	9	9	2
M/E 173-2						
M/E 174						
M/E 175-1						
M/E 175-2						
M/E 176-1						
M/E 176-2						
M/E 177-1						
M/E 177-2						
INTERNAL STD AREA(BCM)			23200		24200	21000
INTERNAL STD AREA(CBZ)			91900		93800	81700
INTERNAL STD AREA(DFB)			106000		110000	94300
DILUTION FACTOR			1		1	1
ACTUAL(ALLOWED) HOLD TIME			6(14 D)		6(14 D)	8(14 D)

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TABLE D.7.4 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN20017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0422885	BR0422887	BR0422887	BR0422888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACETONE	0.296	48.1			0.311	5.1	
BENZENE	0.993	2.2			0.946	4.7	
BROMODICHLOROMETHANE	0.476	2.1			0.51	7.3	
BROMOFORM	0.277	7.9			0.266	4	
BROMOMETHANE	0.904	35.5			1.202	33	
CARBON DISULFIDE	5.423	1.2			5.742	5.9	
CARBON TETRACHLORIDE	0.472	1.5			0.522	10.6	
CHLOROBENZENE	0.97	3.5			0.968	0.2	
CHLOROETHANE	0.757	5.3			0.838	10.7	
CHLOROFORM	2.946	3.6			3.136	6.4	
CHLOROMETHANE	1.777	2.2			2.096	18	
CIS-1,3-DICHLOROPROPENE	0.465	0.7			0.459	1.4	
DIBROMOCHLOROMETHANE	0.393	2			0.41	4.2	
ETHYLBENZENE	0.486	2.3			0.485	0.1	
METHYLENE CHLORIDE	1.251	7			1.399	11.9	
STYRENE	0.7	1.9			0.748	6.8	
TETRACHLOROETHENE	0.473	3.3			0.491	3.8	
TOLUENE	0.776	3.4			0.739	4.7	
TOLUENE-D8	0.456	1.7			0.427	6.2	
TRANS-1,3-DICHLOROPROPENE	0.368	3			0.387	5.2	
TRICHLOROETHENE	0.423	8.7			0.421	0.4	
VINYL ACETATE	0.33	41.1			0.474	43.7	
VINYL CHLORIDE	1.387	8.2			1.649	18.9	
XYLENE (TOTAL)	0.58	3			0.63	8.6	
1,1-DICHLOROETHANE	2.797	2.8			2.681	4.1	
1,1-DICHLOROETHENE	1.454	1.2			1.54	5.9	
1,1,1-TRICHLOROETHANE	0.486	0.9			0.518	6.6	
1,1,2-TRICHLOROETHANE	0.238	3			0.236	0.8	
1,1,2,2-TETRACHLOROETHANE	0.344	8.3			0.326	5.1	
1,2-DICHLOROETHANE	1.935	3.2			2.024	4.6	
1,2-DICHLOROETHANE-D4	0.838	1.2			0.848	1.2	
1,2-DICHLOROETHENE	1.544	2			1.544	0	
1,2-DICHLOROPROPANE	0.358	2.3			0.329	8.1	
1,4-BROMOFLUOROBENZENE	0.578	1.8			0.601	3.9	
2-BUTANONE	0.022	11.3			0.024	10.5	
2-HEXANONE	0.179	14.9			0.148	17.3	
4-METHYL-2-PENTANONE	0.248	9.5			0.225	9.4	

Surr 1(TOL) %RECOVERY

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TABLE D.7.4 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN20017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0422885	BR0422887	BR0422887	BR0422888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	21	22
M/E 75	52	44
M/E 95	100	100
M/E 96	8.1	6.5
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	97	91
M/E 175-1	7.1	7.1
M/E 175-2	7.4	7.8
M/E 176-1	95	88
M/E 176-2	98	97
M/E 177-1	8	6.6
M/E 177-2	8.4	7.5

INTERNAL STD AREA(BCM) 21400
 INTERNAL STD AREA(CBZ) 85300
 INTERNAL STD AREA(DFB) 101000

DILUTION FACTOR
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	TRIP BLANK	TRIP BLANK	B. 975	MATRIX	MS %	RPD
TYPE OF LOCATION	BLANK	TRIP BLANK	TRIP BLANK	CESSPOOL	SPIKE	RECOVERY	
SAMPLE NUMBER	VBK07328	BRN20017A	BRN21018A	BR306018A	BR306018A	BR306018A	BR306018A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	%	%
ENV PROBLEM NO		99	99	2	2	2	2

ACETONE 20 12 B 13 B 16 B 21 B
 BENZENE 5 U 5 U 5 U 5 U 50 S 100 2
 BROMODICHLOROMETHANE 5 U 5 U 5 U 5 U 5 U
 BROMOFORM 5 U 5 U 5 U 5 U 5 U

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TABLE D.7.4 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN20017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	TRIP BLANK	TRIP BLANK	B. 975	MATRIX	MS %	RPD
TYPE OF LOCATION	BLANK	TRIP BLANK	TRIP BLANK	CESSPOOL	SPIKE	RECOVERY	
SAMPLE NUMBER	VBK07328	BRN20017A	BRN21018A	BR306018A	BR306018A	BR306018A	BR306018A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	%	%
ENV PROBLEM NO	99	99	99	2	2	2	2
BROMOMETHANE	10 U	10 U	10 U	10 U	10 U		
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U		
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U		
CHLOROBENZENE	5 U	5 U	5 U	5 U	54 S	107	2
CHLOROETHANE	10 U	10 U	10 U	10 U	10 U		
CHLOROFORM	2 J	5 U	5 U	5 U	5 U		
CHLOROMETHANE	10 U	10 U	10 U	10 U	10 U		
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U		
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U		
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U		
METHYLENE CHLORIDE	2 J	2 JB	5 U	5 U	3 JB		
STYRENE	5 U	5 U	5 U	5 U	5 U		
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U		
TOLUENE	0.3 J	11 B	12 B	1 JB	54 BS	105	0
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U		
TRICHLOROETHENE	5 U	3 J	3 J	5 U	52 S	104	0
VINYL ACETATE	10 U	10 U	10 U	10 U	10 U		
VINYL CHLORIDE	10 U	10 U	10 U	10 U	10 U		
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U		
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U		
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	47 S	93	2
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U		
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U		
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U		
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U		
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U		
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U		
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U	10 U	10		
2-HEXANONE	10 U	10 U	10 U	10 U	10 U		
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U	10 U		
SURR 1(TOL) %RECOVERY	101	104	102	104	105		
SURR 2(BFB) %RECOVERY	98	100	106	97	99		
SURR 3(DCE) %RECOVERY	97	98	102	93	100		

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TABLE D.7.4 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN20017A

DRAFT DO NOT CITE

AREA	QA				QA	QA	QA
LOCATION	METHOD	TRIP BLANK	TRIP BLANK	B. 975	MATRIX	MS %	RPD
TYPE OF LOCATION	BLANK	TRIP BLANK	TRIP BLANK	CESSPOOL	SPIKE	RECOVERY	
SAMPLE NUMBER	VBK07328	BRN20017A	BRN21018A	BR306018A	BR306018A	BR306018A	BR306018A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	%	%
ENV PROBLEM NO		99	99	2	2	2	2

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	16400	20100	15700	20600	20200		
INTERNAL STD AREA(CBZ)	63900	79600	63600	80400	83200		
INTERNAL STD AREA(DFB)	75600	94700	74300	96700	100000		
DILUTION FACTOR	1	1	1	1	1		
ACTUAL(ALLOWED) HOLD TIME		4(14 D)	4(14 D)	4(14 D)	4(14 D)		

AREA	QA	QA					
LOCATION	MATRIX SPIKE	MSD %	B. 479	B. 479	B. 905	B. 905	B. 905
TYPE OF LOCATION	DUPLICATE	RECOVERY	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL
SAMPLE NUMBER	BR306018A	BR306018A	BR306029A	BR306030A	BR310014A	BR310025A	BR310036A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	%	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	2	2	2	2	2	2	2

ACETONE	21 B		18 B	18 B	190 B	220 B	250 B
BENZENE	52 S	103	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	5 U		5 U	5 U	5 U	5 U	5 U
BROMOFORM	5 U		5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	10 U		10 U	10 U	10 U	10 U	10 U
CARBON DISULFIDE	5 U		5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	5 U		5 U	5 U	5 U	5 U	5 U
CHLORO BENZENE	55 S	110	5 U	5 U	5 U	5 U	5 U

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TABLE D.7.4 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN20017A

DRAFT DO NOT CITE

AREA	QA	QA						
LOCATION	MATRIX SPIKE	MSD %	B. 479	B. 479	B. 905	B. 905	B. 905	B. 905
TYPE OF LOCATION	DUPLICATE	RECOVERY	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL
SAMPLE NUMBER	BR306018A	BR306018A	BR306029A	BR306030A	BR310014A	BR310025A	BR310036A	BR310036A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	%	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	2	2	2	2	2	2	2	2
CHLOROETHANE	10 U		10 U					
CHLOROFORM	5 U		5 U	5 U	5 U	5 U	5 U	5 U
CHLOROMETHANE	10 U		10 U	10 U	10 U	3 J	3 J	3 J
CIS-1,3-DICHLOROPROPENE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	2 JB		2 JB					
STYRENE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	54 BS	106	2 JB	2 JB	36 B	36 B	46 B	46 B
TOLUENE-D8								
TRANS-1,3-DICHLOROPROPENE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	52 S	104	5 U	5 U	5 U	5 U	5 U	5 U
VINYL ACETATE	10 U		10 U					
VINYL CHLORIDE	10 U		10 U					
XYLENE (TOTAL)	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	48 S	95	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4								
1,2-DICHLOROETHENE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	5 U		5 U	5 U	5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE								
2-BUTANONE	12		10 U					
2-HEXANONE	10 U		10 U					
4-METHYL-2-PENTANONE	10 U		10 U					
SURR 1(TOL) %RECOVERY	104		103	107	104	99	101	101
SURR 2(BFB) %RECOVERY	96		95	97	95	96	98	98
SURR 3(DCE) %RECOVERY	97		94	93	94	106	103	103
M/E 50								
M/E 75								
M/E 95								
M/E 96								
M/E 173-1								

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TABLE D.7.4 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN20017A

DRAFT DO NOT CITE

AREA	QA	QA						
LOCATION	MATRIX SPIKE	MSD %	B. 479	B. 479	B. 905	B. 905	B. 905	B. 905
TYPE OF LOCATION	DUPLICATE	RECOVERY	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL	CESSPOOL
SAMPLE NUMBER	BR306018A	BR306018A	BR306029A	BR306030A	BR310014A	BR310025A	BR310036A	
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	%	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	2	2	2	2	2	2	2	2
M/E 173-2								
M/E 174								
M/E 175-1								
M/E 175-2								
M/E 176-1								
M/E 176-2								
M/E 177-1								
M/E 177-2								
INTERNAL STD AREA(BCM)	21000		21200	22100	22000	19800	17200	
INTERNAL STD AREA(CBZ)	87100		86600	88500	91300	94400	79100	
INTERNAL STD AREA(DFB)	103000		101000	106000	110000	113000	96100	
DILUTION FACTOR	1		1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME	4(14 D)		4(14 D)	4(14 D)				

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TABLE D.7.5 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN28015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0328886 WATER RRF	INITIAL CAL % RSD BR0328886 WATER %	TUNED CALIBRATION BR0328885 WATER %	TUNED CALIBRATION BR0425885 WATER %	CONTINUING CALIBRATION BR0425887 WATER RRF	CONTINUING CAL %D BR0425887 WATER %	ISTD RET TIM SHIFT BR0425888 WATER AREA
ACETONE	0.296	48.1			0.406	37.2	
BENZENE	0.993	2.2			0.955	3.8	
BROMODICHLOROMETHANE	0.476	2.1			0.528	11.1	
BROMOFORM	0.277	7.9			0.33	19.1	
BROMOMETHANE	0.904	35.5			0.959	6.1	
CARBON DISULFIDE	5.423	1.2			5.97	10.1	
CARBON TETRACHLORIDE	0.472	1.5			0.528	11.8	
CHLOROBENZENE	0.97	3.5			0.97	0	
CHLOROETHANE	0.757	5.3			0.74	2.2	
CHLOROFORM	2.946	3.6			2.918	0.9	
CHLOROMETHANE	1.777	2.2			1.921	8.1	
CIS-1,3-DICHLOROPROPENE	0.465	0.7			0.486	4.4	
DIBROMOCHLOROMETHANE	0.393	2			0.452	15.1	
ETHYLBENZENE	0.486	2.3			0.488	0.5	
METHYLENE CHLORIDE	1.251	7			1.148	8.2	
STYRENE	0.7	1.9			0.752	7.5	
TETRACHLOROETHENE	0.473	3.3			0.476	0.6	
TOLUENE	0.776	3.4			0.74	4.6	
TOLUENE-D8	0.456	1.7			0.431	5.5	
TRANS-1,3-DICHLOROPROPENE	0.368	3			0.426	15.8	
TRICHLOROETHENE	0.423	8.7			0.414	2.1	
VINYL ACETATE	0.33	41.1			0.574	74.1	
VINYL CHLORIDE	1.387	8.2			1.411	1.7	
XYLENE (TOTAL)	0.58	3			0.627	8	
1,1-DICHLOROETHANE	2.797	2.8			2.567	8.2	
1,1-DICHLOROETHENE	1.454	1.2			1.432	1.5	
1,1,1-TRICHLOROETHANE	0.486	0.9			0.525	8.1	
1,1,2-TRICHLOROETHANE	0.238	3			0.263	10.5	
1,1,2,2-TETRACHLOROETHANE	0.344	8.3			0.422	22.8	
1,2-DICHLOROETHANE	1.935	3.2			2.015	4.1	
1,2-DICHLOROETHANE-D4	0.838	1.2			0.844	0.7	
1,2-DICHLOROETHENE	1.544	2			1.438	6.9	
1,2-DICHLOROPROPANE	0.358	2.3			0.343	4.2	
1,4-BROMOFLUOROBENZENE	0.578	1.8			0.619	7	
2-BUTANONE	0.022	11.3			0.033	50.8	
2-HEXANONE	0.179	14.9			0.226	26.6	
4-METHYL-2-PENTANONE	0.248	9.5			0.319	28.4	

SURR 1(TOL) %RECOVERY							

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TABLE D.7.5 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN28015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0425885	BR0425887	BR0425887	BR0425888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
SURR 3(DCE) %RECOVERY

M/E 50	21	18
M/E 75	52	46
M/E 95	100	100
M/E 96	8.1	7.8
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	97	88
M/E 175-1	7.1	6.3
M/E 175-2	7.4	7.1
M/E 176-1	95	84
M/E 176-2	98	96
M/E 177-1	8	6.9
M/E 177-2	8.4	8.2

INTERNAL STD AREA(BCM)	21000
INTERNAL STD AREA(CBZ)	80000
INTERNAL STD AREA(DFB)	93600

DILUTION FACTOR
ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	TRIP BLANK	TRIP BLANK	TRIP BLANK	B. 479	MATRIX	MS %
TYPE OF LOCATION	BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	CESSPOOL	SPIKE	RECOVERY
SAMPLE NUMBER	VBK07341	BRN28015A	BRN33012A	BRN37016A	BR311026A	BR311026A	BR311026A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	%
ENV PROBLEM NO		99	99	99	2	2	2
ACETONE	8 J	11 B	8 JB	10 U	16 B	17 B	
BENZENE	5 U	5 U	5 U	5 U	5 U	51 S	102
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U	

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TABLE D.7.5 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN28015A

DRAFT DO NOT CITE

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AREA	QA					QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK07341 WATER UG/L	TRIP BLANK TRIP BLANK BRN28015A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN33012A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN37016A WATER UG/L 99	B. 479 CESSPOOL BR311026A WATER UG/L 2	MATRIX SPIKE BR311026A WATER UG/L 2	MS % RECOVERY BR311026A WATER % 2
BROMOMETHANE	10 U	10 U	10 U	10 U	10 U	10 U	
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U	5 U	
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	
CHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	54 S	107
CHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	
CHLOROFORM	1 J	5 U	5 U	5 U	5 U	5 U	
CHLOROMETHANE	10 U	10 U	10 U	10 U	10 U	10 U	
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	
METHYLENE CHLORIDE	2 J	5 U	5 U	5 U	5 U	5 U	
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	
TOLUENE	0.3 J	11 B	12 B	11 B	3 JB	55 BS	105
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	
TRICHLOROETHENE	5 U	3 J	3 J	2 J	5 U	53 S	106
VINYL ACETATE	10 U	10 U	10 U	10 U	10 U	10 U	
VINYL CHLORIDE	10 U	10 U	10 U	10 U	10 U	10 U	
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U	5 U	
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	49 S	98
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U	10 U	10 U	10 U	
2-HEXANONE	10 U	10 U	10 U	10 U	10 U	10 U	
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U	10 U	10 U	

SURR 1(TOL) %RECOVERY	101	102	101	104	104	102	
SURR 2(BFB) %RECOVERY	98	98	99	98	99	95	
SURR 3(DCE) %RECOVERY	96	98	99	97	96	92	

TABLE D.7.5 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN28015A

DRAFT DO NOT CITE

AREA	QA					QA	QA
LOCATION	METHOD	TRIP BLANK	TRIP BLANK	TRIP BLANK	B. 479	MATRIX	MS %
TYPE OF LOCATION	BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	CESSPOOL	SPIKE	RECOVERY
SAMPLE NUMBER	VBK07341	BRN28015A	BRN33012A	BRN37016A	BR311026A	BR311026A	BR311026A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	%
ENV PROBLEM NO		99	99	99	2	2	2

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	16300	19400	16200	20200	20800	21900
INTERNAL STD AREA(CBZ)	60200	77400	61900	79300	82100	86400
INTERNAL STD AREA(DFB)	70900	91400	72400	94000	96100	102000

DILUTION FACTOR	1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		7(14 D)	5(14 D)	4(14 D)	6(14 D)	6(14 D)

AREA	QA	QA	QA				
LOCATION	RPD	MATRIX SPIKE	MSD %	BOUNDRY RD	BOUNDRY RD	BOUNDRY RD	AGS SCRAP.
TYPE OF LOCATION		DUPLICATE	RECOVERY	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR311026A	BR311026A	BR311026A	BR809016A	BR809027A	BR809038A	BR805012A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	%	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	2	2	2	0	0	0	9

ACETONE		17 B		13 B	11 B	11 B	10 U
BENZENE	2	50 S	99	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE		5 U		5 U	5 U	5 U	5 U
BROMOFORM		5 U		5 U	5 U	5 U	5 U
BROMOMETHANE		10 U		10 U	10 U	10 U	10 U
CARBON DISULFIDE		5 U		5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE		5 U		5 U	5 U	5 U	5 U
CHLOROBENZENE	1	55 S	109	5 U	5 U	5 U	5 U

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TABLE D.7.5 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN28015A

DRAFT DO NOT CITE

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AREA	QA	QA	QA				
LOCATION	RPD	MATRIX SPIKE	MSD %	BOUNDRY RD	BOUNDRY RD	BOUNDRY RD	AGS SCRAP.
TYPE OF LOCATION		DUPLICATE	RECOVERY	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR311026A	BR311026A	BR311026A	BR809016A	BR809027A	BR809038A	BR805012A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	%	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	2	2	2	0	0	0	9
CHLOROETHANE		10 U		10 U	10 U	10 U	10 U
CHLOROFORM		5 U		5 U	5 U	5 U	2 JB
CHLOROMETHANE		10 U		10 U	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE		5 U		5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE		5 U		5 U	5 U	5 U	5 U
ETHYLBENZENE		5 U		5 U	5 U	5 U	5 U
METHYLENE CHLORIDE		5 U		5 U	5 U	5 U	5 U
STYRENE		5 U		5 U	5 U	5 U	5 U
TETRACHLOROETHENE		5 U		5 U	5 U	5 U	5 U
TOLUENE	1	54 BS	103	2 JB	1 JB	5 U	0.4 JB
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE		5 U		5 U	5 U	5 U	5 U
TRICHLOROETHENE	3	51 S	102	5 U	5 U	5 U	5 U
VINYL ACETATE		10 U		10 U	10 U	10 U	10 U
VINYL CHLORIDE		10 U		10 U	10 U	10 U	10 U
XYLENE (TOTAL)		5 U		5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE		5 U		5 U	5 U	5 U	32
1,1-DICHLOROETHENE	4	47 S	94	5 U	5 U	5 U	3 J
1,1,1-TRICHLOROETHANE		5 U		5 U	5 U	5 U	60
1,1,2-TRICHLOROETHANE		5 U		5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE		5 U		5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE		5 U		5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE		5 U		5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE		5 U		5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE		10 U		10 U	10 U	10 U	10 U
2-HEXANONE		10 U		10 U	10 U	10 U	10 U
4-METHYL-2-PENTANONE		10 U		10 U	10 U	10 U	10 U
SURR 1(TOL) %RECOVERY		103		104	102	101	101
SURR 2(BFB) %RECOVERY		96		95	93	94	96
SURR 3(DCE) %RECOVERY		90		92	91	89	90
M/E 50							
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							

TABLE D.7.5 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN28015A

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION	RPD	MATRIX SPIKE	MSD %	BOUNDRY RD	BOUNDRY RD	BOUNDRY RD	AGS SCRAP.
TYPE OF LOCATION		DUPLICATE	RECOVERY	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR311026A	BR311026A	BR311026A	BR809016A	BR809027A	BR809038A	BR805012A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	%	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	2	2	2	0	0	0	9
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)		21900		22800	23100	23300	20300
INTERNAL STD AREA(CBZ)		85800		88100	93000	94300	79100
INTERNAL STD AREA(DFB)		101000		103000	109000	110000	90400
DILUTION FACTOR		1		1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		6(14 D)		8(14 D)	8(14 D)	8(14 D)	5(14 D)

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TABLE D.7.6 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN36015A

DRAFT DO NOT CITE

D-357

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0428885	BR0428887	BR0428887	BR0428888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACETONE	0.296	48.1			0.339	14.4	
BENZENE	0.993	2.2			0.958	3.5	
BROMODICHLOROMETHANE	0.476	2.1			0.522	9.7	
BROMOFORM	0.277	7.9			0.299	7.9	
BROMOMETHANE	0.904	35.5			0.963	6.6	
CARBON DISULFIDE	5.423	1.2			5.384	0.7	
CARBON TETRACHLORIDE	0.472	1.5			0.522	10.7	
CHLOROBENZENE	0.97	3.5			0.982	1.2	
CHLOROETHANE	0.757	5.3			0.732	3.3	
CHLOROFORM	2.946	3.6			2.913	1.1	
CHLOROMETHANE	1.777	2.2			1.929	8.6	
CIS-1,3-DICHLOROPROPENE	0.465	0.7			0.463	0.5	
DIBROMOCHLOROMETHANE	0.393	2			0.44	11.9	
ETHYLBENZENE	0.486	2.3			0.492	1.4	
METHYLENE CHLORIDE	1.251	7			1.217	2.7	
STYRENE	0.7	1.9			0.757	8.1	
TETRACHLOROETHENE	0.473	3.3			0.494	4.4	
TOLUENE	0.776	3.4			0.753	3	
TOLUENE-D8	0.456	1.7			0.445	2.4	
TRANS-1,3-DICHLOROPROPENE	0.368	3			0.404	9.7	
TRICHLOROETHENE	0.423	8.7			0.427	1.1	
VINYL ACETATE	0.33	41.1			0.507	53.7	
VINYL CHLORIDE	1.387	8.2			1.47	5.9	
XYLENE (TOTAL)	0.58	3			0.623	7.3	
1,1-DICHLOROETHANE	2.797	2.8			2.579	7.8	
1,1-DICHLOROETHENE	1.454	1.2			1.459	0.3	
1,1,1-TRICHLOROETHANE	0.486	0.9			0.513	5.6	
1,1,2-TRICHLOROETHANE	0.238	3			0.247	3.9	
1,1,2,2-TETRACHLOROETHANE	0.344	8.3			0.368	7.2	
1,2-DICHLOROETHANE	1.935	3.2			1.98	2.3	
1,2-DICHLOROETHANE-D4	0.838	1.2			0.824	1.7	
1,2-DICHLOROETHENE	1.544	2			1.473	4.6	
1,2-DICHLOROPROPANE	0.358	2.3			0.338	5.7	
1,4-BROMOFLUOROBENZENE	0.578	1.8			0.597	3.3	
2-BUTANONE	0.022	11.3			0.026	19.1	
2-HEXANONE	0.179	14.9			0.174	2.6	
4-METHYL-2-PENTANONE	0.248	9.5			0.253	1.7	

SURR 1(TOL) %RECOVERY							

TABLE D.7.6 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN36015A

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0428885	BR0428887	BR0428887	BR0428888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	21	23
M/E 75	52	47
M/E 95	100	100
M/E 96	8.1	6.9
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	97	99
M/E 175-1	7.1	7.4
M/E 175-2	7.4	7.5
M/E 176-1	95	97
M/E 176-2	98	98
M/E 177-1	8	7.4
M/E 177-2	8.4	7.6

INTERNAL STD AREA(BCM) 23200
 INTERNAL STD AREA(CBZ) 88600
 INTERNAL STD AREA(DFB) 104000

DILUTION FACTOR
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	TRIP BLANK	B-975	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	BLANK	TRIP BLANK	WELL	SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	VBK07367	BRN36015A	BR807014A	BR807014A	BR807014A	BR807014A	BR807014A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	%	%	UG/L
ENV PROBLEM NO		99	10	10	10	10	10
ACETONE	13	12 B	10 U	10 U			10 U
BENZENE	5 U	5 U	5 U	51 S	101	0	50 S
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U			5 U
BROMOFORM	5 U	5 U	5 U	5 U			5 U

TABLE D.7.6 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN36015A

DRAFT DO NOT CITE

AREA	QA			QA	QA	QA	QA	
	LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK07367 WATER UG/L	TRIP BLANK TRIP BLANK BRN36015A WATER UG/L	B-975 WELL BR807014A WATER UG/L	MATRIX SPIKE BR807014A WATER UG/L	MS % RECOVERY BR807014A WATER %	RPD BR807014A WATER %	MATRIX SPIKE DUPLICATE BR807014A WATER UG/L
D-359	BROMOMETHANE	10 U	10 U	10 U	10 U			10 U
	CARBON DISULFIDE	5 U	5 U	5 U	5 U			5 U
	CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U			5 U
	CHLOROBENZENE	5 U	5 U	5 U	54 S	107	0	54 S
	CHLOROETHANE	10 U	10 U	10 U	10 U			10 U
	CHLOROFORM	0.9 J	5 U	3 JB	3 JB			2 JB
	CHLOROMETHANE	10 U	10 U	10 U	10 U			10 U
	CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U			5 U
	DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U			5 U
	ETHYLBENZENE	5 U	5 U	5 U	5 U			5 U
	METHYLENE CHLORIDE	2 J	5 U	5 U	5 U			5 U
	STYRENE	5 U	5 U	5 U	5 U			5 U
	TETRACHLOROETHENE	5 U	5 U	5 U	5 U			5 U
	TOLUENE	0.3 J	11 B	5 U	52 BS	104	0	52 BS
	TOLUENE-D8							
	TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U			5 U
	TRICHLOROETHENE	5 U	2 J	5 U	52 S	104	1	51 S
	VINYL ACETATE	10 U	10 U	10 U	10 U			10 U
	VINYL CHLORIDE	10 U	10 U	10 U	10 U			10 U
	XYLENE (TOTAL)	5 U	5 U	5 U	5 U			5 U
	1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U			5 U
	1,1-DICHLOROETHENE	5 U	5 U	5 U	50 S	100	3	49 S
	1,1,1-TRICHLOROETHANE	5 U	5 U	2 J	2 J			1 J
	1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U			5 U
	1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U			5 U
	1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U			5 U
	1,2-DICHLOROETHANE-D4							
	1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U			5 U
	1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U			5 U
	1,4-BROMOFLUOROBENZENE							
	2-BUTANONE	10 U	11	10 U	11			14
	2-HEXANONE	10 U	10 U	10 U	10 U			10 U
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U			10 U	
SURR 1(TOL) %RECOVERY	96	100	99	98			97	
SURR 2(BFB) %RECOVERY	97	101	97	96			96	
SURR 3(DCE) %RECOVERY	92	96	94	92			89	

TABLE D.7.6 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN36015A

DRAFT DO NOT CITE

AREA	QA			QA	QA	QA	QA
LOCATION	METHOD	TRIP BLANK	B-975	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	BLANK	TRIP BLANK	WELL	SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	VBK07367	BRN36015A	BR807014A	BR807014A	BR807014A	BR807014A	BR807014A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	%	%	UG/L
ENV PROBLEM NO	99	10	10	10	10	10	10

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	18800	22800	18600	22700		23500
INTERNAL STD AREA(CBZ)	70400	88800	72100	92700		95400
INTERNAL STD AREA(DFB)	82400	105000	84900	109000		113000
DILUTION FACTOR	1	1	1	1		1
ACTUAL(ALLOWED) HOLD TIME		7(14 D)	7(14 D)	7(14 D)		7(14 D)

AREA	QA						
LOCATION	MSD %	B-975	B-975	B. 975	B. 422	B. 422	B. 422
TYPE OF LOCATION	RECOVERY	WELL	WELL	BUBBLE ARE	CESSPOOL	CESSPOOL	CESSPOOL
SAMPLE NUMBER	BR807014A	BR807025A	BR807036A	BR806159A	BR308010B	BR308021B	BR308032B
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	10	10	10	10	2	2	2
ACETONE		5 B	10 U	10 U	44 B	120 B	94 B
BENZENE	100	5 U	5 U	5 U	1 J	5	4 J
BROMODICHLOROMETHANE		5 U	5 U	5 U	5 U	5 U	5 U
BROMOFORM		5 U	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE		10 U	10 U	10 U	10 U	10 U	10 U
CARBON DISULFIDE		5 U	5 U	5 U	3 J	6	6
CARBON TETRACHLORIDE		5 U	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	108	5 U	5 U	5 U	6	19	17

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TABLE D.7.6 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN36015A

DRAFT DO NOT CITE

AREA	QA	LOCATION						
		MSD % RECOVERY BR807014A WATER	B-975 WELL BR807025A WATER	B-975 WELL BR807036A WATER	B. 975 BUBBLE ARE BR806159A WATER	B. 422 CESSPOOL BR308010B WATER	B. 422 CESSPOOL BR308021B WATER	B. 422 CESSPOOL BR308032B WATER
TYPE OF LOCATION		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
SAMPLE NUMBER		10	10	10	2	2	2	
MATRIX								
UNITS								
ENV PROBLEM NO								
D-361								
CHLOROETHANE		10 U	10 U	10 U	16	140	57	
CHLOROFORM		2 JB	3 JB	5 U	5 U	2 JB	2 JB	
CHLOROMETHANE		10 U	10 U	10 U	4 J	29	14	
CIS-1,3-DICHLOROPROPENE		5 U	5 U	5 U	5 U	5 U	5 U	
DIBROMOCHLOROMETHANE		5 U	5 U	5 U	5 U	5 U	5 U	
ETHYLBENZENE		5 U	5 U	5 U	26	130	98	
METHYLENE CHLORIDE		5 U	5 U	2 JB	260 B	11000 B	10000 B	
STYRENE		5 U	5 U	5 U	5 U	5 U	5 U	
TETRACHLOROETHENE		5 U	5 U	5 U	5 U	7	4 J	
TOLUENE	104	5 U	0.5 JB	2 JB	550 B	580 B	510 B	
TOLUENE-D8								
TRANS-1,3-DICHLOROPROPENE		5 U	5 U	5 U	5 U	5 U	5 U	
TRICHLOROETHENE	102	5 U	5 U	5 U	0.8 J	590	400	
VINYL ACETATE		10 U	10 U	10 U	10 U	10 U	10 U	
VINYL CHLORIDE		10 U	10 U	10 U	11	44	22	
XYLENE (TOTAL)		5 U	5 U	5 U	110	600	440	
1,1-DICHLOROETHANE		5 U	5 U	5 U	59	2900	1800	
1,1-DICHLOROETHENE	97	5 U	5 U	5 U	2 J	22	14	
1,1,1-TRICHLOROETHANE		2 J	5 U	5 U	5 U	470	450	
1,1,2-TRICHLOROETHANE		5 U	5 U	5 U	5 U	19	13	
1,1,2,2-TETRACHLOROETHANE		5 U	5 U	5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE		5 U	5 U	5 U	4 J	120	80	
1,2-DICHLOROETHANE-D4								
1,2-DICHLOROETHENE		5 U	5 U	5 U	98	520	300	
1,2-DICHLOROPROPANE		5 U	5 U	5 U	140	380	220	
1,4-BROMOFLUOROBENZENE								
2-BUTANONE		10 U	10 U	10 U	18	300	240	
2-HEXANONE		10 U	10 U	10 U	10 U	10 U	10 U	
4-METHYL-2-PENTANONE		10 U	10 U	10 U	32	41	29	
Surr 1(TOL) %RECOVERY		98	100	102	101	97	88	
Surr 2(BFB) %RECOVERY		95	99	97	109	104	98	
Surr 3(DCE) %RECOVERY		87	92	91	96	107	98	
M/E 50								
M/E 75								
M/E 95								
M/E 96								
M/E 173-1								

TABLE D.7.6 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BRN36015A

DRAFT DO NOT CITE

AREA	QA						
LOCATION	MSD %	B-975	B-975	B. 975	B. 422	B. 422	B. 422
TYPE OF LOCATION	RECOVERY	WELL	WELL	BUBBLE ARE	CESSPOOL	CESSPOOL	CESSPOOL
SAMPLE NUMBER	BR807014A	BR807025A	BR807036A	BR806159A	BR308010B	BR308021B	BR308032B
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	10	10	10	10	2	2	2
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)		24200	23300	24000	23600	26300	22500
INTERNAL STD AREA(CBZ)		97200	93300	94500	92700	107000	95500
INTERNAL STD AREA(DFB)		113000	108000	112000	109000	120000	104000
DILUTION FACTOR		1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		7(14 D)	7(14 D)	8(14 D)	10(14 D)	10(14 D)	10(14 D)

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TUNED CALIBRATION BR0617885 WATER %	METHOD BLANK VBK006171 WATER UG/L	INITIAL CAL RRF BR0617886 WATER UG/L	INITIAL CAL % RSD BR0617886 WATER UG/L	METHOD BLANK VBK006172 SOIL UG/KG	INITIAL CAL RRF BR0617886 SOIL RRF	INITIAL CAL % RSD BR0617886 SOIL %
ACETONE		10 U	0.327	10.1	10 U	0.55	35
BENZENE		5 U	0.738	7.8	5 U	0.79	15
BROMODICHLOROMETHANE		5 U	0.692	10	5 U	0.73	16
BROMOFORM		5 U	0.464	10.4	5 U	0.58	22
BROMOMETHANE		10 U	1.136	16	10 U	1.4	21
CARBON DISULFIDE		5 U	2.758	6.5	5 U	2.8	15
CARBON TETRACHLORIDE		5 U	0.622	9.4	5 U	0.66	14
CHLOROBENZENE		5 U	1.139	9.9	5 U	1.2	15
CHLOROETHANE		10 U	0.506	8.9	10 U	0.54	19
CHLOROFORM		5 U	2.893	8.2	5 U	2.8	19
CHLOROMETHANE		10 U	0.755	11.3	10 U	0.77	9.3
CIS-1,3-DICHLOROPROPENE		5 U	0.516	10.1	5 U	0.53	21
DIBROMOCHLOROMETHANE		5 U	0.703	10.4	5 U	0.76	22
ETHYLBENZENE		5 U	0.542	9.4	5 U	0.58	17
METHYLENE CHLORIDE		5 U	1.088	9.8	5 U	1.1	10
STYRENE		5 U	1.052	11.3	5 U	1.1	18
TETRACHLOROETHENE		5 U	0.624	7.9	5 U	0.61	18
TOLUENE		5 U	0.704	4.7	5 U	0.76	14
TOLUENE-D8			1.092	3.4		1.1	6
TRANS-1,3-DICHLOROPROPENE		5 U	0.362	9.7	5 U	0.4	17
TRICHLOROETHENE		5 U	0.531	8	5 U	0.53	14
VINYL ACETATE		10 U	0.412	13.9	10 U	0.57	11
VINYL CHLORIDE		10 U	0.809	4.6	10 U	0.85	16
XYLENE (TOTAL)		5 U	0.678	10.7	5 U	0.68	18
1,1-DICHLOROETHANE		5 U	2.029	3.4	5 U	2.1	10
1,1-DICHLOROETHENE		5 U	1.333	7.5	5 U	1.3	19
1,1,1-TRICHLOROETHANE		5 U	0.686	4.6	5 U	0.77	7.6
1,1,2-TRICHLOROETHANE		5 U	0.359	4.6	5 U	0.4	12
1,1,2,2-TETRACHLOROETHANE		5 U	0.537	8.9	5 U	0.76	24
1,2-DICHLOROETHANE		5 U	1.837	6.1	5 U	1.9	22
1,2-DICHLOROETHANE-D4			1.459	6.7		1.4	13
1,2-DICHLOROETHENE		5 U	1.383	11.1	5 U	1.3	18
1,2-DICHLOROPROPANE		5 U	0.311	10.2	5 U	0.33	10
1,4-BROMOFLUOROBENZENE			0.704	6.7		0.67	6
2-BUTANONE		10 U	0.019	21.5	10 U	0.037	25
2-HEXANONE		10 U	0.294	21.6	10 U	0.47	17
4-METHYL-2-PENTANONE		10 U	0.413	25.7	10 U	0.57	19

SURR 1(TOL) %RECOVERY							

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	TUNED	METHOD	INITIAL CAL	INITIAL CAL	METHOD	INITIAL CAL	INITIAL CAL
TYPE OF LOCATION	CALIBRATION	BLANK	RRF	% RSD	BLANK	RRF	% RSD
SAMPLE NUMBER	BR0617885	VBK006171	BR0617886	BR0617886	VBK006172	BR0617886	BR0617886
MATRIX	WATER	WATER.	WATER	WATER	SOIL	SOIL	SOIL
UNITS	%	UG/L	UG/L	UG/L	UG/KG	RRF	%
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	21
M/E 75	53
M/E 95	100
M/E 96	7.9
M/E 173-1	0
M/E 173-2	0
M/E 174	95
M/E 175-1	5.4
M/E 175-2	5.7
M/E 176-1	92
M/E 176-2	97
M/E 177-1	8.3
M/E 177-2	9

INTERNAL STD AREA(BCM)
 INTERNAL STD AREA(CBZ)
 INTERNAL STD AREA(DFB)

DILUTION FACTOR 1
 PERCENT MOISTURE 1
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	METHOD	TUNED	CONTINUING	CONTINUING
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	BLANK	CALIBRATION	CALIBRATION	CAL %D
SAMPLE NUMBER	BR0620886	BR0620886	BR0620885	VBK00620	BR0627885	BR0627887	BR0627887
MATRIX	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
UNITS	RRF	%	%	UG/KG	%	RRF	%
ENV PROBLEM NO							
ACETONE	0.395	43.6		1000 U		0.459	-40.4
BENZENE	0.718	9.4		500 U		0.743	-0.7
BROMODICHLOROMETHANE	0.66	14.7		500 U		0.573	17.2

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0620886 SOIL RRF	INITIAL CAL % RSD BR0620886 SOIL %	TUNED CALIBRATION BR0620885 SOIL %	METHOD BLANK VBK00620 SOIL UG/KG	TUNED CALIBRATION BR0627885 WATER %	CONTINUING CALIBRATION BR0627887 WATER RRF	CONTINUING CAL %D BR0627887 WATER %
BROMOFORM	0.403	15.3		500 U		0.345	25.7
BROMOMETHANE	1.707	17.4		1000 U		1.28	-12.7
CARBON DISULFIDE	2.324	9.8		500 U		2.344	15
CARBON TETRACHLORIDE	0.531	12.9		500 U		0.48	22.8
CHLOROBENZENE	1.047	14.9		500 U		1.1	3.4
CHLOROETHANE	0.842	31.3		1000 U		0.58	-14.6
CHLOROFORM	2.547	12.4		500 U		2.734	5.5
CHLOROMETHANE	0.697	13		1000 U		0.764	-1.2
CIS-1,3-DICHLOROPROPENE	0.501	14.2		500 U		0.467	9.5
DIBROMOCHLOROMETHANE	0.654	14.6		500 U		0.561	20.2
ETHYLBENZENE	0.513	13.3		500 U		0.521	3.9
METHYLENE CHLORIDE	0.968	9.6		500 U		1.014	6.8
STYRENE	0.984	15.1		500 U		1.041	1
TETRACHLOROETHENE	0.527	15.2		500 U		0.566	9.3
TOLUENE	0.68	13.1		500 U		0.627	10.9
TOLUENE-D8	1.121	3.3				1.146	-4.9
TRANS-1,3-DICHLOROPROPENE	0.366	13		500 U		0.762	-99.9
TRICHLOROETHENE	0.468	13.1		500 U		0.491	7.5
VINYL ACETATE	0.419	20.3		1000 U		0.308	25.2
VINYL CHLORIDE	0.829	8		1000 U		0.852	-5.3
XYLENE (TOTAL)	0.597	15.6		500 U		0.584	13.9
1,1-DICHLOROETHANE	1.787	12.8		500 U		2.035	-0.3
1,1-DICHLOROETHENE	1.048	8.7		500 U		1.307	2
1,1,1-TRICHLOROETHANE	0.593	10.3		500 U		0.626	8.7
1,1,2-TRICHLOROETHANE	0.353	13.3		500 U		0.38	-5.9
1,1,2,2-TETRACHLOROETHANE	0.478	13.7		500 U		0.516	3.9
1,2-DICHLOROETHANE	1.656	16.8		500 U		1.808	1.6
1,2-DICHLOROETHANE-D4	1.371	5.9				1.396	4.3
1,2-DICHLOROETHENE	1.172	8.6		500 U		1.37	0.9
1,2-DICHLOROPROPANE	0.315	12.3		500 U		0.356	-14.5
1,4-BROMOFLUOROBENZENE	0.667	4.3				0.646	8.2
2-BUTANONE	0.04	59.3		1000 U		0.023	-21.1
2-HEXANONE	0.313	26.4		1000 U		0.309	-5.1
4-METHYL-2-PENTANONE	0.387	15.2		1000 U		0.386	6.5

SURR 1(TOL) %RECOVERY							
SURR 2(BFB) %RECOVERY							
SURR 3(DCE) %RECOVERY							

TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0620886 SOIL RRF	INITIAL CAL % RSD BR0620886 SOIL %	TUNED CALIBRATION BR0620885 SOIL %	METHOD BLANK VBK00620 SOIL UG/KG	TUNED CALIBRATION BR0627885 WATER %	CONTINUING CALIBRATION BR0627887 WATER RRF	CONTINUING CAL %D BR0627887 WATER %
M/E 75			48		56		
M/E 95			100		100		
M/E 96			5.6		8.8		
M/E 173-1			0		0		
M/E 173-2			0		0		
M/E 174			79		80		
M/E 175-1			6.2		6.2		
M/E 175-2			7.8		7.7		
M/E 176-1			77		77		
M/E 176-2			97		97		
M/E 177-1			5.2		5.1		
M/E 177-2			6.7		6.6		

INTERNAL STD AREA(BCM)
INTERNAL STD AREA(CBZ)
INTERNAL STD AREA(DFB)

DILUTION FACTOR
PERCENT MOISTURE
ACTUAL(ALLOWED) HOLD TIME

1.25

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	ISTD RET TIM SHIFT BR0627888 WATER AREA	METHOD BLANK VBK00627 WATER UG/L	B-975 WELL BR809129B WATER UG/L	B-975 WELL BR809049B WATER UG/L	MATRIX SPIKE BR809049B WATER UG/L	MS % RECOVERY BR809049B WATER %	RPD BR809049B WATER %
ACETONE		10 U	10 U	10 U	10 U		
BENZENE		5 U	5 U	5 U	50 S	100	9
BROMODICHLOROMETHANE		5 U	5 U	5 U	5		
BROMOFORM		5 U	5 U	5 U	5 U		
BROMOMETHANE		10 U	10 U	10 U	10 U		
CARBON DISULFIDE		5 U	5 U	5 U	5 U		
CARBON TETRACHLORIDE		5 U	5 U	5 U	5 U		

TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	ISTD RET TIM SHIFT BR0627888 WATER AREA	METHOD BLANK VBK00627 WATER UG/L	B-975 WELL BR809129B WATER UG/L 10	B-975 WELL BR809049B WATER UG/L 10	MATRIX SPIKE BR809049B WATER UG/L 10	MS % RECOVERY BR809049B WATER % 10	RPD BR809049B WATER % 10
CHLOROBENZENE		5 U	5 U	5 U	46 S	93	6
CHLOROETHANE		10 U	10 U	10 U	10 U		
CHLOROFORM		5 U	5 U	9	10		
CHLOROMETHANE		10 U	10 U	10 U	10 U		
CIS-1,3-DICHLOROPROPENE		5 U	5 U	5 U	5 U		
DIBROMOCHLOROMETHANE		5 U	5 U	5 U	5 U		
ETHYLBENZENE		5 U	5 U	5 U	5 U		
METHYLENE CHLORIDE		5 U	5 U	5 U	5 U		
STYRENE		5 U	5 U	5 U	5 U		
TETRACHLOROETHENE		5 U	5 U	5 U	5 U		
TOLUENE		5 U	8	4 J	52 S	95	-2
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE		5 U	5 U	5 U	5 U		
TRICHLOROETHENE		5 U	5 U	5 U	47 S	93	7
VINYL ACETATE		10 U	10 U	10 U	10 U		
VINYL CHLORIDE		10 U	10 U	10 U	10 U		
XYLENE (TOTAL)		5 U	5 U	5 U	5 U		
1,1-DICHLOROETHANE		5 U	5 U	5 U	5 U		
1,1-DICHLOROETHENE		5 U	5 U	5 U	52 S	105	-17
1,1,1-TRICHLOROETHANE		5 U	5 U	5 U	5 U		
1,1,2-TRICHLOROETHANE		5 U	5 U	5 U	5 U		
1,1,2,2-TETRACHLOROETHANE		5 U	5 U	5 U	5 U		
1,2-DICHLOROETHANE		5 U	5 U	5 U	5 U		
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE		5 U	5 U	5 U	5 U		
1,2-DICHLOROPROPANE		5 U	5 U	5 U	5 U		
1,4-BROMOFLUOROBENZENE							
2-BUTANONE		10 U	10 U	10 U	10 U		
2-HEXANONE		10 U	10 U	10 U	10 U		
4-METHYL-2-PENTANONE		10 U	10 U	10 U	10 U		

SURR 1(TOL) %RECOVERY		96	107	107	103		
SURR 2(BFB) %RECOVERY		93	93	93	90		
SURR 3(DCE) %RECOVERY		96	81	96	98		

M/E 50							
M/E 75							
M/E 95							
M/E 96							

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA			QA	QA	QA
LOCATION	ISTD RET TIM	METHOD	B-975	B-975	MATRIX	MS %	RPD
TYPE OF LOCATION	SHIFT	BLANK	WELL	WELL	SPIKE	RECOVERY	
SAMPLE NUMBER	BR0627888	VBK00627	BR809129B	BR809049B	BR809049B	BR809049B	BR809049B
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	AREA	UG/L	UG/L	UG/L	UG/L	%	%
ENV PROBLEM NO			10	10	10	10	10

M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	67000	69500	68900	70600	64100		
INTERNAL STD AREA(CBZ)	245000	259000	245000	262000	263000		
INTERNAL STD AREA(DFB)	283000	297000	272000	285000	316000		
DILUTION FACTOR		1	1	1	1		
PERCENT MOISTURE							
ACTUAL(ALLOWED) HOLD TIME			11(14 D)	4(14 D)	4(14 D)		

AREA	QA	QA					QA
LOCATION	MATRIX SPIKE	MSD %	B-975	TRIP BLANK	B-975	TRIP BLANK	TUNED
TYPE OF LOCATION	DUPLICATE	RECOVERY	WELL	TRIP BLANK	WELL	TRIP BLANK	CALIBRATION
SAMPLE NUMBER	BR809049B	BR809049B	BR809118B	BR809141A	BR809130B	BR809152A	BR0701885
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	%	UG/L	UG/L	UG/L	UG/L	%
ENV PROBLEM NO	10	10	10	99	10	99	

ACETONE	10 U		10 U	10 U	10 U	10 U	
BENZENE	45 S	91	5 U	5 U	5 U	5 U	
BROMODICHLOROMETHANE	6		5 U	5 U	6	5 U	
BROMOFORM	5 U		5 U	5 U	5 U	5 U	
BROMOMETHANE	10 U		10 U	10 U	10 U	10 U	
CARBON DISULFIDE	5 U		5 U	5 U	5 U	5 U	
CARBON TETRACHLORIDE	5 U		5 U	5 U	5 U	5 U	
CHLOROBENZENE	44 S	88	5 U	5 U	5 U	5 U	
CHLOROETHANE	10 U		10 U	10 U	10 U	10 U	
CHLOROFORM	12		5 U	24	11	21	

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

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AREA	QA	QA					QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MATRIX SPIKE DUPLICATE BR809049B WATER UG/L 10	MSD % RECOVERY BR809049B WATER % 10	B-975 WELL BR809118B WATER UG/L 10	TRIP BLANK TRIP BLANK BR809141A WATER UG/L 99	B-975 WELL BR809130B WATER UG/L 10	TRIP BLANK TRIP BLANK BR809152A WATER UG/L 99	TUNED CALIBRATION BR0701885 WATER % %
CHLOROMETHANE	10 U		10 U	10 U	10 U	10 U	
CIS-1,3-DICHLOROPROPENE	5 U		5 U	5 U	5 U	5 U	
DIBROMOCHLOROMETHANE	5 U		5 U	5 U	3 J	5 U	
ETHYLBENZENE	5 U		5 U	5 U	5 U	5 U	
METHYLENE CHLORIDE	5 U		5 U	5 U	5 U	5 U	
STYRENE	5 U		5 U	5 U	5 U	5 U	
TETRACHLOROETHENE	5 U		5 U	5 U	5 U	5 U	
TOLUENE	53 S	97	7	5 U	5	5 U	
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U		5 U	5 U	5 U	5 U	
TRICHLOROETHENE	44 S	87	5 U	5 U	5 U	5 U	
VINYL ACETATE	10 U		10 U	10 U	10 U	10 U	
VINYL CHLORIDE	10 U		10 U	10 U	10 U	10 U	
XYLENE (TOTAL)	5 U		5 U	5 U	5 U	5 U	
1,1-DICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	
1,1-DICHLOROETHENE	62 S	125	5 U	5 U	5 U	5 U	
1,1,1-TRICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	
1,1,2-TRICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	
1,1,2,2-TETRACHLOROETHANE	5 U		5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE	5 U		5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U		5 U	5 U	5 U	5 U	
1,2-DICHLOROPROPANE	5 U		5 U	5 U	5 U	5 U	
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U		10 U	10 U	10 U	10 U	
2-HEXANONE	10 U		10 U	10 U	10 U	10 U	
4-METHYL-2-PENTANONE	10 U		10 U	10 U	10 U	10 U	
SURR 1(TOL) %RECOVERY	108		106	107	109	104	
SURR 2(BFB) %RECOVERY	91		87	91	93	91	
SURR 3(DCE) %RECOVERY	109		102	101	107	87	
M/E 50							25
M/E 75							59
M/E 95							100
M/E 96							6.6
M/E 173-1							1
M/E 173-2							1.2
M/E 174							81

TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	MATRIX SPIKE	MSD %	B-975	TRIP BLANK	B-975	TRIP BLANK	TUNED
TYPE OF LOCATION	DUPLICATE	RECOVERY	WELL	TRIP BLANK	WELL	TRIP BLANK	CALIBRATION
SAMPLE NUMBER	BR809049B	BR809049B	BR809118B	BR809141A	BR809130B	BR809152A	BR0701885
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	%	UG/L	UG/L	UG/L	UG/L	%
ENV PROBLEM NO	10	10	10	99	10	99	
M/E 175-1							5.5
M/E 175-2							6.8
M/E 176-1							79
M/E 176-2							97
M/E 177-1							4.3
M/E 177-2							5.5
INTERNAL STD AREA(BCM)	56600		64400	62600	56400	67500	
INTERNAL STD AREA(CBZ)	262000		247000	253000	242000	246000	
INTERNAL STD AREA(DFB)	293000		274000	289000	285000	264000	
DILUTION FACTOR	1		1	1	1	1	
PERCENT MOISTURE							
ACTUAL(ALLOWED) HOLD TIME	4(14 D)		11(14 D)	2(14 D)	4(14 D)	2(14 D)	
AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	B-975	W UPTON RD	TRIP BLANK
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	BLANK	WELL	WELL	TRIP BLANK
SAMPLE NUMBER	BR0701887	BR0701887	BR0701888	VBK00701	BR809107B	BR316010B	BR316054A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	AREA	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO					10	3	99
ACETONE	0.353	-8		10 U	10 U	10 U	10 U
BENZENE	0.77	-4.3		5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	0.68	1.7		5 U	5 U	5 U	5 U
BROMOFORM	0.384	17.2		5 U	5 U	5 U	5 U
BROMOMETHANE	1.429	-25.8		10 U	10 U	10 U	10 U
CARBON DISULFIDE	2.618	5.1		5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	0.529	15		5 U	5 U	5 U	5 U
CHLORO BENZENE	1.116	2		5 U	5 U	5 U	5 U
CHLOROETHANE	0.525	-3.8		10 U	10 U	10 U	10 U
CHLOROFORM	2.88	0.4		5 U	27	4 J	23
CHLOROMETHANE	0.925	-22.5		10 U	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	0.468	9.3		5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	0.604	14.1		5 U	5 U	5 U	5 U

TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR0701887 WATER RRF	CONTINUING CAL %D BR0701887 WATER %	ISTD RET TIM SHIFT BR0701888 WATER AREA	METHOD BLANK VBK00701 WATER UG/L	B-975 WELL BR809107B WATER UG/L 10	W UPTON RD WELL BR316010B WATER UG/L 3	TRIP BLANK TRIP BLANK BR316054A WATER UG/L 99	
ETHYLBENZENE	0.569	-5		5 U	5 U	5 U	5 U	
METHYLENE CHLORIDE	1.149	-5.6		5 U	7	5 U	7	
STYRENE	0.993	5.6		5 U	5 U	5 U	5 U	
TETRACHLOROETHENE	0.552	11.5		5 U	5 U	5 U	5 U	
TOLUENE	0.682	3.1		5 U	3 J	3 J	5 U	
TOLUENE-D8	1.086	0.5						
TRANS-1,3-DICHLOROPROPENE	0.318	12.2		5 U	5 U	5 U	5 U	
TRICHLOROETHENE	0.51	4		5 U	5 U	5 U	5 U	
VINYL ACETATE	0.413	-0.2		10 U	10 U	10 U	10 U	
VINYL CHLORIDE	0.89	-10		10 U	10 U	10 U	10 U	
XYLENE (TOTAL)	0.59	13		5 U	5 U	5 U	5 U	
1,1-DICHLOROETHANE	2.145	-5.7		5 U	5 U	5 U	5 U	
1,1-DICHLOROETHENE	1.357	-1.8		5 U	5 U	5 U	5 U	
1,1,1-TRICHLOROETHANE	0.717	-4.5		5 U	5 U	5 U	5 U	
1,1,2-TRICHLOROETHANE	0.383	-6.7		5 U	5 U	5 U	5 U	
1,1,2,2-TETRACHLOROETHANE	0.519	3.4		5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE	1.961	-6.8		5 U	5 U	5 U	5 U	
1,2-DICHLOROETHANE-D4	1.393	4.5						
1,2-DICHLOROETHENE	1.487	-7.5		5 U	5 U	5 U	5 U	
1,2-DICHLOROPROPANE	0.309	0.6		5 U	5 U	5 U	5 U	
1,4-BROMOFLUOROBENZENE	0.647	8.1						
2-BUTANONE	0.022	-15.8		10 U	10 U	10 U	10 U	
2-HEXANONE	0.331	-12.6		10 U	10 U	10 U	10 U	
4-METHYL-2-PENTANONE	0.359	13.1		10 U	10 U	10 U	10 U	
SURR 1(TOL) %RECOVERY				100	106	103	105	
SURR 2(BFB) %RECOVERY				88	96	91	92	
SURR 3(DCE) %RECOVERY				104	114	84	96	
M/E 50								
M/E 75								
M/E 95								
M/E 96								
M/E 173-1								
M/E 173-2								
M/E 174								
M/E 175-1								
M/E 175-2								
M/E 176-1								

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA				
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	B-975	W UPTON RD	TRIP BLANK	
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	BLANK	WELL	WELL	TRIP BLANK	
SAMPLE NUMBER	BR0701887	BR0701887	BR0701888	VBK00701	BR809107B	BR316010B	BR316054A	
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
UNITS	RRF	%	AREA	UG/L	UG/L	UG/L	UG/L	
ENV PROBLEM NO					10	3	99	

M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	59900	61400	52500	65200	61100
INTERNAL STD AREA(CBZ)	224000	229000	221000	233000	212000
INTERNAL STD AREA(DFB)	252000	249000	258000	263000	251000

DILUTION FACTOR			1	1	1	1
PERCENT MOISTURE						
ACTUAL(ALLOWED) HOLD TIME				6(14 D)	6(14 D)	6(14 D)

AREA

LOCATION	W UPTON RD	W UPTON RD	W UPTON RD	B-975	B-975	B-975	B-975
TYPE OF LOCATION	WELL	WELL	WELL	WELL	WELL	WELL	WELL
SAMPLE NUMBER	BR316021B	BR316032C	BR316043B	BR809050B	BR809061B	BR809072B	BR809083B
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	3	3	3	10	10	10	10

ACETONE	13	10 U					
BENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	3 J	5 U	5 U	5 U	5 U	4 J	5
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	10 U						
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROETHANE	10 U						
CHLOROFORM	4 J	2 J	5 U	5 U	5 U	7	8
CHLOROMETHANE	10 U						
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	6	11	7	7	5 U	5 U	5 U
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	W UPTON RD WELL BR316021B WATER UG/L 3	W UPTON RD WELL BR316032C WATER UG/L 3	W UPTON RD WELL BR316043B WATER UG/L 3	B-975 WELL BR809050B WATER UG/L 10	B-975 WELL BR809061B WATER UG/L 10	B-975 WELL BR809072B WATER UG/L 10	B-975 WELL BR809083B WATER UG/L 10
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	2 J	1 J	1 J	4 J	5	8	10
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
VINYL ACETATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
VINYL CHLORIDE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	4 J	5	5 U	5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-HEXANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SURR 1(TOL) %RECOVERY	98	99	102	103	108	99	110
SURR 2(BFB) %RECOVERY	93	93	90	92	96	91	101
SURR 3(DCE) %RECOVERY	93	97	94	87	96	88	97
M/E 50							
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	W UPTON RD WELL BR316021B WATER UG/L 3	W UPTON RD WELL BR316032C WATER UG/L 3	W UPTON RD WELL BR316043B WATER UG/L 3	B-975 WELL BR809050B WATER UG/L 10	B-975 WELL BR809061B WATER UG/L 10	B-975 WELL BR809072B WATER UG/L 10	B-975 WELL BR809083B WATER UG/L 10
INTERNAL STD AREA(BCM)	57400	62300	61400	58100	57900	61600	59000
INTERNAL STD AREA(CBZ)	230000	233000	232000	222000	221000	230000	212000
INTERNAL STD AREA(DFB)	265000	240000	258000	236000	264000	249000	248000

DILUTION FACTOR	1	1	1	1	1	1	1
PERCENT MOISTURE							
ACTUAL(ALLOWED) HOLD TIME	6(14 D)	6(14 D)	6(14 D)	7(14 D)	7(14 D)	7(14 D)	7(14 D)

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TUNED CALIBRATION BR0705885 SOIL %	CONTINUING CALIBRATION BR0705887 SOIL RRF	CONTINUING CAL %D BR0705887 SOIL %	ISTD RET TIM SHIFT BR0705888 SOIL AREA	METHOD BLANK VVK00705 SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508056A SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508089A SOIL UG/KG
						4	4

ACETONE	0.869		-58		10 U	74	66
BENZENE	0.742		5.7		5 U	12 U	11 U
BROMODICHLOROMETHANE	0.639		12		5 U	12 U	11 U
BROMOFORM	0.432		24.9		5 U	12 U	11 U
BROMOMETHANE	1.246		11.1		10 U	24 U	21 U
CARBON DISULFIDE	2.395		15.2		5 U	12 U	11 U
CARBON TETRACHLORIDE	0.519		20.8		5 U	12 U	11 U
CHLOROBENZENE	1.03		12.4		5 U	12 U	11 U
CHLOROETHANE	0.547		-2.2		10 U	24 U	21 U
CHLOROFORM	2.666		6.4		5 U	12 U	11 U
CHLOROMETHANE	0.666		13.8		10 U	24 U	21 U
CIS-1,3-DICHLOROPROPENE	0.488		8.6		5 U	12 U	11 U
DIBROMOCHLOROMETHANE	0.678		11.1		5 U	12 U	11 U
ETHYLBENZENE	0.494		14.5		5 U	12 U	11 U
METHYLENE CHLORIDE	1.083		2.6		5 U	400	110
STYRENE	0.924		16.2		5 U	12 U	11 U
TETRACHLOROETHENE	0.574		6.4		5 U	12 U	11 U
TOLUENE	0.656		13.3		5 U	4 J	11 U
TOLUENE-D8	1.128		-5.9				
TRANS-1,3-DICHLOROPROPENE	0.363		10.2		5 U	12 U	11 U

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR00022B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA			
LOCATION	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	U/D CUR LF	U/D CUR LF	
TYPE OF LOCATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT	BLANK	WELL AT LNDF	WELL AT LNDF	
SAMPLE NUMBER	BR0705885	BR0705887	BR0705887	BR0705888	VBK00705	BR508056A	BR508089A	
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
UNITS	%	RRF	%	AREA	UG/KG	UG/KG	UG/KG	
ENV PROBLEM NO						4	4	
TRICHLOROETHENE		0.549	-3		5 U	12 U	11 U	
VINYL ACETATE		0.505	11.7		10 U	24 U	21 U	
VINYL CHLORIDE		0.811	4.9		10 U	24 U	21 U	
XYLENE (TOTAL)		0.565	16.7		5 U	12 U	11 U	
1,1-DICHLOROETHANE		1.933	8.7		5 U	12 U	11 U	
1,1-DICHLOROETHENE		1.225	2.9		5 U	12 U	11 U	
1,1,1-TRICHLOROETHANE		0.967	-25.9		5 U	88	37	
1,1,2-TRICHLOROETHANE		0.431	-6.9		5 U	12 U	11 U	
1,1,2,2-TETRACHLOROETHANE		0.602	21.1		5 U	12 U	11 U	
1,2-DICHLOROETHANE		1.738	7.7		5 U	12 U	11 U	
1,2-DICHLOROETHANE-D4		1.515	-5.6					
1,2-DICHLOROETHENE		1.395	-4.9		5 U	12 U	11 U	
1,2-DICHLOROPROPANE		0.33	0		5 U	12 U	11 U	
1,4-BROMOFLUOROBENZENE		0.665	0.6					
2-BUTANONE		0.046	-24.3		10 U	140	120	
2-HEXANONE		0.463	0.6		10 U	24 U	21 U	
4-METHYL-2-PENTANONE		0.463	19.3		10 U	24 U	21 U	
SURR 1(TOL) %RECOVERY					108	107	109	
SURR 2(BFB) %RECOVERY					97	92	92	
SURR 3(DCE) %RECOVERY					114	111	100	
M/E 50	23							
M/E 75	58							
M/E 95	100							
M/E 96	6.8							
M/E 173-1	0.7							
M/E 173-2	0.9							
M/E 174	80							
M/E 175-1	6.4							
M/E 175-2	8							
M/E 176-1	77							
M/E 176-2	96							
M/E 177-1	6.6							
M/E 177-2	8.5							
INTERNAL STD AREA(BCM)				53600	64700	59700	63000	
INTERNAL STD AREA(CBZ)				203000	243000	200000	199000	
INTERNAL STD AREA(DFB)				214000	284000	236000	239000	

TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA		
LOCATION	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	U/D CUR LF	U/D CUR LF
TYPE OF LOCATION	CALIBRATION	CALIBRATION	CAL X D	SHIFT	BLANK	WELL AT LNDF	WELL AT LNDF
SAMPLE NUMBER	BR0705885	BR0705887	BR0705887	BR0705888	VBK00705	BR508056A	BR508089A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	%	RRF	%	AREA	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO						4	4
DILUTION FACTOR					1	0.998	0.998
PERCENT MOISTURE						11	3
ACTUAL(ALLOWED) HOLD TIME						7(14 D)	7(14 D)

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	U/D CUR LF	U/D CUR LF	U/D CUR LF	TRIP BLANK	MATRIX SPIKE	MSD %	TUNED
TYPE OF LOCATION	WELL AT LNDF	WELL AT LNDF	WELL AT LNDF	TRIP BLANK	DUPLICATE	RECOVERY	CALIBRATION
SAMPLE NUMBER	BR508090A	BR508103A	BR508114A	BR508125A	BR507066A	BR507066A	BR0706885
MATRIX	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	%	%
ENV PROBLEM NO	4	4	4	99	4	4	
ACETONE	23 U	86	10 U	10 U	10 U		
BENZENE	11 U	11 U	5 U	5 U	56 S	100	
BROMODICHLOROMETHANE	11 U	11 U	5 U	5 U	5 U		
BROMOFORM	11 U	11 U	5 U	5 U	5 U		
BROMOMETHANE	23 U	22 U	10 U	10 U	10 U		
CARBON DISULFIDE	11 U	11 U	5 U	5 U	5 U		
CARBON TETRACHLORIDE	11 U	11 U	5 U	5 U	5 U		
CHLORO BENZENE	11 U	11 U	5 U	5 U	49 J	97	
CHLOROETHANE	23 U	22 U	10 U	10 U	38		
CHLOROFORM	11 U	11 U	16	23	5 U		
CHLOROMETHANE	23 U	22 U	10 U	10 U	10 U		
CIS-1,3-DICHLOROPROPENE	11 U	11 U	5 U	5 U	5 U		
DIBROMOCHLOROMETHANE	11 U	11 U	5 U	5 U	5 U		
ETHYLBENZENE	11 U	11 U	5 U	5 U	3 J		
METHYLENE CHLORIDE	130	82	86	110	12		
STYRENE	11 U	11 U	5 U	5 U	5 U		
TETRACHLOROETHENE	11 U	11 U	5 U	5 U	5 U		
TOLUENE	11 U	11 U	5 U	1 J	87 S	147 *	
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	11 U	11 U	5 U	5 U	5 U		
TRICHLOROETHENE	11 U	11 U	5 U	5 U	44 S	88	
VINYL ACETATE	23 U	22 U	10 U	10 U	10 U		
VINYL CHLORIDE	23 U	22 U	10 U	10 U	10 U		
XYLENE (TOTAL)	11 U	11 U	5 U	5 U	5 U		

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA				QA	QA	QA	
LOCATION	U/D CUR LF	U/D CUR LF	U/D CUR LF	TRIP BLANK	MATRIX SPIKE	MSD %	TUNED
TYPE OF LOCATION	WELL AT LNDF	WELL AT LNDF	WELL AT LNDF	TRIP BLANK	DUPLICATE	RECOVERY	CALIBRATION
SAMPLE NUMBER	BR508090A	BR508103A	BR508114A	BR508125A	BR507066A	BR507066A	BR0706885
MATRIX	SOIL	SOIL	SOIL	SOIL	WATER	WATER	WATER
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/L	%	%
ENV PROBLEM NO	4	4	4	99	4	4	
1,1-DICHLOROETHANE	11 U	11 U	5 U	5 U	5 U		
1,1-DICHLOROETHENE	11 U	11 U	5 U	5 U	47 S	93	
1,1,1-TRICHLOROETHANE	48	24	7	10	5 U		
1,1,2-TRICHLOROETHANE	11 U	11 U	5 U	5 U	5 U		
1,1,2,2-TETRACHLOROETHANE	11 U	11 U	5 U	5 U	5 U		
1,2-DICHLOROETHANE	11 U	11 U	5 U	5 U	5 U		
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	11 U	11 U	5 U	5 U	5 U		
1,2-DICHLOROPROPANE	11 U	11 U	5 U	5 U	5 U		
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	110	130	10 U	10 U	10 U		
2-HEXANONE	23 U	22 U	10 U	10 U	10 U		
4-METHYL-2-PENTANONE	23 U	22 U	10 U	10 U	10 U		
SURR 1(TOL) %RECOVERY	107	108	102	107	109		
SURR 2(BFB) %RECOVERY	99	101	99	104	110		
SURR 3(DCE) %RECOVERY	92	101	92	94	99		
M/E 50							28
M/E 75							59
M/E 95							100
M/E 96							5.6
M/E 173-1							0
M/E 173-2							0
M/E 174							100
M/E 175-1							5.3
M/E 175-2							5.3
M/E 176-1							96
M/E 176-2							97
M/E 177-1							8.5
M/E 177-2							8.8
INTERNAL STD AREA(BCM)	59100	60000	63600	59400	48200		
INTERNAL STD AREA(CBZ)	189000	204000	229000	215000	154000		
INTERNAL STD AREA(DFB)	223000	245000	243000	250000	217000		
DILUTION FACTOR	0.998	0.998	1	1	1		
PERCENT MOISTURE	5	4					
ACTUAL(ALLOWED) HOLD TIME	7(14 D)	7(14 D)	7(14 D)	7(14 D)	6(14 D)		

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR0706887 WATER RRF	CONTINUING CAL %D BR0706887 WATER %	ISTD RET TIM SHIFT BR0706888 WATER AREA	METHOD BLANK VBK00706 WATER UG/L	CURR. LNDF WELL BR507022A WATER UG/L 4	CURR. LNDF WELL BR507033A WATER UG/L 4	CURR. LNDF WELL BR507044A WATER UG/L 4	
ACETONE	0.271	17.1		10 U	10 U	10 U	10 U	10 U
BENZENE	0.703	4.7		5 U	5 U	4 J	5	5
BROMODICHLOROMETHANE	0.593	14.3		5 U	5 U	5 U	5 U	5 U
BROMOFORM	0.325	30		5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	1.058	6.9		10 U	10 U	10 U	10 U	10 U
CARBON DISULFIDE	2.356	14.6		5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	0.466	25.1		5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	0.949	16.7		5 U	5 U	1 J	2 J	2 J
CHLOROETHANE	0.542	-7.1		10 U	10 U	130	110	110
CHLOROFORM	2.393	17.3		5 U	2 J	5 U	5 U	5 U
CHLOROMETHANE	0.701	7.2		10 U	10 U	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	0.416	19.4		5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	0.549	21.9		5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	0.423	22		5 U	5 U	7	9	9
METHYLENE CHLORIDE	0.914	16		5 U	5 U	8	6	6
STYRENE	0.852	19		5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	0.468	25		5 U	5 U	5 U	5 U	5 U
TOLUENE	0.647	8.1		5 U	3 J	8	9	9
TOLUENE-D8	1.066	2.4						
TRANS-1,3-DICHLOROPROPENE	0.32	11.6		5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	0.446	16		5 U	5 U	5 U	5 U	5 U
VINYL ACETATE	0.361	12.4		10 U	10 U	10 U	10 U	10 U
VINYL CHLORIDE	0.794	1.9		10 U	10 U	10 U	10 U	10 U
XYLENE (TOTAL)	0.51	24.8		5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	1.775	12.5		5 U	5 U	17	15	15
1,1-DICHLOROETHENE	1.075	19.4		5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	0.614	10.5		5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	0.358	0.3		5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	0.459	14.5		5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	1.597	13.1		5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4	1.35	7.5						
1,2-DICHLOROETHENE	1.12	19		5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	0.335	-7.7		5 U	5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE	0.604	14.2						
2-BUTANONE	0.022	-15.8		10 U	10 U	10 U	10 U	10 U
2-HEXANONE	0.243	17.4		10 U	10 U	10 U	10 U	10 U
4-METHYL-2-PENTANONE	0.318	23		10 U	10 U	10 U	10 U	10 U
SURR 1(TOL) %RECOVERY				100	106	104	109	

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR0706887 WATER RRF	CONTINUING CAL %D BR0706887 WATER %	ISTD RET TIM SHIFT BR0706888 WATER AREA	METHOD BLANK VBK00706 WATER UG/L	CURR. LNDF WELL BR507022A WATER UG/L	CURR. LNDF WELL BR507033A WATER UG/L	CURR. LNDF WELL BR507044A WATER UG/L	
SURR 2(BFB) %RECOVERY				93	101	87	106	
SURR 3(DCE) %RECOVERY				103	89	95	85	
M/E 50								
M/E 75								
M/E 95								
M/E 96								
M/E 173-1								
M/E 173-2								
M/E 174								
M/E 175-1								
M/E 175-2								
M/E 176-1								
M/E 176-2								
M/E 177-1								
M/E 177-2								
INTERNAL STD AREA(BCM)			64000	56000	63700	53000	62900	
INTERNAL STD AREA(CBZ)			250000	205000	215000	217000	203000	
INTERNAL STD AREA(DFB)			261000	235000	238000	233000	239000	
DILUTION FACTOR				1	1	1	1	
PERCENT MOISTURE								
ACTUAL(ALLOWED) HOLD TIME					6(14 D)	6(14 D)	6(14 D)	
AREA			QA	QA	QA			
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CURR. LNDF WELL BR507055A WATER UG/L	CURR. LNDF WELL BR507066A WATER UG/L	MATRIX SPIKE BR507066A WATER UG/L	MS % RECOVERY BR507066A WATER %	RPD BR507066A WATER %	CURR. LNDF WELL BR507077A WATER UG/L	CURR. LNDF WELL BR507088A WATER UG/L	
ACETONE	10 U	10 U	10 U			10 U	10 U	
BENZENE	6	7	57 S	101	1	5 U	5 U	
BROMODICHLOROMETHANE	5 U	5 U	5 U			5 U	5 U	

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA				
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CURR. LNDF WELL BR507055A WATER UG/L 4	CURR. LNDF WELL BR507066A WATER UG/L 4	MATRIX SPIKE BR507066A WATER UG/L 4	MS % RECOVERY BR507066A WATER % 4	RPD BR507066A WATER % 4	CURR. LNDF WELL BR507077A WATER UG/L 4	CURR. LNDF WELL BR507088A WATER UG/L 4
BROMOFORM	5 U	5 U	5 U			5 U	5 U
BROMOMETHANE	10 U	10 U	10 U			10 U	10 U
CARBON DISULFIDE	5 U	5 U	5 U			5 U	5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U			5 U	5 U
CHLOROBENZENE	1 J	1 J	52 S	102	5	5 U	5 U
CHLOROETHANE	54	38	49			10 U	5 J
CHLOROFORM	5 U	5 U	5 U			5 U	5 U
CHLOROMETHANE	10 U	10 U	10 U			10 U	10 U
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U			5 U	5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U			5 U	5 U
ETHYLBENZENE	4 J	3 J	3 J			5 U	5 U
METHYLENE CHLORIDE	7	12	4 J			7	5 U
STYRENE	5 U	5 U	5 U			5 U	5 U
TETRACHLOROETHENE	5 U	5 U	5 U			5 U	5 U
TOLUENE	12	14	66 S	105	-33	54	49
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U			5 U	5 U
TRICHLOROETHENE	5 U	5 U	47 S	94	7	5 U	5 U
VINYL ACETATE	10 U	10 U	10 U			10 U	10 U
VINYL CHLORIDE	10 U	10 U	10 U			10 U	10 U
XYLENE (TOTAL)	5 U	5 U	5 U			5 U	5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U			5 U	5 U
1,1-DICHLOROETHENE	5 U	5 U	35 S	71	-27	5 U	5 U
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U			5 U	5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U			5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U			5 U	5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U			5 U	5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U			5 U	5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U			5 U	5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U			10 U	10 U
2-HEXANONE	10 U	10 U	10 U			10 U	10 U
4-METHYL-2-PENTANONE	10 U	10 U	10 U			10 U	10 U
SURR 1(TOL) %RECOVERY	103	98	108			99	107
SURR 2(BFB) %RECOVERY	86	90	101			94	95
SURR 3(DCE) %RECOVERY	101	94	80			99	93

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CURR. LNDF WELL BR507055A WATER UG/L 4	CURR. LNDF WELL BR507066A WATER UG/L 4	MATRIX SPIKE BR507066A WATER UG/L 4	MS % RECOVERY BR507066A WATER % 4	RPD BR507066A WATER % 4	CURR. LNDF WELL BR507077A WATER UG/L 4	CURR. LNDF WELL BR507088A WATER UG/L 4
M/E 75 M/E 95 M/E 96 M/E 173-1 M/E 173-2 M/E 174 M/E 175-1 M/E 175-2 M/E 176-1 M/E 176-2 M/E 177-1 M/E 177-2							
INTERNAL STD AREA(BCM)	55200	51300	57400			50000	55000
INTERNAL STD AREA(CBZ)	207000	210000	197000			201000	206000
INTERNAL STD AREA(DFB)	237000	233000	227000			227000	234000
DILUTION FACTOR	1	1	1			1	1
PERCENT MOISTURE							
ACTUAL(ALLOWED) HOLD TIME	6(14 D)	6(14 D)	6(14 D)			6(14 D)	6(14 D)
AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CURR. LNDF WELL BR507011A WATER UG/L 4	TRIP BLANK TRIP BLANK BR507099A WATER UG/L 99	TUNED CALIBRATION BR0707885 SOIL % %	METHOD BLANK VBK00707 SOIL UG/KG	CONTINUING CALIBRATION BR0707887 SOIL RRF	CONTINUING CAL %D BR0707887 SOIL %	ISTD RET TIM SHIFT BR0707888 SOIL AREA
ACETONE	10 U	10 U		10 U	0.762	-38.6	
BENZENE	5 U	5 U		5 U	0.684	13.1	
BROMODICHLOROMETHANE	5 U	5 U		5 U	0.598	17.6	
BROMOFORM	5 U	5 U		5 U	0.486	15.5	
BROMOMETHANE	10 U	10 U		10 U	1.182	15.7	
CARBON DISULFIDE	5 U	5 U		5 U	2.424	14.2	
CARBON TETRACHLORIDE	5 U	5 U		5 U	0.562	14.2	

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA		
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CURR. LNDF WELL BR507011A WATER UG/L 4	TRIP BLANK TRIP BLANK BR507099A WATER UG/L 99	TUNED CALIBRATION BR0707885 SOIL %	METHOD BLANK VBK00707 SOIL UG/KG	CONTINUING CALIBRATION BR0707887 SOIL RRF	CONTINUING CAL %D BR0707887 SOIL %	ISTD RET TIM SHIFT BR0707888 SOIL AREA
CHLORO BENZENE	5 U	5 U		5 U	1.137	3.3	
CHLOROETHANE	10 U	10 U		10 U	0.624	-16.6	
CHLOROFORM	5 U	19		5 U	2.588	9.1	
CHLOROMETHANE	10 U	10 U		10 U	0.757	2.1	
CIS-1,3-DICHLOROPROPENE	5 U	5 U		5 U	0.407	23.8	
DIBROMOCHLOROMETHANE	5 U	5 U		5 U	0.655	14.2	
ETHYL BENZENE	5 U	5 U		5 U	0.516	10.7	
METHYLENE CHLORIDE	11	99		12	1.086	2.3	
STYRENE	5 U	5 U		5 U	0.917	16.8	
TETRACHLOROETHENE	5 U	5 U		5 U	0.621	-1.3	
TOLUENE	5 U	5 U		1 J	0.644	14.9	
TOLUENE-D8					0.931	12.6	
TRANS-1,3-DICHLOROPROPENE	5 U	5 U		5 U	0.315	22	
TRICHLOROETHENE	5 U	5 U		5 U	0.451	15.4	
VINYL ACETATE	10 U	10 U		10 U	0.416	27.3	
VINYL CHLORIDE	10 U	10 U		10 U	0.839	1.6	
XYLENE (TOTAL)	5 U	5 U		5 U	0.646	4.7	
1,1-DICHLOROETHANE	5 U	5 U		5 U	1.692	20.1	
1,1-DICHLOROETHENE	5 U	5 U		5 U	1.169	7.4	
1,1,1-TRICHLOROETHANE	5 U	5 U		12	0.896	-16.7	
1,1,2-TRICHLOROETHANE	5 U	5 U		5 U	0.373	7.4	
1,1,2,2-TETRACHLOROETHANE	5 U	5 U		5 U	0.632	17.2	
1,2-DICHLOROETHANE	5 U	5 U		5 U	1.693	10.1	
1,2-DICHLOROETHANE-D4					1.399	2.5	
1,2-DICHLOROETHENE	5 U	5 U		5 U	1.401	-5.3	
1,2-DICHLOROPROPANE	5 U	5 U		5 U	0.275	16.7	
1,4-BROMOFLUOROBENZENE					0.689	-3	
2-BUTANONE	10 U	10 U		10 U	0.041	-10.8	
2-HEXANONE	10 U	10 U		10 U	0.359	23	
4-METHYL-2-PENTANONE	10 U	10 U		10 U	0.459	20	

SURR 1(TOL) %RECOVERY	110	103		104			
SURR 2(BFB) %RECOVERY	94	93		110			
SURR 3(DCE) %RECOVERY	86	87		88			

M/E 50					22		
M/E 75					41		
M/E 95					100		
M/E 96					6.1		

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA		QA	QA	QA	QA	QA	
LOCATION	CURR. LNDF	TRIP BLANK	TUNED	METHOD	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	WELL	TRIP BLANK	CALIBRATION	BLANK	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR507011A	BR507099A	BR0707885	VBK00707	BR0707887	BR0707887	BR0707888
MATRIX	WATER	WATER	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/L	UG/L	%	UG/KG	RRF	%	AREA
ENV PROBLEM NO	4	99					

M/E 173-1			0				
M/E 173-2			0				
M/E 174			86				
M/E 175-1			5.1				
M/E 175-2			5.9				
M/E 176-1			83				
M/E 176-2			97				
M/E 177-1			6.1				
M/E 177-2			7.3				

INTERNAL STD AREA(BCM)	64100	57400		41600		45200
INTERNAL STD AREA(CBZ)	213000	202000		146000		165000
INTERNAL STD AREA(DFB)	245000	232000		164000		188000

DILUTION FACTOR	1	1		1		
PERCENT MOISTURE						
ACTUAL(ALLOWED) HOLD TIME	6(14 D)	6(14 D)				

AREA		QA	QA	QA	QA	QA	QA
LOCATION	U/D CUR LF	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %	TUNED
TYPE OF LOCATION	WELL AT LNDF	SPIKE	RECOVERY		DUPLICATE	RECOVERY	CALIBRATION
SAMPLE NUMBER	BR508078A	BR508078A	BR508078A	BR508078A	BR508078A	BR508078A	BR0708885
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	%	%	UG/KG	%	%
ENV PROBLEM NO	4	4	4	4	4	4	

ACETONE	60	69			73		
BENZENE	12 U	12 U	96	3	12 U	93	
BROMODICHLOROMETHANE	12 U	12 U			12 U		
BROMOFORM	12 U	12 U			12 U		
BROMOMETHANE	25 U	25 U			25 U		
CARBON DISULFIDE	12 U	12 U			12 U		
CARBON TETRACHLORIDE	12 U	12 U			12 U		
CHLOROBENZENE	12 U	12 U	90	0	12 U	90	
CHLOROETHANE	25 U	25 U			25 U		
CHLOROFORM	12 U	12 U			12 U		

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	U/D CUR LF WELL AT LNDF BR508078A SOIL UG/KG 4	MATRIX SPIKE BR508078A SOIL UG/KG 4	MS % RECOVERY BR508078A SOIL % 4	RPD BR508078A SOIL % 4	MATRIX SPIKE DUPLICATE BR508078A SOIL UG/KG 4	MSD % RECOVERY BR508078A SOIL % 4	TUNED CALIBRATION BR0708885 SOIL % 4
CHLOROMETHANE	25 U	25 U			25 U		
CIS-1,3-DICHLOROPROPENE	12 U	12 U			12 U		
DIBROMOCHLOROMETHANE	12 U	12 U			12 U		
ETHYLBENZENE	12 U	12 U			12 U		
METHYLENE CHLORIDE	360 B	340 B			260 B		
STYRENE	12 U	12 U			12 U		
TETRACHLOROETHENE	12 U	12 U			12 U		
TOLUENE	12 U	12 U	86	-6	12 U	91	
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	12 U	12 U			12 U		
TRICHLOROETHENE	12 U	12 U	101	2	12 U	99	
VINYL ACETATE	25 U	25 U			25 U		
VINYL CHLORIDE	25 U	25 U			25 U		
XYLENE (TOTAL)	12 U	12 U			12 U		
1,1-DICHLOROETHANE	12 U	12 U			12 U		
1,1-DICHLOROETHENE	12 U	12 U	81	-7	12 U	87	
1,1,1-TRICHLOROETHANE	85 B	100 B			38 B		
1,1,2-TRICHLOROETHANE	12 U	12 U			12 U		
1,1,2,2-TETRACHLOROETHANE	12 U	12 U			12 U		
1,2-DICHLOROETHANE	12 U	12 U			12 U		
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	12 U	12 U			12 U		
1,2-DICHLOROPROPANE	12 U	12 U			12 U		
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	160	160			170		
2-HEXANONE	25 U	25 U			25 U		
4-METHYL-2-PENTANONE	25 U	25 U			25 U		

SURR 1(TOL) %RECOVERY	93	104			85		
SURR 2(BFB) %RECOVERY	103	96			96		
SURR 3(DCE) %RECOVERY	107	98			78		

M/E 50							19
M/E 75							57
M/E 95							100
M/E 96							7.5
M/E 173-1							0
M/E 173-2							0
M/E 174							84

TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	U/D CUR LF	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %	TUNED
TYPE OF LOCATION	WELL AT LNDF	SPIKE	RECOVERY		DUPLICATE	RECOVERY	CALIBRATION
SAMPLE NUMBER	BR508078A	BR508078A	BR508078A	BR508078A	BR508078A	BR508078A	BR0708885
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	%	%	UG/KG	%	%
ENV PROBLEM NO	4	4	4	4	4	4	

M/E 175-1							5.1
M/E 175-2							6.1
M/E 176-1							84
M/E 176-2							100
M/E 177-1							6.5
M/E 177-2							7.7

INTERNAL STD AREA(BCM)	46800	52900			54800	
INTERNAL STD AREA(CBZ)	149000	170000			179000	
INTERNAL STD AREA(DFB)	177000	188000			181000	

DILUTION FACTOR	1	1			1	
PERCENT MOISTURE	4	4			4	
ACTUAL(ALLOWED) HOLD TIME	9(14 D)	9(14 D)			9(14 D)	

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	U/D CUR LF	MATRIX	MS %
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	BLANK	WELL AT LNDF	SPIKE	RECOVERY
SAMPLE NUMBER	BR0708887	BR0708887	BR0708888	VBK00708	BR508067A	BR508067A	BR508067A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	AREA	UG/KG	UG/KG	UG/KG	%
ENV PROBLEM NO					4	4	4

ACETONE	0.404	-2.3		1000 U	1200 U	1200 U	
BENZENE	0.744	-3.6		500 U	600 U	600 U	102
BROMODICHLOROMETHANE	0.626	5.2		500 U	600 U	600 U	
BROMOFORM	0.265	34.2		500 U	600 U	600 U	
BROMOMETHANE	1.63	4.5		1000 U	1200 U	1200 U	
CARBON DISULFIDE	2.273	2.2		500 U	600 U	600 U	
CARBON TETRACHLORIDE	0.508	4.3		500 U	600 U	600 U	
CHLOROBEZENE	1.015	3.1		500 U	600 U	600 U	96
CHLOROETHANE	0.823	2.3		1000 U	1200 U	1200 U	
CHLOROFORM	2.428	4.7		500 U	600 U	600 U	
CHLOROMETHANE	0.702	-0.7		1000 U	1200 U	1200 U	
CIS-1,3-DICHLOROPROPENE	0.426	15		500 U	600 U	600 U	
DIBROMOCHLOROMETHANE	0.548	16.2		500 U	600 U	600 U	

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	CONTINUING CALIBRATION BR0708887 SOIL RRF	CONTINUING CAL %D BR0708887 SOIL %	ISTD RET TIM SHIFT BR0708888 SOIL AREA	METHOD BLANK VBK00708 SOIL UG/KG	U/D CUR LF WELL AT LNDF BR508067A SOIL UG/KG	MATRIX SPIKE BR508067A SOIL UG/KG	MS % RECOVERY BR508067A SOIL %
ETHYLBENZENE	0.5	2.5		500 U	600 U	600 U	
METHYLENE CHLORIDE	0.911	5.9		500 U	1400	1700	
STYRENE	0.857	12.9		500 U	600 U	600 U	
TETRACHLOROETHENE	0.596	-13.1		500 U	600 U	600 U	
TOLUENE	0.709	-4.3		500 U	600 U	600 U	91
TOLUENE-D8	1.085	3.2					
TRANS-1,3-DICHLOROPROPENE	0.264	27.9		500 U	600 U	600 U	
TRICHLOROETHENE	0.484	-3.4		500 U	600 U	600 U	96
VINYL ACETATE	0.365	12.9		1000 U	1200 U	1200 U	
VINYL CHLORIDE	0.749	9.7		1000 U	1200 U	1200 U	
XYLENE (TOTAL)	0.541	9.4		500 U	600 U	600 U	
1,1-DICHLOROETHANE	1.715	4		500 U	600 U	600 U	
1,1-DICHLOROETHENE	1.079	-3		500 U	600 U	600 U	92
1,1,1-TRICHLOROETHANE	0.693	-16.9		500 U	600 U	600 U	
1,1,2-TRICHLOROETHANE	0.349	1.1		500 U	600 U	600 U	
1,1,2,2-TETRACHLOROETHANE	0.397	17		500 U	600 U	600 U	
1,2-DICHLOROETHANE	1.779	-7.4		500 U	600 U	600 U	
1,2-DICHLOROETHANE-D4	1.437	-4.8					
1,2-DICHLOROETHENE	1.175	-0.3		500 U	600 U	600 U	
1,2-DICHLOROPROPANE	0.299	5.1		500 U	600 U	600 U	
1,4-BROMOFLUOROBENZENE	0.569	14.7					
2-BUTANONE	0.06	-50		1000 U	1200 U	1200 U	
2-HEXANONE	0.32	-2.2		1000 U	1200 U	1200 U	
4-METHYL-2-PENTANONE	0.454	-17.3		1000 U	1200 U	1200 U	
SURR 1(TOL) %RECOVERY				106	86	80 *	
SURR 2(BFB) %RECOVERY				102	84	90	
SURR 3(DCE) %RECOVERY				103	100	98	
M/E 50							
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	U/D CUR LF	MATRIX	MS %
TYPE OF LOCATION	CALIBRATION	CAL %D	SHIFT	BLANK	WELL AT LNDF	SPIKE	RECOVERY
SAMPLE NUMBER	BR0708887	BR0708887	BR0708888	VBK00708	BR508067A	BR508067A	BR508067A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	AREA	UG/KG	UG/KG	UG/KG	%
ENV PROBLEM NO					4	4	4

M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	66800	65500	60200	63200
INTERNAL STD AREA(CBZ)	219000	202000	241000	240000
INTERNAL STD AREA(DFB)	259000	249000	281000	267000

DILUTION FACTOR	1.25	1.25	1.25
PERCENT MOISTURE		16	16
ACTUAL(ALLOWED) HOLD TIME		10(14 D)	10(14 D)

AREA	QA	QA	QA
LOCATION	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	DUPLICATE	RECOVERY	RECOVERY
SAMPLE NUMBER	BR508067A	BR508067A	BR508067A
MATRIX	SOIL	SOIL	SOIL
UNITS	%	UG/KG	%
ENV PROBLEM NO	4	4	4

ACETONE		1200 U	
BENZENE	7	600 U	95
BROMODICHLOROMETHANE		600 U	
BROMOFORM		600 U	
BROMOMETHANE		1200 U	
CARBON DISULFIDE		600 U	
CARBON TETRACHLORIDE		600 U	
CHLOROETHANE	-5	600 U	101
CHLOROETHANE		1200 U	
CHLOROFORM		600 U	
CHLOROMETHANE		1200 U	
CIS-1,3-DICHLOROPROPENE		600 U	
DIBROMOCHLOROMETHANE		600 U	
ETHYLBENZENE		600 U	
METHYLENE CHLORIDE		1900	
STYRENE		600 U	

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA
LOCATION	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	DUPLICATE	RECOVERY	RECOVERY
SAMPLE NUMBER	BR508067A	BR508067A	BR508067A
MATRIX	SOIL	SOIL	SOIL
UNITS	%	UG/KG	%
ENV PROBLEM NO	4	4	4
TETRACHLOROETHENE		600 U	
TOLUENE	-11	600 U	102
TOLUENE-D8			
TRANS-1,3-DICHLOROPROPENE		600 U	
TRICHLOROETHENE	-11	600 U	107
VINYL ACETATE		1200 U	
VINYL CHLORIDE		1200 U	
XYLENE (TOTAL)		600 U	
1,1-DICHLOROETHANE		600 U	
1,1-DICHLOROETHENE	0	600 U	92
1,1,1-TRICHLOROETHANE		600 U	
1,1,2-TRICHLOROETHANE		600 U	
1,1,2,2-TETRACHLOROETHANE		600 U	
1,2-DICHLOROETHANE		600 U	
1,2-DICHLOROETHANE-D4			
1,2-DICHLOROETHENE		600 U	
1,2-DICHLOROPROPANE		600 U	
1,4-BROMOFLUOROBENZENE			
2-BUTANONE		1200 U	
2-HEXANONE		1200 U	
4-METHYL-2-PENTANONE		1200 U	
SURR 1(TOL) %RECOVERY		91	
SURR 2(BFB) %RECOVERY		87	
SURR 3(DCE) %RECOVERY		86	
M/E 50			
M/E 75			
M/E 95			
M/E 96			
M/E 173-1			
M/E 173-2			
M/E 174			
M/E 175-1			
M/E 175-2			
M/E 176-1			
M/E 176-2			
M/E 177-1			
M/E 177-2			

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TABLE D.7.7 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR000022B

DRAFT DO NOT CITE

AREA	QA	QA	QA
LOCATION	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION		DUPLICATE	RECOVERY
SAMPLE NUMBER	BR508067A	BR508067A	BR508067A
MATRIX	SOIL	SOIL	SOIL
UNITS	%	UG/KG	%
ENV PROBLEM NO	4	4	4
INTERNAL STD AREA(BCM)		67800	
INTERNAL STD AREA(CBZ)		233000	
INTERNAL STD AREA(DFB)		273000	

DILUTION FACTOR		1.25	
PERCENT MOISTURE		16	
ACTUAL(ALLOWED) HOLD TIME		10(14 D)	

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TABLE D.7.8 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR301046A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0328886 WATER RRF	INITIAL CAL % RSD BR0328886 WATER %	TUNED CALIBRATION BR0328885 WATER %	TUNED CALIBRATION BR0418885 WATER %	CONTINUING CALIBRATION BR0418887 WATER RRF	CONTINUING CAL %D BR0418887 WATER %	ISTD RET TIM SHIFT BR0418888 WATER AREA
ACETONE	0.296	48.1			0.35	18.3	
BENZENE	0.993	2.2			0.956	3.7	
BROMODICHLOROMETHANE	0.476	2.1			0.537	13	
BROMOFORM	0.277	7.9			0.296	6.9	
BROMOMETHANE	0.904	35.5			0.997	10.3	
CARBON DISULFIDE	5.423	1.2			5.757	6.1	
CARBON TETRACHLORIDE	0.472	1.5			0.533	12.9	
CHLOROBENZENE	0.97	3.5			0.981	1.1	
CHLOROETHANE	0.757	5.3			0.821	8.5	
CHLOROFORM	2.946	3.6			3.175	7.8	
CHLOROMETHANE	1.777	2.2			2.05	15.4	
CIS-1,3-DICHLOROPROPENE	0.465	0.7			0.478	2.8	
DIBROMOCHLOROMETHANE	0.393	2			0.431	9.6	
ETHYLBENZENE	0.486	2.3			0.488	0.4	
METHYLENE CHLORIDE	1.251	7			1.336	6.8	
STYRENE	0.7	1.9			0.763	9	
TETRACHLOROETHENE	0.473	3.3			0.496	4.8	
TOLUENE	0.776	3.4			0.768	1	
TOLUENE-D8	0.456	1.7			0.442	2.9	
TRANS-1,3-DICHLOROPROPENE	0.368	3			0.407	10.5	
TRICHLOROETHENE	0.423	8.7			0.424	0.3	
VINYL ACETATE	0.33	41.1			0.523	58.5	
VINYL CHLORIDE	1.387	8.2			1.557	12.2	
XYLENE (TOTAL)	0.58	3			0.635	9.4	
1,1-DICHLOROETHANE	2.797	2.8			2.694	3.7	
1,1-DICHLOROETHENE	1.454	1.2			1.518	4.4	
1,1,1-TRICHLOROETHANE	0.486	0.9			0.536	10.3	
1,1,2-TRICHLOROETHANE	0.238	3			0.246	3.7	
1,1,2,2-TETRACHLOROETHANE	0.344	8.3			0.369	7.4	
1,2-DICHLOROETHANE	1.935	3.2			2.014	4.1	
1,2-DICHLOROETHANE-D4	0.838	1.2			0.851	1.6	
1,2-DICHLOROETHENE	1.544	2			1.543	0	
1,2-DICHLOROPROPANE	0.358	2.3			0.344	3.8	
1,4-BROMOFLUOROBENZENE	0.578	1.8			0.624	8	
2-BUTANONE	0.022	11.3			0.026	17.8	
2-HEXANONE	0.179	14.9			0.179	0.1	
4-METHYL-2-PENTANONE	0.248	9.5			0.262	5.5	

Surr 1(TOL) %RECOVERY

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TABLE D.7.8 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR301046A

DRAFT DO NOT CITE,

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0328886 WATER RRF	INITIAL CAL % RSD BR0328886 WATER %	TUNED CALIBRATION BR0328885 WATER %	TUNED CALIBRATION BR0418885 WATER %	CONTINUING CALIBRATION BR0418887 WATER RRF	CONTINUING CAL %D BR0418887 WATER %	ISTD RET TIM SHIFT BR0418888 WATER AREA

SURR 2(BFB) %RECOVERY
SURR 3(DCE) %RECOVERY

M/E 50	21	19
M/E 75	52	40
M/E 95	100	100
M/E 96	8.1	6.2
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	97	85
M/E 175-1	7.1	5.5
M/E 175-2	7.4	6.5
M/E 176-1	95	81
M/E 176-2	98	96
M/E 177-1	8	5.6
M/E 177-2	8.4	6.9

INTERNAL STD AREA(BCM)
INTERNAL STD AREA(CBZ)
INTERNAL STD AREA(DFB)

21900
85300
101000

DILUTION FACTOR
ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK07276 WATER UG/L	PRIMARY PD POND BR301046A WATER UG/L	PRIMARY PD HWMA POND BR300012A WATER UG/L	MATRIX SPIKE BR300012A WATER UG/L	MS % RECOVERY BR300012A WATER %	RPD BR300012A WATER %	MATRIX SPIKE DUPLICATE BR300012A WATER UG/L
ACETONE	34	15 B	10 U	10 U			10 U
BENZENE	5 U	5 U	5 U	51 S	101	0	51 S
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U			5 U
BROMOFORM	5 U	5 U	5 U	5 U			5 U

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TABLE D.7.8 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR301046A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK07276 WATER UG/L	PRIMARY PD POND BR301046A WATER UG/L	PRIMARY PD HWMA POND BR300012A WATER UG/L	MATRIX SPIKE BR300012A WATER UG/L	MS % RECOVERY BR300012A WATER %	RPD BR300012A WATER %	MATRIX SPIKE DUPLICATE BR300012A WATER UG/L
BROMOMETHANE	10 U	10 U	10 U	10 U			10 U
CARBON DISULFIDE	5 U	5 U	5 U	5 U			5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U			5 U
CHLOROBENZENE	5 U	5 U	5 U	54 S	108	0	54 S
CHLOROETHANE	10 U	10 U	10 U	10 U			10 U
CHLOROFORM	2 J	5 U	5 U	5 U			5 U
CHLOROMETHANE	10 U	10 U	10 U	10 U			10 U
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U			5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U			5 U
ETHYLBENZENE	5 U	5 U	5 U	5 U			5 U
METHYLENE CHLORIDE	1 J	5 U	5 U	5 U			5 U
STYRENE	5 U	5 U	5 U	5 U			5 U
TETRACHLOROETHENE	5 U	5 U	5 U	5 U			5 U
TOLUENE	0.3 J	2 JB	5 U	52 BS	104	3	50 BS
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U			5 U
TRICHLOROETHENE	5 U	5 U	5 U	53 S	106	0	53 S
VINYL ACETATE	10 U	10 U	10 U	10 U			10 U
VINYL CHLORIDE	10 U	10 U	10 U	10 U			10 U
XYLENE (TOTAL)	5 U	5 U	5 U	5 U			5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U			5 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	50 S	99	1	50 S
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U			5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U			5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U			5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U			5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U			5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U			5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U	10 U			10 U
2-HEXANONE	10 U	10 U	10 U	10 U			10 U
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U			10 U
SURR 1(TOL) %RECOVERY	99	99	98	103			98
SURR 2(BFB) %RECOVERY	100	96	100	96			94
SURR 3(DCE) %RECOVERY	97	97	98	99			98

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TABLE D.7.8 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR301046A

DRAFT DO NOT CITE

AREA	QA			QA	QA	QA	QA
LOCATION	METHOD	PRIMARY PD	PRIMARY PD	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	BLANK	POND	HWMA POND	SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	VBK07276	BR301046A	BR300012A	BR300012A	BR300012A	BR300012A	BR300012A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	%	%	UG/L
ENV PROBLEM NO		1	1	1	1	1	1
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)	17100	19800	16600	19500			19600
INTERNAL STD AREA(CBZ)	64500	79400	63300	79000			82200
INTERNAL STD AREA(DFB)	76400	96100	74100	95700			96400
DILUTION FACTOR	1	1	1	1			1
ACTUAL(ALLOWED) HOLD TIME		6(14 D)	6(14 D)	6(14 D)			6(14 D)
AREA	QA						
LOCATION	MSD %	PRIMARY PD	WOODED PD				
TYPE OF LOCATION	RECOVERY	HWMA POND	HWMA POND	POND	POND	POND	POND
SAMPLE NUMBER	BR300012A	BR300023A	BR300034A	BR301013A	BR301024A	BR301035A	BR302014A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	1	1	1	1	1	1	1
ACETONE		10 U	7 JB	10 U	10 U	10 U	10 U
BENZENE	102	5 U	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE		5 U	5 U	5 U	5 U	5 U	5 U
BROMOFORM		5 U	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE		10 U					
CARBON DISULFIDE		5 U	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE		5 U	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	107	5 U	5 U	5 U	5 U	5 U	5 U

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TABLE D.7.8 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR301046A

DRAFT DO NOT CITE

AREA	QA						
LOCATION	MSD %	PRIMARY PD	WOODED PD				
TYPE OF LOCATION	RECOVERY	HWMA POND	HWMA POND	POND	POND	POND	POND
SAMPLE NUMBER	BR300012A	BR300023A	BR300034A	BR301013A	BR301024A	BR301035A	BR302014A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO							
CHLOROETHANE		10 U	10 U				
CHLOROFORM		5 U	5 U	5 U	5 U	5 U	5 U
CHLOROMETHANE		10 U	10 U				
CIS-1,3-DICHLOROPROPENE		5 U	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE		5 U	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE		5 U	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE		5 U	5 U	5 U	5 U	5 U	5 U
STYRENE		5 U	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE		5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	100	0.9 JB	0.4 JB	5 U	5 U	5 U	0.3 JB
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE		5 U	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	106	5 U	5 U	5 U	5 U	5 U	5 U
VINYL ACETATE		10 U	10 U				
VINYL CHLORIDE		10 U	10 U				
XYLENE (TOTAL)		5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE		5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	100	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE		5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE		5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE		5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE		5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE		5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE		5 U	5 U	5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE		10 U	10 U				
2-HEXANONE		10 U	10 U				
4-METHYL-2-PENTANONE		10 U	10 U				
SURR 1(TOL) %RECOVERY		100	100	101	101	101	97
SURR 2(BFB) %RECOVERY		93	94	91	94	90	92
SURR 3(DCE) %RECOVERY		97	95	91	94	89	91
M/E 50							
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							

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TABLE D.7.8 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR301046A

DRAFT DO NOT CITE

AREA	QA						
LOCATION	MSD %	PRIMARY PD	WOODED PD				
TYPE OF LOCATION	RECOVERY	HWMA POND	HWMA POND	POND	POND	POND	POND
SAMPLE NUMBER	BR300012A	BR300023A	BR300034A	BR301013A	BR301024A	BR301035A	BR302014A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	%	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	1	1	1	1	1	1	1
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)		20400	21000	22000	22300	22600	20100
INTERNAL STD AREA(CBZ)		84700	83800	87300	90000	91400	81600
INTERNAL STD AREA(DFB)		99400	99100	105000	109000	108000	94100
DILUTION FACTOR		1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		6(14 D)	6(14 D)				

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TABLE D.7.9 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR303015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TUNED CALIBRATION BR0425885 SOIL %	INITIAL CAL RRF BR0425886 SOIL RRF	INITIAL CAL % RSD BR0425886 SOIL %	TUNED CALIBRATION BR0427885 WATER %	CONTINUING CALIBRATION BR0427887 SOIL RRF	CONTINUING CAL %D BR0427887 SOIL %	ISTD RET TIM SHIFT BR0427888 SOIL AREA
ACETONE		0.205	20.2		0.251	22.4	
BENZENE		1.657	3.8		1.873	13.1	
BROMODICHLOROMETHANE		0.95	5.7		1.165	22.7	
BROMOFORM		1.53	8.3		1.707	11.6	
BROMOMETHANE		0.865	4.1		0.967	11.7	
CARBON DISULFIDE		0.059	19		0.068	15	
CARBON TETRACHLORIDE		3.288	6.4		4.098	24.6	
CHLOROBENZENE		1.004	2.6		1.017	1.3	
CHLOROETHANE		0.235	4.6		0.325	38.6	
CHLOROFORM		2.599	1.2		2.983	14.8	
CHLOROMETHANE		0.315	11		0.328	4.2	
CIS-1,3-DICHLOROPROPENE		0.453	2.3		0.569	25.4	
DIBROMOCHLOROMETHANE		1.166	7.2		1.285	10.2	
ETHYLBENZENE		0.413	5.1		0.433	4.8	
METHYLENE CHLORIDE		0.724	4.4		0.798	10.3	
STYRENE		0.402	2		0.411	2.2	
TETRACHLOROETHENE		0.605	2.3		0.576	4.9	
TOLUENE		0.434	3.2		0.462	6.3	
TOLUENE-D8		0.175	5.6		0.176	0.2	
TRANS-1,3-DICHLOROPROPENE		0.486	3.7		0.604	24.4	
TRICHLOROETHENE		0.716	2.9		0.727	1.6	
VINYL ACETATE		0.694	8.1		0.936	35	
VINYL CHLORIDE		0.341	3.1		0.406	19	
XYLENE (TOTAL)		0.396	3.6		0.408	3.2	
1,1-DICHLOROETHANE		1.337	1.3		1.593	19.2	
1,1-DICHLOROETHENE		0.775	7		0.724	6.6	
1,1,1-TRICHLOROETHANE		2.8	3.2		3.433	22.6	
1,1,2-TRICHLOROETHANE		0.327	3		0.38	16.4	
1,1,2,2-TETRACHLOROETHANE		0.383	9.9		0.475	24	
1,2-DICHLOROETHANE		1.867	4.6		2.331	24.9	
1,2-DICHLOROETHANE-D4		0.468	6.1		0.545	16.4	
1,2-DICHLOROETHENE		0.862	3		0.89	3.3	
1,2-DICHLOROPROPANE		0.209	1.8		0.254	21.2	
1,4-BROMOFLUOROBENZENE		0.913	4.9		0.913	0.1	
2-BUTANONE		0.096	4.5		0.129	34.2	
2-HEXANONE		0.215	6.3		0.328	52.9	
4-METHYL-2-PENTANONE		0.269	5.2		0.404	50.4	

Surr 1(TOL) %RECOVERY

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TABLE D.7.9 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR303015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	TUNED	INITIAL CAL	INITIAL CAL	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	CALIBRATION	RRF	% RSD	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0425885	BR0425886	BR0425886	BR0427885	BR0427887	BR0427887	BR0427888
MATRIX	SOIL	SOIL	SOIL	WATER	SOIL	SOIL	SOIL
UNITS	%	RRF	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	22	26
M/E 75	52	60
M/E 95	100	100
M/E 96	8.3	5.1
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	98	82
M/E 175-1	7.3	5.8
M/E 175-2	7.4	7
M/E 176-1	98	80
M/E 176-2	100	97
M/E 177-1	5.8	6.2
M/E 177-2	5.9	7.8

INTERNAL STD AREA(BCM)	26700
INTERNAL STD AREA(CBZ)	61200
INTERNAL STD AREA(DFB)	82500

DILUTION FACTOR
 PERCENT MOISTURE
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	S PRIM. PD	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	POND	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK01211	BR303015A	BR303015A	BR303015A	BR303015A	BR303015A	BR303015A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		1	1	1	1	1	1
ACETONE	10 U	73 U	73 U			73 U	
BENZENE	5 U	36 U	310 S	85	2	320 S	87
BROMODICHLOROMETHANE	5 U	36 U	36 U			36 U	

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TABLE D.7.9 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR303015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	S PRIM. PD	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	POND	SPIKE	RECOVERY	BR303015A	DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK01211	BR303015A	BR303015A	BR303015A	BR303015A	BR303015A	BR303015A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO							
BROMOFORM	5 U	36 U	36 U			36 U	
BROMOMETHANE	10 U	73 U	73 U			73 U	
CARBON DISULFIDE	5 U	36 U	36 U			36 U	
CARBON TETRACHLORIDE	5 U	3 J	4 J			36 U	
CHLOROBENZENE	5 U	36 U	370 S	101	2	360 S	99
CHLOROETHANE	10 U	73 U	73 U			73 U	
CHLOROFORM	4 JB	32 JB	32 JB			33 JB	
CHLOROMETHANE	10 U	73 U	73 U			73 U	
CIS-1,3-DICHLOROPROPENE	5 U	36 U	36 U			36 U	
DIBROMOCHLOROMETHANE	5 U	36 U	36 U			36 U	
ETHYLBENZENE	2 J	13 JB	14 JB			17 JB	
METHYLENE CHLORIDE	5 U	36 U	36 U			9 J	
STYRENE	5 U	36 U	36 U			36 U	
TETRACHLOROETHENE	5 U	11 J	8 J			36 U	
TOLUENE	1 JB	7 JB	350 SB	94	4	340 SB	90
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	36 U	36 U			36 U	
TRICHLOROETHENE	5 U	36 U	280 S	78	1	280 S	77
VINYL ACETATE	10 U	73 U	73 U			73 U	
VINYL CHLORIDE	10 U	73 U	73 U			73 U	
XYLENE (TOTAL)	5 U	36 U	36 U			36 U	
1,1-DICHLOROETHANE	5 U	36 U	36 U			36 U	
1,1-DICHLOROETHENE	5 U	36 U	370 S	100	22	450 S	125
1,1,1-TRICHLOROETHANE	5 U	36 U	36 U			36 U	
1,1,2-TRICHLOROETHANE	5 U	36 U	36 U			36 U	
1,1,2,2-TETRACHLOROETHANE	5 U	36 U	36 U			36 U	
1,2-DICHLOROETHANE	5 U	36 U	4 J			36 U	
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	36 U	36 U			36 U	
1,2-DICHLOROPROPANE	5 U	36 U	36 U			36 U	
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	73 U	98			49 J	
2-HEXANONE	10 U	73 U	73 U			73 U	
4-METHYL-2-PENTANONE	10 U	73 U	73 U			73 U	
SURR 1(TOL) %RECOVERY	103	101	103			88	
SURR 2(BFB) %RECOVERY	106	104	103			95	
SURR 3(DCE) %RECOVERY	106	117	117			116	

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TABLE D.7.9 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR303015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	S PRIM. PD	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	POND	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK01211	BR303015A	BR303015A	BR303015A	BR303015A	BR303015A	BR303015A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		1	1	1	1	1	1

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	26400	25300	24500	20400
INTERNAL STD AREA(CBZ)	58400	53900	58000	47200
INTERNAL STD AREA(DFB)	79700	77000	76800	59500

DILUTION FACTOR	1	1	1	1
PERCENT MOISTURE	0	31.1	31.1	31.1
ACTUAL(ALLOWED) HOLD TIME		15(14 D)	15(14 D)	15(14 D)

AREA

LOCATION	S PRIM. PD	S PRIM. PD	N PRIM. PD	N PRIM. PD	N PRIM. PD	N WOODED P
TYPE OF LOCATION	POND	POND	POND	POND	POND	POND
SAMPLE NUMBER	BR303026A	BR303037A	BR304016A	BR304027A	BR304038A	BR305017A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	1	1	1	1	1	1

ACETONE	70 U	78 U	110 U	120 U	10 UX	82 U
BENZENE	35 U	39 U	53 U	62 U	50 U	41 U
BROMODICHLOROMETHANE	35 U	39 U	53 U	62 U	50 U	41 U
BROMOFORM	35 U	39 U	53 U	62 U	50 U	41 U
BROMOMETHANE	70 U	78 U	110 U	120 U	100 U	82 U
CARBON DISULFIDE	35 U	39 U	53 U	62 U	50 U	41 U
CARBON TETRACHLORIDE	5 J	39 U	53 U	62 U	3 J	41 U

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TABLE D.7.9 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR303015A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	S PRIM. PD POND BR303026A SOIL UG/KG 1	S PRIM. PD POND BR303037A SOIL UG/KG 1	N PRIM. PD POND BR304016A SOIL UG/KG 1	N PRIM. PD POND BR304027A SOIL UG/KG 1	N PRIM. PD POND BR304038A SOIL UG/KG 1	N WOODED P POND BR305017A SOIL UG/KG 1
CHLOROBENZENE	35 U	39 U	53 U	62 U	50 U	41 U
CHLOROETHANE	70 U	78 U	110 U	120 U	100 U	82 U
CHLOROFORM	27 JB	30 JB	41 JB	50 JB	43 JB	31 JB
CHLOROMETHANE	70 U	78 U	110 U	120 U	100 U	82 U
CIS-1,3-DICHLOROPROPENE	35 U	39 U	53 U	62 U	50 U	41 U
DIBROMOCHLOROMETHANE	35 U	39 U	53 U	62 U	50 U	41 U
ETHYLBENZENE	10 JB	11 JB	21 JB	22 JB	12 JB	11 JB
METHYLENE CHLORIDE	35 U	39 U	53 U	62 U	50 U	41 U
STYRENE	35 U	39 U	53 U	62 U	50 U	41 U
TETRACHLOROETHENE	5 J	39 U	53 U	62 U	12 J	41 U
TOLUENE	6 JB	5 JB	30 JB	27 JB	10 JB	7 JB
TOLUENE-D8						
TRANS-1,3-DICHLOROPROPENE	35 U	39 U	53 U	62 U	50 U	41 U
TRICHLOROETHENE	35 U	39 U	53 U	62 U	50 U	41 U
VINYL ACETATE	70 U	78 U	110 U	120 U	100 U	82 U
VINYL CHLORIDE	70 U	78 U	110 U	120 U	100 U	82 U
XYLENE (TOTAL)	6 J	39 U	53 U	62 U	9 J	41 U
1,1-DICHLOROETHANE	35 U	39 U	53 U	62 U	50 U	41 U
1,1-DICHLOROETHENE	35 U	39 U	53 U	62 U	50 U	41 U
1,1,1-TRICHLOROETHANE	35 U	39 U	53 U	62 U	50 U	41 U
1,1,2-TRICHLOROETHANE	35 U	39 U	53 U	62 U	50 U	41 U
1,1,2,2-TETRACHLOROETHANE	35 U	39 U	53 U	62 U	50 U	41 U
1,2-DICHLOROETHANE	35 U	39 U	53 U	62 U	50 U	41 U
1,2-DICHLOROETHANE-D4						
1,2-DICHLOROETHENE	35 U	39 U	53 U	62 U	50 U	41 U
1,2-DICHLOROPROPANE	35 U	39 U	53 U	62 U	50 U	41 U
1,4-BROMOFLUOROBENZENE						
2-BUTANONE	44 J	78 U	85 J	120 U	90 J	82 U
2-HEXANONE	70 U	78 U	110 U	120 U	100 U	82 U
4-METHYL-2-PENTANONE	70 U	78 U	110 U	120 U	100 U	82 U

SURR 1(TOL) %RECOVERY	103	91	92	93	93	102
SURR 2(BFB) %RECOVERY	98	93	102	97	104	95
SURR 3(DCE) %RECOVERY	103	104	115	110	104	107

M/E 50
M/E 75
M/E 95
M/E 96

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TABLE D.7.9 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR303015A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	S PRIM. PD POND BR303026A SOIL UG/KG 1	S PRIM. PD POND BR303037A SOIL UG/KG 1	N PRIM. PD POND BR304016A SOIL UG/KG 1	N PRIM. PD POND BR304027A SOIL UG/KG 1	N PRIM. PD POND BR304038A SOIL UG/KG 1	N WOODED P POND BR305017A SOIL UG/KG 1
M/E 173-1						
M/E 173-2						
M/E 174						
M/E 175-1						
M/E 175-2						
M/E 176-1						
M/E 176-2						
M/E 177-1						
M/E 177-2						
INTERNAL STD AREA(BCM)	24000	24700	24700	21500	27700	27600
INTERNAL STD AREA(CBZ)	53100	48400	53400	50700	53700	59600
INTERNAL STD AREA(DFB)	70100	70600	73500	66800	76900	79200
DILUTION FACTOR	1	1	1	1	1	1
PERCENT MOISTURE	28.4	36.1	53.2	59.4	50.3	39.9
ACTUAL(ALLOWED) HOLD TIME	15(14 D)	16(14 D)				

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TABLE D.7.10 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR305028A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	TUNED	INITIAL CAL	INITIAL CAL	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	CALIBRATION	RRF	% RSD	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0425885	BR0425886	BR0425886	BR0428885	BR0428887	BR0428887	BR0428888
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	%	RRF	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACETONE		0.205	20.2		0.261	27	
BENZENE		1.657	3.8		1.622	2.1	
BROMODICHLOROMETHANE		0.95	5.7		1.149	20.9	
BROMOFORM		1.53	8.3		1.939	26.7	
BROMOMETHANE		0.865	4.1		1.039	20	
CARBON DISULFIDE		0.059	19		0.026	56.4	
CARBON TETRACHLORIDE		3.288	6.4		4.259	29.5	
CHLOROBENZENE		1.004	2.6		1.049	4.4	
CHLOROETHANE		0.235	4.6		0.283	20.5	
CHLOROFORM		2.599	1.2		3.175	22.2	
CHLOROMETHANE		0.315	11		0.345	9.4	
CIS-1,3-DICHLOROPROPENE		0.453	2.3		0.549	21.1	
DIBROMOCHLOROMETHANE		1.166	7.2		1.504	28.9	
ETHYLBENZENE		0.413	5.1		0.437	5.7	
METHYLENE CHLORIDE		0.724	4.4		0.765	5.7	
STYRENE		0.402	2		0.422	5	
TETRACHLOROETHENE		0.605	2.3		0.659	8.9	
TOLUENE		0.434	3.2		0.449	3.4	
TOLUENE-D8		0.175	5.6		0.175	0.5	
TRANS-1,3-DICHLOROPROPENE		0.486	3.7		0.621	27.8	
TRICHLOROETHENE		0.716	2.9		0.826	15.3	
VINYL ACETATE		0.694	8.1		0.746	7.5	
VINYL CHLORIDE		0.341	3.1		0.418	22.7	
XYLENE (TOTAL)		0.396	3.6		0.416	5.2	
1,1-DICHLOROETHANE		1.337	1.3		1.415	5.8	
1,1-DICHLOROETHENE		0.775	7		0.699	9.8	
1,1,1-TRICHLOROETHANE		2.8	3.2		3.537	26.3	
1,1,2-TRICHLOROETHANE		0.327	3		0.384	17.6	
1,1,2,2-TETRACHLOROETHANE		0.383	9.9		0.349	8.8	
1,2-DICHLOROETHANE		1.867	4.6		2.398	28.4	
1,2-DICHLOROETHANE-D4		0.468	6.1		0.566	20.9	
1,2-DICHLOROETHENE		0.862	3		0.819	4.9	
1,2-DICHLOROPROPANE		0.209	1.8		0.242	15.8	
1,4-BROMOFLUOROBENZENE		0.913	4.9		0.983	7.7	
2-BUTANONE		0.096	4.5		0.105	9.3	
2-HEXANONE		0.215	6.3		0.267	24.2	
4-METHYL-2-PENTANONE		0.269	5.2		0.331	23.4	

SURR 1(TOL) %RECOVERY							

D-402

TABLE D.7.10 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR305028A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	TUNED	INITIAL CAL	INITIAL CAL	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	CALIBRATION	RRF	% RSD	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0425885	BR0425886	BR0425886	BR0428885	BR0428887	BR0428887	BR0428888
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	%	RRF	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	22	21
M/E 75	52	58
M/E 95	100	100
M/E 96	8.3	6.1
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	98	99
M/E 175-1	7.3	8
M/E 175-2	7.4	8.1
M/E 176-1	98	99
M/E 176-2	100	100
M/E 177-1	5.8	6.2
M/E 177-2	5.9	6.3

INTERNAL STD AREA(DCM) 12800
 INTERNAL STD AREA(CBZ) 28900
 INTERNAL STD AREA(DFB) 37600

DILUTION FACTOR
 PERCENT MOISTURE
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	SPIKE	RECOVERY	BR305028A	DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK01223	BR305028A	BR305028A	BR305028A	BR305028A	BR305028A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		1	1	1	1	1

ACETONE	10 U	92 U			92 U		92 U
BENZENE	5 U	440 S	98	2	450 S	100	46 U
BROMODICHLOROMETHANE	5 U	46 U			46 U		46 U

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TABLE D.7.10 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR305028A

DRAFT DO NOT CITE

D-404

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK01223 SOIL UG/KG	MATRIX SPIKE BR305028A SOIL UG/KG	MS % RECOVERY BR305028A SOIL %	RPD BR305028A SOIL %	MATRIX SPIKE DUPLICATE BR305028A SOIL UG/KG	MSD % RECOVERY BR305028A SOIL %	N WOODED P POND BR305028A SOIL UG/KG
BROMOFORM	5 U	46 U			46 U		46 U
BROMOMETHANE	10 U	92 U			92 U		92 U
CARBON DISULFIDE	5 U	46 U			46 U		46 U
CARBON TETRACHLORIDE	5 U	46 U			46 U		46 U
CHLOROBENZENE	5 U	480 S	107	6	450 S	100	46 U
CHLOROETHANE	10 U	92 U			92 U		92 U
CHLOROFORM	2 JB	24 JB			27 JB		23 JB
CHLOROMETHANE	10 U	92 U			92 U		92 U
CIS-1,3-DICHLOROPROPENE	5 U	46 U			46 U		46 U
DIBROMOCHLOROMETHANE	5 U	46 U			46 U		46 U
ETHYLBENZENE	5 U	46 U			46 U		46 U
METHYLENE CHLORIDE	5 U	46 U			46 U		46 U
STYRENE	5 U	46 U			46 U		46 U
TETRACHLOROETHENE	5 U	46 U			46 U		46 U
TOLUENE	5 U	460 S	102	25 *	590 S	128	14 J
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	46 U			46 U		46 U
TRICHLOROETHENE	5 U	320 S	71	8	350 S	78	46 U
VINYL ACETATE	10 U	92 U			92 U		92 U
VINYL CHLORIDE	10 U	92 U			92 U		92 U
XYLENE (TOTAL)	5 U	46 U			46 U		46 U
1,1-DICHLOROETHANE	5 U	46 U			46 U		46 U
1,1-DICHLOROETHENE	5 U	420 S	93	21	520 S	116	46 U
1,1,1-TRICHLOROETHANE	5 U	46 U			46 U		46 U
1,1,2-TRICHLOROETHANE	5 U	46 U			46 U		46 U
1,1,2,2-TETRACHLOROETHANE	5 U	46 U			46 U		46 U
1,2-DICHLOROETHANE	5 U	46 U			46 U		46 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	46 U			46 U		46 U
1,2-DICHLOROPROPANE	5 U	46 U			46 U		46 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	92 U			92 U		92 U
2-HEXANONE	10 U	92 U			92 U		92 U
4-METHYL-2-PENTANONE	10 U	92 U			92 U		92 U
SURR 1(TOL) %RECOVERY	95	102			113		106
SURR 2(BFB) %RECOVERY	97	93			96		96
SURR 3(DCE) %RECOVERY	103	106			112		105

TABLE D.7.10 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR305028A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %	N WOODED P
TYPE OF LOCATION	BLANK	SPIKE	RECOVERY		DUPLICATE	RECOVERY	POND
SAMPLE NUMBER	VBK01223	BR305028A	BR305028A	BR305028A	BR305028A	BR305028A	BR305028A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	%	%	UG/KG	%	UG/KG
ENV PROBLEM NO		1	1	1	1	1	1

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	12500	11900		10300		10500
INTERNAL STD AREA(CBZ)	28900	25100		23300		24900
INTERNAL STD AREA(DFB)	38600	33100		23100		31000

DILUTION FACTOR	1	1		1		1
PERCENT MOISTURE	0	45.4		45.4		45.4
ACTUAL(ALLOWED) HOLD TIME		16(14 D)		16(14 D)		16(14 D)

AREA

LOCATION	N WOODED P	BNL LANDF	BNL LANDF	BNL LANDF	BOUNDRY RD	BOUNDRY RD	BOUNDRY RD
TYPE OF LOCATION	POND	LEACHATE	LEACHATE	LEACHATE	BACKGROUND	BACKGROUND	BACKGROUND
SAMPLE NUMBER	BR305039A	BR500047A	BR500058A	BR500069A	BR810019A	BR810020A	BR810031A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	1	4	4	4	0	0	0

ACETONE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
BENZENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
BROMODICHLOROMETHANE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
BROMOFORM	45 U	31 U	31 U	37 U	27 U	28 U	28 U
BROMOMETHANE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
CARBON DISULFIDE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
CARBON TETRACHLORIDE	45 U	31 U	31 U	37 U	27 U	28 U	28 U

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TABLE D.7.10 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR305028A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	N WOODED P POND BR305039A SOIL UG/KG 1	BNL LANDF LEACHATE BR500047A SOIL UG/KG 4	BNL LANDF LEACHATE BR500058A SOIL UG/KG 4	BNL LANDF LEACHATE BR500069A SOIL UG/KG 4	BOUNDRY RD BACKGROUND BR810019A SOIL UG/KG 0	BOUNDRY RD BACKGROUND BR810020A SOIL UG/KG 0	BOUNDRY RD BACKGROUND BR810031A SOIL UG/KG 0
CHLORO BENZENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
CHLOROETHANE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
CHLOROFORM	21 JB	16 JB	15 JB	18 JB	16 JB	12 JB	15 JB
CHLOROMETHANE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
CIS-1,3-DICHLOROPROPENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
DIBROMOCHLOROMETHANE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
ETHYLBENZENE	45 U	31 U	31 U	37 U	7 J	28 U	28 U
METHYLENE CHLORIDE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
STYRENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
TETRACHLOROETHENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
TOLUENE	15 J	31 U	31 U	37 U	27 U	28 U	28 U
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
TRICHLOROETHENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
VINYL ACETATE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
VINYL CHLORIDE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
XYLENE (TOTAL)	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,1-DICHLOROETHANE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,1-DICHLOROETHENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,1,1-TRICHLOROETHANE	45 U	9 J	31 U	37 U	27 U	28 U	28 U
1,1,2-TRICHLOROETHANE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,1,2,2-TETRACHLOROETHANE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,2-DICHLOROETHANE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,2-DICHLOROPROPANE	45 U	31 U	31 U	37 U	27 U	28 U	28 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
2-HEXANONE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
4-METHYL-2-PENTANONE	89 U	62 U	61 U	74 U	54 U	55 U	56 U
SURR 1(TOL) %RECOVERY	92	102	95	100	99	90	99
SURR 2(BFB) %RECOVERY	90	97	95	93	95	95	89
SURR 3(DCE) %RECOVERY	98	102	109	103	102	106	119
M/E 50							
M/E 75							
M/E 95							
M/E 96							

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TABLE D.7.10 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR305028A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	N WOODED P POND BR305039A SOIL UG/KG 1	BNL LANDF LEACHATE BR500047A SOIL UG/KG 4	BNL LANDF LEACHATE BR500058A SOIL UG/KG 4	BNL LANDF LEACHATE BR500069A SOIL UG/KG 4	BOUNDRY RD BACKGROUND BR810019A SOIL UG/KG 0	BOUNDRY RD BACKGROUND BR810020A SOIL UG/KG 0	BOUNDRY RD BACKGROUND BR810031A SOIL UG/KG 0
M/E 173-1							
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)	11400	11400	11200	11400	12300	11600	8560
INTERNAL STD AREA(CBZ)	26000	25500	25200	24500	27600	26100	27000
INTERNAL STD AREA(DFB)	33300	31900	33100	31700	34700	34200	31100
DILUTION FACTOR	1	1	1	1	1	1	1
PERCENT MOISTURE	43.9	19.7	18.1	32	7.6	9.2	11.4
ACTUAL(ALLOWED) HOLD TIME	16(14 D)	15(14 D)	15(14 D)	15(14 D)	11(14 D)	11(14 D)	12(14 D)

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TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0503886 SOIL RRF	INITIAL CAL % RSD BR0503886 SOIL %	TUNED CALIBRATION BR0503885 SOIL %	TUNED CALIBRATION BR0506885 SOIL %	CONTINUING CALIBRATION BR0506887 SOIL RRF	CONTINUING CAL %D BR0506887 SOIL %	ISTD RET TIM SHIFT BR0506888 SOIL AREA
ACETONE	0.268	22.6			0.384	43	
BENZENE	2.625	8.2			2.793	6.4	
BROMODICHLOROMETHANE	0.67	4			0.777	16	
BROMOFORM	0.723	13.5			0.835	15.4	
BROMOMETHANE	1.497	5.6			1.507	0.7	
CARBON DISULFIDE	3.41	8.6			3.994	17.1	
CARBON TETRACHLORIDE	1.777	4.1			1.883	6	
CHLOROBENZENE	0.987	2.2			1.022	3.6	
CHLOROETHANE	0.523	12.2			0.54	3.1	
CHLOROFORM	2.692	13			2.915	8.3	
CHLOROMETHANE	0.66	8			0.696	5.5	
CIS-1,3-DICHLOROPROPENE	0.443	3.4			0.511	15.2	
DIBROMOCHLOROMETHANE	0.67	10.1			0.661	1.4	
ETHYLBENZENE	0.565	1.5			0.576	2.1	
METHYLENE CHLORIDE	1.194	12.4			1.349	12.9	
STYRENE	0.61	1.6			0.6	1.6	
TETRACHLOROETHENE	0.377	9.4			0.397	5.3	
TOLUENE	0.463	3.5			0.534	15.4	
TOLUENE-D8	0.151	2.3			0.165	9	
TRANS-1,3-DICHLOROPROPENE	0.349	5.1			0.355	1.9	
TRICHLOROETHENE	0.485	3.1			0.529	9	
VINYL ACETATE	1.238	3.8			1.301	5.1	
VINYL CHLORIDE	0.838	6.6			0.864	3.1	
XYLENE (TOTAL)	0.541	2.1			0.531	1.9	
1,1-DICHLOROETHANE	1.876	5.2			2.007	7	
1,1-DICHLOROETHENE	1.122	15.4			1.304	16.2	
1,1,1-TRICHLOROETHANE	1.868	6.6			1.95	4.3	
1,1,2-TRICHLOROETHANE	0.299	4			0.308	3.1	
1,1,2,2-TETRACHLOROETHANE	0.703	9.3			0.705	0.3	
1,2-DICHLOROETHANE	1.295	7.4			1.482	14.5	
1,2-DICHLOROETHANE-D4	0.339	8.1			0.379	12	
1,2-DICHLOROETHENE	1.229	11.2			1.337	8.7	
1,2-DICHLOROPROPANE	0.309	0.3			0.357	15.5	
1,4-BROMOFLUOROBENZENE	0.604	4			0.632	4.6	
2-BUTANONE	0.103	14.7			0.114	10.9	
2-HEXANONE	0.1	24.1			0.096	4.4	
4-METHYL-2-PENTANONE	0.222	13.3			0.274	23.1	

SURR 1(TOL) %RECOVERY							

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TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0503886	BR0503886	BR0503885	BR0506885	BR0506887	BR0506887	BR0506888
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	16	19
M/E 75	42	51
M/E 95	100	100
M/E 96	8.5	7.1
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	98	99
M/E 175-1	7.1	7.6
M/E 175-2	7.3	7.7
M/E 176-1	95	94
M/E 176-2	98	96
M/E 177-1	5.8	6.8
M/E 177-2	6.1	7.2

INTERNAL STD AREA(BCM) 41700
 INTERNAL STD AREA(CBZ) 101000
 INTERNAL STD AREA(DFB) 143000

DILUTION FACTOR
 PERCENT MOISTURE
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	REANALYSIS	REANALYSIS	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	BLANK			SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	VBK00158	BR506010A	BR504018A	BR504018A	BR504018A	BR504018A	BR504018A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	%	%	UG/KG
ENV PROBLEM NO		7	6	6	6	6	6
ACETONE	20 B	57 U	140 B	130 B			150 B
BENZENE	5 U	29 U	28 U	230 S	84	2	230 S
BROMODICHLOROMETHANE	5 U	29 U	28 U	28 U			28 U

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TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	REANALYSIS	REANALYSIS	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	BLANK			SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	VBK00158	BR506010A	BR504018A	BR504018A	BR504018A	BR504018A	BR504018A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	%	%	UG/KG
ENV PROBLEM NO		7	6	6	6	6	6
BROMOFORM	0.8 JB	29 U	28 U	28 U			28 U
BROMOMETHANE	10 U	57 U	56 U	56 U			56 U
CARBON DISULFIDE	5 U	29 U	28 U	28 U			28 U
CARBON TETRACHLORIDE	5 U	29 U	28 U	28 U			28 U
CHLORO BENZENE	5 U	29 U	28 U	300 S	107	4	290 S
CHLOROETHANE	10 U	57 U	56 U	56 U			56 U
CHLOROFORM	6 B	31 B	32 B	33 B			33 B
CHLOROMETHANE	10 U	57 U	56 U	56 U			56 U
CIS-1,3-DICHLOROPROPENE	5 U	29 U	28 U	28 U			28 U
DIBROMOCHLOROMETHANE	5 U	29 U	28 U	28 U			28 U
ETHYLBENZENE	2 JB	9 JB	8 JB	12 JB			12 JB
METHYLENE CHLORIDE	6 B	31 B	23 JB	26 JB			24 JB
STYRENE	0.8 JB	29 U	2 JB	28 U			28 U
TETRACHLOROETHENE	5 U	29 U	28 U	28 U			28 U
TOLUENE	5 U	29 U	28 U	260 S	91	5	270 S
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	29 U	28 U	28 U			28 U
TRICHLOROETHENE	5 U	29 U	28 U	280 S	99	4	290 S
VINYL ACETATE	10 U	57 U	56 U	56 U			56 U
VINYL CHLORIDE	10 U	57 U	56 U	56 U			56 U
XYLENE (TOTAL)	1 JB	7 JB	6 JB	8 JB			28 U
1,1-DICHLOROETHANE	5 U	29 U	28 U	28 U			28 U
1,1-DICHLOROETHENE	5 U	29 U	28 U	270 S	96	1	270 S
1,1,1-TRICHLOROETHANE	5 U	29 U	28 U	28 U			28 U
1,1,2-TRICHLOROETHANE	5 U	29 U	28 U	28 U			28 U
1,1,2,2-TETRACHLOROETHANE	1 JB	29 U	28 U	28 U			28 U
1,2-DICHLOROETHANE	5 U	29 U	28 U	3 J			28 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	29 U	28 U	28 U			28 U
1,2-DICHLOROPROPANE	5 U	29 U	28 U	28 U			28 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	57 U	56 U	56 U			56 U
2-HEXANONE	10 U	57 U	56 U	56 U			56 U
4-METHYL-2-PENTANONE	4 JB	57 U	56 U	56 U			56 U
SURR 1(TOL) %RECOVERY	93	89	93	102			106
SURR 2(BFB) %RECOVERY	101	99	103	115			111
SURR 3(DCE) %RECOVERY	93	97	109	113			111

TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	REANALYSIS	REANALYSIS	MATRIX	MS %	RPD	MATRIX SPIKE
TYPE OF LOCATION	BLANK			SPIKE	RECOVERY		DUPLICATE
SAMPLE NUMBER	VBK00158	BR506010A	BR504018A	BR504018A	BR504018A	BR504018A	BR504018A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	%	%	UG/KG
ENV PROBLEM NO		7	6	6	6	6	6

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	32500	27700	24400	23200		22100
INTERNAL STD AREA(CBZ)	79200	69800	62900	52700		51800
INTERNAL STD AREA(DFB)	108000	95500	85400	74000 *		68800
DILUTION FACTOR	1	1	1	1		1
PERCENT MOISTURE	0	12.6	10.2	10.2		10.2
ACTUAL(ALLOWED) HOLD TIME		22(14 D)	22(14 D)	22(14 D)		22(14 D)

AREA	QA	QA	QA	QA	QA	QA
LOCATION	MSD %	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION	RECOVERY					
SAMPLE NUMBER	BR504018A	BR808015A	BR808037A	BR806115A	BR806104A	BR806126A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	%	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	6	11	11	10	10	10
ACETONE		1200 B	2200 B	120 B	56 U	95 B
BENZENE	82	170 U	160 U	28 U	28 U	28 U
BROMODICHLOROMETHANE		170 U	21 J	28 U	28 U	28 U
BROMOFORM		170 U	160 U	28 U	28 U	28 U
BROMOMETHANE		350 U	320 U	57 U	56 U	56 U
CARBON DISULFIDE		170 U	160 U	28 U	28 U	28 U
CARBON TETRACHLORIDE		170 U	160 U	28 U	18 J	28 U

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TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

AREA	QA	REANALYSIS						
		MSD % RECOVERY BR504018A SOIL %	BR808015A SOIL UG/KG	BR808037A SOIL UG/KG	BR806115A SOIL UG/KG	BR806104A SOIL UG/KG	BR806126A SOIL UG/KG	BR806079A SOIL UG/KG
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	6	11	11	10	10	10	10	
CHLOROBENZENE	102	79 J	160 U	28 U	28 U	28 U	27 U	
CHLOROETHANE		350 U	320 U	57 U	56 U	56 U	55 U	
CHLOROFORM		180 B	180 B	32 B	30 B	32 B	29 B	
CHLOROMETHANE		350 U	320 U	57 U	56 U	56 U	55 U	
CIS-1,3-DICHLOROPROPENE		170 U	160 U	28 U	28 U	28 U	27 U	
DIBROMOCHLOROMETHANE		170 U	160 U	28 U	28 U	28 U	27 U	
ETHYLBENZENE		660 B	880 B	14 JB	10 JB	10 JB	9 JB	
METHYLENE CHLORIDE		160 JB	200 B	28 JB	29 B	26 JB	25 JB	
STYRENE		170 U	160 U	4 JB	4 JB	28 U	27 U	
TETRACHLOROETHENE		170 U	160 U	4 J	16 J	11 J	7 J	
TOLUENE	96	200	360	28 U	28 U	28 U	27 U	
TOLUENE-D8								
TRANS-1,3-DICHLOROPROPENE		170 U	160 U	28 U	28 U	28 U	27 U	
TRICHLOROETHENE	104	170 U	160 U	28 U	28 U	28 U	27 U	
VINYL ACETATE		350 U	320 U	57 U	56 U	56 U	55 U	
VINYL CHLORIDE		350 U	320 U	57 U	56 U	56 U	55 U	
XYLENE (TOTAL)		670 B	960 B	11 JB	5 JB	4 JB	6 JB	
1,1-DICHLOROETHANE		170 U	160 U	28 U	28 U	28 U	27 U	
1,1-DICHLOROETHENE	97	170 U	160 U	28 U	28 U	28 U	27 U	
1,1,1-TRICHLOROETHANE		170 U	160 U	28 U	28 U	28 U	27 U	
1,1,2-TRICHLOROETHANE		170 U	160 U	28 U	28 U	28 U	27 U	
1,1,2,2-TETRACHLOROETHANE		170 U	160 U	4 JB	28 U	28 U	27 U	
1,2-DICHLOROETHANE		170 U	160 U	28 U	28 U	28 U	27 U	
1,2-DICHLOROETHANE-D4								
1,2-DICHLOROETHENE		170 U	160 U	28 U	28 U	28 U	27 U	
1,2-DICHLOROPROPANE		170 U	160 U	28 U	28 U	28 U	27 U	
1,4-BROMOFLUOROBENZENE								
2-BUTANONE		350 U	310 J	57 U	56 U	56 U	55 U	
2-HEXANONE		3400	1600	57 U	56 U	56 U	55 U	
4-METHYL-2-PENTANONE		2300 B	320 U	57 U	56 U	56 U	55 U	
SURR 1(TOL) %RECOVERY		95	114	94	98	99	93	
SURR 2(BFB) %RECOVERY		109	104	115	109	106	107	
SURR 3(DCE) %RECOVERY		111	108	118	119	111	109	
M/E 50								
M/E 75								
M/E 95								
M/E 96								

TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

AREA	QA						
LOCATION	MSD %	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION	RECOVERY						
SAMPLE NUMBER	BR504018A	BR808015A	BR808037A	BR806115A	BR806104A	BR806126A	BR806079A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	%	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	6	11	11	10	10	10	10

M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	20500 *	21300	22800	20600 *	21400 *	21400 *
INTERNAL STD AREA(CBZ)	44100 *	47700 *	53700	45800 *	49500 *	49700 *
INTERNAL STD AREA(DFB)	69400	76700 *	83300	69100 *	69100 *	70600 *
DILUTION FACTOR	1	1	1	1	1	1
PERCENT MOISTURE	71.4	77.1	12.1	12.1	10.6	8.4
ACTUAL(ALLOWED) HOLD TIME	15(14 D)	15(14 D)	16(14 D)	16(14 D)	16(14 D)	16(14 D)

AREA

LOCATION	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION			
SAMPLE NUMBER	BR311015A	BR802019A	BR802020A
MATRIX	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	2	8	8

ACETONE	69 U	310 U	1800 B
BENZENE	35 U	43 J	170
BROMODICHLOROMETHANE	35 U	150 U	100 U
BROMOFORM	35 U	150 U	100 U
BROMOMETHANE	69 U	310 U	200 U
CARBON DISULFIDE	35 U	71 J	230
CARBON TETRACHLORIDE	35 U	150 U	100 U
CHLOROBENZENE	35 U	1900	710
CHLOROETHANE	69 U	310 U	200 U
CHLOROFORM	33 JB	160 B	100 B

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TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	REANALYSIS BR311015A SOIL UG/KG 2	REANALYSIS BR802019A SOIL UG/KG 8	REANALYSIS BR802020A SOIL UG/KG 8
CHLOROMETHANE	69 U	310 U	200 U
CIS-1,3-DICHLOROPROPENE	35 U	150 U	100 U
DIBROMOCHLOROMETHANE	35 U	150 U	100 U
ETHYLBENZENE	9 JB	760 B	820 B
METHYLENE CHLORIDE	30 JB	120 JB	85 JB
STYRENE	35 U	28 JB	100 U
TETRACHLOROETHENE	35 U	150 U	100 U
TOLUENE	17 J	93 J	79 J
TOLUENE-D8			
TRANS-1,3-DICHLOROPROPENE	35 U	150 U	100 U
TRICHLOROETHENE	35 U	150 U	100 U
VINYL ACETATE	69 U	310 U	200 U
VINYL CHLORIDE	69 U	310 U	200 U
XYLENE (TOTAL)	35 U	260 B	290 B
1,1-DICHLOROETHANE	35 U	150 U	100 U
1,1-DICHLOROETHENE	35 U	150 U	100 U
1,1,1-TRICHLOROETHANE	35 U	150 U	100 U
1,1,2-TRICHLOROETHANE	35 U	150 U	100 U
1,1,2,2-TETRACHLOROETHANE	35 U	260 B	660 B
1,2-DICHLOROETHANE	35 U	150 U	100 U
1,2-DICHLOROETHANE-D4			
1,2-DICHLOROETHENE	35 U	150 U	100 U
1,2-DICHLOROPROPANE	35 U	150 U	100 U
1,4-BROMOFLUOROBENZENE			
2-BUTANONE	69 U	310 U	200 U
2-HEXANONE	69 U	310 U	200 U
4-METHYL-2-PENTANONE	69 U	310 U	200 U

SURR 1(TOL) %RECOVERY	92	90	91
SURR 2(BFB) %RECOVERY	96	97	99
SURR 3(DCE) %RECOVERY	120	114	118

M/E 50			
M/E 75			
M/E 95			
M/E 96			
M/E 173-1			
M/E 173-2			
M/E 174			

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TABLE D.7.11 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR311015A

DRAFT DO NOT CITE

AREA

LOCATION	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION			
SAMPLE NUMBER	BR311015A	BR802019A	BR802020A
MATRIX	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	2	8	8
M/E 175-1			
M/E 175-2			
M/E 176-1			
M/E 176-2			
M/E 177-1			
M/E 177-2			
INTERNAL STD AREA(BCM)	18500	17700	13800 *
INTERNAL STD AREA(CBZ)	48800 *	41400 *	28200 *
INTERNAL STD AREA(DFB)	67800 *	61900 *	50200 *
DILUTION FACTOR	1	1	1
PERCENT MOISTURE	26.7	83.8	75.4
ACTUAL(ALLOWED) HOLD TIME	17(14 D)	18(14 D)	17(14 D)

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TABLE D.7.12 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR313017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0503886 SOIL RRF	INITIAL CAL % RSD BR0503886 SOIL %	TUNED CALIBRATION BR0507885 SOIL %	CONTINUING CALIBRATION BR0507887 SOIL RRF	CONTINUING CAL %D BR0507887 SOIL %	ISTD RET TIM SHIFT BR0507888 SOIL AREA	METHOD BLANK VBK00174 WATER UG/L
ACETONE	0.268	22.6		0.359	33.8		10 U
BENZENE	2.625	8.2		2.41	8.2		5 U
BROMODICHLOROMETHANE	0.67	4		0.912	36.1		5 U
BROMOFORM	0.723	13.5		0.946	30.8		0.6 J
BROMOMETHANE	1.497	5.6		1.426	4.7		10 U
CARBON DISULFIDE	3.41	8.6		3.771	10.6		5 U
CARBON TETRACHLORIDE	1.777	4.1		2.434	37		5 U
CHLOROBENZENE	0.987	2.2		1.039	5.3		5 U
CHLOROETHANE	0.523	12.2		0.466	10.9		10 U
CHLOROFORM	2.692	13		3.107	15.4		5 J
CHLOROMETHANE	0.66	8		0.529	19.9		10 U
CIS-1,3-DICHLOROPROPENE	0.443	3.4		0.504	13.7		5 U
DIBROMOCHLOROMETHANE	0.67	10.1		0.8	19.3		5 U
ETHYLBENZENE	0.565	1.5		0.58	2.7		1 J
METHYLENE CHLORIDE	1.194	12.4		1.267	6.1		4 J
STYRENE	0.61	1.6		0.601	1.4		0.8 J
TETRACHLOROETHENE	0.377	9.4		0.482	27.8		5 U
TOLUENE	0.463	3.5		0.51	10.3		5 U
TOLUENE-D8	0.151	2.3		0.158	4.4		
TRANS-1,3-DICHLOROPROPENE	0.349	5.1		0.43	23.3		5 U
TRICHLOROETHENE	0.485	3.1		0.534	10.1		5 U
VINYL ACETATE	1.238	3.8		1.245	0.6		10 U
VINYL CHLORIDE	0.838	6.6		0.705	15.9		10 U
XYLENE (TOTAL)	0.541	2.1		0.539	0.4		0.9 J
1,1-DICHLOROETHANE	1.876	5.2		2.002	6.7		5 U
1,1-DICHLOROETHENE	1.122	15.4		1.391	24		5 U
1,1,1-TRICHLOROETHANE	1.868	6.6		2.479	32.7		5 U
1,1,2-TRICHLOROETHANE	0.299	4		0.337	12.6		5 U
1,1,2,2-TETRACHLOROETHANE	0.703	9.3		0.697	0.9		1 J
1,2-DICHLOROETHANE	1.295	7.4		1.8	39		5 U
1,2-DICHLOROETHANE-D4	0.339	8.1		0.445	31.3		
1,2-DICHLOROETHENE	1.229	11.2		1.312	6.7		5 U
1,2-DICHLOROPROPANE	0.309	0.3		0.313	1.2		5 U
1,4-BROMOFLUOROBENZENE	0.604	4		0.671	11		
2-BUTANONE	0.103	14.7		0.096	6.6		10 U
2-HEXANONE	0.1	24.1		0.094	5.7		10 U
4-METHYL-2-PENTANONE	0.222	13.3		0.263	18.3		10 U

SURR 1(TOL) %RECOVERY							100

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TABLE D.7.12 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR313017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	METHOD
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CAL %D	SHIFT	BLANK
SAMPLE NUMBER	BR0503886	BR0503886	BR0507885	BR0507887	BR0507887	BR0507888	VBK00174
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	WATER
UNITS	RRF	%	%	RRF	%	AREA	UG/L
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY 95
 SURR 3(DCE) %RECOVERY 106

M/E 50	20
M/E 75	51
M/E 95	100
M/E 96	8.2
M/E 173-1	0
M/E 173-2	0
M/E 174	93
M/E 175-1	6.1
M/E 175-2	6.5
M/E 176-1	93
M/E 176-2	100
M/E 177-1	6.1
M/E 177-2	6.6

INTERNAL STD AREA(BCM) 27900 25400
 INTERNAL STD AREA(CBZ) 62200 59200
 INTERNAL STD AREA(DFB) 86600 83400

DILUTION FACTOR 1
 PERCENT MOISTURE
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA
LOCATION	REANALYSIS	MATRIX	MS %	RPD	TUNED	MATRIX SPIKE
TYPE OF LOCATION		SPIKE	RECOVERY		CALIBRATION	DUPLICATE
SAMPLE NUMBER	BR806104A	BR806104A	BR806104A	BR806104A	BR0503885	BR806104A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	%	%	%	UG/KG
ENV PROBLEM NO	10	10	10	10		10

ACETONE 50 U 56 U 90 4 56 U
 BENZENE 25 U 250 S 240 S 86
 BROMODICHLOROMETHANE 25 U 28 U 28 U

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AREA	QA	QA	QA	QA	QA	QA	
LOCATION	REANALYSIS	MATRIX SPIKE	MS % RECOVERY	RPD	TUNED CALIBRATION	MATRIX SPIKE DUPLICATE	MSD % RECOVERY
TYPE OF LOCATION	BR806104A	BR806104A	BR806104A	BR806104A	BR0503885	BR806104A	BR806104A
SAMPLE NUMBER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MATRIX	UG/KG	UG/KG	%	%	%	UG/KG	%
UNITS	10	10	10	10	10	10	10
ENV PROBLEM NO							
BROMOFORM	25 U	28 U				28 U	
BROMOMETHANE	50 U	56 U				56 U	
CARBON DISULFIDE	25 U	28 U				28 U	
CARBON TETRACHLORIDE	48	8 J				9 J	
CHLORO BENZENE	25 U	260 S	93	1		260 S	94
CHLOROETHANE	50 U	56 U				56 U	
CHLOROFORM	22 JB	25 JB				24 JB	
CHLOROMETHANE	50 U	56 U				56 U	
CIS-1,3-DICHLOROPROPENE	25 U	28 U				28 U	
DIBROMOCHLOROMETHANE	25 U	28 U				28 U	
ETHYL BENZENE	8 JB	11 JB				10 JB	
METHYLENE CHLORIDE	1300 BE	22 JB				27 JB	
STYRENE	25 U	28 U				28 U	
TETRACHLOROETHENE	12 J	13 J				10 J	
TOLUENE	62	250 S	64	4		240 S	61
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	25 U	28 U				28 U	
TRICHLOROETHENE	350	260 S	-44 *	-10		250 S	-49 *
VINYL ACETATE	50 U	56 U				56 U	
VINYL CHLORIDE	50 U	56 U				56 U	
XYLENE (TOTAL)	4 JB	5 JB				4 JB	
1,1-DICHLOROETHANE	100	28 U				28 U	
1,1-DICHLOROETHENE	25 U	250 S	89	8		230 S	82
1,1,1-TRICHLOROETHANE	370	28 U				28 U	
1,1,2-TRICHLOROETHANE	25 U	28 U				28 U	
1,1,2,2-TETRACHLOROETHANE	25 U	28 U				28 U	
1,2-DICHLOROETHANE	25 U	28 U				28 U	
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	25 U	28 U				28 U	
1,2-DICHLOROPROPANE	25 U	28 U				28 U	
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	50 U	56 U				56 U	
2-HEXANONE	50 U	56 U				56 U	
4-METHYL-2-PENTANONE	50 U	56 U				56 U	

SURR 1(TOL) %RECOVERY	101	99				95	
SURR 2(BFB) %RECOVERY	98	92				89	
SURR 3(DCE) %RECOVERY	110	116				112	

TABLE D.7.12 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR313017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	REANALYSIS	MATRIX SPIKE	MS % RECOVERY	RPD	TUNED CALIBRATION	MATRIX SPIKE DUPLICATE	MSD % RECOVERY
TYPE OF LOCATION	BR806104A	BR806104A	BR806104A	BR806104A	BR0503885	BR806104A	BR806104A
SAMPLE NUMBER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MATRIX	UG/KG	UG/KG	%	%	%	UG/KG	%
UNITS	10	10	10	10		10	10
ENV PROBLEM NO							

M/E 75					42		
M/E 95					100		
M/E 96					8.5		
M/E 173-1					0		
M/E 173-2					0		
M/E 174					98		
M/E 175-1					7.1		
M/E 175-2					7.3		
M/E 176-1					95		
M/E 176-2					98		
M/E 177-1					5.8		
M/E 177-2					6.1		

INTERNAL STD AREA(BCM)	20500	18600				17600	
INTERNAL STD AREA(CBZ)	46600	42100				38300	
INTERNAL STD AREA(DFB)	64700	61000				57500	
DILUTION FACTOR	1	1				1	
PERCENT MOISTURE	10.3	10.3				10.3	
ACTUAL(ALLOWED) HOLD TIME	17(14 D)	17(14 D)				17(14 D)	

AREA	REANALYSIS						
LOCATION	BR802031A	BR313017A	BR315019A	BR803010A	BR803021A	BR803032A	BR803043A
TYPE OF LOCATION	SOIL						
SAMPLE NUMBER	UG/KG						
MATRIX	8	2	2	8	8	8	8
UNITS							
ENV PROBLEM NO							
ACETONE	130 U	7200 E	120 U	240 U	1200	280 U	2200
BENZENE	31 J	120 J	60 U	120 U	150 U	140 U	240 U
BROMODICHLOROMETHANE	67 U	130 U	60 U	120 U	150 U	140 U	240 U
BROMOFORM	67 U	130 U	60 U	120 U	150 U	140 U	240 U
BROMOMETHANE	130 U	260 U	120 U	240 U	300 U	280 U	490 U
CARBON DISULFIDE	29 J	2100	60 U	120 U	150 U	150	170 J
CARBON TETRACHLORIDE	67 U	130 U	60 U	120 U	150 U	140 U	240 U

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TABLE D.7.12 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR313017A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	REANALYSIS BR802031A SOIL UG/KG 8	REANALYSIS BR313017A SOIL UG/KG 2	REANALYSIS BR315019A SOIL UG/KG 2	REANALYSIS BR803010A SOIL UG/KG 8	REANALYSIS BR803021A SOIL UG/KG 8	REANALYSIS BR803032A SOIL UG/KG 8	REANALYSIS BR803043A SOIL UG/KG 8
CHLOROBENZENE	13 J	2000	60 U	120 U	150 U	140 U	240 U
CHLOROETHANE	130 U	260 U	120 U	240 U	300 U	280 U	490 U
CHLOROFORM	60 JB	130 U	75 B	93 JB	150 JB	170 B	180 JB
CHLOROMETHANE	130 U	260 U	120 U	240 U	300 U	470	490 U
CIS-1,3-DICHLOROPROPENE	67 U	130 U	60 U	120 U	150 U	140 U	240 U
DIBROMOCHLOROMETHANE	67 U	130 U	60 U	120 U	150 U	140 U	240 U
ETHYLBENZENE	85 B	3400 B	2200 B	120 U	47 JB	140 U	67 JB
METHYLENE CHLORIDE	97 B	670000 BE	10000 BE	490 B	220 B	230 B	390 B
STYRENE	67 U	130 U	60 U	120 U	150 U	140 U	240 U
TETRACHLOROETHENE	67 U	14000 E	170000 E	58000 E	2400	560	340
TOLUENE	28 J	230000 E	160000 E	4700	31 J	140 U	240 U
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	67 U	130 U	60 U	120 U	150 U	140 U	240 U
TRICHLOROETHENE	67 U	270000 E	150000 E	6000 E	150 U	140 U	240 U
VINYL ACETATE	130 U	260 U	120 U	240 U	300 U	280 U	490 U
VINYL CHLORIDE	130 U	260 U	120 U	240 U	300 U	280 U	490 U
XYLENE (TOTAL)	41 JB	2100 B	750 B	120 U	150 U	140 U	240 U
1,1-DICHLOROETHANE	67 U	190000 E	12000 E	120 U	150 U	140 U	240 U
1,1-DICHLOROETHENE	67 U	8100 E	60 U	120 U	150 U	140 U	240 U
1,1,1-TRICHLOROETHANE	67 U	330000 E	530	120 U	150 U	140 U	240 U
1,1,2-TRICHLOROETHANE	67 U	140 U	60 U	120 U	150 U	140 U	240 U
1,1,2,2-TETRACHLOROETHANE	37 JB	130 U	60 U	120 U	120 JB	140 U	240 U
1,2-DICHLOROETHANE	67 U	12000 E	60 U	120 U	150 U	140 U	240 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	67 U	980	60 U	120 U	150 U	140 U	240 U
1,2-DICHLOROPROPANE	67 U	4300	60 U	120 U	150 U	140 U	240 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	130 U	260 U	120 U	240 U	300 U	280 U	490 U
2-HEXANONE	130 U	260 U	120 U	240 U	300 U	280 U	490 U
4-METHYL-2-PENTANONE	130 U	260 U	120 U	240 U	300 U	280 U	490 U
SURR 1(TOL) %RECOVERY	92	152 *	276 *	89	85	87	94
SURR 2(BFB) %RECOVERY	87	97	136 *	83	91	97	87
SURR 3(DCE) %RECOVERY	114	118	163 *	119	163 *	183 *	168 *
M/E 50							
M/E 75							
M/E 95							
M/E 96							

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TABLE D.7.12 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR313017A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	REANALYSIS						
	BR802031A	BR313017A	BR315019A	BR803010A	BR803021A	BR803032A	BR803043A
	SOIL						
	UG/KG						
	8	2	2	8	8	8	8
M/E 173-1							
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)	15900	9930 *	4020 *	12700 *	9840 *	7840 *	10900 *
INTERNAL STD AREA(CBZ)	38000	30000 *	6820 *	32700	29200 *	25000 *	38000
INTERNAL STD AREA(DFB)	56100	31300 *	17400 *	50600	50400	46200	57600
DILUTION FACTOR	1	1	1	1	1	1	1
PERCENT MOISTURE	62.8	80.8	58.4	79.4	83.4	82.4	89.7
ACTUAL(ALLOWED) HOLD TIME	18(14 D)	18(14 D)	18(14 D)	19(14 D)	19(14 D)	19(14 D)	19(14 D)

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TABLE D.7.13 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0503886 SOIL RRF	INITIAL CAL % RSD BR0503886 SOIL %	TUNED CALIBRATION BR0503885 SOIL %	TUNED CALIBRATION BR0505885 SOIL %	CONTINUING CALIBRATION BR0505887 SOIL RRF	CONTINUING CAL %D BR0505887 SOIL %	ISTD RET TIM SHIFT BR0505888 SOIL AREA
ACETONE	0.268	22.6			0.533	98.5	
BENZENE	2.625	8.2			2.495	4.9	
BROMODICHLOROMETHANE	0.67	4			0.761	13.5	
BROMOFORM	0.723	13.5			0.794	9.7	
BROMOMETHANE	1.497	5.6			1.563	4.4	
CARBON DISULFIDE	3.41	8.6			3.932	15.3	
CARBON TETRACHLORIDE	1.777	4.1			2.005	12.8	
CHLOROBENZENE	0.987	2.2			1.034	4.8	
CHLOROETHANE	0.523	12.2			0.523	0	
CHLOROFORM	2.692	13			2.779	3.2	
CHLOROMETHANE	0.66	8			0.624	5.5	
CIS-1,3-DICHLOROPROPENE	0.443	3.4			0.46	3.9	
DIBROMOCHLOROMETHANE	0.67	10.1			0.698	4.1	
ETHYLBENZENE	0.565	1.5			0.588	4.1	
METHYLENE CHLORIDE	1.194	12.4			1.237	3.6	
STYRENE	0.61	1.6			0.62	1.8	
TETRACHLOROETHENE	0.377	9.4			0.433	15	
TOLUENE	0.463	3.5			0.488	5.5	
TOLUENE-D8	0.151	2.3			0.149	1.8	
TRANS-1,3-DICHLOROPROPENE	0.349	5.1			0.371	6.4	
TRICHLOROETHENE	0.485	3.1			0.54	11.3	
VINYL ACETATE	1.238	3.8			1.165	5.9	
VINYL CHLORIDE	0.838	6.6			0.837	0.1	
XYLENE (TOTAL)	0.541	2.1			0.557	2.9	
1,1-DICHLOROETHANE	1.876	5.2			1.901	1.3	
1,1-DICHLOROETHENE	1.122	15.4			1.321	17.7	
1,1,1-TRICHLOROETHANE	1.868	6.6			2.042	9.3	
1,1,2-TRICHLOROETHANE	0.299	4			0.323	7.9	
1,1,2,2-TETRACHLOROETHANE	0.703	9.3			0.686	2.5	
1,2-DICHLOROETHANE	1.295	7.4			1.465	13.1	
1,2-DICHLOROETHANE-D4	0.339	8.1			0.321	5.2	
1,2-DICHLOROETHENE	1.229	11.2			1.311	6.7	
1,2-DICHLOROPROPANE	0.309	0.3			0.307	0.5	
1,4-BROMOFLUOROBENZENE	0.604	4			0.616	2	
2-BUTANONE	0.103	14.7			0.105	1.8	
2-HEXANONE	0.1	24.1			0.107	7.2	
4-METHYL-2-PENTANONE	0.222	13.3			0.239	7.5	

SURR 1(TOL) %RECOVERY							

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TABLE D.7.13 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0503886	BR0503886	BR0503885	BR0505885	BR0505887	BR0505887	BR0505888
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	16	17
M/E 75	42	50
M/E 95	100	100
M/E 96	8.5	7.8
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	98	80
M/E 175-1	7.1	6.1
M/E 175-2	7.3	7.7
M/E 176-1	95	80
M/E 176-2	98	100
M/E 177-1	5.8	5.6
M/E 177-2	6.1	7

INTERNAL STD AREA(BCM) 36500
 INTERNAL STD AREA(CBZ) 85500
 INTERNAL STD AREA(DFB) 117000

DILUTION FACTOR
 PERCENT MOISTURE
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	REANALYSIS	B. 444	REANALYSIS	MATRIX	MS %	RPD
TYPE OF LOCATION	BLANK	RELEASES	RELEASES	RELEASES	SPIKE	RECOVERY	
SAMPLE NUMBER	VBK00142	BR503039A	BR503040A	BR503017A	BR503017A	BR503017A	BR503017A
MATRIX	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	%	%
ENV PROBLEM NO		6	6	6	6	6	6
ACETONE	10 U	130	60 U	120	70		
BENZENE	5 U	33 U	30 U	28 U	250 S	88	3
BROMODICHLOROMETHANE	5 U	33 U	30 U	28 U	28 U		

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TABLE D.7.13 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503017A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK00142 WATER UG/L	REANALYSIS BR503039A SOIL UG/KG	B. 444 RELEASES BR503040A SOIL UG/KG	REANALYSIS BR503017A SOIL UG/KG	MATRIX SPIKE BR503017A SOIL UG/KG	MS % RECOVERY BR503017A SOIL %	RPD BR503017A SOIL %
	6	6	6	6	6	6	6
BROMOFORM	5 U	33 U	30 U	28 U	28 U		
BROMOMETHANE	10 U	65 U	60 U	56 U	56 U		
CARBON DISULFIDE	5 U	33 U	30 U	28 U	28 U		
CARBON TETRACHLORIDE	5 U	33 U	30 U	28 U	28 U		
CHLOROBENZENE	5 U	33 U	30 U	28 U	290 S	102	7
CHLOROETHANE	10 U	65 U	60 U	56 U	56 U		
CHLOROFORM	5 J	27 JB	24 JB	22 JB	21 JB		
CHLOROMETHANE	10 U	65 U	60 U	56 U	56 U		
CIS-1,3-DICHLOROPROPENE	5 U	33 U	30 U	28 U	28 U		
DIBROMOCHLOROMETHANE	5 U	33 U	30 U	28 U	28 U		
ETHYLBENZENE	2 J	9 JB	9 JB	9 JB	11 JB		
METHYLENE CHLORIDE	4 J	24 JB	21 JB	20 JB	18 JB		
STYRENE	5 U	33 U	30 U	28 U	3 J		
TETRACHLOROETHENE	5 U	33 U	30 U	28 U	28 U		
TOLUENE	5 U	33 U	30 U	28 U	280 S	100	11
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	33 U	30 U	28 U	28 U		
TRICHLOROETHENE	5 U	33 U	30 U	28 U	280 S	101	10
VINYL ACETATE	10 U	65 U	60 U	56 U	56 U		
VINYL CHLORIDE	10 U	65 U	60 U	56 U	56 U		
XYLENE (TOTAL)	1 J	8 JB	8 JB	6 JB	6 JB		
1,1-DICHLOROETHANE	5 U	33 U	30 U	28 U	28 U		
1,1-DICHLOROETHENE	5 U	33 U	30 U	28 U	250 S	89	5
1,1,1-TRICHLOROETHANE	5 U	33 U	30 U	28 U	28 U		
1,1,2-TRICHLOROETHANE	5 U	33 U	30 U	28 U	28 U		
1,1,2,2-TETRACHLOROETHANE	1 J	33 U	30 U	28 U	28 U		
1,2-DICHLOROETHANE	5 U	33 U	30 U	28 U	28 U		
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	33 U	30 U	28 U	28 U		
1,2-DICHLOROPROPANE	5 U	33 U	30 U	28 U	28 U		
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	65 U	60 U	56 U	56 U		
2-HEXANONE	10 U	65 U	60 U	56 U	56 U		
4-METHYL-2-PENTANONE	10 U	65 U	60 U	56 U	56 U		
SURR 1(TOL) %RECOVERY	102	104	97	113	105		
SURR 2(BFB) %RECOVERY	102	95	100	107	105		
SURR 3(DCE) %RECOVERY	96	98	100	102	98		

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TABLE D.7.13 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503017A

DRAFT DO NOT CITE

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AREA	QA				QA	QA	QA
LOCATION	METHOD	REANALYSIS	B. 444	REANALYSIS	MATRIX	MS %	RPD
TYPE OF LOCATION	BLANK		RELEASES		SPIKE	RECOVERY	
SAMPLE NUMBER	VBK00142	BR503039A	BR503040A	BR503017A	BR503017A	BR503017A	BR503017A
MATRIX	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	%	%
ENV PROBLEM NO		6	6	6	6	6	6

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	29200	27400	27100	25700	24000
INTERNAL STD AREA(CBZ)	77200	76000	67300	63400	58800
INTERNAL STD AREA(DFB)	105000	95900	92500	81600	75100

DILUTION FACTOR	1	1	1	1	1
PERCENT MOISTURE		23.3	16.2	10.4	10.4
ACTUAL(ALLOWED) HOLD TIME		21(14 D)	21(14 D)	21(14 D)	21(14 D)

AREA	QA	QA			
LOCATION	MATRIX SPIKE	MSD %	B. 444	B. 444	B. 481
TYPE OF LOCATION	DUPLICATE	RECOVERY	RELEASES	RELEASES	LEACH PIT
SAMPLE NUMBER	BR503017A	BR503017A	BR504029A	BR504030A	BR808026A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	%	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	6	6	6	6	11

ACETONE	130		56 U	54 U	2000
BENZENE	240 S	85	28 U	27 U	160 U
BROMODICHLOROMETHANE	28 U		28 U	27 U	160 U
BROMOFORM	28 U		28 U	27 U	160 U
BROMOMETHANE	56 U		56 U	54 U	320 U
CARBON DISULFIDE	28 U		28 U	27 U	160 U
CARBON TETRACHLORIDE	28 U		28 U	27 U	160 U

TABLE D.7.13 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503017A

DRAFT DO NOT CITE

AREA	QA	QA			
LOCATION	MATRIX SPIKE	MSD %	B. 444	B. 444	B. 481
TYPE OF LOCATION	DUPLICATE	RECOVERY	RELEASES	RELEASES	LEACH PIT
SAMPLE NUMBER	BR503017A	BR503017A	BR504029A	BR504030A	BR808026A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	%	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	6	6	6	6	11
CHLOROBENZENE	270 S	95	28 U	27 U	160 U
CHLOROETHANE	56 U		56 U	54 U	320 U
CHLOROFORM	22 JB		18 J	21 J	130 J
CHLOROMETHANE	56 U		56 U	54 U	320 U
CIS-1,3-DICHLOROPROPENE	28 U		28 U	27 U	160 U
DIBROMOCHLOROMETHANE	28 U		28 U	27 U	160 U
ETHYLBENZENE	9 JB		8 J	9 J	160 U
METHYLENE CHLORIDE	21 JB		19 JB	18 JB	120 JB
STYRENE	28 U		28 U	27 U	160 U
TETRACHLOROETHENE	28 U		28 U	27 U	160 U
TOLUENE	250 S	89	28 U	27 U	850
TOLUENE-D8					
TRANS-1,3-DICHLOROPROPENE	28 U		28 U	27 U	160 U
TRICHLOROETHENE	260 S	91	28 U	27 U	160 U
VINYL ACETATE	56 U		56 U	54 U	320 U
VINYL CHLORIDE	56 U		56 U	54 U	320 U
XYLENE (TOTAL)	7 JB		6 J	7 J	1100
1,1-DICHLOROETHANE	28 U		28 U	27 U	160 U
1,1-DICHLOROETHENE	240 S	84	28 U	27 U	160 U
1,1,1-TRICHLOROETHANE	28 U		28 U	27 U	160 U
1,1,2-TRICHLOROETHANE	28 U		28 U	27 U	160 U
1,1,2,2-TETRACHLOROETHANE	28 U		28 U	27 U	160 U
1,2-DICHLOROETHANE	28 U		28 U	27 U	160 U
1,2-DICHLOROETHANE-D4					
1,2-DICHLOROETHENE	28 U		28 U	27 U	160 U
1,2-DICHLOROPROPANE	28 U		28 U	27 U	160 U
1,4-BROMOFLUOROBENZENE					
2-BUTANONE	56 U		56 U	54 U	320 U
2-HEXANONE	56 U		56 U	54 U	320 U
4-METHYL-2-PENTANONE	56 U		56 U	54 U	320 U
SURR 1(TOL) %RECOVERY	99		100	105	117
SURR 2(BFB) %RECOVERY	102		103	102	92
SURR 3(DCE) %RECOVERY	102		102	108	109
M/E 50					
M/E 75					
M/E 95					
M/E 96					

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TABLE D.7.13 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503017A

DRAFT DO NOT CITE

AREA	QA	QA			
LOCATION	MATRIX SPIKE	MSD %	B. 444	B. 444	B. 481
TYPE OF LOCATION	DUPLICATE	RECOVERY	RELEASES	RELEASES	LEACH PIT
SAMPLE NUMBER	BR503017A	BR503017A	BR504029A	BR504030A	BR808026A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	%	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	6	6	6	6	11
M/E 173-1					
M/E 173-2					
M/E 174					
M/E 175-1					
M/E 175-2					
M/E 176-1					
M/E 176-2					
M/E 177-1					
M/E 177-2					
INTERNAL STD AREA(BCM)	23400		21600	21300	19700
INTERNAL STD AREA(CBZ)	58800		54300	52900	52900
INTERNAL STD AREA(DFB)	80000		70000	71300	77800
DILUTION FACTOR	1		1	1	1
PERCENT MOISTURE	10.4		10.5	8.2	69
ACTUAL(ALLOWED) HOLD TIME	21(14 D)		21(14 D)	21(14 D)	14(14 D)

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TABLE D.7.14 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503028A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0503886	BR0503886	BR0503885	BR0504885	BR0504887	BR0504887	BR0504888
MATRIX	SOILR	SOILR	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACETONE	0.268	22.6			0.311	16	
BENZENE	2.625	8.2			2.556	2.6	
BROMODICHLOROMETHANE	0.67	4			0.677	1	
BROMOFORM	0.723	13.5			0.731	1.1	
BROMOMETHANE	1.497	5.6			1.596	6.6	
CARBON DISULFIDE	3.41	8.6			3.656	7.2	
CARBON TETRACHLORIDE	1.777	4.1			1.735	2.4	
CHLOROBENZENE	0.987	2.2			1.016	2.9	
CHLOROETHANE	0.523	12.2			0.565	8	
CHLOROFORM	2.692	13			2.661	1.2	
CHLOROMETHANE	0.66	8			0.685	3.7	
CIS-1,3-DICHLOROPROPENE	0.443	3.4			0.455	2.7	
DIBROMOCHLOROMETHANE	0.67	10.1			0.65	3	
ETHYLBENZENE	0.565	1.5			0.578	2.3	
METHYLENE CHLORIDE	1.194	12.4			1.224	2.5	
STYRENE	0.61	1.6			0.599	1.8	
TETRACHLOROETHENE	0.377	9.4			0.418	11	
TOLUENE	0.463	3.5			0.464	0.2	
TOLUENE-D8	0.151	2.3			0.143	5.3	
TRANS-1,3-DICHLOROPROPENE	0.349	5.1			0.362	3.7	
TRICHLOROETHENE	0.485	3.1			0.491	1.2	
VINYL ACETATE	1.238	3.8			1.206	2.6	
VINYL CHLORIDE	0.838	6.6			0.816	2.6	
XYLENE (TOTAL)	0.541	2.1			0.547	1.1	
1,1-DICHLOROETHANE	1.876	5.2			1.844	1.7	
1,1-DICHLOROETHENE	1.122	15.4			1.22	8.7	
1,1,1-TRICHLOROETHANE	1.868	6.6			1.788	4.3	
1,1,2-TRICHLOROETHANE	0.299	4			0.32	7	
1,1,2,2-TETRACHLOROETHANE	0.703	9.3			0.707	0.6	
1,2-DICHLOROETHANE	1.295	7.4			1.275	1.5	
1,2-DICHLOROETHANE-D4	0.339	8.1			0.292	13.9	
1,2-DICHLOROETHENE	1.229	11.2			1.276	3.8	
1,2-DICHLOROPROPANE	0.309	0.3			0.309	0	
1,4-BROMOFLUOROBENZENE	0.604	4			0.588	25.7	
2-BUTANONE	0.103	14.7			0.108	4.9	
2-HEXANONE	0.1	24.1			0.116	16	
4-METHYL-2-PENTANONE	0.222	13.3			0.216	2.7	

Surr 1(TOL) %RECOVERY

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TABLE D.7.14 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503028A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0503886	BR0503886	BR0503885	BR0504885	BR0504887	BR0504887	BR0504888
MATRIX	SOILR	SOILR	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	16	18
M/E 75	42	45
M/E 95	100	100
M/E 96	8.5	8.1
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	98	81
M/E 175-1	7.1	5.8
M/E 175-2	7.3	7.1
M/E 176-1	95	81
M/E 176-2	98	100
M/E 177-1	5.8	5.4
M/E 177-2	6.1	6.7

INTERNAL STD AREA(BCM) 47500
 INTERNAL STD AREA(CBZ) 121000
 INTERNAL STD AREA(DFB) 159000

DILUTION FACTOR
 PERCENT MOISTURE
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	STP	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	DREDGE MATL	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK00128	BR800062A	BR800062A	BR800062A	BR800062A	BR800062A	BR800062A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		8	8	8	8	8	8
ACETONE	10 U	53 U	53 U			53 U	
BENZENE	5 U	27 U	240 S	90	0	240 S	90
BROMODICHLOROMETHANE	5 U	27 U	27 U			27 U	

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TABLE D.7.14 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503028A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	STP	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	DREDGE MATL	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK00128	BR800062A	BR800062A	BR800062A	BR800062A	BR800062A	BR800062A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO	8	8	8	8	8	8	8
BROMOFORM	0.5 JB	27 U	27 U			27 U	
BROMOMETHANE	10 U	53 U	53 U			53 U	
CARBON DISULFIDE	5 U	27 U	27 U			27 U	
CARBON TETRACHLORIDE	5 U	27 U	27 U			27 U	
CHLORO BENZENE	5 U	27 U	260 S	96	2	260 S	98
CHLOROETHANE	10 U	53 U	53 U			53 U	
CHLOROFORM	5 B	28 B	31 B			31 B	
CHLOROMETHANE	10 U	53 U	53 U			53 U	
CIS-1,3-DICHLOROPROPENE	5 U	27 U	27 U			27 U	
DIBROMOCHLOROMETHANE	5 U	27 U	27 U			27 U	
ETHYLBENZENE	2 JB	9 JB	11 JB			13 JB	
METHYLENE CHLORIDE	4 JB	21 JB	24 JB			23 JB	
STYRENE	1 JB	4 JB	27 U			27 U	
TETRACHLOROETHENE	5 U	27 U	27 U			27 U	
TOLUENE	5 U	2 J	260 S	95	1	260 S	96
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	27 U	27 U			27 U	
TRICHLOROETHENE	5 U	27 U	270 S	99	2	270 S	102
VINYL ACETATE	10 U	53 U	53 U			53 U	
VINYL CHLORIDE	10 U	53 U	53 U			53 U	
XYLENE (TOTAL)	1 JB	7 JB	9 JB			8 JB	
1,1-DICHLOROETHANE	5 U	27 U	27 U			27 U	
1,1-DICHLOROETHENE	5 U	27 U	260 S	96	2	250 S	94
1,1,1-TRICHLOROETHANE	5 U	27 U	27 U			27 U	
1,1,2-TRICHLOROETHANE	5 U	27 U	27 U			27 U	
1,1,2,2-TETRACHLOROETHANE	1 JB	27 U	27 U			27 U	
1,2-DICHLOROETHANE	5 U	27 U	27 U			27 U	
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	27 U	27 U			27 U	
1,2-DICHLOROPROPANE	5 U	27 U	27 U			27 U	
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 B	53 U	53 U			53 U	
2-HEXANONE	10 U	53 U	53 U			53 U	
4-METHYL-2-PENTANONE	10 U	53 U	53 U			53 U	
SURR 1(TOL) %RECOVERY	105	105	105			105	
SURR 2(BFB) %RECOVERY	105	100	104			106	
SURR 3(DCE) %RECOVERY	108	106	114			116	

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TABLE D.7.14 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503028A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	STP	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	DREDGE MATL	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK00128	BR800062A	BR800062A	BR800062A	BR800062A	BR800062A	BR800062A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	%	%	UG/KG	%
ENV PROBLEM NO		8	8	8	8	8	8

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	40500	38900	34600	31000
INTERNAL STD AREA(CBZ)	105000	101000	90900	76500
INTERNAL STD AREA(DFB)	138000	134000	120000	103000
DILUTION FACTOR	1	1	1	1
PERCENT MOISTURE	0	6.5	6.5	6.5
ACTUAL(ALLOWED) HOLD TIME		19(14 D)	19(14 D)	19(14 D)

AREA

LOCATION	STP	STP	STP	STP	B. 444
TYPE OF LOCATION	DREDGE MATL	DREDGE MATL	DREDGE MATL	DREDGE MATL	RELEASES
SAMPLE NUMBER	BR800073A	BR800084A	BR800095A	BR800108A	BR503028A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	8	8	8	8	6
ACETONE	53 U	56 U	120	52 U	55 U
BENZENE	26 U	28 U	27 U	26 U	28 U
BROMODICHLOROMETHANE	26 U	28 U	27 U	26 U	28 U
BROMOFORM	26 U	28 U	27 U	26 U	28 U
BROMOMETHANE	53 U	56 U	54 U	52 U	55 U
CARBON DISULFIDE	26 U	28 U	27 U	26 U	28 U
CARBON TETRACHLORIDE	26 U	28 U	27 U	26 U	28 U

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TABLE D.7.14 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503028A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV. PROBLEM NO	STP DREDGE MATL BR800073A SOIL UG/KG 8	STP DREDGE MATL BR800084A SOIL UG/KG 8	STP DREDGE MATL BR800095A SOIL UG/KG 8	STP DREDGE MATL BR800108A SOIL UG/KG 8	B. 444 RELEASES BR503028A SOIL UG/KG 6
CHLOROBENZENE	26 U	28 U	27 U	26 U	28 U
CHLOROETHANE	53 U	56 U	54 U	52 U	55 U
CHLOROFORM	30 B	32 B	30 B	30 B	33 B
CHLOROMETHANE	53 U	56 U	54 U	52 U	55 U
CIS-1,3-DICHLOROPROPENE	26 U	28 U	27 U	26 U	28 U
DIBROMOCHLOROMETHANE	26 U	28 U	27 U	26 U	28 U
ETHYLBENZENE	10 JB	11 JB	10 JB	9 JB	10 JB
METHYLENE CHLORIDE	20 JB	20 JB	19 JB	20 JB	21 JB
STYRENE	26 U	4 JB	27 U	3 JB	28 U
TETRACHLOROETHENE	26 U	28 U	27 U	26 U	28 U
TOLUENE	26 U	28 U	27 U	26 U	28 U
TOLUENE-D8					
TRANS-1,3-DICHLOROPROPENE	26 U	28 U	27 U	26 U	28 U
TRICHLOROETHENE	26 U	28 U	27 U	26 U	28 U
VINYL ACETATE	53 U	56 U	54 U	52 U	55 U
VINYL CHLORIDE	53 U	56 U	54 U	52 U	55 U
XYLENE (TOTAL)	7 JB	9 JB	8 JB	7 JB	7 JB
1,1-DICHLOROETHANE	26 U	28 U	27 U	26 U	28 U
1,1-DICHLOROETHENE	26 U	28 U	27 U	26 U	28 U
1,1,1-TRICHLOROETHANE	26 U	28 U	27 U	26 U	28 U
1,1,2-TRICHLOROETHANE	26 U	28 U	27 U	26 U	28 U
1,1,2,2-TETRACHLOROETHANE	26 U	28 U	27 U	26 U	28 U
1,2-DICHLOROETHANE	26 U	28 U	27 U	26 U	28 U
1,2-DICHLOROETHANE-D4					
1,2-DICHLOROETHENE	26 U	28 U	27 U	26 U	28 U
1,2-DICHLOROPROPANE	26 U	28 U	27 U	26 U	28 U
1,4-BROMOFLUOROBENZENE					
2-BUTANONE	53 U	56 U	54 U	52 U	55 U
2-HEXANONE	53 U	56 U	54 U	52 U	55 U
4-METHYL-2-PENTANONE	53 U	56 U	54 U	52 U	55 U

SURR 1(TOL) %RECOVERY	111	111	111	111	111
SURR 2(BFB) %RECOVERY	107	106	101	105	106
SURR 3(DCE) %RECOVERY	120	118	117	120	120

M/E 50					
M/E 75					
M/E 95					
M/E 96					

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TABLE D.7.14 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR503028A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP DREDGE MATL BR800073A SOIL UG/KG 8	STP DREDGE MATL BR800084A SOIL UG/KG 8	STP DREDGE MATL BR800095A SOIL UG/KG 8	STP DREDGE MATL BR800108A SOIL UG/KG 8	B. 444 RELEASES BR503028A SOIL UG/KG 6
M/E 173-1					
M/E 173-2					
M/E 174					
M/E 175-1					
M/E 175-2					
M/E 176-1					
M/E 176-2					
M/E 177-1					
M/E 177-2					
INTERNAL STD AREA(BCM)	31400	30200	30100	29800	26300
INTERNAL STD AREA(CBZ)	81700	74100	76200	79800	72300
INTERNAL STD AREA(DFB)	104000	101000	100000	99900	93400
DILUTION FACTOR	1	1	1	1	1
PERCENT MOISTURE	5.2	11	6.8	3.9	9.6
ACTUAL(ALLOWED) HOLD TIME	19(14 D)	19(14 D)	19(14 D)	19(14 D)	20(14 D)

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TABLE D.7.15 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR801041A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0421885	BR0421887	BR0421887	BR0421888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							
ACETONE	0.296	48.1			0.323	9.1	
BENZENE	0.993	2.2			0.942	5.1	
BROMODICHLOROMETHANE	0.476	2.1			0.522	9.7	
BROMOFORM	0.277	7.9			0.276	0.4	
BROMOMETHANE	0.904	35.5			1.232	36.3	
CARBON DISULFIDE	5.423	1.2			5.641	4	
CARBON TETRACHLORIDE	0.472	1.5			0.532	12.7	
CHLORO BENZENE	0.97	3.5			0.975	0.6	
CHLOROETHANE	0.757	5.3			0.848	12.1	
CHLOROFORM	2.946	3.6			3.159	7.2	
CHLOROMETHANE	1.777	2.2			2.082	17.2	
CIS-1,3-DICHLOROPROPENE	0.465	0.7			0.455	2.3	
DIBROMOCHLOROMETHANE	0.393	2			0.423	7.6	
ETHYLBENZENE	0.486	2.3			0.49	0.8	
METHYLENE CHLORIDE	1.251	7			1.379	10.3	
STYRENE	0.7	1.9			0.756	8	
TETRACHLOROETHENE	0.473	3.3			0.5	5.6	
TOLUENE	0.776	3.4			0.752	3.1	
TOLUENE-D8	0.456	1.7			0.44	3.3	
TRANS-1,3-DICHLOROPROPENE	0.368	3			0.371	0.7	
TRICHLOROETHENE	0.423	8.7			0.423	0	
VINYL ACETATE	0.33	41.1			0.5	51.7	
VINYL CHLORIDE	1.387	8.2			1.632	17.7	
XYLENE (TOTAL)	0.58	3			0.64	10.2	
1,1-DICHLOROETHANE	2.797	2.8			2.727	2.5	
1,1-DICHLOROETHENE	1.454	1.2			1.513	4	
1,1,1-TRICHLOROETHANE	0.486	0.9			0.522	7.4	
1,1,2-TRICHLOROETHANE	0.238	3			0.239	0.5	
1,1,2,2-TETRACHLOROETHANE	0.344	8.3			0.35	1.8	
1,2-DICHLOROETHANE	1.935	3.2			2.027	4.8	
1,2-DICHLOROETHANE-D4	0.838	1.2			0.844	0.8	
1,2-DICHLOROETHENE	1.544	2			1.561	1.1	
1,2-DICHLOROPROPANE	0.358	2.3			0.336	6.2	
1,4-BROMOFLUOROBENZENE	0.578	1.8			0.602	4.1	
2-BUTANONE	0.022	11.3			0.026	20.1	
2-HEXANONE	0.179	14.9			0.158	11.5	
4-METHYL-2-PENTANONE	0.248	9.5			0.232	6.6	
SURR 1(TOL) %RECOVERY							

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TABLE D.7.15 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR801041A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0328886	BR0328886	BR0328885	BR0421885	BR0421887	BR0421887	BR0421888
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	21	19
M/E 75	52	48
M/E 95	100	100
M/E 96	8.1	8.5
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	97	89
M/E 175-1	7.1	7.3
M/E 175-2	7.4	8.2
M/E 176-1	95	88
M/E 176-2	98	98
M/E 177-1	8	5.7
M/E 177-2	8.4	6.5

INTERNAL STD AREA(BCM) 22000
 INTERNAL STD AREA(CBZ) 85400
 INTERNAL STD AREA(DFB) 102000

DILUTION FACTOR
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	METHOD	STP	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	TANK	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK07315	BR801041A	BR801041A	BR801041A	BR801041A	BR801041A	BR801041A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	%	%	UG/L	%
ENV PROBLEM NO							
ACETONE	24	25 B	22 B			17 B	
BENZEHE	5 U	5 U	51 S	101	3	49 S	98
BROMODICHLOROMETHANE	5 U	5 U	5 U			5 U	
BROMOFORM	5 U	5 U	5 U			5 U	

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TABLE D.7.15 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR801041A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	METHOD BLANK VBK07315 WATER UG/L	STP TANK BR801041A WATER UG/L	MATRIX SPIKE BR801041A WATER UG/L	MS % RECOVERY BR801041A WATER %	RPD BR801041A WATER %	MATRIX SPIKE DUPLICATE BR801041A WATER UG/L	MSD % RECOVERY BR801041A WATER %
BROMOMETHANE	10 U	10 U	10 U			10 U	
CARBON DISULFIDE	5 U	5 U	5 U			5 U	
CARBON TETRACHLORIDE	5 U	5 U	5 U			5 U	
CHLOROBENZENE	5 U	5 U	53 S	105	2	54 S	108
CHLOROETHANE	10 U	10 U	10 U			10 U	
CHLOROFORM	2 J	5 U	5 U			5 U	
CHLOROMETHANE	10 U	10 U	10 U			10 U	
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U			5 U	
DIBROMOCHLOROMETHANE	5 U	5 U	5 U			5 U	
ETHYLBENZENE	5 U	5 U	5 U			5 U	
METHYLENE CHLORIDE	2 J	5 U	5 U			5 U	
STYRENE	5 U	5 U	5 U			5 U	
TETRACHLOROETHENE	5 U	5 U	5 U			5 U	
TOLUENE	0.4 J	2 JB	53 BS	101	2	54 BS	104
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U			5 U	
TRICHLOROETHENE	5 U	5 U	52 S	104	0	53 S	105
VINYL ACETATE	10 U	10 U	10 U			10 U	
VINYL CHLORIDE	10 U	10 U	10 U			10 U	
XYLENE (TOTAL)	5 U	5 U	5 U			5 U	
1,1-DICHLOROETHANE	5 U	5 U	5 U			5 U	
1,1-DICHLOROETHENE	5 U	5 U	49 S	97	5	51 S	102
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U			5 U	
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U			5 U	
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U			5 U	
1,2-DICHLOROETHANE	5 U	5 U	5 U			5 U	
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U			5 U	
1,2-DICHLOROPROPANE	5 U	5 U	5 U			5 U	
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U			10 U	
2-HEXANONE	10 U	10 U	10 U			10 U	
4-METHYL-2-PENTANONE	10 U	10 U	10 U			10 U	
SURR 1(TOL) %RECOVERY	100	101	99			100	
SURR 2(BFB) %RECOVERY	98	100	100			98	
SURR 3(DCE) %RECOVERY	91	94	101			96	

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TABLE D.7.15 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR801041A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	STP	MATRIX	MS %	RPD	MATRIX SPIKE	MSD %
TYPE OF LOCATION	BLANK	TANK	SPIKE	RECOVERY		DUPLICATE	RECOVERY
SAMPLE NUMBER	VBK07315	BR801041A	BR801041A	BR801041A	BR801041A	BR801041A	BR801041A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	%	%	UG/L	%
ENV PROBLEM NO		8	8	8	8	8	8

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	17400	20400	16100	19700
INTERNAL STD AREA(CBZ)	66300	80500	64700	82400
INTERNAL STD AREA(DFB)	78500	96700	75700	99800

DILUTION FACTOR	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME		6(14 D)	6(14 D)	6(14 D)

AREA

LOCATION	STP	TRIP BLANK	B. 444	TRIP BLANK	STP	STP	STP
TYPE OF LOCATION	DREDGE MATL	TRIP BLANK	RELEASES	TRIP BLANK	TANK	TANK	TANK
SAMPLE NUMBER	BR800119A	BRN17012A	BR503051A	BRN13018A	BR801018A	BR801029A	BR801030A
MATRIX	WATER	WATER	WATER	WATER	WATER	WATER	WATER
UNITS	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
ENV PROBLEM NO	8	99	6	99	8	8	8

ACETONE	16 B	9 JB	18 B	10 U	10 U	10 U	10 U
BENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	10 U						
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U

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TABLE D.7.15 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR801041A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP DREDGE MATL BR800119A WATER UG/L 8	TRIP BLANK TRIP BLANK BRN17012A WATER UG/L 99	B. 444 RELEASES BR503051A WATER UG/L 6	TRIP BLANK TRIP BLANK BRN13018A WATER UG/L 99	STP TANK BR801018A WATER UG/L 8	STP TANK BR801029A WATER UG/L 8	STP TANK BR801030A WATER UG/L 8
CHLOROETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CHLOROFORM	2 JB	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROMETHANE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	5 U	5 U	1 JB	5 U	5 U	5 U	1 JB
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	2 JB	11 B	3 JB	11 B	0.5 JB	0.4 JB	5 U
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	5 U	2 J	5 U	3 J	5 U	5 U	5 U
VINYL ACETATE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
VINYL CHLORIDE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-HEXANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-METHYL-2-PENTANONE	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SURR 1(TOL) %RECOVERY	100	98	101	100	102	100	95
SURR 2(BFB) %RECOVERY	98	95	95	93	96	96	94
SURR 3(DCE) %RECOVERY	99	96	92	88	90	93	90
M/E 50							
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							

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TABLE D.7.15 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR801041A

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	STP DREDGE MATL BR800119A WATER UG/L 8	TRIP BLANK TRIP BLANK BRN17012A WATER UG/L 99	B. 444 RELEASES BR503051A WATER UG/L 6	TRIP BLANK TRIP BLANK BRN13018A WATER UG/L 99	STP TANK BR801018A WATER UG/L 8	STP TANK BR801029A WATER UG/L 8	STP TANK BR801030A WATER UG/L 8
M/E 173-2							
M/E 174							
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)	20500	20900	21400	22200	22700	23000	20600
INTERNAL STD AREA(CBZ)	85000	88800	87100	90900	93900	94800	85500
INTERNAL STD AREA(DFB)	101000	104000	103000	108000	112000	115000	101000
DILUTION FACTOR	1	1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME	6(14 D)	5(14 D)	7(14 D)	6(14 D)	6(14 D)	6(14 D)	6(14 D)

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TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	INITIAL CAL RRF BR0503886 SOIL RRF	INITIAL CAL % RSD BR0503886 SOIL %	TUNED CALIBRATION BR0503885 SOIL %	TUNED CALIBRATION BR0508885 SOIL %	CONTINUING CALIBRATION BR0508887 SOIL RRF	CONTINUING CAL %D BR0508887 SOIL %	ISTD RET TIM SHIFT BR0508888 SOIL AREA
ACETONE	0.268	22.6			0.417	55.3	
BENZENE	2.625	8.2			2.582	1.6	
BROMODICHLOROMETHANE	0.67	4			0.88	31.4	
BROMOFORM	0.723	13.5			0.989	36.8	
BROMOMETHANE	1.497	5.6			1.55	3.6	
CARBON DISULFIDE	3.41	8.6			4.116	20.7	
CARBON TETRACHLORIDE	1.777	4.1			2.233	25.6	
CHLOROBENZENE	0.987	2.2			1.114	12.9	
CHLOROETHANE	0.523	12.2			0.567	8.3	
CHLOROFORM	2.692	13			3.044	13.1	
CHLOROMETHANE	0.66	8			0.606	8.1	
CIS-1,3-DICHLOROPROPENE	0.443	3.4			0.531	19.9	
DIBROMOCHLOROMETHANE	0.67	10.1			0.79	17.8	
ETHYLBENZENE	0.565	1.5			0.606	7.3	
METHYLENE CHLORIDE	1.194	12.4			1.396	16.9	
STYRENE	0.61	1.6			0.628	3	
TETRACHLOROETHENE	0.377	9.4			0.471	25.1	
TOLUENE	0.463	3.5			0.537	16.2	
TOLUENE-D8	0.151	2.3			0.165	8.8	
TRANS-1,3-DICHLOROPROPENE	0.349	5.1			0.397	13.8	
TRICHLOROETHENE	0.485	3.1			0.565	16.5	
VINYL ACETATE	1.238	3.8			1.33	7.4	
VINYL CHLORIDE	0.838	6.6			0.818	2.5	
XYLENE (TOTAL)	0.541	2.1			0.568	4.9	
1,1-DICHLOROETHANE	1.876	5.2			2.084	11.1	
1,1-DICHLOROETHENE	1.122	15.4			1.186	5.7	
1,1,1-TRICHLOROETHANE	1.868	6.6			2.301	23.1	
1,1,2-TRICHLOROETHANE	0.299	4			0.326	9.1	
1,1,2,2-TETRACHLOROETHANE	0.703	9.3			0.753	7.1	
1,2-DICHLOROETHANE	1.295	7.4			1.688	30.4	
1,2-DICHLOROETHANE-D4	0.339	8.1			0.42	24.1	
1,2-DICHLOROETHENE	1.229	11.2			1.416	15.2	
1,2-DICHLOROPROPANE	0.309	0.3			0.341	10.4	
1,4-BROMOFLUOROBENZENE	0.604	4			0.671	11	
2-BUTANONE	0.103	14.7			0.118	14.4	
2-HEXANONE	0.1	24.1			0.106	6.2	
4-METHYL-2-PENTANONE	0.222	13.3			0.268	20.6	

SURR 1(TOL) %RECOVERY							

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TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	INITIAL CAL	INITIAL CAL	TUNED	TUNED	CONTINUING	CONTINUING	ISTD RET TIM
TYPE OF LOCATION	RRF	% RSD	CALIBRATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT
SAMPLE NUMBER	BR0503886	BR0503886	BR0503885	BR0508885	BR0508887	BR0508887	BR0508888
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	RRF	%	%	%	RRF	%	AREA
ENV PROBLEM NO							

SURR 2(BFB) %RECOVERY
 SURR 3(DCE) %RECOVERY

M/E 50	16	20
M/E 75	42	51
M/E 95	100	100
M/E 96	8.5	7.3
M/E 173-1	0	0
M/E 173-2	0	0
M/E 174	98	92
M/E 175-1	7.1	6.5
M/E 175-2	7.3	7.1
M/E 176-1	95	89
M/E 176-2	98	96
M/E 177-1	5.8	6
M/E 177-2	6.1	6.8

INTERNAL STD AREA(BCM) 31300
 INTERNAL STD AREA(CBZ) 67300
 INTERNAL STD AREA(DFB) 96800

DILUTION FACTOR
 PERCENT MOISTURE
 ACTUAL(ALLOWED) HOLD TIME

AREA	QA	QA	QA	QA	QA	QA	QA
LOCATION	METHOD	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION	BLANK						
SAMPLE NUMBER	VBK00188	BR806137A	BR806148A	BR806013A	BR806024A	BR806035A	BR806046A
MATRIX	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO		10	10	10	10	10	10
ACETONE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
BENZENE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
BROMODICHLOROMETHANE	5 U	27 U	31 U	29 U	31 U	28 U	30 U

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TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

AREA	QA						
LOCATION	METHOD	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION	BLANK						
SAMPLE NUMBER	VBK00188	BR806137A	BR806148A	BR806013A	BR806024A	BR806035A	BR806046A
MATRIX	WATER	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	10	10	10	10	10	10	10
BROMOFORM	5 U	27 U	31 U	29 U	31 U	28 U	30 U
BROMOMETHANE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
CARBON DISULFIDE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
CARBON TETRACHLORIDE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
CHLORO BENZENE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
CHLOROETHANE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
CHLOROFORM	5 J	24 JB	27 JB	27 JB	27 JB	26 JB	27 JB
CHLOROMETHANE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
CIS-1,3-DICHLOROPROPENE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
DIBROMOCHLOROMETHANE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
ETHYLBENZENE	2 J	9 JB	8 JB	7 JB	31 U	6 JB	9 JB
METHYLENE CHLORIDE	4 J	16 JB	21 JB	18 JB	21 JB	28 U	230 B
STYRENE	0.4 J	27 U	31 U	29 U	31 U	28 U	30 U
TETRACHLOROETHENE	5 U	27 U	58	29 U	31 U	28 U	30 U
TOLUENE	5 U	27 U	3 J	29 U	31 U	28 U	17 J
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
TRICHLOROETHENE	5 U	9 J	7 J	29 U	31 U	28 U	110
VINYL ACETATE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
VINYL CHLORIDE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
XYLENE (TOTAL)	0.9 J	27 U	6 JB	29 U	31 U	28 U	30 U
1,1-DICHLOROETHANE	5 U	27 U	31 U	29 U	31 U	28 U	36
1,1-DICHLOROETHENE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
1,1,1-TRICHLOROETHANE	5 U	27 U	31 U	29 U	31 U	28 U	230
1,1,2-TRICHLOROETHANE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
1,1,2,2-TETRACHLOROETHANE	1 J	27 U	31 U	29 U	31 U	28 U	30 U
1,2-DICHLOROETHANE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
1,2-DICHLOROPROPANE	5 U	27 U	31 U	29 U	31 U	28 U	30 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
2-HEXANONE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
4-METHYL-2-PENTANONE	10 U	54 U	62 U	57 U	63 U	56 U	59 U
SURR 1(TOL) %RECOVERY	102	93	89	99	86	90	100
SURR 2(BFB) %RECOVERY	96	95	96	94	87	94	101
SURR 3(DCE) %RECOVERY	95	99	98	106	103	107	109

M/E 50

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TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

AREA	QA	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS
LOCATION	METHOD	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION	BLANK						
SAMPLE NUMBER	VBK00188	BR806137A	BR806148A	BR806013A	BR806024A	BR806035A	BR806046A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	UG/L	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO		10	10	10	10	10	10

M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

INTERNAL STD AREA(BCM)	24500	21300	21100	18200	16700	17000	16200
INTERNAL STD AREA(CBZ)	58500	48700	50900	44700	37100	40200	38100
INTERNAL STD AREA(DFB)	82200	72200	73100	62400	56400	58000	54200

DILUTION FACTOR	1	1	1	1	1	1	1
PERCENT MOISTURE		7.9	19.6	13	20.4	10.9	15.3
ACTUAL(ALLOWED) HOLD TIME		18(14 D)					

AREA	QA	QA	QA	QA	QA	QA	
LOCATION	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	REANALYSIS	MATRIX
TYPE OF LOCATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT	BLANK		SPIKE
SAMPLE NUMBER	BR0509885	BR0509887	BR0509887	BR0509888	VBK00202	BR806057A	BR806057A
MATRIX	SOIL	SOIL	SOIL	SOIL	WATER	SOIL	SOIL
UNITS	%	RRF	%	AREA	UG/L	UG/KG	UG/KG
ENV PROBLEM NO						10	10

ACETONE	0.223	17.1	15	110 B	92 B
BENZENE	2.527	3.7	5 U	27 U	250 S
BROMODICHLOROMETHANE	0.779	16.2	0.2 J	27 U	2 JB
BROMOFORM	0.738	2	5 U	27 U	27 U
BROMOMETHANE	1.367	8.7	10 U	53 U	53 U
CARBON DISULFIDE	3.189	6.5	0.3 J	27 U	2 JB
CARBON TETRACHLORIDE	2.204	24	5 U	27 U	27 U

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TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA	QA	QA	
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TUNED CALIBRATION BR0509885 SOIL %	CONTINUING CALIBRATION BR0509887 SOIL RRF	CONTINUING CAL %D BR0509887 SOIL %	ISTD RET TIM SHIFT BR0509888 SOIL AREA	METHOD BLANK VBK00202 WATER UG/L	REANALYSIS BR806057A SOIL UG/KG 10	MATRIX SPIKE BR806057A SOIL UG/KG 10
CHLORO BENZENE		1.042	5.6		5 U	27 U	270 S
CHLOROETHANE		0.484	7.5		10 U	53 U	53 U
CHLOROFORM		2.915	8.3		4 J	22 JB	24 JB
CHLOROMETHANE		0.636	3.6		10 U	53 U	53 U
CIS-1,3-DICHLOROPROPENE		0.415	6.5		5 U	27 U	27 U
DIBROMOCHLOROMETHANE		0.689	2.8		5 U	27 U	27 U
ETHYLBENZENE		0.621	10		2 JB	11 JB	14 JB
METHYLENE CHLORIDE		1.243	4.1		4 J	24 JB	29 B
STYRENE		0.646	5.9		5 U	27 U	27 U
TETRACHLOROETHENE		0.367	2.7		5 U	27 U	27 U
TOLUENE		0.445	3.9		5 U	27 U	240 S
TOLUENE-D8		0.143	5.3				
TRANS-1,3-DICHLOROPROPENE		0.337	3.4		5 U	27 U	27 U
TRICHLOROETHENE		0.484	0.3		5 U	27 U	250 S
VINYL ACETATE		1.445	16.7		10 U	53 U	53 U
VINYL CHLORIDE		0.765	8.7		10 U	53 U	53 U
XYLENE (TOTAL)		0.591	9.3		1 JB	8 JB	10 JB
1,1-DICHLOROETHANE		1.962	4.6		5 U	27 U	27 U
1,1-DICHLOROETHENE		1.184	5.6		5 U	27 U	270 S
1,1,1-TRICHLOROETHANE		2.376	27.2		5 U	27 U	27 U
1,1,2-TRICHLOROETHANE		0.299	0		5 U	27 U	27 U
1,1,2,2-TETRACHLOROETHANE		0.804	14.4		5 U	27 U	27 U
1,2-DICHLOROETHANE		1.584	22.3		5 U	27 U	27 U
1,2-DICHLOROETHANE-D4		0.401	18.5				
1,2-DICHLOROETHENE		1.34	9		5 U	27 U	27 U
1,2-DICHLOROPROPANE		0.295	4.6		5 U	27 U	27 U
1,4-BROMOFLUOROBENZENE		0.623	3.1				
2-BUTANONE		0.112	8.9		10 U	53 J	53 U
2-HEXANONE		0.11	10.3		10 U	53 U	53 U
4-METHYL-2-PENTANONE		0.215	3.4		10 U	53 U	53 U
Surr 1(TOL) %RECOVERY					97	88	97
Surr 2(BFB) %RECOVERY					104	94	100
Surr 3(DCE) %RECOVERY					102	110	113
M/E 50	20						
M/E 75	47						
M/E 95	100						
M/E 96	7.3						

TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA	QA	QA
LOCATION	TUNED	CONTINUING	CONTINUING	ISTD RET TIM	METHOD	REANALYSIS
TYPE OF LOCATION	CALIBRATION	CALIBRATION	CAL %D	SHIFT	BLANK	MATRIX
SAMPLE NUMBER	BR0509885	BR0509887	BR0509887	BR0509888	VBK00202	BR806057A
MATRIX	SOIL	SOIL	SOIL	SOIL	WATER	SOIL
UNITS	%	RRF	%	AREA	UG/L	UG/KG
ENV PROBLEM NO						10

M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1
M/E 176-2
M/E 177-1
M/E 177-2

0
0
82
6.8
8.2
80
97
6.3
7.9

INTERNAL STD AREA(BCM)			42100	38300	34600	29700
INTERNAL STD AREA(CBZ)			94900	89700	84800	72500
INTERNAL STD AREA(DFB)			137000	119000	113000	98000

DILUTION FACTOR				1	1	1
PERCENT MOISTURE					6.4	6.4
ACTUAL(ALLOWED) HOLD TIME					19(14 D)	19(14 D)

AREA	QA	QA	QA	QA	QA	QA
LOCATION	MS %	RPD	MATRIX SPIKE	MSD %	REANALYSIS	REANALYSIS
TYPE OF LOCATION	RECOVERY		DUPLICATE	RECOVERY	REANALYSIS	REANALYSIS
SAMPLE NUMBER	BR806057A	BR806057A	BR806057A	BR806057A	BR806068A	BR806080A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	%	%	UG/KG	%	UG/KG	UG/KG
ENV PROBLEM NO	10	10	10	10	10	10

ACETONE			120 B		55 U	54 U	55 U
BENZENE	93	1	250 S	94	27 U	27 U	27 U
BROMODICHLOROMETHANE			27 U		27 U	27 U	27 U
BROMOFORM			27 U		27 U	27 U	27 U
BROMOMETHANE			53 U		55 U	54 U	55 U
CARBON DISULFIDE			27 U		27 U	27 U	27 U
CARBON TETRACHLORIDE			27 U		27 U	27 U	27 U
CHLORO BENZENE	100	1	270 S	99	27 U	27 U	27 U
CHLOROETHANE			53 U		55 U	54 U	55 U
CHLOROFORM			24 JB		21 JB	24 JB	22 JB

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TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

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AREA	QA	QA	QA	QA			
LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	MS % RECOVERY BR806057A SOIL %	RPD BR806057A SOIL %	MATRIX SPIKE DUPLICATE BR806057A SOIL UG/KG	MSD % RECOVERY BR806057A SOIL %	REANALYSIS BR806068A SOIL UG/KG	REANALYSIS BR806080A SOIL UG/KG	REANALYSIS BR806091A SOIL UG/KG
	10	10	10	10	10	10	10
CHLOROMETHANE			53 U		55 U	54 U	55 U
CIS-1,3-DICHLOROPROPENE			27 U		27 U	27 U	27 U
DIBROMOCHLOROMETHANE			27 U		27 U	27 U	27 U
ETHYLBENZENE			10 JB		11 JB	11 JB	10 JB
METHYLENE CHLORIDE			25 JB		23 JB	27 JB	27 JB
STYRENE			27 U		27 U	27 U	27 U
TETRACHLOROETHENE			27 U		27 U	27 U	34
TOLUENE	89	2	250 S	91	27 U	27 U	27 U
TOLUENE-D8							
TRANS-1,3-DICHLOROPROPENE			27 U		27 U	27 U	27 U
TRICHLOROETHENE	95	0	260 S	95	27 U	27 U	27 U
VINYL ACETATE			53 U		55 U	54 U	55 U
VINYL CHLORIDE			53 U		55 U	54 U	55 U
XYLENE (TOTAL)			7 JB		9 JB	7 JB	7 JB
1,1-DICHLOROETHANE			27 U		27 U	27 U	27 U
1,1-DICHLOROETHENE	102	0	280 S	103	27 U	27 U	27 U
1,1,1-TRICHLOROETHANE			27 U		27 U	27 U	27 U
1,1,2-TRICHLOROETHANE			27 U		27 U	27 U	27 U
1,1,2,2-TETRACHLOROETHANE			27 U		27 U	27 U	27 U
1,2-DICHLOROETHANE			27 U		27 U	27 U	27 U
1,2-DICHLOROETHANE-D4							
1,2-DICHLOROETHENE			27 U		27 U	27 U	27 U
1,2-DICHLOROPROPANE			27 U		27 U	27 U	27 U
1,4-BROMOFLUOROBENZENE							
2-BUTANONE			53 U		55 U	54 U	55 U
2-HEXANONE			53 U		55 U	54 U	55 U
4-METHYL-2-PENTANONE			53 U		55 U	54 U	55 U
SURR 1(TOL) %RECOVERY			92		98	93	96
SURR 2(BFB) %RECOVERY			93		104	97	103
SURR 3(DCE) %RECOVERY			118		119	121	120
M/E 50							
M/E 75							
M/E 95							
M/E 96							
M/E 173-1							
M/E 173-2							
M/E 174							

TABLE D.7.16 BROOKHAVEN VOLATILE ORGANICS - SDG NUMBER: BR806013A

DRAFT DO NOT CITE

AREA	QA	QA	QA	QA			
LOCATION	MS %	RPD	MATRIX SPIKE	MSD %	REANALYSIS	REANALYSIS	REANALYSIS
TYPE OF LOCATION	RECOVERY		DUPLICATE	RECOVERY			
SAMPLE NUMBER	BR806057A	BR806057A	BR806057A	BR806057A	BR806068A	BR806080A	BR806091A
MATRIX	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
UNITS	%	%	UG/KG	%	UG/KG	UG/KG	UG/KG
ENV PROBLEM NO	10	10	10	10	10	10	10
M/E 175-1							
M/E 175-2							
M/E 176-1							
M/E 176-2							
M/E 177-1							
M/E 177-2							
INTERNAL STD AREA(BCM)			27400		27500	26600	25400
INTERNAL STD AREA(CBZ)			67800		65100	67200	57200
INTERNAL STD AREA(DFB)			89800		88900	88500	80400
DILUTION FACTOR			1		1	1	1
PERCENT MOISTURE			6.4		8.8	7.2	8.8
ACTUAL(ALLOWED) HOLD TIME			19(14 D)		19(14 D)	19(14 D)	19(14 D)

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AREA	
LOCATION	REANALYSIS
TYPE OF LOCATION	
SAMPLE NUMBER	BR810031A
MATRIX	SOIL
UNITS	UG/KG
ENV PROBLEM NO	0
ACETONE	56 U
BENZENE	28 U
BROMODICHLOROMETHANE	28 U
BROMOFORM	28 U
BROMOMETHANE	56 U
CARBON DISULFIDE	28 U
CARBON TETRACHLORIDE	28 U
CHLOROBENZENE	28 U
CHLOROETHANE	56 U
CHLOROFORM	24 JB
CHLOROMETHANE	56 U
CIS-1, 3-DICHLOROPROPENE	28 U
DIBROMOCHLOROMETHANE	28 U

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	REANALYSIS BR810031A SOIL UG/KG 0
--	---

ETHYLBENZENE	13 JB
METHYLENE CHLORIDE	24 JB
STYRENE	28 U
TETRACHLOROETHENE	28 U
TOLUENE	28 U
TOLUENE-D8	
TRANS-1,3-DICHLOROPROPENE	28 U
TRICHLOROETHENE	28 U
VINYL ACETATE	56 U
VINYL CHLORIDE	56 U
XYLENE (TOTAL)	7 JB
1,1-DICHLOROETHANE	28 U
1,1-DICHLOROETHENE	28 U
1,1,1-TRICHLOROETHANE	28 U
1,1,2-TRICHLOROETHANE	28 U
1,1,2,2-TETRACHLOROETHANE	28 U
1,2-DICHLOROETHANE	28 U
1,2-DICHLOROETHANE-D4	
1,2-DICHLOROETHENE	28 U
1,2-DICHLOROPROPANE	28 U
1,4-BROMOFLUOROBENZENE	
2-BUTANONE	51 J
2-HEXANONE	56 U
4-METHYL-2-PENTANONE	56 U

SURR 1(TOL) %RECOVERY	97
SURR 2(BFB) %RECOVERY	110
SURR 3(DCE) %RECOVERY	118

M/E 50
M/E 75
M/E 95
M/E 96
M/E 173-1
M/E 173-2
M/E 174
M/E 175-1
M/E 175-2
M/E 176-1

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	REANALYSIS BR810031A SOIL UG/KG 0
M/E 176-2 M/E 177-1 M/E 177-2	
INTERNAL STD AREA(BCM)	24200
INTERNAL STD AREA(CBZ)	60800
INTERNAL STD AREA(DFB)	79000
DILUTION FACTOR	1
PERCENT MOISTURE	11.4
ACTUAL(ALLOWED) HOLD TIME	22(14 D)

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TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BRN11016A					
	BR500025A	109999	TETRAHYDROFURAN(10.50)	13 J	10.50
	BR500036A		UNKNOWN KETONE #1(17.40)	10 J	17.40
	BR500036A		UNKNOWN KETONE #2(27.00)	22 J	27.00
	VBK07289	76131	FREON 113(12.00)	11 J	12.00
BRN16011A					
	BRN16011A	76131	FREON 113(12.20)	11 J	12.20
	BRN22019A	76131	FREON 113(12.20)	8 J	12.20
	BRN34013A	76131	FREON 113(12.20)	12 J	12.20
	BRN35014A	76131	FREON 113(12.20)	14 J	12.20
	BR308043A	76131	FREON 113(12.10)	12 J	12.10
	BR805023A	76131	FREON 113(12.20)	18 J	12.20
	BR805034A	76131	FREON 113(12.20)	19 J	12.20
BRN20017A					
	BR306018A	75183	THIOBISMETHANE(7.00)	6 J	7.00
	BR306029A		VOA UNKNOWN(7.00)	6 J	7.00
	BR306030A	75183	THIOBISMETHANE(7.00)	6 J	7.00
	BR310014A	624920	DIMETHYLDISULFIDE(16.20)	14 J	16.20
	BR310014A	75183	THIOBISMETHANE(7.00)	26 J	7.00
	BR310025A	624920	DIMETHYLDISULFIDE(16.20)	24 J	16.20
	BR310025A	75183	THIOBISMETHANE(7.00)	31 J	7.00
	BR310036A	624920	DIMETHYLDISULFIDE(16.20)	41 J	16.20
	BR310036A	75183	THIOBISMETHANE(7.00)	30 J	7.00
BRN36015A					
	BRN36015A	76131	FREON 113(12.10)	8 J	12.10
	BR308010B	76131	FREON 113(12.10)	8 J	12.10
	BR308010B		SUBSTITUTED BENZENE(34.20)	89 J	34.20
	BR308010B	75183	THIOBISMETHANE(7.00)	15 J	7.00
	BR308010B		UNKNOWN HYDROCARBON(28.20)	19 J	28.20
	BR308021B	646060	PROABABLE 1,3-DIOXOLANE(8.70)	25 J	8.70
	BR308021B		SUBSTITUTED BENZENE#1(23.30)	92 J	23.30
	BR308021B		SUBSTITUTED BENZENE#2(25.50)	10 J	25.50
	BR308021B	75183	THIOBISMETHANE(7.10)	68 J	7.10
	BR308021B		UNKNOWN HYDROCARBON#1(28.20)	4 J	28.20
	BR308021B		UNKNOWN HYDROCARBON#2(29.30)	8 J	29.30
	BR308021B		UNKNOWN HYDROCARBON#3(30.40)	4 J	30.40
	BR308021B		UNKNOWN VOA#1(8.30)	7 J	8.30
	BR308021B		UNKNOWN VOA#2(20.80)	15 J	20.80
	BR308032B		SUBSTITUTED BENZENE(23.10)	17 J	23.10
	BR308032B	75183	THIOBISMETHANE(7.10)	50 J	7.10
	BR308032B		UNKNOWN HYDROCARBON(25.80)	16 J	25.80
	BR308032B		UNKNOWN VOA#1(20.80)	34 J	20.80

TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BRN36015A					
	BR308032B		UNKNOWN VOA#2(29.20)	16 J	29.20
	BR806159A	76131	FREON 113(12.10)	8 J	12.10
	BR807025A	76131	FREON 113(12.10)	9 J	12.10
	BR807036A	76131	FREON 113(12.10)	7 J	12.10
BR000022B					
	BR507033A		UNKNOWN(9.30)	16 J	9.30
	BR507044A		UNKNOWN(9.27)	16 J	9.27
BR301046A					
	BR300023A	76131	FREON 113(12.00)	6 JB	12.00
	BR300034A	76131	FREON 113(12.00)	7 JB	12.00
	BR301035A	76131	FREON 113(12.00)	5 JB	12.00
	BR302014A	76131	FREON 113(12.00)	5 JB	12.00
	VBK07276	76131	FREON 113(12.00)	6 J	12.00
BR303015A					
	BR303015A		PROBABLE HYDROCARBON #1(26.43)	35 JB	26.43
	BR303015A		PROBABLE HYDROCARBON #2(29.17)	95 JB	29.17
	BR303015A		PROBABLE HYDROCARBON #3(31.95)	230 JB	31.95
	BR303015A		PROBABLE HYDROCARBON #4(34.53)	36 J	34.53
	BR303026A		PROBABLE HYDROCARBON #1(20.40)	38 J	20.40
	BR303026A		PROBABLE HYDROCARBON #2(23.59)	34 J	23.59
	BR303026A		PROBABLE HYDROCARBON #3(26.54)	140 JB	26.54
	BR303026A		PROBABLE HYDROCARBON #4(28.36)	35 J	28.36
	BR303026A		PROBABLE HYDROCARBON #5(29.28)	310 J	29.28
	BR303026A		PROBABLE HYDROCARBON #6(31.00)	47 J	31.00
	BR303026A		PROBABLE HYDROCARBON #7(32.08)	880 J	32.08
	BR303026A		PROBABLE HYDROCARBON #8(34.74)	54 J	34.74
	BR303026A		PROBABLE HYDROCARBON #9(35.93)	78 JB	35.93
	BR303037A		PROBABLE HYDROCARBON #1(16.59)	42 J	16.59
	BR303037A		PROBABLE HYDROCARBON #1(35.91)	84 J	35.91
	BR303037A		PROBABLE HYDROCARBON #2(23.59)	38 J	23.59
	BR303037A		PROBABLE HYDROCARBON #3(26.54)	140 JB	26.54
	BR303037A		PROBABLE HYDROCARBON #4(29.28)	320 JB	29.28
	BR303037A		PROBABLE HYDROCARBON #5(30.81)	81 J	30.81
	BR303037A		PROBABLE HYDROCARBON #6(31.00)	85 J	31.00
	BR303037A		PROBABLE HYDROCARBON #7(31.18)	45 J	31.18
	BR303037A		PROBABLE HYDROCARBON #8(32.08)	1100 J	32.08
	BR303037A		PROBABLE HYDROCARBON #9(34.76)	65 J	34.76
	BR304016A		PROBABLE HYDROCARBON #1(23.60)	50 J	23.60
	BR304016A		PROBABLE HYDROCARBON #1(34.75)	100 J	34.75
	BR304016A		PROBABLE HYDROCARBON #1(35.94)	140 J	35.94
	BR304016A		PROBABLE HYDROCARBON #2(26.55)	170 JB	26.55
	BR304016A		PROBABLE HYDROCARBON #3(28.37)	47 J	28.37

TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR303015A					
	BR304016A		PROBABLE HYDROCARBON #4(29.29)	450 J	29.29
	BR304016A		PROBABLE HYDROCARBON #5(30.89)	60 J	30.89
	BR304016A		PROBABLE HYDROCARBON #7(31.03)	140 J	31.03
	BR304016A		PROBABLE HYDROCARBON #7(31.17)	110 J	31.17
	BR304016A		PROBABLE HYDROCARBON #9(34.57)	74 J	34.57
	BR304016A		PROBABLE HYDROCRABON #8(32.09)	1400 J	32.09
	BR304027A		PROBABLE HYDROCARBON #1(26.71)	150 J	26.71
	BR304027A		PROBABLE HYDROCARBON #2(29.37)	420 J	29.37
	BR304027A		PROBABLE HYDROCARBON #3(30.86)	120 J	30.86
	BR304027A		PROBABLE HYDROCARBON #4(31.09)	86 J	31.09
	BR304027A		PROBABLE HYDROCARBON #5(31.23)	76 J	31.23
	BR304027A		PROBABLE HYDROCARBON #6(32.15)	1300 J	32.15
	BR304027A		PROBABLE HYDROCARBON #7(34.59)	100 J	34.59
	BR304027A		PROBABLE HYDROCARBON #8(35.98)	140 J	35.98
	BR304038A		PROBABLE HYDROCARBON #1(23.61)	47 J	23.61
	BR304038A		PROBABLE HYDROCARBON #2(26.57)	170 JB	26.57
	BR304038A		PROBABLE HYDROCARBON #3(28.36)	47 J	28.36
	BR304038A		PROBABLE HYDROCARBON #4(29.30)	470 J	29.30
	BR304038A		PROBABLE HYDROCARBON #5(31.03)	79 J	31.03
	BR304038A		PROBABLE HYDROCARBON #6(31.18)	71 J	31.18
	BR304038A		PROBABLE HYDROCARBON #7(32.10)	1400 J	32.10
	BR304038A		PROBABLE HYDROCARBON #8(34.74)	93 J	34.74
	BR304038A		PROBABLE HYDROCARBON #9(35.94)	110 J	35.94
	BR305017A		PROBABLE HYDROCARBON #1(26.57)	83 J	26.57
	BR305017A		PROBABLE HYDROCARBON #2(29.31)	230 J	29.31
	BR305017A		PROBABLE HYDROCARBON #3(30.89)	68 J	30.89
	BR305017A		PROBABLE HYDROCARBON #4(31.18)	57 J	31.18
	BR305017A		PROBABLE HYDROCARBON #5(32.10)	520 J	32.10
	BR305017A		PROBABLE HYDROCARBON #6(34.61)	42 J	34.61
	BR305017A		PROBABLE HYDROCARBON #7(35.94)	60 J	35.94
	VBK01211		PROBABLE HYDROCARBON #1(25.14)	6 J	25.14
	VBK01211		PROBABLE HYDROCARBON #2(26.45)	8 J	26.45
	VBK01211		PROBABLE HYDROCARBON #3(27.87)	5 J	27.87
	VBK01211		PROBABLE HYDROCARBON #4(29.19)	17 J	29.19
	VBK01211		PROBABLE HYDROCARBON #5(31.95)	46 J	31.95
	VBK01211		PROBABLE HYDROCARBON #6(35.72)	4 J	35.72
BR305028A					
	BR305028A		PROBABLE HYDROCARBON #1(22.33)	52 J	22.33
	BR305028A		PROBABLE HYDROCARBON #2(26.75)	170 J	26.75
	BR305028A		PROBABLE HYDROCARBON #3(28.57)	45 J	28.57
	BR305028A		PROBABLE HYDROCARBON #4(29.49)	500 J	29.49
	BR305028A		PROBABLE HYDROCARBON #5(31.27)	75 J	31.27
	BR305028A		PROBABLE HYDROCARBON #6(31.42)	100 J	31.42
	BR305028A		PROBABLE HYDROCARBON #7(32.36)	1200 J	32.36
	BR305028A		PROBABLE HYDROCARBON #8(35.10)	48 J	35.10
	BR305039A		PROBABLE HYDROCARBON #1(26.77)	74 J	26.77

TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR305028A					
	BR305039A		PROBABLE HYDROCARBON #2(29.50)	220 J	29.50
	BR305039A		PROBABLE HYDROCARBON #3(32.38)	540 J	32.38
	BR500047A		PROBABLE HYDROCARBON #1(26.77)	29 J	26.77
	BR500047A		PROBABLE HYDROCARBON #2(29.51)	80 J	29.51
	BR500047A		PROBABLE HYDROCARBON #3(32.36)	220 J	32.36
	BR500058A		PROBABLE HYDROCARBON #1(26.76)	40 J	26.76
	BR500058A		PROBABLE HYDROCARBON #2(29.50)	130 J	29.50
	BR500058A		PROBABLE HYDROCARBON #3(32.37)	310 J	32.37
	BR500069A		PROBABLE HYDROCARBON #1(29.49)	92 J	29.49
	BR500069A		PROBABLE HYDROCARBON #2(32.35)	190 J	32.35
	BR810019A		PROBABLE HYDROCARBON #1(26.75)	33 J	26.75
	BR810019A		PROBABLE HYDROCARBON #2(29.48)	90 J	29.48
	BR810019A		PROBABLE HYDROCARBON #3(32.36)	160 J	32.36
	BR810020A		PROBABLE HYDROCARBON #1(29.48)	71 J	29.48
	BR810020A		PROBABLE HYDROCARBON #2(32.36)	200 J	32.36
	BR810031A		PROBABLE HYDROCARBON #1(27.05)	49 J	27.05
	BR810031A		PROBABLE HYDROCARBON #2(29.67)	150 J	29.67
	BR810031A		PROBABLE HYDROCARBON #3(31.41)	29 J	31.41
	BR810031A		PROBABLE HYDROCARBON #4(31.55)	37 J	31.55
	BR810031A		PROBABLE HYDROCARBON #5(32.49)	380 J	32.49
	VBK01223	76131	PROBABLE FREON 113(10.78)	14 J	10.78
	VBK01223		PROBABLE HYDROCARBON #1(23.72)	4 J	23.72
	VBK01223		PROBABLE HYDROCARBON #2(25.30)	5 J	25.30
	VBK01223		PROBABLE HYDROCARBON #3(26.61)	14 J	26.61
	VBK01223		PROBABLE HYDROCARBON #4(29.33)	36 J	29.33
	VBK01223		PROBABLE HYDROCARBON #5(31.07)	5 J	31.07
	VBK01223		PROBABLE HYDROCARBON #6(32.13)	82 J	32.13
	VBK01223		PROBABLE HYDROCARBON #7(35.98)	7 J	35.98
	VBK01223		SOLVENT TAIL(5.52)	J	5.52
	VBK01223		SOLVENT TAIL(6.26)	J	6.26
BR311015A					
	BR506010A	76131	PROBABLE FREON 113(3.03)	540 JB	3.03
	BR802019A		NAPHTHALENE(25.51)	810 J	25.51
	BR802019A		PROB. SUBSTITUTED CYCLO(20.26)	390 J	20.26
	BR802019A		PROB. SUBSTITUTED NAPHT(28.29)	1200 J	28.29
	BR802019A		PROBABLE AROMATIC HYDRO(18.89)	1000 J	18.89
	BR802019A		PROBABLE AROMATIC HYDRO(19.71)	1400 J	19.71
	BR802019A		PROBABLE DICHLOROBENZEN(20.39)	1100 J	20.39
	BR802019A		PROBABLE DICHLOROBENZNE(21.22)	1200 J	21.22
	BR802019A		PROBABLE HYDROCARBON #1(17.22)	610 J	17.22
	BR802019A		PROBABLE HYDROCARBON #2(18.10)	1100 J	18.10
	BR802019A		PROBABLE HYDROCARBON #3(19.24)	730 J	19.24
	BR802019A		PROBABLE HYDROCARBON #4(19.91)	920 J	19.91
	BR802019A		PROBABLE HYDROCARBON #5(25.06)	870 J	25.06
	BR802019A		PROBABLE HYDROCARBON #6(26.51)	960 J	26.51
	BR802019A		PROBABLE HYDROCARBON #7(28.96)	660 J	28.96

TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015A					
	BR802019A		PROBABLE SUBSTITUTED BE(20.98)	2300 J	20.98
	BR802019A		PROBABLE SUBSTITUTED BE(21.47)	1100 J	21.47
	BR802019A		PROBABLE SUBSTITUTED BE(22.08)	980 J	22.08
	BR802019A		PROBABLE SUBSTITUTED BE(22.33)	600 J	22.33
	BR802019A		PROBABLE SUBSTITUTED BE(23.02)	590 J	23.02
	BR802019A		PROBABLE SUBSTITUTED CY(24.47)	460 J	24.47
	BR802020A		PROB AROMATIC HYDROCARB(20.66)	850 J	20.66
	BR802020A		PROB. SUBSTITUTED BENZE(21.51)	1200 J	21.51
	BR802020A		PROB. SUBSTITUTED BENZE(22.09)	1700 J	22.09
	BR802020A		PROB. SUBSTITUTED CYCLO(18.90)	3200 J	18.90
	BR802020A		PROB. SUBSTITUTED CYCLO(20.27)	2000 J	20.27
	BR802020A		PROB. SUBSTITUTED NAPHT(21.02)	4700 J	21.02
	BR802020A		PROB. SUBSTITUTED NAPHT(22.56)	1800 J	22.56
	BR802020A		PROB. SUBSTITUTED NAPHT(23.09)	3400 J	23.09
	BR802020A		PROBABLE AROMATIC HYDRO(19.70)	2900 J	19.70
	BR802020A		PROBABLE CYCLOHEXANE #1(24.47)	1200 J	24.47
	BR802020A		PROBABLE CYCLOHEXANE #2(28.33)	1200 J	28.33
	BR802020A		PROBABLE HYDROCARBON #1(17.24)	1800 J	17.24
	BR802020A		PROBABLE HYDROCARBON #2(17.49)	840 J	17.49
	BR802020A		PROBABLE HYDROCARBON #3(18.12)	3100 J	18.12
	BR802020A		PROBABLE HYDROCARBON #4(19.23)	1000 J	19.23
	BR802020A		PROBABLE HYDROCARBON #5(19.92)	2700 J	19.92
	BR802020A		PROBABLE HYDROCARBON #6(21.27)	1800 J	21.27
	BR802020A		PROBABLE HYDROCARBON #7(25.06)	2700 J	25.06
	BR802020A		PROBABLE HYDROCARBON #8(26.51)	3500 J	26.51
	BR802020A		PROBABLE HYDROCARBON #9(28.96)	1000 J	28.96
	BR806115A		PROBABLE AROMATIC HYDRO(17.73)	34 J	17.73
	BR806115A		PROBABLE AROMATIC HYDRO(18.69)	86 J	18.69
	BR806115A		PROBABLE AROMATIC HYDRO(18.94)	370 J	18.94
	BR806115A		PROBABLE AROMATIC HYDRO(19.14)	340 J	19.14
	BR806115A		PROBABLE AROMATIC HYDRO(19.51)	200 J	19.51
	BR806115A		PROBABLE AROMATIC HYDRO(19.92)	810 J	19.92
	BR806115A		PROBABLE AROMATIC HYDRO(20.84)	200 J	20.84
	BR806115A		PROBABLE CYCLOHEXANE(17.44)	30 J	17.44
	BR806115A		PROBABLE DIETHYLBENZENE(21.45)	110 J	21.45
	BR806115A		PROBABLE HYDROCARBON #1(18.34)	42 J	18.34
	BR806115A		PROBABLE SUBSTITUTED BE(21.69)	52 J	21.69
	BR806115A		PROBABLE SUBSTITUTED BE(22.51)	89 J	22.51
	BR806115A		SOLVENT TAIL(1.85)		1.85
	BR806126A		PROBABLE HYDROCARBON(19.27)	27 J	19.27
	BR808015A		PROB AROMATIC HYDROCARB(18.96)	1600 J	18.96
	BR808015A		PROB AROMATIC HYDROCARB(19.78)	2200 J	19.78
	BR808015A		PROBABLE CYCLOHEXANE #1(20.35)	1300 J	20.35
	BR808015A		PROBABLE CYCLOHEXANE #2(21.82)	790 J	21.82
	BR808015A		PROBABLE CYCLOHEXANE #3(28.40)	1100 J	28.40
	BR808015A		PROBABLE HYDROCARBON #1(16.22)	1700 J	16.22
	BR808015A		PROBABLE HYDROCARBON #1(22.18)	8500 J	22.18
	BR808015A		PROBABLE HYDROCARBON #1(24.77)	1800 J	24.77

TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR311015A					
	BR808015A		PROBABLE HYDROCARBON #1(26.57)	1300 J	26.57
	BR808015A		PROBABLE HYDROCARBON #1(27.22)	1400 J	27.22
	BR808015A		PROBABLE HYDROCARBON #1(29.03)	1600 J	29.03
	BR808015A		PROBABLE HYDROCARBON #1(29.52)	1100 J	29.52
	BR808015A		PROBABLE HYDROCARBON #2(17.29)	1400 J	17.29
	BR808015A		PROBABLE HYDROCARBON #3(17.53)	930 J	17.53
	BR808015A		PROBABLE HYDROCARBON #4(18.19)	3500 J	18.19
	BR808015A		PROBABLE HYDROCARBON #4(18.47)	1600 J	18.47
	BR808015A		PROBABLE HYDROCARBON #6(19.35)	8600 J	19.35
	BR808015A		PROBABLE HYDROCARBON #7(20.00)	1500 J	20.00
	BR808015A		PROBABLE HYDROCARBON #8(21.16)	3000 J	21.16
	BR808015A		PROBABLE HYDROCARBON #9(21.35)	1300 J	21.35
	BR808037A		PROBABLE AROMATIC HYDRO(17.53)	2700 J	17.53
	BR808037A		PROBABLE AROMATIC HYDRO(18.49)	7000 J	18.49
	BR808037A		PROBABLE AROMATIC HYDRO(18.81)	24000 J	18.81
	BR808037A		PROBABLE AROMATIC HYDRO(19.00)	16000 J	19.00
	BR808037A		PROBABLE AROMATIC HYDRO(19.36)	11000 J	19.36
	BR808037A		PROBABLE AROMATIC HYDRO(19.83)	33000 J	19.83
	BR808037A		PROBABLE AROMATIC HYDRO(20.69)	8400 J	20.69
	BR808037A		PROBABLE CYCLOHEXANE #1(20.34)	1800 J	20.34
	BR808037A		PROBABLE CYCLOHEXANE #2(28.37)	1700 J	28.37
	BR808037A		PROBABLE DIETHYLBENZENE(21.32)	4200 J	21.32
	BR808037A		PROBABLE HYDROCARBON #1(15.81)	1200 J	15.81
	BR808037A		PROBABLE HYDROCARBON #2(17.28)	2800 J	17.28
	BR808037A		PROBABLE HYDROCARBON #3(18.18)	4800 J	18.18
	BR808037A		PROBABLE HYDROCARBON #3(25.09)	1800 J	25.09
	BR808037A		PROBABLE HYDROCARBON #4(26.54)	2500 J	26.54
	BR808037A		PROBABLE HYDROCARBON #5(29.00)	2600 J	29.00
	BR808037A		PROBABLE SUBSTITUTED BE(21.04)	4300 J	21.04
	BR808037A		PROBABLE SUBSTITUTED BE(21.53)	2600 J	21.53
	BR808037A		PROBABLE SUBSTITUTED BE(22.12)	4100 J	22.12
	BR808037A		PROBABLE SUBSTITUTED BE(22.36)	3000 J	22.36
	VBK00158	76131	PROBABLE FREON 113(2.92)	10 J	2.92
	VBK00158		PROBABLE HYDROCARBON #1(19.25)	5 J	19.25
BR313017A					
	BR313017A		PROB. AROMATIC HYDROCAR(18.91)	130 J	18.91
	BR313017A		PROBABLE DICHLOROBENZEN(20.44)	340 J	20.44
	BR313017A		PROBABLE HYDROCARBON #1(19.26)	280 J	19.26
	BR313017A		PROBABLE HYDROCARBON #2(22.08)	350 J	22.08
	BR313017A		UNKNOWN(21.06)	430 J	21.06
	BR315019A		PROBABLE FREON(2.83)	920 J	2.83
	BR315019A		UNKNOWN(19.60)	89 J	19.60
	BR802031A	91203	NAPHTHALENE(25.52)	540 J	25.52
	BR802031A		PROB. AROMATIC HYDROCAR(21.00)	900 J	21.00
	BR802031A		PROB. SUBSTITUTED NAPHT(28.28)	1400 J	28.28
	BR802031A		PROBABLE CYCLOHEXANE(24.48)	650 J	24.48

TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR313017A					
	BR802031A		PROBABLE HYDROCARBON #1(19.24)	790 J	19.24
	BR802031A		PROBABLE HYDROCARBON #2(22.08)	1700 J	22.08
	BR802031A		PROBABLE HYDROCARBON #3(23.07)	620 J	23.07
	BR802031A		PROBABLE HYDROCARBON #4(24.72)	1100 J	24.72
	BR802031A		PROBABLE HYDROCARBON #5(26.52)	990 J	26.52
	BR802031A		PROBABLE HYDROCARBON #6(28.97)	690 J	28.97
	BR803021A		PROB. SUBSTITUTED NAPHT(22.46)	1600 J	22.46
	BR803021A		PROB. SUBSTITUTED NAPHT(22.50)	1400 J	22.50
	BR803021A		PROBABLE HYDROCARBON #1(19.24)	1500 J	19.24
	BR803021A		PROBABLE HYDROCARBON #2(19.94)	1900 J	19.94
	BR803021A		PROBABLE HYDROCARBON #3(20.33)	3000 J	20.33
	BR803021A		PROBABLE HYDROCARBON #4(20.92)	1900 J	20.92
	BR803021A		PROBABLE HYDROCARBON #5(22.07)	2500 J	22.07
	BR803021A		PROBABLE HYDROCARBON #6(24.70)	1800 J	24.70
	BR803021A		PROBABLE HYDROCARBON #7(25.07)	1300 J	25.07
	BR803021A		PROBABLE HYDROCARBON #8(26.52)	1900 J	26.52
	BR803032A		PROB. SUBSTITUTED NAPHT(23.06)	1600 J	23.06
	BR803032A		PROB. SUBSTITUTED NAPHT(24.45)	1400 J	24.45
	BR803032A		PROBABLE CYCLIC-HYDROCA(18.52)	1500 J	18.52
	BR803032A		PROBABLE HYDROCARBON #1(18.09)	1400 J	18.09
	BR803032A		PROBABLE HYDROCARBON #2(19.23)	1200 J	19.23
	BR803032A		PROBABLE HYDROCARBON #3(19.95)	2000 J	19.95
	BR803032A		PROBABLE HYDROCARBON #4(20.34)	4200 J	20.34
	BR803032A		PROBABLE HYDROCARBON #5(20.91)	2000 J	20.91
	BR803032A		PROBABLE HYDROCARBON #6(21.50)	1500 J	21.50
	BR803032A		PROBABLE HYDROCARBON #7(22.06)	1700 J	22.06
	BR803043A		PROB. SUBSTITUTED NAPHT(23.05)	1300 J	23.05
	BR803043A		PROB. SUBSTITUTED NAPHT(24.46)	1900 J	24.46
	BR803043A		PROBABLE HYDROCARBON #1(19.24)	1300 J	19.24
	BR803043A		PROBABLE HYDROCARBON #2(19.92)	1800 J	19.92
	BR803043A		PROBABLE HYDROCARBON #3(20.33)	2500 J	20.33
	BR803043A		PROBABLE HYDROCARBON #4(20.90)	1600 J	20.90
	BR803043A		PROBABLE HYDROCARBON #5(22.07)	2100 J	22.07
	BR803043A		PROBABLE HYDROCARBON #6(24.69)	1600 J	24.69
	BR803043A		PROBABLE HYDROCARBON #7(26.50)	1700 J	26.50
	BR803043A		PROBABLE HYDROCARBON #8(28.96)	1400 J	28.96
BR503017A					
	BR503017A		PROBABLE HYDROCARBON(19.24)	27 JB	19.24
	BR503039A		PROBABLE HYDROCARBON(19.22)	29 JB	19.22
	BR503040A	76131	PROBABLE FREON 113(3.03)	220 JB	3.03
	BR504029A	76131	PROBABLE FREON 113(3.07)	210 JB	3.07
	BR504030A		METHYL-NAPHTHALENE #1(28.26)	820 J	28.26
	BR504030A		METHYL-NAPHTHALENE #2(28.67)	1000 J	28.67
	BR504030A	91203	NAPHTHALENE(25.50)	320 J	25.50
	BR504030A		PROB AROMATIC HYDROCARB(24.10)	56 J	24.10
	BR504030A		PROB AROMATIC HYDROCARB(24.55)	58 J	24.55

TABLE D 7.17 BROOKHAVEN QC TIC VOLATILE ORGANICS BY SDG NUM

SDG NUM	SMP ID	CAS NUM	ANALYSIS	RESULTS & PREFIX	RETENTION TIME
BR503017A					
	BR504030A	76131	PROBABLE FREON 113(3.01)	200 JB	3.01
	BR504030A		PROBABLE HYDROCARBON #1(19.22)	24 JB	19.22
	BR504030A		PROBABLE HYDROCARBON #2(22.05)	25 JB	22.05
	BR504030A		SUBSTITUTED NAPHTHALENE(27.13)	41 J	27.13
	BR504030A		SUBSTITUTED NAPHTHALENE(27.38)	27 J	27.38
	BR808026A		PROB AROMATIC HYDROCARB(18.47)	6700 J	18.47
	BR808026A		PROB AROMATIC HYDROCARB(18.78)	22000 J	18.78
	BR808026A		PROB AROMATIC HYDROCARB(18.98)	15000 J	18.98
	BR808026A		PROB AROMATIC HYDROCARB(19.33)	13000 J	19.33
	BR808026A		PROB AROMATIC HYDROCARB(19.80)	28000 J	19.80
	BR808026A		PROB AROMATIC HYDROCARB(20.67)	7400 J	20.67
	BR808026A		PROB AROMATIC HYDROCARB(21.00)	4300 J	21.00
	BR808026A		PROB AROMATIC HYDROCARB(21.30)	4400 J	21.30
	BR808026A		PROBABLE HYDROCARBON # (18.17)	4500 J	18.17
	BR808026A		PROBABLE HYDROCARBON # (22.10)	5500 J	22.10
	VBK00142	76131	PROBABLE FREON 113(3.03)	68 J	3.03
	VBK00142		PROBABLE HYDROCARBON #1(19.24)	6 J	19.24
	VBK00142		PROBABLE HYDROCARBON #2(22.08)	5 J	22.08
BR503028A					
	BR503028A	76131	PROBABLE FREON 113(3.04)	320 JB	3.04
	BR503028A		PROBABLE HYDROCARBON(25.95)	38 J	25.95
	BR800062A	76131	PROBABLE FREON 113(3.03)	310 JB	3.03
	BR800073A	76131	PROBABLE FREON 113(3.04)	320 JB	3.04
	BR800084A	76131	PROBABLE FREON 113(3.02)	310 JB	3.02
	BR800095A		PROBABLE HYDROCARBON(25.93)	26 J	25.93
	BR800108A	76131	PROBABLE FREON 113(3.04)	290 JB	3.04
	BR800108A		PROBABLE HYDROCARBON(19.23)	22 JB	19.23
	VBK00128	76131	PROBABLE FREON 113(3.02)	61 J	3.02
	VBK00128		PROBABLE HYDROCARBON #1(19.23)	7 J	19.23
	VBK00128		PROBABLE HYDROCARBON #2(22.06)	6 J	22.06
BR806013A					
	BR806057A		PROBABLE HYDROCARBON #1(19.19)	26 JB	19.19
	BR806057A		PROBABLE HYDROCARBON #2(29.32)	40 J	29.32
	BR806068A		PROBABLE HYDROCARBON(19.22)	33 JB	19.22
	BR806148A	76-13-1	PROBABLE FREON 113(3.03)	390 J	3.03
	BR806148A		PROBABLE SILANE(23.53)	35 JB	23.53
	VBK00188		PROBABLE HYDROCARBON(19.25)	4 J	19.25
	VBK00188		PROBABLE SILANE(23.52)	5 J	23.52
	VBK00202		PROBABLE FREON 113(3.05)	5 J	3.05
	VBK00202		PROBABLE HYDROCARBON #1(19.20)	13 J	19.20
	VBK00202		PROBABLE HYDROCARBON #2(22.03)	5 J	22.03
	VBK00202		PROBABLE SILANE(23.48)	9 J	23.48

TABLE D.8

ANALYTICAL DATA SUMMARY FOR TRAVEL BLANKS

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TRIP BLANK TRIP BLANK BRN11016A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN09012A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN17012A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN13018A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN20017A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN21018A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN28015A WATER UG/L 99
ACETONE	14 B	9 JB	9 JB	10 U	12 B	13 B	11 B
BENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	10 U						
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLORO BENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROETHANE	10 U						
CHLOROFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROMETHANE	10 U						
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	5 U	5 U	5 U	5 U	2 JB	5 U	5 U
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	11 B	12 B	11 B				
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	2 J	2 J	2 J	3 J	3 J	3 J	3 J
VINYL ACETATE	10 U						
VINYL CHLORIDE	10 U						
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-BUTANONE	10 U						
2-HEXANONE	10 U						
4-METHYL-2-PENTANONE	10 U						
SURR 1(TOL) %RECOVERY	100	106	98	100	104	102	102
SURR 2(BFB) %RECOVERY	97	99	95	93	100	100	98
SURR 3(DCE) %RECOVERY	95	94	96	88	98	102	98
INTERNAL STD AREA(BCM)	20400	19800	20900	22200	20100	15700	19400

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TABLE D.8

ANALYTICAL DATA SUMMARY FOR TRAVEL BLANKS

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TRIP BLANK TRIP BLANK BRN11016A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN09012A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN17012A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN13018A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN20017A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN21018A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN28015A WATER UG/L 99
INTERNAL STD AREA(CBZ)	82200	80300	88800	90900	79600	63600	77400
INTERNAL STD AREA(DFB)	98400	99300	104000	108000	94700	74300	91400
DILUTION FACTOR	1	1	1	1	1	1	1
PERCENT MOISTURE							
ACTUAL(ALLOWED) HOLD TIME	5(14 D)	5(14 D)	5(14 D)	6(14 D)	4(14 D)	4(14 D)	7(14 D)

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TRIP BLANK TRIP BLANK BRN33012A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN37016A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN16011A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN34013A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN22019A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN35014A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN36015A WATER UG/L 99
ACETONE	8 JB	10 U	13 B	10 U	10 U	10 U	12 B
BENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	10 U						
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROETHANE	10 U						
CHLOROFORM	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHLOROMETHANE	10 U						
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
STYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TOLUENE	12 B	11 B					
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	3 J	2 J	2 J	2 J	2 J	2 J	2 J
VINYL ACETATE	10 U						

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TABLE D.8 ANALYTICAL DATA SUMMARY FOR TRAVEL BLANKS

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TRIP BLANK TRIP BLANK BRN33012A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN37016A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN16011A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN34013A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN22019A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN35014A WATER UG/L 99	TRIP BLANK TRIP BLANK BRN36015A WATER UG/L 99
VINYL CHLORIDE	10 U						
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-BUTANONE	10 U	11					
2-HEXANONE	10 U						
4-METHYL-2-PENTANONE	10 U						
SURR 1(TOL) %RECOVERY	101	104	101	99	102	101	100
SURR 2(BFB) %RECOVERY	99	98	96	97	97	95	101
SURR 3(DCE) %RECOVERY	99	97	97	101	94	97	96
INTERNAL STD AREA(BCM)	16200	20200	20500	16300	21000	21400	22800
INTERNAL STD AREA(CBZ)	61900	79300	79400	64800	83200	85900	88800
INTERNAL STD AREA(DFB)	72400	94000	92800	74900	98800	99300	105000
DILUTION FACTOR	1	1	1	1	1	1	1
ACTUAL(ALLOWED) HOLD TIME	5(14 D)	4(14 D)	11(14 D)	6(14 D)	8(14 D)	5(14 D)	7(14 D)

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TRIP BLANK TRIP BLANK BR809141A WATER UG/L 99	TRIP BLANK TRIP BLANK BR809152A WATER UG/L 99	TRIP BLANK TRIP BLANK BR316054A WATER UG/L 99	TRIP BLANK TRIP BLANK BR508125A SOIL UG/KG 99	TRIP BLANK TRIP BLANK BR507099A WATER UG/L 99
ACETONE	10 U				
BENZENE	5 U	5 U	5 U	5 U	5 U
BROMODICHLOROMETHANE	5 U	5 U	5 U	5 U	5 U

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TABLE D.8 ANALYTICAL DATA SUMMARY FOR TRAVEL BLANKS

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TRIP BLANK TRIP BLANK BR809141A WATER UG/L 99	TRIP BLANK TRIP BLANK BR809152A WATER UG/L 99	TRIP BLANK TRIP BLANK BR316054A WATER UG/L 99	TRIP BLANK TRIP BLANK BR508125A SOIL UG/KG 99	TRIP BLANK TRIP BLANK BR507099A WATER UG/L 99
BROMOFORM	5 U	5 U	5 U	5 U	5 U
BROMOMETHANE	10 U				
CARBON DISULFIDE	5 U	5 U	5 U	5 U	5 U
CARBON TETRACHLORIDE	5 U	5 U	5 U	5 U	5 U
CHLOROENZENE	5 U	5 U	5 U	5 U	5 U
CHLOROETHANE	10 U				
CHLOROFORM	24	21	23	23	19
CHLOROMETHANE	10 U				
CIS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U
DIBROMOCHLOROMETHANE	5 U	5 U	5 U	5 U	5 U
ETHYLBENZENE	5 U	5 U	5 U	5 U	5 U
METHYLENE CHLORIDE	5 U	5 U	7	110	99
STYRENE	5 U	5 U	5 U	5 U	5 U
TETRACHLOROETHENE	5 U	5 U	5 U	5 U	5 U
TOLUENE	5 U	5 U	5 U	1 J	5 U
TRANS-1,3-DICHLOROPROPENE	5 U	5 U	5 U	5 U	5 U
TRICHLOROETHENE	5 U	5 U	5 U	5 U	5 U
VINYL ACETATE	10 U				
VINYL CHLORIDE	10 U				
XYLENE (TOTAL)	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U
1,1-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U
1,1,1-TRICHLOROETHANE	5 U	5 U	5 U	10	5 U
1,1,2-TRICHLOROETHANE	5 U	5 U	5 U	5 U	5 U
1,1,2,2-TETRACHLOROETHANE	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHANE	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROETHENE	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROPROPANE	5 U	5 U	5 U	5 U	5 U
2-BUTANONE	10 U				
2-HEXANONE	10 U				
4-METHYL-2-PENTANONE	10 U				
SURR 1(TOL) %RECOVERY	107	104	105	107	103
SURR 2(BFB) %RECOVERY	91	91	92	104	93
SURR 3(DCE) %RECOVERY	101	87	96	94	87
INTERNAL STD AREA(BCM)	62600	67500	61100	59400	57400
INTERNAL STD AREA(CBZ)	253000	246000	212000	215000	202000
INTERNAL STD AREA(DFB)	289000	264000	251000	250000	232000

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TABLE D.8 ANALYTICAL DATA SUMMARY FOR TRAVEL BLANKS

DRAFT DO NOT CITE

AREA

LOCATION TYPE OF LOCATION SAMPLE NUMBER MATRIX UNITS ENV PROBLEM NO	TRIP BLANK TRIP BLANK BR809141A WATER UG/L 99	TRIP BLANK TRIP BLANK BR809152A WATER UG/L 99	TRIP BLANK TRIP BLANK BR316054A WATER UG/L 99	TRIP BLANK TRIP BLANK BR508125A SOIL UG/KG 99	TRIP BLANK TRIP BLANK BR507099A WATER UG/L 99
DILUTION FACTOR ACTUAL(ALLOWED) HOLD TIME	2(14 D) ¹	2(14 D) ¹	6(14 D) ¹	7(14 D) ¹	6(14 D) ¹

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Appendix E
RADIOLOGICAL QC DATA TABLES

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Appendix E

The QC data for radiological (RAD) analysis are presented in this appendix.

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TABLE E-1 QC RADIOLOGICAL SAMPLE DATA

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CONTROL I. D. OR SAMPLE ID	RADIONUCLIDE	VALUE OBTAINED	KNOWN VALUE	"R" VALUE	UNIT OF MEASURE	INSTRUMENT USED	DATE ANALYZED	TYPE OF CONTROL
BR305017F	U-235	0.00			PCI/KGD	19	13JUN1988	DUP
BR305017G	SR-TOT	17490.00	17280.00	1.20	PCI/KGD	LB-4000	13MAY1988	MS
BR301046K	CO-60	4.00			PCI/L	ND9900	10MAY1988	DUP
BR301046K	CS-137	4.00			PCI/L	ND9900	10MAY1988	DUP
BR304049K	H-3	-1200.00			PCI/KGD	PACKARD	20MAY1988	DUP
BR503040E	CO-60	58.00			PCI/KGD	ND9900	06JUN1988	DUP
BR503040E	CS-137	1100.00			PCI/KGD	ND9900	06JUN1988	DUP
BR503040E	K-40	5200.00			PCI/KGD	ND9900	06JUN1988	DUP
BR506010D	H-3	200.00			PCI/KGD	PACKARD	27MAY1988	DUP
BR506076C	CO-60	20.00			PCI/KGD	ND-9900	24JUN1988	DUP
BR506076C	CS-137	290.00			PCI/KGD	ND-9900	24JUN1988	DUP
BR506076C	K-40	5400.00			PCI/KGD	ND-9900	24JUN1988	DUP
BR506076C	SR-TOT	22.00			PCI/KGD	LB-4000	13MAY1988	DUP
BR508090G	PU-238	-0.82			PCI/KGD	PNL-C1	13SEP1988	DUP
BR508090G	PU-239	-0.82			PCI/KGD	PNL-C1	13SEP1988	DUP
BR800108E	SR-TOT	2.00			PCI/KGD	LB4000	16MAY1988	DUP
BR800119I	SR-TOT	0.10			PCI/L	LB4000	03JUN1988	DUP
BR801041I	CO-60	4.00			PCI/L	ND9900	26MAY1988	DUP
BR801041I	CS-137	3.00			PCI/L	ND9900	26MAY1988	DUP
BR801041K	H-3	-560.00			PCI/L	PACKARD	20MAY1988	DUP
BR802031F	SR-TOT	1100.00			PCI/KGD	LB4000	03JUN1988	DUP
BR804066C	SR-TOT	130.00			PCI/KGD	LB-4000	24MAY1988	DUP
BR805034I	SR-TOT	0.60			PCI/L	LB4000	05MAY1988	DUP
BR806013D	CO-60	40.00			PCI/KGD	ND-9900	10JUL1988	DUP
BR806013D	CS-137	460.00			PCI/KGD	ND-9900	10JUL1988	DUP
BR806013D	K-40	13000.00			PCI/KGD	ND-9900	10JUL1988	DUP
BR806148D	SR-TOT	0.00			PCI/KGD	LB4000	18MAY1988	DUP
BR806159G	SR-TOT	1.40			PCI/L	LB4000	03JUN1988	DUP
BR808015E	SR-TOT	230.00			PCI/KGD	LB4000	27MAY1988	DUP
51195631	PU-238	5495.00	5495.00		KEV	PNL-C1	06SEP1988	CNTRL
51195631	PU-238	5495.00	5495.00		KEV	PNL-C9	30AUG1988	CNTRL
51195631	PU-239	5147.00	5147.00		KEV	PNL-C1	06SEP1988	CNTRL
51195631	PU-242	4898.00	4898.00		KEV	PNL-C1	06SEP1988	CNTRL
51195631	PU-242	4898.00	4898.00		KEV	PNL-C9	30AUG1988	CNTRL
51195631	URANIUM	314.00	315.00	0.30	CPM	PNL-C1	06SEP1988	CNTRL
51195631	URANIUM	297.00	298.00	0.30	CPM	PNL-C9	30AUG1988	CNTRL
51195632	PU-238	5495.00	5495.00		KEV	PNL-C10	30AUG1988	CNTRL
51195632	PU-239	5147.00	5147.00		KEV	PNL-C10	30AUG1988	CNTRL
51195632	PU-242	4898.00	4898.00		KEV	PNL-C10	30AUG1988	CNTRL
51195632	URANIUM	368.40	369.00	0.20	CPM	PNL-C10	30AUG1988	CNTRL
51195633	PU-238	5495.00	5495.00		KEV	PNL-C11	30AUG1988	CNTRL
51195633	PU-238	5495.00	5495.00		KEV	PNL-C3	06SEP1988	CNTRL
51195633	PU-239	5147.00	5147.00		KEV	PNL-C11	30AUG1988	CNTRL
51195633	PU-239	5147.00	5147.00		KEV	PNL-C3	06SEP1988	CNTRL
51195633	PU-242	4898.00	4898.00		KEV	PNL-C11	30AUG1988	CNTRL
51195633	PU-242	4898.00	4898.00		KEV	PHL-C3	06SEP1988	CNTRL
51195633	URANIUM	365.00	366.00	0.30	CPM	PHL-C11	30AUG1988	CNTRL
51195633	URANIUM	356.50	357.00	0.10	CPM	PNL-C3	06SEP1988	CNTRL
51195634	PU-238	5495.00	5495.00		KEV	PNL-C12	30AUG1988	CNTRL
51195634	PU-238	5495.00	5495.00		KEV	PNL-C4	06SEP1988	CNTRL
51195634	PU-239	5147.00	5147.00		KEV	PNL-C12	30AUG1988	CNTRL
51195634	PU-242	4898.00	4898.00		KEV	PNL-C12	30AUG1988	CNTRL
51195634	PU-242	4898.00	4898.00		KEV	PHL-C4	06SEP1988	CNTRL

TABLE E-1 QC RADIOLOGICAL SAMPLE DATA

DRAFT DO NOT CITE

CONTROL I.D. OR SAMPLE ID	RADIONUCLIDE	VALUE OBTAINED	KNOWN VALUE	"R" VALUE	UNIT OF MEASURE	INSTRUMENT USED	DATE ANALYZED	TYPE OF CONTROL
51195634	URANIU	345.00	346.00	0.30	CPM	PNL-C12	30AUG1988	CNTRL
51195634	URANIU	341.50	342.00	0.10	CPM	PNL-C4	06SEP1988	CNTRL
880525	PU-235	0.01	0.00	0.04	PCI/L		13JUN1988	CNTRL
B11080	H-3	13.96	0.00		CPM	7804114	08JUL1988	MB
B11080	H-3	14.16	0.00		CPM	7804114	13JUL1988	MB
B11080	H-3	14.64	0.00		CPM	7804114	12JUL1988	MB
B11080	H-3	14.12	0.00		CPM	7804114	11JUL1988	MB
BLANK	CO-60	4.00	0.00		PCI/L	ND-9900	06JUN1988	MB
BLANK	CO-60	4.00	0.00		PCI/L	ND9900	10MAY1988	MB
BLANK	CS-137	4.00	0.00		PCI/L	ND-9900	06JUN1988	MB
BLANK	CS-137	3.00	0.00		PCI/L	ND9900	10MAY1988	MB
BLANK	H-3	0.00	0.00		PCI/L	PACKARD	31MAY1988	MB
BLANK	H-3	0.00	0.00		PCI/L	PACKARD	27MAY1988	MB
BLANK	SR-TOT	-0.92	0.00		PCI/TOT	LB-4000	18MAY1988	MB
BLANK	SR-TOT	-0.24	0.00		PCI/TOT	LB-4000	16MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB-4000	13MAY1988	MB
BLANK	SR-TOT	-0.08	0.00		PCI/TOT	LB-4000	24MAY1988	MB
BLANK	SR-TOT	-0.08	0.00		PCI/TOT	LB4000	24MAY1988	MB
BLANK	SR-TOT	-0.92	0.00		PCI/TOT	LB4000	18MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB4000	13MAY1988	MB
BLANK	SR-TOT	-0.08	0.00		PCI/TOT	LB4000	24MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB4000	13MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB4000	13MAY1988	MB
BLANK	SR-TOT	-0.24	0.00		PCI/TOT	LB4000	16MAY1988	MB
BLANK	SR-TOT	-0.92	0.00		PCI/TOT	LB4000	18MAY1988	MB
BLANK	SR-TOT	-0.92	0.00		PCI/TOT	LB4000	18MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB4000	13MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB4000	13MAY1988	MB
BLANK	SR-TOT	-0.92	0.00		PCI/TOT	LB4000	18MAY1988	MB
BLANK	SR-TOT	-0.92	0.00		PCI/TOT	LB4000	18MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB4000	13MAY1988	MB
BLANK	SR-TOT	-0.14	0.00		PCI/TOT	LB4000	13MAY1988	MB
BLANK	SR-TOT	-0.92	0.00		PCI/TOT	LB4000	18MAY1988	MB
BLANK	SR-TOT	-0.24	0.00		PCI/TOT	LB4000	16MAY1988	MB
BLANK	SR-TOT	-0.24	0.00		PCI/TOT	LB4000	16MAY1988	MB
BLANK	SR-TOT	-0.08	0.00		PCI/TOT	LB4000	24MAY1988	MB
BLANK	SR-TOT	-0.24	0.00		PCI/TOT	LB4000	16MAY1988	MB
BLANK	SR-TOT	-0.24	0.00		PCI/TOT	LB4000	16MAY1988	MB
BLANK	SR-TOT	-0.08	0.00		PCI/TOT	LB4000	24MAY1988	MB
BLANK	SR-TOT	-0.08	0.00		PCI/TOT	LB4000	24MAY1988	MB
BLANK	SR-TOT	-0.08	0.00		PCI/TOT	LB4000	24MAY1988	MB
BR304049K	H-3	17000.00	17000.00		PCI/L	PACKARD	20MAY1988	MS
BR311026J	CE-139	53.00	55.60	-4.70	PCI/L	ND9900	27MAY1988	MS
BR311026J	CO-60	505.00	512.60	-1.50	PCI/L	ND9900	27MAY1988	MS
BR311026J	CS-137	450.00	454.40	-1.00	PCI/L	ND9900	27MAY1988	MS
BR311026J	SN-113	162.00	171.50	-5.50	PCI/L	ND9900	27MAY1988	MS
BR311026J	Y-88	296.00	327.00	-9.50	PCI/L	ND9900	27MAY1988	MS
BR500014I	CE-139	54.00	56.00	-3.60	PCI/L	ND9900	27MAY1988	MS
BR500014I	CO-60	516.00	513.00	0.60	PCI/L	ND9900	27MAY1988	MS
BR500014I	CS-137	466.00	454.00	2.60	PCI/L	ND9900	27MAY1988	MS
BR500014I	SN-113	170.00	172.00	-1.20	PCI/L	ND9900	27MAY1988	MS
BR500014I	Y-88	309.00	327.00	-5.50	PCI/L	ND9900	27MAY1988	MS
BR506010D	H-3	37000.00	34300.00	7.90	PCI/KGW	PACKARD	27MAY1988	MS

TABLE E-1 QC RADIOLOGICAL SAMPLE DATA

DRAFT DO NOT CITE

CONTROL I. D. OR SAMPLE ID	RADIONUCLIDE	VALUE OBTAINED	KNOWN VALUE	"R" VALUE	UNIT OF MEASURE	INSTRUMENT USED	DATE ANALYZED	TYPE OF CONTROL
BR801030J	SR-TOT	625.00	599.00	4.30	PCI/L	LB-4000	13MAY1988	MS
BR801030J	SR-TOT	625.00	599.00	4.30	PCI/L	LB4000	13MAY1988	MS
BR801030J	SR-TOT	625.00	599.00	4.30	PCI/L	LB4000	13MAY1988	MS
BR801030J	SR-TOT	625.00	599.00	4.30	PCI/L	LB4000	13MAY1988	MS
BR801030J	SR-TOT	625.00	599.00	4.30	PCI/L	LB4000	13MAY1988	MS
BR801030J	SR-TOT	625.00	599.00	4.30	PCI/L	LB4000	13MAY1988	MS
BR801030J	SR-TOT	625.00	599.00	4.30	PCI/L	LB4000	13MAY1988	MS
BR801041K	H-3	17000.00	17000.00		PCI/L	PACKARD	20MAY1988	MS
BR804066C	SR-TOT	29080.00	28650.00	1.50	PCI/KGD	LB-4000	24MAY1988	MS
BR804066C	SR-TOT	29080.00	28650.00	1.50	PCI/KGD	LB4000	24MAY1988	MS
BR804066C	SR-TOT	29080.00	28650.00	1.50	PCI/KGD	LB4000	24MAY1988	MS
BR804066C	SR-TOT	29080.00	28650.00	1.50	PCI/KGD	LB4000	24MAY1988	MS
BR804066C	SR-TOT	29080.00	28650.00	1.50	PCI/KGD	LB4000	24MAY1988	MS
BR804066C	SR-TOT	29080.00	28650.00	1.50	PCI/KGD	LB4000	24MAY1988	MS
BR806148B	SR-TOT	27970.00	27890.00	0.30	PCI/KGD	LB4000	18MAY1988	MS
BR806148D	SR-TOT	27970.00	27890.00	0.30	PCI/KGD	LB-4000	18MAY1988	MS
BR806148D	SR-TOT	27970.00	27890.00	0.30	PCI/KGD	LB4000	18MAY1988	MS
BR806148D	SR-TOT	27970.00	27890.00	0.30	PCI/KGD	LB4000	18MAY1988	MS
BR806148D	SR-TOT	27970.00	27890.00	0.30	PCI/KGD	LB4000	18MAY1988	MS
BR806148D	SR-TOT	27970.00	27890.00	0.30	PCI/KGD	LB4000	18MAY1988	MS
BR806148D	SR-TOT	27970.00	27890.00	0.30	PCI/KGD	LB4000	18MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB-4000	16MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB4000	16MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB4000	16MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB4000	16MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB4000	16MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB4000	16MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB4000	16MAY1988	MS
BR810031H	SR-TOT	16082.00	17681.00	-9.00	PCI/KGD	LB4000	16MAY1988	MS
BR810066C	SR-TOT	29080.00	28650.00	1.50	PCI/KGD	LB4000	24MAY1988	MS
H277082	H-3	36202.00	36589.00	-1.10	CPM	7804114	11JUL1988	CNTRL
H277082	H-3	36589.00	36589.00		CPM	7804114	08JUL1988	CNTRL
H277082	H-3	36397.00	36589.00	-0.50	CPM	7804114	13JUL1988	CNTRL
H277082	H-3	36514.00	36589.00	-0.20	CPM	7804114	12JUL1988	CNTRL
NBSU005	PU-235	0.00	0.00	0.07	PCI/L		13JUN1988	CNTRL
NBSU050	PU-235	0.05	0.00	0.02	PCI/L		13JUN1988	CNTRL
NBSU930	PU-235	17.31	0.00	0.01	PCI/L		13JUN1988	CNTRL
PNL-11	SR-TOT	8594.10	8611.90		CPM	LOBETA-3	18JUL1988	CNTRL
PNL-11	SR-TOT	8600.20	8611.90		CPM	LOBETA-3	27JUL1988	CNTRL
PNL-11	SR-TOT	8611.90	8611.90		CPM	LOBETA-3	15JUL1988	CNTRL
PNL-11	SR-TOT	8605.20	8611.90		CPM	LOBETA-3	21JUL1988	CNTRL
PNL-11	SR-TOT	8534.70	8550.00		CPM	LOBETA-4	21JUL1988	CNTRL
PNL-11	SR-TOT	8550.00	8550.00		CPM	LOBETA-4	15JUL1988	CNTRL
PNL-11	SR-TOT	8576.30	8550.00		CPM	LOBETA-4	18JUL1988	CNTRL
PNL-11	SR-TOT	8561.60	8550.00		CPM	LOBETA-4	27JUL1988	CNTRL
PNL-15	SR-TOT	8562.60	8550.70		CPM	LOBETA-2	27JUL1988	CNTRL
PNL-15	SR-TOT	8570.50	8550.70		CPM	LOBETA-2	21JUL1988	CNTRL
PNL-15	SR-TOT	8519.20	8550.70		CPM	LOBETA-2	18JUL1988	CNTRL
PNL-15	SR-TOT	8550.70	8550.70		CPM	LOBETA-2	15JUL1988	CNTRL
PNL-17	SR-TOT	8560.00	8621.20		CPM	LOBETA-1	18JUL1988	CNTRL
PNL-17	SR-TOT	8580.00	8621.20		CPM	LOBETA-1	21JUL1988	CNTRL
PNL-17	SR-TOT	8621.20	8621.20		CPM	LOBETA-1	15JUL1988	CNTRL
PNL-17	SR-TOT	8589.60	8621.20		CPM	LOBETA-1	27JUL1988	CNTRL
PNL-2	SR-TOT	8110.40	8125.50		CPM	BETA-66	18JUL1988	CNTRL

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TABLE E-1 QC RADIOLOGICAL SAMPLE DATA

DRAFT DO NOT CITE

CONTROL I.D. OR SAMPLE ID	RADIONUCLIDE	VALUE OBTAINED	KNOWN VALUE	"R" VALUE	UNIT OF MEASURE	INSTRUMENT USED	DATE ANALYZED	TYPE OF CONTROL
PNL-2	SR-TOT	8137.30	8125.50		CPM	BETA-66	21JUL1988	CNTRL
PNL-2	SR-TOT	8125.50	8125.50		CPM	BETA-66	15JUL1988	CNTRL
PNL-2	SR-TOT	8132.60	8125.50		CPM	BETA-66	04AUG1988	CNTRL
PNL-3	SR-TOT	8313.70	8292.70		CPM	BETA-67	21JUL1988	CNTRL
PNL-3	SR-TOT	8321.10	8292.70		CPM	BETA-67	18JUL1988	CNTRL
PNL-3	SR-TOT	8292.70	8292.70		CPM	BETA-67	15JUL1988	CNTRL
PNL-3	SR-TOT	8315.10	8292.70		CPM	BETA-67	04AUG1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB-4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB-4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB-4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	147.90	149.60	-1.10	PCI/L	LB-4000	24MAY1988	CNTRL
RNS2-41C	SR-TOT	147.90	149.60	-1.10	PCI/L	LB4000	24MAY1988	CNTRL
RNS2-41C	SR-TOT	147.90	149.60	-1.10	PCI/L	LB4000	24MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	147.90	149.60	-1.10	PCI/L	LB4000	24MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	147.90	149.60	-1.10	PCI/L	LB4000	24MAY1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	147.90	149.60	-1.10	PCI/L	LB4000	24MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	147.90	149.60	-1.10	PCI/L	LB4000	24MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	151.60	149.60	1.40	PCI/L	LB4000	13MAY1988	CNTRL
RNS2-41C	SR-TOT	154.80	149.60	3.50	PCI/L	LB4000	18MAY1988	CNTRL
RNS2-41C	SR-TOT	148.30	149.60	-0.90	PCI/L	LB4000	16MAY1988	CNTRL
RNS2-43B	H-3	840000.00	857000.00	-2.00	PCI/L	PACKARD	31MAY1988	CNTRL
RNS2-43B	H-3	840000.00	857000.00	-2.00	PCI/L	PACKARD	27MAY1988	CNTRL
RNS2-43B	H-3	831000.00	857000.00	3.00	PCI/L	PACKARD	20MAY1988	CNTRL
RNS2-63B	CE-139	24000.00	25500.00	-5.90	PCI/KGD	ND-9900	10JUL1988	CNTRL
RNS2-63B	CE-139	23000.00	25500.00	-9.80	PCI/KGD	ND-9900	27JUN1988	CNTRL
RNS2-63B	CE-139	25000.00	25500.00	-2.00	PCI/KGD	ND9900	10JUN1988	CNTRL
RNS2-63B	CO-60	230000.00	231000.00	-0.40	PCI/KGD	ND-9900	27JUN1988	CNTRL
RNS2-63B	CO-60	230000.00	231000.00	-0.40	PCI/KGD	ND-9900	10JUL1988	CNTRL
RNS2-63B	CO-60	230000.00	231000.00	-0.40	PCI/KGD	ND-9900	10JUL1988	CNTRL
RNS2-63B	CO-60	240000.00	230000.00	4.30	PCI/KGD	ND9900	10JUN1988	CNTRL
RNS2-63B	CS-137	200000.00	205000.00	-2.40	PCI/KGD	ND-9900	27JUN1988	CNTRL
RNS2-63B	CS-137	210000.00	205000.00	2.40	PCI/KGD	ND-9900	10JUL1988	CNTRL
RNS2-63B	CS-137	200000.00	200000.00		PCI/KGD	ND9900	10JUN1988	CNTRL
RNS2-63B	SN-113	73000.00	78700.00	-7.20	PCI/KGD	ND-9900	10JUL1988	CNTRL
RNS2-63B	SN-113	72000.00	78700.00	-8.50	PCI/KGD	ND-9900	27JUN1988	CNTRL
RNS2-63B	SN-113	79000.00	78700.00	0.40	PCI/KGD	ND9900	10JUN1988	CNTRL
RNS2-63B	Y-88	140000.00	150000.00	-6.70	PCI/KGD	ND-9900	10JUL1988	CNTRL
RNS2-63B	Y-88	140000.00	150000.00	7.0	PCI/KGD	ND-9900	27JUN1988	CNTRL

TABLE E-1 QC RADIOLOGICAL SAMPLE DATA

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CONTROL I.D. OR SAMPLE ID	RADIONUCLIDE	VALUE OBTAINED	KNOWN VALUE	"R" VALUE	UNIT OF MEASURE	INSTRUMENT USED	DATE ANALYZED	TYPE OF CONTROL
RNS2-63B	Y-88	150000.00	150000.00		PCI/KGD	ND9900	10JUN1988	CNTRL
RNS2-69	CE-139	58.00	56.00	3.60	PCI/L	ND-9900	02JUN1988	CNTRL
RNS2-69	CE-139	58.00	56.00	3.60	PCI/L	ND9900	09MAY1988	CNTRL
RNS2-69	CE-139	54.00	56.00	-3.60	PCI/L	ND9900	27MAY1988	MS
RNS2-69	CO-60	519.00	513.00	1.20	PCI/L	ND-9900	02JUN1988	CNTRL
RNS2-69	CO-60	524.00	513.00	2.10	PCI/L	ND9900	09MAY1988	CNTRL
RNS2-69	CO-60	529.00	513.00	3.10	PCI/L	ND9900	27MAY1988	MS
RNS2-69	CS-137	466.00	454.00	2.60	PCI/L	ND-9900	02JUN1988	CNTRL
RNS2-69	CS-137	464.00	454.00	2.20	PCI/L	ND9900	09MAY1988	CNTRL
RNS2-69	CS-137	463.00	454.00	2.00	PCI/L	ND9900	27MAY1988	MS
RNS2-69	SN-113	165.00	172.00	-4.10	PCI/L	ND-9900	02JUN1988	CNTRL
RNS2-69	SN-113	171.00	172.00	-0.60	PCI/L	ND9900	09MAY1988	CNTRL
RNS2-69	SN-113	168.00	172.00	-2.30	PCI/L	ND9900	27MAY1988	MS
RNS2-69	Y-88	317.00	327.00	-3.10	PCI/L	ND-9900	02JUN1988	CNTRL
RNS2-69	Y-88	351.00	327.00	7.30	PCI/L	ND9900	09MAY1988	CNTRL
RNS2-69	Y-88	312.00	327.00	-4.60	PCI/L	ND9900	27MAY1988	MS
51195634	PU-239	5147.00	5147.00		KEV	PNL-C4	06SEP1988	CNTRL

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Table E.2 Average of LB-4000 Standard Results
(Beta Counts Only)
for ORNL

Detector No.	cpm
1	2207 ± 78
2	2221 ± 70
3	2227 ± 78
4	2370 ± 89
5	2409 ± 62
6	2292 ± 53
7	2448 ± 170
8	2413 ± 100
9	2363 ± 48
10	2180 ± 46
11	2615 ± 27
12	2448 ± 30

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL:

(Efficiencies given are for betas only)

Detector #1:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.01	1.23	32.17
05/10/88			30.44
05/12/88	0.03	1.15	
05/17/88			33.41
05/18/88	0.02	0.80	
05/24/88	0.02	1.02	34.87
05/31/88	0.01	1.02	33.67
06/07/88			34.49
06/08/88	0.01	1.13	
06/14/88	0.02	1.06	33.83
06/22/88	0.02	1.05	33.05
06/29/88			32.61
06/30/88	0.02	1.52	
07/05/88			32.43
07/07/88	0.01	1.18	
07/12/88	0.03	1.16	33.75
07/18/88	0.02	1.07	
07/19/88			31.72

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #2:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.02	0.79	33.04
05/10/88			30.76
05/12/88	0.03	0.72	
05/17/88			34.16
05/18/88	0.05	0.90	
05/24/88	0.05	0.88	35.22
05/31/88	0.06	0.94	33.95
06/07/88			33.47
06/08/88	0.04	0.89	
06/14/88	0.05	0.89	33.43
06/22/88	0.07	0.91	33.13
06/29/88			32.71
06/30/88	0.18	1.15	
07/05/88			33.62
07/07/88	0.05	1.09	
07/12/88	0.05	1.08	33.40
07/18/88	0.05	0.88	
07/19/88			32.60

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #3:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.01	0.94	32.23
05/10/88			32.63
05/12/88	0.03	0.86	
05/17/88			32.98
05/18/88	0.05	1.10	
05/24/88	0.04	1.10	34.62
05/31/88	0.03	1.72	32.72
06/07/88			32.98
06/08/88	0.01	1.01	
06/14/88	0.02	0.83	33.28
06/22/88	0.02	0.87	32.12
06/29/88			34.41
06/30/88	0.13	1.35	
07/05/88			35.00
07/07/88	0.01	1.22	
07/12/88	0.02	1.20	34.99
07/18/88	0.02	0.91	
07/19/88			35.68

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #4:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.04	0.77	33.84
05/10/88			33.05
05/12/88	0.03	0.69	
05/17/88			35.40
05/18/88	0.04	1.10	
05/24/88	0.03	0.97	36.61
05/31/88	0.07	0.92	36.25
06/07/88			35.38
06/08/88	0.03	0.77	
06/14/88	0.03	0.77	35.38
06/22/88	0.05	0.99	35.17
06/29/88			36.58
06/30/88	0.07	1.25	
07/05/88			36.80
07/07/88	0.03	1.20	
07/12/88	0.05	1.17	37.11
07/18/88	0.05	0.91	
07/19/88			36.13

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #5:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.02	0.89	36.54
05/10/88			36.02
05/12/88	0.05	1.36	
05/17/88			37.07
05/18/88	0.02	1.27	
05/24/88	0.03	1.19	36.09
05/31/88	0.04	1.08	35.11
06/07/88			36.15
06/08/88	0.02	0.91	
06/14/88	0.02	1.03	36.38
06/22/88	0.03	1.14	36.88
06/29/88			34.41
06/30/88	0.05	2.13	
07/05/88			35.83
07/07/88	0.02	1.20	
07/12/88	0.04	1.26	36.01
07/18/88	0.03	0.92	
07/19/88			37.51

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #6:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.02	0.80	35.14
05/10/88			33.78
05/12/88	0.03	0.80	
05/17/88			35.21
05/18/88	0.02	0.86	
05/24/88	0.03	0.88	34.58
05/31/88	0.04	0.77	33.26
06/07/88			34.40
06/08/88	0.02	0.75	
06/14/88	0.02	0.72	34.00
06/22/88	0.03	0.80	35.12
06/29/88			33.60
06/30/88	0.10	0.95	
07/05/88			34.61
07/07/88	0.02	0.87	
07/12/88	0.03	0.94	34.61
07/18/88	0.02	0.85	
07/19/88			35.92

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #7:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.01	0.95	34.94
05/10/88			34.73
05/12/88	0.03	1.06	
05/17/88			36.79
05/18/88	0.03	0.92	
05/24/88	0.02	0.93	35.96
05/31/88	0.02	0.99	34.61
06/07/88			34.62
06/08/88	0.02	0.94	
06/14/88	0.02	0.93	35.83
06/22/88	0.04	0.84	35.31
06/29/88			40.61
06/30/88	0.02	1.97	
07/05/88			41.13
07/07/88	0.03	1.37	
07/12/88	0.03	1.38	40.48
07/18/88	0.03	1.13	
07/19/88			41.16

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #8:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.02	0.71	36.01
05/10/88			34.57
05/12/88	0.02	0.72	
05/17/88			35.70
05/18/88	0.03	0.82	
05/24/88	0.05	0.91	35.03
05/31/88	0.02	0.76	34.86
06/07/88			36.12
06/08/88	0.01	0.67	
06/14/88	0.02	0.74	35.85
06/22/88	0.04	0.75	35.98
06/29/88			37.32
06/30/88	0.08	1.22	
07/05/88			38.83
07/07/88	0.03	1.11	
07/12/88	0.04	1.18	38.50
07/18/88	0.03	0.99	
07/19/88			39.71

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #9:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.02	0.64	35.65
05/10/88			35.35
05/12/88	0.03	0.67	
05/17/88			35.99
05/18/88	0.05	0.76	
05/24/88	0.04	1.15	36.64
05/31/88	0.02	1.15	34.73
06/07/88			35.02
06/08/88	0.01	0.78	
06/14/88	0.02	0.75	35.06
06/22/88	0.04	0.78	34.91
06/30/88	0.03	0.94	
07/07/88	0.03	0.94	
07/12/88	0.03	0.94	
07/18/88	0.03	0.73	
07/19/88			35.50

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #10:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.02	0.64	33.60
05/10/88			32.93
05/12/88	0.02	0.65	
05/17/88			34.00
05/18/88	0.16	0.83	
05/24/88	0.07	1.05	33.16
05/31/88	0.03	0.86	31.86
06/07/88			32.24
06/08/88	0.02	0.65	
06/14/88	0.04	0.91	32.08
06/22/88	0.06	0.62	32.45
06/30/88	0.04	0.66	
07/07/88	0.04	0.66	
07/12/88	0.04	0.66	
07/18/88	0.02	0.63	
07/19/88			32.47

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #11:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.03	1.01	39.86
05/10/88			39.65
05/12/88	0.02	0.86	
05/17/88			40.09
05/18/88	0.03	0.95	
05/24/88	0.05	0.99	39.24
05/31/88	0.03	0.85	39.13
06/07/88			39.27
06/08/88	0.02	0.77	
06/14/88	0.03	0.76	38.86
06/22/88	0.04	0.82	38.97
06/30/88	0.03	1.00	
07/07/88	0.03	1.00	
07/12/88	0.03	1.00	
07/18/88	0.03	0.79	
07/19/88			38.55

Table E.3. LB-4000 Efficiencies and Backgrounds for ORNL (cont.):

(Efficiencies given are for betas only)

Detector #12:

<u>Date</u>	<u>Alpha Bkg.(cpm)</u>	<u>Beta Bkg.(cpm)</u>	<u>Eff.(%)</u>
05/03/88	0.02	0.64	36.66
05/10/88			36.66
05/12/88	0.03	0.70	
05/17/88			37.87
05/18/88	0.03	0.70	
05/24/88	0.07	1.05	37.17
05/31/88	0.03	1.13	36.74
06/07/88			36.34
06/08/88	0.02	0.83	
06/14/88	0.02	0.84	36.30
06/22/88	0.02	0.90	37.02
06/30/88	0.06	0.96	
07/07/88	0.06	0.96	
07/12/88	0.06	0.96	
07/18/88	0.02	0.76	
07/19/88			36.44

Table E.4 Gamma Standard Results for ORNL (August - October 87):

FWHM Data for Gamma Detectors:

Cs-137: 661 keV Peak

Date	<u>Detector No. 1</u>	<u>Detector No. 2</u>	<u>Detector No. 3</u>	<u>Detector No. 4</u>	<u>Detector No. 5</u>
05/03/88	1.76	2.15	1.58	1.65	NA
05/10/88	1.63	1.93	1.59	1.57	NA
05/17/88	1.63	1.93	1.58	1.60	1.60
05/24/88	1.63	1.88	1.57	1.60	1.47
05/31/88	1.72	1.90	1.60	1.53	1.57
06/07/88	1.68	2.06	1.61	1.51	1.54
06/14/88	1.64	1.76	1.63	1.53	1.56
06/21/88	1.69	2.22	1.62	1.55	1.57
06/28/88	1.65	2.06	1.60	1.52	1.57
07/05/88	1.67	2.10	1.60	1.50	1.54
07/12/88	1.71	2.08	1.61	1.52	1.56
07/19/88	1.62	2.07	1.59	1.53	1.57

Co-60: 1332 keV Peak

Date	<u>Detector No. 1</u>	<u>Detector No. 2</u>	<u>Detector No. 3</u>	<u>Detector No. 4</u>	<u>Detector No. 5</u>
05/03/88	2.12	2.51	1.99	2.00	NA
05/10/88	2.07	2.32	1.97	1.99	NA
05/17/88	2.01	2.37	1.96	2.02	1.95
05/24/88	2.10	2.40	1.99	1.99	1.93
05/31/88	2.04	2.30	1.98	2.02	2.00
06/07/88	2.11	2.44	2.02	2.02	1.91
06/14/88	1.99	2.27	1.95	2.00	1.95
06/21/88	2.06	2.50	1.98	2.03	1.95
06/28/88	2.09	2.44	1.96	2.04	1.96
07/05/88	2.06	2.49	1.97	1.98	1.94
07/12/88	2.04	2.42	1.95	1.93	1.94
07/19/88	2.03	2.46	1.95	2.01	1.92

Tables E.5. Gamma Detector Backgrounds for ORNL:

Background for Gamma Detector #1:

<u>Peak Energy</u> <u>(KeV)</u>	<u>Cts/Sec</u>	<u>%Error</u>
90.0	9.92E-3	11.3
184.7	7.23E-3	13.1
238.7	3.54E-3	21.4
351.4	2.82E-3	28.8
510.8	1.12E-2	7.1
583.2	1.56E-3	27.6
609.2	1.38E-3	36.1
1460.	2.22E-3	14.5
1764.7	4.52E-4	38.0
2614.2	8.52E-4	31.8

Tables E.5. Gamma Detector Backgrounds for ORNL (cont.):

Background for Gamma Detector #2

<u>Peak Energy (Kev)</u>	<u>Cts/Sec</u>	<u>%Error</u>
92.2	7.01E-3	14.3
185.8	4.78E-3	21.2
238.5	2.19E-3	27.8
510.3	5.39E-3	12.1
583.2	2.25E-3	19.3
609.5	1.49E-3	33.5
1460.	1.39E-3	22.1
2615.	7.97E-4	25.3

Tables E.5. Gamma Detector Backgrounds for ORNL (cont.):

Background for Gamma Detector #3

<u>Peak Energy (Kev)</u>	<u>Cts/Sec</u>	<u>%Error</u>
93.1	9.66E-3	10.2
186.1	5.17E-3	19.5
239.	4.61E-3	17.9
352.2	1.91E-3	28.5
511.1	1.28E-2	6.3
583.1	9.36E-4	46.0
609.4	1.05E-3	34.3
1001.	9.79E-4	30.7
1250.8	5.22E-4	51.5
1332	1.08E-3	27.9
1460.	2.13E-3	15.5
2615.	1.25E-3	16.0

Tables E.5. Gamma Detector Backgrounds for ORNL (cont.):

Background for Gamma Detector #4

<u>Peak Energy (Kev)</u>	<u>Cts/Sec</u>	<u>%Error</u>
91.8	4.43E-3	28.1
511.	1.31E-2	8.0
582.6	1.72E-3	39.4
608.7	1.49E-3	37.4
1460.	8.12E-3	6.8
1764.	1.02E-3	21.3
2206.7	6.65E-4	40.8
2615.	2.07E-3	12.6

Tables E.5. Gamma Detector Backgrounds for ORNL (cont.):

Background for Gamma Detector #5

<u>Peak Energy (KeV)</u>	<u>Cts/Sec</u>	<u>%Error</u>
92.9	4.13E-3	20.2
185.6	3.64E-3	22.7
238.7	4.40E-3	12.6
351.9	1.61E-3	35.2
511.	1.52E-2	5.7
558.	1.12E-3	35.1
583.	1.96E-3	23.1
608.3	9.11E-4	57.5
1460.	2.55E-3	13.8
2615.	1.32E-3	17.0

Table E.6. Liquid Scintillation Counter Standard Counts,
Efficiencies, and Backgrounds for ORNL

<u>Date</u>	<u>Standard Ct. (cpm)</u>	<u>Eff. (%)</u>	<u>Bkg. (cpm)</u>
05/03/88	93087	58.5	11.6
05/10/88	92955	58.6	11.5
05/17/88	92959	58.6	13.4
05/24/88	92812	58.5	14.4
05/31/88	92922	58.7	12.4
06/06/88	92981	58.8	13.9
06/13/88	92579	58.6	11.6
06/20/88	92210	58.5	12.2
06/27/88	92273	58.6	12.6
07/05/88	92158	58.5	12.9
07/12/88	92138	58.6	11.2
07/19/88	92064	58.6	13.2

Average Standard Value = 92595 +/- 381 cpm
Actual Standard Value = 255200 dpm on 11/27/79
Standard is a Packard 3-H standard.

Efficiency = 58.6% +/- 0.1%
Range = 58.5% - 58.8%

Background = 12.6 +/- 1.0 cpm
Range = 11.2 - 14.4 cpm

Table E.7. Interlaboratory Comparison Sample Results for ORNL

EPA QC(EMSL) Sample Results

No EMSL samples were run during the time period in which
 the Brookhaven samples were analyzed.

EML Sample Results (July 1988):

<u>Matrix</u>	<u>Isotope</u>	<u>Found</u>	<u>Known</u>
Water: (pCi/mL)	H-3	19.4	20.7
	Mn-54	6.9	6.8
	Co-57	1.9	2.05
	Co-60	1.9	2.03
	Sr-90	0.56	0.53
	Cs-134	2.9	3.56
	Cs-137	1.8	1.84
	Pu-239	0.018	0.0243
	Am-241	0.52E-2	0.41E-2
	U(pCi)	0.011	0.0085
	Soil: (pCi/g)	K-40	0.83
Sr-90		0.14	0.146
Cs-137		0.31	0.4
Pu-239		0.048	0.041
Am-241		0.79E-2	0.67E-2

Table E.8 Tritium Counting Efficiency for Battelle-PNL

<u>DATE</u>	<u>CPM STANDARD</u>	<u>CPM BACKGROUND WATER</u>	<u>% EFFICIENCY</u>
07/08/88	19565.13	13.93	32.9
07/08/88	40206.42	14.46	33.8
07/12/88	19407.49	14.30	32.7
07/12/88	39995.08	14.01	33.7

Table E.9 Beta Counting Efficiency for Battelle-PNL

<u>DATE</u>	<u>CPM</u>	<u>% EFFICIENCY</u>	<u>INSTRUMENT IDENTIFICATION</u>
07/15/88	8621	55.3	Lobeta-1
07/15/88	8551	54.9	Lobeta-2
07/15/88	8612	55.3	Lobeta-3
07/15/88	8550	54.9	Lobeta-4
07/18/88	8560	54.9	Lobeta-1
07/18/88	8519	54.7	Lobeta-2
07/18/88	8594	55.2	Lobeta-3
07/18/88	8576	55.1	Lobeta-4
07/21/88	8580	55.1	Lobeta-1
07/21/88	8571	55.0	Lobeta-2
07/21/88	8605	55.2	Lobeta-3
07/21/88	8535	54.8	Lobeta-4
07/27/88	8590	55.1	Lobeta-1
07/27/88	8563	55.0	Lobeta-2
07/27/88	8600	55.2	Lobeta-3
07/27/88	8561	55.0	Lobeta-4

Table E.10 Beta Counting Background for Battelle-PNL

<u>DATE</u>	<u>COUNT TIME MINUTES</u>	<u>BETA BACKGROUND CPM</u>	<u>INSTRUMENT IDENTIFICATION</u>
07/15/88	1000	0.478 ± 0.022	Lobeta-1
07/15/88	1000	0.530 ± 0.023	Lobeta-2
07/15/88	1000	0.485 ± 0.022	Lobeta-3
07/15/88	1000	0.488 ± 0.022	Lobeta-4
07/18/88	1000	0.466 ± 0.022	Lobeta-1
07/18/88	1000	0.435 ± 0.021	Lobeta-2
07/18/88	1000	0.506 ± 0.022	Lobeta-3
07/18/88	1000	0.478 ± 0.022	Lobeta-4
07/21/88	1000	0.507 ± 0.023	Lobeta-1
07/21/88	1000	0.516 ± 0.023	Lobeta-2
07/21/88	1000	0.547 ± 0.023	Lobeta-3
07/21/88	1000	0.529 ± 0.023	Lobeta-4
07/27/88	1000	0.518 ± 0.023	Lobeta-1
07/27/88	1000	0.443 ± 0.021	Lobeta-2
07/27/88	1000	0.527 ± 0.023	Lobeta-3
07/27/88	1000	0.483 ± 0.022	Lobeta-4

Table E.11 AEA Efficiency for Battelle-PNL

<u>DATE</u>	<u>CPM</u>	<u>% EFFICIENCY</u>	<u>INSTRUMENT IDENTIFICATION</u>
08/30/88	297.02	30.1	PNL-C9
08/30/88	368.38	31.8	PNL-C10
08/30/88	364.95	31.1	PNL-C11
08/30/88	345.0	29.4	PNL-C12
09/06/88	313.98	31.8	PNL-C1
09/06/88	356.47	30.3	PNL-C3
09/06/88	341.50	29.1	PNL-C4

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Issue Date: July 1989
Revision: 00

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BNL Data Document
Issue Date: July 1989
Revision: 00

Appendix F

ADDENDUM TO THE BNL SAMPLING AND ANALYSIS PLAN (BATTELLE)

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FINAL DRAFT
ADDENDUM

DOE ENVIRONMENTAL SURVEY
SAMPLING AND ANALYSIS PLAN

BROOKHAVEN NATIONAL LABORATORY

JUNE 1988

PREPARED FOR

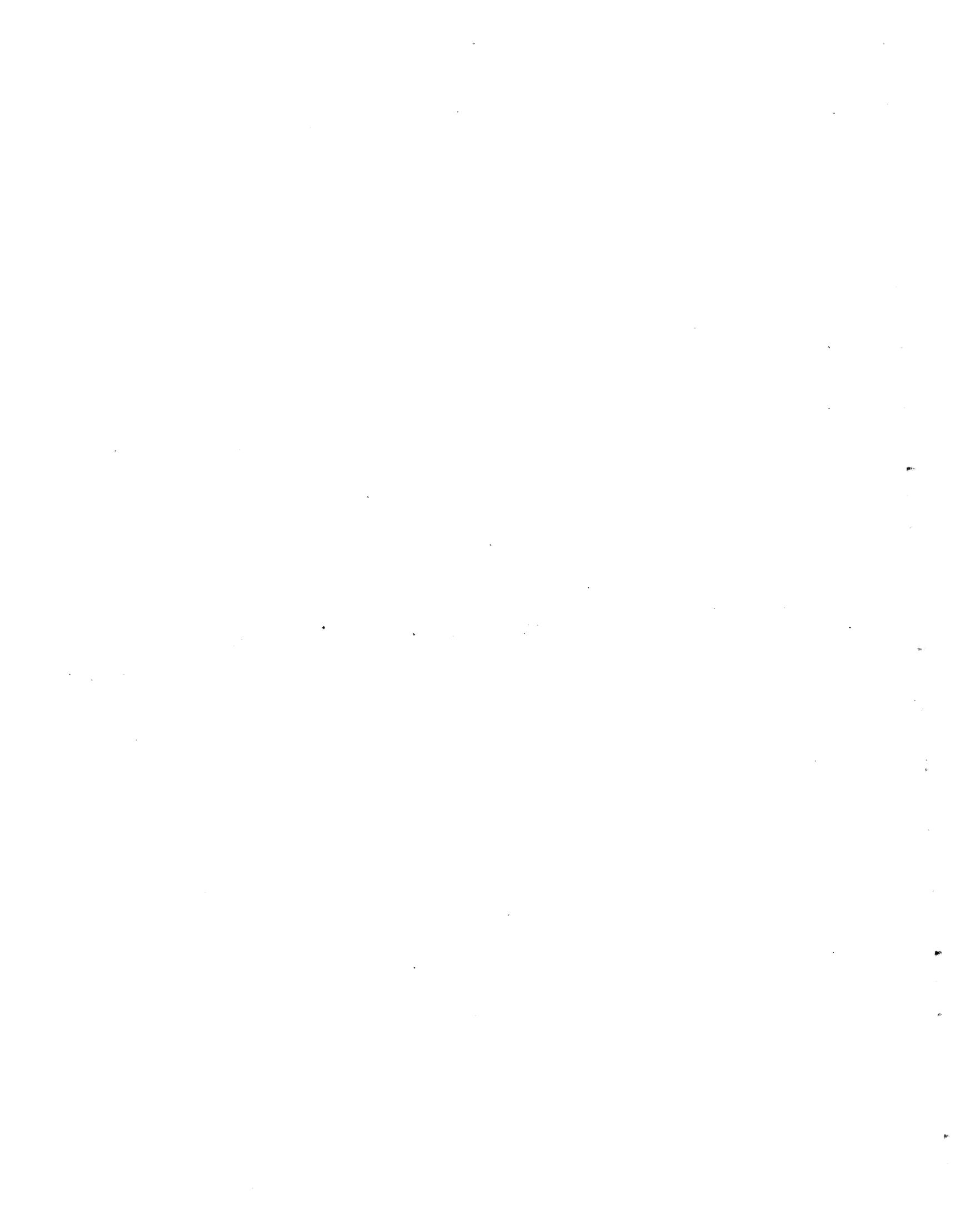
U.S. DEPARTMENT OF ENERGY
OFFICE OF ENVIRONMENTAL AUDIT

PREPARED BY

DOE ENVIRONMENTAL SURVEY
AND
BATTELLE COLUMBUS DIVISION

UNDER U.S. DOE CONTRACT NO. DE-AC06-76RL0-1830

Approval signatures appear on May 1988 version.



3.0 SAMPLING AND ANALYSIS STRATEGY

3.1 INTRODUCTION

This supplement to the Brookhaven National Laboratory (BNL) Sampling and Analysis Plan addresses the installation and sampling of 10 groundwater monitoring wells that comprise Phase II of the on-site sampling. Four groundwater monitoring wells will be installed and sampled at the B-975 Bubble Chamber Hazardous Waste Storage/Disposal Area, four groundwater monitoring wells will be installed and sampled at the Current Landfill, and two Upgradient Background Monitoring Wells will be installed and sampled upgradient of BNL along Upton Road. Soil borings will be taken at five of the wells for lithologic determination and for subsequent analysis.

This document for Phase II is supplemental to the original Brookhaven Sampling and Analysis Plan. All field sampling guidelines, sample control and documentation, and safety procedures will be followed as found in Sections 4, 5, 6, 7, and 9 of the March 25, 1988, final draft plan, except as indicated in this document.

The Phase II drilling-contract procurement and field sampling will be completed by Battelle, Columbus Division (BCD). Battelle will oversee the drilling operations, conduct the sampling, perform analysis on samples collected, and submit field-logbook data and data packages to ORNL for preparation of the BNL Sampling and Analysis Data Document.

3.2 ENVIRONMENTAL PROBLEMS

3.2.3 Environmental Problem #3: Groundwater Contamination

Request Number: 316

Requestor: Jim Werner

Finding and Basis: The absence of upgradient background monitoring may result in undetected migration of off-site contamination onto the BNL site and add uncertainty to the meaning of on-site data. BNL drinking water wells have been shut down because of organics contamination. These wells are located upgradient of all known on-site hazardous waste areas, but are downgradient of smaller, off-site potential sources. Therefore, the exact source of the contamination is not identified. There are two potential but unconfirmed off-site sources of groundwater contamination. First, an off-site underground storage tank (UST) at a retail gas station located hydrologically upgradient of BNL at the intersection of Raynor Road and Rt. 25 is known to have leaked gasoline into the groundwater. This UST is approximately one mile from the BNL boundary along William Floyd Parkway, and 1.5 miles from the nearest on-site well (designated well SG). The extent of this contamination has not been determined. Dissolved product has not been detected at the 13-14 wells that were installed near the station. Only floating product has been measured. Because toluene is one of the primary constituents of gasoline, and one of the suspected contaminants at the B-975 Bubble Chamber Area, it is important to have reliable upgradient background data.

The second potential off-site source of groundwater contamination is from cesspool degreasers (e.g., solvents such as trichloroethylene [TCE] and trichloroethane [TCA]). State and local environmental agencies believe that the use of these septic-tank cleaners has caused wide-spread groundwater contamination on Long Island. The extent of groundwater contamination at BNL from these sources is not known. There are approximately four dozen houses on the west side of the William Floyd Parkway along BNL's western border, and approximately two dozen houses located on BNL's northern border. These houses may be potential sources of cesspool degreasers.

3.2.3.1 Sampling and Analysis Objectives

Statement: To detect the presence of groundwater contamination due to volatile and semivolatile organic compounds, ICP-metals, and tritium at BNL that may be moving on-site from off-site sources. Also, to obtain background values that provide a basis for comparison with on-site groundwater monitoring results. Finally, to add piezometric data to the existing on-site data base to better understand the groundwater flow regime, including variations caused by on-site pumping.

Supporting Information: Three existing upgradient wells (SG, SB, and SC) are inadequate as background wells due to their small diameter, PVC casing, and distance (900 to 2,400 ft) from the BNL border. Specifics of each well are as follows:

<u>Well</u>	<u>Depth (ft)</u>	<u>Casing Elev. (ft)</u>	<u>Depth of Water (ft)</u>	<u>Elev. in ft (Date)</u>	<u>Distance to BNL Border (ft)</u>
SG	32.7	64.36	approx. 20	approx. 44	2400
SB	[No information available. Located on map but not in field.]				2100
SC	32.6	61.22	22.6	38.26 (9/87)	900

3.2.3.2 Sampling and Analysis Design: Request No. 316 - New Monitoring Wells Upgradient of BNL (Groundwater)

3.2.3.2.1 Sampling Design

Introduction: Two wells will be installed on the west side of Upton Road near the north gate to BNL. A well nest consisting of a 25-ft deep well and a 50-ft deep well will be installed at this location. The shallow well will be used to collect groundwater samples in the upper sections of the aquifer near the air/water interface. The deep well will be used to collect samples to determine if any contaminant plume has penetrated to the 40- to 50-ft depth. Exact well depths and screened intervals will be selected during drilling and will be based partially upon new water-level measurements.

The groundwater monitoring wells will be augured and the cuttings examined to assure placement of the screened interval in a sand lens. The wells will be constructed of 4-inch diameter 304 stainless steel. The screen will be 10 ft long and have a 0.010 slot size. Gravel pack will be filled in the annulus around the screen to a depth of 2 ft above the top of the screen. Bentonite pellets will then be placed on the gravel pack to form a seal 2 ft thick. If insufficient moisture is available to allow the seal to develop, clean water will be added to the borehole to help develop the seal. The well is to be ~~tremie grouted~~ grouted to the surface and the grout allowed to harden for at least 12 hours before well development. Well development will be accomplished by bailing or surging. During well development, periodic measurements of pH, temperature, and specific conductance will be taken. Development will continue until the readings have stabilized.

The wells will be installed and constructed in compliance with all RCRA standards as found in Chapter 3 of RCRA Ground-Water Technical Enforcement Guidance Document, 1986. All necessary permits will be obtained by a licensed drilling contractor. Wells will be protected by locking caps and protective posts mounted in a concrete pad.

Assumptions/Considerations:

1. Two sets of samples will be collected from each well. Samples should be collected consecutively. If both samples can not be collected on the same day, all parameters for the first sample should be collected on the first day and those for the second sample on the second day.
2. Groundwater sampling will not be performed until at least 24 hours after well development.
3. Groundwater elevation in the well is to be measured before sampling to determine the minimum volume to be purged.
4. The well will be purged until measured field parameters have stabilized. It is anticipated that at least three to five borehole volumes will be evacuated before the parameters stabilize. A submersible pump is to be used, although Teflon and stainless steel bailers will be available if the submersible pump proves to be unacceptable.
5. Measurements of temperature, pH, and specific conductance will be performed before and after sampling to confirm water stability.
6. Samples will be collected in order of susceptibility to volatilization, and level of concern of the DOE Survey team. The order will be:
 - (a) volatiles
 - (b) semivolatiles
 - (c) total tritium
 - (d) ICP-metals.

Design Type: Biased

Number, Location, and Type of Sample: Collect two grab samples from each well for a total of four samples.

Sampling Method: "Depth to Water Level Field Measurements," Section E4.4.3, and "Sampling with Bucket-Type Bailer," Section E4.4.4.4, DOE Environmental Survey Manual, Appendix E.

3.2.3.2.2 Analytical Design

Field Measurements: pH, specific conductance, and temperature (Appendix A and Appendix E, Section E 4.5, DOE Environmental Survey Manual).

Laboratory Analyses: Volatiles, semivolatiles, total tritium, and ICP-metals (Appendix D, DOE Environmental Survey Manual, August 1987; "GC/MS Analysis of Volatiles," p. D-16; "GC/MS Analysis of Semivolatiles," p. D-118; "Determination of Tritium in Solids and Liquids," Procedure No. 14 [will appear in Revised DOE Environmental Survey Manual, Appendix D]; "Determination of Metals by Inductively Coupled Plasma--Atomic Emission Spectrometry," p. D-266).

3.2.4 Environmental Problem #4: Current BNL Landfill (Phase II)

Request numbers: 507 and 508

Requestor: Jim Werner

Finding and Basis: The current landfill is known to be a source of low level radioactive groundwater contamination, and is suspected of receiving significant quantities of hazardous chemical waste.

3.2.4.1 Sampling and Analysis Objectives

Statement: Install four new wells near the current landfill and collect split-spoon samples and groundwater samples to determine if contaminants listed in Section 3.2.4.3.1 are present above analytical detection levels in soils and groundwater in the Current Landfill Area.

Supporting Information: Fourteen monitoring wells have been installed in the area, although the data are suspect because BNL audits have shown several wells to be screened at unknown depths. Chloroform and radioactivity have been detected in the groundwater. Specifics for seven of the closer wells are as follows:

<u>ID#</u>	<u>Ground Surface (ft)</u>	<u>Casing Elev. (ft)</u>	<u>Depth of Water (ft)</u>	<u>Diameter (inches)</u>	<u>Water Elev. in ft (date)</u>
2C	50.9	53.2	31.0	1-1/4	37.1 (12-87)
W9	51.0	52.8	24.8	1-1/4	37.3 (12-87)
WS	(?)	52.2	20.1	1-1/4	37.4 (12-87)
WR	54.6	54.7	24.8	1-1/4	37.7 (12-87)
WG	64.8(?)	69.4	39.9	5	40.1 (6-87)
1k	55.1	55.3	25.0	1-1/4	37.5 (12-87)
WT	47.3	49.8	17.6	1-1/4	37.7 (12-87)

June 1984 water-level elevations ranged from 43.9 to 45.5 ft for these wells.

3.2.4.3 Sampling and Analytical Design: Request No. 507 - New Monitoring Wells in the Current Landfill Area (Groundwater)

This section includes discussion of water sampling in the four new wells. Soil sampling is discussed in Section 3.2.4.4.

3.2.4.3.1 Sampling Design

Introduction: Four wells will be installed near the BNL Current Landfill (Figure 3-1). The wells will be arranged such that a single 25-ft well is installed and sampled upgradient of the landfill. Another single 25-ft deep well will be located downgradient of the landfill. As shown in Figure 3-1, a well nest consisting of a 25-ft deep well and a 50-ft deep well will also be installed in another downgradient location. The shallow wells will be used to collect groundwater samples in the upper sections of the aquifer near the air/water interface. The deep well will be used to collect samples to determine if any contaminant plume has penetrated to the 40- to 50-ft depth. Exact well depths and screened intervals will be selected during drilling and will be based partially upon new water-level measurements.

The wells will be augered and split-spoon samples taken at the designated intervals specified in Section 3.2.4.4.1. The groundwater monitoring wells will be constructed of 4-inch diameter 304 stainless steel. The screen will be 10 ft long and have a 0.010 slot size. Gravel pack will be filled in the annulus around the screen to a depth of 2 ft above the top of the screen. Bentonite pellets will then be placed on the gravel pack to form a seal 2 ft thick. If insufficient moisture is available to allow the seal to develop, then clean water will be added to the borehole to help develop the seal. The well is to be tremie grouted to the surface and the grout allowed to harden for at least 12 hours before well development. Well development will be accomplished by bailing or surging. During well development, periodic measurements of pH, temperature, and specific conductance will be taken. Development will continue until the readings have stabilized.

The wells will be installed and constructed in compliance with RCRA standards as found in Chapter 3 of the RCRA Ground-Water Technical Enforcement Guidance Document, 1986. Wells will be protected by locking caps and protective posts mounted in a concrete pad. All necessary permits will be obtained by a licensed drilling contractor.

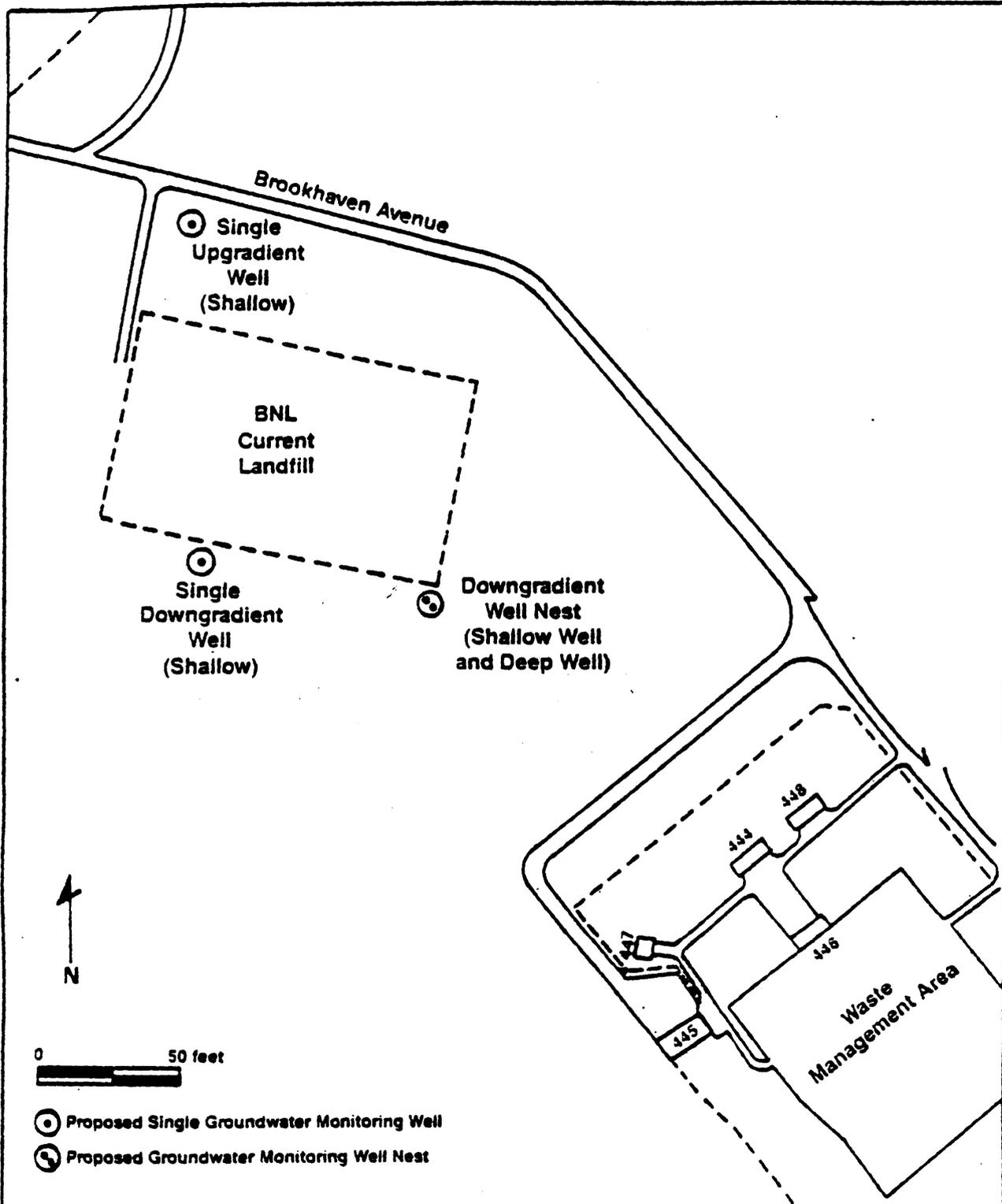


FIGURE 3-1. Location of Proposed Groundwater Monitoring Wells at BNL Current Landfill

Assumptions/Considerations:

1. Two sets of samples will be collected from each well. Samples should be collected consecutively. If both samples can not be collected on the same day, all parameters for sample one should be collected on the first day and those for sample two on the second day.
2. Groundwater sampling will not be performed until at least 24 hours after well development.
3. Groundwater elevation is to be measured before sampling to determine the minimum volume to be purged.
4. The well will be purged until measured field parameters have stabilized. It is anticipated that at least three to five borehole volumes will be evacuated before the parameters stabilize. A submersible pump is to be used, although Teflon and stainless steel bailers will be available if the submersible pump proves to be unacceptable.
5. Measurements of temperature, pH, and conductivity will be performed before and after sampling to confirm water stability.
6. Collect samples in order of susceptibility to volatilization, and level of concern of the DOE Survey team. The order will be:
 - (a) volatiles
 - (b) semivolatiles
 - (c) total tritium
 - (d) strontium-90
 - (e) ICP-metals
 - (f) plutonium.

Design Type: Biased

Number, Location, and Type of Sample: Collect two grab samples from each well for a total of eight samples.

Sampling Method: "Depth to Water Level Field Measurements," Section E4.4.3, and "Sampling with Bucket-Type Bailer," Section E4.4.4.4, DOE Environmental Survey Manual, Appendix E.

3.2.4.3.2 Analytical Design

Field Measurements: pH, specific conductivity, and temperature (Appendix A and DOE Environmental Survey Manual, Appendix E, Section E 4.5).

Laboratory Analyses: Volatiles, semivolatiles, total tritium, ICP-metals, strontium-90, and plutonium (Appendix D, DOE Environmental Survey Manual, August 1987; "GC/MS Analysis of Volatiles," p. D-16; "GC/MS Analysis of Semivolatiles," p. D-118; "Determination of Tritium in Solids and Liquids," Procedure No. 14 [will appear in Revised DOE Environmental Survey Manual, Appendix D]; "Determination of Metals by Inductively Coupled Plasma--Atomic Emission Spectrometry," p. D-266; "Determination of Sr-90 in Water," D-679; "Determination of Plutonium in Water," p. D-570).

3.2.4.4 Sampling and Analytical Design: Request No. 508 - New Monitoring Wells in the Current Landfill Area (Subsurface Soil)

The collection and analysis of soil samples will aid in understanding soil lithology, determine the presence of contamination of the soil column, and serve as an indicator of potential ground-water contamination.

3.2.4.4.1 Sampling Design

Introduction: Four wells will be installed near the current landfill (Figure 3-1). Three of these wells will have split-spoon samples taken for lithologic purposes. One of these wells is located upgradient of the landfill and will be completed to a total depth of 25 ft. Another 25-ft well will be completed downgradient of the landfill. Split-spoon samples will be taken at 2-4 ft, 6-8 ft, 10-12 ft, and 20-22 ft intervals in these wells. The remaining two wells will be installed as a well nest, meaning sampling of only the deep well is necessary. Split-spoon samples will be taken at the 2-4 ft, 6-8 ft, 10-12 ft, 20-22 ft, 30-32 ft, 40-42 ft, 48-50 ft intervals as the 50-ft deep well is drilled. The samples will be used to provide information on soil lithology, the presence of contaminants in the soil column, and as an indicator of potential groundwater contamination. Field screening will be conducted using a flame ionization detector (OVA) headspace analysis to indicate the presence of organic constituents.

Assumption/Considerations:

1. For the downgradient well nest, soil samples will be collected only in the 50-ft well.
2. Soil samples will be collected at every 10-ft interval to the bottom of the boring (25 or 50 ft), plus additional samples at 2-4 and 6-8 ft, using a split-spoon sampler.
3. Triplicate samples will be collected for volatiles in the 2-4, 6-8, 10-12, and 20-22 ft intervals; the 20-22 ft interval is to be

excluded if below the water table. One sample container will be placed in the sun or a heated area for 15 to 20 minutes. After that time, the air in this container will be tested with an OVA. If levels increase 5 ppm above background levels, the remaining two volatile samples will be retained for laboratory analysis, along with all remaining samples from that well. The heated volatile sample will be disposed of by BNL. Should the OVA indicate an absence of organic vapor, all samples will be discarded.

4. Samples at 30-32 ft, 40-42 ft, and 48-50 ft are for lithologic determinations only. If the 20-22 ft sample is below the water table, it too is to be used for lithologic determinations only.
5. Samples will be collected in the order of their sensitivity to volatilization, and interest of the DOE Survey team. The order will be:
 - (a) volatiles
 - (b) semivolatiles
 - (c) total tritium
 - (d) ICP-metals
 - (e) strontium-90
 - (f) plutonium.

Number, Location, and Type of Sample: Collect up to four subsurface soil samples per well during drilling of the two shallow and one deep groundwater monitoring wells. The well locations are shown in Figure 3-1.

Sampling Method: "Auger or Drive Tube," Section E5.2.3, DOE Environmental Survey Manual, Appendix E.

3.2.4.4.2 Analytical Design

Field Measurements: Organic vapor headspace analysis using flame ionization detector (OVA).

Laboratory Analyses: Volatiles, semivolatiles, total tritium, ICP-metals, strontium-90, and plutonium (Appendix D, DOE Environmental Survey Manual, August 1987; "GC/MS Analysis of Volatiles," p. D-16; "GC/MS Analysis of Semivolatiles," p. D-118; "Determination of Tritium in Solids and Liquids," Procedure No. 14 [will appear in Revised DOE Environmental Survey Manual, Appendix D]; "Determination of Metals by Inductively Coupled Plasma--Atomic Emission Spectrometry," p. D-266; "Determination of Sr-90 in Sediment and Soil," p. D-687; "Determination of Plutonium in Sediment and Soil," D-578).

3.2.10 Environmental Problem #10: B-975 Bubble Chamber Hazardous Waste Storage/Disposal Area (Phase II)

Request Numbers: 809 and 810

Requestors: Jim Werner/Doug Detman

Finding and Basis: Spills and leaks of hazardous substances, including toluene-containing scintillation fluid and an apparent variety of hazardous substances, onto the ground and asphalt in a storage area adjacent to the bubble-chamber area may have caused groundwater and soil contamination.

3.2.10.1 Sampling and Analysis Objectives

Statement: Determine if the contaminants listed in Section 3.2.10.4.1 are present above analytical detection levels in soils and groundwater from the B-975 bubble-chamber area. Because of the presence of low density immiscible contaminants such as toluene, and the potential for high density contaminants such as TCE, both shallow and deep wells will be installed. The wells will be located in pairs, one shallow (25 ft) and one deep (50 ft). Well pairs will be located both upgradient and downgradient of the storage disposal area. Split-spoon samples will be taken for lithologic purposes at the 2-4 ft, 6-8 ft, 10-12 ft, and 20-22 ft intervals in the deep wells. If any of these subsurface soil samples have a OVA headspace reading greater than 5 ppm above background levels, all samples from that well will be retained for laboratory analysis. Split-spoon samples for lithologic logging purposes only will taken at 10 ft intervals below the 20-22 ft interval to a total depth of 50 ft. The deepest sampled interval will be 48-50 ft.

Supporting Information: Several tanks were observed by the Survey Team in the area. A 500 gal tank of "nitric acid"; 12,000, 5,700, and 6,000 gal tanks of possible scintillation fluid; various drums of organic compounds; and 12 liquid filled "counters" were observed but some have since been removed. Nearby wells have shown TCE contamination, but because of their long screened intervals and uncertain depths, are unacceptable for monitoring purposes.

Preliminary groundwater data suggests flow from north to south in the area, but the gradient is uncertain. Groundwater monitoring in this area is

limited to the existing monitoring well designated SG, a 32.7 ft deep well with a top-of-casing elevation of 64.4 ft (Figure 3-2). Data from the new wells will help determine the extent of contamination in the area. Water-level measurements taken from the two new shallow wells can be used in conjunction with water-level data taken from well SG to determine the groundwater flow direction and gradient in the immediate area.

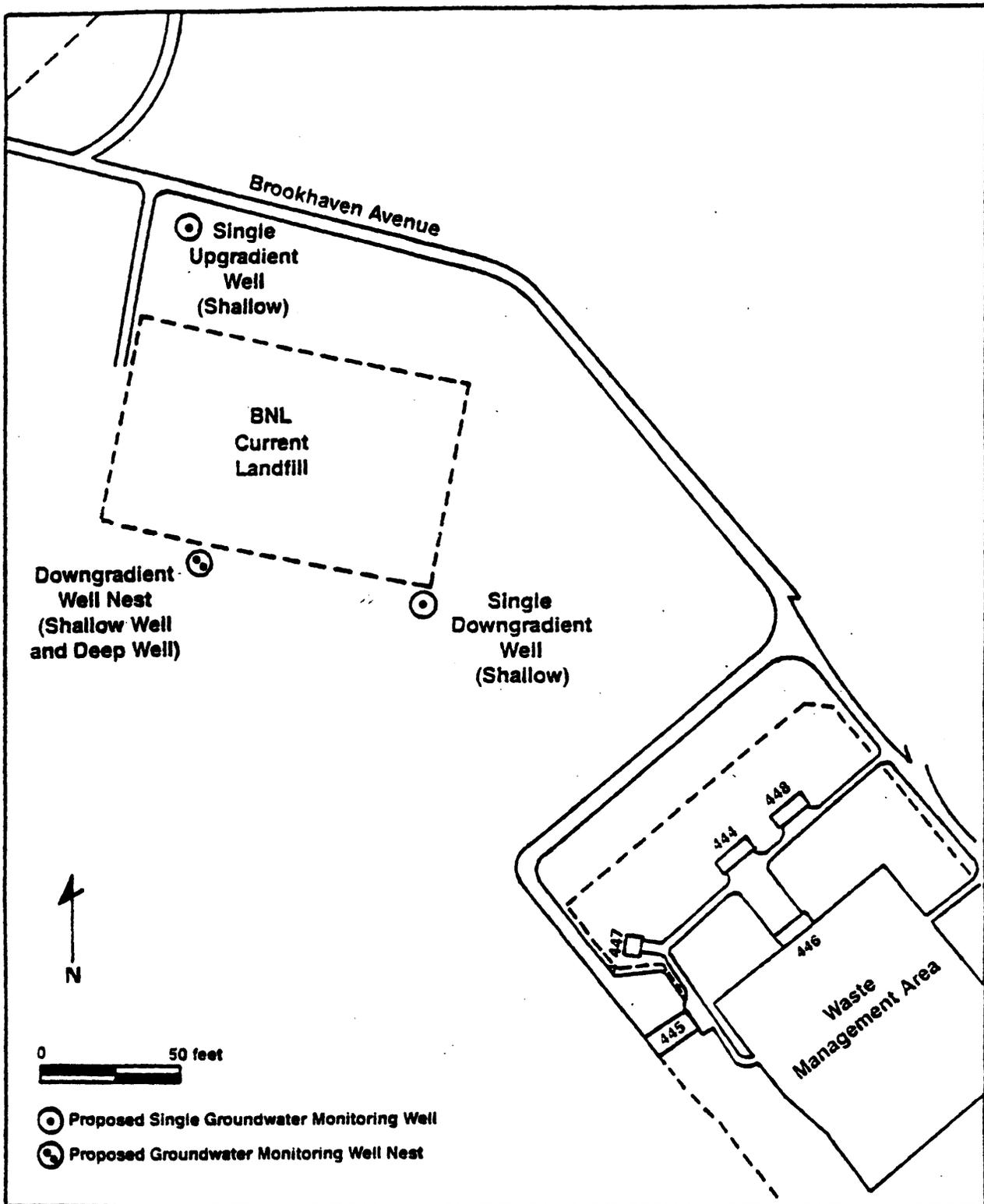


FIGURE 3-2. Location of Proposed Groundwater Monitoring Wells at B-975 Bubble Chamber Area

3.2.10.4 Sampling and Analytical Design: Request No. 809 - New Monitoring Wells in the B-975 Bubble Chamber Area (Groundwater)

This section includes discussion of water sampling in the four new wells. Discussion of soil sampling is located in Section 3.2.10.5.

3.2.10.4.1 Sampling Design

Introduction: Four wells will be installed near the B-975 Bubble Chamber Area (Figure 3-2). The wells will be arranged in nests of two wells. One of the wells in the nest will be completed to a depth of approximately 25 ft (shallow). The other well in the nest will be completed to a depth of 50 ft (deep). The shallow wells will be used to collect groundwater samples in the upper sections of the aquifer near the air/water interface. The deep wells will be used to collect samples to determine if the contaminant plume has reached the 40 to 50 ft depth.

The wells will be augured and split-spoon samples taken at the designated intervals specified in Section 3.2.10.5. The groundwater monitoring wells will be constructed of 4-inch diameter 304 stainless steel. The screen will be 10 ft long and have a 0.010 slot size. Gravel pack will be filled in the annulus around the screen to a depth of 2 ft above the top of the screen. Bentonite pellets will then be placed on the gravel pack to form a seal 2 ft thick. If insufficient moisture is available to allow the seal to develop, then clean water will be added to the borehole to help develop the seal. The well is to be tremie grouted to the surface and the grout allowed to harden for at least 12 hours before well development. Well development will be accomplished by bailing or surging. During well development, periodic measurements of pH, temperature, and conductivity will be taken. Development will continue until the readings have stabilized.

The wells will be installed and constructed in compliance with RCRA standards as found in Chapter 3 of the RCRA Ground-Water Technical Enforcement Guidance Document, 1986. Wells will be protected by locking caps and protective posts mounted in a concrete pad. All necessary permits will be obtained by a licensed drilling contractor.

Assumptions/Considerations:

1. Two sets of samples will be collected from each well. Samples should be collected consecutively. If both samples can not be collected on the same day, all parameters for sample one should be collected on the first day and those for sample two on the second day.
2. Groundwater sampling will not be performed until at least 24 hours after well development.
3. Groundwater elevation is to be measured before sampling to determine the minimum volume to be purged.
4. The well will be purged until measured field parameters have stabilized. It is anticipated that three to five borehole volumes will be evacuated before the parameters stabilize. A submersible pump is to be used, although Teflon and stainless steel bailers will be available if the submersible pump proves to be unacceptable.
5. Measurements of temperature, pH, and conductivity will be performed before and after sampling to confirm water stability.
6. Collect samples in order of susceptibility to volatilization, and interest of the DOE Survey team. The order will be:
 - (a) volatiles
 - (b) semivolatiles
 - (c) total tritium
 - (d) strontium-90
 - (e) ICP-metals.

Design Type: Biased

Number, Location, and Type of Sample: Collect two grab samples from each well for a total of eight samples.

Sampling Method: "Depth to Water Level Field Measurements," Section E4.4.3, and "Sampling with Bucket-Type Bailer," Section E4.4.4.4, DOE Environmental Survey Manual, Appendix E.

3.2.10.4.2 Analytical Design

Field Measurements: pH, specific conductivity, temperature (Appendix A and DOE Environmental Survey Manual, Appendix E, Section E 4.5).

Laboratory Analyses: Volatiles, semivolatiles, total tritium, ICP-metals, and strontium-90 (Appendix D, DOE Environmental Survey Manual, August 1987; "GC/MS Analysis of Volatiles," p. D-16; "GC/MS Analysis of Semivolatiles," p. D-118; "Determination of Tritium in Solids and Liquids," Procedure No. 14 [will appear in Revised DOE Environmental Survey Manual, Appendix D]; "Determination of Metals by Inductively Coupled Plasma--Atomic Emission Spectrometry," p. D-266; "Determination of Sr-90 in Water," p. D-679).

3.2.10.5 Sampling and Analytical Design: Request No. 810 - New Monitoring Wells in the B-975 Bubble Chamber Area (Subsurface Soil)

The collection and analysis of soil samples will aid in understanding soil lithology, determine the presence of contamination of the soil column, and serve as an indicator of potential ground-water contamination.

3.2.10.5.1 Sampling Design

Introduction: Split-spoon samples will be collected at 10-ft intervals as the two 50 ft wells are drilled, with two additional samples taken in the first 10 ft of drilling (at 2-4 and 6-8 ft). The samples will be used to provide information on soil lithology, the presence of contaminants in the soil column, and as an indicator of potential groundwater contamination. Field screening will be conducted using a flame ionization detector (OVA) headspace analysis to indicate the presence of organic constituents.

Assumptions/Considerations:

1. Soil samples will be collected only in the 50-ft wells.
2. Soil samples will be collected at every 10-ft interval to the bottom of the boring (50 ft), plus additional samples at 2-4 and 6-8 ft, using a split-spoon sampler.
3. Triplicate samples will be collected for volatiles in the 2-4, 6-8, 10-12, and 20-22 ft intervals; the 20-22 ft interval is to be excluded if below the water table. One sample container will be placed in the sun or a heated area for 15 to 20 minutes. After that time, the air in this container will be tested with an OVA. If levels increase 5 ppm above the background levels, the remaining two volatile samples will be retained for laboratory analysis, along with the rest of the samples from that well. The heated volatile sample will be disposed of by BNL. Should the OVA indicate an absence of organic vapor, all samples will be discarded.

4. Samples at 30-32 ft, 40-42 ft, and 48-50 ft are for lithologic determinations only. If the 20-22 ft sample is below the water table, it too is to be used for lithologic determination only.
5. Samples will be collected in the order of their sensitivity to volatilization, and interest of the DOE Survey team. The order will be:
 - (a) volatiles
 - (b) semivolatiles
 - (c) total tritium
 - (d) ICP-metals
 - (e) strontium-90.

Number, Location, and Type of Sample: Collect up to four subsurface soil samples per well during drilling of the 50-ft groundwater monitoring wells. The well locations are shown in Figure 3-2.

Sampling Method: "Auger or Drive Tube" Section E5.2.3, DOE Environmental Survey Manual, Appendix E.

3.2.10.5.2 Analytical Design

Field Measurement: Organic vapor headspace analysis using flame ionization detector (OVA)

Laboratory Analyses: Volatiles, semivolatiles, total tritium, ICP-metals, and strontium-90 (Appendix D, DOE Environmental Survey Manual, August 1987; "GC/MS Analysis of Volatiles," p. D-16; "GC/MS Analysis of Semivolatiles," p. D-118; "Determination of Tritium in Solids and Liquids," Procedure No. 14 [will appear in Revised DOE Environmental Survey Manual, Appendix D]; "Determination of Metals by Inductively Coupled Plasma--Atomic Emission Spectrometry," D-266; "Determination of Sr-90 in Water," D-679).

4.0 FIELD SAMPLING GUIDELINES

Those applicable guidelines provided in the March 25, 1988, final draft of the Brookhaven Sampling and Analysis Plan will be used except as identified below.

4.4 FIELD MEASUREMENTS

The following instruments will be used to collect the field data:

pH: An Orion instrument will be used for aqueous readings
OVA: A Foxborough Flame Ionization Organic Vapor Analyzer will be used
Conductance: A Yellow Springs Instruments Meter (YSI) will be used
Temperature: A Yellow Springs Instruments Meter (YSI) will be used.

4.5 SPECIFIC FIELD INSTRUCTIONS

The following are quick-check references for the collection of groundwater and split-spoon samples from the new Brookhaven wells.

Environmental Problem No. 3 -- Upgradient Monitoring Wells

Sample Request: 316

Sample Numbers: BR31601 through BR31604

Media: Groundwater

Sample Type: Grab

Sample Locations: At newly installed groundwater monitoring wells on the west side of Upton Road, one-quarter mile south of north gate

Sampling Procedure: "Sampling with Bucket-Type Bailer," Section E4.4.4.4, DOE Environmental Survey Manual, Appendix E

Number of Samples: 4

Special Equipment: Bailer

Field Measurements: Temperature, Specific Conductance, and pH

Sample Containers, Volumes, and Preservatives:

Aliquot I.D. (9th Character)	Analytical Parameter	Container Volume and Type	Preservative
A, B, C, D	Volatiles	40 ml B-glass vial with Teflon- faced septa	Ref
E, F, G	Semivolatiles	3 x 1000 ml A- Amber glass with Teflon-lined cap	Ref
H	Metals (ICP)	500 ml C-HDPE	HNO ₃ to pH < 2
I	Total Tritium	500 ml C-HDPE	HNO ₃ to pH < 2

Decontamination Procedures: Sampling equipment will be washed with detergent, rinsed with water, rinsed with methanol, and allowed to air dry or rinsed with distilled water

Environmental Problem No. 4 -- BNL Current Landfill

Sample Request: 507
Sample Numbers: BR50701 through BR50708
Media: Groundwater
Sample Type: Grab
Sample Locations: At newly installed groundwater monitoring wells near BNL Current Landfill
Sampling Procedure: "Sampling with Bucket-Type Bailer," Section E4.4.4.4, DOE Environmental Survey Manual, Appendix E
Number of Samples: 8
Special Equipment: Bailer
Field Measurements: Temperature, Specific Conductance, and pH
Sample Containers, Volumes, and Preservatives:

Aliquot I.D. (9th Character)	Analytical Parameter	Container Volume and Type	Preservative
A, B, C, D	Volatiles	40 ml B-glass vial with Teflon- faced septa	Ref
E, F, G	Semivolatiles	3 x 1000 ml A- Amber glass with Teflon-lined cap	Ref
H	Metals (ICP)	500 ml C-HDPE	HNO ₃ to pH < 2
I	Strontium-90	500 ml C-HDPE	HNO ₃ to pH < 2
J	Total Tritium	500 ml C-HDPE	HNO ₃ to pH < 2
K	Plutonium	500 ml C-HDPE	HNO ₃ to pH < 2

Decontamination Procedures: Sampling equipment will be washed with detergent, rinsed with water, rinsed with methanol, and allowed to air dry or rinsed with distilled water

Environmental Problem No. 4 -- BNL Current Landfill

Sample Request: 508
Sample Numbers: BR50801 through BR50810
Media: Subsurface Soil
Sample Type: Split spoon
Sample Locations: At newly installed groundwater monitoring wells near BNL Current Landfill
Sampling Procedure: "Auger or Drive Tube," Section E5.2.3 DOE Environmental Survey Manual, Appendix E
Number of Samples: Maximum of 10
Special Equipment: Split-spoon sampler
Field Measurements: OVA
Sample Containers, Volumes, and Preservatives:

Aliquot I.D. (9th Character)	Analytical Parameter	Container Volume and Type	Preservative
A, B	Volatiles	125 ml glass jar WM, Teflon cap	Ref
C	Semivolatiles	250 ml glass jar WM, Teflon cap	Ref
D	Metals (ICP)	250 ml C-HDPE	Ref
E	Strontium-90	250 ml C-HDPE	None
F	Total Tritium	250 ml C-HDPE	None
G	Plutonium	250 ml C-HDPE	None

Decontamination Procedures: Sampling equipment will be washed with detergent, rinsed with water, rinsed with methanol, and allowed to air dry or rinsed with distilled water

**Environmental Problem No. 10 -- B-975 Bubble Chamber Hazardous Waste
Storage/Disposal Area**

Sample Request: 809

Sample Numbers: BR80901 through BR80908

Media: Groundwater

Sample Type: Grab

Sample Locations: At newly installed groundwater monitoring wells near the Bubble Chamber Area

Sampling Procedure: "Sampling with Bucket-Type Bailer," Section E4.4.4.4, DOE Environmental Survey Manual, Appendix E

Number of Samples: 8

Special Equipment: Bailer

Field Measurements: Temperature, Specific Conductance, and pH

Sample Containers, Volumes, and Preservatives:

Aliquot I.D. (9th Character)	Analytical Parameter	Container Volume and Type	Preservative
A, B, C, D	Volatiles	40 ml B-glass vial with Teflon- faced septa	Ref
E, F, G	Semivolatiles	3 x 1000 ml A- Amber glass with Teflon-lined cap	Ref
H	Metals (ICP)	500 ml C-HDPE	HNO ₃ to pH < 2
I	Strontium-90	500 ml C-HDPE	HNO ₃ to pH < 2
J	Total Tritium	500 ml C-HDPE	HNO ₃ to pH < 2

Decontamination Procedures: Sampling equipment will be washed with detergent, rinsed with water, rinsed with methanol, and allowed to air dry or rinsed with distilled water

Environmental Problem No. 10 -- B-975 Bubble Chamber Hazardous Waste Storage/Disposal Area

Sample Request: 810
Sample Numbers: BR81001 through BR81008
Media: Subsurface Soil
Sample Type: Split spoon
Sample Locations: At newly-installed groundwater monitoring wells near the Bubble Chamber Area
Sampling Procedure: "Auger or Drive Tube," Section E5.2.3 DOE Environmental Survey Manual, Appendix E
Number of Samples: Maximum of 8
Special Equipment: Split-spoon sampler
Field Measurements: OVA
Sample Containers, Volumes, and Preservatives:

Aliquot I.D. (9th Character)	Analytical Parameter	Container Volume and Type	Preservative
A, B	Volatiles	125 ml glass jar WM, Teflon cap	Ref
C	Semivolatiles	250 ml glass jar WM, Teflon cap	Ref
D	Metals (ICP)	250 ml C-HDPE	Ref
E	Strontium-90	250 ml C-HDPE	None
F	Total Tritium	250 ml C-HDPE	None

Decontamination Procedures: Sampling equipment will be washed with detergent, rinsed with water, rinsed with methanol, and allowed to air dry or rinsed with distilled water

TABLE 5-1. SAMPLE CONTAINER TYPES, SAMPLE VOLUMES, PRESERVATION METHOD AND
AND MAXIMUM HOLDING TIMES FOR AQUEOUS SAMPLES

PARAMETER	CONTAINER MATERIAL	CONTAINER CAPACITY	SAMPLE VOLUME	PRESER- VATION	HOLDING TIME	COMMENTS
Volatiles	Glass vial with Teflon-faced Septa (S336-0040)	40 ml	160 ml (4 vials)	Ref	7 days from receipt	No headspace Protect from light Store inverted
Semivolatiles	Glass, amber Teflon-lined cap (349-1000)	1 liter	3 liters (3 vials)	Ref	Extract 5 days Analyze 30 days	Protect from light
Metals (ICP)	HDPE (313-0500 or 319-0500)	500 ml	500 ml	HNO ₃ to pH < 2	6 months	
Strontium-90	HDPE	500 ml	500 ml	HNO ₃ to pH < 2		
Total Tritium	HDPE	500 ml	500 ml	HNO ₃ to pH < 2		
Plutonium	HDPE	500 ml	500 ml	HNO ₃ to pH < 2		

TABLE 5-2. SAMPLE CONTAINER TYPES, SAMPLE VOLUMES, PRESERVATION METHOD AND
AND MAXIMUM HOLDING TIMES FOR SUBSURFACE SOIL SAMPLES

PARAMETER	CONTAINER MATERIAL	CONTAINER CAPACITY	SAMPLE VOLUME	PRESER- VATION	HOLDING TIME	COMMENTS
Volatiles	Glass jar WM, Teflon cap (341-0120 or 320-0125)	125 ml	100 g (2 jars)	Ref	10 days from receipt	Minimum headspace
30 Semivolatiles	Glass jar, WM, Teflon cap. (341-0250 or 320-0250)	250 ml	100 g	Ref	Extract 10 days from receipt, analyze 30 days from receipt	
Metals (ICP)	HDPE Wide Mouth (311-0250)	250 ml	100 g	Ref	6 months	
Strontium-90	HDPE	250 ml	150 g	None		
Total Tritium	HDPE	250 ml	150 g	None		
Plutonium	HDPE	250 ml	150 g	None		