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Formerly Utilized Sites  
Remedial Action Program  
(FUSRAP)

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**Maywood Chemical Company Superfund Site**

**ADMINISTRATIVE RECORD**

**Operable Unit 2 - Groundwater**

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**Document Number**

**GW-002**

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**US Army Corps  
of Engineers®**  
New York District

**Department of Energy**

Field Office, Oak Ridge  
P.O. Box 2001  
Oak Ridge, Tennessee 37831-8723

June 7, 1993

Mr. Jeffrey Gratz  
Federal Facilities Section  
U. S. Environmental Protection Agency,  
Region II  
26 Federal Plaza  
Jacob K. Javits Federal Building  
New York, New York 10278

Dear Mr. Gratz:

**MAYWOOD SITE - RESULTS OF THE WESTERLY BROOK SAMPLING EVENT**

The purpose of this letter is to transmit the results of the Westerly Brook sampling effort which was conducted in support of the Maywood site remedial investigation. This information will be placed in the administrative record file in July 1993. If you have any comments, please submit them before this time.

Please contact me at (615) 576-5724 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Susan M. Cange".

Susan M. Cange, Site Manager  
Former Sites Restoration Division

Enclosure

## WESTERLY BROOK CHANNEL BANK AND SADDLE RIVER CORE SAMPLING RESULTS

### INTRODUCTION

Soil and sediment samples were collected along Westerly Brook and in the immediate area of its confluence with the Saddle River to determine whether contaminants defined as FUSRAP wastes by the Maywood site federal facilities agreement (Section 1.0 in the Remedial Investigation Report for the Maywood Site, BNI 1992) have been transported to and deposited in these areas. Sample collection and subsequent analyses were performed as described in the "Addendum to the Maywood Site Field Sampling Plan for Westerly Brook/Saddle River" (DOE 1992). This plan delineates the need to perform radiological field screening and sample collection along the banks of Westerly Brook and in the Saddle River floodplain to determine whether deposition of contaminants associated with thorium and lithium processing has occurred. Sampling results are necessary to fully analyze the risks to aquatic receptors in the Westerly Brook and Saddle River areas.

Results of surface water and sediment monitoring conducted in the brook and river since 1984 indicate that radionuclides are not currently being transported from the Maywood Interim Storage Site (MISS) via this pathway. However, low concentrations of lithium, carbon tetrachloride, 1,2-dichloroethene, trichloroethene, and tetrachloroethene have been detected in surface water samples collected downstream of MISS. It has not been established that these organics are originating on MISS.

Samples were analyzed for uranium-238, thorium-232, radium-226, Target Compound List (TCL) compounds, Target Analyte List (TAL) metals, lanthanides, and lithium. To determine contaminant contribution from MISS to surface water and sediment, downstream sampling results are compared with upstream sample results. All sample results were also compared to MISS onsite and representative baseline soil sampling results obtained during remedial investigation work for the Maywood site. The baseline soil samples were collected from three recreational parks in the Maywood area. For informational purposes, comparisons were also made with the New Jersey

Department of Environmental Protection and Energy (NJDEPE) "Cleanup Standards for Contaminated Sites, Proposed New Rules" for residential surface and subsurface soil standards.

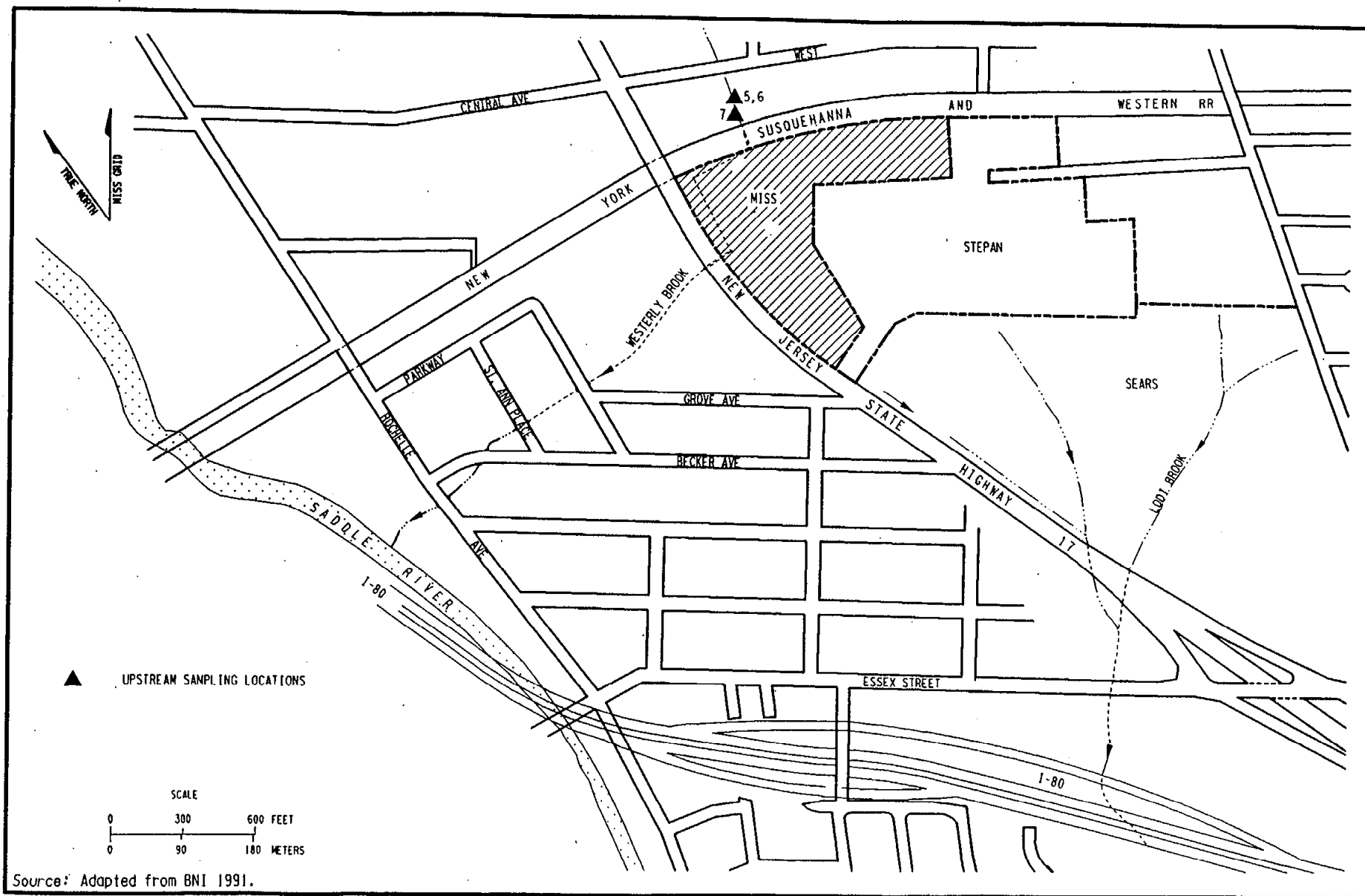
## 1.0 SITE DESCRIPTION

Westerly Brook drains an area of approximately 1 km<sup>2</sup> (0.4 mi<sup>2</sup>) in Maywood and Rochelle Park. The brook begins as a natural channel in Maywood and flows southward for approximately 975 m (3,200 ft) in an open channel (upstream of MISS). North of the site, the brook enters a culvert that conducts the flow for 585 m (1,920 ft) beneath MISS. West of the site, the culvert extends approximately 300 m (1,000 ft) before the brook becomes an open channel again, west of St. Ann Place in Rochelle Park. The brook then flows west for approximately 230 m (750 ft) as an open channel before discharging into the Saddle River (Figure 1).

The open channel downstream of MISS is approximately 4 m (12 ft) wide, basically straight, and contains very little sediment. The banks of the channel are approximately 3 m (10 ft) high, steep, and lined with rock walls from the culvert discharge at St. Ann Place to a point 9 m (30 ft) downstream of the Becker Avenue bridge. From this point to the brook's confluence with the Saddle River, the channel has not been altered and exists in its natural state.

The Saddle River is approximately 30 m (100 ft) wide at its confluence with Westerly Brook. The Saddle River drainage area above this point is approximately 130 km<sup>2</sup> (50 mi<sup>2</sup>). The long-term average flow of the Saddle River is 2.83 m<sup>3</sup>/sec (100 cfs).

In the 1960s, the Saddle River channel reach between the New York Susquehanna and Western Railroad and Essex Street was altered by the construction of Interstate 80. Prior to the construction, the Saddle River had a meandering channel, however, the channel was straightened by the construction activities, and most of the old channel was covered with fill.



138F069.DGN F3

FIGURE 1

## **2.0 Sampling Locations and Methods**

### **2.1 Westerly Brook**

Soil sampling and radiological surface surveys were conducted at five locations in Westerly Brook (Figures 1 and 2). Cross-sections of the channel banks were surveyed with both a Fidler and a SPA-3 to detect sediment depositional zones exhibiting radioactivity above background. Survey results showed no significant differences over the cross-sections and identified no areas emitting radiation above background.

Because survey results gave no indication of depositional zones contaminated by radionuclides, soil sampling locations were arbitrarily chosen near the bottom of the channel banks at a height approximating the water level during an average storm event. The samples were collected at a depth of 0 to 8 cm (0 to 3 ins).

### **2.2 Saddle River**

Ideally, sampling locations would have been selected to target depositional zones on both sides of the old Saddle River channel downstream of the Westerly Brook confluence. Because the channel was completely altered by construction of Interstate 80, resulting in the placement of fill dirt over the depositional zones on the west side of the river, core samples were collected from only the east side of the river channel below the confluence with Westerly Brook.

Three core samples were collected along a cross-section 5 m (16 feet) downstream of the Westerly Brook confluence with the Saddle River (Figure 2). Core A was taken from the elevated floodplain approximately 3 m (10 ft) from the water's edge. Core B was taken at the water's edge, and core C was taken from within the river approximately 4.6 m (15 ft) from the water's edge. The sampling device was driven to refusal, yielding 1-m (3-ft) cores from locations A and B and a 0.5-m (1.5-ft) core at location C.

The core samples were surveyed with both a Fidler and a SPA-3 to detect contaminated intervals. No activity significantly above background was detected in the samples. However, because the bottom 0.3-m (1-ft) interval of

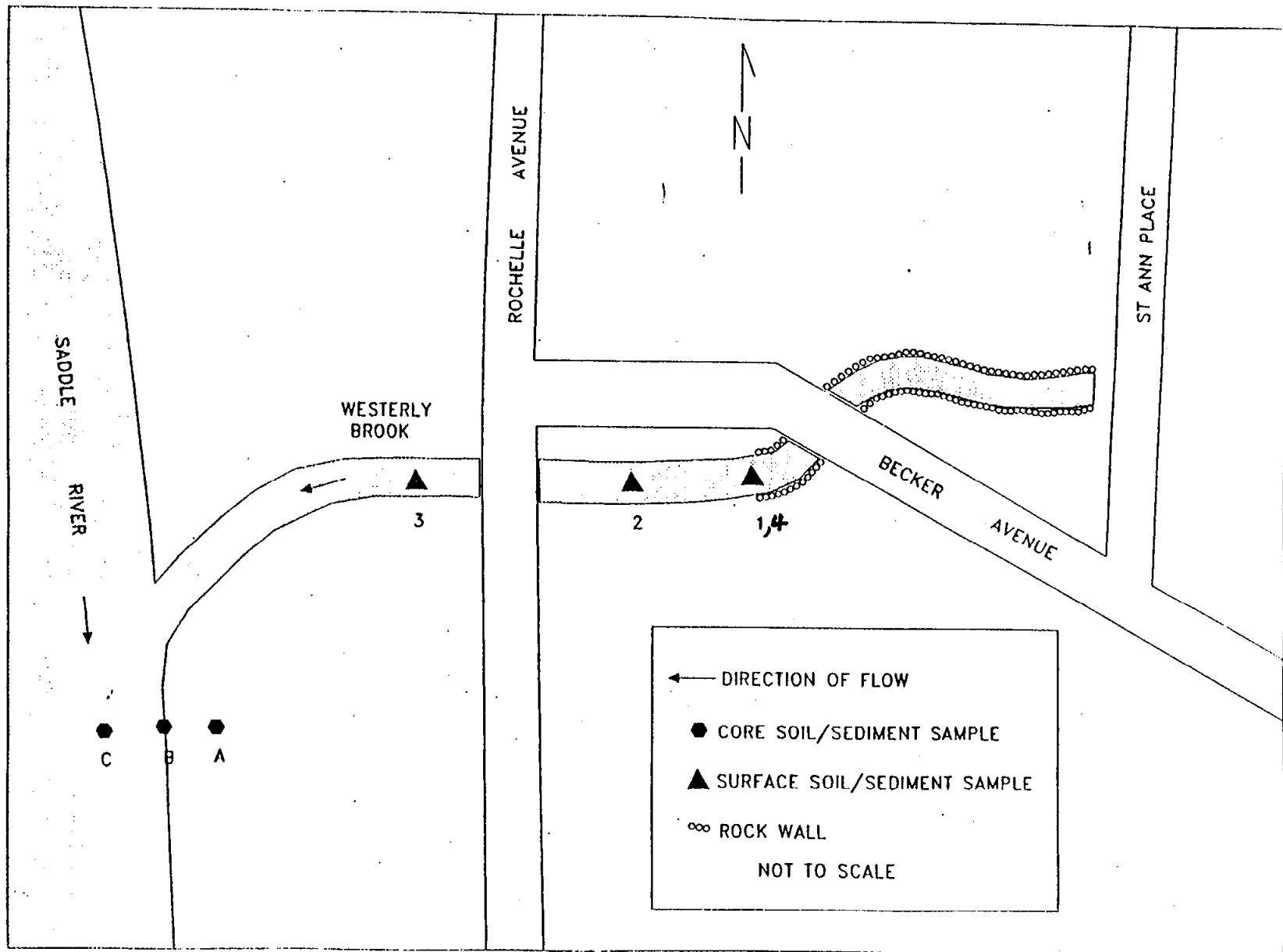


FIGURE 2  
 WESTERLY BROOK/SADDLE RIVER SEDIMENT SAMPLE LOCATIONS

each core exhibited slightly higher survey readings (approximately 10 cpm when surveyed with the SPA-3), the lower portion of the core was selected as the sample to be analyzed for the various radiological and chemical parameters.

### **3.0 Evaluation of Radiological Contaminants**

As can be seen in Table 1, results of the radiological analyses performed on the Westerly Brook and Saddle River core samples are at or near the analytical detection limits in most cases. Results for radium-226 and thorium-232 were all well below FUSRAP guidelines of 5p Ci/g for surface soil [less than 15 cm (6 in) deep] and 15 pCi/g for subsurface soil [15 cm (6 in) deep or greater].

The absence of radiological contamination indicates that sediment originating at the Maywood site has not been deposited along the banks of Westerly Brook or in the Saddle River. Radiological contaminants tend to be tightly bound to sediment particles and, therefore would have been transported with sediment migrating from the site and would be evident downstream.

### **4.0 Evaluation of Chemical Contaminants**

Samples for chemical analyses were collected from the same locations as those for radiological analyses. The samples were analyzed for volatile organic compounds (VOCs), base/neutral and acid extractable compounds (BNAEs), pesticides, polychlorinated biphenyls (PCBs), target analyte list (TAL) metals, and lanthanides.

**Volatile Organic Compounds.** Analyses for VOCs detected the presence of acetone in sample B (23  $\mu\text{g}/\text{kg}$ ) and C (38  $\mu\text{g}/\text{kg}$ ) from the Saddle River (see Figure 2). These concentrations are low and well below the NJDEPE proposed standard of 50 mg/kg. No other VOCs were detected. The absence of acetone in Westerly Brook soil samples, routine environmental monitoring surface water samples, or MISS onsite soil samples further indicates a source other than MISS.

**Base/Neutral Acid and Extractable Compounds.** Table 2 presents the analytical results for base/neutral and acid extractable compounds (BNAEs).



Table 1  
 Concentrations<sup>a</sup> of Uranium-238, Radium-226,  
 and Thorium-232 in Westerly Brook Channel  
 Bank and Saddle River Core Samples

Sampling <sup>b</sup> Location	Concentration (pCi/g)	Validation Qualifier	Laboratory Qualifier	Minimum <sup>c</sup> Detectable Activity (pCi/g)
<b>Uranium-238</b>				
138WB1	3.40	UJ <sup>e,f</sup>	U	3.40
138WB2	3.20	UJ	U	3.20
138WB3	5.40	UJ	U	5.40
138WB4 <sup>d</sup>	3.50	UJ	U	3.50
138SRA	7.00	UJ	U	7.00
138SRB	5.70	UJ	U	5.70
138SRC	4.10	UJ	U	4.10
<b>Radium-226</b>				
138WB1	0.68	UJ	U	0.68
138WB2	0.52	UJ	U	0.42
138WB3	1.00	UJ	U	1.00
138WB4 <sup>d</sup>	0.66	UJ	U	0.66
138SRA	1.20	UJ	U	0.73
138SRB	0.90	UJ	U	0.71
138SRC	0.91	UJ	U	0.86
<b>Thorium-232</b>				
138WB1	0.91	UJ	U	0.91
138WB2	0.72	UJ	U	0.38
138WB3	1.40	UJ	U	1.40
138WB4 <sup>d</sup>	0.87	UJ	U	0.87
138SRA	2.60	UJ	U	0.66
128SRB	1.20	UJ	U	0.65
138SRC	0.94	UJ	U	0.78

<sup>a</sup>Concentrations given in pCi/g.

<sup>b</sup>Sampling locations are shown in Figures 1 and 2.

<sup>c</sup>Minimum detectable activity varies with counting time, detector efficiencies, and sample composition.

<sup>d</sup>Sample 4 is a field duplicate for 1.

<sup>e</sup>Result below detection limit.

<sup>f</sup>Estimated result.

**Table 2**  
**BNAE Compounds Detected in Westerly Brook Channel Bank and**  
**Saddle River Core Samples**

Page 1 of 5

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Standards Depth (mg/kg) <sup>c</sup>	
						Minimum	Maximum	<2 ft	>2 ft
138SRC	ACENAPHTHENE	3.80		=	2.40	0.39 U	2.2 U	3,400	100
138 W 5	ANTHRACENE	0.41		=	0.40				
138 W 7	ANTHRACENE	0.78		=	0.47	0.39 U	2.2 U	10,000	500
138SRC	ANTHRACENE	4.00		=	2.40				
138 W 5	BENZO(A)ANTHRACENE	1.00		=	0.40				
138 W 6 <sup>d</sup>	BENZO(A)ANTHRACENE	0.73		=	0.42				
138 W 7	BENZO(A)ANTHRACENE	1.70		=	0.47				
138WB1	BENZO(A)ANTHRACENE	2.70		=	2.10				
138WB2	BENZO(A)ANTHRACENE	0.47		=	0.40				
138WB3	BENZO(A)ANTHRACENE	3.30		=	2.30	0.077 J	2.2 U	0.66	500
138WB4 <sup>e</sup>	BENZO(A)ANTHRACENE	2.40		=	2.10				
138SRA	BENZO(A)ANTHRACENE	2.70	J	=	0.88				
138SRB	BENZO(A)ANTHRACENE	5.10		=	2.10				
138SRC	BENZO(A)ANTHRACENE	12.00		=	2.40				
138 W 5	BENZO(A)PYRENE	0.95		=	0.40				
138 W 6 <sup>d</sup>	BENZO(A)PYRENE	0.44		=	0.42				
138 W 7	BENZO(A)PYRENE	1.60		=	0.47				
138WB2	BENZO(A)PYRENE	0.46		=	0.40	0.068 J	2.2 U	0.66	100
138WB3	BENZO(A)PYRENE	3.30		=	2.30				
138SRA	BENZO(A)PYRENE	2.50	J	=	0.88				
138SRB	BENZO(A)PYRENE	3.70		=	2.10				
138SRC	BENZO(A)PYRENE	10.00		=	2.40				

Table 2  
(continued)

Page 2 of 5

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Standards Depth (mg/kg) <sup>c</sup>	
						Minimum	Maximum	<2 ft	>2 ft
138 W 5	BENZO(B)FLUORANTHENE	0.77		=	0.40				
138 W 6 <sup>d</sup>	BENZO(B)FLUORANTHENE	0.51		=	0.42				
138 W 7	BENZO(B)FLUORANTHENE	1.30		=	0.47				
138WB1	BENZO(B)FLUORANTHENE	2.20		=	2.10				
138WB2	BENZO(B)FLUORANTHENE	0.47		=	0.40				
138WB3	BENZO(B)FLUORANTHENE	4.50		=	2.30	0.064 J	2.2 U	0.66	500
138WB4 <sup>e</sup>	BENZO(B)FLUORANTHENE	2.90		=	2.10				
138SRA	BENZO(B)FLUORANTHENE	2.80	J	=	0.88				
138SRB	BENZO(B)FLUORANTHENE	4.00		=	2.10				
138SRC	BENZO(B)FLUORANTHENE	10.00		=	2.40				
138 W 5	BENZO(G,H,I)PERYLENE	0.61		=	0.40	0.39 U	2.2 U	0.66	500
138 W 7	BENZO(G,H,I)PERYLENE	0.98		=	0.47				
138 W 5	BENZO(K)FLUORANTHENE	0.82		=	0.40				
138 W 6 <sup>d</sup>	BENZO(K)FLUORANTHENE	0.59		=	0.42				
138 W 7	BENZO(K)FLUORANTHENE	1.50		=	0.47				
138WB2	BENZO(K)FLUORANTHENE	0.61		=	0.40				
138WB3	BENZO(K)FLUORANTHENE	3.50		=	2.30	0.67 J	2.2 U	0.66	500
138WB4 <sup>e</sup>	BENZO(K)FLUORANTHENE	2.20		=	2.10				
138SRA	BENZO(K)FLUORANTHENE	2.70	J	=	0.88				
138SRB	BENZO(K)FLUORANTHENE	3.20		=	2.10				
138SRC	BENZO(K)FLUORANTHENE	8.20		=	2.40				

Table 2  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Standards Depth (mg/kg) <sup>c</sup>	
						Minimum	Maximum	<2 ft	>2 ft
138 W 5	BIS(2-ETHYLHEXYL)PHTHALATE	2.10		=	0.40				
138 W 6 <sup>d</sup>	BIS(2-ETHYLHEXYL)PHTHALATE	0.43		=	0.42				
138 W 7	BIS(2-ETHYLHEXYL)PHTHALATE	2.30		=	0.47	0.046 J	2.2 U	49	100
138WB3	BIS(2-ETHYLHEXYL)PHTHALATE	8.30		=	2.30				
138WB4 <sup>e</sup>	BIS(2-ETHYLHEXYL)PHTHALATE	2.70		=	2.10				
138 W 5	BUTYLBENZYLPHthalATE	2.00		=	0.40	0.39 U	2.2 U	10,000	100
138 W 5	CHRYSENE	1.20		=	0.40				
138 W 6 <sup>d</sup>	CHRYSENE	0.81		=	0.42				
138 W 7	CHRYSENE	2.10		=	0.47				
138WB1	CHRYSENE	2.30		=	2.10				
138WB2	CHRYSENE	0.58		=	0.40	0.041 J	2.2 U	0.66	500
138WB3	CHRYSENE	4.00		=	2.30				
138WB4 <sup>e</sup>	CHRYSENE	2.50		=	2.10				
138SRA	CHRYSENE	2.90	J	=	0.88				
138SRB	CHRYSENE	4.80		=	2.10				
138SRC	CHRYSENE	13.00		=	2.40				
138 W 5	FLUORANTHENE	2.40		=	0.40				
138 W 6 <sup>d</sup>	FLUORANTHENE	1.90		=	0.42				
138 W 7	FLUORANTHENE	4.50		=	0.47				
138WB1	FLUORANTHENE	5.90		=	2.10				
138WB2	FLUORANTHENE	1.20		=	0.40	0.059 J	2.2 U	2,300	500
138WB3	FLUORANTHENE	9.30		=	2.30				
138WB4 <sup>e</sup>	FLUORANTHENE	6.00		=	2.10				
138SRA	FLUORANTHENE	6.60	J	=	0.88				

Table 2  
(continued)

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Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Standards Depth (mg/kg) <sup>c</sup>	
						Minimum	Maximum	<2 ft	>2 ft
138SRB	FLUORANTHENE	14.00		=	2.10				
138SRC	FLUORANTHENE	31.00		=	2.40				
138SRC	FLUORENE	4.30		=	2.40	0.39 U	2.2 U	2,300	100
138 W 5	INDENO(1,2,3-CD)PYRENE	0.52		=	0.40				
138 W 7	INDENO(1,2,3-CD)PYRENE	0.88		=	0.47				
138SRA	INDENO(1,2,3-CD)PYRENE	0.93	J	=	0.88	0.39 U	2.2 U	0.66	500
138SRB	INDENO(1,2,3-CD)PYRENE	2.30		=	2.10				
138SRC	INDENO(1,2,3-CD)PYRENE	3.10		=	2.40				
138 W 5	PHENANTHRENE	1.60		=	0.40				
138 W 6 <sup>d</sup>	PHENANTHRENE	1.40		=	0.42				
138 W 7	PHENANTHRENE	3.20		=	0.47				
138WB1	PHENANTHRENE	3.80		=	2.10				
138WB2	PHENANTHRENE	0.84		=	0.40				
138WB3	PHENANTHRENE	5.50		=	2.30	0.39 U	2.2 U	NA	NA
138WB4 <sup>e</sup>	PHENANTHRENE	3.20		=	2.10				
138SRA	PHENANTHRENE	4.30	J	=	0.88				
138SRB	PHENANTHRENE	9.80		=	2.10				
138SRC	PHENANTHRENE	26.00		=	2.40				

Table 2  
(continued)

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Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Standards Depth (mg/kg) <sup>c</sup>	
						Minimum	Maximum	<2 ft	>2 ft
138 W 5	PYRENE	2.20		=	0.40				
138 W 6 <sup>d</sup>	PYRENE	1.50		=	0.42				
138 W 7	PYRENE	3.60		=	0.47				
138WB1	PYRENE	4.00		=	2.10				
138WB2	PYRENE	1.00		=	0.40				
138WB3	PYRENE	5.60		=	2.30	NA	NA	1,700	500
138WB4 <sup>e</sup>	PYRENE	4.10		=	2.10				
138SRA	PYRENE	5.10	J	=	0.88				
138SRB	PYRENE	10.00		=	2.10				
138SRC	PYRENE	19.00		=	2.40				

<sup>a</sup>Sampling locations are shown in Figures 1 and 2. Locations 5, 6, and 7 are on Westerly Brook, upstream of MISS.

<sup>b</sup>Analytical results for soil samples from local parks (BNI 1992).

<sup>c</sup>From the New Jersey Department of Environmental Protection and Energy's "Cleanup Standards for Contaminated Sites, Proposed New Rules."

<sup>d</sup>Sample 6 is a field duplicate for 5.

<sup>e</sup>Sample 4 is a field duplicate for 1.

Analytical results indicate that although the 15 BNAEs detected in the brook and river samples were also detected in MISS soil samples, the site's contribution to downstream BNAE concentrations is probably small or negligible, and the presence of the compounds is primarily a result of the industrialized nature of the area, the high population density, and litter observed in Westerly Brook and the Saddle River. The following observations support this hypothesis:

- o The BNAEs found in MISS onsite soil samples were detected infrequently; none were detected above mean background soil concentrations in more than 15 percent of the samples analyzed.
- o BNAEs have not been detected in environmental monitoring surface water samples taken downstream of MISS.
- o Eleven of the 15 compounds detected in the study samples were detected in upstream as well as downstream samples. Two of the remaining four compounds were detected only in an upstream sample, and two were detected only in a sample from the Saddle River.
- o NJDEPE has proposed soil standards for 13 of the 15 BNAEs detected. Benzo(A)anthracene, benzo(A)pyrene, benzo(G,H,I)perylene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene were detected at concentrations above the proposed standards in upstream samples. These same BNAEs, except benzo(G,H,I)perylene, were also detected at concentrations above the proposed standards in downstream samples.
- o Visual inspections of Westerly Brook and the Saddle River revealed an abundance of litter ranging from recently deposited paper, plastics, and fabrics to automotive oil filters, scrapped parts, and building materials. Much of the debris is partially or mostly

buried in sediments, indicating that littering in the brook and river has been taking place for a long time.

It should be noted that when a given BNAE was detected at all three sampling locations, the maximum concentrations detected in downstream samples from Westerly Brook were approximately twice those detected in upstream samples. Furthermore, concentrations in samples from the Saddle River were generally 2 to 3 times higher than concentrations in downstream samples from Westerly Brook. Possible explanations for the increasing concentrations downstream include:

- o The variable nature of sampling results when a heterogeneous medium is sampled at a few sampling locations.
- o Proximity to local sources of contamination present within or draining into the brook and river.

BNAE contamination of the soil and sediment is probably common throughout the area resulting from the long-time high population density and the industrial businesses in the area. If Westerly Brook were the only contributor of BNAEs to the river, concentrations of BNAEs would be expected to be significantly lower in the river than in the brook because of dilution in the larger volume of water. The concentrations increase, however, which suggests sources other than Westerly Brook.

**Pesticides and PCBs.** Analytical results for pesticides and PCBs are presented in Table 3. The results indicate that pesticides are not migrating from MISS. The only pesticide detected was 4,4'-DDD in samples B (0.067 mg/kg) and C (0.220 mg/kg) from the Saddle River. These concentrations are well below the NJDEPE proposed standard of 100 mg/kg for subsurface soil. The absence of pesticides in Westerly Brook samples indicates that the source is upstream in the Saddle River watershed.

The PCB arochlor-1254 was detected in all upstream and downstream samples from Westerly Brook and in sample A from the Saddle River (see Figure 2). Results for all of the Westerly Brook samples were above the NJDEPE



**Table 3**  
**Pesticides and PCBs Detected in Westerly Brook Channel Bank and**  
**Saddle River Core Samples**

Sample ID <sup>c</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Standards Depth (mg/kg) <sup>c</sup>	
						Minimum	Maximum	<2 ft	>2 ft
138SRB	4,4'-DDD	0.06		=	0.04	0.009 U	0.052 U	3	100
138SRC	4,4'-DDD	0.22		=	0.12				
138 W 5	AROCHLOR-1254	3.70		=	1.90				
138 W 6 <sup>d</sup>	AROCHLOR-1254	1.70		=	0.99				
138 W 7	AROCHLOR-1254	13.00		=	11.00				
138WB1	AROCHLOR-1254	15.00		=	10.00	0.092 U	0.52 U	0.45	100
138WB2	AROCHLOR-1254	2.50		=	2.00				
138WB3	AROCHLOR-1254	18.00		=	11.00				
138WB4 <sup>e</sup>	AROCHLOR-1254	15.00		=	10.00				
138SRA	AROCHLOR-1254	1.00	J	=	0.86				

<sup>a</sup>Sampling locations are shown in Figures 1 and 2. Locations 5, 6, and 7 are on Westerly Brook, upstream of MISS.

<sup>b</sup>Analytical results for soil samples from local parks (BNI 1992).

<sup>c</sup>From the New Jersey Department of Environmental Protection and Energy's "Cleanup Standards for Contaminated Sites, Proposed New Rules."

<sup>d</sup>Sample 6 is a field duplicate for 5.

<sup>e</sup>Sample 4 is a field duplicate for 1.

proposed soil standard of 0.45 mg/kg; however, because PCBs have not been detected in soil samples from MISS and the maximum upstream and downstream sampling results for Westerly Brook (13 and 18 mg/kg, respectively) are similar, it can be concluded that MISS is not contributing PCBs to downstream soils or sediments.

**Metals.** Most of the 26 metals analyzed for are natural components of the earth's crust and commonly detected in soils and sediments. In an effort to focus on metals that may have migrated from MISS, only metals known to be constituents of thorium and lithium process wastes are discussed. Analytical results for these metals (arsenic, cobalt, copper, lead, lithium, nickel, selenium, and vanadium) are presented in Table 4. Table A-3 presents a complete list of analytical results for metals.

Analytical results for metals indicate that activities at MISS have had no discernable effect on metal concentrations in soil and sediment in Westerly Brook and the Saddle River. In all samples, concentrations of cobalt, nickel, selenium, vanadium, arsenic, and lithium are comparable to background concentrations and are below proposed NJDEPE standards. Analytical results of surface water and sediment samples collected from Westerly Brook in support of MISS environmental monitoring and remedial investigation work indicate the presence of low concentrations of lithium (less than 1 mg/L) in the surface water downstream of the site. Analysis of filtered surface water samples demonstrated that the lithium is primarily in solution. This finding correlates well with the absence of lithium in past environmental monitoring sediment samples the bank and core samples collected for this study. Apparently low concentrations of lithium leaving the site are being carried via surface water to the Saddle River where the lithium becomes very dilute and remains in solution.

Concentrations of copper are above background concentrations but are highest in an upstream sample, indicating a source other than MISS. Most samples (upstream and downstream) also contain lead at concentrations above background. All of the downstream samples and one upstream sample contain concentrations of lead greater than the NJDEPE proposed standards. The

**Table 4**  
**Analytical Results for Arsenic, Cobalt, Copper, Lead, Lithium, Nickel, Selenium, and Vanadium**  
**in Westerly Brook Channel Bank and Saddle River Core Samples**

Page 1 of 4

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Std. (mg/kg)
						Minimum	Maximum	
138 W 5	Arsenic	2.80		=	0.48			
138 W 6 <sup>d</sup>	Arsenic	2.00		=	0.51			
138 W 7	Arsenic	7.70		=	0.57			
138WB1	Arsenic	8.50	J	=	0.40			
138WB2	Arsenic	7.90	J	=	0.36	1.5 B	7.1	20
138WB3	Arsenic	9.40	J	=	0.50			
138WB4 <sup>e</sup>	Arsenic	7.50	J	=	0.44			
138SRA	Arsenic	8.10	J	=	0.53			
138SRB	Arsenic	3.50	J	=	0.41			
138SRC	Arsenic	6.40	J	=	0.56			
138 W 5	Cobalt	4.00		=	1.90			
138 W 6 <sup>d</sup>	Cobalt	9.70		=	2.00			
138 W 7	Cobalt	4.80		=	2.30			
138WB1	Cobalt	3.60		B	2.10			
138WB2	Cobalt	3.90		B	1.60	3.3 B	9.9 B	NA
138WB3	Cobalt	5.10		B	2.40			
138WB4 <sup>e</sup>	Cobalt	4.00		B	2.10			
138SRA	Cobalt	6.10		B	2.40			
138SRB	Cobalt	14.00		B	2.10			
138SRC	Cobalt	4.10		=	2.50			
138 W 5	Copper	43.90		=	2.20			
138 W 6 <sup>d</sup>	Copper	113.00		=	2.30			
138 W 7	Copper	55.70		=	2.60			

**Table 4**  
(continued)

Page 2 of 4

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Std. (mg/kg)
						Minimum	Maximum	
138WB1	Copper	40.70		=	1.90			
138WB2	Copper	21.90		=	1.40	8.1	28.2	600
138WB3	Copper	65.40		=	2.10			
138WB4 <sup>e</sup>	Copper	43.50		=	1.80			
138SRA	Copper	42.70		=	2.10			
138SRB	Copper	107.00		=	1.90			
138SRC	Copper	67.70		B	2.20			
138 W 5	Lead	83.50		=	24.20			
138 W 6 <sup>d</sup>	Lead	89.70		=	25.30			
138 W 7	Lead	142.00		=	56.80			
138WB1	Lead	324.00		=	0.40			
138WB2	Lead	104.00		=	7.10	10.7 U	89.8 J	100
138WB3	Lead	252.00		=	50.50			
138WB4 <sup>e</sup>	Lead	353.00		=	17.50			
138SRA	Lead	235.00		=	53.50			
138SRB	Lead	117.00		=	0.41			
138SRC	Lead	535.00		=	55.70			
138 W 5	Lithium	7.00		U	7.00			
138 W 6 <sup>d</sup>	Lithium	7.30		U	7.30			
138 W 7	Lithium	8.20		U	8.20			
138WB1	Lithium	6.90		U	6.90			
138WB2	Lithium	5.00		U	5.00	22.6 U	24.6 U	NA
138WB3	Lithium	7.70		U	7.70			
138WB4 <sup>e</sup>	Lithium	6.70		U	6.70			

**Table 4**  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Std. (mg/kg)
						Minimum	Maximum	
138SRA	Lithium	28.80		=	7.80			
138SRB	Lithium	36.10		=	29.00			
138SRC	Lithium	8.10		U	8.10			
138 W 5	Nickel	12.50		=	4.60			
138 W 6 <sup>d</sup>	Nickel	19.10		=	4.80			
138 W 7	Nickel	16.10		=	5.40			
138WB1	Nickel	8.30		B	4.80			
138WB2	Nickel	4.50		B	3.50	5.6 B	10.2	250
138WB3	Nickel	13.30		=	5.30			
138WB4 <sup>e</sup>	Nickel	8.60		B	4.60			
138SRA	Nickel	9.90		B	5.30			
138SRB	Nickel	29.00		B	4.70			
138SRC	Nickel	9.40		B	5.60			
138 W 5	Selenium	0.53	J	=	0.48			
138 W 6 <sup>d</sup>	Selenium	0.51	UJ	U	0.51			
138 W 7	Selenium	0.57	UJ	U	0.57			
138WB1	Selenium	0.40	UJ	U	0.40			
138WB2	Selenium	0.36		U	0.36	0.41 UJ	0.49 UJ	1
138WB3	Selenium	0.50	UJ	U	0.50			
138WB4 <sup>e</sup>	Selenium	0.44		U	0.44			
138SRA	Selenium	0.64	J	B	0.53			
138SRB	Selenium	0.41		U	0.41			
138SRC	Selenium	0.59	J	B	0.56			

**Table 4**  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>		NJDEPE Proposed Std. (mg/kg)
						Minimum	Maximum	
138 W 5	Vanadium	9.30		=	1.70			
138 W 6 <sup>d</sup>	Vanadium	7.70		=	1.80			
138 W 7	Vanadium	10.80		=	2.00			
138WB1	Vanadium	9.90		B	1.90			
138WB2	Vanadium	15.60		=	1.40	7.2 B	31.3	380
138WB3	Vanadium	14.00		=	2.10			
138WB4 <sup>e</sup>	Vanadium	14.90		=	1.80			
138SRA	Vanadium	16.90		=	2.10			
138SRB	Vanadium	42.40		B	1.90			
138SRC	Vanadium	16.30		=	2.20			

<sup>a</sup>Sampling locations are shown in Figures 1 and 2. Locations 5, 6, and 7 are on Westerly Brook, upstream of MISS.

<sup>b</sup>Analytical result for soil samples from local parks (BNI 1992).

<sup>c</sup>From the New Jersey Department of Environmental Protection and Energy's "Cleanup Standards for Contaminated Sites, Proposed New Rules."

<sup>d</sup>Sample 6 is a field duplicate for 5.

<sup>e</sup>Sample 4 is a field duplicate for 1.

following observations indicate that there are likely many contributing sources (other than activities at MISS) that are primarily responsible for the lead present in the brook and river soils and sediments:

- o Lead was detected consistently above background in upstream as well as downstream samples.
- o Visual inspection of the brook and river revealed large quantities of discarded metal, including pipes and oil filters (some possibly containing lead).
- o The brook and river drain an area that has been densely populated with industries, people, and automobiles (burning leaded gasoline) for decades.

**Lanthanides.** Analyses for lanthanides were performed because lanthanides are known to be common constituents of the monazite sands processed by the former Maywood Chemical Works. Lanthanides detected are presented in Table 5. Concentrations of lanthanides detected in background soil samples collected for the Maywood site remedial investigation have also been included for comparison. Analytical results indicate that lanthanides have not migrated from MISS to the soils and sediments in Westerly Brook and the Saddle River. Concentrations of the 8 lanthanides detected are all low and approximately equal to or less than the maximum concentrations measured in the background soil samples.

#### **Conclusion**

The data resulting from this sampling event suggest that radionuclides and chemicals currently or historically present on MISS have not discernably accumulated in soils and sediments in Westerly Brook or the Saddle River. Supporting this conclusion is the fact that analytes of interest were either not detected at all in the study and/or onsite samples, they were detected in the study samples at concentrations comparable to background concentrations, or they were detected above background concentrations in both upstream and downstream samples.

Table 5

## Lanthanides Detected in Westerly Brook Channel Bank and Saddle River Core Samples

Page 1 of 2

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>	
						Minimum	Maximum
138WB2	Cerium	31.90	J	=	21.00		
138WB4 <sup>c</sup>	Cerium	35.60	J	=	27.90		
138SRA	Cerium	65.60	J	=	32.30	45.3	49.5
138SRB	Cerium	128.00	J	=	121.00		
138SRC	Cerium	37.60	J	=	33.90		
138 W 5	Erbium	23.70		=	1.70		
138 W 6 <sup>d</sup>	Erbium	19.90		=	1.80		
138 W 7	Erbium	28.40		=	2.00		
138WB1	Erbium	32.60		=	2.00		
138WB2	Erbium	47.00		=	1.50	206	785
138WB3	Erbium	43.10		=	2.20		
138WB4 <sup>c</sup>	Erbium	79.30		=	1.90		
138SRA	Erbium	55.10		=	2.20		
138SRB	Erbium	118.00		=	8.40		
138SRC	Erbium	41.40		=	2.40		
138 W 6 <sup>d</sup>	Gadolinium	5.90		=	3.80		
138WB2	Gadolinium	3.90		=	3.20		
138WB4 <sup>c</sup>	Gadolinium	5.30		=	4.20	45.3 U	49.1 U
138SRA	Gadolinium	8.20		=	4.90		
138SRB	Gadolinium	23.90		=	18.20		
138SRC	Gadolinium	5.30		=	5.10		
138WB2	Lanthanum	5.10	J	=	4.70		
138SRA	Lanthanum	24.10	J	=	7.20	45.3 U	49.1 U
138SRC	Lanthanum	8.40	J	=	7.60		



**Table 5**  
(continued)

Page 2 of 2

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit	Representative Baseline Results (mg/kg) <sup>b</sup>	
						Minimum	Maximum
138WB1	Neodymium	16.40		=	14.30		
138WB2	Neodymium	19.20		=	10.40		
138WB4 <sup>c</sup>	Neodymium	20.50		=	13.80	45.3 U	49.1 U
138SRA	Neodymium	45.50		=	16.00		
138SRB	Neodymium	71.10		=	60.00		
138SRC	Neodymium	28.60		=	16.80		
138WB1	Thulium	185.00		=	4.40		
138WB2	Thulium	286.00		=	3.20		
138WB3	Thulium	280.00		=	4.90	201	750
138WB4 <sup>c</sup>	Thulium	483.00		=	4.30		
138SRA	Thulium	326.00		=	4.90		
138SRB	Thulium	633.00		=	18.50		
138WB1	Ytterbium	0.50		=	0.36		
138WB2	Ytterbium	0.59		=	0.26		
138WB3	Ytterbium	0.75		=	0.40	45.3 U	49.1 U
138WB4 <sup>c</sup>	Ytterbium	0.65		=	0.35		
138SRA	Ytterbium	0.56		=	0.40		
138SRA	Praseodymium	11.80		=	9.40	45.3 U	49.1 UJ

<sup>a</sup>Sampling locations are shown in Figures 1 and 2. Locations 5, 6, and 7, are on Westerly brook, upstream of MISS.

<sup>b</sup>Analytical results for soil samples from local parks (BNI 1992).

<sup>c</sup>Sample 4 is a field duplicate for 1.

<sup>d</sup>Sample 6 is a field duplicate for 5.

## REFERENCES

Bechtel National, Inc. (BNI), 1992. Remedial Investigation Report for the Maywood Site, DOE/OR/21949-337, prepared for U.S. Department of Energy, Oak Ridge Operations, Oak Ridge, Tenn. (December)

Department of Energy (DOE), 1992. "Addendum to the Maywood Site Field Sampling Plan for Westerly Brook/Saddle River," CCN 093776, Oak Ridge, Tenn. (August)

**APPENDIX A**  
**Chemical Data**

Table A-1

**Analytical Results for BNAEs in Westerly Brook Channel Bank,  
and Saddle River Core Samples**

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 5	PHENOL	0.40		U	0.40
138 W 5	BIS(2-CHLOROETHYL)ETHER	0.40		U	0.40
138 W 5	2-CHLOROPHENOL	0.40		U	0.40
138 W 5	1,3-DICHLOROBENZENE	0.40		U	0.40
138 W 5	1,4-DICHLOROBENZENE	0.40		U	0.40
138 W 5	BENZYL ALCOHOL	0.40		U	0.40
138 W 5	1,2-DICHLOROBENZENE	0.40		U	0.40
138 W 5	2-METHYLPHENOL	0.40		U	0.40
138 W 5	BIS(2-CHLOROISOPROPYL)ETHER	0.40		U	0.40
138 W 5	4-METHYLPHENOL	0.40		U	0.40
138 W 5	N-NITROSO-DI-N-PROPYLAMINE	0.40		U	0.40
138 W 5	HEXACHLOROETHANE	0.40		U	0.40
138 W 5	NITROBENZENE	0.40		U	0.40
138 W 5	ISOPHORONE	0.40		U	0.40
138 W 5	2-NITROPHENOL	0.40		U	0.40
138 W 5	2,4-DIMETHYLPHENOL	0.40		U	0.40
138 W 5	BENZOIC ACID	2.00	UJ	U	2.00
138 W 5	BIS(2-CHLOROETHOXY)METHANE	0.40		U	0.40
138 W 5	2,4-DICHLOROPHENOL	0.40		U	0.40
138 W 5	1,2,4-TRICHLOROBENZENE	0.40		U	0.40
138 W 5	NAPHTHALENE	0.40		U	0.40
138 W 5	4-CHLOROANILINE	0.40		U	0.40
138 W 5	HEXACHLOROBUTADIENE	0.40		U	0.40
138 W 5	4-CHLORO-3-METHYLPHENOL	0.40		U	0.40
138 W 5	2-METHYLNAPHTHALENE	0.40		U	0.40
138 W 5	HEXACHLOROCYCLOPENTADIENE	0.40		U	0.40
138 W 5	2,4,6-TRICHLOROPHENOL	0.40		U	0.40
138 W 5	2,4,5-TRICHLOROPHENOL	2.00		U	2.00

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 5	2-CHLORONAPHTHALENE	0.40		U	0.40
138 W 5	2-NITROANILINE	2.00		U	2.00
138 W 5	DIMETHYLPHTHALATE	0.40		U	0.40
138 W 5	ACENAPHTHYLENE	0.12		J	0.40
138 W 5	2,6-DINITROTOLUENE	0.40		U	0.40
138 W 5	3-NITROANILINE	2.00		U	2.00
138 W 5	ACENAPHTHENE	0.12		J	0.40
138 W 5	2,4-DINITROPHENOL	2.00	UJ	U	2.00
138 W 5	4-NITROPHENOL	2.00		U	2.00
138 W 5	DIBENZOFURAN	0.05		J	0.40
138 W 5	2,4-DINITROTOLUENE	0.40		U	0.40
138 W 5	DIETHYLPHTHALATE	0.40		U	0.40
138 W 5	4-CHLOROPHENYL-PHENYLEETHER	0.40		U	0.40
138 W 5	FLUORENE	0.20		J	0.40
138 W 5	4-NITROANILINE	2.00		U	2.00
138 W 5	4,6-DINITRO-2-METHYLPHENOL	2.00	UJ	U	2.00
138 W 5	N-NITROSODIPHENYLAMINE	0.40		U	0.40
138 W 5	4-BROMOPHENYL-PHENYLEETHER	0.40		U	0.40
138 W 5	HEXACHLOROBENZENE	0.40		U	0.40
138 W 5	PENTACHLOROPHENOL	2.00		U	2.00
138 W 5	PHENANTHRENE	1.60		=	0.40
138 W 5	ANTHRACENE	0.41		=	0.40
138 W 5	DI-N-BUTYLPHTHALATE	0.04		J	0.40
138 W 5	FLUORANTHENE	2.40		=	0.40
138 W 5	PYRENE	2.20		=	0.40
138 W 5	BUTYLBENZYLPHTHALATE	2.00		=	0.40
138 W 5	3,3'-DICHLOROBENZIDINE	0.80		U	0.80
138 W 5	BENZO(A)ANTHRACENE	1.00		=	0.40

**Table A-1**  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 5	CHRYSENE	1.20		=	0.40
138 W 5	BIS(2-ETHYLHEXYL)PHTHALATE	2.10		=	0.40
138 W 5	DI-N-OCTYLPHTHALATE	0.40		U	0.40
138 W 5	BENZO(B)FLUORANTHENE	0.77		=	0.40
138 W 5	BENZO(K)FLUORANTHENE	0.82		=	0.40
138 W 5	BENZO(A)PYRENE	0.95		=	0.40
138 W 5	INDENO(1,2,3-CD)PYRENE	0.52		=	0.40
138 W 5	DIBENZ(A,H)ANTHRACENE	0.40		U	0.40
138 W 5	BENZO(G,H,I)PERYLENE	0.61		=	0.40
138 W 5	N-NITROSODIMETHYLAMINE	0.40		U	0.40
138 W 5	BENZIDINE	2.00	UJ	U	2.00
138 W 5	1,2-DIPHENYLHYDRAZINE	0.40		U	0.40
138 W 6 <sup>b</sup>	PHENOL	0.42		U	0.42
138 W 6	BIS(2-CHLOROETHYL)ETHER	0.42		U	0.42
138 W 6	2-CHLOROPHENOL	0.42		U	0.42
138 W 6	1,3-DICHLOROBENZENE	0.42		U	0.42
138 W 6	1,4-DICHLOROBENZENE	0.42		U	0.42
138 W 6	BENZYL ALCOHOL	0.42		U	0.42
138 W 6	1,2-DICHLOROBENZENE	0.42		U	0.42
138 W 6	2-METHYLPHENOL	0.42		U	0.42
138 W 6	BIS(2-CHLOROISOPROPYL)ETHER	0.42		U	0.42
138 W 6	4-METHYLPHENOL	0.42		U	0.42
138 W 6	N-NITROSO-DI-N-PROPYLAMINE	0.42		U	0.42
138 W 6	HEXACHLOROETHANE	0.42		U	0.42
138 W 6	NITROBENZENE	0.42		U	0.42
138 W 6	ISOPHORONE	0.42		U	0.42
138 W 6	2-NITROPHENOL	0.42		U	0.42

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 6	2,4-DIMETHYLPHENOL	0.42		U	0.42
138 W 6	BENZOIC ACID	2.10	UJ	U	2.10
138 W 6	BIS(2-CHLOROETHOXY)METHANE	0.42		U	0.42
138 W 6	2,4-DICHLOROPHENOL	0.42		U	0.42
138 W 6	1,2,4-TRICHLOROBENZENE	0.42		U	0.42
138 W 6	NAPHTHALENE	0.42		U	0.42
138 W 6	4-CHLOROANILINE	0.42		U	0.42
138 W 6	HEXACHLOROBUTADIENE	0.42		U	0.42
138 W 6	4-CHLORO-3-METHYLPHENOL	0.42		U	0.42
138 W 6	2-METHYLNAPHTHALENE	0.42		U	0.42
138 W 6	HEXACHLOROCYCLOPENTADIENE	0.42		U	0.42
138 W 6	2,4,6-TRICHLOROPHENOL	0.42		U	0.42
138 W 6	2,4,5-TRICHLOROPHENOL	2.10		U	2.10
138 W 6	2-CHLORONAPHTHALENE	0.42		U	0.42
138 W 6	2-NITROANILINE	2.10		U	2.10
138 W 6	DIMETHYLPHTHALATE	0.42		U	0.42
138 W 6	ACENAPHTHYLENE	0.06		J	0.42
138 W 6	2,6-DINITROTOLUENE	0.42		U	0.42
138 W 6	3-NITROANILINE	2.10		U	2.10
138 W 6	ACENAPHTHENE	0.14		J	0.42
138 W 6	2,4-DINITROPHENOL	2.10	UJ	U	2.10
138 W 6	4-NITROPHENOL	2.10		U	2.10
138 W 6	DIBENZOFURAN	0.07		J	0.42
138 W 6	2,4-DINITROTOLUENE	0.42		U	0.42
138 W 6	DIETHYLPHTHALATE	0.42		U	0.42
138 W 6	4-CHLOROPHENYL-PHENYLETHER	0.42		U	0.42
138 W 6	FLUORENE	0.19		J	0.42
138 W 6	4-NITROANILINE	2.10		U	2.10

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 6	4,6-DINITRO-2-METHYLPHENOL	2.10	UJ	U	2.10
138 W 6	N-NITROSODIPHENYLAMINE	0.42		U	0.42
138 W 6	4-BROMOPHENYL-PHENYLEETHER	0.42		U	0.42
138 W 6	HEXACHLOROBENZENE	0.42		U	0.42
138 W 6	PENTACHLOROPHENOL	2.10		U	2.10
138 W 6	PHENANTHRENE	1.40		=	0.42
138 W 6	ANTHRACENE	0.37		J	0.42
138 W 6	DI-N-BUTYLPHTHALATE	0.42		U	0.42
138 W 6	FLUORANTHENE	1.90		=	0.42
138 W 6	PYRENE	1.50		=	0.42
138 W 6	BUTYLBENZYLPHTHALATE	0.42		U	0.42
138 W 6	3,3'-DICHLOROBENZIDINE	0.83		U	0.83
138 W 6	BENZO(A)ANTHRACENE	0.73		=	0.42
138 W 6	CHRYSENE	0.81		=	0.42
138 W 6	BIS(2-ETHYLHEXYL)PHTHALATE	0.43		=	0.42
138 W 6	DI-N-OCTYLPHTHALATE	0.42		U	0.42
138 W 6	BENZO(B)FLUORANTHENE	0.51		=	0.42
138 W 6	BENZO(K)FLUORANTHENE	0.59		=	0.42
138 W 6	BENZO(A)PYRENE	0.44		=	0.42
138 W 6	INDENO(1,2,3-CD)PYRENE	0.32		J	0.42
138 W 6	DIBENZ(A,H)ANTHRACENE	0.42		U	0.42
138 W 6	BENZO(G,H,I)PERYLENE	0.20		J	0.42
138 W 6	N-NITROSODIMETHYLAMINE	0.42		U	0.42
138 W 6	BENZIDINE	2.10	UJ	U	2.10
138 W 6	1,2-DIPHENYLHYDRAZINE	0.42		U	0.42
138 W 7	PHENOL	0.47		U	0.47
138 W 7	BIS(2-CHLOROETHYL)ETHER	0.47		U	0.47



Table A-1  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 7	2-CHLOROPHENOL	0.47		U	0.47
138 W 7	1,3-DICHLOROBENZENE	0.47		U	0.47
138 W 7	1,4-DICHLOROBENZENE	0.47		U	0.47
138 W 7	BENZYL ALCOHOL	0.47		U	0.47
138 W 7	1,2-DICHLOROBENZENE	0.47		U	0.47
138 W 7	2-METHYLPHENOL	0.47		U	0.47
138 W 7	BIS(2-CHLOROISOPROPYL)ETHER	0.47		U	0.47
138 W 7	4-METHYLPHENOL	0.47		U	0.47
138 W 7	N-NITROSO-DI-N-PROPYLAMINE	0.47		U	0.47
138 W 7	HEXACHLOROETHANE	0.47		U	0.47
138 W 7	NITROBENZENE	0.47		U	0.47
138 W 7	ISOPHORONE	0.47		U	0.47
138 W 7	2-NITROPHENOL	0.47		U	0.47
138 W 7	2,4-DIMETHYLPHENOL	0.47		U	0.47
138 W 7	BENZOIC ACID	2.40	UJ	U	2.40
138 W 7	BIS(2-CHLOROETHOXY)METHANE	0.47		U	0.47
138 W 7	2,4-DICHLOROPHENOL	0.47		U	0.47
138 W 7	1,2,4-TRICHLOROBENZENE	0.47		U	0.47
138 W 7	NAPHTHALENE	0.47		U	0.47
138 W 7	4-CHLOROANILINE	0.47		U	0.47
138 W 7	HEXACHLOROBUTADIENE	0.47		U	0.47
138 W 7	4-CHLORO-3-METHYLPHENOL	0.47		U	0.47
138 W 7	2-METHYLNAPHTHALENE	0.05		J	0.47
138 W 7	HEXACHLOROCYCLOPENTADIENE	0.47		U	0.47
138 W 7	2,4,6-TRICHLOROPHENOL	0.47		U	0.47
138 W 7	2,4,5-TRICHLOROPHENOL	2.40		U	2.40
138 W 7	2-CHLORONAPHTHALENE	0.47		U	0.47
138 W 7	2-NITROANILINE	2.40		U	2.40

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 7	DIMETHYLPHTHALATE	0.47		U	0.47
138 W 7	ACENAPHTHYLENE	0.17		J	0.47
138 W 7	2,6-DINITROTOLUENE	0.47		U	0.47
138 W 7	3-NITROANILINE	2.40		U	2.40
138 W 7	ACENAPHTHENE	0.28		J	0.47
138 W 7	2,4-DINITROPHENOL	2.40	UJ	U	2.40
138 W 7	4-NITROPHENOL	2.40		U	2.40
138 W 7	DIBENZOFURAN	0.16		J	0.47
138 W 7	2,4-DINITROTOLUENE	0.47		U	0.47
138 W 7	DIETHYLPHTHALATE	0.47		U	0.47
138 W 7	4-CHLOROPHENYL-PHENYLETHER	0.47		U	0.47
138 W 7	FLUORENE	0.38		J	0.47
138 W 7	4-NITROANILINE	2.40		U	2.40
138 W 7	4,6-DINITRO-2-METHYLPHENOL	2.40	UJ	U	2.40
138 W 7	N-NITROSODIPHENYLAMINE	0.47		U	0.47
138 W 7	4-BROMOPHENYL-PHENYLETHER	0.47		U	0.47
138 W 7	HEXACHLOROBENZENE	0.47		U	0.47
138 W 7	PENTACHLOROPHENOL	0.05		J	2.40
138 W 7	PHENANTHRENE	3.20		=	0.47
138 W 7	ANTHRACENE	0.78		=	0.47
138 W 7	DI-N-BUTYLPHTHALATE	0.08		J	0.47
138 W 7	FLUORANTHENE	4.50		=	0.47
138 W 7	PYRENE	3.60		=	0.47
138 W 7	BUTYLBENZYLPHTHALATE	0.21		J	0.47
138 W 7	3,3'-DICHLOROBENZIDINE	0.94		U	0.94
138 W 7	BENZO(A)ANTHRACENE	1.70		=	0.47
138 W 7	CHRYSENE	2.10		=	0.47
138 W 7	BIS(2-ETHYLHEXYL)PHTHALATE	2.30		=	0.47

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 7	DI-N-OCTYLPHTHALATE	0.47		U	0.47
138 W 7	BENZO(B)FLUORANTHENE	1.30		=	0.47
138 W 7	BENZO(K)FLUORANTHENE	1.50		=	0.47
138 W 7	BENZO(A)PYRENE	1.60		=	0.47
138 W 7	INDENO(1,2,3-CD)PYRENE	0.88		=	0.47
138 W 7	DIBENZ(A,H)ANTHRACENE	0.29		J	0.47
138 W 7	BENZO(G,H,I)PERYLENE	0.98		=	0.47
138 W 7	N-NITROSODIMETHYLAMINE	0.47		U	0.47
138 W 7	BENZIDINE	2.40	UJ	U	2.40
138 W 7	1,2-DIPHENYLHYDRAZINE	0.47		U	0.47
138 W FB <sup>c</sup>	PHENOL	0.01		U	0.01
138 W FB	BIS(2-CHLOROETHYL)ETHER	0.01		U	0.01
138 W FB	2-CHLOROPHENOL	0.01		U	0.01
138 W FB	1,3-DICHLOROBENZENE	0.01		U	0.01
138 W FB	1,4-DICHLOROBENZENE	0.01		U	0.01
138 W FB	BENZYL ALCOHOL	0.01		U	0.01
138 W FB	1,2-DICHLOROBENZENE	0.01		U	0.01
138 W FB	2-METHYLPHENOL	0.01		U	0.01
138 W FB	BIS(2-CHLOROISOPROPYL)ETHER	0.01		U	0.01
138 W FB	4-METHYLPHENOL	0.01		U	0.01
138 W FB	N-NITROSO-DI-N-PROPYLAMINE	0.01		U	0.01
138 W FB	HEXACHLOROETHANE	0.01		U	0.01
138 W FB	NITROBENZENE	0.01		U	0.01
138 W FB	ISOPHORONE	0.01		U	0.01
138 W FB	2-NITROPHENOL	0.01		U	0.01
138 W FB	2,4-DIMETHYLPHENOL	0.01		U	0.01
138 W FB	BENZOIC ACID	0.06	UJ	U	0.06

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W FB	BIS(2-CHLOROETHOXY)METHANE	0.01		U	0.01
138 W FB	2,4-DICHLOROPHENOL	0.01		U	0.01
138 W FB	1,2,4-TRICHLOROBENZENE	0.01		U	0.01
138 W FB	NAPHTHALENE	0.01		U	0.01
138 W FB	4-CHLOROANILINE	0.01		U	0.01
138 W FB	HEXACHLOROBUTADIENE	0.01		U	0.01
138 W FB	4-CHLORO-3-METHYLPHENOL	0.01		U	0.01
138 W FB	2-METHYLNAPHTHALENE	0.01		U	0.01
138 W FB	HEXACHLOROCYCLOPENTADIENE	0.01		U	0.01
138 W FB	2,4,6-TRICHLOROPHENOL	0.01		U	0.01
138 W FB	2,4,5-TRICHLOROPHENOL	0.06		U	0.06
138 W FB	2-CHLORONAPHTHALENE	0.01		U	0.01
138 W FB	2-NITROANILINE	0.06		U	0.06
138 W FB	DIMETHYLPHTHALATE	0.01		U	0.01
138 W FB	ACENAPHTHYLENE	0.01		U	0.01
138 W FB	2,6-DINITROTOLUENE	0.01		U	0.01
138 W FB	3-NITROANILINE	0.06		U	0.06
138 W FB	ACENAPHTHENE	0.01		U	0.01
138 W FB	2,4-DINITROPHENOL	0.06	UJ	U	0.06
138 W FB	4-NITROPHENOL	0.06		U	0.06
138 W FB	DIBENZOFURAN	0.01		U	0.01
138 W FB	2,4-DINITROTOLUENE	0.01		U	0.01
138 W FB	DIETHYLPHTHALATE	0.01		U	0.01
138 W FB	4-CHLOROPHENYL-PHENYLETHER	0.01		U	0.01
138 W FB	FLUORENE	0.01		U	0.01
138 W FB	4-NITROANILINE	0.06		U	0.06
138 W FB	4,6-DINITRO-2-METHYLPHENOL	0.06	UJ	U	0.06
138 W FB	N-NITROSODIPHENYLAMINE	0.01		U	0.01

Table A-1  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W FB	4-BROMOPHENYL-PHENYLETHER	0.01		U	0.01
138 W FB	HEXACHLOROBENZENE	0.01		U	0.01
138 W FB	PENTACHLOROPHENOL	0.06		U	0.06
138 W FB	PHENANTHRENE	0.01		U	0.01
138 W FB	ANTHRACENE	0.01		U	0.01
138 W FB	DI-N-BUTYLPHTHALATE	0.01		U	0.01
138 W FB	FLUORANTHENE	0.01		U	0.01
138 W FB	PYRENE	0.01		U	0.01
138 W FB	BUTYLBENZYLPHTHALATE	0.01		U	0.01
138 W FB	3,3'-DICHLOROBENZIDINE	0.02		U	0.02
138 W FB	BENZO(A)ANTHRACENE	0.01		U	0.01
138 W FB	CHRYSENE	0.01		U	0.01
138 W FB	BIS(2-ETHYLHEXYL)PHTHALATE	0.00		JB	0.01
138 W FB	DI-N-OCTYLPHTHALATE	0.01		U	0.01
138 W FB	BENZO(B)FLUORANTHENE	0.01		U	0.01
138 W FB	BENZO(K)FLUORANTHENE	0.01		U	0.01
138 W FB	BENZO(A)PYRENE	0.01		U	0.01
138 W FB	INDENO(1,2,3-CD)PYRENE	0.01		U	0.01
138 W FB	DIBENZ(A,H)ANTHRACENE	0.01		U	0.01
138 W FB	BENZO(G,H,I)PERYLENE	0.01		U	0.01
138 W FB	N-NITROSODIMETHYLAMINE	0.01		U	0.01
138 W FB	BENZIDINE	0.06	UJ	U	0.06
138 W FB	1,2-DIPHENYLHYDRAZINE	0.01		U	0.01
138FB <sup>c</sup>	PHENOL	0.01		U	0.01
138FB	BIS(2-CHLOROETHYL)ETHER	0.01		U	0.01
138FB	2-CHLOROPHENOL	0.01		U	0.01
138FB	1,3-DICHLOROBENZENE	0.01		U	0.01

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138FB	1,4-DICHLOROBENZENE	0.01		U	0.01
138FB	BENZYL ALCOHOL	0.01		U	0.01
138FB	1,2-DICHLOROBENZENE	0.01		U	0.01
138FB	2-METHYLPHENOL	0.01		U	0.01
138FB	BIS(2-CHLOROISOPROPYL)ETHER	0.01		U	0.01
138FB	4-METHYLPHENOL	0.01		U	0.01
138FB	N-NITROSO-DI-N-PROPYLAMINE	0.01		U	0.01
138FB	HEXACHLOROETHANE	0.01		U	0.01
138FB	NITROBENZENE	0.01		U	0.01
138FB	ISOPHORONE	0.01		U	0.01
138FB	2-NITROPHENOL	0.01		U	0.01
138FB	2,4-DIMETHYLPHENOL	0.01		U	0.01
138FB	BENZOIC ACID	0.05		U	0.05
138FB	BIS(2-CHLOROETHOXY)METHANE	0.01		U	0.01
138FB	2,4-DICHLOROPHENOL	0.01		U	0.01
138FB	1,2,4-TRICHLOROBENZENE	0.01		U	0.01
138FB	NAPHTHALENE	0.01		U	0.01
138FB	4-CHLOROANILINE	0.01		U	0.01
138FB	HEXACHLOROBUTADIENE	0.01		U	0.01
138FB	4-CHLORO-3-METHYLPHENOL	0.01		U	0.01
138FB	2-METHYLNAPHTHALENE	0.01		U	0.01
138FB	HEXACHLOROCYCLOPENTADIENE	0.01		U	0.01
138FB	2,4,6-TRICHLOROPHENOL	0.01		U	0.01
138FB	2,4,5-TRICHLOROPHENOL	0.05		U	0.05
138FB	2-CHLORONAPHTHALENE	0.01		U	0.01
138FB	2-NITROANILINE	0.05		U	0.05
138FB	DIMETHYLPHTHALATE	0.01		U	0.01
138FB	ACENAPHTHYLENE	0.01		U	0.01

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138FB	2,6-DINITROTOLUENE	0.01		U	0.01
138FB	3-NITROANILINE	0.05		U	0.05
138FB	ACENAPHTHENE	0.01		U	0.01
138FB	2,4-DINITROPHENOL	0.05		U	0.05
138FB	4-NITROPHENOL	0.05		U	0.05
138FB	DIBENZOFURAN	0.01		U	0.01
138FB	2,4-DINITROTOLUENE	0.01		U	0.01
138FB	DIETHYLPHTHALATE	0.01		U	0.01
138FB	4-CHLOROPHENYL-PHENYLETHER	0.01		U	0.01
138FB	FLUORENE	0.01		U	0.01
138FB	4-NITROANILINE	0.05		U	0.05
138FB	4,6-DINITRO-2-METHYLPHENOL	0.05		U	0.05
138FB	N-NITROSODIPHENYLAMINE	0.01		U	0.01
138FB	4-BROMOPHENYL-PHENYLETHER	0.01		U	0.01
138FB	HEXACHLOROBENZENE	0.01		U	0.01
138FB	PENTACHLOROPHENOL	0.05		U	0.05
138FB	PHENANTHRENE	0.01		U	0.01
138FB	ANTHRACENE	0.01		U	0.01
138FB	DI-N-BUTYLPHTHALATE	0.01		U	0.01
138FB	FLUORANTHENE	0.01		U	0.01
138FB	PYRENE	0.01		U	0.01
138FB	BUTYLBENZYLPHTHALATE	0.01		U	0.01
138FB	3,3'-DICHLOROBENZIDINE	0.02		U	0.02
138FB	BENZO(A)ANTHRACENE	0.01		U	0.01
138FB	CHRYSENE	0.01		U	0.01
138FB	BIS(2-ETHYLHEXYL)PHTHALATE	0.01		U	0.01
138FB	DI-N-OCTYLPHTHALATE	0.01		U	0.01
138FB	BENZO(B)FLUORANTHENE	0.01		U	0.01

Table A-1  
(continued)

Sample ID	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138FB	BENZO(K)FLUORANTHENE	0.01		U	0.01
138FB	BENZO(A)PYRENE	0.01		U	0.01
138FB	INDENO(1,2,3-CD)PYRENE	0.01		U	0.01
138FB	DIBENZ(A,H)ANTHRACENE	0.01		U	0.01
138FB	BENZO(G,H,I)PERYLENE	0.01		U	0.01
138FB	N-NITROSODIMETHYLAMINE	0.01		U	0.01
138FB	BENZIDINE	0.05		U	0.05
138FB	1,2-DIPHENYLHYDRAZINE	0.01		U	0.01
138SRA	PHENOL	0.88		U	0.88
138SRA	BIS(2-CHLOROETHYL)ETHER	0.88		U	0.88
138SRA	2-CHLOROPHENOL	0.88		U	0.88
138SRA	1,3-DICHLOROBENZENE	0.88		U	0.88
138SRA	1,4-DICHLOROBENZENE	0.88		U	0.88
138SRA	BENZYL ALCOHOL	0.88		U	0.88
138SRA	1,2-DICHLOROBENZENE	0.88		U	0.88
138SRA	2-METHYLPHENOL	0.88		U	0.88
138SRA	BIS(2-CHLOROISOPROPYL)ETHER	0.88		U	0.88
138SRA	4-METHYLPHENOL	0.88		U	0.88
138SRA	N-NITROSO-DI-N-PROPYLAMINE	0.88		U	0.88
138SRA	HEXACHLOROETHANE	0.88		U	0.88
138SRA	NITROBENZENE	0.88		U	0.88
138SRA	ISOPHORONE	0.88		U	0.88
138SRA	2-NITROPHENOL	0.88		U	0.88
138SRA	2,4-DIMETHYLPHENOL	0.88		U	0.88
138SRA	BENZOIC ACID	4.40		U	4.40
138SRA	BIS(2-CHLOROETHOXY)METHANE	0.88		U	0.88
138SRA	2,4-DICHLOROPHENOL	0.88		U	0.88



Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRA	1,2,4-TRICHLOROBENZENE	0.88		U	0.88
138SRA	NAPHTHALENE	0.88		U	0.88
138SRA	4-CHLOROANILINE	0.88		U	0.88
138SRA	HEXACHLOROBUTADIENE	0.88		U	0.88
138SRA	4-CHLORO-3-METHYLPHENOL	0.88		U	0.88
138SRA	2-METHYLNAPHTHALENE	0.88		U	0.88
138SRA	HEXACHLOROCYCLOPENTADIENE	0.88		U	0.88
138SRA	2,4,6-TRICHLOROPHENOL	0.88		U	0.88
138SRA	2,4,5-TRICHLOROPHENOL	4.40		U	4.40
138SRA	2-CHLORONAPHTHALENE	0.88		U	0.88
138SRA	2-NITROANILINE	4.40		U	4.40
138SRA	DIMETHYLPHTHALATE	0.88		U	0.88
138SRA	ACENAPHTHYLENE	0.12	J	J	0.88
138SRA	2,6-DINITROTOLUENE	0.88		U	0.88
138SRA	3-NITROANILINE	4.40		U	4.40
138SRA	ACENAPHTHENE	0.31	J	J	0.88
138SRA	2,4-DINITROPHENOL	4.40		U	4.40
138SRA	4-NITROPHENOL	4.40		U	4.40
138SRA	DIBENZOFURAN	0.12	J	J	0.88
138SRA	2,4-DINITROTOLUENE	0.88		U	0.88
138SRA	DIETHYLPHTHALATE	0.88		U	0.88
138SRA	4-CHLOROPHENYL-PHENYLEETHER	0.88		U	0.88
138SRA	FLUORENE	0.39	J	J	0.88
138SRA	4-NITROANILINE	4.40		U	4.40
138SRA	4,6-DINITRO-2-METHYLPHENOL	4.40		U	4.40
138SRA	N-NITROSODIPHENYLAMINE	0.88		U	0.88
138SRA	4-BROMOPHENYL-PHENYLEETHER	0.88		U	0.88
138SRA	HEXACHLOROBENZENE	0.88		U	0.88

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRA	PENTACHLOROPHENOL	4.40		U	4.40
138SRA	PHENANTHRENE	4.30	J	=	0.88
138SRA	ANTHRACENE	0.53		J	0.88
138SRA	DI-N-BUTYLPHTHALATE	0.12		J	0.88
138SRA	FLUORANTHENE	6.60	J	=	0.88
138SRA	PYRENE	5.10	J	=	0.88
138SRA	BUTYLBENZYLPHTHALATE	0.88		U	0.88
138SRA	3,3'-DICHLOROBENZIDINE	1.80		U	1.80
138SRA	BENZO(A)ANTHRACENE	2.70	J	=	0.88
138SRA	CHRYSENE	2.90	J	=	0.88
138SRA	BIS(2-ETHYLHEXYL)PHTHALATE	0.48	J	J	0.88
138SRA	DI-N-OCTYLPHTHALATE	0.88		U	0.88
138SRA	BENZO(B)FLUORANTHENE	2.80	J	=	0.88
138SRA	BENZO(K)FLUORANTHENE	2.70	J	=	0.88
138SRA	BENZO(A)PYRENE	2.50	J	=	0.88
138SRA	INDENO(1,2,3-CD)PYRENE	0.93	J	=	0.88
138SRA	DIBENZ(A,H)ANTHRACENE	0.40		J	0.88
138SRA	BENZO(G,H,I)PERYLENE	0.77		J	0.88
138SRA	N-NITROSODIMETHYLAMINE	0.88		U	0.88
138SRA	BENZIDINE	4.40		U	4.40
138SRA	1,2-DIPHENYLHYDRAZINE	0.88		U	0.88
138SRB	PHENOL	2.10		U	2.10
138SRB	BIS(2-CHLOROETHYL)ETHER	2.10		U	2.10
138SRB	2-CHLOROPHENOL	2.10		U	2.10
138SRB	1,3-DICHLOROBENZENE	2.10		U	2.10
138SRB	1,4-DICHLOROBENZENE	2.10		U	2.10
138SRB	BENZYL ALCOHOL	2.10		U	2.10

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRB	1,2-DICHLOROBENZENE	2.10		U	2.10
138SRB	2-METHYLPHENOL	2.10		U	2.10
138SRB	BIS(2-CHLOROISOPROPYL)ETHER	2.10		U	2.10
138SRB	4-METHYLPHENOL	2.10		U	2.10
138SRB	N-NITROSO-DI-N-PROPYLAMINE	2.10		U	2.10
138SRB	HEXACHLOROETHANE	2.10		U	2.10
138SRB	NITROBENZENE	2.10		U	2.10
138SRB	ISOPHORONE	2.10		U	2.10
138SRB	2-NITROPHENOL	2.10		U	2.10
138SRB	2,4-DIMETHYLPHENOL	2.10		U	2.10
138SRB	BENZOIC ACID	10.00		U	10.00
138SRB	BIS(2-CHLOROETHOXY)METHANE	2.10		U	2.10
138SRB	2,4-DICHLOROPHENOL	2.10		U	2.10
138SRB	1,2,4-TRICHLOROBENZENE	2.10		U	2.10
138SRB	NAPHTHALENE	2.10		U	2.10
138SRB	4-CHLOROANILINE	2.10		U	2.10
138SRB	HEXACHLOROBUTADIENE	2.10		U	2.10
138SRB	4-CHLORO-3-METHYLPHENOL	2.10		U	2.10
138SRB	2-METHYLNAPHTHALENE	2.10		U	2.10
138SRB	HEXACHLOROCYCLOPENTADIENE	2.10		U	2.10
138SRB	2,4,6-TRICHLOROPHENOL	2.10		U	2.10
138SRB	2,4,5-TRICHLOROPHENOL	10.00		U	10.00
138SRB	2-CHLORONAPHTHALENE	2.10		U	2.10
138SRB	2-NITROANILINE	10.00		U	10.00
138SRB	DIMETHYLPHTHALATE	2.10		U	2.10
138SRB	ACENAPHTHYLENE	2.10		U	2.10
138SRB	2,6-DINITROTOLUENE	2.10		U	2.10
138SRB	3-NITROANILINE	10.00		U	10.00

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRB	ACENAPHTHENE	1.40		J	2.10
138SRB	2,4-DINITROPHENOL	10.00		U	10.00
138SRB	4-NITROPHENOL	10.00		U	10.00
138SRB	DIBENZOFURAN	0.46		J	2.10
138SRB	2,4-DINITROTOLUENE	2.10		U	2.10
138SRB	DIETHYLPHTHALATE	2.10		U	2.10
138SRB	4-CHLOROPHENYL-PHENYLETHER	2.10		U	2.10
138SRB	FLUORENE	1.20		J	2.10
138SRB	4-NITROANILINE	10.00		U	10.00
138SRB	4,6-DINITRO-2-METHYLPHENOL	10.00		U	10.00
138SRB	N-NITROSODIPHENYLAMINE	2.10		U	2.10
138SRB	4-BROMOPHENYL-PHENYLETHER	2.10		U	2.10
138SRB	HEXACHLOROBENZENE	2.10		U	2.10
138SRB	PENTACHLOROPHENOL	10.00		U	10.00
138SRB	PHENANTHRENE	9.80		=	2.10
138SRB	ANTHRACENE	1.70		J	2.10
138SRB	DI-N-BUTYLPHTHALATE	2.10		U	2.10
138SRB	FLUORANTHENE	14.00		=	2.10
138SRB	PYRENE	10.00		=	2.10
138SRB	BUTYLBENZYLPHTHALATE	2.10		U	2.10
138SRB	3,3'-DICHLOROBENZIDINE	4.20		U	4.20
138SRB	BENZO(A)ANTHRACENE	5.10		=	2.10
138SRB	CHRYSENE	4.80		=	2.10
138SRB	BIS(2-ETHYLHEXYL)PHTHALATE	0.28		J	2.10
138SRB	DI-N-OCTYLPHTHALATE	2.10		U	2.10
138SRB	BENZO(B)FLUORANTHENE	4.00		=	2.10
138SRB	BENZO(K)FLUORANTHENE	3.20		=	2.10
138SRB	BENZO(A)PYRENE	3.70		=	2.10

Table A-1  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRB	INDENO(1,2,3-CD)PYRENE	2.30		=	2.10
138SRB	DIBENZ(A,H)ANTHRACENE	1.10		J	2.10
138SRB	BENZO(G,H,I)PERYLENE	2.00		J	2.10
138SRB	N-NITROSODIMETHYLAMINE	2.10		U	2.10
138SRB	BENZIDINE	10.00		U	10.00
138SRB	1,2-DIPHENYLHYDRAZINE	2.10		U	2.10
138SRC	PHENOL	2.40		U	2.40
138SRC	BIS(2-CHLOROETHYL)ETHER	2.40		U	2.40
138SRC	2-CHLOROPHENOL	2.40		U	2.40
138SRC	1,3-DICHLOROBENZENE	2.40		U	2.40
138SRC	1,4-DICHLOROBENZENE	2.40		U	2.40
138SRC	BENZYL ALCOHOL	2.40		U	2.40
138SRC	1,2-DICHLOROBENZENE	2.40		U	2.40
138SRC	2-METHYLPHENOL	2.40		U	2.40
138SRC	BIS(2-CHLOROISOPROPYL)ETHER	2.40		U	2.40
138SRC	4-METHYLPHENOL	2.40		U	2.40
138SRC	N-NITROSO-DI-N-PROPYLAMINE	2.40		U	2.40
138SRC	HEXACHLOROETHANE	2.40		U	2.40
138SRC	NITROBENZENE	2.40		U	2.40
138SRC	ISOPHORONE	2.40		U	2.40
138SRC	2-NITROPHENOL	2.40		U	2.40
138SRC	2,4-DIMETHYLPHENOL	2.40		U	2.40
138SRC	BENZOIC ACID	12.00		U	12.00
138SRC	BIS(2-CHLOROETHOXY)METHANE	2.40		U	2.40
138SRC	2,4-DICHLOROPHENOL	2.40		U	2.40
138SRC	1,2,4-TRICHLOROBENZENE	2.40		U	2.40
138SRC	NAPHTHALENE	2.40		U	2.40

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRC	4-CHLOROANILINE	2.40		U	2.40
138SRC	HEXACHLOROBUTADIENE	2.40		U	2.40
138SRC	4-CHLORO-3-METHYLPHENOL	2.40		U	2.40
138SRC	2-METHYLNAPHTHALENE	0.99		J	2.40
138SRC	HEXACHLOROCYCLOPENTADIENE	2.40		U	2.40
138SRC	2,4,6-TRICHLOROPHENOL	2.40		U	2.40
138SRC	2,4,5-TRICHLOROPHENOL	12.00		U	12.00
138SRC	2-CHLORONAPHTHALENE	2.40		U	2.40
138SRC	2-NITROANILINE	12.00		U	12.00
138SRC	DIMETHYLPHTHALATE	2.40		U	2.40
138SRC	ACENAPHTHYLENE	0.40		J	2.40
138SRC	2,6-DINITROTOLUENE	2.40		U	2.40
138SRC	3-NITROANILINE	12.00		U	12.00
138SRC	ACENAPHTHENE	3.80		=	2.40
138SRC	2,4-DINITROPHENOL	12.00		U	12.00
138SRC	4-NITROPHENOL	12.00		U	12.00
138SRC	DIBENZOFURAN	1.30		J	2.40
138SRC	2,4-DINITROTOLUENE	2.40		U	2.40
138SRC	DIETHYLPHTHALATE	2.40		U	2.40
138SRC	4-CHLOROPHENYL-PHENYLETHER	2.40		U	2.40
138SRC	FLUORENE	4.30		=	2.40
138SRC	4-NITROANILINE	12.00		U	12.00
138SRC	4,6-DINITRO-2-METHYLPHENOL	12.00		U	12.00
138SRC	N-NITROSODIPHENYLAMINE	2.40		U	2.40
138SRC	4-BROMOPHENYL-PHENYLETHER	2.40		U	2.40
138SRC	HEXACHLOROBENZENE	2.40		U	2.40
138SRC	PENTACHLOROPHENOL	12.00		U	12.00
138SRC	PHENANTHRENE	26.00		=	2.40

Table A-1  
(continued)

Sample ID	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRC	ANTHRACENE	4.00		=	2.40
138SRC	DI-N-BUTYLPHTHALATE	2.40		U	2.40
138SRC	FLUORANTHENE	31.00		=	2.40
138SRC	PYRENE	19.00		=	2.40
138SRC	BUTYLBENZYLPHTHALATE	2.40		U	2.40
138SRC	3,3'-DICHLOROBENZIDINE	4.80		U	4.80
138SRC	BENZO(A)ANTHRACENE	12.00		=	2.40
138SRC	CHRYSENE	13.00		=	2.40
138SRC	BIS(2-ETHYLHEXYL)PHTHALATE	0.54		J	2.40
138SRC	DI-N-OCTYLPHTHALATE	2.40		U	2.40
138SRC	BENZO(B)FLUORANTHENE	10.00		=	2.40
138SRC	BENZO(K)FLUORANTHENE	8.20		=	2.40
138SRC	BENZO(A)PYRENE	10.00		=	2.40
138SRC	INDENO(1,2,3-CD)PYRENE	3.10		=	2.40
138SRC	DIBENZ(A,H)ANTHRACENE	2.00		J	2.40
138SRC	BENZO(G,H,I)PERYLENE	2.40		=	2.40
138SRC	N-NITROSODIMETHYLAMINE	2.40		U	2.40
138SRC	BENZIDINE	12.00		U	12.00
138SRC	1,2-DIPHENYLHYDRAZINE	2.40		U	2.40
138WB1	PHENOL	2.10		U	2.10
138WB1	BIS(2-CHLOROETHYL)ETHER	2.10		U	2.10
138WB1	2-CHLOROPHENOL	2.10		U	2.10
138WB1	1,3-DICHLOROBENZENE	2.10		U	2.10
138WB1	1,4-DICHLOROBENZENE	2.10		U	2.10
138WB1	BENZYL ALCOHOL	2.10		U	2.10
138WB1	1,2-DICHLOROBENZENE	2.10		U	2.10
138WB1	2-METHYLPHENOL	2.10		U	2.10

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB1	BIS(2-CHLOROISOPROPYL)ETHER	2.10		U	2.10
138WB1	4-METHYLPHENOL	2.10		U	2.10
138WB1	N-NITROSO-DI-N-PROPYLAMINE	2.10		U	2.10
138WB1	HEXACHLOROETHANE	2.10		U	2.10
138WB1	NITROBENZENE	2.10		U	2.10
138WB1	ISOPHORONE	2.10		U	2.10
138WB1	2-NITROPHENOL	2.10		U	2.10
138WB1	2,4-DIMETHYLPHENOL	2.10		U	2.10
138WB1	BENZOIC ACID	10.00		U	10.00
138WB1	BIS(2-CHLOROETHOXY)METHANE	2.10		U	2.10
138WB1	2,4-DICHLOROPHENOL	2.10		U	2.10
138WB1	1,2,4-TRICHLOROBENZENE	2.10		U	2.10
138WB1	NAPHTHALENE	2.10		U	2.10
138WB1	4-CHLOROANILINE	2.10		U	2.10
138WB1	HEXACHLOROBUTADIENE	2.10		U	2.10
138WB1	4-CHLORO-3-METHYLPHENOL	2.10		U	2.10
138WB1	2-METHYLNAPHTHALENE	2.10		U	2.10
138WB1	HEXACHLOROCYCLOPENTADIENE	2.10		U	2.10
138WB1	2,4,6-TRICHLOROPHENOL	2.10		U	2.10
138WB1	2,4,5-TRICHLOROPHENOL	10.00		U	10.00
138WB1	2-CHLORONAPHTHALENE	2.10		U	2.10
138WB1	2-NITROANILINE	10.00		U	10.00
138WB1	DIMETHYLPHTHALATE	2.10		U	2.10
138WB1	ACENAPHTHYLENE	2.10		U	2.10
138WB1	2,6-DINITROTOLUENE	2.10		U	2.10
138WB1	3-NITROANILINE	10.00		U	10.00
138WB1	ACENAPHTHENE	0.28		J	2.10
138WB1	2,4-DINITROPHENOL	10.00		U	10.00



Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB1	4-NITROPHENOL	10.00		U	10.00
138WB1	DIBENZOFURAN	2.10		U	2.10
138WB1	2,4-DINITROTOLUENE	2.10		U	2.10
138WB1	DIETHYLPHTHALATE	2.10		U	2.10
138WB1	4-CHLOROPHENYL-PHENYLEETHER	2.10		U	2.10
138WB1	FLUORENE	0.35		J	2.10
138WB1	4-NITROANILINE	10.00		U	10.00
138WB1	4,6-DINITRO-2-METHYLPHENOL	10.00		U	10.00
138WB1	N-NITROSODIPHENYLAMINE	2.10		U	2.10
138WB1	4-BROMOPHENYL-PHENYLEETHER	2.10		U	2.10
138WB1	HEXACHLOROBENZENE	2.10		U	2.10
138WB1	PENTACHLOROPHENOL	10.00		U	10.00
138WB1	PHENANTHRENE	3.80		=	2.10
138WB1	ANTHRACENE	0.68		J	2.10
138WB1	DI-N-BUTYLPHTHALATE	2.10		U	2.10
138WB1	FLUORANTHENE	5.90		=	2.10
138WB1	PYRENE	4.00		=	2.10
138WB1	BUTYLBENZYLPHTHALATE	0.39		J	2.10
138WB1	3,3'-DICHLOROBENZIDINE	4.20		U	4.20
138WB1	BENZO(A)ANTHRACENE	2.70		=	2.10
138WB1	CHRYSENE	2.30		=	2.10
138WB1	BIS(2-ETHYLHEXYL)PHTHALATE	0.96		J	2.10
138WB1	DI-N-OCTYLPHTHALATE	2.10		U	2.10
138WB1	BENZO(B)FLUORANTHENE	2.20		=	2.10
138WB1	BENZO(K)FLUORANTHENE	2.00		=	2.10
138WB1	BENZO(A)PYRENE	2.00		J	2.10
138WB1	INDENO(1,2,3-CD)PYRENE	0.60		J	2.10
138WB1	DIBENZ(A,H)ANTHRACENE	2.10		U	2.10

Table A-1  
(continued)

Sample ID	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB1	BENZO(G,H,I)PERYLENE	0.56		J	2.10
138WB1	N-NITROSODIMETHYLAMINE	2.10		U	2.10
138WB1	BENZIDINE	10.00		U	10.00
138WB1	1,2-DIPHENYLHYDRAZINE	2.10		U	2.10
138WB2	PHENOL	0.40		U	0.40
138WB2	BIS(2-CHLOROETHYL)ETHER	0.40		U	0.40
138WB2	2-CHLOROPHENOL	0.40		U	0.40
138WB2	1,3-DICHLOROBENZENE	0.40		U	0.40
138WB2	1,4-DICHLOROBENZENE	0.40		U	0.40
138WB2	BENZYL ALCOHOL	0.40		U	0.40
138WB2	1,2-DICHLOROBENZENE	0.40		U	0.40
138WB2	2-METHYLPHENOL	0.40		U	0.40
138WB2	BIS(2-CHLOROISOPROPYL)ETHER	0.40		U	0.40
138WB2	4-METHYLPHENOL	0.40		U	0.40
138WB2	N-NITROSO-DI-N-PROPYLAMINE	0.40		U	0.40
138WB2	HEXACHLOROETHANE	0.40		U	0.40
138WB2	NITROBENZENE	0.40		U	0.40
138WB2	ISOPHORONE	0.40		U	0.40
138WB2	2-NITROPHENOL	0.40		U	0.40
138WB2	2,4-DIMETHYLPHENOL	0.40		U	0.40
138WB2	BENZOIC ACID	2.00		U	2.00
138WB2	BIS(2-CHLOROETHOXY)METHANE	0.40		U	0.40
138WB2	2,4-DICHLOROPHENOL	0.40		U	0.40
138WB2	1,2,4-TRICHLOROBENZENE	0.40		U	0.40
138WB2	NAPHTHALENE	0.40		U	0.40
138WB2	4-CHLOROANILINE	0.40		U	0.40
138WB2	HEXACHLOROBUTADIENE	0.40		U	0.40

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB2	4-CHLORO-3-METHYLPHENOL	0.40		U	0.40
138WB2	2-METHYLNAPHTHALENE	0.40		U	0.40
138WB2	HEXACHLOROCYCLOPENTADIENE	0.40		U	0.40
138WB2	2,4,6-TRICHLOROPHENOL	0.40		U	0.40
138WB2	2,4,5-TRICHLOROPHENOL	2.00		U	2.00
138WB2	2-CHLORONAPHTHALENE	0.40		U	0.40
138WB2	2-NITROANILINE	2.00		U	2.00
138WB2	DIMETHYLPHTHALATE	0.40		U	0.40
138WB2	ACENAPHTHYLENE	0.04		J	0.40
138WB2	2,6-DINITROTOLUENE	0.40		U	0.40
138WB2	3-NITROANILINE	2.00		U	2.00
138WB2	ACENAPHTHENE	0.04		J	0.40
138WB2	2,4-DINITROPHENOL	2.00		U	2.00
138WB2	4-NITROPHENOL	2.00		U	2.00
138WB2	DIBENZOFURAN	0.40		U	0.40
138WB2	2,4-DINITROTOLUENE	0.40		U	0.40
138WB2	DIETHYLPHTHALATE	0.40		U	0.40
138WB2	4-CHLOROPHENYL-PHENYLEETHER	0.40		U	0.40
138WB2	FLUORENE	0.07		J	0.40
138WB2	4-NITROANILINE	2.00		U	2.00
138WB2	4,6-DINITRO-2-METHYLPHENOL	2.00		U	2.00
138WB2	N-NITROSODIPHENYLAMINE	0.40		U	0.40
138WB2	4-BROMOPHENYL-PHENYLEETHER	0.40		U	0.40
138WB2	HEXACHLOROBENZENE	0.40		U	0.40
138WB2	PENTACHLOROPHENOL	2.00		U	2.00
138WB2	PHENANTHRENE	0.84		=	0.40
138WB2	ANTHRACENE	0.10		J	0.40
138WB2	DI-N-BUTYLPHTHALATE	0.08		J	0.40

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB2	FLUORANTHENE	1.20		=	0.40
138WB2	PYRENE	1.00		=	0.40
138WB2	BUTYLBENZYLPHTHALATE	0.04		J	0.40
138WB2	3,3'-DICHLOROBENZIDINE	0.81		U	0.81
138WB2	BENZO(A)ANTHRACENE	0.47		=	0.40
138WB2	CHRYSENE	0.58		=	0.40
138WB2	BIS(2-ETHYLHEXYL)PHTHALATE	0.23		J	0.40
138WB2	DI-N-OCTYLPHTHALATE	0.40		U	0.40
138WB2	BENZO(B)FLUORANTHENE	0.47		=	0.40
138WB2	BENZO(K)FLUORANTHENE	0.61		=	0.40
138WB2	BENZO(A)PYRENE	0.46		=	0.40
138WB2	INDENO(1,2,3-CD)PYRENE	0.28		J	0.40
138WB2	DIBENZ(A,H)ANTHRACENE	0.13		J	0.40
138WB2	BENZO(G,H,I)PERYLENE	0.27		J	0.40
138WB2	N-NITROSODIMETHYLAMINE	0.40		U	0.40
138WB2	BENZIDINE	2.00		U	2.00
138WB2	1,2-DIPHENYLHYDRAZINE	0.40		U	0.40
138WB3	PHENOL	2.30		U	2.30
138WB3	BIS(2-CHLOROETHYL)ETHER	2.30		U	2.30
138WB3	2-CHLOROPHENOL	2.30		U	2.30
138WB3	1,3-DICHLOROBENZENE	2.30		U	2.30
138WB3	1,4-DICHLOROBENZENE	2.30		U	2.30
138WB3	BENZYL ALCOHOL	2.30		U	2.30
138WB3	1,2-DICHLOROBENZENE	2.30		U	2.30
138WB3	2-METHYLPHENOL	2.30		U	2.30
138WB3	BIS(2-CHLOROISOPROPYL)ETHER	2.30		U	2.30
138WB3	4-METHYLPHENOL	2.30		U	2.30

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB3	N-NITROSO-DI-N-PROPYLAMINE	2.30		U	2.30
138WB3	HEXACHLOROETHANE	2.30		U	2.30
138WB3	NITROBENZENE	2.30		U	2.30
138WB3	ISOPHORONE	2.30		U	2.30
138WB3	2-NITROPHENOL	2.30		U	2.30
138WB3	2,4-DIMETHYLPHENOL	2.30		U	2.30
138WB3	BENZOIC ACID	11.00		U	11.00
138WB3	BIS(2-CHLOROETHOXY)METHANE	2.30		U	2.30
138WB3	2,4-DICHLOROPHENOL	2.30		U	2.30
138WB3	1,2,4-TRICHLOROBENZENE	2.30		U	2.30
138WB3	NAPHTHALENE	2.30		U	2.30
138WB3	4-CHLOROANILINE	2.30		U	2.30
138WB3	HEXACHLOROBUTADIENE	2.30		U	2.30
138WB3	4-CHLORO-3-METHYLPHENOL	2.30		U	2.30
138WB3	2-METHYLNAPHTHALENE	2.30		U	2.30
138WB3	HEXACHLOROCYCLOPENTADIENE	2.30		U	2.30
138WB3	2,4,6-TRICHLOROPHENOL	2.30		U	2.30
138WB3	2,4,5-TRICHLOROPHENOL	11.00		U	11.00
138WB3	2-CHLORONAPHTHALENE	2.30		U	2.30
138WB3	2-NITROANILINE	11.00		U	11.00
138WB3	DIMETHYLPHTHALATE	2.30		U	2.30
138WB3	ACENAPHTHYLENE	2.30		U	2.30
138WB3	2,6-DINITROTOLUENE	2.30		U	2.30
138WB3	3-NITROANILINE	11.00		U	11.00
138WB3	ACENAPHTHENE	0.40		J	2.30
138WB3	2,4-DINITROPHENOL	11.00		U	11.00
138WB3	4-NITROPHENOL	11.00		U	11.00
138WB3	DIBENZOFURAN	2.30		U	2.30

Table A-1  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB3	2,4-DINITROTOLUENE	2.30		U	2.30
138WB3	DIETHYLPHTHALATE	2.30		U	2.30
138WB3	4-CHLOROPHENYL-PHENYLEETHER	2.30		U	2.30
138WB3	FLUORENE	0.47		J	2.30
138WB3	4-NITROANILINE	11.00		U	11.00
138WB3	4,6-DINITRO-2-METHYLPHENOL	11.00		U	11.00
138WB3	N-NITROSODIPHENYLAMINE	2.30		U	2.30
138WB3	4-BROMOPHENYL-PHENYLEETHER	2.30		U	2.30
138WB3	HEXACHLOROBENZENE	2.30		U	2.30
138WB3	PENTACHLOROPHENOL	11.00		U	11.00
138WB3	PHENANTHRENE	5.50		=	2.30
138WB3	ANTHRACENE	0.86		J	2.30
138WB3	DI-N-BUTYLPHTHALATE	0.24		J	2.30
138WB3	FLUORANTHENE	9.30		=	2.30
138WB3	PYRENE	5.60		=	2.30
138WB3	BUTYLBENZYLPHTHALATE	0.45		J	2.30
138WB3	3,3'-DICHLOROBENZIDINE	4.50		U	4.50
138WB3	BENZO(A)ANTHRACENE	3.30		=	2.30
138WB3	CHRYSENE	4.00		=	2.30
138WB3	BIS(2-ETHYLHEXYL)PHTHALATE	8.30		=	2.30
138WB3	DI-N-OCTYLPHTHALATE	2.30		U	2.30
138WB3	BENZO(B)FLUORANTHENE	4.50		=	2.30
138WB3	BENZO(K)FLUORANTHENE	3.50		=	2.30
138WB3	BENZO(A)PYRENE	3.30		=	2.30
138WB3	INDENO(1,2,3-CD)PYRENE	0.91		J	2.30
138WB3	DIBENZ(A,H)ANTHRACENE	0.29		J	2.30
138WB3	BENZO(G,H,I)PERYLENE	0.87		J	2.30
138WB3	N-NITROSODIMETHYLAMINE	2.30		U	2.30

Table A-1  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB3	BENZIDINE	11.00		U	11.00
138WB3	1,2-DIPHENYLHYDRAZINE	2.30		U	2.30
138WB4 <sup>d</sup>	PHENOL	2.10		U	2.10
138WB4	BIS(2-CHLOROETHYL)ETHER	2.10		U	2.10
138WB4	2-CHLOROPHENOL	2.10		U	2.10
138WB4	1,3-DICHLOROBENZENE	2.10		U	2.10
138WB4	1,4-DICHLOROBENZENE	2.10		U	2.10
138WB4	BENZYL ALCOHOL	2.10		U	2.10
138WB4	1,2-DICHLOROBENZENE	2.10		U	2.10
138WB4	2-METHYLPHENOL	2.10		U	2.10
138WB4	BIS(2-CHLOROISOPROPYL)ETHER	2.10		U	2.10
138WB4	4-METHYLPHENOL	2.10		U	2.10
138WB4	N-NITROSO-DI-N-PROPYLAMINE	2.10		U	2.10
138WB4	HEXACHLOROETHANE	2.10		U	2.10
138WB4	NITROBENZENE	2.10		U	2.10
138WB4	ISOPHORONE	2.10		U	2.10
138WB4	2-NITROPHENOL	2.10		U	2.10
138WB4	2,4-DIMETHYLPHENOL	2.10		U	2.10
138WB4	BENZOIC ACID	11.00		U	11.00
138WB4	BIS(2-CHLOROETHOXY)METHANE	2.10		U	2.10
138WB4	2,4-DICHLOROPHENOL	2.10		U	2.10
138WB4	1,2,4-TRICHLOROBENZENE	2.10		U	2.10
138WB4	NAPHTHALENE	2.10		U	2.10
138WB4	4-CHLOROANILINE	2.10		U	2.10
138WB4	HEXACHLOROBUTADIENE	2.10		U	2.10
138WB4	4-CHLORO-3-METHYLPHENOL	2.10		U	2.10
138WB4	2-METHYLNAPHTHALENE	2.10		U	2.10

Table A-1  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB4	HEXACHLOROCYCLOPENTADIENE	2.10		U	2.10
138WB4	2,4,6-TRICHLOROPHENOL	2.10		U	2.10
138WB4	2,4,5-TRICHLOROPHENOL	11.00		U	11.00
138WB4	2-CHLORONAPHTHALENE	2.10		U	2.10
138WB4	2-NITROANILINE	11.00		U	11.00
138WB4	DIMETHYLPHTHALATE	2.10		U	2.10
138WB4	ACENAPHTHYLENE	2.10		U	2.10
138WB4	2,6-DINITROTOLUENE	2.10		U	2.10
138WB4	3-NITROANILINE	11.00		U	11.00
138WB4	ACENAPHTHENE	2.10		U	2.10
138WB4	2,4-DINITROPHENOL	11.00		U	11.00
138WB4	4-NITROPHENOL	11.00		U	11.00
138WB4	DIBENZOFURAN	2.10		U	2.10
138WB4	2,4-DINITROTOLUENE	2.10		U	2.10
138WB4	DIETHYLPHTHALATE	2.10		U	2.10
138WB4	4-CHLOROPHENYL-PHENYLETHER	2.10		U	2.10
138WB4	FLUORENE	0.26		J	2.10
138WB4	4-NITROANILINE	11.00		U	11.00
138WB4	4,6-DINITRO-2-METHYLPHENOL	11.00		U	11.00
138WB4	N-NITROSODIPHENYLAMINE	2.10		U	2.10
138WB4	4-BROMOPHENYL-PHENYLETHER	2.10		U	2.10
138WB4	HEXACHLOROBENZENE	2.10		U	2.10
138WB4	PENTACHLOROPHENOL	11.00		U	11.00
138WB4	PHENANTHRENE	3.20		=	2.10
138WB4	ANTHRACENE	0.63		J	2.10
138WB4	DI-N-BUTYLPHTHALATE	2.10		U	2.10
138WB4	FLUORANTHENE	6.00		=	2.10
138WB4	PYRENE	4.10		=	2.10



Table A-1  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB4	BUTYLBENZYLPHTHALATE	0.35		J	2.10
138WB4	3,3'-DICHLOROBENZIDINE	4.20		U	4.20
138WB4	BENZO(A)ANTHRACENE	2.40		=	2.10
138WB4	CHRYSENE	2.50		=	2.10
138WB4	BIS(2-ETHYLHEXYL)PHTHALATE	2.70		=	2.10
138WB4	DI-N-OCTYLPHTHALATE	2.10		U	2.10
138WB4	BENZO(B)FLUORANTHENE	2.90		=	2.10
138WB4	BENZO(K)FLUORANTHENE	2.20		=	2.10
138WB4	BENZO(A)PYRENE	2.10		=	2.10
138WB4	INDENO(1,2,3-CD)PYRENE	0.61		J	2.10
138WB4	DIBENZ(A,H)ANTHRACENE	2.10		U	2.10
138WB4	BENZO(G,H,I)PERYLENE	0.57		J	2.10
138WB4	N-NITROSODIMETHYLAMINE	2.10		U	2.10
138WB4	BENZIDINE	11.00		U	11.00
138WB4	1,2-DIPHENYLHYDRAZINE	2.10		U	2.10

- a Sampling locations are shown in Figure 1 and 2. Locations 5, 6, and 7 are on Westerly Brook, upstream of MISS.  
b Sample 6 is a field duplicate for 5.  
c Quality control field rinse blank sample.  
d Sample 4 is a field duplicate for 1.

Table A-2

**Analytical Results for Pesticide/PCBs in Westerly Brook  
Channel Bank, and Saddle River Core Samples**

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 5	ALPHA-BHC	0.09	UJ	U	0.10
138 W 5	BETA-BHC	0.09	UJ	U	0.10
138 W 5	DELTA-BHC	0.09	UJ	U	0.10
138 W 5	GAMMA-BHC (LINDANE)	0.09	UJ	U	0.10
138 W 5	HEPTACHLOR	0.09	UJ	U	0.10
138 W 5	ALDRIN	0.09	UJ	U	0.10
138 W 5	HEPTACHLOR EPOXIDE	0.09	UJ	U	0.10
138 W 5	ENDOSULFAN I	0.09	UJ	U	0.10
138 W 5	DIELDRIN	0.19	UJ	U	0.19
138 W 5	4,4'-DDE	0.19	UJ	U	0.19
138 W 5	ENDRIN	0.19	UJ	U	0.19
138 W 5	ENDOSULFAN II	0.19	UJ	U	0.19
138 W 5	4,4'-DDD	0.19	UJ	U	0.19
138 W 5	ENDOSULFAN SULFATE	0.19	UJ	U	0.19
138 W 5	4,4'-DDT	0.19	UJ	U	0.19
138 W 5	METHOXYCHLOR	0.96	UJ	U	0.96
138 W 5	ENDRIN KETONE	0.19	UJ	U	0.19
138 W 5	ENDRIN ALDEHYDE	0.19	UJ	U	0.19
138 W 5	ALPHA CHLORDANE	0.96	UJ	U	0.96
138 W 5	GAMMA CHLORDANE	0.96	UJ	U	0.96
138 W 5	TOXAPHENE	1.90	UJ	U	1.90
138 W 5	AROCHLOR-1016	0.96	UJ	U	0.96
138 W 5	AROCHLOR-1221	0.96	UJ	U	0.96
138 W 5	AROCHLOR-1232	0.96	UJ	U	0.96
138 W 5	AROCHLOR-1242	0.96	UJ	U	0.96
138 W 5	AROCHLOR-1248	0.96	UJ	U	0.96
138 W 5	AROCHLOR-1254	3.70		=	1.90
138 W 5	AROCHLOR-1260	1.90	UJ	U	1.90

Table A-2  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 6 <sup>b</sup>	ALPHA-BHC	0.05	UJ	U	0.05
138 W 6	BETA-BHC	0.05	UJ	U	0.05
138 W 6	DELTA-BHC	0.05	UJ	U	0.05
138 W 6	GAMMA-BHC (LINDANE)	0.05	UJ	U	0.05
138 W 6	HEPTACHLOR	0.05	UJ	U	0.05
138 W 6	ALDRIN	0.05	UJ	U	0.05
138 W 6	HEPTACHLOR EPOXIDE	0.05	UJ	U	0.05
138 W 6	ENDOSULFAN I	0.05	UJ	U	0.05
138 W 6	DIELDRIN	0.09	UJ	U	0.10
138 W 6	4,4'-DDE	0.09	UJ	U	0.10
138 W 6	ENDRIN	0.09	UJ	U	0.10
138 W 6	ENDOSULFAN II	0.09	UJ	U	0.10
138 W 6	4,4'-DDD	0.09	UJ	U	0.10
138 W 6	ENDOSULFAN SULFATE	0.09	UJ	U	0.10
138 W 6	4,4'-DDT	0.09	UJ	U	0.10
138 W 6	METHOXYCHLOR	0.50	UJ	U	0.50
138 W 6	ENDRIN KETONE	0.09	UJ	U	0.10
138 W 6	ENDRIN ALDEHYDE	0.09	UJ	U	0.10
138 W 6	ALPHA CHLORDANE	0.50	UJ	U	0.50
138 W 6	GAMMA CHLORDANE	0.50	UJ	U	0.50
138 W 6	TOXAPHENE	0.99	UJ	U	0.99
138 W 6	AROCHLOR-1016	0.50	UJ	U	0.50
138 W 6	AROCHLOR-1221	0.50	UJ	U	0.50
138 W 6	AROCHLOR-1232	0.50	UJ	U	0.50
138 W 6	AROCHLOR-1242	0.50	UJ	U	0.50
138 W 6	AROCHLOR-1248	0.50	UJ	U	0.50
138 W 6	AROCHLOR-1254	1.70		=	0.99

Table A-2  
(continued)

Sample ID	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 6	AROCHLOR-1260	0.99	UJ	U	0.99
138 W 7	ALPHA-BHC	0.56	UJ	U	0.56
138 W 7	BETA-BHC	0.56	UJ	U	0.56
138 W 7	DELTA-BHC	0.56	UJ	U	0.56
138 W 7	GAMMA-BHC (LINDANE)	0.56	UJ	U	0.56
138 W 7	HEPTACHLOR	0.56	UJ	U	0.56
138 W 7	ALDRIN	0.56	UJ	U	0.56
138 W 7	HEPTACHLOR EPOXIDE	0.56	UJ	U	0.56
138 W 7	ENDOSULFAN I	0.56	UJ	U	0.56
138 W 7	DIELDRIN	1.10	UJ	U	1.10
138 W 7	4,4'-DDE	1.10	UJ	U	1.10
138 W 7	ENDRIN	1.10	UJ	U	1.10
138 W 7	ENDOSULFAN II	1.10	UJ	U	1.10
138 W 7	4,4'-DDD	1.10	UJ	U	1.10
138 W 7	ENDOSULFAN SULFATE	1.10	UJ	U	1.10
138 W 7	4,4'-DDT	1.10	UJ	U	1.10
138 W 7	METHOXYCHLOR	5.60	UJ	U	5.60
138 W 7	ENDRIN KETONE	1.10	UJ	U	1.10
138 W 7	ENDRIN ALDEHYDE	1.10	UJ	U	1.10
138 W 7	ALPHA CHLORDANE	5.60	UJ	U	5.60
138 W 7	GAMMA CHLORDANE	5.60	UJ	U	5.60
138 W 7	TOXAPHENE	11.00	UJ	U	11.00
138 W 7	AROCHLOR-1016	5.60	UJ	U	5.60
138 W 7	AROCHLOR-1221	5.60	UJ	U	5.60
138 W 7	AROCHLOR-1232	5.60	UJ	U	5.60
138 W 7	AROCHLOR-1242	5.60	UJ	U	5.60
138 W 7	AROCHLOR-1248	5.60	UJ	U	5.60

Table A-2  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W 7	AROCHLOR-1254	13.00		=	11.00
138 W 7	AROCHLOR-1260	11.00	UJ	U	11.00
138 W FB <sup>c</sup>	ALPHA-BHC	0.05		U	0.06
138 W FB	BETA-BHC	0.05		U	0.06
138 W FB	DELTA-BHC	0.05		U	0.06
138 W FB	GAMMA-BHC (LINDANE)	0.05		U	0.06
138 W FB	HEPTACHLOR	0.05		U	0.06
138 W FB	ALDRIN	0.05		U	0.06
138 W FB	HEPTACHLOR EPOXIDE	0.05		U	0.06
138 W FB	ENDOSULFAN I	0.05		U	0.06
138 W FB	DIELDRIN	0.11		U	0.11
138 W FB	4,4'-DDE	0.11		U	0.11
138 W FB	ENDRIN	0.11		U	0.11
138 W FB	ENDOSULFAN II	0.11		U	0.11
138 W FB	4,4'-DDD	0.11		U	0.11
138 W FB	ENDOSULFAN SULFATE	0.11		U	0.11
138 W FB	4,4'-DDT	0.11		U	0.11
138 W FB	METHOXYCHLOR	0.56		U	0.56
138 W FB	ENDRIN KETONE	0.11		U	0.11
138 W FB	ENDRIN ALDEHYDE	0.11		U	0.11
138 W FB	ALPHA CHLORDANE	0.56		U	0.56
138 W FB	GAMMA CHLORDANE	0.56		U	0.56
138 W FB	TOXAPHENE	1.10		U	1.10
138 W FB	AROCHLOR-1016	0.56		U	0.56
138 W FB	AROCHLOR-1221	0.56		U	0.56
138 W FB	AROCHLOR-1232	0.56		U	0.56
138 W FB	AROCHLOR-1242	0.56		U	0.56

Table A-2  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W FB	AROCHLOR-1248	0.56		U	0.56
138 W FB	AROCHLOR-1254	1.10		U	1.10
138 W FB	AROCHLOR-1260	1.10		U	1.10
138SRA	ALPHA-BHC	0.04	UJ	U	0.04
138SRA	BETA-BHC	0.04	UJ	U	0.04
138SRA	DELTA-BHC	0.04	UJ	U	0.04
138SRA	GAMMA-BHC (LINDANE)	0.04	UJ	U	0.04
138SRA	HEPTACHLOR	0.04	UJ	U	0.04
138SRA	ALDRIN	0.04	UJ	U	0.04
138SRA	HEPTACHLOR EPOXIDE	0.04	UJ	U	0.04
138SRA	ENDOSULFAN I	0.04	UJ	U	0.04
138SRA	DIELDRIN	0.08	UJ	U	0.09
138SRA	4,4'-DDE	0.08	UJ	U	0.09
138SRA	ENDRIN	0.08	UJ	U	0.09
138SRA	ENDOSULFAN II	0.08	UJ	U	0.09
138SRA	4,4'-DDD	0.08	UJ	U	0.09
138SRA	ENDOSULFAN SULFATE	0.08	UJ	U	0.09
138SRA	4,4'-DDT	0.08	UJ	U	0.09
138SRA	METHOXYCHLOR	0.43	UJ	U	0.43
138SRA	ENDRIN KETONE	0.08	UJ	U	0.09
138SRA	ENDRIN ALDEHYDE	0.08	UJ	U	0.09
138SRA	ALPHA CHLORDANE	0.06	J	J	0.43
138SRA	GAMMA CHLORDANE	0.14	J	J	0.43
138SRA	TOXAPHENE	0.86	UJ	U	0.86
138SRA	AROCHLOR-1016	0.43	UJ	U	0.43
138SRA	AROCHLOR-1221	0.43	UJ	U	0.43
138SRA	AROCHLOR-1232	0.43	UJ	U	0.43

Table A-2  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRA	AROCHLOR-1242	0.43	UJ	U	0.43
138SRA	AROCHLOR-1248	0.43	UJ	U	0.43
138SRA	AROCHLOR-1254	1.00	J	=	0.86
138SRA	AROCHLOR-1260	0.86	UJ	U	0.86
138SRB	ALPHA-BHC	0.02		U	0.02
138SRB	BETA-BHC	0.02		U	0.02
138SRB	DELTA-BHC	0.02		U	0.02
138SRB	GAMMA-BHC (LINDANE)	0.02		U	0.02
138SRB	HEPTACHLOR	0.02		U	0.02
138SRB	ALDRIN	0.02		U	0.02
138SRB	HEPTACHLOR EPOXIDE	0.02		U	0.02
138SRB	ENDOSULFAN I	0.02		U	0.02
138SRB	DIELDRIN	0.04		U	0.04
138SRB	4,4'-DDE	0.04		U	0.04
138SRB	ENDRIN	0.04		U	0.04
138SRB	ENDOSULFAN II	0.04		U	0.04
138SRB	4,4'-DDD	0.06		=	0.04
138SRB	ENDOSULFAN SULFATE	0.04		U	0.04
138SRB	4,4'-DDT	0.04		U	0.04
138SRB	METHOXYCHLOR	0.20		U	0.20
138SRB	ENDRIN KETONE	0.04		U	0.04
138SRB	ENDRIN ALDEHYDE	0.04		U	0.04
138SRB	ALPHA CHLORDANE	0.20		U	0.20
138SRB	GAMMA CHLORDANE	0.20		U	0.20
138SRB	TOXAPHENE	0.40		U	0.40
138SRB	AROCHLOR-1016	0.20		U	0.20
138SRB	AROCHLOR-1221	0.20		U	0.20

Table A-2  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRB	AROCHLOR-1232	0.20		U	0.20
138SRB	AROCHLOR-1242	0.20		U	0.20
138SRB	AROCHLOR-1248	0.20		U	0.20
138SRB	AROCHLOR-1254	0.40		U	0.40
138SRB	AROCHLOR-1260	0.40		U	0.40
138SRC	ALPHA-BHC	0.05		U	0.06
138SRC	BETA-BHC	0.05		U	0.06
138SRC	DELTA-BHC	0.05		U	0.06
138SRC	GAMMA-BHC (LINDANE)	0.05		U	0.06
138SRC	HEPTACHLOR	0.05		U	0.06
138SRC	ALDRIN	0.05		U	0.06
138SRC	HEPTACHLOR EPOXIDE	0.05		U	0.06
138SRC	ENDOSULFAN I	0.05		U	0.06
138SRC	DIELDRIN	0.12		U	0.12
138SRC	4,4'-DDE	0.12		U	0.12
138SRC	ENDRIN	0.12		U	0.12
138SRC	ENDOSULFAN II	0.12		U	0.12
138SRC	4,4'-DDD	0.22		=	0.12
138SRC	ENDOSULFAN SULFATE	0.12		U	0.12
138SRC	4,4'-DDT	0.12		U	0.12
138SRC	METHOXYCHLOR	0.59		U	0.59
138SRC	ENDRIN KETONE	0.12		U	0.12
138SRC	ENDRIN ALDEHYDE	0.12		U	0.12
138SRC	ALPHA CHLORDANE	0.59		U	0.59
138SRC	GAMMA CHLORDANE	0.59		U	0.59
138SRC	TOXAPHENE	1.20		U	1.20
138SRC	AROCHLOR-1016	0.59		U	0.59



Table A-2  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRC	AROCHLOR-1221	0.59		U	0.59
138SRC	AROCHLOR-1232	0.59		U	0.59
138SRC	AROCHLOR-1242	0.59		U	0.59
138SRC	AROCHLOR-1248	0.59		U	0.59
138SRC	AROCHLOR-1254	1.20		U	1.20
138SRC	AROCHLOR-1260	1.20		U	1.20
138WB1	ALPHA-BHC	0.51		U	0.51
138WB1	BETA-BHC	0.51		U	0.51
138WB1	DELTA-BHC	0.51		U	0.51
138WB1	GAMMA-BHC (LINDANE)	0.51		U	0.51
138WB1	HEPTACHLOR	0.51		U	0.51
138WB1	ALDRIN	0.51		U	0.51
138WB1	HEPTACHLOR EPOXIDE	0.51		U	0.51
138WB1	ENDOSULFAN I	0.51		U	0.51
138WB1	DIELDRIN	1.00		U	1.00
138WB1	4,4'-DDE	1.00		U	1.00
138WB1	ENDRIN	1.00		U	1.00
138WB1	ENDOSULFAN II	1.00		U	1.00
138WB1	4,4'-DDD	1.00		U	1.00
138WB1	ENDOSULFAN SULFATE	1.00		U	1.00
138WB1	4,4'-DDT	1.00		U	1.00
138WB1	METHOXYCHLOR	5.10		U	5.10
138WB1	ENDRIN KETONE	1.00		U	1.00
138WB1	ENDRIN ALDEHYDE	1.00		U	1.00
138WB1	ALPHA CHLORDANE	5.10		U	5.10
138WB1	GAMMA CHLORDANE	5.10		U	5.10
138WB1	TOXAPHENE	10.00		U	10.00

Table A-2  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB1	AROCHLOR-1016	5.10		U	5.10
138WB1	AROCHLOR-1221	5.10		U	5.10
138WB1	AROCHLOR-1232	5.10		U	5.10
138WB1	AROCHLOR-1242	5.10		U	5.10
138WB1	AROCHLOR-1248	5.10		U	5.10
138WB1	AROCHLOR-1254	15.00		=	10.00
138WB1	AROCHLOR-1260	10.00		U	10.00
138WB2	ALPHA-BHC	0.09		U	0.10
138WB2	BETA-BHC	0.09		U	0.10
138WB2	DELTA-BHC	0.09		U	0.10
138WB2	GAMMA-BHC (LINDANE)	0.09		U	0.10
138WB2	HEPTACHLOR	0.09		U	0.10
138WB2	ALDRIN	0.09		U	0.10
138WB2	HEPTACHLOR EPOXIDE	0.09		U	0.10
138WB2	ENDOSULFAN I	0.09		U	0.10
138WB2	DIELDRIN	0.20		U	0.20
138WB2	4,4'-DDE	0.20		U	0.20
138WB2	ENDRIN	0.20		U	0.20
138WB2	ENDOSULFAN II	0.20		U	0.20
138WB2	4,4'-DDD	0.20		U	0.20
138WB2	ENDOSULFAN SULFATE	0.20		U	0.20
138WB2	4,4'-DDT	0.20		U	0.20
138WB2	METHOXYCHLOR	0.98		U	0.98
138WB2	ENDRIN KETONE	0.20		U	0.20
138WB2	ENDRIN ALDEHYDE	0.20		U	0.20
138WB2	ALPHA CHLORDANE	0.98		U	0.98
138WB2	GAMMA CHLORDANE	0.98		U	0.98

Table A-2  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB2	TOXAPHENE	2.00		U	2.00
138WB2	AROCHLOR-1016	0.98		U	0.98
138WB2	AROCHLOR-1221	0.98		U	0.98
138WB2	AROCHLOR-1232	0.98		U	0.98
138WB2	AROCHLOR-1242	0.98		U	0.98
138WB2	AROCHLOR-1248	0.98		U	0.98
138WB2	AROCHLOR-1254	2.50		=	2.00
138WB2	AROCHLOR-1260	2.00		U	2.00
138WB3	ALPHA-BHC	0.55		U	0.55
138WB3	BETA-BHC	0.55		U	0.55
138WB3	DELTA-BHC	0.55		U	0.55
138WB3	GAMMA-BHC (LINDANE)	0.55		U	0.55
138WB3	HEPTACHLOR	0.55		U	0.55
138WB3	ALDRIN	0.55		U	0.55
138WB3	HEPTACHLOR EPOXIDE	0.55		U	0.55
138WB3	ENDOSULFAN I	0.55		U	0.55
138WB3	DIELDRIN	1.10		U	1.10
138WB3	4,4'-DDE	1.10		U	1.10
138WB3	ENDRIN	1.10		U	1.10
138WB3	ENDOSULFAN II	1.10		U	1.10
138WB3	4,4'-DDD	1.10		U	1.10
138WB3	ENDOSULFAN SULFATE	1.10		U	1.10
138WB3	4,4'-DDT	1.10		U	1.10
138WB3	METHOXYCHLOR	5.50		U	5.50
138WB3	ENDRIN KETONE	1.10		U	1.10
138WB3	ENDRIN ALDEHYDE	1.10		U	1.10
138WB3	ALPHA CHLORDANE	5.50		U	5.50

Table A-2  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB3	GAMMA CHLORDANE	5.50		U	5.50
138WB3	TOXAPHENE	11.00		U	11.00
138WB3	AROCHLOR-1016	5.50		U	5.50
138WB3	AROCHLOR-1221	5.50		U	5.50
138WB3	AROCHLOR-1232	5.50		U	5.50
138WB3	AROCHLOR-1242	5.50		U	5.50
138WB3	AROCHLOR-1248	5.50		U	5.50
138WB3	AROCHLOR-1254	18.00		=	11.00
138WB3	AROCHLOR-1260	11.00		U	11.00
138WB4 <sup>d</sup>	ALPHA-BHC	0.51		U	0.51
138WB4	BETA-BHC	0.51		U	0.51
138WB4	DELTA-BHC	0.51		U	0.51
138WB4	GAMMA-BHC (LINDANE)	0.51		U	0.51
138WB4	HEPTACHLOR	0.51		U	0.51
138WB4	ALDRIN	0.51		U	0.51
138WB4	HEPTACHLOR EPOXIDE	0.51		U	0.51
138WB4	ENDOSULFAN I	0.51		U	0.51
138WB4	DIELDRIN	1.00		U	1.00
138WB4	4,4'-DDE	1.00		U	1.00
138WB4	ENDRIN	1.00		U	1.00
138WB4	ENDOSULFAN II	1.00		U	1.00
138WB4	4,4'-DDD	1.00		U	1.00
138WB4	ENDOSULFAN SULFATE	1.00		U	1.00
138WB4	4,4'-DDT	1.00		U	1.00
138WB4	METHOXYCHLOR	5.10		U	5.10
138WB4	ENDRIN KETONE	1.00		U	1.00
138WB4	ENDRIN ALDEHYDE	1.00		U	1.00

Table A-2  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB4	ALPHA CHLORDANE	5.10		U	5.10
138WB4	GAMMA CHLORDANE	5.10		U	5.10
138WB4	TOXAPHENE	10.00		U	10.00
138WB4	AROCHLOR-1016	5.10		U	5.10
138WB4	AROCHLOR-1221	5.10		U	5.10
138WB4	AROCHLOR-1232	5.10		U	5.10
138WB4	AROCHLOR-1242	5.10		U	5.10
138WB4	AROCHLOR-1248	5.10		U	5.10
138WB4	AROCHLOR-1254	15.00		=	10.00
138WB4	AROCHLOR-1260	10.00		U	10.00

<sup>a</sup> Sampling locations are shown in Figures 1 and 2. Locations 5, 6, and 7 are on Westerly Brook, upstream of MISS.

<sup>b</sup> Sample 6 is a field duplicate for 5.

<sup>c</sup> Quality control field rinse blank sample.

<sup>d</sup> Sample 4 is a field duplicate for 1.

Table A-3

**Analytical Results for Metals in Westerly Brook Channel Bank,  
and Saddle River Core Samples**

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W FB <sup>b</sup>	Silver	7.00		U	7.00
138 W FB	Aluminum	64.00		U	64.00
138 W FB	Arsenic	2.00		U	2.00
138 W FB	Boron	32.00	J	=	9.00
138 W FB	Barium	5.00		U	5.00
138 W FB	Beryllium	1.00		U	1.00
138 W FB	Calcium	67.30	J	=	17.00
138 W FB	Cadmium	4.00		U	4.00
138 W FB	Cobalt	8.00		U	8.00
138 W FB	Chromium	7.00		U	7.00
138 W FB	Copper	9.00		U	9.00
138 W FB	Iron	14.50		=	10.00
138 W FB	Mercury	0.10		U	0.10
138 W FB	Potassium	877.00		U	877.00
138 W FB	Magnesium	44.00		U	44.00
138 W FB	Manganese	2.00		U	2.00
138 W FB	Molybdenum	20.00		U	20.00
138 W FB	Sodium	168.00		=	155.00
138 W FB	Nickel	19.00		U	19.00
138 W FB	Lead	2.00		U	2.00
138 W FB	Antimony	57.00		U	57.00
138 W FB	Selenium	2.00		U	2.00
138 W FB	Thallium	2.00		U	2.00
138 W FB	Vanadium	7.00		U	7.00
138 W FB	Zinc	10.10		=	8.00
138SRA	Silver	2.70		U	2.70
138SRA	Aluminum	4820.00		=	13.10

Table A-3  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRA	Arsenic	8.10	J	=	0.53
138SRA	Boron	13.60	J	=	2.70
138SRA	Barium	110.00		=	3.70
138SRA	Beryllium	0.51		B	0.27
138SRA	Calcium	2690.00		=	15.20
138SRA	Cadmium	1.90		U	1.90
138SRA	Cobalt	6.10		B	2.40
138SRA	Chromium	96.40	J	=	2.40
138SRA	Copper	42.70		=	2.10
138SRA	Iron	9300.00		=	4.00
138SRA	Mercury	0.26		=	0.07
138SRA	Potassium	360.00		B	358.00
138SRA	Magnesium	1420.00		=	18.20
138SRA	Manganese	282.00	J	=	1.10
138SRA	Molybdenum	1.30		U	1.30
138SRA	Sodium	302.00		B	40.40
138SRA	Nickel	9.90		B	5.30
138SRA	Lead	235.00		=	53.50
138SRA	Antimony	16.00		U	16.00
138SRA	Selenium	0.64	J	B	0.53
138SRA	Thallium	0.53		U	0.53
138SRA	Vanadium	16.90		=	2.10
138SRA	Zinc	143.00		=	1.90
138SRB	Silver	10.00		U	2.37
138SRB	Aluminum	9290.00		=	11.60
138SRB	Arsenic	3.50	J	=	0.41
138SRB	Boron	38.00		=	10.00

Table A-3  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRB	Barium	204.00		=	3.31
138SRB	Beryllium	1.30		B	0.24
138SRB	Calcium	6290.00		=	13.50
138SRB	Cadmium	7.00		U	1.70
138SRB	Cobalt	14.00		B	2.10
138SRB	Chromium	351.00	J	=	2.10
138SRB	Copper	107.00		=	1.90
138SRB	Iron	33900.00		=	3.50
138SRB	Mercury	0.12		B	0.06
138SRB	Potassium	1340.00		U	317.00
138SRB	Magnesium	3320.00		B	16.10
138SRB	Manganese	346.00	J	=	0.97
138SRB	Molybdenum	5.00		U	5.00
138SRB	Sodium	528.00		B	35.70
138SRB	Nickel	29.00		B	4.70
138SRB	Lead	117.00		=	0.41
138SRB	Antimony	60.00		U	14.20
138SRB	Selenium	0.41		U	0.41
138SRB	Thallium	0.41		U	0.41
138SRB	Vanadium	42.40		B	1.90
138SRB	Zinc	276.00		=	1.70
138SRC	Silver	2.80		U	2.80
138SRC	Aluminum	3820.00		=	13.70
138SRC	Arsenic	6.40	J	=	0.56
138SRC	Boron	10.90	J	=	2.80
138SRC	Barium	95.10		=	3.90
138SRC	Beryllium	0.34		B	0.28



Table A-3  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRC	Calcium	2150.00		=	16.00
138SRC	Cadmium	2.00		U	2.00
138SRC	Cobalt	4.10		=	2.50
138SRC	Chromium	104.00	J	=	2.50
138SRC	Copper	67.70		B	2.20
138SRC	Iron	9010.00		=	4.20
138SRC	Mercury	0.70		=	0.07
138SRC	Potassium	376.00		U	376.00
138SRC	Magnesium	1190.00		B	19.10
138SRC	Manganese	192.00	J	=	1.10
138SRC	Molybdenum	2.30		=	1.40
138SRC	Sodium	155.00	J	B	42.30
138SRC	Nickel	9.40		B	5.60
138SRC	Lead	535.00		=	55.70
138SRC	Antimony	16.80		U	16.80
138SRC	Selenium	0.59	J	B	0.56
138SRC	Thallium	0.56		U	0.56
138SRC	Vanadium	16.30		=	2.20
138SRC	Zinc	162.00		=	2.00
138WB1	Silver	2.40		U	2.40
138WB1	Aluminum	2640.00		=	11.70
138WB1	Arsenic	8.50	J	=	0.40
138WB1	Boron	12.20	J	=	2.40
138WB1	Barium	52.80		=	3.30
138WB1	Beryllium	0.38		B	0.24
138WB1	Calcium	2390.00		=	13.60
138WB1	Cadmium	1.70		U	1.70

Table A-3  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB1	Cobalt	3.60		B	2.10
138WB1	Chromium	16.00	J	=	2.10
138WB1	Copper	40.70		=	1.90
138WB1	Iron	9650.00		=	3.60
138WB1	Mercury	0.09		B	0.06
138WB1	Potassium	319.00		U	319.00
138WB1	Magnesium	1670.00		=	16.20
138WB1	Manganese	156.00	J	=	0.95
138WB1	Molybdenum	2.00		=	1.20
138WB1	Sodium	129.00	J	B	36.00
138WB1	Nickel	8.30		B	4.80
138WB1	Lead	324.00		=	0.40
138WB1	Antimony	14.30		U	14.30
138WB1	Selenium	0.40	UJ	U	0.40
138WB1	Thallium	0.40		U	0.40
138WB1	Vanadium	9.90		B	1.90
138WB1	Zinc	230.00		=	1.70
138WB2	Silver	1.70		U	1.70
138WB2	Aluminum	4620.00		=	8.50
138WB2	Arsenic	7.90	J	=	0.36
138WB2	Boron	10.30	J	=	1.70
138WB2	Barium	46.00		=	2.40
138WB2	Beryllium	0.31		B	0.17
138WB2	Calcium	1030.00		=	9.90
138WB2	Cadmium	1.20		U	1.20
138WB2	Cobalt	3.90		B	1.60
138WB2	Chromium	11.50	J	=	1.60

Table A-3  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB2	Copper	21.90		=	1.40
138WB2	Iron	8350.00		=	2.60
138WB2	Mercury	0.15		=	0.06
138WB2	Potassium	233.00		U	233.00
138WB2	Magnesium	1100.00		=	11.80
138WB2	Manganese	191.00	J	=	0.69
138WB2	Molybdenum	0.87		U	0.87
138WB2	Sodium	80.80	J	B	26.20
138WB2	Nickel	4.50		B	3.50
138WB2	Lead	104.00		=	7.10
138WB2	Antimony	10.40		U	10.40
138WB2	Selenium	0.36		U	0.36
138WB2	Thallium	0.36		U	0.36
138WB2	Vanadium	15.60		=	1.40
138WB2	Zinc	61.90		=	1.20
138WB3	Silver	2.70		U	2.70
138WB3	Aluminum	2860.00		=	13.10
138WB3	Arsenic	9.40	J	=	0.50
138WB3	Boron	17.40	J	=	2.70
138WB3	Barium	93.00		=	3.70
138WB3	Beryllium	0.35		B	0.27
138WB3	Calcium	4420.00		=	15.20
138WB3	Cadmium	1.90		U	1.90
138WB3	Cobalt	5.10		B	2.40
138WB3	Chromium	22.10	J	=	2.40
138WB3	Copper	65.40		=	2.10
138WB3	Iron	11000.00		=	4.00

Table A-3  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB3	Mercury	0.18		=	0.07
138WB3	Potassium	358.00		U	358.00
138WB3	Magnesium	1700.00		=	18.20
138WB3	Manganese	378.00	J	=	1.10
138WB3	Molybdenum	1.30		U	1.30
138WB3	Sodium	124.00	J	B	40.30
138WB3	Nickel	13.30		=	5.30
138WB3	Lead	252.00		=	50.50
138WB3	Antimony	16.00		U	16.00
138WB3	Selenium	0.50	UJ	U	0.50
138WB3	Thallium	0.50		U	0.50
138WB3	Vanadium	14.00		=	2.10
138WB3	Zinc	352.00		=	1.90
138WB4 <sup>c</sup>	Silver	2.30		U	2.30
138WB4	Aluminum	4210.00		=	11.30
138WB4	Arsenic	7.50	J	=	0.44
138WB4	Boron	11.70	J	=	2.30
138WB4	Barium	98.30		=	3.20
138WB4	Beryllium	0.39		B	0.23
138WB4	Calcium	4920.00		=	13.10
138WB4	Cadmium	1.60		U	1.60
138WB4	Cobalt	4.00		B	2.10
138WB4	Chromium	14.10	J	=	2.10
138WB4	Copper	43.50		=	1.80
138WB4	Iron	9700.00		=	3.50
138WB4	Mercury	0.10		B	0.06
138WB4	Potassium	309.00		U	309.00

Table A-3  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB4	Magnesium	2560.00		=	15.70
138WB4	Manganese	324.00	J	=	0.92
138WB4	Molybdenum	1.20		U	1.20
138WB4	Sodium	255.00		B	34.80
138WB4	Nickel	8.60		B	4.60
138WB4	Lead	353.00		=	17.50
138WB4	Antimony	13.80		U	13.80
138WB4	Selenium	0.44		U	0.44
138WB4	Thallium	0.44		U	0.44
138WB4	Vanadium	14.90		=	1.80
138WB4	Zinc	272.00		=	1.60
138WB5	Silver	1.70		U	1.70
138WB5	Aluminum	2780.00	J	=	15.50
138WB5	Arsenic	2.80		=	0.48
138WB5	Boron	17.10	J	=	2.20
138WB5	Barium	34.90		=	1.20
138WB5	Beryllium	0.34		=	0.24
138WB5	Calcium	7700.00	J	=	4.10
138WB5	Cadmium	0.97		U	0.97
138WB5	Cobalt	4.00		=	1.90
138WB5	Chromium	13.40		=	1.70
138WB5	Copper	43.90		=	2.20
138WB5	Iron	7060.00	J	=	2.40
138WB5	Mercury	0.08		=	0.06
138WB5	Potassium	296.00		=	212.00
138WB5	Magnesium	3990.00	J	=	10.70
138WB5	Manganese	169.00	J	=	0.48

Table A-3  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB5	Molybdenum	4.80		U	4.80
138WB5	Sodium	243.00		=	37.50
138WB5	Nickel	12.50		=	4.60
138WB5	Lead	83.50		=	24.20
138WB5	Antimony	13.80		U	13.80
138WB5	Selenium	0.53	J	=	0.48
138WB5	Thallium	0.48		U	0.48
138WB5	Vanadium	9.30		=	1.70
138WB5	Zinc	227.00	J	=	1.90
138WB6 <sup>d</sup>	Silver	1.80		U	1.80
138WB6	Aluminum	2240.00	J	=	16.20
138WB6	Arsenic	2.00		=	0.51
138WB6	Boron	2.30		U	2.30
138WB6	Barium	30.60		=	1.30
138WB6	Beryllium	0.66		=	0.25
138WB6	Calcium	29900.00	J	=	4.30
138WB6	Cadmium	1.00		U	1.00
138WB6	Cobalt	9.70		=	2.00
138WB6	Chromium	9.50		=	1.80
138WB6	Copper	113.00		=	2.30
138WB6	Iron	9280.00	J	=	2.50
138WB6	Mercury	0.08		=	0.06
138WB6	Potassium	222.00		U	222.00
138WB6	Magnesium	6660.00	J	=	11.10
138WB6	Manganese	114.00	J	=	0.51
138WB6	Molybdenum	5.10		U	5.10
138WB6	Sodium	281.00		=	39.20

Table A-3  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB6	Nickel	19.10		=	4.80
138WB6	Lead	89.70		=	25.30
138WB6	Antimony	14.40		U	14.40
138WB6	Selenium	0.51	UJ	U	0.51
138WB6	Thallium	0.51		U	0.51
138WB6	Vanadium	7.70		=	1.80
138WB6	Zinc	1060.00	J	=	2.00
138WB7	Silver	2.00		U	2.00
138WB7	Aluminum	2510.00	J	=	18.20
138WB7	Arsenic	7.70		=	0.57
138WB7	Boron	11.50	J	=	2.60
138WB7	Barium	58.50		=	1.40
138WB7	Beryllium	0.28		U	0.28
138WB7	Calcium	3170.00	J	=	4.80
138WB7	Cadmium	1.10		U	1.10
138WB7	Cobalt	4.80		=	2.30
138WB7	Chromium	22.70		=	2.00
138WB7	Copper	55.70		=	2.60
138WB7	Iron	8480.00	J	=	2.80
138WB7	Mercury	0.17		=	0.07
138WB7	Potassium	342.00		=	249.00
138WB7	Magnesium	1570.00	J	=	12.50
138WB7	Manganese	111.00	J	=	0.57
138WB7	Molybdenum	5.70		U	5.70
138WB7	Sodium	197.00		=	44.10
138WB7	Nickel	16.10		=	5.40
138WB7	Lead	142.00		=	56.80

Table A-3  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB7	Antimony	16.20		U	16.20
138WB7	Selenium	0.57	UJ	U	0.57
138WB7	Thallium	0.57		U	0.57
138WB7	Vanadium	10.80		=	2.00
138WB7	Zinc	264.00	J	=	2.30

<sup>a</sup> Sampling locations are shown in Figures 1 and 2. Locations 5, 6, and 7 are on Westerly Brook, upstream of MISS.

<sup>b</sup> Quality control field rinse blank sample.

<sup>c</sup> Sample 4 is a field duplicate for 1.

<sup>d</sup> Sample 6 is a field duplicate for 5.



Table A-4

**Analytical Results for Lanthanides in Westerly Brook  
Channel Bank, and Saddle River Core Samples**

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138 W FB <sup>b</sup>	Cerium	107.00		U	107.00
138 W FB	Dysprosium	8.00		U	8.00
138 W FB	Erbium	7.00		U	7.00
138 W FB	Europium	10.00		U	10.00
138 W FB	Gadolinium	15.00		U	15.00
138 W FB	Holmium	29.00		U	29.00
138 W FB	Lanthanum	26.00		U	26.00
138 W FB	Lithium	29.00		U	29.00
138 W FB	Lutetium	6.00		U	6.00
138 W FB	Niobium	25.00		U	25.00
138 W FB	Neodymium	42.00		U	42.00
138 W FB	Praseodymium	43.00		U	43.00
138 W FB	Samarium	50.00		U	50.00
138 W FB	Terbium	29.00		U	29.00
138 W FB	Tellurium	72.00		U	72.00
138 W FB	Thulium	37.00		U	37.00
138 W FB	Ytterbium	4.00		U	4.00
138SRA	Cerium	65.60	J	=	32.30
138SRA	Dysprosium	2.20		U	2.20
138SRA	Erbium	55.10		=	2.20
138SRA	Europium	3.90		U	3.90
138SRA	Gadolinium	8.20		=	4.90
138SRA	Holmium	4.40		U	4.40
138SRA	Lanthanum	24.10	J	=	7.20
138SRA	Lithium	28.80		=	7.80
138SRA	Lutetium	0.29		U	0.29
138SRA	Niobium	17.60	UJ	U	17.60

Table A-4  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRA	Neodymium	45.50		=	16.00
138SRA	Praseodymium	11.80		=	9.40
138SRA	Samarium	10.40		U	10.40
138SRA	Terbium	4.00		U	4.00
138SRA	Tellurium	14.10		U	14.10
138SRA	Thulium	326.00		=	4.90
138SRA	Ytterbium	0.56		=	0.40
138SRB	Cerium	128.00	J	=	121.00
138SRB	Dysprosium	8.30		U	8.30
138SRB	Erbium	118.00		=	8.40
138SRB	Europium	14.70		U	14.70
138SRB	Gadolinium	23.90		=	18.20
138SRB	Holmium	16.60		U	16.60
138SRB	Lanthanum	27.00	UJ	U	27.00
138SRB	Lithium	36.10		=	29.00
138SRB	Lutetium	1.10		U	1.10
138SRB	Niobium	66.00	UJ	U	66.00
138SRB	Neodymium	71.10		=	60.00
138SRB	Praseodymium	35.20		U	35.20
138SRB	Samarium	38.90		U	38.90
138SRB	Terbium	15.00		U	15.00
138SRB	Tellurium	52.80		U	52.80
138SRB	Thulium	633.00		=	18.50
138SRB	Ytterbium	1.50		U	1.50
138SRC	Cerium	37.60	J	=	33.90
138SRC	Dysprosium	2.30		U	2.30

Table A-4  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138SRC	Erbium	41.40		=	2.40
138SRC	Europium	4.10		U	4.10
138SRC	Gadolinium	5.30		=	5.10
138SRC	Holmium	4.70		U	4.70
138SRC	Lanthanum	8.40	J	=	7.60
138SRC	Lithium	8.10		U	8.10
138SRC	Lutetium	0.31		U	0.31
138SRC	Niobium	18.50	UJ	U	18.50
138SRC	Neodymium	28.60		=	16.80
138SRC	Praseodymium	9.90		U	9.90
138SRC	Samarium	10.90		U	10.90
138SRC	Terbium	4.20		U	4.20
138SRC	Tellurium	14.80		U	14.80
138SRC	Thulium	245.00		=	5.20
138SRC	Ytterbium	0.42		U	0.42
138WB1	Cerium	28.80	UJ	U	28.80
138WB1	Dysprosium	2.00		U	2.00
138WB1	Erbium	32.60		=	2.00
138WB1	Europium	3.50		U	3.50
138WB1	Gadolinium	4.30		U	4.30
138WB1	Holmium	4.00		U	4.00
138WB1	Lanthanum	6.40	UJ	U	6.40
138WB1	Lithium	6.90		U	6.90
138WB1	Lutetium	0.26		U	0.26
138WB1	Niobium	15.70	UJ	U	15.70
138WB1	Neodymium	16.40		=	14.30
138WB1	Praseodymium	8.40		U	8.40

Table A-4  
(continued)

Sample ID	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB1	Samarium	9.30		U	9.30
138WB1	Terbium	3.60		U	3.60
138WB1	Tellurium	12.60		U	12.60
138WB1	Thulium	185.00		=	4.40
138WB1	Ytterbium	0.50		=	0.36
138WB2	Cerium	31.90	J	=	21.00
138WB2	Dysprosium	1.40		U	1.40
138WB2	Erbium	47.00		=	1.50
138WB2	Europium	2.60		U	2.60
138WB2	Gadolinium	3.90		=	3.20
138WB2	Holmium	2.90		U	2.90
138WB2	Lanthanum	5.10	J	=	4.70
138WB2	Lithium	5.00		U	5.00
138WB2	Lutetium	0.19		U	0.19
138WB2	Niobium	11.50	UJ	U	11.50
138WB2	Neodymium	19.20		=	10.40
138WB2	Praseodymium	6.10		U	6.10
138WB2	Samarium	6.80		U	6.80
138WB2	Terbium	2.60		U	2.60
138WB2	Tellurium	9.20		U	9.20
138WB2	Thulium	286.00		=	3.20
138WB2	Ytterbium	0.59		=	0.26
138WB3	Cerium	32.30	UJ	U	32.30
138WB3	Dysprosium	2.20		U	2.20
138WB3	Erbium	43.10		=	2.20
138WB3	Europium	3.90		U	3.90

Table A-4  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB3	Gadolinium	4.90		U	4.90
138WB3	Holmium	4.40		U	4.40
138WB3	Lanthanum	7.20	UJ	U	7.20
138WB3	Lithium	7.70		U	7.70
138WB3	Lutetium	0.29		U	0.29
138WB3	Niobium	17.60	UJ	U	17.60
138WB3	Neodymium	16.00		U	16.00
138WB3	Praseodymium	9.40		U	9.40
138WB3	Samarium	10.40		U	10.40
138WB3	Terbium	4.00		U	4.00
138WB3	Tellurium	14.10		U	14.10
138WB3	Thulium	280.00		=	4.90
138WB3	Ytterbium	0.75		=	0.40
138WB4 <sup>c</sup>	Cerium	35.60	J	=	27.90
138WB4	Dysprosium	1.90		U	1.90
138WB4	Erbium	79.30		=	1.90
138WB4	Europium	3.40		U	3.40
138WB4	Gadolinium	5.30		=	4.20
138WB4	Holmium	3.80		U	3.80
138WB4	Lanthanum	6.20	UJ	U	6.20
138WB4	Lithium	6.70		U	6.70
138WB4	Lutetium	0.25		U	0.25
138WB4	Niobium	15.20	UJ	U	15.20
138WB4	Neodymium	20.50		=	13.80
138WB4	Praseodymium	8.10		U	8.10
138WB4	Samarium	9.00		U	9.00
138WB4	Terbium	3.50		U	3.50

Table A-4  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB4	Tellurium	12.20		U	12.20
138WB4	Thulium	483.00		=	4.30
138WB4	Ytterbium	0.65		=	0.35
138WB5	Cerium	25.90		U	25.90
138WB5	Dysprosium	1.90		U	1.90
138WB5	Erbium	23.70		=	1.70
138WB5	Europium	2.40		U	2.40
138WB5	Gadolinium	3.60		U	3.60
138WB5	Holmium	7.00		U	7.00
138WB5	Lanthanum	6.30		U	6.30
138WB5	Lithium	7.00		U	7.00
138WB5	Lutetium	1.50		U	1.50
138WB5	Niobium	6.10	UJ	U	6.10
138WB5	Neodymium	10.20		U	10.20
138WB5	Praseodymium	10.40		U	10.40
138WB5	Samarium	12.10		U	12.10
138WB5	Terbium	7.00		U	7.00
138WB5	Tellurium	17.40		U	17.40
138WB5	Thulium	9.00		U	9.00
138WB5	Ytterbium	0.97		U	0.97
138WB6 <sup>d</sup>	Cerium	27.00		U	27.00
138WB6	Dysprosium	2.00		U	2.00
138WB6	Erbium	19.90		=	1.80
138WB6	Europium	2.50		U	2.50
138WB6	Gadolinium	5.90		=	3.80
138WB6	Holmium	7.30		U	7.30

Table A-4  
(continued)

Sample ID*	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB6	Lanthanum	6.60		U	6.60
138WB6	Lithium	7.30		U	7.30
138WB6	Lutetium	1.50		U	1.50
138WB6	Niobium	6.30	UJ	U	6.30
138WB6	Neodymium	10.60		U	10.60
138WB6	Praseodymium	10.90		U	10.90
138WB6	Samarium	12.60		U	12.60
138WB6	Terbium	7.30		U	7.30
138WB6	Tellurium	18.20		U	18.20
138WB6	Thulium	9.30		U	9.30
138WB6	Ytterbium	1.00		U	1.00
138WB7	Cerium	30.40		U	30.40
138WB7	Dysprosium	2.30		U	2.30
138WB7	Erbium	28.40		=	2.00
138WB7	Europium	2.80		U	2.80
138WB7	Gadolinium	4.30		U	4.30
138WB7	Holmium	8.20		U	8.20
138WB7	Lanthanum	7.40		U	7.40
138WB7	Lithium	8.20		U	8.20
138WB7	Lutetium	1.70		U	1.70
138WB7	Niobium	7.10	UJ	U	7.10
138WB7	Neodymium	11.90		U	11.90
138WB7	Praseodymium	12.20		U	12.20
138WB7	Samarium	14.20		U	14.20
138WB7	Terbium	8.20		U	8.20
138WB7	Tellurium	20.50		U	20.50
138WB7	Thulium	10.50		U	10.50

Table A-4  
(continued)

Sample ID <sup>a</sup>	Analyte	Result (mg/kg)	Validation Qualifier	Laboratory Qualifier	Detection Limit (mg/kg)
138WB7	Ytterbium	1.10		U	1.10

<sup>a</sup> Sampling locations are shown in Figures 1 and 2. Locations 5, 6, and 7 are on Westerly Brook, upstream of MISS.

<sup>b</sup> Quality control field rinse blank sample.

<sup>c</sup> Sample 4 is a field duplicate for 1.

<sup>d</sup> Sample 6 is a field duplicate for 5.