

**Table 1**  
**Surface Water Results - 2007**  
**Rocky Flats Site, Colorado**

North Walnut Creek AEU - Pond A-4						
Analyte	Units	2007 Results <sup>1</sup>			Chronic ESL	Acute Criterion
		Sample 1	Sample 2	Sample 3		
Total Ammonia <sup>2</sup>	mg/L	0.01U	0.03U	0.03U	2.2	8.1
Un-ionized Ammonia <sup>3</sup>	mg/L	0.00023U	0.00068U	0.00068U	0.02	0.19
Cyanide	mg/L	0.0024U	0.0015U	0.0015U	0.0005	0.005
Radium-228 <sup>4</sup>	pCi/L	0.472U	0.593	1.81	3.4	NA

South Walnut Creek AEU - Pond B-5						
Analyte	Units	2007 Results <sup>1</sup>			Chronic ESL	Acute Criterion
		Sample 1	Sample 2	Sample 3		
Total Ammonia <sup>2</sup>	mg/L	0.069J	0.03U	0.03U	2.0	6.8
Un-ionized Ammonia <sup>3</sup>	mg/L	0.0018U	0.00078U	0.00078U	0.02	0.199
Cyanide	mg/L	0.0024U	0.0015U	0.0015U	0.0005	0.005
Radium-228 <sup>4</sup>	pCi/L	0.448U	0.687U	0.382U	3.4	NA

Woman Creek AEU - Pond C-2						
Analyte	Units	2007 Results <sup>1</sup>			Chronic ESL	Acute Criterion
		Sample 1	Sample 2	Sample 3		
Total Ammonia <sup>2</sup>	mg/L	0.014J	0.03U	0.03U	2.5	9.6
Un-ionized Ammonia <sup>3</sup>	mg/L	0.00025U	0.00054U	0.00054U	0.02	0.177
Cyanide	mg/L	0.0015U	0.0015U	0.0015U	0.0005	0.005
Radium-228 <sup>4</sup>	pCi/L	0.854U	0.55U	1.34	3.4	NA

AEU = aquatic exposure unit  
 CRA = Comprehensive Risk Assessment  
 ESL = ecological screening level  
 J = estimated  
 mg/L = milligrams per liter  
 pCi/L = picocuries per liter  
 U = nondetect

1 = 3 samples were collected in 2007 from each AEU shown above - samples collected in Feb/March, May, and September  
 2 = CDPHE aquatic life criteria for ammonia currently based on Total ammonia results  
 3 = in CRA, total ammonia results were converted to un-ionized ammonia results and compared to CDPHE aquatic life criteria for un-ionized ammonia; percentages used in CRA were applied to 2007 results to estimate un-ionized ammonia (Table A5.4 in Volume 15B2 of CRA [DOE 2006])  
 4 = updated ESL based on current version of RESRAD BIOTA (Version 1.21); ESL in CRA was based on RESRAD BIOTA 1.0

**Table 2**  
**Sediment Results - 2007**  
**Rocky Flats Site, Colorado**

North Walnut Creek AEU - Pond A-4			
Analyte	Units	2007 Results <sup>1</sup>	ESL
Total Ammonia	mg/kg	229	NA
Cyanide	mg/kg	1.12J	NA
Radium-228	pCi/g	1.53	87.8

South Walnut Creek AEU - Pond B-5			
Analyte	Units	2007 Results <sup>1</sup>	ESL
Total Ammonia	mg/kg	434J	NA
Cyanide	mg/kg	0.353J	NA
Radium-228	pCi/g	0.696U	87.8

Woman Creek AEU - Pond C-2			
Analyte	Units	2007 Results <sup>1</sup>	ESL
Total Ammonia	mg/kg	116J	NA
Cyanide	mg/kg	0.159J	NA
Radium-228	pCi/g	1.59	87.8

AEU = aquatic exposure unit  
 CRA = Comprehensive Risk Assessment  
 ESL = ecological screening level  
 J = estimated  
 mg/kg = milligrams per kilogram  
 pCi/g = picocuries per gram  
 U = nondetect

1 = sediment samples were collected July 13, 2007 from each AEU shown above