

**Table 7.1. Summary of the comprehensive groundwater monitoring program at the Y-12 Plant, 1995<sup>a</sup>**

Hydrogeologic regime/waste disposal site	Requirements <sup>b</sup>	Number of wells
<i>Bear Creek Hydrogeologic Regime</i>		
Bear Creek Springs	EXP	9
Bear Creek surface water	EXP	6
Maynardville Limestone	EXP/RCRA-CM	23
Oil Landfarm	RCRA-AM/SMP	15
Rust Spoil Area	RCRA-AM	2
S-3 Site	RCRA-CM/SMP	10
Spoil Area I	RCRA-AM	2
Y-12 Burial Grounds	RCRA-AM/SMP/RCRA-CM	27
BCV CA Nitrate Assessment	RI/FS	4
BCV CA Radiological Assessment	RI/FS	32
Above-Grade Low-Level Storage Facility	BMP	3
TSD Garage Facility	UST	1
<i>East Fork Poplar Creek Hydrogeologic Regime</i>		
Surface water	EXP	1
Maynardville Limestone	EXP	9
Scarboro Road north of Y-12	EXP	4
Y-12 Plant:	SMP/BMP	73
–Active Facilities		
–S-2 Site		
–Rust Garage		
–Waste Coolant Area		
–Salvage Yard		
–Fire Training Facility		
–Beta-4 Security Pits		
–Grid Network		
New Hope Pond	RCRA-AM	9
Union Valley	EXP/RI/FS	7
<i>Chestnut Ridge Hydrogeologic Regime</i>		
Springs	EXP/BMP	2
Ash Disposal Basin	BMP	4
Chestnut Ridge Security Pits	RCRA-AM	10
East Chestnut Ridge Waste Pile	BMP	4
Kerr Hollow Quarry	RCRA-DM	7
Landfill II	SWDF	3
Chestnut Ridge Borrow Area Waste Pile	BMP	6
Landfill IV	SWDF	5
Landfill V	SWDF	5
Landfill VI	SWDF	7
Landfill VII	SWDF	4

**Table 7.1 (continued)**

Hydrogeologic regime/waste disposal site	Requirements <sup>b</sup>	Number of wells
Rogers Quarry	BMP	4
Sediment Disposal Basin	RCRA-DM	8
United Nuclear Site	ROD	6

<sup>a</sup>Baseline analytical parameters include ICP metals scan; Cd, Cr, Pb by atomic absorption spectroscopy; Hg; U (total); VOCs; major anions; gross alpha; gross beta; pH; conductance; TSS; TDS; turbidity; standard field parameters, including dissolved oxygen, water level, pH, temperature, conductance, and redox potential. RCRA corrective action monitoring in the Bear Creek regime includes <sup>241</sup>Am, <sup>129</sup>I, <sup>237</sup>Np, <sup>238</sup>Pu, total radium, total strontium, <sup>99</sup>Tc, <sup>3</sup>H, <sup>234</sup>U, <sup>235</sup>U, and <sup>238</sup>U. SWDF monitoring required by TDEC Rule 1200-1-7-.04 includes chemical oxygen demand, cyanide, TOC, TOX, ammonia (as N), gamma activity, and additional VOC list required by TDEC Rule 1200-1-7-.04. Analyte lists for some sites were tailored to meet specific programmatic, technical, or regulatory requirements.

<sup>b</sup>BMP = best management practices monitoring; EXP = exit-pathway or perimeter monitoring under DOE Order 5400.1; RCRA-AM = RCRA Assessment Monitoring at interim status units; RCRA-DM = RCRA Detection Monitoring; RCRA-CM = RCRA post-closure corrective action monitoring; SMP = DOE Order 5400.1 surveillance monitoring; UST = petroleum underground storage tank locations; SWDF = monitoring for solid waste disposal facilities under TDEC Rule 1200-1-7-.04; ROD = CERCLA record of decision post-closure monitoring; RI/FS = CERCLA remedial investigation monitoring.