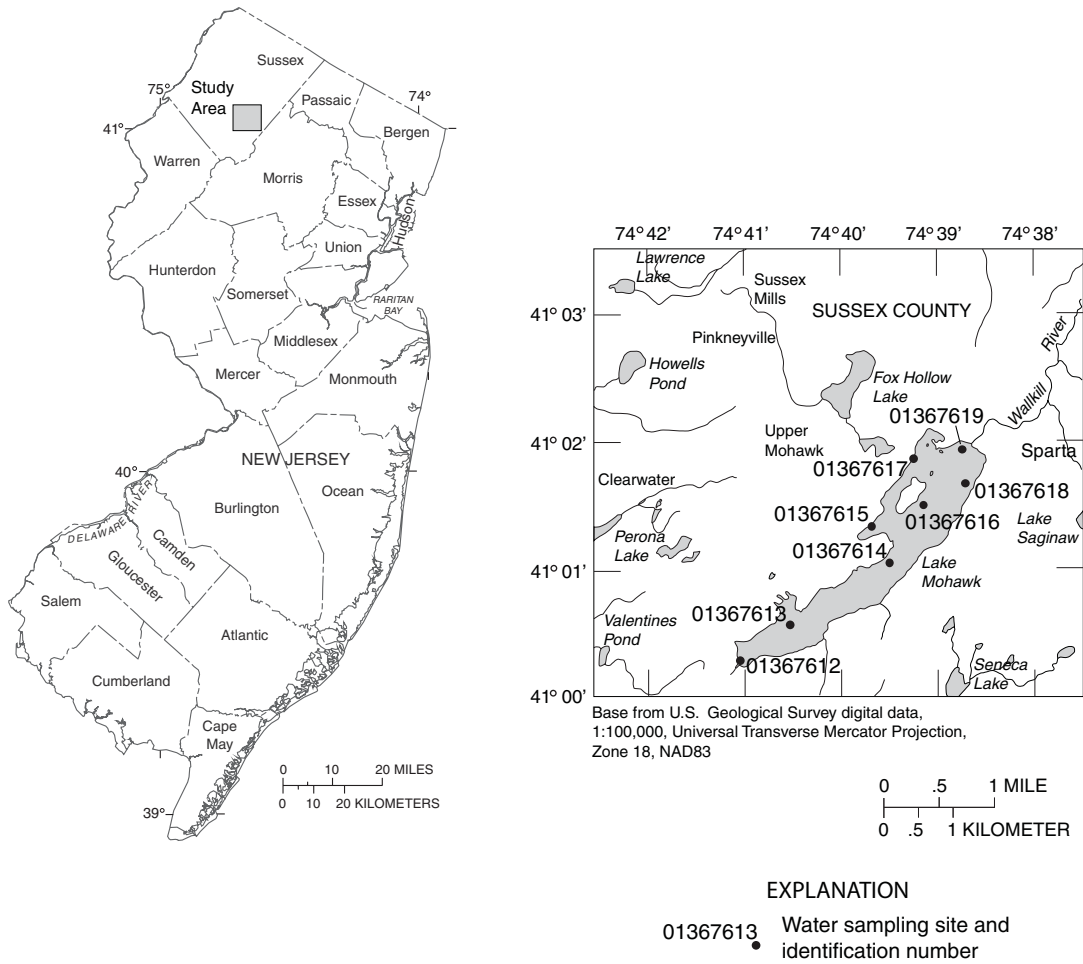


**Figure 45.** Location of surface-water, bed-sediment, and sediment-core sampling sites in the Wallkill River Watershed sampled for selected constituents for the Wallkill River Arsenic Sources Study, water year 2005.

WATER QUALITY AT SPECIAL STUDY SITES  
 WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued



**Figure 46.** Location of surface-water sampling sites in Lake Mohawk sampled for selected constituents for the Wallkill River Arsenic Sources Study, water year 2005.

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

The following tables contain site-information, water-quality data, and (or) sediment chemistry data from 12 surface-water sites on the Wallkill River in Sussex County, nine sites on tributaries to the river, and two sediment-core sites in Franklin Pond, through which the river flows (fig. 45). Also included are water-quality data for the hyporheic zone (the saturated zone beneath the stream channel from which water can discharge to the stream) at seven locations on the river and for a flooded mine shaft at the Sterling Hill mine, one of two abandoned mine sites and waste-rock dumps along the river. Additionally, the tables include water-quality data for eight sites on Lake Mohawk (fig. 46). The lake was constructed in 1927 on the site of a former wetland. Water from the lake outlet forms the headwaters of the Wallkill River.

These sites have been sampled in order to determine sources of arsenic to the river. Previously collected water-quality data from the Wallkill River have indicated that the New Jersey Surface-Water Quality Standard (SWQS) of 0.017 micrograms per liter for arsenic has been exceeded, and, in some cases, the maximum contaminant level for drinking water of 5 micrograms per liter also has been exceeded. The New Jersey Department of Environmental Protection (NJDEP) needed to implement a recently established Total Maximum Daily Load for arsenic for the Wallkill River. To do this, the sources of arsenic and the variability of concentrations needed to be identified. The study of arsenic sources to the Wallkill River is undertaken in cooperation with the NJDEP.

The Wallkill Watershed includes fractured gneiss bedrock formed in the Proterozoic Era in the New Jersey Highlands (New England) Physiographic Province to the east and Paleozoic Era sedimentary rocks of the Valley and Ridge Physiographic Province to the west. The main stem of the river follows Paleozoic dolomite rocks and the Proterozoic Franklin Marble, host to world-famous zinc ores.

Water samples were analyzed to determine concentrations of arsenic, as well as major ions, nutrients, trace elements, dissolved and total organic carbon, and total suspended solids. Field measurements of temperature, pH, specific conductance, and dissolved oxygen were made at each site. Both filtered and unfiltered samples for analysis of arsenic and trace elements were collected. In addition, one site previously sampled to determine diurnal (24-hour) variations in 2004 was resampled bi-hourly during a 24-hour period in order to determine processes causing diurnal variations in concentrations of arsenic and metals such as iron, aluminum, manganese, and zinc.

Water samples from the abandoned mine shaft were collected to determine the chemistry of ground water in contact with local host rock and ore minerals. Sediment cores from Franklin Pond were analyzed to determine arsenic and metal concentrations following recent dredging of Pond sediments. Water samples from Lake Mohawk were collected in order to determine the distribution of arsenic areally and in the water column during a period when arsenic concentrations were found to be elevated.

## WATER-QUALITY CONTROL DATA

The field methods used are described in Techniques of Water Resources Investigations-Book 9-Handbooks for Water Resource Investigations-National Field Manual for the Collection of Water-Quality Data -Chapter A3 Cleaning of Equipment for Water Sampling, edited by F.D. Wilde and others, 1998, Chapter A4 Collection of Water Samples edited by F.D. Wilde and others, 1999, and Chapter A5 Processing of Water Samples edited by F.D. Wilde and others, 1999.

Quality assurance measures consisted of collecting selected split and sequential replicate samples and collecting equipment-blank samples using analyte-free de-ionized water.

Personal protection and safety procedures needed at the sampling sites are described in a Site Specific Job Hazard analysis on file at the U.S. Geological Survey New Jersey Water Science Center in West Trenton, NJ.

	Station Name	Latitude	Longitude	Altitude (feet)	Type of Site	Drainage Area (square miles)
01367612	Lake Mohawk 2.9 mi upstream of dam near Sparta NJ	410016	0744100	730	LK-RES	
	Lake Mohawk 2.2 mi upstream of dam near Sparta NJ	410033	0744030	730	LK-RES	
	Lake Mohawk 1.3 mi upstream of dam near Sparta NJ	410103	0743928	730	LK-RES	
	Lake Mohawk 1.2 mi upstream of dam near Sparta NJ	410119	0743938	730	LK-RES	
	Lake Mohawk 3800 ft upstream of dam at Sparta NJ	410130	0743906	730	LK-RES	
	Lake Mohawk 2200 ft upstream of dam at Sparta NJ	410151	0743912	730	LK-RES	
	Lake Mohawk 2000 ft upstream of dam at Sparta NJ	410139	0743840	730	LK-RES	
	Lake Mohawk 600 ft upstream of dam at Sparta NJ	410155	0743843	730	LK-RES	
	Wallkill R at outflow of Lake Mohawk at Sparta NJ	410159	0743835			4.4
	Wallkill River at Sparta NJ	410225	0743747			5.9
01367638	Glen Brook in Sparta Glen at Sparta NJ	410223	0743716	760	STREAM	4.2
01367640	Wallkill River at South Ogdensburg NJ	410420	0743617	570	STREAM	16.3
01367648	Wallkill River below Passaic Ave at Ogdensburg NJ	410508	0743607	590	STREAM	19.2
01367650	Wallkill River at Ogdensburg NJ	410512	0743540	570	STREAM	19.4
01367690	Franklin Pond Creek at Beaver Lake NJ	410619	0743334	900	STREAM	5.7
01367696	Franklin pond 1500 ft above dam at Franklin NJ	410630	0743514	530	LK-RES	
	Franklin pond 1200 ft above dam at Franklin NJ	410634	0743510	535	LK-RES	
	Wallkill River at Franklin NJ	410643	0743520			29.4
01367701	Wallkill River at Church Street at Franklin NJ	410652	0743528	515	STREAM	30.1
01367702	Wallkill River at Wildcat Road at Franklin NJ	410655	0743540	500	STREAM	30.2
01367705	Wildcat Brook at Maple Road at Franklin NJ	410637	0743619	510	STREAM	2.1
01367715	Wallkill River at Scott Road at Franklin NJ	410800	0743443			40.6
01367718	Wallkill River Trib 3 near Hardistonville NJ	410800	0743317	640	STREAM	1.4
01367729	Wallkill River at Route 94 at Hamburg NJ	410909	0743455	410	STREAM	46.8
01367770	Wallkill River near Sussex NJ	411138	0743431			60.8
01367805	Papakating Creek at Roys NJ	411012	0743923	410	STREAM	18.1
01367902	Clove Brook at Loomis Ave at Sussex NJ	411228	0743633	400	STREAM	19.8
01367909	Papakating Creek at railroad bridge at Sussex NJ	411202	0743606	390	STREAM	
	Quarryville Brook near Sussex NJ	411404	0743421	410	STREAM	4.5
01367990	Wallkill River Trib 2 at Wantage NJ	411421	0743230	470	STREAM	
	Wallkill River near Unionville NY	411536	0743256	379	STREAM	140
410502074361701	Sterling Hill Mine at Ogdensburg NJ	410501	0743616	610	LK-RES	

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES

Station number	Date	Time	Sample type	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Sampling depth, feet (00003)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specific conductance, wat unfltrd lab, uS/cm 25 degC (90095)
01367612	09-27-05	1820	Surface Water	--	--	1.00	9.2	105	8.1	7.7	601
01367613	09-28-05	1838	Surface Water	--	--	1.00	9.3	106	8.3	7.6	592
	09-28-05	1843	<i>Sequential Replicate</i>	--	--	1.00	--	--	--	--	--
	09-28-05	1914	Surface Water	--	--	10.5	5.9	65	7.8	7.2	597
01367614	09-27-05	1614	Surface Water	--	--	1.00	7.9	91	8.1	7.8	605
	09-27-05	1700	Surface Water	--	--	14.0	6.5	74	7.8	7.8	598
01367615	09-27-05	1130	Surface Water	--	--	1.00	8.5	102	8.0	7.2	596
	09-27-05	1230	Surface Water	--	--	6.50	7.5	86	8.0	7.7	601
01367616	09-28-05	0936	Surface Water	--	--	1.00	6.9	80	8.0	7.2	597
	09-28-05	1041	Surface Water	--	--	16.2	5.8	65	7.6	7.8	604
	09-28-05	1046	<i>Sequential Replicate</i>	--	--	16.2	--	--	--	7.2	599
	09-28-05	1131	Surface Water	--	--	16.8	--	--	--	--	--
01367617	09-27-05	1400	Surface Water	--	--	1.00	9.7	114	8.2	7.7	598
	09-27-05	1445	Surface Water	--	--	10.0	7.5	86	8.0	7.1	600
01367618	09-28-05	1652	Surface Water	--	--	1.00	8.3	94	8.2	7.7	595
	09-28-05	1740	Surface Water	--	--	16.0	5.2	59	8	7.0	600
	09-28-05	1745	<i>Sequential Replicate</i>	--	--	16.0	--	--	--	--	--
01367619	09-28-05	1430	Surface Water	--	--	1.00	8.6	101	7.7	7.2	599
	09-28-05	1520	Surface Water	--	--	15.0	4.5	51	--	6.9	594
	09-28-05	1543	Surface Water	--	--	16.0	--	--	--	--	--
01367620	10-13-04	1355	Surface Water	--	6.4	--	8.6	90	8.3	8.0	525
	03-02-05	1300	Surface Water	--	--	--	--	--	7.7	E7.4	563
	03-02-05	1515	<i>Field Blank</i>	--	--	--	--	--	--	--	--
	04-19-05	1310	Surface Water	--	13	--	10.8	114	8.4	8.3	550
	06-07-05	1140	Surface Water	.72	5.4	--	8.7	104	8.3	8.2	566
	07-27-05	1200	Surface Water	.51	1.2	--	8.9	122	7.3	8.1	590
01367625	12-08-04	1330	Surface Water	2.48	11	--	12.1	100	7.9	E7.4	--
	02-14-05	1140	Surface Water	2.27	14	--	13.5	102	8.0	7.9	623
	04-19-05	0940	Surface Water	2.36	17	--	10.6	104	8.2	8.1	595
	07-12-05	1215	Hyporheic Zone	--	--	--	6.0	72	7.5	7.5	733
	07-12-05	1310	Surface Water	--	--	--	11.7	138	7.9	--	--
	08-24-05	1240	Surface Water	1.96	1.2	--	9.4	101	7.9	8.1	864
01367638	10-13-04	1115	Surface Water	--	4.4	--	10.0	93	8.1	7.9	302
01367640	10-13-04	1430	Surface Water	--	16	--	10.0	98	7.8	E7.7	512
	10-13-04	1431	<i>Split Replicate</i>	--	--	--	--	--	--	7.9	482
	04-19-05	1130	Surface Water	--	34	--	--	--	--	7.9	507
01367648	08-03-05	1500	Hyporheic Zone	--	--	--	6.9	73	6.6	7.3	993
	08-03-05	1505	Surface Water	--	--	--	6.5	80	7.4	7.9	764
	08-03-05	2130	<i>Field Blank</i>	--	--	--	--	--	--	5.6	3
01367650	10-13-04	1305	<i>Field Blank</i>	--	--	--	--	--	--	--	--
	10-13-04	1340	Surface Water	--	20	--	10.0	92	7.5	7.9	513
	04-19-05	1215	Surface Water	--	--	--	10.6	102	7.7	8.0	506
	07-11-05	1840	Hyporheic Zone	--	--	--	1.3	16	7.4	7.7	659
	07-11-05	1845	Surface Water	--	--	--	2.8	33	7.4	--	--
01367690	10-13-04	1210	Surface Water	--	6.0	--	10.5	95	7.5	8.0	182
01367700	04-19-05	1515	Surface Water	2.70	--	--	10.0	102	8.3	8.2	479
	04-19-05	1520	<i>Split Replicate</i>	--	--	--	--	--	8.3	8.2	478
	07-12-05	1720	Hyporheic Zone	--	--	--	2.9	37	7.8	8.0	618
	07-12-05	1740	Surface Water	--	--	--	7.7	106	8.0	--	--
	07-12-05	2155	<i>Field Blank</i>	--	--	--	--	--	--	8.4	3
01367701	06-07-05	1530	Surface Water	--	--	--	7.8	96	8.4	8.3	541
01367702	06-07-05	1750	Surface Water	--	--	--	7.4	90	8.3	8.2	549
	07-13-05	1530	Hyporheic Zone	--	--	--	2.5	32	7.3	7.6	734
	07-13-05	1550	Surface Water	--	--	--	7.2	92	8.2	--	--
01367705	10-13-04	1130	Surface Water	--	2.7	--	7.1	66	7.3	7.8	470

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Specif. conduc- tance, wat unft uS/cm (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO <sub>3</sub> (00900)	Noncarb	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
						hard- ness, wat flt lab, mg/L as CaCO <sub>3</sub> (00905)						
01367612	09-27-05	622	19.0	21.9	170	--	39.3	17.8	1.61	2	51.5	39
01367613	09-28-05	599	18.5	21.5	170	--	38.5	17.3	1.52	2	50.4	39
	09-28-05	--	--	--	170	--	39.6	17.7	1.50	2	54.8	41
	09-28-05	604	17.5	20.4	170	--	39.4	17.8	1.64	2	51.3	39
01367614	09-27-05	621	22.5	22.0	170	--	38.1	17.6	1.60	2	50.9	40
	09-27-05	623	27.0	21.4	170	--	37.9	17.6	1.60	2	50.3	39
01367615	09-27-05	622	31.0	21.6	170	--	38.3	17.8	1.65	2	51.1	39
	09-27-05	623	--	21.1	170	--	37.6	17.3	1.59	2	49.4	39
01367616	09-28-05	604	12.0	21.1	160	--	37.2	17.3	1.60	2	49.8	39
	09-28-05	605	24.5	20.9	170	--	38.0	17.2	1.66	2	54.8	42
	09-28-05	--	--	--	170	--	38.1	17.7	1.60	2	51.4	40
01367617	09-28-05	--	--	--	--	--	--	--	--	--	--	--
	09-27-05	621	23.5	21.8	170	--	38.2	17.7	1.67	2	51.1	40
	09-27-05	622	28.5	21.4	170	--	37.9	17.7	1.61	2	50.4	39
01367618	09-28-05	599	24.5	21.6	170	--	38.4	17.9	1.56	2	51.1	39
	09-28-05	601	23.5	20.8	170	--	38.4	17.6	1.65	2	51.0	39
01367619	09-28-05	--	--	--	--	--	--	--	--	--	--	--
	09-28-05	601	35.0	21.6	170	--	38.7	17.6	1.64	2	51.7	40
	09-28-05	603	25.0	20.9	170	--	38.5	17.7	1.57	2	51.2	39
01367620	09-28-05	--	--	--	--	--	--	--	--	--	--	--
	10-13-04	593	20.0	17.6	170	48	39.8	16.5	1.46	2	50.1	39
	03-02-05	597	--	--	--	--	--	--	--	--	--	--
	03-02-05	--	--	--	--	--	--	--	--	--	--	--
	04-19-05	585	--	17.9	170	--	42.0	14.9	1.36	2	48.9	39
01367625	06-07-05	584	24.0	24.3	170	--	38.1	17.3	1.35	2	48.8	39
	07-27-05	618	30.1	30.6	170	--	38.6	17.1	1.53	2	53.8	41
	12-08-04	591	12.0	6.6	150	--	36.7	14.5	1.44	2	53.1	43
	02-14-05	680	1.5	3.6	180	--	43.6	17.4	1.46	2	61.5	42
	04-19-05	633	21.5	14.1	180	--	44.0	15.8	1.47	2	57.2	41
	07-12-05	729	--	24.5	210	33	51.7	20.6	1.87	2	54.8	36
	07-12-05	709	--	23.7	220	67	53.4	22.1	1.80	2	56.8	35
01367638	08-24-05	892	24.5	17.5	290	--	66.4	29.5	2.28	2	71.0	35
	10-13-04	352	19.0	11.9	110	27	27.3	10.2	.97	1	27.2	35
01367640	10-13-04	568	17.5	12.5	170	33	40.9	16.2	1.32	2	44.9	36
	10-13-04	--	--	--	170	36	41.8	16.6	1.36	2	45.3	36
01367648	04-19-05	--	--	--	160	--	39.4	14.7	1.22	2	45.7	38
	08-03-05	1,030	--	17.3	380	71	103	29.7	1.37	1	54.5	24
	08-03-05	772	--	26.1	240	44	56.0	23.7	1.87	2	57.3	34
01367650	08-03-05	--	--	--	--	--	.06	.010	<.16	--	<.20	--
	10-13-04	--	--	--	--	--	.02	<.008	<.010	--	<.20	--
01367690	10-13-04	569	18.0	11.8	190	45	46.1	17.8	1.31	1	47.1	35
	04-19-05	557	28.5	13.4	160	--	40.6	14.3	1.20	2	44.5	37
	07-11-05	680	--	23.8	220	49	55.6	18.7	2.09	1	48.4	33
	07-11-05	647	--	24.3	210	54	51.1	20.2	1.52	1	48.7	33
	10-13-04	214	--	11.2	47	6	12.8	3.75	.78	1	21.1	49
01367700	04-19-05	523	28.0	15.9	150	--	37.7	13.1	1.27	2	43.4	39
	04-19-05	523	--	15.9	150	--	39.3	13.4	1.21	2	45.1	39
	07-12-05	635	--	25.4	210	35	54.0	18.4	2.31	1	41.5	30
	07-12-05	499	--	30.1	160	42	40.7	14.3	1.34	1	40.3	35
	07-12-05	--	--	--	--	--	<.02	<.008	<.16	--	<.20	--
01367701	06-07-05	596	--	25.4	190	--	42.8	18.9	1.39	2	48.4	36
01367702	06-07-05	603	--	25.2	190	--	43.4	19.0	1.42	2	48.4	36
	07-13-05	--	--	26.3	330	40	75.1	33.7	1.60	.8	31.2	17
01367705	07-13-05	538	--	28.0	170	38	41.3	15.2	1.49	1	40.9	35
	10-13-04	522	15.0	10.2	240	35	52.5	26.0	1.18	.7	23.2	17

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Alka- linity, wat flt fxd end lab, mg/L as CaCO <sub>3</sub> (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L (71846)
01367612	09-27-05	--	108	E.1	.62	14.0	307	.45	--	--	.77	.18
01367613	09-28-05	--	108	E.1	.34	13.8	304	.46	--	--	.76	.15
	09-28-05	--	--	--	.35	--	--	--	--	--	.97	.16
01367614	09-28-05	--	108	E.1	.49	13.9	308	.44	--	--	.93	.23
	09-27-05	--	108	E.1	.54	13.8	304	.43	--	--	.83	.25
01367615	09-27-05	--	108	E.1	.56	13.8	304	.46	--	--	.94	.29
	09-27-05	--	108	E.1	.53	13.8	305	.44	--	--	.97	.25
01367616	09-27-05	--	108	E.1	.49	13.8	302	.47	--	--	.99	.28
	09-28-05	--	108	E.1	.49	13.7	302	.47	--	--	.93	.29
	09-28-05	--	108	E.1	.52	13.7	308	.44	--	--	.95	.30
	09-28-05	--	108	E.1	.51	13.8	304	.44	--	--	.98	.28
	09-28-05	--	--	--	--	--	--	--	--	--	180	1.50
01367617	09-27-05	--	108	E.1	.38	13.7	305	.45	--	--	.94	.18
	09-27-05	--	108	E.1	.46	13.9	304	.45	--	--	.99	.22
01367618	09-28-05	--	108	E.1	.41	13.7	305	.48	--	--	1.0	.23
	09-28-05	--	108	E.1	.55	13.9	305	.44	--	--	.97	.32
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367619	09-28-05	--	108	E.1	.41	13.7	306	.48	--	--	.80	.23
	09-28-05	--	107	E.1	.46	13.7	304	.48	--	--	.91	.30
	09-28-05	--	--	--	--	--	--	--	--	--	220	1.02
01367620	10-13-04	120	98.6	.1	1.46	12.5	293	.40	5.06	<10	.80	.09
	03-02-05	--	96.2	--	--	20.2	--	--	--	--	--	--
	03-02-05	--	--	--	--	--	--	--	--	--	--	--
	04-19-05	--	94.7	E.1	.07	18.8	293	.42	10.4	--	.29	--
	06-07-05	--	96.9	E.1	.34	17.6	292	.40	4.22	--	--	--
01367625	07-27-05	--	103	.1	1.00	22.4	305	.42	1.01	--	.83	--
	12-08-04	--	101	E.1	5.3	15.9	298	.40	8.76	8	--	.03
	02-14-05	--	119	E.1	4.1	19.5	347	.48	13.0	--	--	--
	04-19-05	--	109	E.1	2.21	17.9	322	.48	16.7	--	.35	--
	07-12-05	181	111	--	9.02	10.5	369	.50	--	--	--	.21
	07-12-05	158	120	--	6.60	14.9	374	.51	--	--	--	--
	08-24-05	--	144	.1	11.8	17.5	474	.64	1.53	1	--	.05
01367638	10-13-04	83	46.9	.1	11.4	11.0	187	.25	2.22	<10	.15	--
01367640	10-13-04	136	84.2	.1	8.36	11.9	292	.40	12.6	<10	.22	--
	10-13-04	136	84.1	.1	8.48	11.9	294	.40	--	<10	.22	--
01367648	04-19-05	--	84.4	.1	3.85	14.2	276	.39	26.2	--	.30	--
	08-03-05	308	126	--	16.2	16.8	548	.75	--	--	--	--
	08-03-05	193	122	--	8.06	12.3	399	.54	--	--	--	--
	08-03-05	<5	<.20	--	<.04	<.2	--	--	--	--	--	--
01367650	10-13-04	--	--	--	.05	--	--	--	--	--	--	--
	10-13-04	144	84.5	.1	8.72	11.7	306	.42	16.5	<10	.26	--
	04-19-05	--	85.0	.2	4.37	14.0	279	.39	--	--	.23	--
	07-11-05	167	97.4	--	9.72	16.4	352	.48	--	--	--	.44
	07-11-05	157	99.3	--	9.03	15.2	342	.46	--	--	--	--
01367690	10-13-04	42	35.2	E.1	6.51	4.8	110	.15	1.79	<10	.26	--
01367700	04-19-05	--	80.6	.1	3.58	13.2	262	.40	--	--	.25	--
	04-19-05	--	80.9	.1	3.53	13.2	266	.36	--	--	.25	--
	07-12-05	176	89.6	--	15.6	3.5	331	.45	--	--	--	.27
	07-12-05	118	75.6	--	10.5	12.6	267	.36	--	--	--	.06
	07-12-05	<5	<.20	--	<.04	<.2	--	--	--	--	--	--
01367701	06-07-05	--	87.8	.1	7.63	10.2	307	.43	--	<10	.35	--
01367702	06-07-05	--	92.4	.1	7.83	10.7	314	.44	--	<10	.35	--
	07-13-05	286	64.6	--	17.9	12.0	412	.56	--	--	--	.19
	07-13-05	127	80.9	--	10.8	12.9	281	.38	--	--	--	--
01367705	10-13-04	203	40.7	.1	13.7	11.6	291	.40	2.12	<10	.25	--

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	Total nitro- gen, water, unfltrd mg/L (00600)	Ortho- phos- phate, water, fltrd, mg/L (00660)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
01367612	09-27-05	.14	<.06	--	E.004	--	--	<.02	<.04	E.03	4.9	7.1
01367613	09-28-05	.12	<.06	--	<.008	--	--	<.02	<.04	E.03	5.1	7.8
	09-28-05	.12	<.06	--	<.008	--	--	<.02	<.04	.06	5.5	7.4
	09-28-05	.18	<.06	--	E.004	--	--	<.02	<.04	.06	3.5	8.4
01367614	09-27-05	.20	<.06	--	E.007	--	--	<.02	<.04	.05	3.3	7.0
	09-27-05	.23	<.06	--	E.006	--	--	<.02	E.02	.06	3.5	7.5
01367615	09-27-05	.20	<.06	--	E.004	--	--	<.02	<.04	.07	5.4	4.3
	09-27-05	.22	<.06	.026	.008	--	--	<.02	<.04	.06	3.5	9.0
01367616	09-28-05	.22	<.06	--	E.004	--	--	<.02	<.04	.06	5.1	6.9
	09-28-05	.23	<.06	--	E.006	--	--	<.02	<.04	.06	5.9	10.1
	09-28-05	.22	<.06	--	E.004	--	--	<.02	<.04	.07	6.0	7.7
	09-28-05	1.17	<.06	--	<.008	--	--	<.02	E.03	53.2	7.4	E2,730
01367617	09-27-05	.14	<.06	--	E.005	--	--	<.02	<.04	.05	4.1	7.6
	09-27-05	.17	<.06	--	E.005	--	--	<.02	<.04	.06	6.5	7.5
01367618	09-28-05	.18	<.06	--	E.004	--	--	<.02	<.04	.06	6.3	7.6
	09-28-05	.25	<.06	--	E.005	--	--	<.02	<.04	.06	8.0	7.3
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367619	09-28-05	.18	<.06	--	E.004	--	--	<.02	<.04	.05	6.3	6.9
	09-28-05	.23	<.06	--	E.005	--	--	<.02	<.04	.05	6.4	7.2
	09-28-05	.79	<.06	--	<.008	--	--	<.09	E.03	26.6	7.8	5,150
01367620	10-13-04	.07	E.05	--	E.004	--	--	<.02	<.04	E.04	3.3	7.8
	03-02-05	--	--	--	--	--	--	--	--	--	--	--
	03-02-05	--	--	--	--	--	--	--	--	--	--	--
	04-19-05	<.04	E.06	--	<.008	--	--	<.02	<.04	<.04	2.7	5.8
	06-07-05	--	--	--	--	--	--	--	--	--	--	--
	07-27-05	<.04	<.06	--	<.008	--	--	<.02	<.04	.04	3.1	6.2
01367625	12-08-04	.020	.28	.012	.004	.58	--	<.010	.012	.032	3.1	--
	02-14-05	<.040	.48	--	--	.71	--	E.004	.010	.026	2.2	--
	04-19-05	<.04	.31	--	<.008	.66	--	<.02	<.04	E.03	2.3	4.6
	07-12-05	.16	.07	--	<.008	--	.018	.006	--	--	--	--
	07-12-05	E.02	.84	.062	.019	--	.233	.076	--	--	--	--
	08-24-05	.040	1.07	--	--	1.4	.101	.033	.043	.056	1.8	--
01367638	10-13-04	<.04	.42	--	<.008	.57	--	<.02	<.04	<.04	4.6	5.4
01367640	10-13-04	<.04	.39	--	<.008	.62	--	<.02	<.04	<.04	3.2	4.1
	10-13-04	<.04	.40	--	<.008	.62	--	<.02	<.04	<.04	4.6	5.3
	04-19-05	<.04	.25	--	<.008	.55	--	<.02	<.04	E.02	2.5	7.2
01367648	08-03-05	<.04	3.29	--	<.008	--	--	<.006	--	--	--	--
	08-03-05	E.03	.40	--	E.005	--	.018	.006	--	--	--	--
	08-03-05	<.04	<.06	--	<.008	--	--	<.006	--	--	--	--
01367650	10-13-04	--	--	--	--	--	--	--	--	--	--	--
	10-13-04	<.04	.38	--	<.008	.64	--	<.02	<.04	<.04	3.2	3.6
	04-19-05	<.04	.32	--	<.008	.55	--	<.02	<.04	<.04	2.6	6.3
	07-11-05	.34	.18	--	E.004	--	--	E.005	--	--	--	--
	07-11-05	E.02	.51	--	E.005	--	--	E.005	--	--	--	--
01367690	10-13-04	<.04	E.04	--	<.008	--	--	<.02	<.04	<.04	3.2	4.4
01367700	04-19-05	<.04	.21	--	<.008	.46	--	<.02	<.04	<.04	2.8	3.4
	04-19-05	<.04	.21	--	<.008	.46	--	<.02	<.04	<.04	2.5	4.7
	07-12-05	.21	<.06	--	<.008	--	.184	.060	--	--	--	--
	07-12-05	.04	.13	--	E.004	--	.021	.007	--	--	--	--
	07-12-05	<.04	<.06	--	<.008	--	--	<.006	--	--	--	--
01367701	06-07-05	<.04	.25	--	E.006	.61	--	<.02	<.04	E.03	5.0	8.2
01367702	06-07-05	E.02	.27	--	E.007	.62	--	<.02	<.04	E.03	6.4	5.0
	07-13-05	.15	<.06	--	<.008	--	.058	.019	--	--	--	--
	07-13-05	E.04	.15	--	E.005	--	--	E.005	--	--	--	--
01367705	10-13-04	<.04	E.03	--	<.008	--	--	<.02	<.04	<.04	3.7	7.2

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenate, water, fltrd, ug/L as As (62453)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd, ug/L (01002)	Arsenite, water, fltrd, ug/L as As (62452)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, fltrd, ug/L (01010)	Beryllium, water, unfltrd recoverable, ug/L (01012)	Boron, water, fltrd, ug/L (01020)
01367612	09-27-05	38	--	21.0	22.9	27.5	1.7	34.4	--	<.2	<.06	28
01367613	09-28-05	42	--	21.7	23.5	28.3	1.4	33.1	--	<.2	<.06	28
	09-28-05	41	--	21.4	23.4	27.8	1.3	33.2	--	<.2	<.06	28
	09-28-05	34	--	20.6	22.1	30.2	2.0	34.2	--	<.2	<.06	28
01367614	09-27-05	48	--	23.4	24.6	30.0	1.4	32.9	--	<.2	<.06	29
	09-27-05	43	--	22.1	24.0	30.5	1.6	32.7	--	<.2	<.06	28
01367615	09-27-05	44	--	23.3	25.2	30.8	1.5	33.6	--	<.2	<.06	29
	09-27-05	35	--	23.0	25.1	30.2	1.9	32.4	--	<.2	E.03	28
01367616	09-28-05	40	--	22.5	24.7	29.9	1.3	32.8	--	<.2	<.06	29
	09-28-05	39	--	22.8	22.7	31.0	1.3	36.2	--	<.2	<.06	33
	09-28-05	40	--	21.9	23.1	31.5	1.6	34.4	--	<.2	<.06	30
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367617	09-27-05	41	--	22.9	25.2	30.3	1.6	32.6	--	<.2	<.06	28
	09-27-05	42	--	21.7	24.2	30.5	1.7	32.5	--	<.2	<.06	29
01367618	09-28-05	42	--	22.9	24.5	29.8	1.2	32.7	--	<.2	<.06	28
	09-28-05	43	--	20.7	22.2	30.1	2.1	32.5	--	<.2	<.06	28
	09-28-05	--	--	20.4	--	--	2.0	--	--	--	--	--
01367619	09-28-05	45	--	22.5	24.3	29.9	1.3	32.6	--	<.2	<.06	29
	09-28-05	45	--	22.5	24.5	31.3	1.7	32.2	--	<.2	<.06	28
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367620	10-13-04	60	.27	--	16.5	21	--	30.7	29.4	<.2	<.06	25
	03-02-05	4	--	1.8	3.7	3	E.4	30.5	--	--	--	27
	03-02-05	<2	--	--	<.2	--	--	<1.0	--	--	--	<8
	04-19-05	2	--	1.2	3.1	3	1.5	29.4	--	--	--	23
	06-07-05	18	--	5.2	6.6	8	E.3	27.1	--	--	--	21
01367625	07-27-05	636	--	24.5	27.7	34	3.0	--	--	--	--	25
	12-08-04	14	--	--	3.3	4	--	25	--	--	--	19
	02-14-05	8	--	--	2.5	<2	--	28.5	--	--	--	19
	04-19-05	6	--	1.7	2.9	3	1.0	29.1	--	--	--	20
	07-12-05	4	--	--	2.6	--	--	--	--	--	--	--
	07-12-05	32	--	--	13.5	--	--	--	--	--	--	--
	08-24-05	7	--	--	4.9	5.3	--	--	--	--	--	25
01367638	10-13-04	11	<.20	--	.2	<2	--	16.6	15.1	<.2	<.06	12
01367640	10-13-04	6	E.11	--	3.1	4	--	24.3	24.4	<.2	<.06	16
	10-13-04	6	E.11	--	3.3	3	--	24.8	24.8	<.2	<.06	17
01367648	04-19-05	4	--	<.8	1.5	E2	E.5	26.0	--	--	--	16
	08-03-05	M	--	--	2.0	--	--	--	--	--	--	--
	08-03-05	4	--	--	4.5	--	--	--	--	--	--	--
	08-03-05	<2	--	--	<.2	--	--	--	--	--	--	--
01367650	10-13-04	<2	<.20	--	<.2	--	--	<1.0	--	<.2	--	<7.0
	10-13-04	3	<.20	--	2.2	E2	--	24.0	22.3	<.2	<.06	18
	04-19-05	5	--	E.5	1.3	2	E.5	29.1	--	--	--	17
	07-11-05	4	--	--	2.2	--	--	--	--	--	--	--
	07-11-05	5	--	--	3.4	--	--	--	--	--	--	--
01367690	10-13-04	4	<.20	--	.3	<2	--	11.9	12.6	<.2	<.06	9.2
01367700	04-19-05	6	--	E.5	1.2	E2	E.4	21.9	--	--	--	16
	04-19-05	7	--	E.4	1.2	3	E.5	22.1	--	--	--	16
	07-12-05	20	--	--	6.9	--	--	--	--	--	--	--
	07-12-05	3	--	--	3.6	--	--	--	--	--	--	--
	07-12-05	<2	--	--	<.2	--	--	--	--	--	--	--
01367701	06-07-05	6	--	1.3	3.2	4	1.0	22.7	--	--	--	18
01367702	06-07-05	6	--	1.5	3.3	4	.9	30.5	31.1	<.2	<.06	21
	07-13-05	5	--	--	22.0	--	--	--	--	--	--	--
	07-13-05	3	--	--	4.3	--	--	--	--	--	--	--
01367705	10-13-04	E1	<.20	--	.2	<2	--	17.3	15.4	<.2	<.06	7.2



## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Boron, water, unfltrd recover- able, ug/L (01022)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, fltrd, ug/L (01030)	Chrom- ium, water, unfltrd recover- able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover- able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)
01367612	09-27-05	37	<2	<.04	--	--	--	3	7.2	15	120	.09
01367613	09-28-05	33	<2	<.04	--	--	--	4	6.1	15	100	E.07
	09-28-05	32	<2	E.02	--	--	--	3	6.3	24	100	E.06
	09-28-05	26	<2	<.04	--	--	--	2	22.3	17	290	E.07
01367614	09-27-05	22	<2	<.04	--	--	--	3	7.2	20	120	.10
	09-27-05	23	<2	<.04	--	--	--	4	14.7	23	220	.10
01367615	09-27-05	30	<2	<.04	--	--	--	3	8.9	24	120	.08
	09-27-05	24	<2	<.04	--	--	--	4	11.9	20	150	E.07
01367616	09-28-05	35	<2	E.02	--	--	--	3	10.9	25	140	.08
	09-28-05	24	<2	<.04	--	--	--	<2	15.3	34	220	E.06
	09-28-05	26	<2	<.04	--	--	--	3	16.1	24	230	E.06
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367617	09-27-05	29	<2	<.04	--	--	--	5	10.4	24	120	.11
	09-27-05	29	<2	<.04	--	--	--	3	17.0	23	190	.11
01367618	09-28-05	34	<2	<.04	--	--	--	3	7.9	16	120	.08
	09-28-05	35	<2	<.04	--	--	--	3	14.0	28	230	E.07
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367619	09-28-05	34	<2	<.04	--	--	--	4	8.3	22	120	.10
	09-28-05	35	<2	<.04	--	--	--	2	12.7	21	190	E.07
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367620	10-13-04	21	<2	<.04	E1	<.8	<2	5	9.3	17	90	E.04
	03-02-05	23	--	--	--	--	--	3.8	6.7	E6	M	--
	03-02-05	--	--	--	--	--	--	<.4	--	--	<6	--
	04-19-05	24	<2	<.04	--	--	--	E2	3.2	<6	30	E.04
	06-07-05	24	<2	<.04	--	--	--	4	4.8	<6	30	<.08
	07-27-05	--	--	--	--	--	--	E2	3.2	<6	60	--
01367625	12-08-04	19	--	--	--	--	--	2.6	4.6	29	140	--
	02-14-05	15	--	--	--	--	--	--	--	22	680	--
	04-19-05	21	<2	<.04	--	--	--	E1	3.0	25	130	E.05
	07-12-05	--	--	--	--	--	--	--	--	E5	--	--
	07-12-05	--	--	--	--	--	--	--	--	59	--	--
	08-24-05	--	E.03	--	--	--	--	--	--	56	210	--
01367638	10-13-04	E7	<2	<.04	<2	<.8	<2	E1	1.3	105	130	.12
01367640	10-13-04	16	<2	<.04	<2	<.8	<2	4	2.4	112	400	<.08
	10-13-04	15	<2	<.04	<2	<.8	<2	4	2.4	112	400	<.08
	04-19-05	16	<2	<.04	--	--	--	<2	1.5	109	380	<.08
01367648	08-03-05	--	--	--	--	--	--	--	--	<6	--	--
	08-03-05	--	--	--	--	--	--	--	--	22	--	--
	08-03-05	--	--	--	--	--	--	--	--	<6	--	--
01367650	10-13-04	--	<2	--	<2	--	<2	<2	--	<6	--	<.08
	10-13-04	18	<2	<.04	E1	<.8	<2	2	1.8	92	300	E.05
	04-19-05	16	<2	E.02	--	--	--	3	1.2	108	290	.08
	07-11-05	--	--	--	--	--	--	--	--	27	--	--
	07-11-05	--	--	--	--	--	--	--	--	82	--	--
01367690	10-13-04	E7	<2	<.04	<2	<.8	<2	<2	.8	113	300	E.05
01367700	04-19-05	16	<2	E.03	--	--	--	E1	1.3	70	260	.09
	04-19-05	15	<2	E.02	--	--	--	E1	1.3	70	260	.12
	07-12-05	--	--	--	--	--	--	--	--	<6	--	--
	07-12-05	--	--	--	--	--	--	--	--	74	--	--
	07-12-05	--	--	--	--	--	--	--	--	<6	--	--
01367701	06-07-05	20	<2	E.02	--	--	--	<2	1.7	182	390	.14
01367702	06-07-05	23	<2	<.04	--	--	<2	3	1.6	171	360	.20
	07-13-05	--	--	--	--	--	--	--	--	3,520	--	--
	07-13-05	--	--	--	--	--	--	--	--	43	--	--
01367705	10-13-04	<8	<2	<.04	E1	<.8	<2	E1	.6	24	80	<.08

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Lead, water, unfltrd recover- able, ug/L (01051)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover- able, ug/L (01062)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover- able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)
01367612	09-27-05	.38	<2	11.9	108	--	--	--	--	--	E.05	--
01367613	09-28-05	.29	<2	2.6	126	--	--	--	--	--	E.06	--
	09-28-05	.38	<2	2.8	125	--	--	--	--	--	E.05	--
	09-28-05	1.43	<2	29.3	207	--	--	--	--	--	E.07	--
01367614	09-27-05	.33	<2	4.3	131	--	--	--	--	--	E.05	--
	09-27-05	.87	<2	9.1	140	--	--	--	--	--	E.06	--
01367615	09-27-05	.43	<2	6.1	130	--	--	--	--	--	E.05	--
	09-27-05	.55	<2	11.1	123	--	--	--	--	--	E.05	--
01367616	09-28-05	.42	<2	4.9	140	--	--	--	--	--	E.06	--
	09-28-05	.83	<2	216	165	--	--	--	--	--	E.06	--
	09-28-05	1.41	<2	68.3	168	--	--	--	--	--	E.07	--
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367617	09-27-05	.57	<2	6.8	111	--	--	--	--	--	E.04	--
	09-27-05	1.12	<2	11.6	130	--	--	--	--	--	E.07	--
01367618	09-28-05	.34	<2	3.5	124	--	--	--	--	--	E.06	--
	09-28-05	.79	<2	37.9	179	--	--	--	--	--	E.06	--
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367619	09-28-05	.35	<2	4.3	126	--	--	--	--	--	E.06	--
	09-28-05	.66	<2	22.3	157	--	--	--	--	--	E.07	--
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367620	10-13-04	.31	<2	7.3	85.0	<4	E.2	M	1.05	<4	E.4	<3
	03-02-05	--	--	1.3	1.4	--	--	--	--	--	--	--
	03-02-05	--	--	<2	--	--	--	--	--	--	--	--
	04-19-05	.11	<2	2.3	17.2	--	--	--	--	--	--	--
	06-07-05	.15	<2	2.3	29.5	--	--	--	--	--	--	--
	07-27-05	--	--	3.4	91.8	--	--	--	--	--	--	--
01367625	12-08-04	--	--	14.6	33	E.3	.3	--	--	--	--	--
	02-14-05	--	--	17.3	132	--	--	--	--	--	--	--
	04-19-05	.81	<2	16.2	32.6	--	--	--	--	--	--	--
	07-12-05	--	--	555	--	--	--	--	--	--	--	--
	07-12-05	--	--	18.1	--	--	--	--	--	--	--	--
	08-24-05	--	--	18.6	32.3	--	--	--	--	--	--	--
01367638	10-13-04	.10	<2	16.5	17.9	<4	.3	M	.66	<4	E.3	<3
01367640	10-13-04	.16	<2	75.2	82.4	<4	.4	<2	1.12	<4	.4	<3
	10-13-04	.18	<2	76.4	82.7	<4	.4	<2	1.16	<4	.5	<3
	04-19-05	.29	<2	98.9	116	--	--	--	--	--	--	--
01367648	08-03-05	--	--	.7	--	--	--	--	--	--	--	--
	08-03-05	--	--	288	--	--	--	--	--	--	--	--
	08-03-05	--	--	1.6	--	--	--	--	--	--	--	--
01367650	10-13-04	--	<2	<6	--	<4	--	<2	--	<4	--	<3
	10-13-04	.23	<2	83.8	90.8	<4	.4	M	.97	<4	E.3	<3
	04-19-05	.23	<2	107	112	--	--	--	--	--	--	--
	07-11-05	--	--	1,960	--	--	--	--	--	--	--	--
	07-11-05	--	--	115	--	--	--	--	--	--	--	--
01367690	10-13-04	.18	<2	18.2	57.3	<4	E.1	<2	.54	<4	E.4	<3
01367700	04-19-05	.47	<2	89.2	108	--	--	--	--	--	--	--
	04-19-05	.49	<2	88.1	109	--	--	--	--	--	--	--
	07-12-05	--	--	360	--	--	--	--	--	--	--	--
	07-12-05	--	--	25.8	--	--	--	--	--	--	--	--
	07-12-05	--	--	<6	--	--	--	--	--	--	--	--
01367701	06-07-05	.55	<2	213	324	--	--	--	--	--	--	--
01367702	06-07-05	.49	<2	180	270	E3	--	--	.91	--	.6	--
	07-13-05	--	--	579	--	--	--	--	--	--	--	--
	07-13-05	--	--	35.6	--	--	--	--	--	--	--	--
01367705	10-13-04	E.04	E1	23.8	23.2	<4	.5	M	1.00	<4	E.4	E2

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Silver, water, unfltrd recover- able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Stront- ium, water, unfltrd recover- able, ug/L (01082)	Vanad- ium, water, fltrd, ug/L (01085)	Vanad- ium, water, unfltrd ug/L (01087)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)	Di- methyl- arsin- ate, wat flt ug/L as As (62455)	Mono- methyl- arson- ate, wat flt ug/L as As (62454)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
01367612	09-27-05	--	89.8	--	--	--	<6	E1	E.4	<1.2	--	--
01367613	09-28-05	--	85.8	--	--	--	<6	<2	E.4	<1.2	--	--
	09-28-05	--	86.8	--	--	--	<6	E1	E.3	<1.2	--	--
	09-28-05	--	89.6	--	--	--	<6	3	E.4	<1.2	--	--
01367614	09-27-05	--	87.7	--	--	--	<6	<2	E.4	<1.2	--	--
	09-27-05	--	86.6	--	--	--	<6	E2	E.4	<1.2	--	--
01367615	09-27-05	--	87.0	--	--	--	<6	E1	E.4	<1.2	--	--
	09-27-05	--	87.4	--	--	--	<6	E1	E.5	<1.2	--	--
01367616	09-28-05	--	86.3	--	--	--	<6	E1	E.4	<1.2	--	--
	09-28-05	--	35.0	--	--	--	<6	E2	E.4	<1.2	--	--
	09-28-05	--	86.4	--	--	--	<6	E2	E.4	<1.2	--	--
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367617	09-27-05	--	88.5	--	--	--	<6	E1	E.5	<1.2	--	--
	09-27-05	--	87.9	--	--	--	<6	2	E.4	<1.2	--	--
01367618	09-28-05	--	85.8	--	--	--	<6	E1	E.4	<1.2	--	--
	09-28-05	--	90.2	--	--	--	<6	E2	E.4	<1.2	--	--
	09-28-05	--	--	--	--	--	--	--	E.4	<1.2	--	--
01367619	09-28-05	--	87.5	--	--	--	<6	E1	E.4	<1.2	--	--
	09-28-05	--	88.2	--	--	--	<6	E1	E.4	<1.2	--	--
	09-28-05	--	--	--	--	--	--	--	--	--	--	--
01367620	10-13-04	<.16	91.7	83.6	E1	<2	<6	E2	--	--	.37	.403
	03-02-05	--	--	--	--	--	4.0	12	<.6	<1.2	--	--
	03-02-05	--	--	--	--	--	E.5	--	--	--	--	--
	04-19-05	--	86.8	--	--	--	<6	E1	E.3	<1.2	--	--
	06-07-05	--	83.0	--	--	--	12	E1	E.3	<1.2	--	--
01367625	07-27-05	--	--	--	--	--	<6	E1	.7	E.6	--	--
	12-08-04	--	--	--	--	--	1.5	3	--	--	--	--
	02-14-05	--	--	--	--	--	4.7	13	--	--	--	--
	04-19-05	--	92.7	--	--	--	<6	3	<.6	<1.2	--	--
	07-12-05	--	--	--	--	--	5.5	--	--	--	--	--
	07-12-05	--	--	--	--	--	5.3	--	--	--	--	--
	08-24-05	--	--	--	--	--	--	12	--	--	--	--
01367638	10-13-04	<.16	70.4	62.4	<2	<2	E6	5	--	--	.30	--
01367640	10-13-04	<.16	92.5	89.6	<2	<2	<6	3	--	--	.58	.612
	10-13-04	<.16	93.5	89.8	<2	<2	<6	3	--	--	.60	.619
01367648	04-19-05	--	87.6	--	--	--	<6	4	<.6	<1.2	--	--
	08-03-05	--	--	--	--	--	1,290	--	--	--	--	--
	08-03-05	--	--	--	--	--	5.6	--	--	--	--	--
	08-03-05	--	--	--	--	--	1.0	--	--	--	--	--
01367650	10-13-04	--	<1.0	--	<2	--	<6	--	--	--	<.04	--
	10-13-04	<.16	111	97.1	<2	<2	12	19	--	--	.66	.701
	04-19-05	--	95.4	--	--	--	19	14	<.6	<1.2	--	--
	07-11-05	--	--	--	--	--	57.1	--	--	--	--	--
	07-11-05	--	--	--	--	--	7.7	--	--	--	--	--
01367690	10-13-04	<.16	53.1	52.2	<2	<2	<6	2	--	--	<.04	E.009
01367700	04-19-05	--	96.7	--	--	--	9	18	<.6	<1.2	--	--
	04-19-05	--	95.3	--	--	--	12	18	<.6	<1.2	--	--
	07-12-05	--	--	--	--	--	5.5	--	--	--	--	--
	07-12-05	--	--	--	--	--	5.4	--	--	--	--	--
	07-12-05	--	--	--	--	--	E.5	--	--	--	--	--
01367701	06-07-05	--	112	--	--	--	7	14	<.6	<1.2	--	--
01367702	06-07-05	--	117	--	<2	--	7	13	<.6	<1.2	--	--
	07-13-05	--	--	--	--	--	.7	--	--	--	--	--
	07-13-05	--	--	--	--	--	3.9	--	--	--	--	--
01367705	10-13-04	<.16	62.8	55.5	E1	<2	<6	<2	--	--	1.21	1.26

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Time	Sample type	Gage height, feet (00065)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, uS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, uS/cm 25 degC (00095)
01367715	04-19-05	1140	Surface Water	--	87	10.8	107	8.0	8.1	493	509
	07-13-05	1210	Hyporheic Zone	--	--	7.3	88	7.8	7.9	576	593
	07-13-05	1245	Surface Water	--	--	9.8	121	8.0	--	--	549
01367718	10-28-04	1200	Surface Water	--	1.0	10.1	91	7.4	8.0	135	136
01367729	04-19-05	1355	Surface Water	--	95	11.0	114	8.2	8.4	511	536
	08-04-05	1230	Hyporheic Zone	--	--	5.7	70	7.6	7.9	698	708
	08-04-05	1300	Surface Water	--	--	10.4	131	8.3	8.4	820	--
01367770	12-08-04	1030	Surface Water	3.71	206	11.4	88	7.4	7.6	397	428
	02-14-05	0950	Surface Water	1.70	77	13.0	93	7.6	7.6	540	588
	04-19-05	1030	Surface Water	2.16	99	9.5	93	8.1	7.9	525	521
	06-08-05	1150	Surface Water	1.65	53	8.0	94	7.7	8.0	570	626
	08-04-05	1630	Hyporheic Zone	--	--	10.4	132	7.8	8.3	788	815
	08-04-05	1700	Surface Water	--	--	11.2	141	7.8	8.3	788	806
	08-24-05	1010	Surface Water	1.50	11	7.7	86	7.8	7.9	778	778
	09-13-05	1215	Surface Water	--	--	9.1	--	--	--	--	871
	09-13-05	1400	Surface Water	2.25	--	9.4	--	7.9	--	--	872
	09-13-05	1600	Surface Water	2.23	--	10.3	10	8.0	--	--	877
	09-13-05	1800	Surface Water	2.23	--	10.5	120	8.0	--	--	874
	09-13-05	1905	Field Blank	--	--	--	--	--	--	--	--
	09-13-05	2005	Surface Water	2.24	--	10.6	122	8.1	--	--	853
	09-13-05	2215	Surface Water	2.24	--	9.9	113	8.1	--	--	847
	09-14-05	0010	Surface Water	2.24	--	9.2	104	8.1	--	--	851
	09-14-05	0210	Surface Water	2.26	--	8.2	92	8.0	--	--	858
	09-14-05	0400	Surface Water	--	--	7.0	79	7.9	--	--	898
	09-14-05	0600	Surface Water	2.27	--	6.8	75	7.8	--	--	914
	09-14-05	0800	Surface Water	2.29	--	6.5	72	7.8	--	--	920
	09-14-05	1000	Surface Water	2.29	--	6.7	73	--	--	--	899
	09-14-05	1200	Surface Water	2.29	--	7.7	85	7.9	--	--	880
	09-14-05	1215	Surface Water	--	--	--	--	--	--	--	--
01367805	10-28-04	1100	Field Blank	--	--	--	--	--	--	--	--
	10-28-04	1200	Surface Water	--	16	12.2	106	7.4	8.1	333	366
01367902	10-28-04	1030	Surface Water	--	--	11.1	99	7.8	7.6	244	271
	10-28-04	1350	Surface Water	--	14	12.2	110	8.0	8.0	251	278
01367909	10-28-04	1230	Surface Water	--	46	10.7	96	7.5	8.0	297	309
01367950	10-28-04	0950	Surface Water	--	3.2	12.1	103	7.5	7.9	239	248
	10-28-04	0951	Split Replicate	--	--	--	--	--	7.9	238	--
01367990	10-28-04	1530	Surface Water	--	.80	10.7	95	7.8	8.0	383	398
01368000	12-08-04	1130	Surface Water	5.28	516	12.4	94	7.2	6.7	295	319
	02-14-05	0940	Surface Water	4.17	211	12.7	91	7.4	E6.9	393	423
	04-19-05	1220	Surface Water	4.23	253	9.8	98	8.1	7.9	426	425
	06-08-05	1000	Surface Water	3.64	93	6.2	73	7.3	7.8	486	513
	08-24-05	1000	Surface Water	2.92	15	6.3	75	7.7	8.2	623	654
410502074361701	12-09-04	1445	Field Blank	--	--	--	--	--	7.9	E3	--
	12-09-04	1450	Surface Water	--	--	.1	1	8.1	8.0	578	517
	12-21-04	1355	Surface Water	--	--	--	--	--	7.9	578	--
	12-21-04	1420	Surface Water	--	--	--	--	--	E7.6	573	--

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)	Noncarb hardness, wat flt lab, mg/L as CaCO <sub>3</sub> (00905)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt fxd end lab, mg/L as CaCO <sub>3</sub> (29801)
01367715	04-19-05	24.0	14.7	170	--	42.3	16.2	1.40	1	37.4	32	--
	07-13-05	--	25.2	240	57	55.3	24.8	1.88	.9	33.2	23	183
	07-13-05	--	25.4	200	38	46.1	21.3	1.47	1	33.9	26	165
01367718	10-28-04	13.5	10.9	69	6	16.2	7.01	.54	.1	1.79	5	64
01367729	04-19-05	29.0	16.9	180	--	44.9	16.9	1.87	1	40.6	32	--
01367770	08-04-05	--	25.8	270	52	59.9	29.0	2.93	1	40.4	24	217
	08-04-05	--	26.8	310	51	69.7	31.8	2.64	1	46.9	25	254
	12-08-04	12.5	3.8	140	--	34.0	14.2	1.45	1	29.2	30	--
	02-14-05	-5	1.8	220	--	52.1	22.6	1.82	1	35.4	25	--
	04-19-05	16.5	13.4	200	--	48.9	19.3	1.64	1	37.4	29	--
	06-08-05	30.5	22.9	230	--	51.7	25.1	1.98	1	43.0	28	--
	08-04-05	--	27.6	260	58	58.6	28.3	4.89	2	56.7	31	204
	08-04-05	--	27.1	260	57	58.9	28.1	4.83	2	56.5	31	206
	08-24-05	24.0	19.9	280	--	62.1	30.8	4.12	1	52.5	28	--
	09-13-05	--	18.8	300	68	66.0	33.1	--	--	--	--	233
	09-13-05	--	19.6	300	71	66.0	33.1	--	--	--	--	230
	09-13-05	32.0	20.6	300	71	65.4	32.7	--	--	--	--	227
	09-13-05	29.0	21.3	290	68	64.5	32.3	--	--	--	--	226
	09-13-05	--	--	--	--	<.02	<.008	--	--	--	--	<5
	09-13-05	20.5	21.7	300	68	64.9	32.5	--	--	--	--	228
	09-13-05	19.0	21.8	290	65	64.2	32.5	--	--	--	--	229
	09-14-05	18.0	21.5	300	70	65.4	32.9	--	--	--	--	229
09-14-05	16.0	21.1	300	80	67.0	33.1	--	--	--	--	224	
09-14-05	14.0	20.4	300	73	64.8	32.8	--	--	--	--	224	
09-14-05	13.0	19.8	310	80	67.7	33.0	--	--	--	--	225	
09-14-05	17.0	19.2	300	74	66.9	33.1	--	--	--	--	229	
09-14-05	25.0	19.2	310	79	67.5	33.3	--	--	--	--	226	
09-14-05	28.0	19.6	310	75	68.2	33.5	--	--	--	--	233	
09-14-05	--	--	310	77	67.7	33.2	--	--	--	--	229	
01367805	10-28-04	--	--	--	--	E.01	<.008	<.010	--	<.20	--	--
01367902	10-28-04	12.0	9.4	140	39	44.6	5.91	1.78	.8	21.3	25	97
	10-28-04	5.0	10.3	80	--	25.9	3.71	1.99	1	20.9	36	--
	10-28-04	13.0	11.4	82	24	26.5	3.80	1.99	1	21.2	35	58
01367909	10-28-04	--	10.0	110	31	35.3	4.92	2.12	.9	22.0	30	78
01367950	10-28-04	9.0	8.1	97	23	29.5	5.72	1.78	.6	12.6	22	74
01367990	10-28-04	--	--	98	24	29.9	5.78	1.83	.6	12.8	22	74
	10-28-04	16.0	10.4	150	48	42.5	11.6	1.43	.8	24.0	25	106
	12-08-04	13.5	3.4	94	--	25.7	7.30	1.66	1	22.6	34	--
01368000	02-14-05	.0	1.3	--	--	E35.3	E11.2	1.50	--	30.5	--	--
	04-19-05	24.0	14.9	150	--	39.4	12.5	1.56	1	30.6	30	--
410502074361701	06-08-05	28.5	22.7	180	--	43.6	17.7	1.94	1	34.2	29	--
	08-24-05	24.0	23.1	220	--	53.5	21.8	3.30	1	41.5	28	--
	12-09-04	--	--	--	--	<.02	<.008	<.010	--	<.20	--	<2
	12-09-04	--	12.0	220	93	67.8	12.2	18.8	.8	27.9	20	128
	12-21-04	--	--	220	92	66.9	12.1	18.6	.9	29.3	21	126
	12-21-04	--	--	220	90	66.4	12.0	18.9	.9	29.2	21	127
	12-21-04	--	--	220	90	66.4	12.0	18.9	.9	29.2	21	127

## WATER QUALITY AT SPECIAL STUDY SITES

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L (71846)	Ammonia water, fltrd, mg/L as N (00608)
01367715	04-19-05	68.1	.1	3.61	13.8	268	.38	65.4	--	.26	--	<.04
	07-13-05	69.1	--	11.7	18.6	327	.44	--	--	--	.18	.14
	07-13-05	66.6	--	10.1	13.6	293	.40	--	--	--	--	E.02
01367718	10-28-04	1.74	E.1	9.14	7.9	83	.11	.22	<10	.12	--	<.04
01367729	04-19-05	72.7	.1	3.83	14.3	285	.40	74.6	--	.29	--	<.04
01367770	08-04-05	83.9	--	11.4	20.5	387	.53	--	--	--	--	<.04
	08-04-05	101	--	12.0	19.9	442	.60	--	--	--	--	<.04
	12-08-04	51.4	E.1	8.1	12.6	228	.31	128	7	--	.03	.022
	02-14-05	62.9	.1	7.6	16.7	317	.43	66.2	--	--	.14	.105
	04-19-05	66.4	.1	3.61	14.5	292	.41	80.0	--	.29	--	E.03
	06-08-05	79.1	.1	8.0	12.9	337	.47	49.5	--	--	.08	.061
	08-04-05	110	--	8.96	20.9	434	.59	--	--	--	.06	.04
	08-04-05	109	--	8.89	20.8	433	.59	--	--	--	.06	.05
	08-24-05	102	.1	10.8	20.1	427	.59	12.3	2	--	.08	.063
	09-13-05	111	--	--	24.4	--	--	--	--	--	.05	.036
	09-13-05	113	--	--	24.8	--	--	--	--	--	.05	.036
	09-13-05	114	--	--	25.1	--	--	--	--	--	.05	.038
09-13-05	114	--	--	25.0	--	--	--	--	--	.05	.036	
09-13-05	<.20	--	--	<.2	--	--	--	--	--	--	--	E.005
09-13-05	111	--	--	24.8	--	--	--	--	--	.05	.037	
09-13-05	110	--	--	24.6	--	--	--	--	--	.05	.036	
09-14-05	111	--	--	24.6	--	--	--	--	--	.04	.034	
09-14-05	115	--	--	24.9	--	--	--	--	--	.05	.039	
09-14-05	123	--	--	25.5	--	--	--	--	--	.06	.044	
09-14-05	127	--	--	26.0	--	--	--	--	--	.06	.048	
09-14-05	125	--	--	26.0	--	--	--	--	--	.06	.048	
09-14-05	120	--	--	25.6	--	--	--	--	--	.06	.048	
09-14-05	115	--	--	25.2	--	--	--	--	--	.06	.045	
09-14-05	114	--	--	25.1	--	--	--	--	--	.05	.040	
01367805	10-28-04	--	--	<.04	--	--	--	--	--	--	--	--
01367902	10-28-04	39.4	E.1	9.01	18.0	202	.27	8.79	<10	.24	--	<.04
	10-28-04	37.5	<.1	5.8	13.1	145	.20	--	7	--	.02	.012
	10-28-04	37.6	E.1	5.91	13.1	147	.20	5.56	<10	.39	--	E.03
01367909	10-28-04	39.7	E.1	7.07	15.2	176	.24	21.6	<10	.30	--	<.04
01367950	10-28-04	24.7	E.1	5.64	14.1	141	.19	1.21	<10	.20	--	<.04
01367990	10-28-04	24.4	E.1	5.66	14.1	141	.19	--	<10	.20	--	<.04
	10-28-04	55.2	E.1	2.73	17.2	218	.30	.47	<10	.26	--	<.04
	12-08-04	41.2	E.1	8.0	14.4	170	.23	232	11	--	.05	.039
01368000	02-14-05	56.0	E.1	7.5	16.8	--	--	--	--	--	.06	.046
	04-19-05	57.5	.1	3.31	15.1	234	.33	168	--	.36	--	<.04
410502074361701	06-08-05	65.1	E.1	7.1	14.0	273	.39	71.6	--	--	.06	.043
	08-24-05	80.4	.1	8.7	21.1	347	.50	15.3	20	--	.08	.064
	12-09-04	.31	<.1	<.04	<.2	--	--	--	--	<.10	--	<.04
	12-09-04	26.0	1.3	9.16	138	382	.52	--	<10	.62	.67	.52
	12-21-04	25.3	1.4	8.85	138	380	.52	--	<10	.61	.66	.51
	12-21-04	25.1	1.4	9.08	137	380	.52	--	13	.64	.67	.52

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, water, unfltrd mg/L (00600)	Ortho-phosphate, water, fltrd, mg/L (00660)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, fltrd, ug/L (01106)
01367715	04-19-05	.28	--	<.008	.54	--	<.02	<.04	E.02	2.8	5.3	5
	07-13-05	.20	--	E.005	--	.071	.023	--	--	--	--	4
	07-13-05	.26	--	E.006	--	.018	.006	--	--	--	--	4
01367718	10-28-04	<.06	--	<.008	--	--	<.02	<.04	<.04	1.0	1.2	3
01367729	04-19-05	.98	--	<.008	1.3	--	<.02	<.04	<.04	2.7	4.9	5
01367770	08-04-05	2.00	.049	.015	--	.074	.024	--	--	--	--	4
	08-04-05	1.18	--	E.005	--	.215	.070	--	--	--	--	2
	12-08-04	.58	.012	.004	.85	--	<.010	.012	.023	3.2	--	--
	02-14-05	1.16	--	--	1.5	--	E.004	.010	.033	2.2	--	2
	04-19-05	.70	--	E.007	.99	--	<.02	<.04	E.03	2.8	6.6	5
	06-08-05	.99	--	--	1.4	.077	.025	.034	.057	3.5	--	7
	08-04-05	5.22	.125	.038	--	.129	.042	--	--	--	--	5
	08-04-05	5.08	.128	.039	--	.141	.046	--	--	--	--	4
	08-24-05	2.94	--	--	3.6	.196	.064	.081	.107	3.1	--	4
	09-13-05	5.53	--	--	--	.199	.065	--	--	--	--	2
	09-13-05	5.77	--	--	--	.224	.073	--	--	--	--	2
	09-13-05	6.00	--	--	--	.233	.076	--	--	--	--	2
	09-13-05	5.75	--	--	--	.239	.078	--	--	--	--	3
	09-13-05	<.016	--	--	--	--	<.006	--	--	--	--	<2
	09-13-05	5.19	--	--	--	.221	.072	--	--	--	--	3
09-13-05	4.98	--	--	--	.218	.071	--	--	--	--	3	
09-14-05	4.95	--	--	--	.212	.069	--	--	--	--	3	
09-14-05	5.33	--	--	--	.212	.069	--	--	--	--	3	
09-14-05	6.30	--	--	--	.215	.070	--	--	--	--	3	
09-14-05	6.73	--	--	--	.215	.070	--	--	--	--	2	
09-14-05	6.45	--	--	--	.233	.076	--	--	--	--	2	
09-14-05	5.89	--	--	--	.233	.076	--	--	--	--	3	
09-14-05	5.39	--	--	--	.205	.067	--	--	--	--	3	
09-14-05	5.29	--	--	--	.224	.073	--	--	--	--	2	
01367805	10-28-04	--	--	--	--	--	--	--	--	--	--	<2
01367902	10-28-04	.91	--	<.008	1.2	--	<.02	<.04	<.04	3.4	4.3	3
	10-28-04	.53	.020	.006	.95	--	<.010	.012	.038	3.2	--	--
	10-28-04	.48	--	<.008	.87	.055	.02	<.04	.04	3.4	5.0	5
01367909	10-28-04	.54	--	E.004	.84	--	<.02	<.04	E.03	3.7	4.7	4
01367950	10-28-04	.41	--	<.008	.62	--	<.02	<.04	<.04	2.8	3.7	2
01367990	10-28-04	.41	--	<.008	.61	--	<.02	<.04	<.04	2.8	3.3	2
	10-28-04	.10	--	<.008	.36	--	<.02	<.04	E.02	2.5	4.7	3
	12-08-04	.73	.020	.006	1.1	.064	.021	.022	.041	3.5	--	--
01368000	02-14-05	.90	--	--	1.2	.018	.006	.015	.036	3.1	--	8
	04-19-05	.61	--	<.008	.97	--	<.02	<.04	E.03	3.5	5.9	15
410502074361701	06-08-05	.71	--	--	1.4	.052	.017	.023	.082	3.8	--	13
	08-24-05	1.57	--	--	2.2	.095	.031	.047	.093	3.6	--	5
	12-09-04	<.06	--	<.008	--	--	<.02	<.04	<.04	--	--	<2
	12-09-04	<.016	--	<.008	--	--	<.02	<.04	<.04	1.5	E3.9	7
	12-21-04	<.016	--	<.008	--	--	<.02	<.04	<.04	1.5	2.7	9
	12-21-04	<.06	--	<.008	--	--	<.02	<.04	E.02	1.6	2.4	9

## WATER QUALITY AT SPECIAL STUDY SITES

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Anti- mony, water, fltrd, ug/L (01095)	Arsen- ate, water, fltrd, ug/L as As (62453)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Arsen- ite, water, fltrd, ug/L as As (62452)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover- able, ug/L (01007)	Beryll- ium, water, fltrd, ug/L (01010)	Beryll- ium, water, unfltrd recover- able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover- able, ug/L (01022)
01367715	04-19-05	--	E.4	1.1	E1	E.4	29.9	--	--	--	17	17
	07-13-05	--	--	4.2	--	--	--	--	--	--	--	--
	07-13-05	--	--	2.6	--	--	--	--	--	--	--	--
01367718	10-28-04	<.20	--	E.2	<2	--	8.0	8.1	<.2	<.06	E5.1	<8
	04-19-05	--	E.4	1.1	4	E.4	27.4	--	--	--	23	23
01367770	08-04-05	--	--	3.0	--	--	--	--	--	--	--	--
	08-04-05	--	--	2.3	--	--	--	--	--	--	--	--
	12-08-04	--	--	--	--	--	--	--	--	--	13	--
	02-14-05	--	--	.6	3	--	24.6	--	--	--	17	18
	04-19-05	--	<.8	.9	E1	E.4	28.9	--	--	--	20	19
	06-08-05	--	--	2.0	2	--	--	--	--	--	24	--
	08-04-05	--	--	2.6	--	--	--	--	--	--	--	--
	08-04-05	--	--	2.5	--	--	--	--	--	--	--	--
	08-24-05	--	--	2.0	1.9	--	--	--	--	--	50	--
	09-13-05	--	1.1	1.5	1.7	<.6	--	--	--	--	72	60
	09-13-05	--	1.1	1.6	1.7	<.6	--	--	--	--	76	63
	09-13-05	--	1.2	1.6	1.8	<.6	--	--	--	--	78	67
	09-13-05	--	1.2	1.7	1.8	<.6	--	--	--	--	77	64
	09-13-05	--	<.8	<.12	<.12	<.6	--	--	--	--	<7.0	<7.0
	09-13-05	--	1.2	1.9	1.9	<.6	--	--	--	--	74	62
	09-13-05	--	1.3	1.8	1.9	<.6	--	--	--	--	71	60
	09-14-05	--	1.3	1.8	1.9	<.6	--	--	--	--	72	62
	09-14-05	--	1.2	1.7	1.9	<.6	--	--	--	--	77	65
	09-14-05	--	1.2	1.6	1.9	<.6	--	--	--	--	91	75
09-14-05	--	1.1	1.6	1.8	<.6	--	--	--	--	91	77	
09-14-05	--	1.1	1.6	1.8	<.6	--	--	--	--	88	76	
09-14-05	--	1.2	1.5	1.7	E.3	--	--	--	--	82	69	
09-14-05	--	1.1	1.8	1.8	<.6	--	--	--	--	76	64	
09-14-05	--	1.2	1.6	1.7	<.6	--	--	--	--	76	64	
01367805	10-28-04	<.20	--	<.2	<2	--	<1.0	<2.0	<.2	<.06	<7.0	<8
01367902	10-28-04	<.20	--	.3	<2	--	11.1	10.9	<.2	<.06	14	13
	10-28-04	--	--	--	--	--	--	--	--	--	15	--
01367909	10-28-04	<.20	--	.3	<2	--	11.2	12.5	<.2	<.06	15	14
	10-28-04	<.20	--	.4	<2	--	11.8	11.8	<.2	<.06	16	14
01367950	10-28-04	<.20	--	.2	<2	--	8.9	8.9	<.2	<.06	15	14
01367990	10-28-04	<.20	--	.2	<2	--	9.1	9.0	<.2	<.06	15	14
	10-28-04	<.20	--	.5	<2	--	15.6	16.2	<.2	<.06	19	17
	12-08-04	--	--	--	--	--	--	--	--	--	13	--
01368000	02-14-05	--	--	--	--	--	--	--	--	--	18	13
	04-19-05	--	<.8	.8	E1	E.3	20.2	--	--	--	17	18
	06-08-05	--	--	1.3	E2	--	--	--	--	--	21	--
	08-24-05	--	--	1.8	2.4	--	--	--	--	--	35	--
	12-09-04	<.20	<.8	<.2	<2	<.6	<1.0	<2.0	<.2	<.06	<7.0	<8
	12-09-04	<.20	1.7	8.1	11	5.0	106	104	<.2	E.03	726	746
410502074361701	12-21-04	<.20	4.1	7.6	10	.6	108	104	<.2	<.06	754	767
	12-21-04	<.20	5.0	7.6	12	1.0	112	110	<.2	E.05	761	754



## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, fltrd, ug/L (01030)	Chrom- ium, water, unfltrd recover- able, ug/L (01034)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover- able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover- able, ug/L (01051)
01367715	04-19-05	<2	<.04	--	--	--	<2	1.1	68	210	E.07	.40
	07-13-05	--	--	--	--	--	--	--	288	--	--	--
	07-13-05	--	--	--	--	--	--	--	53	--	--	--
01367718	10-28-04	<2	<.04	E1	<.8	<2	<2	E.5	6	110	<.08	.15
	01367729	04-19-05	<2	<.04	--	--	--	E1	1.4	72	.09	.43
01367770	08-04-05	--	--	--	--	--	--	--	12	--	--	--
	08-04-05	--	--	--	--	--	--	--	21	--	--	--
	12-08-04	--	--	--	--	--	--	--	--	--	--	--
	02-14-05	--	--	--	--	--	--	--	29	130	--	--
	04-19-05	<2	<.04	--	--	--	2	1.2	87	260	.12	.40
	06-08-05	--	--	--	--	--	--	--	93	330	--	--
	08-04-05	--	--	--	--	--	--	--	13	--	--	--
	08-04-05	--	--	--	--	--	--	--	44	--	--	--
	08-24-05	E.02	--	--	--	--	--	--	31	230	--	--
	09-13-05	--	--	--	--	--	--	--	21	200	--	--
	09-13-05	--	--	--	--	--	--	--	16	170	--	--
	09-13-05	--	--	--	--	--	--	--	34	150	--	--
	09-13-05	--	--	--	--	--	--	--	14	140	--	--
	09-13-05	--	--	--	--	--	--	--	<6	<6	--	--
	09-13-05	--	--	--	--	--	--	--	18	150	--	--
	09-13-05	--	--	--	--	--	--	--	17	230	--	--
	09-14-05	--	--	--	--	--	--	--	14	310	--	--
	09-14-05	--	--	--	--	--	--	--	E6	370	--	--
	09-14-05	--	--	--	--	--	--	--	19	330	--	--
	09-14-05	--	--	--	--	--	--	--	20	340	--	--
09-14-05	--	--	--	--	--	--	--	17	310	--	--	
09-14-05	--	--	--	--	--	--	--	14	230	--	--	
09-14-05	--	--	--	--	--	--	--	22	290	--	--	
09-14-05	--	--	--	--	--	--	--	18	180	--	--	
01367805	10-28-04	<2	<.04	<2	<.8	<2	<2	<.6	<6	<6	<.08	<.06
01367902	10-28-04	<2	<.04	2	<.8	<2	<2	1.3	59	200	<.08	E.06
	10-28-04	--	--	--	--	--	--	--	--	--	--	--
01367909	10-28-04	<2	<.04	E1	<.8	<2	<2	1.4	131	390	.10	.29
01367950	10-28-04	<2	<.04	E2	<.8	<2	<2	1.3	110	300	E.07	.15
	10-28-04	<2	<.04	E2	<.8	<2	<2	.9	51	180	<.08	E.04
01367990	10-28-04	<2	<.04	E2	<.8	<2	<2	1.0	56	170	<.08	E.04
	10-28-04	<2	<.04	2	<.8	<2	4	4.6	17	140	<.08	.19
01368000	12-08-04	--	--	--	--	--	--	--	--	500	--	--
	02-14-05	--	--	--	--	--	--	--	30	160	--	--
410502074361701	04-19-05	<2	E.03	--	--	--	2	1.5	137	500	.13	.52
	06-08-05	--	--	--	--	--	--	2.6	114	--	--	--
	08-24-05	<.04	--	--	--	--	--	--	27	710	--	--
	12-09-04	<2	<.04	<2	<.8	<2	E1	3.1	<6	<6	.09	<.06
	12-09-04	<2	.17	3	<.8	<2	E2	5.9	E6	210	.08	3.36
	12-21-04	<2	.08	2	<.8	<2	3	5.5	E4	110	.29	.83
	12-21-04	<2	.32	2	E.4	<2	2	6.3	E4	550	.15	6.68

## WATER QUALITY AT SPECIAL STUDY SITES

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Lithium water, fltrd, ug/L (01130)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover- able, ug/L (01062)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover- able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover- able, ug/L (01077)
01367715	04-19-05	E1	50.6	71.3	--	--	--	--	--	--	--	--
	07-13-05	--	1,130	--	--	--	--	--	--	--	--	--
	07-13-05	--	65.0	--	--	--	--	--	--	--	--	--
01367718	10-28-04	<2	5.1	19.5	<4	E.1	M	.45	E.3	E.2	<3	<.16
01367729	04-19-05	E1	37.1	53.2	--	--	--	--	--	--	--	--
	08-04-05	--	8.2	--	--	--	--	--	--	--	--	--
	08-04-05	--	24.6	--	--	--	--	--	--	--	--	--
01367770	12-08-04	--	--	--	--	--	--	--	--	--	--	--
	02-14-05	--	137	24.2	--	--	--	--	--	--	--	--
	04-19-05	E1	86.6	101	--	--	--	--	--	--	--	--
	06-08-05	--	111	136	--	--	--	--	--	--	--	--
	08-04-05	--	129	--	--	--	--	--	--	--	--	--
	08-04-05	--	106	--	--	--	--	--	--	--	--	--
	08-24-05	--	97.8	120	--	--	--	--	--	--	--	--
	09-13-05	--	96.9	104	--	--	--	--	--	--	--	--
	09-13-05	--	90.3	95.8	--	--	--	--	--	--	--	--
	09-13-05	--	84.3	90.6	--	--	--	--	--	--	--	--
	09-13-05	--	79.5	84.7	--	--	--	--	--	--	--	--
	09-13-05	--	<.6	<.6	--	--	--	--	--	--	--	--
	09-13-05	--	76.5	84.9	--	--	--	--	--	--	--	--
	09-13-05	--	77.9	98.0	--	--	--	--	--	--	--	--
	09-14-05	--	80.8	114	--	--	--	--	--	--	--	--
	09-14-05	--	87.0	130	--	--	--	--	--	--	--	--
	09-14-05	--	89.4	118	--	--	--	--	--	--	--	--
	09-14-05	--	93.0	126	--	--	--	--	--	--	--	--
	09-14-05	--	96.2	122	--	--	--	--	--	--	--	--
	09-14-05	--	96.4	112	--	--	--	--	--	--	--	--
	09-14-05	--	89.6	128	--	--	--	--	--	--	--	--
	09-14-05	--	92.9	103	--	--	--	--	--	--	--	--
01367805	10-28-04	<2	<.6	<.6	<4	<.2	<2	<.16	<.4	E.3	<3	<.16
	10-28-04	2	44.6	46.6	<4	.2	M	1.11	<.4	E.3	<3	<.16
01367902	10-28-04	--	--	--	--	--	--	--	--	--	--	--
	10-28-04	E1	100	121	<4	E.1	M	1.10	<.4	<.4	<3	<.16
01367909	10-28-04	E2	60.3	64.7	<4	.2	M	1.11	<.4	.4	<3	<.16
01367950	10-28-04	E1	15.3	17.2	<4	E.1	<2	.88	<.4	E.4	<3	<.16
	10-28-04	E1	15.5	17.1	<4	E.1	M	.89	<.4	E.3	<3	<.16
01367990	10-28-04	<2	5.1	40.8	E2	.6	M	1.06	E.2	E.3	<3	<.16
01368000	12-08-04	--	--	--	--	--	--	--	--	--	--	--
	02-14-05	--	143	111	--	--	--	--	--	--	--	--
	04-19-05	E1	89.3	106	--	--	--	--	--	--	--	--
	06-08-05	--	99.4	140	--	--	--	--	--	--	--	--
	08-24-05	--	137	196	--	--	--	--	--	--	--	--
410502074361701	12-09-04	<2	<.6	<.6	<4	<.2	<2	<.16	<.4	E.3	<3	<.16
	12-09-04	52	1,100	1,110	8	5.5	<2	1.28	<.4	.5	<3	<.16
	12-21-04	51	1,140	1,140	7	5.8	M	1.11	E.2	.5	<3	<.16
	12-21-04	52	1,180	1,210	7	5.7	M	1.28	E.3	.5	<3	<.16

WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Strontium, water, fltrd, ug/L (01080)	Strontium, water, unfltrd recover-able, ug/L (01082)	Vanadium, water, fltrd, ug/L (01085)	Vanadium, water, unfltrd ug/L (01087)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)	Dimethyl-arsinate, wat flt ug/L as As (62455)	Mono-methyl-arsonate, wat flt ug/L as As (62454)	Uranium natural water, fltrd, ug/L (22703)	Uranium natural water unfltrd ug/L (28011)
01367715	04-19-05	94.9	--	--	--	7	21	<.6	<.1.2	--	--
	07-13-05	--	--	--	--	16.7	--	--	--	--	--
	07-13-05	--	--	--	--	2.8	--	--	--	--	--
01367718	10-28-04	24.1	21.7	<.2	<.2	<.6	3	--	E.03	.039	
01367729	04-19-05	96.6	--	--	--	9	15	<.6	<.1.2	--	--
01367770	08-04-05	--	--	--	--	10.3	--	--	--	--	--
	08-04-05	--	--	--	--	2.3	--	--	--	--	--
	12-08-04	--	--	--	--	--	--	--	--	--	--
	02-14-05	--	--	--	--	12.9	13	--	--	--	--
	04-19-05	102	--	--	--	14	15	<.6	<.1.2	--	--
	06-08-05	--	--	--	--	17	40	--	--	--	--
	08-04-05	--	--	--	--	7.1	--	--	--	--	--
	08-04-05	--	--	--	--	8.0	--	--	--	--	--
	08-24-05	--	--	--	--	--	14	--	--	--	--
	09-13-05	--	--	--	--	9.3	15	<.6	<.1.2	--	--
	09-13-05	--	--	--	--	10.1	15	<.6	<.1.2	--	--
	09-13-05	--	--	--	--	9.9	14	<.6	<.1.2	--	--
	09-13-05	--	--	--	--	9.5	13	<.6	<.1.2	--	--
	09-13-05	--	--	--	--	--	--	<.6	<.1.2	--	--
	09-13-05	--	--	--	--	8.9	13	<.6	<.1.2	--	--
	09-13-05	--	--	--	--	8.5	19	<.6	<.1.2	--	--
	09-14-05	--	--	--	--	8.6	23	<.6	<.1.2	--	--
09-14-05	--	--	--	--	10.2	28	<.6	<.1.2	--	--	
09-14-05	--	--	--	--	12.8	25	<.6	<.1.2	--	--	
09-14-05	--	--	--	--	11.8	28	<.6	<.1.2	--	--	
09-14-05	--	--	--	--	11.6	24	<.6	<.1.2	--	--	
09-14-05	--	--	--	--	12.0	20	<.6	<.1.2	--	--	
09-14-05	--	--	--	--	11.5	23	<.6	<.1.2	--	--	
09-14-05	--	--	--	--	10.8	15	<.6	<.1.2	--	--	
01367805	10-28-04	<.1.0	<.20	<.2	<.2	<.6	<.2	--	--	<.04	<.012
01367902	10-28-04	190	178	<.2	<.2	<.6	E1	--	--	.20	.179
	10-28-04	--	--	--	--	--	--	--	--	--	--
	10-28-04	111	104	<.2	<.2	<.6	E1	--	--	.09	.078
01367909	10-28-04	170	158	<.2	<.2	<.6	E1	--	--	.19	.160
01367950	10-28-04	104	101	<.2	<.2	<.6	<.2	--	--	.06	.057
01367990	10-28-04	104	101	<.2	<.2	<.6	<.2	--	--	.06	.059
	10-28-04	89.1	87.4	<.2	<.2	<.6	E2	--	--	.98	.928
	12-08-04	--	--	--	--	--	--	--	--	--	--
01368000	02-14-05	--	--	--	--	10.3	15	--	--	--	--
	04-19-05	113	--	--	--	E5	10	<.6	<.1.2	--	--
410502074361701	06-08-05	--	--	--	--	9	13	--	--	--	--
	08-24-05	--	--	--	--	--	13	--	--	--	--
	12-09-04	<.1.0	<.20	<.2	<.2	7	<.2	<.6	<.1.2	<.04	<.012
	12-09-04	1,360	1,370	<.2	<.2	9	127	E.3	<.1.2	--	3.69
	12-21-04	1,370	1,390	<.2	<.2	33	52	<.6	<.1.2	--	3.81
	12-21-04	1,360	1,360	<.2	<.2	18	245	<.6	<.1.2	--	3.95

Remark codes used in this table:

< -- Less than.

E -- Estimated.

M-- Presence verified but not quantified.

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## BED-SEDIMENT TRACE-ELEMENT ANALYSES

## MULTIPLE STATION ANALYSES

Station number	Date	Time	Calcium bed sed <62.5um wet svd fld,tot percent (34830)	Magnesium, bed sed <62.5um wet svd fld,tot percent (34900)	Potassium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd fld,tot percent (34960)	Sulfur, bed sed <62.5um wet svd fld,tot percent (34970)	Phosphorus, bed sed <62.5um wet svd fld,tot percent (34935)	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)	Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Aluminum, bed sed <62.5um wet svd fld,tot percent (34790)
01367620	10-13-04	1330	2.2	.620	2.0	1.8	<.05	.048	1.1	.42	.63	4.9
01367625	12-08-04	1330	4.0	1.8	2.1	1.3	<.05	.033	2.3	1.9	.34	4.1
01367638	10-13-04	1030	2.1	1.0	2.5	1.2	<.05	.040	.76	.52	.24	4.9
01367640	10-07-04	1425	1.0	.380	2.6	1.6	<.05	.027	.22	.04	.18	5.0
01367650	10-13-04	1340	2.2	.740	2.4	1.3	<.05	.030	1.2	.57	.62	4.7
01367690	10-13-04	1210	1.4	.620	2.5	1.7	<.05	.045	1.1	.15	.98	5.6
01367700	08-26-04	1345	8.3	2.6	1.7	1.1	.05	.042	4.5	3.2	1.3	4.2
	12-08-04	1510	11	2.5	1.3	.660	<.05	.032	5.2	4.7	.43	2.7
01367701	06-07-05	1530	--	--	--	--	--	--	--	--	--	--
01367702	06-07-05	1750	--	--	--	--	--	--	--	--	--	--
01367705	10-13-04	1130	1.5	.520	2.0	1.6	.09	.034	3.4	.33	3.1	4.8
01367715	09-01-04	1230	3.1	1.1	2.1	.860	<.05	.034	2.4	1.1	1.3	3.6
01367718	10-28-04	1130	.680	.310	2.9	1.0	<.05	.040	1.4	.03	1.4	4.3
01367729	08-26-04	1800	3.0	1.6	2.5	1.1	<.05	.033	1.6	1.2	.41	4.5
01367770	08-26-04	1410	.930	.460	2.8	1.2	<.05	.033	.43	.09	.34	4.7
01367902	10-28-04	1350	2.7	1.6	1.5	.970	.05	.043	2.2	1.3	.93	4.2
01367909	10-28-04	1230	.300	.620	1.2	.530	<.05	.051	1.0	.02	.99	4.1
01367950	10-07-04	1115	.170	.860	1.7	.570	<.05	.038	.33	.02	.31	4.9
01367990	10-28-04	1430	2.4	1.4	2.4	1.2	<.05	.032	1.5	1.1	.36	4.7
01368000	08-26-04	1140	1.1	1.1	1.8	.850	.10	.051	2.1	.41	1.7	4.8

Station number	Date	Aluminum, bed sedimnt recover- able, ug/g (01108)	Anti- mony, bed sed <62.5um wet svd fld,tot ug/g (34795)	Arsenic bed sed <62.5um wet svd fld,tot ug/g (34800)	Arsenic bed sedimnt total, ug/g (01003)	Barium, bed sed <62.5um wet svd fld,tot ug/g (34805)	Beryllium, bed sed <62.5um wet svd fld,tot ug/g (34810)	Bismuth bed sed <177um wet svd fld,tot ug/g (34816)	Boron, bed sedimnt recover- able, ug/g (01023)	Cadmium bed sed <62.5um wet svd fld,tot ug/g (34825)	Cadmium bed sedimnt recover- able, ug/g (01028)	Cerium, bed sed <62.5um wet svd fld,tot ug/g (34835)
01367620	10-13-04	3,400	.3	24	23	490	1.3	<1	<1.8	<.1	.080	39
01367625	12-08-04	2,300	.3	17	9	530	1.6	<1	9.4	.2	.110	40
01367638	10-13-04	3,700	1.0	9.0	<1	690	1.8	<1	<1.8	.3	.140	69
01367640	10-07-04	2,200	.2	8.1	6	660	1.2	<1	<1.8	.1	.090	27
01367650	10-13-04	3,700	.7	17	12	630	1.6	<1	<1.8	2.8	2.3	33
01367690	10-13-04	4,400	.6	5.4	2	710	1.4	<1	<1.8	.1	.110	46
01367700	08-26-04	--	2.7	66	--	590	2.1	<1	--	4.1	--	54
	12-08-04	1,900	1.4	100	24	760	2.4	<1	8.3	14	14	38
01367701	06-07-05	44,000	.93	40	--	710	1.9	.090	--	3.9	--	56
01367702	06-07-05	47,000	.47	13	--	560	1.3	.080	--	.630	--	48
01367705	10-13-04	3,500	.2	1.5	1	460	1.4	<1	<1.8	.2	.400	30
01367715	09-01-04	2,700	2.0	190	7	590	4.8	<1	2.1	5.5	.290	37
01367718	10-28-04	2,800	.2	3.9	1	720	2.1	<1	12	.2	.180	71
01367729	08-26-04	3,900	.8	7.0	3	560	1.8	<1	<1.8	.2	.130	52
01367770	08-26-04	2,900	.3	5.2	3	650	1.2	<1	<1.8	.2	.170	34
01367902	10-28-04	6,800	.9	5.2	1	360	1.9	<1	26	.2	.260	46
01367909	10-28-04	7,100	.8	4.7	2	360	2.0	<1	28	<.1	.070	48
01367950	10-07-04	11,000	.2	3.7	2	330	1.4	<1	<1.8	<.1	.090	52
01367990	10-28-04	3,600	.2	7.0	2	760	1.7	<1	17	<.1	.080	56
01368000	08-26-04	2,200	.3	5.7	3	380	1.7	<1	<1.8	.3	.180	55

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Chrom- ium, bed sed <62.5um wet svd fld,tot ug/g (34840)	Chrom- ium, bed sedimnt recover- able, ug/g (01029)	Cobalt, bed sed <62.5um wet svd fld,tot, ug/g (34845)	Cobalt bed sedimnt recover- able, ug/g (01038)	Copper, bed sed <62.5um wet svd fld,tot, ug/g (34850)	Copper, bed sedimnt recover- able, ug/g (01043)	Europ- ium, bed sed <62.5um wet svd fld,tot ug/g (34855)	Gallium bed sed <62.5um wet svd fld,tot, ug/g (34860)	Gold, bed sed <62.5um wet svd fld,tot, ug/g (34870)	Holmium bed sed <62.5um wet svd fld,tot, ug/g (34875)	Iron, bed sed <62.5um wet svd fld,tot, percent (34880)
		Iron, bed sedimnt total, ug/g (01170)	Lantha- num, bed sed <62.5um wet svd fld,tot ug/g (34885)	Lead, bed sed <62.5um wet svd fld,tot, ug/g (34890)	Lead, bed sedimnt recover- able, ug/g (01052)	Lithium bed sed <62.5um wet svd fld,tot, ug/g (34895)	Mangan- ese, bed sed <62.5um wet svd fld,tot ug/g (34905)	Mangan- ese, bed sedimnt recover- able, ug/g (01053)	Mercury bed sed <62.5um wet svd fld,tot, ug/g (34910)	Molyb- denum, bed sed <62.5um wet svd fld,tot ug/g (34915)	Molyb- denum, bed sedimnt recover- able, ug/g (01063)	Neodym- ium, bed sed <62.5um wet svd fld,tot ug/g (34920)
01367620	10-13-04	24	4.9	6	1.9	51	78	<1	12	<1	<1	2.2
01367625	12-08-04	18	4.6	4	2.1	10	7	1	9	<1	<1	1.6
01367638	10-13-04	33	5.2	9	5.7	22	9	1	15	<1	1	4.5
01367640	10-07-04	19	3.6	4	1.4	4	4	<1	12	<1	<1	1.4
01367650	10-13-04	22	5.7	5	2.2	10	10	<1	11	<1	<1	1.7
01367690	10-13-04	38	5.9	7	2.9	19	12	1	14	<1	<1	3.2
01367700	08-26-04	30	--	6	--	26	--	<1	11	<1	<1	3.0
	12-08-04	22	4.9	4	2.2	21	10	1	6	<1	<1	1.8
01367701	06-07-05	27	--	6.4	--	20	--	--	9.9	--	--	--
01367702	06-07-05	34	--	6.2	--	21	--	--	11	--	--	--
01367705	10-13-04	21	6.1	4	2.3	8	7	<1	10	<1	<1	1.0
01367715	09-01-04	23	6.7	6	2.3	11	8	<1	10	<1	<1	2.2
01367718	10-28-04	18	4.4	4	2.4	7	3	2	11	<1	1	2.4
01367729	08-26-04	31	14	6	2.5	17	9	1	12	<1	<1	2.6
01367770	08-26-04	24	5.9	4	2.0	6	4	<1	11	<1	<1	1.3
01367902	10-28-04	49	15	9	7.7	33	25	1	10	<1	<1	3.0
01367909	10-28-04	44	9.6	10	6.5	16	11	1	9	<1	<1	3.3
01367950	10-07-04	49	12	8	4.5	13	12	<1	13	<1	<1	2.8
01367990	10-28-04	22	6.5	5	3.5	15	12	1	10	<1	<1	2.1
01368000	08-26-04	47	9.8	9	4.2	18	11	1	12	<1	<1	2.5
01367620	10-13-04	6,300	21	7	5.2	10	710	480	<.02	<.5	.160	20
01367625	12-08-04	6,100	22	24	19	19	470	270	<.02	<.5	.250	21
01367638	10-13-04	10,000	38	12	4.4	15	1,500	940	<.02	1.0	.240	34
01367640	10-07-04	6,000	16	9	4.5	8	500	270	<.02	<.5	.110	16
01367650	10-13-04	7,700	19	44	42	10	2,800	1,700	<.02	<.5	.200	19
01367690	10-13-04	14,000	25	48	21	19	1,900	1,600	<.02	1.3	.360	24
01367700	08-26-04	--	30	130	--	21	4,900	--	.03	.8	--	27
	12-08-04	5,000	25	310	310	16	7,300	2,900	.03	.5	.240	21
01367701	06-07-05	26,000	32	100	--	23	3,900	--	--	.9	--	--
01367702	06-07-05	26,000	27	29	--	19	1,300	--	--	.7	--	--
01367705	10-13-04	6,200	17	16	19	15	300	210	.02	<.5	.200	16
01367715	09-01-04	7,300	22	73	68	16	11,000	8,500	.03	<.5	.140	21
01367718	10-28-04	7,500	42	12	5.9	14	650	240	.02	.8	.320	40
01367729	08-26-04	10,000	29	34	53	19	1,000	750	<.02	.6	.220	27
01367770	08-26-04	6,000	19	14	8.4	12	620	300	.02	<.5	.070	18
01367902	10-28-04	17,000	23	47	35	31	770	850	.04	1.4	.650	23
01367909	10-28-04	18,000	24	26	59	39	940	640	.03	.9	.330	24
01367950	10-07-04	22,000	27	14	15	37	450	400	<.02	<.5	.160	25
01367990	10-28-04	11,000	31	12	7.7	20	910	680	<.02	.5	.300	28
01368000	08-26-04	15,000	29	15	9.8	34	640	450	.04	<.5	.120	30

## WATER QUALITY AT SPECIAL STUDY SITES

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Nickel, bed sed <62.5um wet svd fld, total, ug/g (34925)	Nickel, bed sedimnt recover- able, ug/g (01068)	Niobium bed sed <62.5um wet svd fld, total, ug/g (34930)	Scand- ium, bed sed <62.5um wet svd fld,tot ug/g (34945)	Selen- ium, bed sed <62.5um wet svd fld,tot ug/g (34950)	Silver, bed sed <62.5um wet svd fld, total, ug/g (34955)	Stront- ium, bed sed <62.5um wet svd fld,tot ug/g (34965)	Tant- alum, bed sed <62.5um wet svd fld,tot ug/g (34975)	Thall- ium, bed sed <62.5um dry svd total, ug/g (04064)	Thorium bed sed <62.5um wet svd fld, total, ug/g (34980)	Tin, bed sed <62.5um wet svd fld, total, ug/g (34985)
01367620	10-13-04	7	3.1	7	6	<.1	.1	140	<.1	<.1	3	2
01367625	12-08-04	8	4.5	<4	4	<.1	<.1	180	<.1	<.1	4	1
01367638	10-13-04	12	3.2	16	8	.1	.2	160	1	<.1	7	2
01367640	10-07-04	5	1.8	5	5	<.1	<.1	150	<.1	<.1	2	1
01367650	10-13-04	7	3.1	7	5	<.1	.1	180	<.1	<.1	3	3
01367690	10-13-04	13	4.8	13	6	<.1	.2	190	<.1	<.1	5	5
01367700	08-26-04	12	--	8	5	.2	.2	310	<.1	<.1	6	5
	12-08-04	10	5.0	5	4	<.1	.2	340	<.1	<.1	4	6
01367701	06-07-05	14	--	10	6.2	--	<.2	270	.6	.420	6.6	--
01367702	06-07-05	14	--	10	7.1	--	<.2	160	.5	.380	8.6	--
01367705	10-13-04	7	3.8	7	4	.3	.1	130	<.1	<.1	3	1
01367715	09-01-04	9	3.8	<4	4	.1	<.1	150	<.1	<.1	4	9
01367718	10-28-04	6	4.0	17	4	.1	.2	110	<.1	<.1	10	2
01367729	08-26-04	11	5.2	10	6	<.1	.1	140	<.1	<.1	5	6
01367770	08-26-04	9	4.9	6	4	<.1	.1	120	<.1	<.1	3	2
01367902	10-28-04	26	17	9	7	.2	.2	120	<.1	<.1	6	12
01367909	10-28-04	23	15	9	8	.1	.1	90	<.1	<.1	7	27
01367950	10-07-04	20	11	7	8	<.1	<.1	28	<.1	<.1	7	5
01367990	10-28-04	10	6.8	8	4	<.1	.1	190	<.1	<.1	6	2
01368000	08-26-04	21	9.1	12	8	.3	.2	73	<.1	<.1	7	2

Station number	Date	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)	Yttrium bed sed <62.5um wet svd fld, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd fld, total, ug/g (35020)	Zinc, bed sedimnt recover- able, ug/g (01093)	Uranium bed sed <62.5um wet svd fld, total, ug/g (35000)
01367620	10-13-04	.240	37	2	16	150	56	.9
01367625	12-08-04	.130	27	2	14	86	40	1.5
01367638	10-13-04	.420	58	4	32	810	77	1.4
01367640	10-07-04	.190	26	2	17	100	56	.8
01367650	10-13-04	.260	31	2	16	3,800	2,900	1.1
01367690	10-13-04	.330	40	2	17	160	99	1.2
01367700	08-26-04	.210	38	2	24	6,900	--	1.8
	12-08-04	.110	26	2	20	4,900	2,300	1.0
01367701	06-07-05	--	42	--	26	1,400	--	1.6
01367702	06-07-05	--	51	--	23	430	--	1.5
01367705	10-13-04	.130	23	1	12	78	54	1.4
01367715	09-01-04	.180	30	2	22	66,000	54,000	1.2
01367718	10-28-04	.500	31	3	26	93	54	1.5
01367729	08-26-04	.380	45	2	22	420	140	1.3
01367770	08-26-04	.190	24	2	14	400	220	1.0
01367902	10-28-04	.200	51	2	14	240	220	1.7
01367909	10-28-04	.220	57	2	14	110	68	1.9
01367950	10-07-04	.200	61	2	11	92	57	1.7
01367990	10-28-04	.140	32	2	16	52	39	1.6
01368000	08-26-04	.300	54	2	19	260	120	2.1

Remark codes used in this table:  
< -- Less than.

WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

SEDIMENT-CORE TRACE-ELEMENT ANALYSES

MULTIPLE STATION ANALYSES

Station number	Date	Time	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)	Calcium bed sed <62.5um wet svd field, total, percent (34830)	Magnesium, bed sed <62.5um wet svd fld,tot percent (34900)	Potassium, bed sed <62.5um wet svd fld,tot percent (34940)	Sodium, bed sed <62.5um wet svd field, total, percent (34960)	Sulfur, bed sed <62.5um wet svd field, total, percent (34970)	Phosphorus, bed sed <62.5um wet svd fld,tot percent (34935)	Total carbon, sedimnt <62.5um wsv nat field percent (49267)	Inorg. carbon, bed sed <62.5um wsv nat field percent (49269)
			Organic carbon, bed sed <62.5um wsv nat field percent (49266)	Aluminum, bed sed <62.5um wet svd fld,tot percent (34790)	Aluminum, bed sed sedimnt recover-able, ug/g (01108)	Antimony, bed sed <62.5um wet svd fld,tot percent (34795)	Arsenic bed sed <62.5um field, total, ug/g (34800)	Arsenic bed sedimnt total, ug/g (01003)	Barium, bed sed <62.5um field, total, ug/g (34805)	Beryllium, bed sed <62.5um wet svd fld,tot percent (34810)	Bismuth bed sed <177um wet svd field, total, ug/g (34816)	Boron, bed sedimnt recover-able, ug/g (01023)
01367696	01-13-05	1605	1.7	.70	11	4.3	.920	.430	.63	.045	12	1.5
	01-13-05	1600	.70	.00	8.3	3.3	1.5	.840	.36	.026	7.2	1.6
01367697	01-13-05	1710	3.0	2.0	1.9	1.4	1.9	.740	.06	.029	.22	<.01
	01-13-05	1705	2.0	1.0	2.8	.670	2.1	.720	<.05	.026	2.2	.82
	01-13-05	1700	1.0	.00	2.1	1.3	1.7	.610	.05	.050	5.7	.90
01367696	01-13-05	10	3.7	6,500	1.6	15	6	360	4.7	<1	15	.5
	01-13-05	5.5	4.1	11,000	1.2	9.9	3	440	3.2	<1	21	.4
01367697	01-13-05	.21	4.3	5,400	.6	12	2	470	3.0	<1	20	.3
	01-13-05	1.4	3.6	4,200	.6	10	3	500	2.3	<1	13	.4
	01-13-05	4.8	3.3	4,700	.8	13	3	480	2.1	<1	17	.6
01367696	01-13-05	.550	64	23	2.2	6	2.1	23	4	1	5	<1
	01-13-05	.370	64	21	5.4	5	1.8	15	5	1	7	<1
01367697	01-13-05	.230	190	30	7.9	9	5.5	15	8	2	11	<1
	01-13-05	.190	78	25	5.4	6	3.1	10	5	1	9	<1
	01-13-05	.530	73	24	6.0	6	3.7	14	8	1	8	<1
01367696	01-13-05	1	3.1	4,200	35	50	98	54	2,400	640	.03	.8
	01-13-05	1	2.3	6,000	35	30	17	40	1,500	910	<.02	.9
01367697	01-13-05	2	3.1	14,000	100	38	37	28	710	370	.03	1.8
	01-13-05	<1	2.0	8,700	43	20	14	24	770	320	.04	.8
	01-13-05	1	2.0	9,500	41	39	32	26	850	550	.07	.6
01367696	01-13-05	.220	32	12	4.8	10	11	2.2	.2	400	<1	<1
	01-13-05	.240	30	11	4.2	8	8	1.3	.2	330	<1	<1
01367697	01-13-05	1.2	75	15	7.4	6	9	.2	.1	93	<1	<1
	01-13-05	.570	35	10	5.5	6	6	.2	.1	160	<1	<1
	01-13-05	.420	34	12	7.3	8	5	.3	.2	92	<1	<1

## WATER QUALITY AT SPECIAL STUDY SITES

## WALLKILL RIVER ARSENIC SOURCES, SUSSEX COUNTY—Continued

## MULTIPLE STATION ANALYSES—CONTINUED

Station number	Date	Thorium bed sed <62.5um wet svd field, total, ug/g (34980)	Tin, bed sed <62.5um wet svd field, total, ug/g (34985)	Titan- ium, bed sed <62.5um wsv nat rec, percent (49274)	Vanad- ium, bed sed <62.5um wet svd fld,tot ug/g (35005)	Ytterb- ium, bed sed <62.5um wet svd fld,tot ug/g (35015)	Yttrium bed sed <62.5um wet svd field, total, ug/g (35010)	Zinc, bed sed <62.5um wet svd field, total, ug/g (35020)	Zinc, bed sedimnt recover- able, ug/g (01093)	Uranium bed sed <62.5um wet svd field, total, ug/g (35000)
01367696	01-13-05	9	6	.340	38	4	36	590	200	3.3
	01-13-05	8	3	.250	32	3	26	310	110	2.4
01367697	01-13-05	12	2	.260	49	5	44	190	82	2.4
	01-13-05	9	2	.240	42	3	22	210	110	2.0
	01-13-05	9	3	.210	39	3	26	420	230	1.8

Remark codes used in this table:

< -- Less than.