

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT**

Traditionally, wastewater has been treated and discharged to streams. However, a rapidly growing suburban population in southeastern Pennsylvania is generating an increasing quantity of wastewater. Discharge to streams often degrades stream-water quality. A government-wide move is underway to limit the quantity of nutrients discharged to streams. In addition, many streams are being designated as high or exceptional value streams. An alternative to stream discharge is land application of treated effluent. An increasing number of communities in Pennsylvania are implementing land-treatment systems to dispose of treated sewage effluent. Disposal of treated effluent by spraying onto the land surface recharges the ground-water system and provides an extra purifying step in the wastewater treatment process and does not directly degrade stream-water quality.

The USGS, in cooperation with the Chester County Water Resources Authority and the Pennsylvania Department of Environmental Protection (PaDEP), is currently conducting a study on the effects of treated sewage effluent sprayed on the land surface in New Garden Township, Chester County, Pennsylvania. New Garden Township is not contributing funding to the study, but is graciously allowing the use of their spray-irrigation site as a study site. The New Garden Township site lies west of Kennett Square Borough just north of Baltimore Pike (fig. 11). The site covers approximately 58 acres. The PaDEP issued a permit for a maximum application rate of 300,000 gallons of effluent per day. Application began in May of 1999.

The objectives of this study are to determine the percentage of applied effluent that recharges the ground-water system and the percentage that is lost to evapotranspiration using a monthly water-budget approach, to characterize the effect of land treatment on ground-water and surface-water quality, and to determine the fate and transport of nitrogen as it moves from effluent into soil, soil water, ground water, crops and the atmosphere by determining and quantifying a nitrogen budget.

The site has been intensively instrumented in order to reach project objectives. The USGS has drilled 6 shallow (CH5173, CH5175, CH5177, CH5179, CH5180, and CH5181) and 4 bedrock wells (CH5172, CH5174, CH5176, and CH5178) at the New Garden Township site to monitor ground-water quality and ground-water-level fluctuations within the spray application area. A deep (CH5182) and shallow (CH5183) well pair act as control wells outside the application area. Data for water year 2000 for these wells are presented in this report on pages 548-587. A system of suction lysimeters was installed at three locations in the application area with additional lysimeters installed as control lysimeters outside the application area (fig. 11). Lysimeters were installed at depths ranging from 3 to 15 feet. Lysimeter data are presented in this report, pages 413-428.

A surface-water flow-measuring station (01479678) has been installed on the stream located downgradient in respect to ground-water-flow directions to measure the quantity of streamflow leaving the approximately 45 acre site (0.07 mi²). A stilling well has been installed in a pond (station 01479677) downgradient of the spray fields to measure pond level fluctuations. A flume (station 01479676) was installed at the lowest elevation point of the field site above the pond. A swale directs overland flow from part of the study site (0.03 mi²) through the flume and stage is recorded electronically. Data for these surface-water sites can be found on pages 323-337.

Ground-water and surface-water sampling on a monthly basis are used to characterize changes in ground-water and surface-water quality. Storm samples are also collected using an automatic sampler at the flume station 01479676. Treated sewage effluent and precipitation are sampled on a monthly basis to quantify nutrient inputs to the site.

Other data collected electronically at the site include precipitation amounts, numerous other meteorological parameters such as wind speed and wind direction, soil moisture, and applied effluent. Soil and plant samples are collected in the application field and in control areas in order to determine the mass of nitrogen in the soil-plant system.

System design engineers and regulators are in need of data on monthly and seasonal variations in recharge and evapotranspiration for use in designing and managing spray irrigation systems. Quantifying monthly evapotranspiration rates will provide additional field data to assist regulators in permitting new spray irrigation systems. Results from the monthly water budgets could potentially change the present regulations regarding application rates. For water managers, the monthly water budgets could provide a ground-water recharge percentage for issuances of water-use credits. Assessments of nutrient loading to ground water and surface water would quantify the percentage of nutrients applied to the land surface that enters and moves through the ground-water system to the surface-water system.

For additional information, contact Curtis Schreffler at the U.S. Geological Survey, 111 Great Valley Parkway, Malvern, PA 19355; 610-647-9008 ext 220 (email clschref@usgs.gov).

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
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**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
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TABLE 3.--Description of soil suction lysimeters located at the Spray Irrigation Project site.

REMARKS.--Lysimeter nests Lys#1, Lys#2, and Lys#3 are located in the spray field. Lysimeter nests Lys#4 and Lys#5 are located outside of the spray zones.

LYSIMETER NEST	LOCAL ID	LATITUDE (DEGREES)	LONGITUDE (DEGREES)	DEPTH OF WELL (FEET)
Lys#1	CH 5211	395045	0754347	3.0
	CH 5212	395045	0754347	7.0
	CH 5213	395045	0754347	11.0
	CH 5214	395045	0754347	15.0
Lys#2	CH 5215	395048	0754347	3.0
	CH 5216	395048	0754347	7.0
	CH 5217	395048	0754347	11.0
	CH 5218	395048	0754347	15.0
Lys#3	CH 5219	395052	0754345	3.0
	CH 5564	395052	0754345	6.0
	CH 5565	395052	0754345	9.5
	CH 5566	395052	0754345	13.0
Lys#4	CH 5567	395100	0754346	3.0
	CH 5568	395100	0754346	7.0
	CH 5569	395100	0754346	11.0
	CH 5570	395100	0754346	15.0
Lys#5	CH 5571	395043	0754407	3.0
	CH 5572	395043	0754407	7.0
	CH 5573	395043	0754407	11.0
	CH 5574	395043	0754407	15.0

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
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REMARKS.--Some values for dissolved nitrate-nitrogen exceed values for dissolved nitrogen. These results are within the limits of analytical precision and methods.

395043075440703 - CH 5571

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
APR 2000 12...	1100	9813	1028	6.5	.070	.540	1.3	<.040	<200	<10
MAY 10...	1155	9813	1028	5.5	<.020	.090	.85	<.040	<200	--
JUN 14...	1210	9813	1028	4.9	<.020	<.040	.93	<.040	--	--

395043075440704 - CH 5572

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
APR 2000 12...	1105	9813	1028	6.0	1.24	.820	1.8	<.040	<200	<10
MAY 10...	1200	9813	1028	5.4	.050	1.57	2.5	<.040	<200	--
JUN 14...	1220	9813	1028	5.8	.040	2.90	4.2	<.040	<200	<10
JUL 12...	1105	9813	1028	6.0	<.020	3.12	4.3	<.040	--	--
AUG 09...	1200	9813	1028	5.6	<.020	3.53	4.5	<.040	--	--
SEP 13...	1215	9813	1028	5.3	<.020	3.72	5.0	<.040	--	--

395043075440705 - CH 5573

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
APR 2000 12...	1110	9813	1028	4.3	.180	4.85	6.7	<.040	<200	<10
MAY 10...	1205	9813	1028	4.5	.050	6.65	6.8	<.040	<200	--
JUN 14...	1230	9813	1028	4.5	.070	4.10	5.2	<.040	<200	<10
JUL 12...	1110	9813	1028	5.0	<.020	3.79	4.4	<.040	--	--
AUG 09...	1210	9813	1028	4.5	<.020	3.64	4.4	<.040	--	--
SEP 13...	1220	9813	1028	4.5	<.020	3.96	5.2	<.040	--	--

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued**

395043075440706 - CH 5574

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
APR 2000 12...	1115	9813	1028	4.9	.160	6.02	8.0	<.040	<200	14
MAY 10...	1210	9813	1028	4.4	.040	6.46	6.8	<.040	<200	--
JUN 14...	1235	9813	1028	4.5	.020	8.10	8.7	<.040	<200	19
JUL 12...	1115	9813	1028	4.6	<.020	9.03	9.9	<.040	--	--
AUG 09...	1220	9813	1028	4.3	<.020	9.40	10	<.040	--	--
SEP 13...	1225	9813	1028	4.3	<.020	8.49	11	<.040	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued

395045075434703 - CH 5211

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
JUN 1999							
11...	0835	9813	1028	5.7	260	23.8	.150
JUL							
15...	0800	9813	1028	5.8	185	25.7	.050
AUG							
19...	0930	9813	1028	--	--	25.9	.040
SEP							
23...	0950	9813	1028	5.8	411	42.6	<.020
OCT							
20...	0930	9813	1028	6.2	536	70.9	<.020
NOV							
17...	0940	1028	1028	6.1	576	67.0	<.020
DEC							
16...	0920	1028	1028	6.1	413	51.0	<.020
MAR 2000							
16...	0815	1028	1028	6.4	454	49.1	.070
APR							
12...	0840	9813	1028	6.5	417	46.5	<.020
MAY							
10...	0915	9813	1028	6.4	604	50.7	<.020
JUN							
14...	0905	9813	1028	6.3	477	56.0	<.020
JUL							
12...	0740	9813	1028	6.3	497	63.0	<.020
AUG							
09...	0810	9813	1028	6.3	562	82.0	<.020
SEP							
13...	0845	9813	1028	6.3	548	82.7	<.020

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999						
11...	3.41	4.8	<.040	--	<200	11
JUL						
15...	2.57	3.2	<.040	--	<200	36
AUG						
19...	.200	.50	<.040	--	<200	26
SEP						
23...	.040	.30	<.040	--	<200	--
OCT						
20...	.090	.37	<.040	--	<200	21
NOV						
17...	.150	.53	<.040	--	<200	17
DEC						
16...	1.09	1.4	<.040	--	<200	14
MAR 2000						
16...	1.81	2.4	<.040	--	<200	22
APR						
12...	3.00	4.9	<.040	--	<200	14
MAY						
10...	1.29	1.8	<.040	--	<200	13
JUN						
14...	.190	.46	<.040	--	<200	17
JUL						
12...	.950	1.3	<.040	--	<200	10
AUG						
09...	1.03	1.3	<.040	--	<200	18
SEP						
13...	.630	.89	<.040	1.6	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued

395045075434704 - CH 5212

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
JUN 1999							
11...	0800	9813	1028	5.7	207	20.6	<.020
JUL							
15...	0830	9813	1028	6.1	190	22.1	.040
AUG							
19...	0950	9813	1028	6.0	314	25.5	.040
SEP							
23...	1015	9813	1028	5.7	218	14.9	<.020
OCT							
20...	1000	9813	1028	--	--	39.0	<.020
NOV							
17...	0950	1028	1028	5.9	182	22.3	<.020
DEC							
16...	0935	1028	1028	6.3	157	20.7	<.020
FEB 2000							
03...	1000	1028	1028	--	--	46.4	<.020
17...	1330	1028	1028	--	--	32.7	.170
MAR							
16...	0830	1028	1028	--	--	38.3	.160
APR							
12...	0855	9813	1028	6.3	270	51.7	.240
MAY							
10...	0925	9813	1028	6.2	254	43.7	<.020
JUN							
14...	0910	9813	1028	6.2	312	47.3	<.020
JUL							
12...	0750	9813	1028	6.1	521	51.0	<.020
AUG							
09...	0820	9813	1028	6.1	378	57.0	<.020
SEP							
13...	0855	9813	1028	--	--	61.2	<.020

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999						
11...	3.50	4.7	<.040	--	<200	<10
JUL						
15...	5.80	6.2	<.040	--	<200	<10
AUG						
19...	8.40	8.5	<.040	--	<200	<10
SEP						
23...	10.1	11	<.040	--	<200	<10
OCT						
20...	.690	.93	<.040	--	<200	<10
NOV						
17...	2.21	2.8	<.040	--	<200	<10
DEC						
16...	2.04	2.7	<.040	--	<200	<10
FEB 2000						
03...	.340	.40	<.010	--	<200	<10
17...	.760	1.1	<.040	--	<200	<10
MAR						
16...	.660	1.1	<.040	--	<200	<10
APR						
12...	.510	.83	<.040	--	<200	13
MAY						
10...	.800	1.1	<.040	--	<200	<10
JUN						
14...	2.97	3.5	<.040	--	<200	<10
JUL						
12...	3.35	4.1	<.040	--	<200	<10
AUG						
09...	2.98	3.4	<.040	--	<200	<10
SEP						
13...	2.23	2.8	<.040	1.2	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued

395045075434705 - CH 5213

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999												
11...	0745	9813	1028	--	--	4.2	.220	.790	1.3	<.040	<200	22
JUL												
15...	0840	9813	1028	--	--	3.1	.040	1.26	1.7	<.040	<200	<10
AUG												
19...	1010	9813	1028	--	--	2.4	.060	1.43	1.8	<.040	<200	<10
SEP												
23...	1025	9813	1028	--	--	1.7	<.020	1.79	2.3	<.040	<200	<10
OCT												
20...	1015	9813	1028	6.0	137	1.5	<.020	.890	1.3	<.040	<200	12
NOV												
17...	1000	1028	1028	--	--	1.4	<.020	2.64	3.4	<.040	<200	<10
DEC												
16...	0950	1028	1028	--	--	1.2	.120	3.48	4.0	<.040	<200	<10
FEB 2000												
03...	1015	1028	1028	--	--	1.9	.160	20.9	21	<.010	<200	20
17...	1345	1028	1028	--	--	1.9	.250	25.8	24	<.040	<200	<10
MAR												
16...	0840	1028	1028	--	--	1.7	.180	24.3	24	<.040	<200	17
APR												
12...	0905	9813	1028	--	--	1.4	1.42	13.9	16	<.040	<200	15
MAY												
10...	0940	9813	1028	--	--	1.1	.320	7.46	8.4	.050	<200	16
JUN												
14...	0920	9813	1028	--	--	.9	.310	3.91	4.6	<.040	<200	18
JUL												
12...	0800	9813	1028	--	--	.8	.196	2.56	3.4	<.040	<200	21
AUG												
09...	0830	9813	1028	--	--	8.9	.150	3.28	3.9	<.040	<200	16
SEP												
13...	0900	9813	1028	--	--	56.1	.120	1.29	1.9	<.040	--	--

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued**

395048075434703 - CH 5215

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
JUN 1999								
11...	0905	9813	1028	6.5	638	49.6	<.020	6.70
JUL								
15...	0915	9813	1028	6.6	576	48.3	<.020	8.10
15...	0920	9813	1028	--	--	48.4	<.020	8.00
AUG								
19...	1045	9813	1028	6.1	637	73.0	<.020	5.90
19...	1046	9813	1028	--	--	73.0	<.020	5.90
SEP								
23...	1045	--	--	6.2	841	59.6	<.020	5.06
OCT								
20...	1040	9813	1028	6.3	813	87.8	<.020	2.41
NOV								
17...	1030	1028	1028	6.3	728	105	<.020	1.60
DEC								
16...	1010	1028	1028	6.4	702	94.0	<.020	2.01
FEB 2000								
03...	1045	1028	1028	6.5	--	82.0	<.020	2.26
17...	1050	1028	1028	6.7	628	67.0	<.020	2.00
MAR								
16...	0850	1028	1028	6.6	282	71.0	<.020	3.15
16...	0855	1028	1028	6.6	282	71.0	<.020	3.10
APR								
12...	0920	9813	1028	6.6	518	56.8	.160	2.52
MAY								
10...	1000	9813	1028	6.2	543	51.9	<.020	1.88
JUN								
14...	0935	9813	1028	6.5	549	64.0	<.020	1.32
JUL								
12...	0815	9813	1028	6.5	526	73.0	<.020	.990
AUG								
09...	0855	9813	1028	6.4	715	87.0	<.020	.420
SEP								
13...	0925	9813	1028	6.4	686	104	<.020	1.27

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (µG/L AS B) (01020)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999							
11...	12	<.040	--	<200	--	--	<10
JUL							
15...	8.8	<.040	--	<200	--	--	<10
15...	8.9	<.040	--	<200	--	--	<10
AUG							
19...	6.3	<.040	--	<200	--	--	<10
19...	6.0	<.040	--	<200	--	--	<10
SEP							
23...	5.3	<.040	--	<200	--	--	<10
OCT							
20...	3.0	<.040	--	<200	--	--	<10
NOV							
17...	2.1	<.040	--	<200	--	--	<10
DEC							
16...	2.3	<.040	--	<200	--	--	<10
FEB 2000							
03...	2.6	<.010	--	<200	--	--	<10
17...	2.5	<.040	1.6	<200	<20	<10	<10
MAR							
16...	4.1	<.040	--	<200	--	--	<10
16...	3.9	<.040	--	<200	--	--	21
APR							
12...	4.1	<.040	--	<200	--	--	<10
MAY							
10...	2.5	<.040	--	<200	--	--	<10
JUN							
14...	1.6	<.040	--	<200	--	--	<10
JUL							
12...	1.4	<.040	--	<200	--	--	<10
AUG							
09...	.73	<.040	--	<200	--	--	<10
SEP							
13...	1.7	<.040	1.8	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued

395048075434704 - CH 5216

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
JUN 1999								
11...	0920	9813	1028	6.0	297	19.6	<.020	3.55
JUL								
15...	0940	9813	1028	6.5	537	41.9	.030	8.10
AUG								
19...	1105	9813	1028	6.4	608	39.4	.020	8.10
SEP								
23...	1110	--	--	6.8	984	35.7	<.020	3.64
OCT								
20...	1050	9813	1028	6.9	1450	42.7	<.020	4.00
NOV								
17...	1045	1028	1028	6.8	834	58.0	<.020	3.01
17...	1050	1028	1028	6.8	834	58.0	.090	3.03
DEC								
16...	1025	1028	1028	--	--	70.0	<.020	3.59
FEB 2000								
03...	1100	1028	1028	6.9	--	63.0	<.020	2.16
17...	1100	1028	1028	7.0	938	65.0	<.020	2.30
MAR								
16...	0900	1028	1028	6.9	--	50.1	<.020	2.00
APR								
12...	0930	9813	1028	7.0	615	53.6	<.020	2.23
MAY								
10...	1005	9813	1028	6.6	583	110	<.020	1.88
JUN								
14...	0945	9813	1028	6.9	619	54.0	<.020	1.82
JUL								
12...	0825	9813	1028	6.8	676	62.0	<.020	2.35
AUG								
09...	0900	9813	1028	6.9	760	76.0	<.020	2.30
SEP								
13...	0930	9813	1028	6.9	822	84.2	<.020	1.80

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (µG/L AS B) (01020)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999							
11...	4.5	<.040	--	<200	--	--	<10
JUL							
15...	8.7	<.040	--	<200	--	--	<10
AUG							
19...	8.0	<.040	--	<200	--	--	<10
SEP							
23...	3.7	<.040	--	<200	--	--	<10
OCT							
20...	4.3	<.040	--	<200	--	--	<10
NOV							
17...	3.7	<.040	--	<200	--	--	<10
17...	3.7	<.040	--	<200	--	--	<10
DEC							
16...	3.8	<.040	--	<200	--	--	<10
FEB 2000							
03...	2.4	<.010	--	<200	--	--	<10
17...	2.8	<.040	1.3	<200	<20	<10	<10
MAR							
16...	2.6	<.040	--	<200	--	--	<10
APR							
12...	2.7	<.040	--	<200	--	--	<10
MAY							
10...	2.5	<.040	--	<200	--	--	<10
JUN							
14...	2.2	<.040	--	<200	--	--	<10
JUL							
12...	2.8	<.040	--	<200	--	--	<10
AUG							
09...	2.7	<.040	--	<200	--	--	<10
SEP							
13...	2.2	<.040	1.6	--	--	--	--

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued**

395048075434705 - CH 5217

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	ZINC, DIS- SOLVED (μ G/L AS ZN) (01090)
JUN 1999												
11...	0940	9813	1028	--	--	4.1	<.020	2.72	3.2	<.040	<200	<10
JUL 15...	0955	9813	1028	--	--	6.2	<.020	7.70	8.5	<.040	<200	<10
AUG 19...	1120	9813	1028	--	--	31.7	.020	9.10	8.7	<.040	<200	<10
SEP 23...	1125	9813	1028	--	--	44.3	<.020	13.6	15	<.040	<200	<10
OCT 20...	1110	9813	1028	--	--	50.0	<.020	--	10	<.040	<200	11
NOV 17...	1115	1028	1028	6.2	232	25.8	<.020	6.50	7.3	<.040	<200	<10
DEC 16...	1035	1028	1028	6.4	203	16.3	<.020	6.80	6.0	<.040	<200	<10
FEB 2000												
03...	1115	1028	1028	6.6	--	21.3	<.020	5.98	5.9	<.010	<200	<10
17...	1300	1028	1028	--	--	23.8	<.020	4.01	4.6	<.040	<200	<10
MAR 16...	0910	1028	1028	--	--	41.5	<.020	4.70	5.8	<.040	<200	14
APR 12...	0940	9813	1028	--	--	52.7	.300	5.57	9.2	<.040	<200	<10
MAY 10...	1010	9813	1028	--	--	60.4	<.020	4.47	5.2	<.040	<200	<10
JUN 14...	0955	9813	1028	--	--	53.0	<.020	3.81	4.4	<.040	<200	<10
JUL 12...	0830	9813	1028	--	--	67.0	<.020	4.20	4.4	<.040	<200	<10
AUG 09...	0910	9813	1028	--	--	60.0	<.020	3.31	3.8	<.040	<200	<10
SEP 13...	0945	9813	1028	6.4	324	49.5	<.020	2.28	2.7	<.040	--	--

395048075434706 - CH 5218

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (μ S/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (μ G/L AS B) (01020)	ZINC, DIS- SOLVED (μ G/L AS ZN) (01090)
JUN 1999												
11...	1000	9813	1028	--	--	4.2	<.020	.640	.83	<.040	<200	<10
JUL 15...	1005	9813	1028	--	--	3.3	<.020	.670	.96	<.040	<200	<10
AUG 19...	1130	9813	1028	6.0	--	2.3	<.020	3.90	4.7	<.040	<200	<10
SEP 23...	1140	9813	1028	6.4	147	.9	<.020	.580	.80	<.040	<200	<10
OCT 20...	1125	9813	1028	6.3	137	2.3	<.020	1.20	5.6	<.040	<200	<10
NOV 17...	1125	1028	1028	6.3	151	8.5	<.020	1.42	1.8	<.040	<200	<10
DEC 16...	1045	1028	1028	6.3	153	8.3	<.020	1.49	1.7	<.040	<200	<10
FEB 2000												
03...	1130	1028	1028	6.5	--	13.4	<.020	1.67	1.9	<.010	<200	<10
17...	1315	1028	1028	6.6	173	13.7	<.020	1.56	2.0	<.040	<200	<10
MAR 16...	0920	1028	1028	--	--	14.0	<.020	1.54	1.9	<.040	<200	<10
APR 12...	0945	9813	1028	--	--	14.5	.040	1.56	1.9	<.040	<200	<10
MAY 10...	1020	9813	1028	--	--	28.5	<.020	2.02	2.4	<.040	<200	<10
JUN 14...	1000	9813	1028	6.4	268	41.3	<.020	2.08	2.4	<.040	<200	<10
JUL 12...	0840	9813	1028	6.3	276	42.5	<.020	2.26	2.6	<.040	<200	<10
AUG 09...	0915	9813	1028	--	--	47.2	<.020	1.99	2.3	<.040	<200	10
SEP 13...	0950	9813	1028	6.4	306	48.9	<.020	1.77	2.1	<.040	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued

395052075434503 - CH 5219

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
JUN 1999								
11...	1120	--	--	--	--	9.6	.200	.970
SEP								
23...	1210	9813	1028	6.6	702	1.0	<.020	<.040
OCT								
20...	1135	9813	1028	6.7	586	.8	<.020	<.040
NOV								
17...	1145	1028	1028	6.5	588	.8	<.020	<.040
DEC								
16...	1120	1028	1028	6.6	405	.6	<.020	<.040
FEB 2000								
03...	1215	1028	1028	6.8	--	<.5	<.020	<.040
17...	1120	1028	1028	6.9	281	<.5	<.020	<.040
MAR								
16...	1040	1028	1028	6.8	339	<.5	<.020	<.040
APR								
12...	0955	9813	1028	6.9	352	.5	.100	<.040
MAY								
10...	1040	9813	1028	6.6	361	.6	<.020	<.040
JUN								
14...	1020	9813	1028	6.8	328	.7	<.020	<.040
JUL								
12...	0855	9813	1028	6.8	344	.8	<.020	<.040
AUG								
09...	0930	9813	1028	6.6	315	1.3	<.020	<.040
SEP								
13...	1030	9813	1028	6.7	338	.9	<.020	<.040

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (µG/L AS B) (01020)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999							
11...	1.9	<.040	--	<200	--	--	<10
SEP							
23...	.42	<.040	--	<200	--	--	<10
OCT							
20...	.37	<.040	--	<200	--	--	<10
NOV							
17...	.32	<.040	--	<200	--	--	<10
DEC							
16...	.29	<.040	--	<200	--	--	<10
FEB 2000							
03...	.08	<.010	--	<200	--	--	<10
17...	.12	<.040	1.4	<200	<20	<10	<10
MAR							
16...	<.06	<.040	--	<200	--	--	<10
APR							
12...	.24	<.040	--	<200	--	--	<10
MAY							
10...	<.06	<.040	--	<200	--	--	<10
JUN							
14...	.19	<.040	--	<200	--	--	<10
JUL							
12...	.17	<.040	--	<200	--	--	<10
AUG							
09...	.16	<.040	--	<200	--	--	<10
SEP							
13...	.09	<.040	1.2	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued

395052075434504 - CH 5564

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)
JUN 1999								
11...	1105	9813	1028	6.1	295	3.0	.050	7.10
JUL								
15...	1100	9813	1028	6.5	618	2.2	.020	10.1
AUG								
19...	1210	9813	1028	6.0	280	2.3	.020	12.9
SEP								
23...	1230	9813	1028	6.0	251	2.1	<.020	11.7
OCT								
20...	1150	9813	1028	6.1	234	2.3	<.020	12.3
NOV								
17...	1155	1028	1028	6.1	271	2.2	<.020	11.3
DEC								
16...	1135	1028	1028	6.2	236	2.2	<.020	10.8
FEB 2000								
03...	1230	1028	1028	6.5	--	2.2	<.020	9.95
17...	1140	1028	1028	6.6	224	2.0	<.020	9.30
MAR								
16...	1050	1028	1028	6.3	230	1.9	<.020	8.20
APR								
12...	1010	9813	1028	--	--	2.2	<.020	8.48
12...	1011	9813	1028	--	--	2.2	.190	8.23
MAY								
10...	1045	9813	1028	6.0	230	2.5	<.020	9.07
JUN								
14...	1030	9813	1028	6.3	227	2.5	<.020	7.80
JUL								
12...	0905	9813	1028	6.2	228	2.6	<.020	7.50
AUG								
09...	0945	9813	1028	6.2	219	2.3	<.020	6.80
SEP								
13...	1035	9813	1028	6.2	218	2.6	<.020	6.00

DATE	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (µG/L AS B) (01020)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (µG/L AS MN) (01056)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999							
11...	8.8	<.040	--	<200	--	--	<10
JUL							
15...	11	<.040	--	<200	--	--	<10
AUG							
19...	13	<.040	--	<200	--	--	<10
SEP							
23...	14	<.040	--	<200	--	--	<10
OCT							
20...	13	<.040	--	<200	--	--	<10
NOV							
17...	12	<.040	--	<200	--	--	<10
DEC							
16...	9.5	<.040	--	<200	--	--	<10
FEB 2000							
03...	10	<.010	--	<200	--	--	<10
17...	9.3	<.040	<1.0	<200	<20	<10	<10
MAR							
16...	8.8	<.040	--	<200	--	--	<10
APR							
12...	12	<.040	--	<200	--	--	<10
12...	12	<.040	--	<200	--	--	<10
MAY							
10...	9.7	<.040	--	<200	--	--	<10
JUN							
14...	8.4	<.040	--	<200	--	--	<10
JUL							
12...	7.8	<.040	--	<200	--	--	<10
AUG							
09...	7.2	<.040	--	<200	--	--	11
SEP							
13...	6.7	<.040	<1.0	--	--	--	--

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued

395052075434505 - CH 5565

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999												
11...	1050	9813	1028	--	--	8.8	.190	16.5	16	.070	<200	<10
JUL 15...	1140	9813	1028	7.2	555	6.5	.090	14.6	15	.060	<200	<10
AUG 19...	1230	9813	1028	6.7	447	6.2	.070	14.6	13	.040	<200	<10
SEP 23...	1245	9813	1028	--	--	5.4	<.020	11.6	13	<.040	<200	<10
OCT 20...	1200	9813	1028	6.8	397	5.3	<.020	11.2	12	<.040	<200	<10
NOV 17...	1210	1028	1028	6.6	438	5.6	<.020	10.7	12	<.040	<200	<10
DEC 16...	1155	1028	1028	--	--	5.0	<.020	10.9	11	<.040	<200	<10
FEB 2000												
03...	1245	1028	1028	7.0	--	4.6	<.020	10.8	11	<.010	<200	<10
17...	1150	1028	1028	6.8	349	4.6	<.020	10.6	11	<.040	<200	<10
MAR 16...	1055	1028	1028	--	--	4.5	<.020	11.6	11	<.040	<200	<10
APR 12...	1025	9813	1028	--	--	4.6	<.020	10.8	16	<.040	<200	<10
MAY 10...	1050	9813	1028	--	--	4.9	<.020	12.0	12	<.040	<200	<10
JUN 14...	1045	9813	1028	--	--	5.6	<.020	11.9	13	<.040	<200	<10
JUL 12...	0920	9813	1028	--	--	6.3	<.020	12.1	12	<.040	<200	<10
AUG 09...	0950	9813	1028	--	--	6.8	<.020	12.1	12	<.040	<200	<10
SEP 13...	1040	9813	1028	6.6	369	8.4	<.020	9.52	11	<.040	--	--

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued**

395052075434506 - CH 5566

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
JUN 1999							
11...	1035	9813	1028	6.0	364	8.9	<.020
JUL							
15...	1155	9813	1028	6.2	318	8.5	<.020
AUG							
19...	1240	9813	1028	5.8	349	8.1	<.020
SEP							
23...	1300	9813	1028	6.1	328	7.1	<.020
OCT							
20...	1215	9813	1028	5.9	321	6.1	<.020
NOV							
17...	1220	1028	1028	5.9	330	6.5	<.020
DEC							
16...	1205	1028	1028	--	--	6.0	<.020
FEB 2000							
03...	1300	1028	1028	--	--	5.5	<.020
17...	1200	1028	1028	6.3	341	5.4	<.020
MAR							
16...	1105	1028	1028	--	--	5.5	<.020
APR							
12...	1035	9813	1028	--	--	5.4	.090
MAY							
10...	1100	9813	1028	--	--	5.4	<.020
JUN							
14...	1055	9813	1028	--	--	5.6	<.020
JUL							
12...	0930	9813	1028	--	--	6.5	<.020
AUG							
09...	1000	9813	1028	6.3	320	7.2	<.020
SEP							
13...	1050	9813	1028	6.1	324	9.0	<.020

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUN 1999						
11...	16.3	25	<.040	--	<200	<10
JUL						
15...	15.6	16	<.040	--	<200	<10
AUG						
19...	15.1	14	<.040	--	<200	<10
SEP						
23...	11.7	14	<.040	--	<200	<10
OCT						
20...	11.4	12	<.040	--	<200	<10
NOV						
17...	10.5	11	<.040	--	<200	11
DEC						
16...	10.6	10	<.040	--	<200	<10
FEB 2000						
03...	11.2	12	<.010	--	<200	<10
17...	11.0	11	<.040	--	<200	<10
MAR						
16...	12.0	12	<.040	--	<200	<10
APR						
12...	11.7	12	<.040	--	<200	<10
MAY						
10...	14.4	13	<.040	--	<200	<10
JUN						
14...	12.6	13	<.040	--	<200	<10
JUL						
12...	13.3	13	<.040	--	<200	<10
AUG						
09...	13.0	13	<.040	--	<200	<10
SEP						
13...	9.94	12	<.040	1.4	--	--

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued**

395100075434603 - CH 5567

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
SEP 1999												
23...	1320	9813	1028	6.5	279	1.7	<.020	.840	1.7	<.040	<200	<10
OCT												
20...	1320	9813	1028	6.6	345	.7	<.020	.090	.72	<.040	<200	<10
NOV												
17...	1300	1028	1028	6.7	295	.6	<.020	<.040	.54	<.040	<200	<10
DEC												
16...	1235	1028	1028	--	--	<.5	<.020	<.040	.32	<.040	<200	<10
FEB 2000												
03...	1320	1028	1028	--	--	.6	<.020	.130	.23	<.010	<200	<10
MAR												
16...	0950	1028	1028	--	--	.8	<.020	.140	.43	<.040	<200	99
APR												
12...	1135	9813	1028	--	--	.9	.060	.060	.38	<.040	<200	<10
MAY												
10...	1115	9813	1028	6.5	327	.5	<.020	<.040	.42	<.040	<200	<10
JUN												
14...	1115	9813	1028	--	--	.7	<.020	<.040	.64	<.040	<200	32
JUL												
12...	1005	9813	1028	--	--	.6	<.020	.040	.67	<.040	--	--

395100075434604 - CH 5568

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE (CODE NUMBER) (00028)	AGENCY COL- LECTING SAMPLE (CODE NUMBER) (00027)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/CM) (00095)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)
JUL 1999												
15...	1300	9813	1028	--	--	10.0	.030	.320	.64	<.040	<200	<10
SEP												
23...	1340	9813	1028	6.4	258	2.3	<.020	.880	1.3	<.040	<200	13
OCT												
20...	1330	9813	1028	6.1	252	1.2	<.020	3.45	4.3	<.040	<200	15
NOV												
17...	1315	1028	1028	6.5	300	2.2	<.020	6.10	7.2	<.040	<200	<10
DEC												
16...	1245	1028	1028	6.5	334	2.5	<.020	5.80	5.9	<.040	<200	10
FEB 2000												
03...	1340	1028	1028	6.7	--	1.5	<.020	3.35	4.2	<.010	<200	14
17...	1240	1028	1028	7.0	429	1.3	<.020	1.98	2.6	<.040	<200	<10
MAR												
16...	1010	1028	1028	--	--	1.4	<.020	1.61	2.1	<.040	<200	15
APR												
12...	1140	9813	1028	6.9	394	1.0	.070	.500	.88	<.040	<200	<10
MAY												
10...	1120	9813	1028	--	--	.7	<.020	.380	.69	<.040	<200	<10
JUN												
14...	1125	9813	1028	--	--	1.0	<.020	.390	.77	<.040	<200	20
JUL												
12...	1010	9813	1028	--	--	.9	<.020	.460	.77	<.040	<200	19
AUG												
09...	1025	9813	1028	--	--	.7	.050	.460	.81	<.040	--	--
SEP												
13...	1150	9813	1028	--	--	1.0	<.020	.610	.97	<.040	--	--

**ANALYSIS OF SAMPLES COLLECTED AT SPECIAL-STUDY SITES
NEW GARDEN TOWNSHIP, CHESTER COUNTY, SPRAY IRRIGATION PROJECT--Continued**

395100075434606 - CH 5570

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	AGENCY ANA- LYZING SAMPLE NUMBER (00028)	AGENCY COL- LECTING SAMPLE NUMBER (00027)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N) (00618)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	BORON, DIS- SOLVED (µG/L AS B) (01020)
NOV 1999 17...	1330	1028	1028	2.0	<.020	3.31	4.3	<.040	--
DEC 16...	1305	1028	1028	1.5	<.020	1.94	2.3	<.040	--
FEB 2000 03...	1350	1028	1028	1.4	<.020	1.38	1.7	<.010	<200
MAR 16...	1015	1028	1028	2.0	<.020	1.40	1.9	<.040	<200
MAY 10...	1130	9813	1028	1.6	<.020	1.63	2.0	<.040	<200
JUN 14...	1135	9813	1028	1.4	<.020	1.12	1.4	<.040	--
JUL 12...	1015	9813	1028	1.4	<.020	.860	1.1	<.040	--