



Water-Data Report 2011

352306077321601 Local number LN-199, LU-15A NEAR HUGO, NC

Surficial aquifer system
Post Miocene (Quaternary + Pliocene) Rocks

Lenoir County, NC

LOCATION.--Lat 35°23'06", long 77°32'16" referenced to North American Datum of 1983, Lenoir County, NC, Hydrologic Unit 03020203, at intersection of Secondary Road 1707 and 1004, .5 mi south of Hugo. Owner: U.S. Geological Survey.

GROUNDWATER RECORDS

WELL CHARACTERISTICS.--Depth 15 ft. Upper casing diameter 2 in; top of first opening 10.4 ft, bottom of last opening 15 ft.

DATUM.--Land-surface datum is 72 ft above National Geodetic Vertical Datum of 1929. Measuring point: black mark between two notches on top of PVC casing, 2.22 ft above land-surface datum, September 28, 2006 to present.

PERIOD OF RECORD.--April 2007 to current year.

GAGE.--Measured periodically with electric and steel tape.

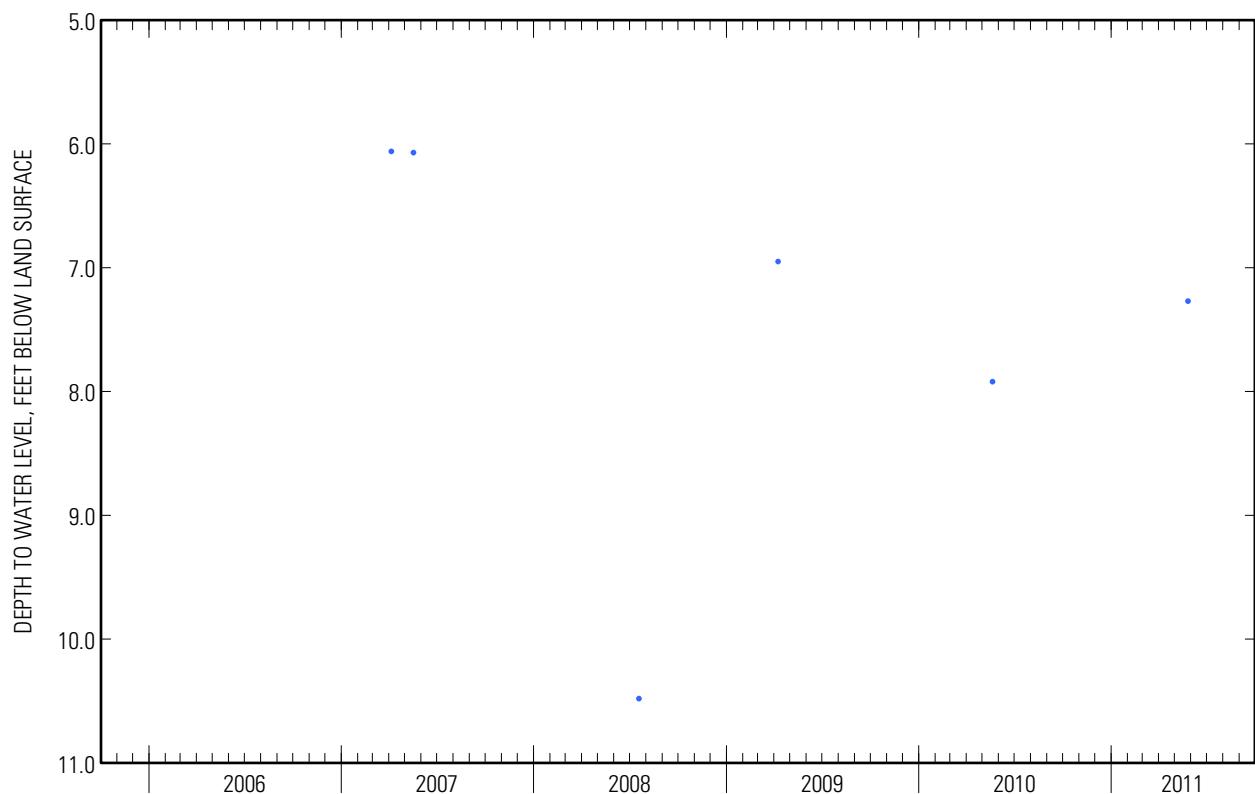
REMARKS.--Well measured as part of the National Water Quality Assessment (NAWQA) program.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.06 ft below land-surface datum, April 5, 2007; lowest water level measured, 10.48 ft below land-surface datum, July 18, 2008.

WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM

Date	Water level
May 26, 2011	7.27

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2007, 2009, 2011.

REMARKS.--Well is sampled as part of the National Water-Quality Assessment (NAWQA) Program.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 16

[%; percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Tempera-ture, air, °C (00020)	Depth to water level, ft below land surface (72019)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)
05-26-2011	1200	Groundwater	Regular	759	32.7	7.27	6.6	71
05-26-2011	1201	QC sample - Groundwater	Spike	--	--	--	--	--

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

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[%; percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Turbidity, water, unfiltered, broad band light source						Dissolved solids dried at 180 °C, water, filtered, mg/L	Hardness, water, mg/L as CaCO ₃	Calcium, water, filtered, mg/L
		pH, water, unfiltered, field, standard units	Specific conduc-tance, water, unfiltered, water, µS/cm at 25 °C (000400)	Tempera-ture, water, °C (00095)	including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	detectors at multiple angles	depth below measuring point, feet (61055)			
05-26-2011	1200	4.1	108	18.7	18	9.49	57	26.5	7.10	
05-26-2011	1201	--	--	--	--	--	--	--	--	--

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	Bromide, water, filtered, mg/L (71870)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Ammonia, water, filtered, mg/L as N (00608)
05-26-2011	1200	2.12	3.47	2.74	.04	6.03	.09	5.92	14.9	< .010
05-26-2011	1201	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 4 of 16

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Total							
		Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	nitrogen, water, filtered, mg/L (62854)	Aluminum, analytically determined, mg/L (01106)	Barium, water, filtered, µg/L (01005)	Beryllium, water, filtered, µg/L (01010)	Cadmium, water, filtered, µg/L (01025)
05-26-2011	1200	2.65	< .001	.004	2.89	489	75	.20	.15
05-26-2011	1201	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Chromium, water, filtered, µg/L (01030)	Cobalt, water, filtered, µg/L (01035)	Copper, water, filtered, µg/L (01040)	Iron, water, filtered, µg/L (01046)	Lead, water, filtered, µg/L (01049)	Lithium, water, filtered, µg/L (01130)	Manganese, water, filtered, µg/L (01056)	Molybdenum, water, filtered, µg/L (01060)	Nickel, water, filtered, µg/L (01065)
05-26-2011	1200	.93	.47	< .50	28	1.00	.7	16.3	.05	2.4
05-26-2011	1201	--	--	--	--	--	--	--	--	--

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Silver, water, filtered, µg/L (01075)	Strontium, water, filtered, µg/L (01080)	Thallium, water, filtered, µg/L (01057)	Vanadium, water, filtered, µg/L (01085)	Zinc, water, filtered, µg/L (01090)	Antimony, water, filtered, µg/L (01095)	Arsenic, water, filtered, µg/L (01000)	Boron, water, filtered, µg/L (01020)	Selenium, water, filtered, µg/L (01145)
05-26-2011	1200	<.01	26.3	.06	.10	10.3	.07	.06	10	.86
05-26-2011	1201	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	2,6- 1-Diethyl- Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49295)	2-Chloro- aniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2-Chloro- isopropyl- 2',6'-diethyl- acetanilide, water, filtered, recoverable, µg/L (61618)	2-Ethyl-6-amino-6-s-triazine, water, filtered, recoverable, µg/L (04040)	3,4-Dichloro-aniline, water, filtered, recoverable, µg/L (61620)	3,5-Dichloro-aniline, water, filtered, recoverable, µg/L (61625)	4-Chloro-2-methyl-phenol, water, filtered, recoverable, µg/L (61627)	Aceto-chlor, water, filtered, recoverable, µg/L (61633)	
05-26-2011	1200	<.036	<.006	<.010	E .013	<.010	<.004	<.004	<.005	<.010
05-26-2011	1201	E .083	.137	.160	E .128	E .108	E .105	.132	E .106	.176

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 8 of 16

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	alpha-Endo-Alachlor, water, filtered, recoverable, µg/L (46342)	Atrazine, water, filtered, recoverable, µg/L (34362)	Azinphos-methyl, oxygen analog, water, filtered, recoverable, µg/L (39632)	Azinphos-methyl, oxygen analog, water, filtered, recoverable, µg/L (61635)	Benfluralin, water, filtered, recoverable, µg/L (82686)	Carbaryl, water, filtered, recoverable, µg/L (82673)	Carbofuran, water, filtered, recoverable, µg/L (82674)	
05-26-2011	1200	<.008	<.006	.026	<.04	<.120	<.014	<.060	<.060
05-26-2011	1201	.170	.137	.186	E .08	E .168	.137	E .179	E .184

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Chlorpyrifos oxygen analog, water, filtered, recoverable, µg/L (61636)	Chlorpyrifos water, filtered, recoverable, µg/L (38933)	Permethrin, water, filtered (0.7 micron glass fiber) recoverable, µg/L (82687)	cis-Propiconazole, water, filtered, recoverable, µg/L (79846)	Cyanazine, water, filtered, recoverable, µg/L (04041)	Cyfluthrin, water, filtered, recoverable, µg/L (61585)	Cypermethrin, water, filtered, recoverable, µg/L (61586)	DCPA, water, filtered (0.7 micron glass fiber) recoverable, µg/L (82682)	Desulfynil-fipronil amide, water, filtered, recoverable, µg/L (62169)
05-26-2011	1200	<.06	<.004	<.010	<.008	<.022	<.016	<.020	<.008	<.029
05-26-2011	1201	E .03	.154	.124	E .054	.159	E .133	E .126	.163	E .151

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Desulfynil-fipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dichlorvos, water, filtered, recoverable, µg/L (38775)	Dicrotophos, water, filtered, recoverable, µg/L (38454)	Dieldrin, water, filtered, recoverable, µg/L (39381)	Dimethoate, water, filtered (0.7 micron glass fiber) recoverable, µg/L (82662)	Disulfoton sulfone, water, filtered, recoverable, µg/L (61640)	Disulfoton, water, filtered (0.7 micron glass fiber) recoverable, µg/L (82677)	Endosulfan sulfate, water, filtered, recoverable, µg/L (61590)
05-26-2011	1200	<.012	<.006	<.04	<.08	<.008	<.006	<.01	<.04	<.016
05-26-2011	1201	.138	.125	E .10	E .07	.142	E .088	.15	E .13	.147

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	EPTC, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82668)		Ethoprop, water, monoxon, water, filtered, recover- able, µg/L (61644)		Fenami- phos sulfone, water, filtered, recover- able, µg/L (82346)		Fenami- phos sulfoxide, water, filtered, recover- able, µg/L (82672)		Fenami- phos, water, filtered, recover- able, µg/L (61645)		Fipronil sulfide, water, filtered, recover- able, µg/L (61591)		Fipronil sulfone, water, filtered, recover- able, µg/L (62167)	
		Ethion	Ethion	Ethion,	Ethion,	Fenami-	Fenami-	Fipronil	Fipronil						
05-26-2011	1200	< .006	< .02	< .008	< .016	< .054	< .08	< .03	< .012	< .024					
05-26-2011	1201	.144	E .15	.148	.193	.159	E .02	E .18	.176	.156					

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Fipronil, water, filtered, recover- able, µg/L (62166)		Fonofos, water, filtered, recover- able, µg/L (04095)		Hexa- zinone, water, filtered, recover- able, µg/L (04025)		Iprodione, water, filtered, recover- able, µg/L (61593)		Isofen- phos, water, filtered, recover- able, µg/L (61594)		Cyhalo- thrin, water, filtered, recover- able, µg/L (61595)		Malaoxon, water, filtered, recover- able, µg/L (61652)		Malathion, water, filtered, recover- able, µg/L (39532)		Metalexyl, water, filtered, recover- able, µg/L (61596)	
		lambda-	Cyhalo-	Isofen-	Malaoxon,	Malathion,	Metalexyl,												
05-26-2011	1200	< .018	< .005	< .008	< .014	< .006	< .010	< .022	< .016	< .014									
05-26-2011	1201	E .175	.144	.115	E .071	.167	E .081	.152	.155	.161									

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Methyl parathion, water, filtered				Molinate, water, filtered				Pendimethalin, water, filtered	
		Methidathion, water, filtered, recoverable, µg/L (61598)	Methyl paraoxon, water, filtered, recoverable, µg/L (61664)	(0.7 micron glass fiber)	Metolachlor, water, filtered, recoverable, µg/L (82667)	Metribuzin, water, filtered, recoverable, µg/L (39415)	(0.7 micron glass fiber)	Myclobutanil, water, filtered, recoverable, µg/L (82630)	Oxyfluorfen, water, filtered, recoverable, µg/L (61599)	(0.7 micron glass fiber)	Pendimethalin, water, filtered, recoverable, µg/L (82683)
05-26-2011	1200	<.012	<.01	<.008	.008	<.012	<.004	<.010	<.006	.036	
05-26-2011	1201	.144	E .10	.156	.162	.147	.158	.144	.122	.179	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Phorate, water, filtered				Propanil, Propargite, water, filtered				Propyzamide, water, filtered	
		Phorate oxygen analog, water, filtered, recoverable, µg/L (61666)	Phosmet oxygen analog, water, filtered, recoverable, µg/L (82664)	Phosmet water, filtered, recoverable, µg/L (61668)	Prometon, Prometryn, water, filtered, recoverable, µg/L (61601)	(0.7 micron glass fiber)	(0.7 micron glass fiber)	(0.7 micron glass fiber)	(0.7 micron glass fiber)	(0.7 micron glass fiber)	(0.7 micron glass fiber)
05-26-2011	1200	<.03	<.020	<.05	<.140	<.012	.025	<.010	<.02	<.004	
05-26-2011	1201	E .12	.122	<.05	<.140	.150	.179	.182	.16	.154	

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Tebu-thiuron, water, filtered Simazine, water, filtered, recover- able, µg/L (04035)	(0.7 micron glass fiber filter), recover- able, µg/L (82670)	Tefluthrin, water, filtered, recover- able, µg/L (61606)	Terbufos oxygen analog recover- able, µg/L (61674)	Terbufos, water, filtered recover- able, µg/L (82675)	Terbutyl- azine, water, filtered, recover- able, µg/L (82675)	(0.7 micron glass fiber filter), recover- able, µg/L (04022)	Thioben-carb, water, filtered recover- able, µg/L (82681)	Propiconazole, water, filtered, recover- able, µg/L (79847)	Tribuphos, water, filtered, recover- able, µg/L (61610)
05-26-2011	1200	< .006	< .03	< .010	< .04	< .02	< .01	< .016	< .01	< .018	
05-26-2011	1201	.157	E .26	E .093	.12	.11	.15	.157	E .12	E .136	

WATER-QUALITY DATA
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[%, percent; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Date	Sample start time	Trifluralin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82661)	Uranium (natural), water, filtered, µg/L (22703)
05-26-2011	1200	< .018	.22
05-26-2011	1201	.144	--