488-4D LANDFILL GROUNDWATER MONITORING REPORT FOR 2009

SRNS-TR-2009-00365

SEPTEMBER 24, 2009

Introduction

In accordance with the 488-4D Class Two Landfill Permit, #025800-1602, wells DCB 8, DCB 13R and DCB 16R (figure 1) are monitored for the parameters listed below:

Antimony (total)
Arsenic (total)
Barium (total)
Cadmium (total)
Chlorides
Chromium (total)
Copper (total)
Cyanide (total)
Fluoride (total)
Iron (total)
Lead (total)
Mercury (total)
Nickel (total)
Nitrate/Nitrite (total)
pH
Selenium (total)
Silver (total)
Sulfate
Thallium (total)
Total Dissolved Solids
Turbidity
Zinc (total)

Sampling took place during the first and third quarters of 2009. The well sampling and analyses were conducted in accordance with Procedure Manual 3Q5, Hydrogeologic Data Collection. New wells DCB 75 and DCB 76 were completed in September and have not yet been sampled.

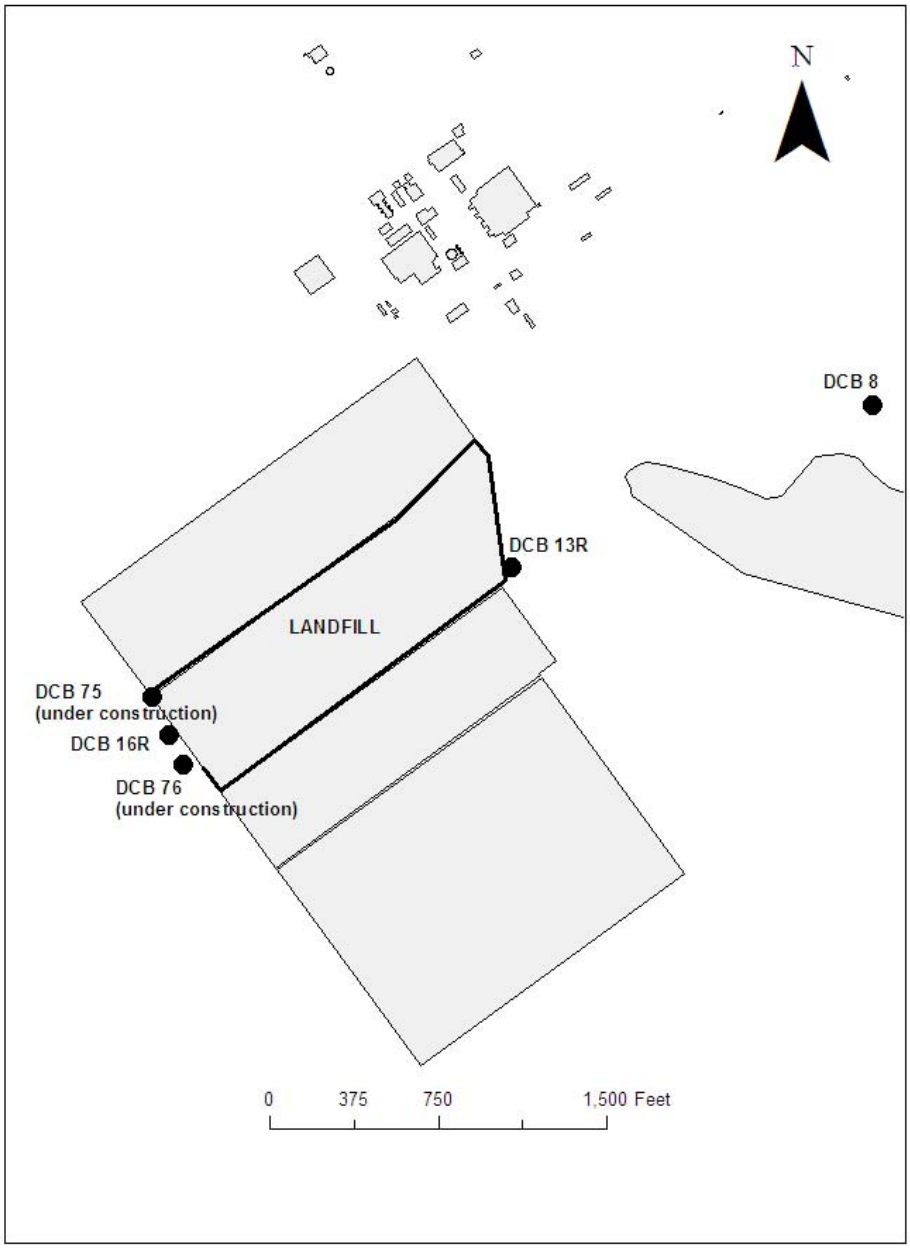

Figure 1. Well locations for 488-4D Landfill. DCB 75 and DCB 76 will be completed by October 1, 2009.

Flow Direction and Rate

Maps of the watertable surface for first and third quarters are presented in figures 2 and 3. The first quarter map will always be more comprehensive because wells associated with other D Area waste units are sampled at that time. The third quarter map has at only three data points, but this is sufficient to show changes in gradient that may occur over time.

It is clear from both maps that flow is to the southwest. The flow rate can be estimated using the data from wells DCB 8 and DCB 16R and the following equation:

$$\text{Flow(ft/day)} = \frac{\text{Hydraulic Conductivity (ft/day)}}{\text{Porosity (unitless)}} \times \frac{\text{dh(ft)}}{\text{dl(ft)}}$$

With the hydraulic conductivity at 18 ft/day (Brewer and Sochor, 2002), the effective porosity value at 20 percent, and the gradient at .004 (based on contours in figure 2), the calculation is as follows:

$$\frac{18 \text{ ft/day}}{0.20} \times .004 = 0.36 \text{ ft/day or } 131.4 \text{ ft/year}$$

There was no appreciable change in gradient, so the estimate is good for both quarters.

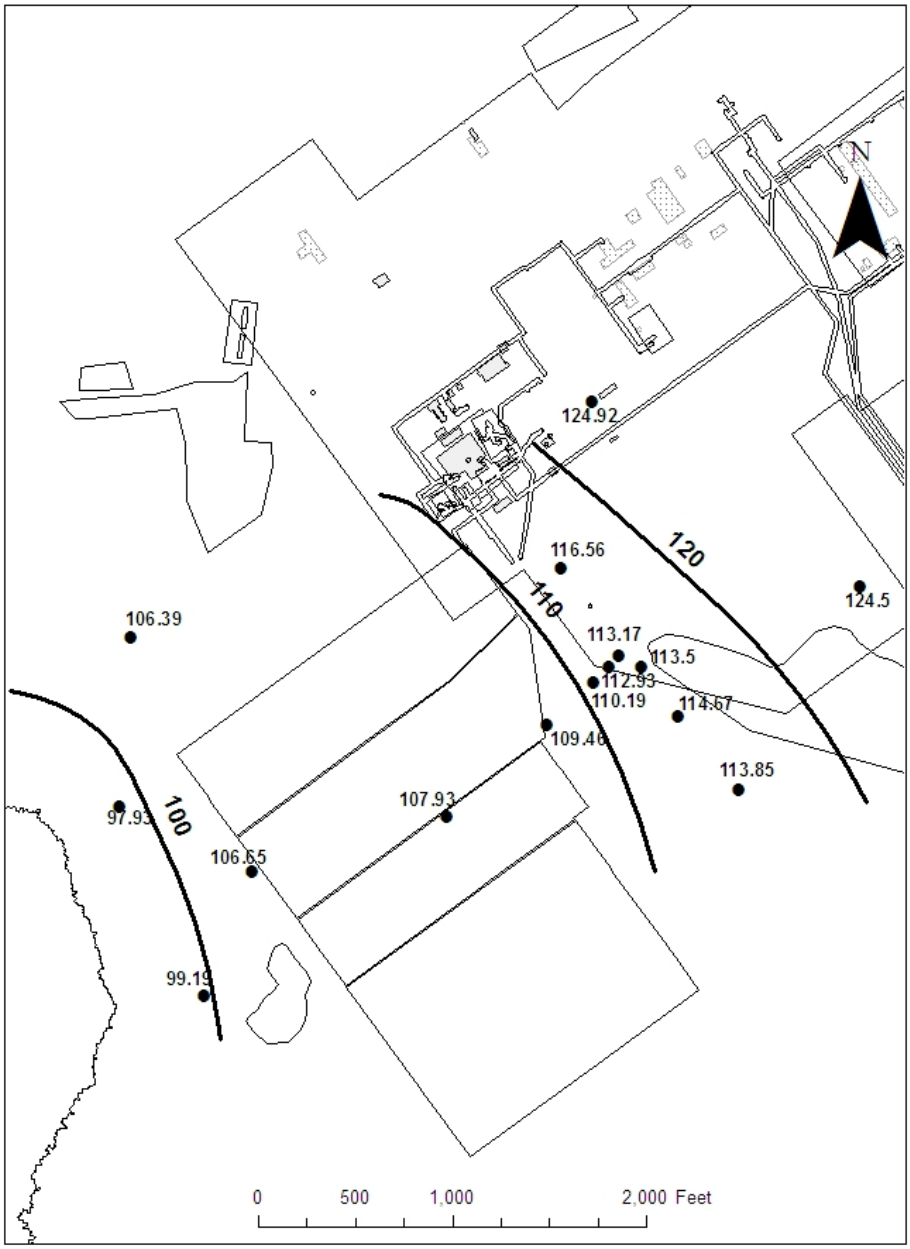

Figure 2. Watertable elevations at D Area during the first quarter of 2009.

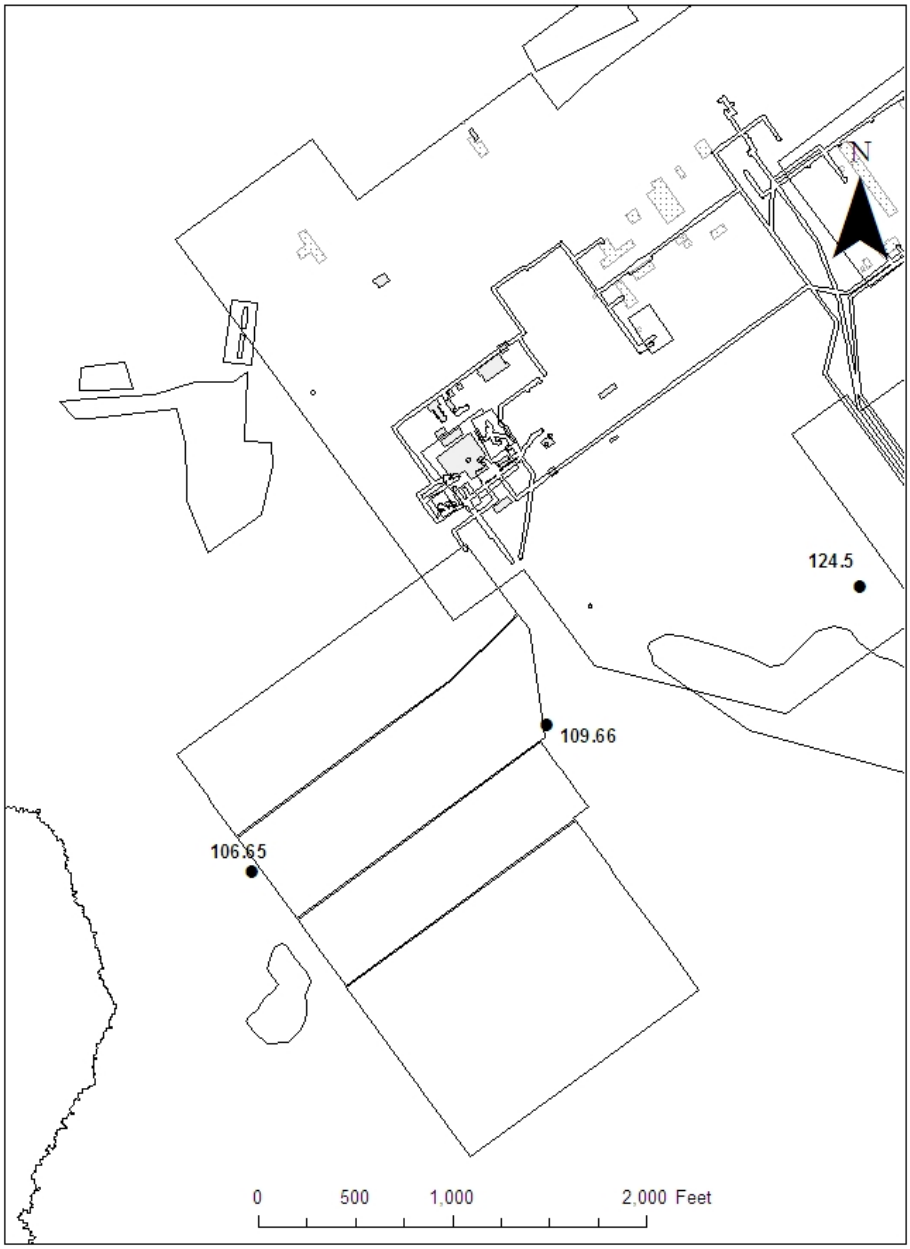

Figure 3. Watertable elevations at D Area during the third quarter of 2009.

Analytical results

Downgradient monitoring results from well DCB 16R were compared to upgradient results from wells DCB 8 and DCB 13R. Downgradient results for barium and chlorides exceeded upgradient results during both sampling events. This is an indication that the ash basin may be contributing small amounts of these contaminants to the groundwater. However, the concentrations of both contaminants are well below drinking water standards. The barium results from DCB 16R were 21.2 ug/l during first quarter and 23.5 ug/l for third quarter while the Primary Drinking Water Standard (PDWS) is 2 mg/l. The chlorides results from DCB 16R were 6.65 ug/l during first quarter and 6.76 ug/l for third quarter while the Secondary Drinking Water Standard (SDWS) is 250 mg/l.

All results from the 2009 sampling events are presented in table 1.

Conclusions

Downgradient well DCB 16R and upgradient wells DCB 8 and DCB 13R were sampled during the first quarter and again during the third quarter of 2009. The samples from the downgradient well were elevated above background for barium and chlorides, but the concentrations were orders of magnitude below the drinking water standards. The groundwater flow direction and velocity were consistent with historical trends.

Table 1. Sampling results.

WELL	DATE	ANALYTE NAME	METHOD	MDL	PQL	LAB QUALIFIER	RESULT	UNITS
DCB 8	3/17/2009	ANTIMONY	EPA6010C	5	50	U	50	ug/L
DCB 8	7/9/2009	ANTIMONY	EPA6020A	1	3	J	1.17	ug/L
DCB 13R	3/17/2009	ANTIMONY	EPA6020A	0.5	2	U	2	ug/L
DCB 13R	3/17/2009	ANTIMONY	EPA6010C	5	50	J	5.33	ug/L
DCB 13R	3/17/2009	ANTIMONY	EPA6010C	5	50	U	50	ug/L
DCB 13R	7/9/2009	ANTIMONY	EPA6020A	1	3	U	3	ug/L
DCB 16R	3/17/2009	ANTIMONY	EPA6020A	0.5	2	U	2	ug/L

WELL	DATE	ANALYTE NAME	METHOD	MDL	PQL	LAB QUALIFIER	RESULT	UNITS
DCB 16R	3/17/2009	ANTIMONY	EPA6010C	5	50	J	10.8	ug/L
DCB 16R	7/9/2009	ANTIMONY	EPA6020A	1	3	U	3	ug/L
DCB 8	3/17/2009	ARSENIC	EPA6010C	10	100	U	100	ug/L
DCB 8	7/9/2009	ARSENIC	EPA6020A	1.6	5	U	2.29	ug/L
DCB 13R	3/17/2009	ARSENIC	EPA6020A	1.5	5	U	5	ug/L
DCB 13R	3/17/2009	ARSENIC	EPA6010C	10	100	U	100	ug/L
DCB 13R	3/17/2009	ARSENIC	EPA6010C	10	100	J	13.6	ug/L
DCB 13R	7/9/2009	ARSENIC	EPA6020A	1.6	5	U	5	ug/L
DCB 16R	3/17/2009	ARSENIC	EPA6020A	1.5	5	U	5	ug/L
DCB 16R	3/17/2009	ARSENIC	EPA6010C	10	100	U	100	ug/L
DCB 16R	7/9/2009	ARSENIC	EPA6020A	1.6	5	U	5	ug/L
DCB 8	3/17/2009	BARIUM	EPA6010C	1	10		17.1	ug/L
DCB 8	7/9/2009	BARIUM	EPA6020A	0.6	2		19.7	ug/L
DCB 13R	3/17/2009	BARIUM	EPA6020A	0.5	2		19.8	ug/L
DCB 13R	3/17/2009	BARIUM	EPA6010C	1	10		18.1	ug/L
DCB 13R	3/17/2009	BARIUM	EPA6010C	1	10		17.7	ug/L
DCB 13R	7/9/2009	BARIUM	EPA6020A	0.6	2		12.4	ug/L
DCB 16R	3/17/2009	BARIUM	EPA6020A	0.5	2		20.2	ug/L
DCB 16R	3/17/2009	BARIUM	EPA6010C	1	10		20.7	ug/L
DCB 16R	7/9/2009	BARIUM	EPA6020A	0.6	2		21.2	ug/L
DCB 8	3/17/2009	CADMIUM	EPA6010C	1	10	U	10	ug/L
DCB 8	7/9/2009	CADMIUM	EPA6020A	0.11	1		7.88	ug/L
DCB 13R	3/17/2009	CADMIUM	EPA6020A	0.11	1		5.72	ug/L
DCB 13R	3/17/2009	CADMIUM	EPA6010C	1	10	J	4.54	ug/L
DCB 13R	3/17/2009	CADMIUM	EPA6010C	1	10	J	4.64	ug/L
DCB 13R	7/9/2009	CADMIUM	EPA6020A	0.11	1	U	1	ug/L
DCB 16R	3/17/2009	CADMIUM	EPA6020A	0.11	1	J	0.326	ug/L
DCB 16R	3/17/2009	CADMIUM	EPA6010C	1	10	U	10	ug/L
DCB 16R	7/9/2009	CADMIUM	EPA6020A	0.11	1	U	0.82	ug/L
DCB 8	3/17/2009	CHLORIDE	EPA9056A	0.066	0.2		3.72	mg/L
DCB 8	3/17/2009	CHLORIDE	EPA9056A	0.066	0.2		3.72	mg/L
DCB 8	3/17/2009	CHLORIDE	EPA9056A	0.066	0.2		3.72	mg/L
DCB 8	3/17/2009	CHLORIDE	EPA9056A	0.066	0.2		3.72	mg/L
DCB 8	7/9/2009	CHLORIDE	EPA9056A	0.066	0.2		3.81	mg/L
DCB 8	7/9/2009	CHLORIDE	EPA9056A	0.066	0.2		3.76	mg/L
DCB 13R	3/17/2009	CHLORIDE	EPA9056A	0.066	0.2		2.67	mg/L
DCB 13R	7/9/2009	CHLORIDE	EPA9056A	0.066	0.2		2.72	mg/L
DCB 16R	3/17/2009	CHLORIDE	EPA9056A	0.066	0.2		6.65	mg/L
DCB 16R	7/9/2009	CHLORIDE	EPA9056A	0.066	0.2		6.76	mg/L
DCB 8	3/17/2009	CHROMIUM	EPA6010C	1	10	J	3.37	ug/L
DCB 8	7/9/2009	CHROMIUM	EPA6020A	2	10	U	10	ug/L
DCB 13R	3/17/2009	CHROMIUM	EPA6020A	1.5	3		3.42	ug/L
DCB 13R	3/17/2009	CHROMIUM	EPA6010C	1	10	J	1.11	ug/L
DCB 13R	3/17/2009	CHROMIUM	EPA6010C	1	10	J	1.08	ug/L
DCB 13R	7/9/2009	CHROMIUM	EPA6020A	2	10	U	10	ug/L
DCB 16R	3/17/2009	CHROMIUM	EPA6020A	1.5	3	U	3	ug/L
DCB 16R	3/17/2009	CHROMIUM	EPA6010C	1	10	U	10	ug/L
DCB 16R	7/9/2009	CHROMIUM	EPA6020A	2	10	U	10	ug/L

WELL	DATE	ANALYTE NAME	METHOD	MDL	PQL	LAB QUALIFIER	RESULT	UNITS
DCB 8	3/17/2009	COPPER	EPA6010C	1	10		68.2	ug/L
DCB 8	7/9/2009	COPPER	EPA6020A	0.33	1		9.13	ug/L
DCB 13R	3/17/2009	COPPER	EPA6020A	0.3	1		7.79	ug/L
DCB 13R	3/17/2009	COPPER	EPA6010C	1	10	U	10	ug/L
DCB 13R	3/17/2009	COPPER	EPA6010C	1	10	U	10	ug/L
DCB 13R	7/9/2009	COPPER	EPA6020A	0.33	1		36.5	ug/L
DCB 16R	3/17/2009	COPPER	EPA6020A	0.3	1	J	3.42	ug/L
DCB 16R	3/17/2009	COPPER	EPA6010C	1	10	J	1.55	ug/L
DCB 16R	7/9/2009	COPPER	EPA6020A	0.33	1	J	4.28	ug/L
DCB 8	3/17/2009	CYANIDE	EPA9012A	1.5	5	U	5	ug/L
DCB 8	3/17/2009	CYANIDE	EPA9012A	1.5	5	U	5	ug/L
DCB 8	7/9/2009	CYANIDE	EPA9012A	1.66	5	U	5	ug/L
DCB 8	7/9/2009	CYANIDE	EPA9012A	1.66	5	U	5	ug/L
DCB 13R	3/17/2009	CYANIDE	EPA9012A	1.5	5	U	5	ug/L
DCB 13R	7/9/2009	CYANIDE	EPA9012A	1.66	5	U	5	ug/L
DCB 16R	3/17/2009	CYANIDE	EPA9012A	1.5	5	U	5	ug/L
DCB 16R	7/9/2009	CYANIDE	EPA9012A	1.66	5	J	1.94	ug/L
DCB 8	3/17/2009	DEPTH_TO_WATER					12.8	ft
DCB 8	7/9/2009	DEPTH_TO_WATER					12.7	ft
DCB 13R	3/17/2009	DEPTH_TO_WATER					21.1	ft
DCB 13R	3/17/2009	DEPTH_TO_WATER					21.2	ft
DCB 13R	7/9/2009	DEPTH_TO_WATER					21	ft
DCB 16R	3/17/2009	DEPTH_TO_WATER					20.6	ft
DCB 16R	7/9/2009	DEPTH_TO_WATER					20.6	ft
DCB 8	3/17/2009	FLUORIDE	EPA9056A	0.033	0.1	U	0.1	mg/L
DCB 8	3/17/2009	FLUORIDE	EPA9056A	0.033	0.1	U	0.1	mg/L
DCB 8	7/9/2009	FLUORIDE	EPA9056A	0.033	0.1	U	0.1	mg/L
DCB 8	7/9/2009	FLUORIDE	EPA9056A	0.033	0.1	U	0.1	mg/L
DCB 13R	3/17/2009	FLUORIDE	EPA9056A	0.033	0.1		2.67	mg/L
DCB 13R	7/9/2009	FLUORIDE	EPA9056A	0.033	0.1		2.73	mg/L
DCB 16R	3/17/2009	FLUORIDE	EPA9056A	0.033	0.1		0.21	mg/L
DCB 16R	7/9/2009	FLUORIDE	EPA9056A	0.033	0.1		0.27	mg/L
DCB 8	3/17/2009	IRON	EPA6010C	1	10		709	ug/L
DCB 8	7/9/2009	IRON	EPA6020A	33	100		8930	ug/L
DCB 13R	3/17/2009	IRON	EPA6020A	10	25		9390	ug/L
DCB 13R	3/17/2009	IRON	EPA6010C	1	10		7040	ug/L
DCB 13R	3/17/2009	IRON	EPA6010C	1	10		6940	ug/L
DCB 13R	7/9/2009	IRON	EPA6020A	33	100		1030	ug/L
DCB 16R	3/17/2009	IRON	EPA6020A	10	25		5190	ug/L
DCB 16R	3/17/2009	IRON	EPA6010C	1	10		4860	ug/L
DCB 16R	7/9/2009	IRON	EPA6020A	33	100		4110	ug/L
DCB 8	3/17/2009	LEAD	EPA6010C	2	20	U	20	ug/L
DCB 8	7/9/2009	LEAD	EPA6020A	0.5	2	U	2	ug/L
DCB 13R	3/17/2009	LEAD	EPA6020A	0.5	2	U	2	ug/L
DCB 13R	3/17/2009	LEAD	EPA6010C	2	20	U	20	ug/L
DCB 13R	3/17/2009	LEAD	EPA6010C	2	20	U	20	ug/L
DCB 13R	7/9/2009	LEAD	EPA6020A	0.5	2	J	0.516	ug/L
DCB 16R	3/17/2009	LEAD	EPA6020A	0.5	2	U	2	ug/L

WELL	DATE	ANALYTE NAME	METHOD	MDL	PQL	LAB QUALIFIER	RESULT	UNITS
DCB 16R	3/17/2009	LEAD	EPA6010C	2	20	U	20	ug/L
DCB 16R	7/9/2009	LEAD	EPA6020A	0.5	2	U	2	ug/L
DCB 8	3/17/2009	MERCURY	EPA7470A	0.02	0.2	U	0.2	ug/L
DCB 8	7/9/2009	MERCURY	EPA7470A	0.066	0.2		1.96	ug/L
DCB 13R	3/17/2009	MERCURY	EPA7470A	0.067	0.2		2.16	ug/L
DCB 13R	3/17/2009	MERCURY	EPA7470A	0.02	0.2		2.25	ug/L
DCB 13R	7/9/2009	MERCURY	EPA7470A	0.066	0.2	U	0.2	ug/L
DCB 16R	3/17/2009	MERCURY	EPA7470A	0.067	0.2	U	0.2	ug/L
DCB 16R	3/17/2009	MERCURY	EPA7470A	0.02	0.2	J	0.025	ug/L
DCB 16R	7/9/2009	MERCURY	EPA7470A	0.066	0.2	J	0.104	ug/L
DCB 8	3/17/2009	NICKEL	EPA6010C	1	10	J	1.1	ug/L
DCB 8	7/9/2009	NICKEL	EPA6020A	0.5	2		301	ug/L
DCB 13R	3/17/2009	NICKEL	EPA6020A	0.5	2		297	ug/L
DCB 13R	3/17/2009	NICKEL	EPA6010C	1	10		225	ug/L
DCB 13R	3/17/2009	NICKEL	EPA6010C	1	10		221	ug/L
DCB 13R	7/9/2009	NICKEL	EPA6020A	0.5	2	J	0.654	ug/L
DCB 16R	3/17/2009	NICKEL	EPA6020A	0.5	2		11.4	ug/L
DCB 16R	3/17/2009	NICKEL	EPA6010C	1	10	J	8.84	ug/L
DCB 16R	7/9/2009	NICKEL	EPA6020A	0.5	2		17.9	ug/L
DCB 8	3/17/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.1	0.5	J	0.422	mg/L
DCB 8	3/17/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.1	0.5	J	0.41	mg/L
DCB 8	7/9/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.05	0.25		0.362	mg/L
DCB 8	7/9/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.05	0.25		0.339	mg/L
DCB 13R	3/17/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.05	0.25	J	0.057	mg/L
DCB 13R	7/9/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.01	0.05		0.05	mg/L
DCB 16R	3/17/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.05	0.25	J	0.0765	mg/L
DCB 16R	7/9/2009	NITRATE-NITRITE AS NITROGEN	EPA353.2	0.01	0.05		0.05	mg/L
DCB 8	3/17/2009	PH	EPA9040B	0.01	0.1	J	4.81	pH
DCB 8	7/9/2009	PH	EPA9040B	0.01	0.1		4.94	pH
DCB 8	7/9/2009	PH	EPA9040B	0.01	0.1		4.91	pH
DCB 13R	3/17/2009	PH	EPA9040B	0.01	0.1	J	4.2	pH
DCB 13R	3/17/2009	PH					4	pH
DCB 13R	7/9/2009	PH	EPA9040B	0.01	0.1		4.21	pH
DCB 16R	3/17/2009	PH	EPA9040B	0.01	0.1	J	4.61	pH
DCB 16R	3/17/2009	PH	EPA9040B	0.01	0.1	J	4.61	pH
DCB 16R	3/17/2009	PH					4.4	pH
DCB 16R	7/9/2009	PH	EPA9040B	0.01	0.1		4.68	pH
DCB 8	3/17/2009	SELENIUM	EPA6010C	10	100	U	100	ug/L
DCB 8	7/9/2009	SELENIUM	EPA6020A	1	5	J	1.41	ug/L
DCB 13R	3/17/2009	SELENIUM	EPA6020A	1	5	J	1.9	ug/L
DCB 13R	3/17/2009	SELENIUM	EPA6010C	10	100	U	100	ug/L
DCB 13R	3/17/2009	SELENIUM	EPA6010C	10	100	U	100	ug/L
DCB 13R	7/9/2009	SELENIUM	EPA6020A	1	5	U	5	ug/L
DCB 16R	3/17/2009	SELENIUM	EPA6020A	1	5	U	5	ug/L
DCB 16R	3/17/2009	SELENIUM	EPA6010C	10	100	U	100	ug/L

WELL	DATE	ANALYTE NAME	METHOD	MDL	PQL	LAB QUALIFIER	RESULT	UNITS
DCB 16R	7/9/2009	SELENIUM	EPA6020A	1	5	U	5	ug/L
DCB 8	3/17/2009	SILVER	EPA6010C	1	10	U	10	ug/L
DCB 8	7/9/2009	SILVER	EPA6020A	0.2	1	U	0.296	ug/L
DCB 13R	3/17/2009	SILVER	EPA6020A	0.2	1	U	1	ug/L
DCB 13R	3/17/2009	SILVER	EPA6010C	1	10	U	10	ug/L
DCB 13R	3/17/2009	SILVER	EPA6010C	1	10	U	10	ug/L
DCB 13R	7/9/2009	SILVER	EPA6020A	0.2	1	U	1	ug/L
DCB 16R	3/17/2009	SILVER	EPA6020A	0.2	1	U	1	ug/L
DCB 16R	3/17/2009	SILVER	EPA6010C	1	10	U	10	ug/L
DCB 16R	7/9/2009	SILVER	EPA6020A	0.2	1	U	1	ug/L
DCB 8	3/17/2009	SPECIFIC CONDUCTANCE					29	uS/cm
DCB 8	7/9/2009	SPECIFIC CONDUCTANCE					21	uS/cm
DCB 13R	3/17/2009	SPECIFIC CONDUCTANCE					928	uS/cm
DCB 13R	7/9/2009	SPECIFIC CONDUCTANCE					906	uS/cm
DCB 16R	3/17/2009	SPECIFIC CONDUCTANCE					588	uS/cm
DCB 16R	7/9/2009	SPECIFIC CONDUCTANCE					567	uS/cm
DCB 8	3/17/2009	SULFATE	EPA9056A	0.1	0.4		1.72	mg/L
DCB 8	3/17/2009	SULFATE	EPA9056A	0.1	0.4		1.76	mg/L
DCB 8	7/9/2009	SULFATE	EPA9056A	0.1	0.4		2.05	mg/L
DCB 8	7/9/2009	SULFATE	EPA9056A	0.1	0.4		2.07	mg/L
DCB 13R	3/17/2009	SULFATE	EPA9056A	10	40		617	mg/L
DCB 13R	3/17/2009	SULFATE	EPA9056A	10	40		674	mg/L
DCB 13R	7/9/2009	SULFATE	EPA9056A	2	8		485	mg/L
DCB 16R	3/17/2009	SULFATE	EPA9056A	10	40		315	mg/L
DCB 16R	3/17/2009	SULFATE	EPA9056A	10	40		345	mg/L
DCB 16R	7/9/2009	SULFATE	EPA9056A	1	4		245	mg/L
DCB 8	3/17/2009	THALLIUM	EPA6010C	10	100	U	100	ug/L
DCB 8	7/9/2009	THALLIUM	EPA6020A	0.3	1	J	0.471	ug/L
DCB 13R	3/17/2009	THALLIUM	EPA6020A	0.3	1	U	1	ug/L
DCB 13R	3/17/2009	THALLIUM	EPA6010C	10	100	U	100	ug/L
DCB 13R	3/17/2009	THALLIUM	EPA6010C	10	100	U	100	ug/L
DCB 13R	7/9/2009	THALLIUM	EPA6020A	0.3	1	U	1	ug/L
DCB 16R	3/17/2009	THALLIUM	EPA6020A	0.3	1	U	1	ug/L
DCB 16R	3/17/2009	THALLIUM	EPA6010C	10	100	U	100	ug/L
DCB 16R	7/9/2009	THALLIUM	EPA6020A	0.3	1	J	0.313	ug/L
DCB 8	3/17/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		22	mg/L
DCB 8	3/17/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		24	mg/L
DCB 8	7/9/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		22	mg/L
DCB 8	7/9/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		18	mg/L
DCB 13R	3/17/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		723	mg/L
DCB 13R	7/9/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		763	mg/L
DCB 16R	3/17/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		390	mg/L

WELL	DATE	ANALYTE NAME	METHOD	MDL	PQL	LAB QUALIFIER	RESULT	UNITS
DCB 16R	7/9/2009	TOTAL DISSOLVED SOLIDS	SM2540C	2.38	10		405	mg/L
DCB 8	3/17/2009	TURBIDITY					7.8	NTU
DCB 8	7/9/2009	TURBIDITY					3.3	NTU
DCB 13R	3/17/2009	TURBIDITY					0.3	NTU
DCB 13R	7/9/2009	TURBIDITY					1.8	NTU
DCB 16R	3/17/2009	TURBIDITY					0.3	NTU
DCB 16R	7/9/2009	TURBIDITY					1.5	NTU
DCB 8	3/17/2009	WATER TEMPERATURE					18.6	degC
DCB 8	7/9/2009	WATER TEMPERATURE					19.1	degC
DCB 13R	3/17/2009	WATER TEMPERATURE					20.2	degC
DCB 13R	7/9/2009	WATER TEMPERATURE					20.2	degC
DCB 16R	3/17/2009	WATER TEMPERATURE					20.4	degC
DCB 16R	7/9/2009	WATER TEMPERATURE					20.8	degC
DCB 8	3/17/2009	ZINC	EPA6010C	1	10	J	3.82	ug/L
DCB 8	7/9/2009	ZINC	EPA6020A	3	10		810	ug/L
DCB 13R	3/17/2009	ZINC	EPA6020A	2.6	10		1040	ug/L
DCB 13R	3/17/2009	ZINC	EPA6010C	1	10		747	ug/L
DCB 13R	3/17/2009	ZINC	EPA6010C	1	10		734	ug/L
DCB 13R	7/9/2009	ZINC	EPA6020A	3	10	U	10	ug/L
DCB 16R	3/17/2009	ZINC	EPA6020A	2.6	10		21	ug/L
DCB 16R	3/17/2009	ZINC	EPA6010C	1	10		11.4	ug/L
DCB 16R	7/9/2009	ZINC	EPA6020A	3	10		28.1	ug/L

Definitions:

MDL method detection limit

PQL practical quantitation limit

LAB QUALIFIER USEPA Functional Guideline Codes applied by labs.

USEPA Functional Guideline Codes

J The detected analyte was positively identified but the result is approximate.

NJ The detected analyte was only tentatively identified and the result is approximate. All usable TIC results receive this code.

U The analyte was analyzed for, but not detected. The sample detection and quantitation limits (MDL & SQL) are valid unless blank contamination is indicated.

UJ The analyte was analyzed for, but not detected. The MDL & SQL are approximate, and may be inaccurate or imprecise.

R The sample result is rejected as unusable due to serious deficiencies in meeting quality control criteria. The analyte may be present or absent.

References Cited

Brewer, K.E. and C.S. Sochor, 2002, *Flow and Transport Modelin for D-Area Groundwater*, WSRC-RP-2002-4166, Savannah River Site, Aiken, S.C.

Westinghouse Savannah River Company, 2007, *Hydrogeologic .Data Collection Manual 3Q5*, Savannah River Site, Aiken, S.C.