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*Title:* Los Alamos National Laboratory Surface Water Monitoring Results, Rio Grande at Otowi Bridge

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ENV-RCRA

*Intended for:* Mr. Brian Snyder  
Water Division Director  
City of Santa Fe  
Santa Fe, New Mexico 87504



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Date:  
Refer To: EP2010-

Mr. Brian Snyder, Water Division Director  
Acting Public Utilities Division Director  
Sangre de Cristo Water Division  
City of Santa Fe  
801 West San Mateo  
P.O. Box 909  
Santa Fe, New Mexico 87504

**Subject: Los Alamos National Laboratory Surface Water Monitoring Results, Rio Grande at Otowi Bridge**

Dear Mr. Snyder:

This report, prepared by Los Alamos National Laboratory (LANL or the Laboratory), provides analytical results from the May 10, 2010, sampling of the Rio Grande at Otowi Bridge. All results were below U.S. Environmental Protection Agency (EPA) drinking water standards, with the exception of the following.

- Aluminum (Al) was measured in an unfiltered sample at a concentration of 2570 µg/L; the EPA national secondary drinking water standard for aluminum is 50 µg/L–200 µg/L. The concentration of aluminum in the filtered sample was <200 µg/L.
- Iron (Fe) was measured in an unfiltered sample at a concentration of 1810 µg/L; the EPA national secondary drinking water standard for iron is 300 µg/L. The concentration of iron in the filtered sample was <100 µg/L.
- Manganese (Mn) was measured in an unfiltered sample at a concentration of 98.1 µg/L; the EPA national secondary drinking water standard for manganese is 50 µg/L. The concentration of manganese in the filtered sample was 3.97 µg/L.

In a November 1, 2007, letter the Buckman Direct Diversion (BDD) Board requested that LANL and the U.S. Department of Energy (DOE) fund and implement six actions to protect public drinking water supplies (H. Montoya, Chair, BDD Board, to G. Rael, DOE, and S. Stiger, LANL). Pursuant to the letter's action item 2, *Properly monitor the transport of legacy contaminants in both the surface water and groundwater flow systems*, on July 30, 2008, LANL initiated bimonthly sampling of the Rio Grande at Otowi Bridge and at Buckman upstream of the BDD. This report presents the analytical results from the May 10, 2010, 9:10 a.m., sampling event at Otowi Bridge. The results from sampling the Rio Grande at Buckman were reported to your agency separately in an August 16, 2010, letter (EP2010-0358).

Analytical results from the May 10, 2010, event are summarized in Tables 1.0 to 6.0. The attached CD also contains an Excel file of Tables 1.0 to 6.0 and a glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes. A discussion of the analytical results follows.

**Radionuclides:** Samples were collected from the Rio Grande at Otowi Bridge and submitted to General Engineering Laboratories, Inc. (GEL) and American Radiation Services Laboratory, Inc. (ARSL) for the analysis of radionuclides. Analytical results are summarized in Table 1.0. The results are discussed below.

- **Americium-241, Cesium-137, Neptunium-237, Plutonium-238, Plutonium-239/240, and Strontium-90:** All filtered and unfiltered results were nondetect, as indicated by the analytical laboratory qualifier code "U."
- **Gross Alpha:** All filtered and unfiltered results were nondetect, as indicated by the analytical laboratory qualifier code "U."
- **Gross Beta:** Gross-beta activities in the filtered and unfiltered samples were 2.56 pCi/L and 3.09 pCi/L, respectively. All results were below the EPA screening level of 50 pCi/L for gross beta in drinking water.
- **Tritium:** Tritium activity in the unfiltered sample was 17.18 pCi/L, below the EPA Maximum Contaminant Level (MCL) of 20,000 pCi/L for tritium in drinking water and consistent with background atmospheric tritium levels in northern New Mexico of about 30 pCi/L.
- **Radium-226:** Radium-226 was not detected in the filtered sample, as indicated by the analytical laboratory qualifier code "U." Radium-226 was detected in the unfiltered sample at 0.48 pCi/L, below the EPA MCL for radium-226 in drinking water of 5 pCi/L.
- **Radium-228:** Radium-228 was not detected in the filtered sample, as indicated by the analytical laboratory qualifier code "U." Radium-228 was detected in the unfiltered sample at 1.8 pCi/L, below the EPA MCL for radium-228 in drinking water of 5 pCi/L.
- **Isotopic Uranium:** Filtered and unfiltered samples were submitted to GEL for isotopic uranium (U) analysis using alpha spectroscopy. The EPA has not established an activity-based MCL for uranium isotopes in drinking water; the current EPA MCL of 30 µg/L is a mass-based standard. The mass of uranium in each sample was calculated using the following formula, which incorporates the specific activities for the isotopes:

$$\text{Total uranium } (\mu\text{g/L}) = \left(\frac{^{233}\text{U}}{^{234}\text{U}}/6250\right) + \left(\frac{^{235}\text{U}}{^{236}\text{U}}/2.16\right) + \left(\frac{^{238}\text{U}}{^{238}\text{U}}/0.336\right)$$

The calculated concentrations of total uranium are presented below. These values are consistent with the total uranium results obtained from inductively coupled plasma/mass spectrometry (ICPMS) analysis presented in Table 6.0. All results are below the EPA MCL of 30 µg/L for total uranium in drinking water.

Location	Field Prep (F/UF)	Total Uranium —Calculated— (pCi/L)	Total Uranium —ICPMS— (pCi/L)
Rio Grande at Otowi Bridge	F	0.95	1.2
Rio Grande at Otowi Bridge	UF	1.1	1.4

**Organics:** Samples were collected from the Rio Grande at Buckman and submitted to GEL for the analysis of organics. The analytical results are summarized in Tables 2.0, 3.0, and 4.0 and are discussed below.

- **Volatile Organic Compounds (VOCs):** No VOCs were detected in the unfiltered sample or field trip blank (FTB) at concentrations greater than GEL's method detection limit (MDL).
- **Semivolatile Organic Compounds (SVOCs):** No SVOCs were detected in the unfiltered sample at concentrations greater than GEL's MDL.
- **Pesticides:** No pesticides were detected in the unfiltered sample at concentrations greater than GEL's MDL.
- **Polychlorinated Biphenyls (PCBs):** An unfiltered sample and unfiltered field blank (FB) were submitted to Cape Fear Analytical (CFA) for the analysis of 209 PCB congeners using analytical method EPA:1668A. Congeners are individual PCB compounds. Table 4.0 presents the total detected PCBs—the sum of detected PCB congeners—in each sample. The results are summarized below.

Location	Analyte	Field Prep	Result (µg/L)	Result (pg/L)	Lab Qual Code	Concat Flag Code	Fld QC Type Code
Rio Grande at Otowi Bridge	Total detected PCBs	UF	<0.0000000	<0.00	U	U	
Rio Grande at Otowi Bridge	Total detected PCBs	UF	<0.0000000	<0.00	U	U	FB

The sample and FB were reported as nondetect for PCBs by CFA, as indicated by the qualifier code "U." The EPA MCL for total PCBs in drinking water is 0.5 µg/L. Individual congener results have not been included in this report but are available online at RACER NM (<http://www.racernm.com/>).

**General Inorganics:** Samples were submitted to GEL for the analysis of general inorganics. Field measurements were taken for dissolved oxygen, conductivity, temperature, turbidity, and pH. The results are summarized in Table 5.0 and discussed below.

- **Perchlorate:** The unfiltered perchlorate concentration was 0.09 µg/L. Currently, neither the federal government nor the State of New Mexico has established a drinking water standard for perchlorate.
- **Cyanide, Fluoride, and Nitrate+Nitrite (as N):** All results were below EPA MCLs.

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- Chloride, Sulfate, Total Dissolved Solids, and pH:** All results were below EPA secondary drinking water standards.
- Turbidity, Suspended Solids Concentration, and Streamflow:** Turbidity was measured at 47.6 nephelometric turbidity units (NTUs). Turbidity values in the Rio Grande at Otowi Bridge have ranged from 10 to 121 NTUs since July 2008.

The unfiltered suspended solids concentration (SSC) was <10 mg/L. Since July 2008, SSC values in the Rio Grande at Otowi Bridge have ranged from <10 to 196 mg/L.

The U.S. Geologic Survey (USGS) collects real-time streamflow data from the Rio Grande and Rio Chama. Daily mean discharge data for May 10, 2010, are presented below.

USGS Station Name	Date	Daily Mean Discharge (ft <sup>3</sup> /s)
Rio Grande at Otowi Bridge (USGS 08313000)	5/10/10	4,080
Rio Grande at Embudo (USGS 08279500)	5/10/10	1,570
Rio Chama near Chamita (USGS 08290000)	5/10/10	2,060

Source: <http://waterdata.usgs.gov/nm/nwis/current/?type=flow>.

**Metals:** Filtered and unfiltered samples were collected from the Rio Grande at Otowi Bridge and submitted to GEL for metals analysis. All results are summarized in Table 6.0. The concentrations of filtered and unfiltered metals were below the EPA national primary and secondary drinking water standards, with the exception of aluminum, iron, and manganese reported on page 1 of this report.

**Particle Size:** Results from the analytical laboratory were pending at the time this report was prepared.

In summary, all results presented in this report are below EPA drinking water standards, with the exception of unfiltered aluminum, manganese, and iron.

If you have any questions, please contact Bob Beers at (505) 667-7969 ([bbeers@lanl.gov](mailto:bbeers@lanl.gov)) or Cheryl Rodriguez at (505) 665-5330 ([crodriguez2@doeal.gov](mailto:crodriguez2@doeal.gov)).

Sincerely,

Sincerely,

Michael J. Graham, Associate Director  
Environmental Programs  
Los Alamos National Laboratory

George J. Rael, Manager  
Environmental Projects Office  
Los Alamos Site Office

MG/GR/SV/BB:sm

Attachment: CD with Excel file of Tables 1.0–6.0 and glossary of laboratory qualification codes, secondary validation codes, and secondary validation reason codes (LA-UR-10-)

Cy: (w/enc.)

Virginia Vigil, Buckman Direct Diversion Board, Santa Fe, NM  
Rick Carpenter, City of Santa Fe, Santa Fe, NM  
Sandy Hurlocker, USDA, Santa Fe National Forest, Santa Fe, NM  
Neil Weber, San Ildefonso Pueblo  
Steve Yanicak, NMED-DOE-OB, MS M894  
Hai Shen, DOE-LASO, MS A316  
Gene Turner, DOE-LASO, MS A316  
Bob Beers, ENV-RCRA, MS K490  
RPF, MS M707 (with two CDs)

Cy: (Letter and CD and/or DVD only)

Laurie King, EPA Region 6, Dallas, TX  
Steve Veenis, EP-CAP, MS K490  
Danny Katzman, EP-ET-DO, MS M992  
Suzanne Coyne, IRM-DCS, MS M992  
Kristine Smeltz, EP-BPS, MS M992

Cy: (w/o enc.)

Tom Skibitski, NMED-OB, Santa Fe, NM  
Annette Russell, DOE-LASO (date-stamped letter emailed)  
Dave McInroy, EP-CAP, MS M992  
James C. Cantwell, ADESHQ, MS K491  
Mike Saladen, ENV-RCRA, MS K490  
Michael J. Graham, ADEP, MS M991  
IRM-RMMSO, MS A150 (date-stamped letter emailed)

Table 1.0  
Rio Grande at Otowi Bridge  
Radionuclides

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<b>Location Name</b>	<b>Start Date</b>	<b>Analyte</b>	<b>Anyl Meth Code</b>	<b>Fld Prep Code</b>	<b>Std Result</b>	<b>Units</b>	<b>Std Uncert</b>	<b>Std Mda</b>	<b>Lab Qual Code</b>	<b>Concat Flag Code</b>	<b>Sample Id</b>	<b>Lab Code</b>	<b>Ser Lvl</b>	<b>Ser Lvl Type Code</b>
Rio Grande at Otowi Bridge	5/10/10	Am-241	HASL-300:AM-241	F <	0.0093	pCi/L	0.005	0.022	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Am-241	HASL-300:AM-241	UF <	0.0073	pCi/L	0.004	0.021	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Co-60	EPA:901.1	F <	0.295	pCi/L	0.96	2.8	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Co-60	EPA:901.1	UF <	-0.22	pCi/L	0.9	3	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Cs-137	EPA:901.1	F <	0.47	pCi/L	0.8	2.7	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Cs-137	EPA:901.1	UF <	0.902	pCi/L	0.8	3.0	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	GROSSA	EPA:900	F <	0.61	pCi/L	0.6	2.4	U	U	CAWR-10-17026	GELC	15	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	GROSSA	EPA:900	UF <	3.75	pCi/L	1.4	3.5		U	CAWR-10-17025	GELC	15	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	GROSSB	EPA:900	F <	2.86	pCi/L	0.9	2.3			CAWR-10-17026	GELC	50	EPA SEC DW LVL
Rio Grande at Otowi Bridge	5/10/10	GROSSB	EPA:900	UF <	3.09	pCi/L	0.89	2.3			CAWR-10-17025	GELC	50	EPA SEC DW LVL
Rio Grande at Otowi Bridge	5/10/10	GROSSG	EPA:901.1	F <	6.3	pCi/L	2.3	6		U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	GROSSG	EPA:901.1	UF <	14.1	pCi/L	5	14		U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	H-3	Low_Level_Tritium	UF <	17.18	pCi/L	2.682	1.788			CAWR-10-17025	ARSL	20,000	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	K-40	EPA:901.1	F <	-3.1	pCi/L	13	41	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	K-40	EPA:901.1	UF <	-6.4	pCi/L	13	44	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Na-22	EPA:901.1	F <	0.37	pCi/L	0.8	2.8	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Na-22	EPA:901.1	UF <	-0.372	pCi/L	0.9	2.7	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Np-237	HASL-300:Np-237	F <	0.0035	pCi/L	0	0	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Np-237	EPA:901.1	F <	1.37	pCi/L	1.7	5.6	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Np-237	EPA:901.1	UF <	3.520	pCi/L	1.9	6.7	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Np-237	HASL-300:Np-237	UF <	-0.013	pCi/L	0.009	0.03	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Pu-238	HASL-300:ISOPU	F <	-0.002	pCi/L	0.006	0.038	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Pu-238	HASL-300:ISOPU	UF <	0.003	pCi/L	0.003	0.042	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Pu-239/240	HASL-300:ISOPU	F <	0.010	pCi/L	0.01	0.04	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Pu-239/240	HASL-300:ISOPU	UF <	0.000	pCi/L	0.01	0.04	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Ra-226	EPA:903.1	F <	0.255	pCi/L	0.11	0.24		U	CAWR-10-17026	GELC	5	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	Ra-226	EPA:903.1	UF <	0.481	pCi/L	0.16	0.31			CAWR-10-17025	GELC	5	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	Ra-228	EPA:904	F <	0.166	pCi/L	0.26	0.9	U	U	CAWR-10-17026	GELC	5	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	Ra-228	EPA:904	UF <	1.830	pCi/L	0.41	0.86			CAWR-10-17025	GELC	5	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	Sr-90	EPA:905.0	F <	-0.06	pCi/L	0.12	0.45	U	U	CAWR-10-17026	GELC	8	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	Sr-90	EPA:905.0	UF <	-0.05	pCi/L	0.12	0.44	U	U	CAWR-10-17025	GELC	8	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	5/10/10	Th-228	HASL-300:ISOTH	F <	0.013	pCi/L	0.007	0.045	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Th-228	HASL-300:ISOTH	UF <	0.117	pCi/L	0.024	0.073			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Th-230	HASL-300:ISOTH	F <	-0.013	pCi/L	0.006	0.063	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Th-230	HASL-300:ISOTH	UF <	0.042	pCi/L	0.014	0.1	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	Th-232	HASL-300:ISOTH	F <	0.0125	pCi/L	0.006	0.027	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	Th-232	HASL-300:ISOTH	UF <	0.11	pCi/L	0.023	0.044			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	U-234	HASL-300:ISOU	F <	0.513	pCi/L	0.055	0.05			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	U-234	HASL-300:ISOU	UF <	0.62	pCi/L	0.066	0.056			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	U-235/236	HASL-300:ISOU	F <	0.0227	pCi/L	0.009	0.046	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	U-235/236	HASL-300:ISOU	UF <	0.0296	pCi/L	0.011	0.051	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	5/10/10	U-238	HASL-300:ISOU	F <	0.316	pCi/L	0.039	0.046			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	5/10/10	U-238	HASL-300:ISOU	UF <	0.376	pCi/L	0.046	0.051			CAWR-10-17025	GELC		

Table 2.0  
Rio Grande at Otowi Bridge  
Volatile Organic Compounds (VOCs)

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Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code	Std Result	Units	Std Mdl	Lab Qual Code	Concat	Flag Code	Sample ID	Fld Qc Type Code	Lab Code
Rio Grande at Otowi Bridge	5/10/10	100-41-4	Ethylbenzene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	100-42-5	Styrene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	10061-01-5	Dichloropropene[cis-1,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	10061-02-6	Dichloropropene[trans-1,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	103-65-1	Propylbenzene[1-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	104-51-8	Butylbenzene[n-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	106-43-4	Chlorotoluene[4-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	106-46-7	Dichlorobenzene[1,4-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	106-93-4	Dibromoethane[1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	107-02-8	Acrolein	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	R	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	107-05-1	Chloro-1-propene[3-]	SW-846:8260B	UF	< 5.0	ug/L	1.5	U	UJ	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	107-06-2	Dichloroethane[1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	107-12-0	Propionitrile	SW-846:8260B	UF	< 5.0	ug/L	1.5	U	R	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	107-13-1	Acrylonitrile	SW-846:8260B	UF	< 5.0	ug/L	1	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	108-05-4	Vinyl acetate	SW-846:8260B	UF	< 5.0	ug/L	1.5	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	108-10-1	Methyl-2-pentanone[4-]	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	108-67-8	Trimethylbenzene[1,3,5-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	108-86-1	Bromobenzene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	108-88-3	Toluene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	108-90-7	Chlorobenzene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	120-82-1	Trichlorobenzene[1,2,4-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	124-48-1	Chlorodibromomethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	126-98-7	Methacrylonitrile	SW-846:8260B	UF	< 5.0	ug/L	1	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	126-99-8	Chloro-1,3-butadiene[2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	UJ	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	127-18-4	Tetrachloroethene	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	135-98-8	Butylbenzene[sec-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	142-28-9	Dichloropropane[1,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	156-59-2	Dichloroethene[cis-1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	156-60-5	Dichloroethene[trans-1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	1634-04-4	Methyl tert-Butyl Ether	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	541-73-1	Dichlorobenzene[1,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	56-23-5	Carbon Tetrachloride	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	563-58-6	Dichloropropene[1,1-1]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	591-78-6	Hexanone[2-]	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	594-20-7	Dichloropropane[2,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	60-29-7	Diethyl Ether	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	630-20-6	Tetrachloroethane[1,1,1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	67-64-1	Acetone	SW-846:8260B	UF	< 10.0	ug/L	3.5	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	67-66-3	Chloroform	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	71-36-3	Butanol[1-]	SW-846:8260B	UF	< 50.0	ug/L	15	U	R	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	71-43-2	Benzene	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	71-55-6	Trichloroethane[1,1,1-]	SW-846:8260B	UF	< 1.0	ug/L	0.33	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	74-83-9	Bromomethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	74-87-3	Chloromethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	74-88-4	Iodomethane	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	74-95-3	Dibromomethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	74-97-5	Bromochloromethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	75-00-3	Chloroethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	75-01-4	Vinyl Chloride	SW-846:8260B	UF	< 1.0	ug/L	0.5	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	75-05-8	Acetonitrile	SW-846:8260B	UF	< 25.0	ug/L	6.3	U	R	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	75-09-2	Methylene Chloride	SW-846:8260B	UF	< 10.0	ug/L	3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	75-15-0	Carbon Disulfide	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17025		GELC	
Rio Grande at Otowi Bridge	5/10/10	75-25-2	Bromoform	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17025		GELC	

Table 2.0  
Rio Grande at Otowi Bridge  
Volatile Organic Compounds (VOCs)

DRAFT

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code	Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Sample ID	Fld Qc Type	Lab Code
Rio Grande at Otowi Bridge	5/10/10	142-28-9	Dichloropropane[1,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	156-59-2	Dichloroethene[cis-1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	156-60-5	Dichloroethene[trans-1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	1634-04-4	Methyl tert-Butyl Ether	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	541-73-1	Dichlorobenzene[1,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	56-23-5	Carbon Tetrachloride	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	563-58-6	Dichloropropene[1,1-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	591-78-6	Hexanone[2-]	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	594-20-7	Dichloropropane[2,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	60-29-7	Diethyl Ether	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	630-20-6	Tetrachloroethane[1,1,1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	67-64-1	Acetone	SW-846:8260B	UF	< 10.0	ug/L	3.5	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	67-66-3	Chloroform	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	71-36-3	Butanol[1-]	SW-846:8260B	UF	< 50.0	ug/L	15	U	R	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	71-43-2	Benzene	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	71-55-6	Trichloroethane[1,1,1-]	SW-846:8260B	UF	< 1.0	ug/L	0.33	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	74-83-9	Bromomethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	74-87-3	Chloromethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	74-88-4	Iodomethane	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	74-95-3	Dibromomethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	74-97-5	Bromochloromethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-00-3	Chloroethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-01-4	Vinyl Chloride	SW-846:8260B	UF	< 1.0	ug/L	0.5	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-05-8	Acetonitrile	SW-846:8260B	UF	< 25.0	ug/L	6.3	U	R	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-09-2	Methylene Chloride	SW-846:8260B	UF	< 10.0	ug/L	3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-15-0	Carbon Disulfide	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-25-2	Bromoform	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-27-4	Bromodichloromethane	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-34-3	Dichloroethane[1,1-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-35-4	Dichloroethene[1,1-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-69-4	Trichlorofluoromethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	75-71-8	Dichlorodifluoromethane	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	UJ	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	76-13-1	Trichloro-1,2,2-trifluoroethane[1,1,2-]	SW-846:8260B	UF	< 5.0	ug/L	1	U	UJ	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	78-83-1	Isobutyl alcohol	SW-846:8260B	UF	< 50.0	ug/L	13	U	R	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	78-87-5	Dichloropropane[1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	78-93-3	Butanone[2-]	SW-846:8260B	UF	< 5.0	ug/L	1.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	79-00-5	Trichloroethane[1,1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	79-01-6	Trichloroethene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	79-34-5	Tetrachloroethane[1,1,2,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	80-62-6	Methyl Methacrylate	SW-846:8260B	UF	< 5.0	ug/L	1	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	87-61-6	Trichlorobenzene[1,2,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.33	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	87-68-3	Hexachlorobutadiene	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	91-20-3	Naphthalene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	95-47-6	Xylene[1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	95-49-8	Chlorotoluene[2-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	95-50-1	Dichlorobenzene[1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	95-63-6	Trimethylbenzene[1,2,4-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	96-12-8	Dibromo-3-Chloropropane[1,2-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	96-18-4	Trichloropropane[1,2,3-]	SW-846:8260B	UF	< 1.0	ug/L	0.3	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	97-63-2	Ethyl Methacrylate	SW-846:8260B	UF	< 5.0	ug/L	1	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	98-06-6	Butylbenzene[tert-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	98-82-8	Isopropylbenzene	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	99-87-6	Isopropyltoluene[4-]	SW-846:8260B	UF	< 1.0	ug/L	0.25	U	U	CAWR-10-17028	FTB	GELC
Rio Grande at Otowi Bridge	5/10/10	lene[1,3 and	Xylene[1,3-]+Xylene[1,4-]	SW-846:8260B	UF	< 2.0	ug/L	0.5	U	U	CAWR-10-17028	FTB	GELC

Table 3.0  
Rio Grande at Otowi Bridge  
Semivolatile Organic Compounds (SVOCs)

DRAFT

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Sample Id	Fld Qc Type Code	Lab Code
Rio Grande at Otowi Bridge	5/10/10	100-01-6	Nitroaniline[4-]	SW-846:8270C	UF	<	10	ug/L	3	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	100-02-7	Nitrophenol[4-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	100-51-6	Benzyl Alcohol	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	101-55-3	Bromophenyl-phenylether[4-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	103-33-3	Azobenzene	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	105-67-9	Dimethylphenol[2,4-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	106-44-5	Methylphenol[4-]	SW-846:8270C	UF	<	10	ug/L	3	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	106-46-7	Dichlorobenzene[1,4-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	106-47-8	Chloroaniline[4-]	SW-846:8270C	UF	<	10.00	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	108-60-1	Oxybis(1-chloropropane)[2,2'-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	108-95-2	Phenol	SW-846:8270C	UF	<	10.00	ug/L	1	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	110-86-1	Pyridine	SW-846:8270C	UF	<	10	ug/L	3	U	UJ	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	111-44-4	Bis(2-chloroethyl)ether	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	111-91-1	Bis(2-chloroethoxy)methane	SW-846:8270C	UF	<	10	ug/L	3	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	117-81-7	Bis(2-ethylhexyl)phthalate	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	117-84-0	Di-n-octylphthalate	SW-846:8270C	UF	<	10	ug/L	3	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	118-74-1	Hexachlorobenzene	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	120-12-7	Anthracene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	120-82-1	Trichlorobenzene[1,2,4-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	120-83-2	Dichlorophenol[2,4-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	121-14-2	Dinitrotoluene[2,4-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	122-39-4	Diphenylamine	SW-846:8270C	UF	<	10	ug/L	3	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	123-91-1	Dioxane[1,4-]	SW-846:8270C	UF	<	10	ug/L	2	U	UJ	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	129-00-0	Pyrene	SW-846:8270C	UF	<	1	ug/L	0.3	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	131-11-3	Dimethyl Phthalate	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	132-64-9	Dibenzofuran	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	191-24-2	Benzo(g,h,i)perylene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	1912-24-9	Atrazine	SW-846:8270C	UF	<	10.0	ug/L	3	U	R	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	193-39-5	Indeno(1,2,3-cd)pyrene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	205-99-2	Benzo(b)fluoranthene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	206-44-0	Fluoranthene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	207-08-9	Benzo(k)fluoranthene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	208-96-8	Acenaphthylene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	218-01-9	Chrysene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	50-32-8	Benzo(a)pyrene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	51-28-5	Dinitrophenol[2,4-]	SW-846:8270C	UF	<	20	ug/L	5	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	53-70-3	Diben(a,h)anthracene	SW-846:8270C	UF	<	1	ug/L	0.2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	534-52-1	Dinitro-2-methylphenol[4,6-]	SW-846:8270C	UF	<	10	ug/L	3	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	541-73-1	Dichlorobenzene[1,3-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	55-18-5	Nitrosodiethylamine[N-]	SW-846:8270C	UF	<	10	ug/L	2	U	U	CAWR-10-17025		GELC

Table 4.0  
Rio Grande at Otowi Bridge  
Pesticides/PCBs

**DRAFT**

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Sample Id	Fld Qc Type Code	Lab Code
Rio Grande at Otowi Bridge	5/10/10	309-00-2	Aldrin	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	319-84-6	BHC[alpha-]	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	319-85-7	BHC[beta-]	SW-846:8081A	UF	<	0.021	ug/L	0.006	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	319-86-8	BHC[delta-]	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	58-89-9	BHC[gamma-]	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	5103-71-9	Chlordane[alpha-]	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	5103-74-2	Chlordane[gamma-]	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	72-54-8	DDD[4,4'-]	SW-846:8081A	UF	<	0.042	ug/L	0.011	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	72-55-9	DDE[4,4'-]	SW-846:8081A	UF	<	0.042	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	50-29-3	DDT[4,4'-]	SW-846:8081A	UF	<	0.042	ug/L	0.011	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	60-57-1	Dieldrin	SW-846:8081A	UF	<	0.042	ug/L	0.011	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	959-98-8	Endosulfan I	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	33213-65-9	Endosulfan II	SW-846:8081A	UF	<	0.042	ug/L	0.011	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	1031-07-8	Endosulfan Sulfate	SW-846:8081A	UF	<	0.042	ug/L	0.011	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	72-20-8	Endrin	SW-846:8081A	UF	<	0.042	ug/L	0.011	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	7421-93-4	Endrin Aldehyde	SW-846:8081A	UF	<	0.042	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	53494-70-5	Endrin Ketone	SW-846:8081A	UF	<	0.042	ug/L	0.011	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	76-44-8	Heptachlor	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	1024-57-3	Heptachlor Epoxide	SW-846:8081A	UF	<	0.021	ug/L	0.005	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	72-43-5	Methoxychlor[4,4'-]	SW-846:8081A	UF	<	0.211	ug/L	0.053	U	U	CAWR-10-17025		GELC
Rio Grande at Otowi Bridge	5/10/10	8001-35-2	Toxaphene (Technical Grade)	SW-846:8081A	UF	<	0.526	ug/L	0.16	U	U	CAWR-10-17025		GELC

Location Name	Start Date	Analyte	Analyte Desc	Anyl Meth Code	Fld Prep Code		Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Sample Id	Fld Qc Type Code	Lab Code
Rio Grande at Otowi Bridge	5/10/10	1336-36-3	Total PCB	EPA:1668A	UF	<	0.00000000	ug/L	NA	U	U	CAWR-10-17025		CFA
Rio Grande at Otowi Bridge	5/10/10	1336-36-3	Total PCB	EPA:1668A	UF	<	0.00000000	ug/L	NA	U	U	CAWR-10-17027	FB	CFA

**Notes:**

NA means that no MDL is available for Total PCB measurements because the result is a summation of individual congener values.

Table 5.0  
Rio Grande at Otowi Bridge  
General Inorganics

DRAFT

Location Name	Start Date	Analyte	Anyl Meth Code	Fld Prep Code	Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Sample Id	Lab Code	Scr Lvl	Scr Lvl Type Code
Rio Grande at Otowi Bridge	05/10/10	ALK-CO3	EPA:310.1	UF <	1	mg/L	0.73	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	ALK-CO3+HCO3	EPA:310.1	UF	71.9	mg/L	0.73			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Br(-1)	EPA:300.0	UF <	0.20	mg/L	0.07	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	CN(TOTAL)	EPA:335.4	UF <	0.005	mg/L	0.002	U	U	CAWR-10-17025	GELC	0.2	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Ca	SW-846:6010B	UF	31.4	mg/L	0.05			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Ca	SW-846:6010B	F	27.3	mg/L	0.05			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	Cl(-1)	EPA:300.0	UF	2.59	mg/L	0.066			CAWR-10-17025	GELC	250	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	ClO4	SW-846:6850	UF	0.09	ug/L	0.05	J	J	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	DO	Field Measurement	UF	9.68	mg/L				CAWR-10-17025	FLD		
Rio Grande at Otowi Bridge	05/10/10	F(-1)	EPA:300.0	UF	0.18	mg/L	0.033			CAWR-10-17025	GELC	4	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	HARDNESS	SM:A2340B	F	88	mg/L	0.35			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	HARDNESS	SM:A2340B	UF	102	mg/L	0.35			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	K	SW-846:6010B	F	2.0	mg/L	0.05	E		CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	K	SW-846:6010B	UF	2.5	mg/L	0.05	E		CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Mg	SW-846:6010B	UF	5.6	mg/L	0.09			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Mg	SW-846:6010B	F	4.9	mg/L	0.09			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	NH3-N	EPA:350.1	UF	0.18	mg/L	0.016		J	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	NO3+NO2-N	EPA:353.2	UF <	0.12	mg/L	0.05	J	U	CAWR-10-17025	GELC	10	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Na	SW-846:6010B	F	10.3	mg/L	0.10			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	Na	SW-846:6010B	UF	10.6	mg/L	0.10			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	PO4-P	EPA:365.4	UF	0.1	mg/L	0.02			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	SO4(-2)	EPA:300.0	UF	34.2	mg/L	0.10			CAWR-10-17025	GELC	250	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	SPEC_COND C	FIELD CONDUCTIVITY	UF	215	uS/cm				CAWR-10-17025	FLD		
Rio Grande at Otowi Bridge	05/10/10	SPEC_COND C	EPA:120.1	UF	238	uS/cm	1.0			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	SSC	EPA:160.2	UF <	10	mg/L	2.3	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	TDS	EPA:160.1	UF	169	mg/L	2.4			CAWR-10-17025	GELC	500	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	TEMP	FIELD TEMP	UF	10.6	deg C				CAWR-10-17025	FLD		
Rio Grande at Otowi Bridge	05/10/10	TKN	EPA:351.2	UF	0.37	mg/L	0.033		J	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	TOC	SW-846:9060	UF	5.2	mg/L	0.33			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	TURB	FIELD TURB	UF	47.6	NTU				CAWR-10-17025	FLD		
Rio Grande at Otowi Bridge	05/10/10	pH	FIELD PH	UF	7.14	SU				CAWR-10-17025	FLD	6.5-8.5	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	pH	EPA:150.1	UF	8.11	SU	0.01	H	J-	CAWR-10-17025	GELC	6.5-8.5	EPA SEC DW LVL

Table 6.0  
Rio Grande at Otowi Bridge  
Metals

DRAFT

Location Name	Start Date	Analyte	Anyl Meth Code	Fid Prep Code	Std Result	Units	Std Mdl	Lab Qual Code	Concat Flag Code	Sample Id	Lab Code	Scr Lvl	Scr Lvl Type Code
Rio Grande at Otowi Bridge	05/10/10	Ag	SW-846:6020	F	< 1	ug/L	0.2	U	U	CAWR-10-17026	GELC	100	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Ag	SW-846:6020	UF	< 1	ug/L	0.2	U	U	CAWR-10-17025	GELC	100	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Al	SW-846:6010B	F	< 200	ug/L	68	U*	UJ	CAWR-10-17026	GELC	200	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Al	SW-846:6010B	UF	2570	ug/L	68	*	J	CAWR-10-17025	GELC	200	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	As	SW-846:6020	UF	< 5	ug/L	1.5	U	U	CAWR-10-17025	GELC	10	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	As	SW-846:6020	F	< 5	ug/L	1.5	U	U	CAWR-10-17026	GELC	10	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	B	SW-846:6010B	F	17.8	ug/L	15	J	J	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	B	SW-846:6010B	UF	19.9	ug/L	15	J	J	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Ba	SW-846:6010B	UF	71	ug/L	1			CAWR-10-17025	GELC	2000	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Ba	SW-846:6010B	F	42	ug/L	1			CAWR-10-17026	GELC	2000	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Be	SW-846:6010B	F	< 5	ug/L	1	U	U	CAWR-10-17026	GELC	4	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Be	SW-846:6010B	UF	< 5	ug/L	1	U	U	CAWR-10-17025	GELC	4	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Cd	SW-846:6020	UF	0.116	ug/L	0.11	J	J	CAWR-10-17025	GELC	5	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Cd	SW-846:6020	F	< 1	ug/L	0.11	U	U	CAWR-10-17026	GELC	5	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Co	SW-846:6010B	F	< 5.0	ug/L	1	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	Co	SW-846:6010B	UF	1.5	ug/L	1	J	J	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Cr	SW-846:6020	UF	3.29	ug/L	2.5	J	J	CAWR-10-17025	GELC	100	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Cr	SW-846:6020	F	< 10	ug/L	2.5	U	U	CAWR-10-17026	GELC	100	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Cu	SW-846:6010B	UF	< 10	ug/L	3	U	U	CAWR-10-17025	GELC	1300	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Cu	SW-846:6010B	F	< 10	ug/L	3	U	U	CAWR-10-17026	GELC	1300	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Fe	SW-846:6010B	UF	1810	ug/L	30	*	J	CAWR-10-17025	GELC	300	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Fe	SW-846:6010B	F	< 100	ug/L	30	U*	UJ	CAWR-10-17026	GELC	300	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Hg	EPA:245.2	F	< 0.2	ug/L	0.066	U	U	CAWR-10-17026	GELC	2	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Hg	EPA:245.2	UF	< 0.2	ug/L	0.066	U	U	CAWR-10-17025	GELC	2	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Mn	SW-846:6010B	UF	98.1	ug/L	2			CAWR-10-17025	GELC	50	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Mn	SW-846:6010B	F	3.97	ug/L	2	J	J	CAWR-10-17026	GELC	50	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Mo	SW-846:6020	UF	1.9	ug/L	0.1			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Mo	SW-846:6020	F	1.91	ug/L	0.1			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	Ni	SW-846:6020	UF	3.1	ug/L	0.5			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Ni	SW-846:6020	F	1.2	ug/L	0.5	J	J	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	Pb	SW-846:6020	UF	2	ug/L	0.5			CAWR-10-17025	GELC	15	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Pb	SW-846:6020	F	< 2.0	ug/L	0.5	U	U	CAWR-10-17026	GELC	15	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Sb	SW-846:6020	UF	< 3	ug/L	0.5	U	U	CAWR-10-17025	GELC	6	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Sb	SW-846:6020	F	< 3	ug/L	0.5	U	U	CAWR-10-17026	GELC	6	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Sc	SW-846:6020	UF	< 5	ug/L	1	U	U	CAWR-10-17025	GELC	50	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Se	SW-846:6020	F	< 5	ug/L	1	U	U	CAWR-10-17026	GELC	50	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	SiO2	SW-846:6010B	UF	27	mg/L	0.05			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Sn	SW-846:6010B	UF	< 10	ug/L	2.5	U	U	CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Sn	SW-846:6010B	F	< 10	ug/L	2.5	U	U	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	Sr	SW-846:6010B	UF	221	ug/L	1			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Sr	SW-846:6010B	F	204	ug/L	1			CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	Tl	SW-846:6020	F	< 1	ug/L	0.3	U	U	CAWR-10-17026	GELC	2	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	Tl	SW-846:6020	UF	0.392	ug/L	0.3	J	J	CAWR-10-17025	GELC	2	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	U	SW-846:6020	F	1.2	ug/L	0.05			CAWR-10-17026	GELC	30	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	U	SW-846:6020	UF	1.4	ug/L	0.05			CAWR-10-17025	GELC	30	EPA PRIM DW LVL
Rio Grande at Otowi Bridge	05/10/10	V	SW-846:6010B	F	2.2	ug/L	1	J	J	CAWR-10-17026	GELC		
Rio Grande at Otowi Bridge	05/10/10	V	SW-846:6010B	UF	6.5	ug/L	1			CAWR-10-17025	GELC		
Rio Grande at Otowi Bridge	05/10/10	Zn	SW-846:6010B	UF	9.92	ug/L	3.3	J	J	CAWR-10-17025	GELC	5000	EPA SEC DW LVL
Rio Grande at Otowi Bridge	05/10/10	Zn	SW-846:6010B	F	< 10.0	ug/L	3.3	U	U	CAWR-10-17026	GELC	5000	EPA SEC DW LVL