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Arturo Duran
Environmental Projects Office (EPO)
U.S Department of Energy
National Nuclear Security Administration
Los Alamos Site Office
3747 West Jemez Road MS A316
Los Alamos, NM 87544

Subject: Submittal 2011 and 2012 Post Las Conchas Fire Sampling Results for Stormwater, Farm Soils, Post-flood Muck and Precipitation

Dear Mr. Duran:

The New Mexico Environment Department, Department of Energy Oversight Bureau collected stormwater samples, ash laden sediment samples, and soils irrigated by waters containing ash after the 2011 Los Conchas Fire. Most samples identify impacts from the fire; an increase sediment load in stormwater, and an increase of metal and radionuclide content in the samples. The increases are not unexpected and are similar to those seen in the 2000 Cerro Grande fire. Ash laden samples and soils irrigated with black irrigation water (containing ash) are being used by the Interagency Flood Risk Assessment Team (IFRAT) to characterize potential risk to the public associated with contaminants transported by flooding in the aftermath of the fire. The Bureau also found that stormwater impacts to the Rio Grande from burned watershed inputs were infrequent and short lived. When Rio Grande stormwater data was compared to previous years data, the increases in suspended sediment and most sediment bound contaminants was slight.

Stormwater Sample Collection

The Oversight Bureau collected sixty-eight stormwater samples in Los Alamos Canyon, along the Rio Grande, and in watersheds draining areas burned by the Los Conchas fire during the 2011 summer. Individual storm events, from August 3rd to October 4th, often included multiple samples at 40 to 60 minute intervals from each station. The stormwater samples were measured for total and dissolved radionuclides and metals, suspended sediment, total organic carbon, alkalinity, polychlorinated biphenyl (PCBs) and dioxin/furans. Sediments from the stormwater samples were measured for radionuclides, metals, total organic carbon, and alkalinity. Water volume and sediment mass were not always sufficient for all analyte measurements.

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Stormwater and Precipitation Data Results

Chemical measurements from Rio Grande stormwater samples collected at Otowi, Buckman, and Alameda, and the Los Alamos Canyon gage E050 were compared to existing and appropriate New Mexico Water Quality Standards for Interstate and Intrastate Surface Waters. The criterion for eight metals; aluminum, cadmium, copper, lead, manganese, nickel, silver, and zinc are hardness-based and can be referenced in Subsection I of 20.6.4.900 NMAC. Samples collected from E110 in Los Alamos Canyon and Peralta and Bland Canyons, canyons below watersheds severely burned during the 2011 Los Conchas fire, were compared to statistical outlier levels or to New Mexico surface water standards. The Los Alamos Canyon gage station E110 and the Rio Grande Otowi station are on San Ildefonso Pueblo property and New Mexico standards do not apply to Pueblo lands. They are used as comparative values only, while outlier values often identify and quantify changing conditions in a water system. If possible, measurements were also made on sediments extracted from the stormwater samples. Although standards do not apply to them, they provide insight to the source of the contaminants in stormwater.

Radionuclide measurements are compared to §20.6.4.114, for the main stem of the Rio Grande from the Cochiti pueblo boundary upstream to Rio Pueblo de Taos. Multiple measurements of strontium-90, cesium-137, plutonium-239/240, exceeded the public water supply criteria though the rolling 12 month average criteria for stortium,-90, cesium-137, and plutonium 239/240 were not exceeded.

Strontium-90 Results

- Strontium-90 values from Rio Grande stormwater and the Los Alamos Canyon gage E050 range from a non-detect -3.8 pCi/L to 35 pCi/L. Six of 34 measurements in the Rio Grande exceed the 3.5 pCi/L criterion.
- Values from Los Alamos Canyon range from a non-detect 0.12 to 84 pCi/L. Values that exceed a 34 pCi/L 90^{th} percentile level originate from samples collected at E110 containing extraordinary SSC values. Those SSC values also exceed a 90^{th} percentile level and are reported at levels greater than 250,000 mg/L.
- Strontium-90 in sediments extracted from Rio Grande stormwater range from a non-detect -0.048 to 0.6 pCi/g. Five of 24 measurements are considered detects at a 95% confidence level.
- Values in Los Alamos Canyon suspended sediment range from 0.056 to 2.2 pCi/g. We believe these values are primarily derived from ash, although a possible legacy component exists.
- Dissolved strontium-90 measurements are reported for 58 stormwater samples with values that range from a non-detect -0.12 pCi/L to 8.3 pCi/L. Forty-one values are considered detects at a 95% confidence level. Almost all Los Alamos Canyon samples

contain dissolved strontium-90 at detectable levels, while only 19 of 34 Rio Grande samples contain detectable strontium-90.

Cesium-137 Results

- Almost all 65 cesium-137 measurements are reported as non-detects. Three Los Alamos Canyon samples collected from the same event on August 19th at E050, and one sample collected along the Rio Grande at the Buckman Diversion on August 3rd contained
- cesium-137 at detectable levels. The Rio Grande cesium-137 value is 6 pCi/L, slightly under the 6.4 pCi/L Public Water Supply criterion and may originate from forest-fire ash in the sample.
- Only two cesium-137 values are reported for sediment samples, both above detection levels. Values of 2.5 pCi/g and 1.8 pCi/g are found in Los Alamos Canyon E110 samples and are similar to values found in ash from the 2000 Cerro Grande fire.
- Only seven values are reported for dissolved cesium-137, all of which are non-detects.

Adjusted Gross Alpha Results

- All of the Rio Grande samples contained adjusted gross alpha values reported above the 15 pCi/L Livestock Watering criterion, as well as most samples collected within Los Alamos Canyon. The gross alpha values range from a single non-detect value of 2.3 pCi/L to 6300 pCi/L. The gross alpha measurements, as well as gross beta, demonstrate a very strong positive correlation to the suspended sediment concentrations measured in the stormwater.
- Only six gross alpha measurements are reported for sediments. The values range from 4.9 pCi/g to 9.6 pCi/g and are similar to levels seen in the 2000 Cerro Grande ash samples.
- There are no dissolved gross alpha measurements reported.

Plutonium-238 Results

- Almost half, 33 of 64, plutonium-238 measurements are reported below their detection levels. The values in the Rio Grande and E050 range from a non-detect -0.069 pCi/L to 1.2 pCi/L. All values from the Rio Grande are much less than the 1.5 pCi/L Public Water Supply criterion.
- Total values from stormwater samples collected at E110 in Los Alamos Canyon range from a non-detect -0.003 to 2.2 pCi/L.

- Fifty-nine sediment measurements are reported for plutonium-238, of which 19 are considered detects. The values range from a non-detect -0.24 pCi/g to 0.18 pCi/g. Eight detections are from Rio Grande suspended sediment samples.
- Only six values are reported for dissolved plutonium-238, of which two are detections. Both samples originate from a September 7th sample collected at the Buckman Diversion.

Plutonium-239/240 Results

- Almost all, 60 of 64, plutonium-239/240 samples are reported as detects. The values in the Rio Grande range from a non-detect 0.026 pCi/L to 3.5 pCi/L. Six values exceed the 1.5 pCi/L Public Water supply criterion.
- The Los Alamos Canyon total plutonium-239/240 measurements range from a non-detect 0.029 pCi/L to 33 pCi/L.
- Fifty-nine sediment measurements are reported for plutonium-239/240, of which only two are considered non-detects. The values range from a non-detect -0.0024 pCi/g to 2.5 pCi/g.
- A LANL background reference for plutonium-239/240 is 0.013 pCi/g. Most values are greater than that reference. Only three samples from Otowi, August 21 are less than the reference.
- Plutonium-239/240 measurements in Los Alamos Canyon sediments extracted from stormwater are generally an order of magnitude greater than found in the Rio Grande. The average value in the Rio Grande is 0.05 pCi/g while it is 0.3 pCi/g in the Los Alamos Canyon sediments. The maximum value in Los Alamos Canyon is 2.5 pCi/g and 0.23 pCi/g in the Rio Grande. Although the Rio Grande values are similar to Cerro Grande ash, they may reflect diluted legacy plutonium from Los Alamos Canyon.
- Only one dissolved plutonium-239/240 detection of six measurements is reported. A value of 0.0077 pCi/L is reported for a September 7th Buckman sample event.

Americium-241 Results

- Almost all, 62 of 64 Americium-241 measurements are reported as detects ranging from 0.023 pCi/L to 6.9 pCi/L. None of the Rio Grande measurements exceed the 1.9 pCi/L Public Water Supply criterion. Five measurements are greater than the standard at E050, and while the standards do not apply at E110 four of six measurements are greater than 1.9 pCi/L.
- As with plutonium-239/240, the americium-241 measurements in Los Alamos Canyon sediments are generally greater than found in the Rio Grande. The average value in the Rio Grande is 0.2 pCi/g while it is 1.1 pCi/g in the Los Alamos Canyon sediments. The maximum value in Los Alamos Canyon is 6.9 pCi/g and 0.81 pCi/g in the Rio Grande.

The Rio Grande values are similar although greater than Cerro Grande ash, and may reflect diluted legacy plutonium from Los Alamos Canyon.

- Three of six dissolved americium-241 detections are reported. A value of 0.013 pCi/L is reported for an E110 September 7th event, and two samples at Buckman from the same day have values of 0.016 pCi/L and 0.021 pCi/L.

Uranium isotope -234, -235, and -238 Results

- Sixty-four uranium isotope -234, -235, and -238 measurements are reported for which there are no applicable water quality standards. The isotope relationships from all samples reflect naturally occurring uranium in that the -234 and -238 isotopes are similar, while U-235 is much less in concentration. Therefore, the remaining uranium evaluation will refer only to the -234 isotope.
- Uranium-234 ranges from 0.016 pCi/L to 320 pCi/L, and as with many other analytes, the concentrations in water are positively correlated to the suspended sediment concentrations.
- Uranium measurements in the Rio Grande, Los Alamos Canyon, and LANL reference values are similar.

Results for Metals and Inorganics

A comparison of dissolved metal measurements to criteria from the New Mexico Water Quality Standards for Interstate and Intrastate Surface Waters indicates that a single sample at E110 collected July 22nd exceeds an arsenic criterion of 0.009 mg/L. It was a single sample from that event and is reported at 0.0016 mg/L.

Further comparisons to surface water standards indicate seven samples exceed a thallium 0.0012 mg/L criterion. The exceedances originate from four events; August 26th and September 4th in the Rio Grande at Otowi and Buckman, August 28th at E050, and September 1rst at E050. All values are B flagged, they are greater than the detection limits but less than the reporting limit.

Total recoverable cyanide exceeded the Acute Aquatic Life criterion of 22 µg/L in thirteen of forty-one samples. The criterion was exceeded in eight of nineteen samples from Los Alamos Canyon, three of twenty samples from the Rio Grande, and once each in Bland and Peralta Canyons.

PCB and Dioxin Results

We encountered data quality problems in 22 of the 42 samples analyzed for PCBs. Contaminated glassware was used by the analytical laboratory resulting in high batch blank concentrations and fundamentally unreliable data. Nine results were rejected and all twenty-two suspect samples

were flagged as not valid for all uses. Only data that was not rejected will be evaluated here though all data is included in the submittal.

Thirteen of seventeen PCB samples from the Rio Grande at the BDD, Otowi, and Rio Grande above Alameda Bridge exceeded the Human Health criterion of 0.000064 µg/L and three of those exceeded the Wildlife Habitat criterion of 0.014 µg/L. Rio Grande results ranged from 34

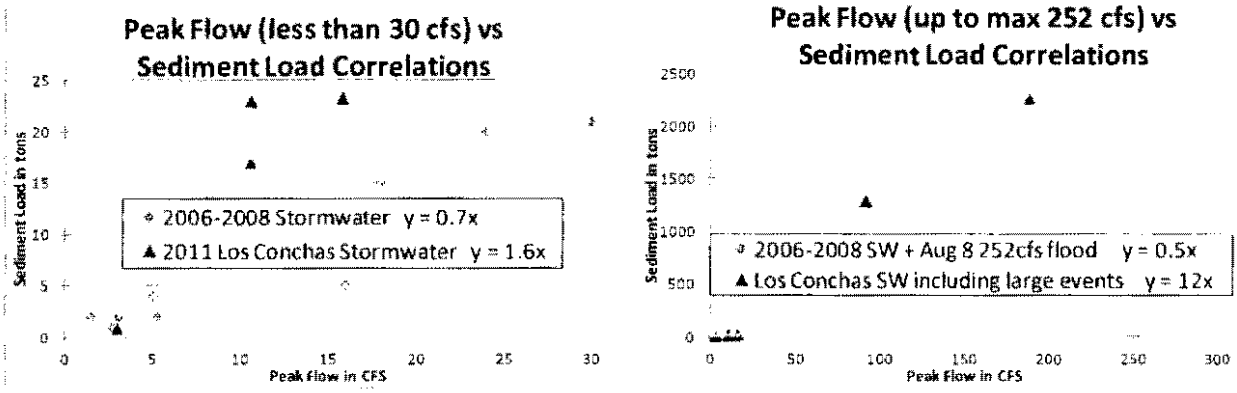
pg/L to 46,219 pg/L. Eleven of eleven samples from E050 in Los Alamos Canyon and Peralta Canyon exceeded the Human Health criterion and six of the eleven samples exceeded the Wildlife Habitat criterion. Results in Peralta and Los Alamos Canyons ranged from 1,027 pg/L to 67,746 pg/L.

One of five precipitation samples from Bandelier National Monument and Los Alamos County Airport exceeded the Human Health criterion. The concentrations in precipitation ranged from 39 pg/L to 81,296 pg/L. The highest result was collected at Bandelier during the Las Conchas fire but the data is questionable due to laboratory error.

Twelve of thirteen results for dioxin in stormwater from the Rio Grande at BDD and Otowi exceeded the Human Health criterion of 0.05 pg/L. TEQ values ranged from 0.013 pg/L to 14.8 pg/L . In Los Alamos Canyon at E050 and Peralta Canyon, the Human Health criterion was exceeded in five of six samples and TEQs ranged from 0.028 pg/L to 7.23 pg/L. In the Rio Grande at Alameda, TEQs ranged from 0.396 pg/L to 10.9 pg/L and all exceeded the Human Health criterion.

Sediment Transport in Stormwater

Additional sediment transport in stormwater originating from watersheds burned during the Los Conchas fire was expected. To investigate the relative rate increase of sediment transport in stormwater, sediment flux for each event that the Bureau sampled was determined. The total sediment load measured in tons was then correlated to the cfs peak flow measured during the flood. This relationship is presented as the transport rate. As an example, suspended sediment transport rates (tons of sediment to peak flow) from E050 are compared here to rates during 2006 to 2008. Stormwater at E050 carried much more sediment relative to flow than before the Los Conchas Fire. Compared to peak flows that occurred during 2006 to 2008, flows less than 30 cfs after the Los Conchas Fire carried about twice the sediment (1.6x / 0.7x: where x is peak flow in cfs). Los Conchas transport rates for peak flows greater than 90 cfs appear to have carried 24 times the amount of sediment (12x / 0.5x) for at least the 91 cfs and 188 cfs floods presented in this chart.



Based on the method described above, we estimate 4340 tons of sediment was transported past E050. As the upper watershed functions improve, erosion potential diminishes and precipitation capture potential increases, the sediment load to peak flow relationship may approach the earlier 2006 to 2008 coefficients of 0.5 to 0.7. Comparisons similar to this could also have been applied to gage stations above and below mitigation efforts in the Los Alamos watershed to determine the effectiveness of those efforts.

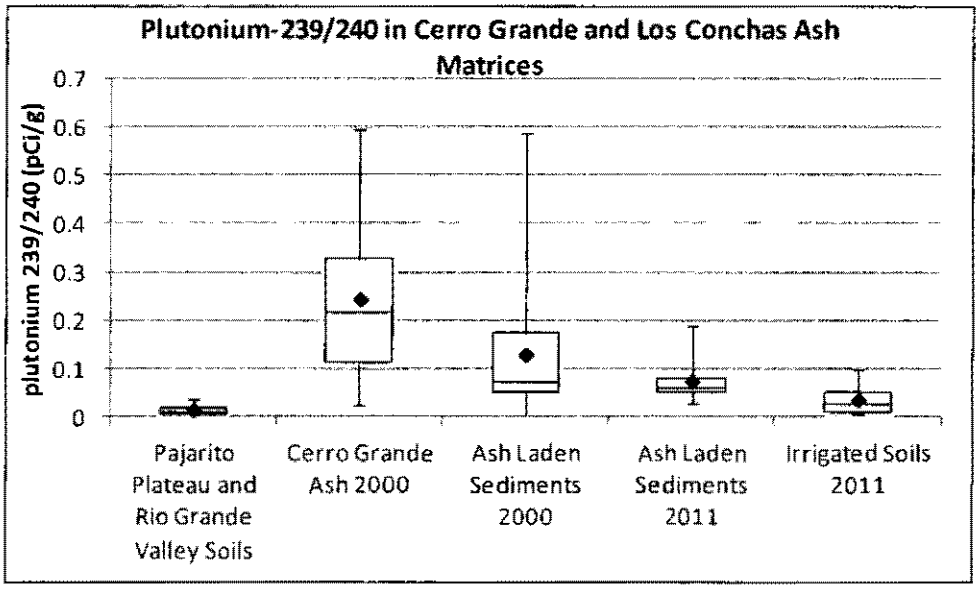
Additional Sample Collection

The Oversight Bureau collected an additional 18 samples including; ash laden sediments deposited during receding storm events, and soils irrigated with black ash-laden water. The samples are from watersheds draining areas burned by the Los Conchas fire during the 2011 summer and along the Rio Grande below those confluences. They were measured for total radionuclides and metals, total organic carbon, grain size distribution, PCB, dioxin/furan and alkalinity. The results are compared to Cerro Grande ash averages and the upper 95% confidence levels of Bureau and LANL background soil data. The results will also be used by IFRAT to determine potential health risks from potential nuclear and industrial fallout materials incorporated into the forest ash.

PCB levels in farm soils ranged from 80.3 pg/g to 1,004 pg/g while levels of PCBs in ash-laden muck ranged from 155 pg/g to 8,448 pg/g. The highest levels of PCBs in muck was found in sediments in Water Canyon near the Rio Grande.

Dioxin TEQ levels in twelve ash-laden muck samples ranged from 0.012 pg/g to 0.50 pg/g and averaged 0.138 pg/g. Dioxin TEQ levels in six farm soil samples ranged from 0.072 pg/g to 0.35 pg/g and averaged 0.19 pg/g. All dioxin TEQ values are well below the NMED soil screening guidance level for Residential Soil of 45 pg/g .

The majority of samples, 13 of 18, contained radionuclide measurements that exceeded the upper 95% confidence levels for background from LANL and Bureau data. They were often more near Cerro Grande ash levels that are generally five times greater than background upper tolerance levels (ranging from two to ten times background). The only samples that did not appear to be impacted by waters containing ash are the upper and lower Pecos fields and the top of the Lower Field at Sile. Generally the samples irrigated with black ash-laden waters had the least impacts, while the ash laden samples in Peralta Canyon, Water Canyon, along the Rio Grande, and the Nambe reference samples contained the greatest impacts. The following box and whisker chart demonstrates the plutonium-239/240 evaluation for 2000 Cerro Grande and 2011 Los Conchas samples.



Measurements for the metals demonstrate similar results. The fields irrigated with black ash-laden water appear to have little impacts, while the remaining ash-laden sediment samples contain elevated levels of some metals similar to samples collected during the Cerro Grande fire. While similar, the values are generally smaller and we suspect the samples are diluted, sampled at a greater distance and relatively later than those collected after the Cerro Grande fire. The samples that appear impacted by ash have elevated levels of barium, copper, lead, manganese, mercury, and possibly beryllium and zinc.

The effects of the Las Conchas fire dominated the stormwater and suspended sediment quality in 2011. In nearly all instances, the flushing of ash from the affected canyons overwhelmed any potential impacts from LANL legacy contaminants on stormwater quality in the Rio Grande.

If you have any questions about this data please contact David Englert at 476-6022 or Ralph Ford-Schmid at 476-6023.

Sincerely,

Stephen Yanicak

Stephen Yanicak, Staff Manager/POC

SY:de-rfs

cc: Tom Skibitski, NMED, Chief, DOE OB
Gene Turner, DOE LASO MS A316
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Table 1. Total Radionuclide Concentrations (pCi/L) in Stormwater during 2011

				SSC (mg/L)	Sr-90				Cs-137				Gross A				Gross B			
Location	Date	Time	Sample Type	RESULT	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL
Bond Canyon	9/13/2011	17:08	CS	62000	11	4.7	3.9	M3	13	63	48	U,M	2400	150	420	M3	4000	230	570	M3
E050	8/19/2011	18:49	CS	1200	4.4	1.1	0.57		9	3	4.1									
E050	8/19/2011	19:39	CS	890	5.5	1.4	0.65		9.1	3	4.1									
E050	8/19/2011	20:29	CS	760	4.9	1.3	0.65		9.4	3.7	5.5	M3								
E050	8/22/2011	16:08	CS	85000	3.7	0.47	0.77		50	98	150	U,M	3000	530	140	M3	3600	600	210	M3
E050	8/27/2011	16:57	CS	96000	26	7.5	6.3	M3	84	84	140	U,M	2800	480	140	M3	3700	620	220	M3
E050	8/27/2011	17:42	CS	56000	35	9	5.3	M3	57	58	94	U,M	2600	460	130	M3	3300	560	210	M3
E050	8/22/2011	17:47	DUP						50	74	120	U,M								
E050	6/28/2011	2:59	CS	110	4	1	0.6		2.1	3.3	6.4	U,M	2.3	1.8	2.6	U,M	24	4.8	4.2	M3
E050	6/28/2011	3:45	CS	270	4.3	1.1	0.62		0.42	4.5	7.7	U,M	4	2	2.9	M3	24	4.8	4.3	M3
E050	6/28/2011	4:35	CS	110	3.5	0.97	0.54		2.6	4.5	7.6	U,M	5.1	1.9	2.4	M3	28	5.3	4.2	M3
E050	9/1/2011	18:38	CS	220	0.12	0.26	0.5	U	-24	40	55	U,M	13	2.9	2.3	M3	23	4.7	4.2	M3
E050	9/1/2011	19:28	CS	110	0.19	0.27	0.52	U	1	4.5	7.5	U,M	7.2	2.2	2.4	M3	16	3.7	4.1	M3
E050	9/1/2011	20:18	CS	110	2.6	0.59	0.53		1.7	4.7	7.9	U,M	11	2.5	2.5	M3	19	5.3	4.3	M3
E050	9/4/2011	20:58	CS	140000	8	4.7	6.9	M3	-11	140	230	U,M	2200	390	110	M3	3500	590	130	M3
E050	9/4/2011	21:48	CS	60000	3	7	3	U,M	39	50	82	U,M	1900	340	120	M3	2700	450	210	M3
E050	9/4/2011	22:38	CS	38000	2.9	1.4	1.9	M3	25	27	45	U,M	1300	230	76	M3	1700	290	110	M3
E050	9/7/2011	14:10	CS	2600					-2	2.5	4.4	U	130	22	5.5	M3	160	27	7.1	M3
E050	9/7/2011	15:00	CS	730					1.1	2.6	4.3	U	37	6.6	2.4	M3	50	8.6	4.4	M3
E050	9/7/2011	15:50	CS	890					2.1	3.2	5.3	U,M								
E050	9/10/2011	2:10	CS	505					3	3.5	5.7	U,M	38	5.7	2.2	M3	50	8.6	4.7	M3
E050	9/10/2011	3:00	CS	730					0.31	3	5	U,M	37	6.6	2.3	M3	58	9.8	4.3	M3
E050	9/10/2011	3:50	CS	880					-0.3	3.2	5.4	U,M								
E050	10/2/2011	18:05	CS	6300					6	5.4	8.6	U,M	300	52	15	M3	430	71	20	M3
E050	10/2/2011	18:56	CS	4700					-4.6	4.9	8.5	U,M	250	40	9.6	M3	300	49	14	M3
E050	10/2/2011	18:56	DUP	5400																
E110	8/5/2011	14:47	CS	250000	64	22	14	M3	7.3	240	400	U,M	2300	440	220	M3	4000	730	440	M3
E110	8/22/2011	16:30	CS	280000	34	8.7	5.1	M3	350	250	400	U,M	6300	1100	320	M3	9800	1600	180	M3
E110	8/22/2011	17:20	CS	120000	25	6.7	5	M3	46	120	200	U,M	3600	620	150	M3	4200	770	220	M3
E030	9/1/2011	18:53	CS	70000	1.3	2.1	3.4	U,M	11	57	100	U,M	800	190	130	M3	1800	320	210	M3
E110	9/7/2011	14:27	CS	120000	1.5	7.3	4.4	U,M	-110	180	100	U,M	2200	160	400	M3	3500	230	590	M3
E110	9/7/2011	14:27	DUP		7.1	8	5.7	U,M	-27	180	110	U,M								
Peralta Canyon	8/24/2011	17:15	CS	160000	51	19	22	M3	31	120	200	U,M	2300	420	160	M3	3400	570	210	M3
Peralta Canyon	10/4/2011	19:57	CS	30000	3	2.3	1.6	M3	3.5	38	22	U,M	630	70	120	M3	2100	110	190	M3
Peralta Canyon	10/4/2011	19:57	DUP		3	1.5	1.3	M3	25	50	29	U,M								
Peralta Canyon	10/7/2011	19:29	CS	670																
Peralta Canyon	10/7/2011	20:09	CS	840																
Rio Grande @ Buckman	8/3/2011	18:09	CS	9100	5.1	1.7	0.68		10	6	9.1	M3	330	57	15	M3	570	93	24	M3
Rio Grande @ Buckman	8/3/2011	18:09	DUP						6.5	7.5	12	U,M								
Rio Grande @ Buckman	8/3/2011	18:59	CS	5900	3.6	0.9	0.4		0.99	4.8	8	U,M	73	13	3.7	M3	92	15	5.8	M3
Rio Grande @ Buckman	8/5/2011	17:54	CS	2000	1	0.32	0.21		0	4.3	7.3	U,M	58	10	3.6	M3	86	15	5.5	M3
Rio Grande @ Buckman	8/5/2011	18:44	CS	2900	2.1	0.55	0.3		1.7	6.5	11	U,M	110	19	6.7	M3	150	23	8.4	M3
Rio Grande @ Buckman	8/21/2011	18:42	CS	32000	12	3	2.3	M3	22	30	53	U,M	990	180	79	M3	1500	250	100	M3
Rio Grande @ Buckman	8/21/2011	19:27	CS	46000	2.4	2.4	3.9	U,M	8.7	37	62	U,M	950	160	84	M3	1500	250	110	M3
Rio Grande @ Buckman	8/21/2011	19:29	CS	43000	3.2	2.4	3.7	U,M	34	50	88	U,M	990	160	65	M3	1400	240	110	M3
Rio Grande @ Buckman	8/21/2011	19:29	DUP						-14	34	58	U,M								
Rio Grande @ Buckman	8/21/2011	20:19	CS	30000	-3.8	3.6	5.8	U,M	-8.5	19	32	U,M	530	95	37	M3	800	130	52	M3
Rio Grande @ Buckman	8/26/2011	20:14	CS	1900	0.39	0.33	0.53	U	2.3	4.2	7.1	U,M	79	5.6	2.9	M3	55	9.4	4.2	M3
Rio Grande @ Buckman	8/26/2011	21:04	CS	1100	0.81	0.36	0.53	U	4.9	5.7	9.8	U,M	37	7	1.3	M3	57	10	5.4	M3
Rio Grande @ Buckman	8/29/2011	4:21	CS	15000	10	2.6	1.3	M3	9.7	11	18	U,M	540	110	39	M3	800	130	34	M3
Rio Grande @ Buckman	8/29/2011	4:21	CS																	
Rio Grande @ Buckman	8/29/2011	4:21	DUP																	
Rio Grande @ Buckman	8/29/2011	5:06	CS	11000	0.42	0.46	0.74	U	0.44	10	17	U,M	280	50	17	M3	440	74	27	M3
Rio Grande @ Buckman	8/29/2011	5:06	DUP		3.5	0.54	0.63	W	1.4	10	17	U,M								
Rio Grande @ Buckman	8/29/2011	5:51	CS	8500	1.1	0.43	0.54		7.3	6.6	11	U,M	190	34	14	M3	290	46	21	M3
Rio Grande @ Buckman	8/29/2011	6:36	CS	14000	3.3	0.61	0.91		3.1	14	21	U,M	450	82	30	M3	650	110	44	M3
Rio Grande @ Buckman	8/29/2011	6:36	DUP		1.9	0.98	1.4	M3	-5.6	13	20	U,M								
Rio Grande @ Buckman	9/4/2011	21:54	CS	46000	3.3	1.5	2.1	M3	28	37	66	U,M	1300	230	70	M3	1600	210	120	M3
Rio Grande @ Buckman	9/4/2011	21:54	DUP		2.4	1.4	2.3	M3	16	41	71	U,M								
Rio Grande @ Buckman	9/4/2011	22:44	DUP		1.2	0.77	1.2	M3	2.9	21	35	U,M								
Rio Grande @ Buckman	9/4/2011	22:54	CS	22000	0.82	0.71	1.1	U,M	11	18	29	U,M	700	120	41	M3	930	160	56	M3
Rio Grande @ Buckman	9/7/2011	14:41	CS	12500	2.1	1.2	0.91	M3	6	30	17	U,M	310	76	58	M3	390	36	68	M3
Rio Grande @ Buckman	9/7/2011	15:11	CS	5000																
Rio Grande @ Buckman	9/7/2011	15:25	CS	3500	0.34	0.47	0.75	U	1.8	5.4	3.2	U,M	58	5.5	11	M3	55	7	15	M3
Rio Grande @ Buckman	9/7/2011	15:56	CS	19000	0.7	1.4	0.85	U,M	-13	25	14	U,M	400	75	21	M3	600	37	100	M3
Rio Grande @ Buckman	9/7/2011	16:11	CS	18000	1.5	1.2	0.83	M3	-6.3	24	14	U,M	400	22	22	M3	810	36	100	M3
Rio Grande @ Buckman	9/7/2011	16:56	CS	7900	0.4	0.54	0.34	U	-1.4	10	6.1	U,M	340	24	62	M3	340	36	60	M3
Rio Grande @ Otowi	8/21/2011	18:03	CS	47000	1.3	1	1.5	U,M	24	36	59	U,M	1100	220	120	M3	1700	310	210	M3
Rio Grande @ Otowi	8/21/2011	18:53	CS	21000	1.7	2.4	3.9	U,M	8.4	19	32	U,M	520	110	52	M3	720	130	72	M3
Rio Grande @ Otowi	8/21/2011	19:31	CS	16000	3.5	1	1.5	M3	11	15	25	U,M	430	79	35	M3	630	110	55	M3
Rio Grande @ Otowi	8/26/2011	19:40	CS	830	0.76	0.37	0.61	UT	-2	4	6.9	U,M	17	3.5	1.9	M3	25	5	4.3	M3
Rio Grande @ Otowi	8/26/2011	20:20	CS	530	0.031	0.29	0.6	U	1.3	4.6	7.7	U,M	14	3	2.2	M3	21	4.3	4	M3
Rio Grande @ Otowi	8/26/2011	21:00	CS	23000	7.1	2.1	1.9	M3	10	23	40	U,M	860	150	42	M3	970	150	71	M3
Rio Grande @ Otowi	9/4/2011	23:42	CS	5700	0.72	0.26	0.51	U	3.4	5.2	9	U,M	130	24	10	M3	200	34	14	M3
Rio Grande @ Otowi	9/5/2011	0:08	CS	5300	0.11	0.33	0.61	U	2	4.4	7.2	U,M	150	27	9.5	M3	210	35	14	M3
Rio Grande @ Otowi	9/5/2011	1:03	CS	41000	0.65	1.2	1.9	U,M	5.4	31	53	U,M	1000	180	57	M3	1800	300	110	M3
Rio Grande above Alameda	8/13/2011	4:53	CS	320	0.077	0.29	0.67	U	-7.1	3.6	6.3	U,M	30	4	7.4	M3	38	6.8	4.7	M3
Rio Grande above Alameda	8/17/2011	21:47	CS	410	0.29	0.24	0.49	U	-0.91	2.3	4	U	18	3.5	3	M3	25	5	6.4	M3
Rio Grande above Alameda	8/21/2011	4:53	CS	1600	4.1	1.2	1.2	M3	0.53	3.1	5.1	U,M	30	5.7	3	M3	55	9.5	4.5	M3
count				58	62				73				59				59			
maximum				260000	54				350				6300				9800			
minimum				110	3.8				-110				2.3				16			
Standard deviation				54554.73075	13.7843				47.85213				1171.734				1732.05			
mean				31092.5	6.427506				6.053973				828.7982				1214.593			
median				7100	2.1				9				340				570			
Outlier 90 percentile				86300	11				27.6				2370				3570			

Abbreviations
- CS — Customer Sample
- DUP — Duplicate
- MDA — Minimum Detectable Activity or Concentration
- Uncert — Uncertainty - total Propagated Uncertainty at 95% confidence (2 x sigma)

- Qual — Qualifiers or Flags
- M — The requested MDC was not met
- M3 — The requested MDC was not met, but the reported activity is greater than the reported MDC
- U — Result is less than the sample specific MDC
- UT — Result is less than the requested MDC, greater than the sample specific MDC
- W — Duplicate Error Ratio is greater than warning limit of 1.42

Table 3. Radionuclide Concentrations (pCi/L) in Stormwater during 2011 (continued)

Location	Date	Time	Sample Type	Pu-238 RESULT	UNCERT	MDA	QUAL	Ra-226/228 RESULT	UNCERT	MDA	QUAL	Am-241 RESULT	UNCERT	MDA	QUAL	U-234 RESULT	UNCERT	MDA	QUAL	U-235 RESULT	UNCERT	MDA	QUAL	U-238 RESULT	UNCERT	MDA	QUAL
Rendija Canyon	9/15/2011	1:20	CS	0.54	0.11	0.31	M3	3.8	0.98	1.3	M3	1.5	0.11	0.55	M3	89	0.78	15	M3	4	0.36	1.1	M3	93	2.7	15	M3
E050	8/19/2011	18:49	CS	0.17	0.047	0.0074		1.2	0.32	0.012		1.3	0.28	0.043		7.2	0.37	0.03		0.33	0.069	0.055	LT	2.1	0.65	0.032	
E050	8/19/2011	19:39	CS	0.15	0.048	0.0094		1.5	0.26	0.032		1.6	0.27	0.0049		3	0.14	0.028		0.12	0.077	0.029	LT	1.8	0.31	0.02	
E050	8/19/2011	20:09	CS	0.14	0.042	0.016		1.9	0.26	0.029		1.8	0.13	0.014		3.7	0.28	0.033		0.095	0.031	0.023	LT	1.7	0.48	0.019	
E050	8/22/2011	16:58	CS	0.097	0.028	0.045	LT	1.32	0.083	0.051		0.1	0.53	0.017		2.5	0.43	0.064		0.12	0.064	0.043	LT	2.3	0.41	0.092	
E050	8/22/2011	16:57	CS	2.25	0.45	0.47	M3	7.4	1.7	0.41	M3	3.9	0.89	0.51	M3	58	11	3	M3	2.7	1.4	0.96	M3	60	13	1.3	M3
E050	8/22/2011	17:47	CS	2.75	0.45	0.15	M3	5.3	1.2	0.55	M3	3.5	0.80	0.39	M3	51	10	2.8	M3	2.0	1.3	0.87	M3	65	11	0.73	M3
E050	8/22/2011	17:47	DUP																								
E050	8/28/2011	2:55	CS	0.0024	0.023	0.041	U	0.055	0.039	0.0091	U	0.069	0.037	0.0076	LT	2.1	0.47	0.099		0.052	0.035	0.037	LT	1.9	0.42	0.032	
E050	8/28/2011	3:45	CS	0.017	0.018	0.039	U	1.04	0.028	0.043	U	0.056	0.028	0.023	LT	1.2	0.35	0.037		0.088	0.045	0.041	LT	2.1	0.47	0.052	
E050	8/28/2011	4:15	CS	-0.0083	0.027	0.054	U	0.059	0.032	0.049	U	0.058	0.032	0.0079	LT	2.1	0.34	0.068		0.08	0.065	0.088	LT	1.9	0.43	0.046	
E050	9/14/2011	19:10	CS	0.014	0.02	0.033	U	0.047	0.04	0.0097	U	0.053	0.039	0.045	LT	0.45	0.12	0.051		0.055	0.026	0.029	LT	0.58	0.095	0.047	
E050	9/12/2011	19:28	CS	0.026	0.032	0.027	U	0.08	0.046	0.0094	U	0.056	0.026	0.024	LT	0.15	0.056	0.049	LT	0.031	0.02	0.03	U	0.11	0.069	0.025	
E050	9/13/2011	20:18	CS	0.047	0.036	0.046	U	0.11	0.056	0.017		0.069	0.045	0.044	LT	1.2	0.31	0.081		0.058	0.035	0.039	LT	1.2	0.2	0.031	
E050	9/4/2011	20:58	CS	1.5	3.2	1.5	U,M	8	5.1	2.6	M3	2.9	1.1	0.87	M3	300	19	4.2	M3	5.6	1.8	0.29	M3	97	16	0.47	M3
E050	9/4/2011	22:48	CS	0.43	0.22	2.8	U,M	5.7	1.7	0.53	M3	0.64	0.37	0.45	M3	97	14	2.5	M3	3.1	0.66	0.59	M3	66	11	0.6	M3
E050	9/4/2011	22:58	CS	0.33	0.33	0.12	M3	3.3	0.89	0.25	M3	0.57	0.25	0.34	M3	46	5.2	2.5	M3	1.8	0.47	0.27	M3	53	5.9	0.34	M3
E050	9/7/2011	14:10	CS	0.022	0.018	0.0062	LT	0.32	0.056	0.012		0.065	0.026	0.0061	LT	3.3	0.6	0.028		0.32	0.051	0.024	LT	4.9	0.63	0.021	
E050	9/7/2011	15:00	CS	0.023	0.015	0.0065	LT	0.31	0.038	0.017		0.274	0.027	0.0045	LT	2.6	0.45	0.056		0.06	0.058	0.012	LT	2.5	0.44	0.02	
E050	9/7/2011	15:[illegible]	CS	0.012	0.017	0.0054	LT	0.28	0.055	0.014		0.064	0.027	0.01	LT	2.4	0.4	0.024		0.12	0.042	0.0083	LT	2.3	0.33	0.034	
E050	9/10/2011	1:18	CS	0.037	0.021	0.013	LT	0.4	0.087	0.035		0.24	0.058	0.0056		1.4	0.25	0.03		0.25	0.035	0.022	LT	1.9	0.26	0.04	
E050	9/10/2011	[illegible]	CS	0.055	0.025	0.0055	LT	0.49	0.098	0.0055		0.29	0.098	0.0052		1.7	0.2	0.035		0.371	0.084	0.024	LT	1.3	0.28	0.025	
E050	9/10/2011	[illegible]	CS	0.04	0.023	0.0098	LT	0.45	0.1	0.029		0.3	0.05	0.0052		1.4	0.25	0.039		0.098	0.033	0.0094	LT	1.5	0.22	0.027	
E050	10/[illegible]/2011	18:[illegible]	CS	0.047	0.034	0.042	LT	1	0.2	0.051		0.38	0.091	0.016		7	1.2	0.072		0.39	0.097	0.051		5	1.2	0.06	
E050	10/[illegible]/2011	18:56	CS	0.025	0.019	0.0095	LT	0.54	0.12	0.026		0.13	0.055	0.014		4.5	0.6	0.056		0.3	0.09	0.058		5.8	0.94	0.096	
E050	10/[illegible]/2011	18:56	DUP																								
E110	8/6/2011	14:40	CS	2.2	1.8	2.3	U,M	16	7.5	2	M3	5.2	0.6	0.45	M3	320	53	1.4	M3	19	4.2	1.3	M3	320	54	1.5	M3
E110	8/23/2011	16:36	CS	0.22	0.35	0.59	U,M	6	3.5	0.46	M3	3.3	0.49	0.31	M3	95	9	0.73	M3	2.6	0.86	0.57	M3	57	9	0.57	M3
E110	8/23/2011	17:20	CS	0.35	0.3	0.38	U,M	2.4	2	0.34	M3	4	0.35	0.21	M3	53	8.8	0.69	M3	2.1	0.76	0.68	M3	54	8.8	0.49	M3
E110	9/1/2011	18:53	CS	0.28	0.44	0.75	U,M	2.3	0.99	0.91	M3	0.73	0.59	0.35	M3	50	[illegible]	1	M3	2.5	0.88	0.60	M3	53	9.2	0.64	M3
E110	9/7/2011	14:27	CS	0.64	1.3	0.89	U,M	4.4	2	1.2	M3	1.9	0.69	0.75	M3	66	0.99	11	M3	3.6	0.93	1.8	M3	65	1	11	M3
E110	9/7/2011	14:27	DUP	5.6	0.81	0.57	U,M	3.4	0.82	1.2	M3	1.7	0.39	0.75	M3	56	3.4	9.5	M3	1.4	1.1	1.1	M3	56	1.1	9.5	M3
Pajarito Canyon	8/24/2011	17:35	CS	3.4	3.4	1.4	U,M	13	6.8	1.9	M3	5.8	2.3	1.4	M3	200	27	2.5	M3	5.7	2.4	15	M3	260	29	2.9	M3
Pajarito Canyon	10/4/2011	19:57	CS	0.17	0.067	0.1	M3	0.55	0.047	0.23	M3	0.38	0.053	0.2	M3	23	0.58	5.7	M3	3.2	0.27	2.18	M3	22	0.31	9.6	M3
Pajarito Canyon	10/4/2011	19:57	DUP	0.11	0.038	0.17	M3	0.73	0.2	0.23	M3	0.37	0.13	0.39	M3	19	0.39	3.2	M3	3.2	0.26	5.4	M3	28	0.27	3	M3
Pajarito Canyon	10/[illegible]/2011	19:59	CS																								
Pajarito Canyon	10/[illegible]/2011	20:[illegible]	CS																								
Rio Grande @ Buckman	8/3/2011	18:09	CS	0.068	0.046	0.045	M3	1.3	0.32	0.44	M7	0.37	1.3	[illegible]		19	3	0.13		2.24	0.19	0.08		18	2.8	0.095	
Rio Grande @ Buckman	8/4/2011	18:09	DUP																								
Rio Grande @ Buckman	8/[illegible]/2011	18:5[illegible]	CS	0.037	0.049	0.052	M3	3.2	0.24	0.066	M3	0.26	0.08	[illegible]		16	2.5	0.072		2.22	0.18	0.084		18	3.5	0.051	
Rio Grande @ Buckman	8/5/2011	17:54	CS	0.07	0.021	0.0091		0.25	0.089	[illegible]		0.32	0.094	0.026		[illegible]	0.82	0.064		0.23	0.065	0.036		4.8	0.77	0.05	
Rio Grande @ Buckman	8/5/2011	18:44	CS	0.035	0.024	0.0081		0.63	0.13	0.0087		0.22	0.045	0.0075		6	0.95	0.012		0.28	0.069	0.027		5.9	0.95	0.029	
Rio Grande @ Buckman	9/21/2011	14:43	CS	0.29	0.26	0.31	M3	2	0.56	0.26	M3	0.41	0.29	0.26	M3	35	5.5	0.26	M3	1.5	0.33	0.50		30	5.5	0.11	M3
Rio Grande @ Buckman	9/21/2011	19:27	CS	0.16	0.2	0.11	M3	6.88	0.45	0.45	M3	0.34	0.24	0.24	M3	49	6.9	0.69	M3	1.9	0.14	1.5	M3	42	7.2	0.56	M3
Rio Grande @ Buckman	9/21/2011	19:29	CS	0.35	0.27	0.23	U,M	3	0.42	0.29	M3	0.43	0.25	0.079		50	6.1	0.4	M3	3.3	0.8	0.50	M3	50	8	0.29	M3
Rio Grande @ Buckman	9/21/2011	19:29	DUP																								
Rio Grande @ Buckman	9/23/2011	17:[illegible]	CS	0.23	0.18	0.21	M3	0.36	0.35	0.41	M3	0.6	0.27	0.044		56	6.8	0.34	M3	2.9	0.34	0.22	M3	55	8.7	0.068	
Rio Grande @ Buckman	9/26/2011	20:14	CS	0.017	0.022	0.036	U,M	0.17	0.086	0.043	M3	0.052	0.032	0.025	LT	3	0.99	0.034		0.12	0.056	0.085	LT	2.7	0.65	0.032	
Rio Grande @ Buckman	9/26/2011	21:04	CS	0.0098	0.016	0.024	U	0.4	0.098	0.035	M3	0.085	0.045	0.014	LT	2.8	0.43	0.031		0.099	0.038	0.022	LT	2.3	0.48	0.0067	
Rio Grande @ Buckman	9/29/2011	4:21	CS													71	11	0.27		3	0.43	0.13		56	10	0.23	M3
Rio Grande @ Buckman	9/29/2011	4:21	CS	0.064	0.032	0.063	M3	0.75	0.37	0.24	M3	0.43	0.2	0.39	M3												
Rio Grande @ Buckman	9/29/2011	4:21	DUP	0.079	0.097	0.076	U,M	0.75	0.086	0.33	M3																
Rio Grande @ Buckman	9/29/2011	5:56	CS	0.11	0.22	0.38	Y2,U,M	0.42	0.26	0.32	Y2,M3	0.25	0.072	0.95		10	2.3	0.24		0.71	0.23	0.4		10	1.3	0.28	
Rio Grande @ Buckman	9/29/2011	5:06	DUP	0.084	0.069	0.043	M3	0.5	0.37	0.043	M3	0.16	0.062	0.024	M3	15	2.2	0.33		0.65	0.2	0.13		12	2	0.096	
Rio Grande @ Buckman	9/29/2011	5:54	CS	0.24	0.045	0.12	U,M	0.93	0.43	0.036	M3	0.17	0.056	0.055	M3	17	1.9	0.08		0.56	0.14	0.043		9.6	1.5	0.043	
Rio Grande @ Buckman	9/29/2011	6:34	CS	0.098	0.32	0.2	U,M	0.73	0.28	0.18	M3	0.18	0.092	0.07	M3	25	3.1	0.25		1.3	0.29	0.041		12	3.5	0.11	
Rio Grande @ Buckman	9/30/2011	6:36	DUP	0.13	0.2	0.05	M3	0.87	0.29	0.27	M3	0.24	0.11	0.072	M3	21	3.6	0.15		0.32	0.24	0.05		21	9.5	0.21	
Rio Grande @ Buckman	9/4/2011	21:54	CS	0.29	0.31	0.31	U,M	4.5	1.2	0.54	M3	0.57	0.35	0.4	M3	46	7.5	3.56	M3	2.2	0.55	0.57	M3	39	6.6	0.44	M3
Rio Grande @ Buckman	9/4/2011	22:44	DUP	-0.049	0.45	0.88	U,M	4.6	1	0.69	M3	0.63	0.27	0.072		46	7.6	0.96	M3	3.5	0.79	0.63	M3	42	7	0.48	M3
Rio Grande @ Buckman	9/4/2011	22:44	DUP	0.12	0.2	0.35	U,M	1.3	2.44	0.038	M3	0.31	0.14	0.13	M3	26	4.3	0.25	M3	1.2	0.34	0.16		44	3.8	0.27	M3
Rio Grande @ Buckman	9/4/2011	22:54	CS	0.17	0.19	0.33	U,M	1.6	0.5	0.22	M3	0.29	0.15	0.13	M3	29	4.6	0.72	M3	2.2	0.54	0.16		46	4.5	2.15	
Rio Grande @ Buckman	9/7/2011	15:43	CS	0.15	0.054	0.093	M3	0.29	0.093	0.13	M3	0.05	0.78	0.085		14	0.096	1.3		0.46	2.1	0.74		45	2.932	1.5	
Rio Grande @ Buckman	9/7/2011	15:13	CS																								
Rio Grande @ Buckman	9/7/2011	15:26	CS	-0.032	0.0061	0.018		0.054	0.021	0.026		0.015	0.046	0.010	LT	5.9	0.038	0.05		0.36	0.244	0.094	LT	3.7	0.033	0.6	
Rio Grande @ Buckman	9/7/2011	15:56	CS	0.078	0.12	0.093	U,M	0.5	0.19	0.37	M3	0.23	0.17	0.17	U,M	18	0.35	3.1	M3	0.84	2.4	0.31	M3	16	0.57	3.2	M3
Rio Grande @ Buckman	9/7/2011	16:11	CS	-0.037	0.16	0.087	U,M	0.86	0.1	0.26	M3	0.18	0.11	0.12	M3	18	0.26	5		0.95	20.8	0.21		18	0.89	5	
Rio Grande @ Buckman	9/7/2011	15:58	CS	-0.049	0.097	0.031	U,M	0.9	0.054	0.11		0.13	0.078	0.068	M3	11	0.068	2.7		0.52	0.046	0.24		19	0.064	4.6	
Rio Grande @ Otowi	8/21/2011	18:10	CS	0.1	0.071	0.034	M3	0.36	0.31	0.14	M3	0.14	0.085	0.052		25	4.1	3.49		1.3	0.35	0.41		75	4.1	0.15	
Rio Grande @ Otowi	8/21/2011	18:53	CS	0.069	0.44	0.51	U,M	0.31	0.41	0.74	U,M	0.42	0.27	0.094		56	1.2	0.8	M3	3.4	0.89	0.96	M3	54	9.3	0.69	M3
Rio Grande @ Otowi	8/21/2011	19:11	CS	0.041	0.072	0.33	U,M	0.2	0.32	0.079	M3	0.14	0.087	0.034		32	5.4	1.29		1.8	0.43	0.37		44	7.5	0.18	
Rio Grande @ Otowi	8/26/2011	19:40	CS	0.02	0.02	0.026	U	0.049	0.018	0.21		0.05	0.02	0.02	LT	1.7	0.79	0.069		0.064	0.035	0.043	LT	1.3	0.24	0.039	
Rio Grande @ Otowi	8/26/2011	20:20	CS	0.043	0.027	0.026		0.069	0.014	0.041	U,M	0.085	0.05	0.042	LT	5.4	0.92	0.26		0.056	0.035	0.046	LT	1.3	0.21	0.036	
Rio Grande @ Otowi	8/26/2011	21:00	CS	0.33	0.21	0.52	M3	1.8	0.51	0.25	M3	0.44	0.18	0.045		47	5.9	2.34	M3	1.2	0.35	0.12		40	4.9	0.3	M3
Rio Grande @ Otowi	9/4/2011	23:48	CS	0.029	0.042	0.066	U,M	0.36	0.035	0.015		0.06	0.099	0.048	LT	5.5	0.86	0.46		0.39	0.084	0.049		4.8	0.79	0.049	
Rio Grande @ Otowi	9/5/2011	0:08	CS	0.04	0.043	0.054	U,M	0.16	0.079	0.058	U,M	0.059	0.037	0.028	LT	7.1	1.1	0.046		0.27	0.083	0.087		5.8	1.1	0.04	
Rio Grande @ Otowi	9/5/2011	1:08	CS	0.21	0.26	0.14	M3	1.5	5.55	0.49	M3	0.36	0.26	0.4	U,M	34	5.6	0.19		1.6	0.52	0.28	M3	33	5.3	0.36	M3
Rio Grande Above Alameda	9/13/2011	4:33	CS	0.015	0.026	0.041	U	0.036	0.023	0.027	U	0.035	0.02	0.02	LT	0.42	0.15	0.025		0.022	0.021	0.037	U	0.65	0.13	0.034	
Rio Grande Above Alameda	9/13/2011	23:47	CS	-0.0026	0.021	0.024	U	0.039	0.025	0.024		0.023	0.014	0.013	LT	0.44	0.14	0.031		0.039	0.02	0.026	LT	0.46	0.14	0.024	
Rio Grande Above Alameda	9/13/2011	4:33	CS	0.057	0.11	0.13	U,M	0.6	0.24	0.2	M3	0.51	0.12	0.026		12	2	0.12		0.54	0.17	0.11		9.7	1.5	0.15	
count				71				76				75				73	30			76				75			
maximum				2.2				13				5.9				440				19				330			
minimum				0.059				0.026				0.025				0.36				0.0237				0.21			
Standard deviation				0.354423				4.426048				1.233342				65.85623				2.55100				46.82396			
mean				0.314648				2.364394				0.666714				24.49488				1.436386				29.27971			
median				0.078				1.21				0.255				35				0.76				36.3			
Quartile 95 percentile				0.54				5.7				1.26				63.3				3.01				65			

Abbreviations

CS — Customer Sample
DUP — Duplicate
MDA — Minimum Detectable Activity or Concentration
Uncert. — Uncertainty - Total Propagated Uncertainty at 95% confidence (2 sigma)

Qual — Qualifier or flag
M — The requested MDC was not met
M3 — The requested MDC was not met, but the reported activity is greater than the reported MDC
U — Result is less than the sample specific MDC
LT — Result is less than the requested MDC, greater than the sample specific MDC
W — Duplicate Error Ratio is greater than Warning Limit of 2.42
Y2 — Chemical Yield outside default limits

Table 2. Dissolved Radionuclide Concentrations (pCi/L) in Stormwater during 2011

Location	Date	Time	Sample Type	Sr 90				Cs-137				Pu 238				Pu-239/240			
				RESULT	MDA	UNCER	QUAL	RESULT	MDA	UNCER	QUAL	RESULT	MDA	UNCER	QUAL	RESULT	MDA	UNCER	QUAL
E050	8/19/2011	18:48	CS	2.8	0.68	0.68													
E050	8/19/2011	19:35	CS	3.4	0.9	0.67													
E050	8/19/2011	20:29	CS	3.4	0.92	0.68													
E050	8/22/2011	15:58	CS	4.9	1.9	0.74													
E050	8/22/2011	18:47	CS	4.9	1.8	0.86													
E050	8/22/2011	19:47	CS	5	1.8	0.85													
E050	8/28/2011	2:55	CS	4.1	1.1	0.69													
E050	8/28/2011	3:45	CS	4.3	1.2	0.76													
E050	8/28/2011	4:35	CS	3.8	1	0.72													
E050	9/1/2011	18:38	CS	0.83	0.37	0.4	LT												
E050	9/1/2011	19:28	CS	0.28	0.27	0.57	U												
E050	9/1/2011	20:18	CS	2.4	0.69	0.65													
E050	9/4/2011	20:58	CS	3.7	0.98	0.67													
E050	9/4/2011	21:48	CS	2.9	0.81	0.68													
E050	9/4/2011	22:38	CS	2.2	0.64	0.66													
E050	9/7/2011	13:56	CS	1.4	0.57	0.76													
E050	9/10/2011	9:50	CS	3.4	0.94	0.78													
E050	10/2/2011	19:56	CS	2.3	0.71	0.72													
E050	10/2/2011	18:46	DUP	1.9	0.69	0.75													
E110	8/5/2011	14:47	CS	8.3	2	0.61	Y3												
E110	8/22/2011	14:30	CS	7.4	1.9	0.88													
E110	8/22/2011	17:26	CS	4.2	1.1	0.66													
E110	9/1/2011	18:33	CS	1.3	0.44	0.56													
E110	9/7/2011	14:27	CS	1.2	0.65	0.47		0.16	4.7	2.7	U	0.0041	0.0075	0.005	U	0.003	0.0095	0.005	U
Peralta Canyon	8/24/2011	17:15	CS	2.4	0.67	0.61													
Peralta Canyon	10/4/2011	19:57	CS	0.49	0.69	0.35	U	1.9	4.3	2.5	U	0.0043	0.014	0.008	U	0.0095	0.023	0.0089	U
Rio Grande @ Buckman	8/3/2011	18:59	CS	1.5	0.43	0.56													
Rio Grande @ Buckman	8/3/2011	18:59	CS	1.6	0.5	0.55													
Rio Grande @ Buckman	8/5/2011	17:58	CS	0.82	0.35	0.54	Y1,LT												
Rio Grande @ Buckman	8/5/2011	18:44	CS	0.96	0.38	0.58	Y1,LT												
Rio Grande @ Buckman	8/21/2011	18:42	CS	1.4	0.6	0.8													
Rio Grande @ Buckman	8/21/2011	19:27	CS	0.5	0.35	0.58	U												
Rio Grande @ Buckman	8/21/2011	19:39	CS	0.65	0.38	0.74	U												
Rio Grande @ Buckman	8/21/2011	20:19	CS	0.82	0.42	0.79	LT												
Rio Grande @ Buckman	8/26/2011	20:16	CS	0.61	0.39	0.75	U												
Rio Grande @ Buckman	8/26/2011	21:04	CS	0.68	0.37	0.68	U												
Rio Grande @ Buckman	8/29/2011	4:21	CS	1.1	0.45	0.68													
Rio Grande @ Buckman	8/29/2011	5:06	CS	1.2	0.47	0.7													
Rio Grande @ Buckman	8/29/2011	5:51	CS	1.1	0.44	0.65													
Rio Grande @ Buckman	8/29/2011	6:36	CS	1.2	0.48	0.7													
Rio Grande @ Buckman	9/4/2011	21:56	CS	2.5	0.7	0.62													
Rio Grande @ Buckman	9/4/2011	22:46	DUP	2	0.59	0.53													
Rio Grande @ Buckman	9/7/2011	14:41	CS	0.45	0.74	0.37	U	0.18	3.9	2.3	U	0.0034	0.0084	0.0056	U	0.0068	0.014	0.0086	U
Rio Grande @ Buckman	9/7/2011	15:26	CS	0.19	0.65	0.3	U	2.5	5.1	2.9	U,M	0.0052	0.012	0.0075	U	0.0087	0.013	0.009	U
Rio Grande @ Buckman	9/7/2011	15:56	CS	0.86	0.67	0.42	LT	3.5	5.3	3.3	U,M	0.014	0.01	0.0093	LT	0.0077	0.005	0.0059	LT
Rio Grande @ Buckman	9/7/2011	16:11	DUP					0.054	4.2	2.5	U								
Rio Grande @ Buckman	9/7/2011	16:56	CS	0.58	0.7	0.37	U	3.6	4.2	2.4	U	0.0091	0.0088	0.0073	LT	0	0.014	0.0064	U
Rio Grande @ Otowi	8/21/2011	18:11	CS	0.63	0.39	0.78	U												
Rio Grande @ Otowi	8/21/2011	18:51	CS	0.042	0.32	0.82	U												
Rio Grande @ Otowi	8/21/2011	19:31	CS	0.13	0.57	0.8	U												
Rio Grande @ Otowi	8/26/2011	19:40	CS	0.96	0.41	0.66	LT												
Rio Grande @ Otowi	8/26/2011	20:20	CS	0.73	0.37	0.65	LT												
Rio Grande @ Otowi	8/26/2011	21:00	CS	2.2	0.49	0.78													
Rio Grande @ Otowi	9/4/2011	23:48	CS	1.3	0.43	0.68													
Rio Grande @ Otowi	9/5/2011	0:08	CS	0.65	0.36	0.65	U												
Rio Grande @ Otowi	9/5/2011	1:08	CS	2.2	0.69	0.76													
Rio Grande above Alameda	8/19/2011	4:53	CS	0.23	0.29	0.61	U												
Rio Grande above Alameda	8/19/2011	4:53	CS	0.12	0.26	0.59	U												
Rio Grande above Alameda	8/19/2011	4:53	CS	0.81	0.39	0.67	LT												
Rio Grande above Alameda	8/22/2011	21:47	CS	0.068	0.25	0.56	T1,U												
Rio Grande above Alameda	8/23/2011	4:53	CS	0.5	0.29	0.53	U												

count	60	7	5	5
maximum	8.3	3.5	0.014	0.0096
minimum	-0.12	3.6	0.0034	0
Standard deviation	1.765968	7.304299	0.004064	0.004098
mean	1.898667	0.68171	0.00685	0.005633
median	1.2	-0.18	0.00525	0.00725
Outlier 90 percentile	4.21	1.4324	0.01153	0.00915

Abbreviations

CS	Customer Sample
DUP	Duplicate
MDA	Minimum Detectable Activity or Concentration
Uncert	Uncertainty - (total Propagated Uncertainty at 95% confidence (2 x sigma))

Qual	Qualifiers or Flag
M	The requested MDC was not met
M3	The requested MDC was not met, but the reported activity is greater than the reported MDC
U	Result is less than the sample specific MDC
LT	Result is less than the requested MDC, greater than the sample specific MDC
Y2	Duplicate Error Ratio is greater than Warning Limit of 1.42
Y1	Chemical Yield is in control at 160-110%. Quantitative yield is assumed
Y3	Chemical Yield outside default limits

Table 2. Dissolved Radionuclide Concentrations (pCi/L) in Stormwater during 2011 (continued)

Location	Date	Time	Am-241 RESULT	Am-241 MDA	Am-241 UNCER	Am-241 QUAL	U-234 RESULT	U-234 MDA	U-234 UNCER	U-234 QUAL	U-235 RESULT	U-235 MDA	U-235 UNCER	U-235 QUAL	U-238 RESULT	U-238 MDA	U-238 UNCER	U-238 QUAL
E050	8/19/2011	18:49																
E050	8/19/2011	19:39																
E050	8/19/2011	20:29																
E050	8/22/2011	16:08																
E050	8/22/2011	16:57																
E050	8/22/2011	17:47																
E050	8/28/2011	2:55																
E050	8/28/2011	3:45																
E050	8/28/2011	4:35																
E050	9/1/2011	18:38																
E050	9/1/2011	19:28																
E050	9/1/2011	20:18																
E050	9/4/2011	20:58																
E050	9/4/2011	21:48																
E050	9/4/2011	22:38																
E050	9/7/2011	15:30					0.5	0.2	0.15		0.036	0.065	0.19	U	0.45	0.16	0.11	
E050	9/10/2011	3:50					0.19	0.094	0.089	LT	-0.018	0.042	0.1	U	0.18	0.09	0.08	LT
E050	10/2/2011	18:56					0.66	0.26	0.12		0.289	0.076	0.087	LT	0.87	0.25	0.074	
E050	10/2/2011	18:56					1	0.24	0.089		0.026	0.034	0.053	U	0.91	0.22	0.056	
E110	8/5/2011	14:47																
E110	8/22/2011	16:30																
E110	8/22/2011	17:20																
E110	9/1/2011	18:33																
E110	9/7/2011	14:27	0.013	0.013	0.012	LT	0.65	0.029	0.18		0.033	0.028	0.026	LT	0.58	0.024	0.14	
Peralta Canyon	8/24/2011	17:15																
Peralta Canyon	10/4/2011	19:57	0.0063	0.023	0.012	U	1.7	0.059	0.36		0.071	0.035	0.046	LT	0.98	0.036	0.23	
Rio Grande @ Buckman	8/3/2011	18:09																
Rio Grande @ Buckman	8/3/2011	18:59																
Rio Grande @ Buckman	8/5/2011	17:54																
Rio Grande @ Buckman	8/5/2011	18:34																
Rio Grande @ Buckman	8/21/2011	18:42																
Rio Grande @ Buckman	8/21/2011	19:27																
Rio Grande @ Buckman	8/21/2011	19:29																
Rio Grande @ Buckman	8/21/2011	20:19																
Rio Grande @ Buckman	8/26/2011	20:14																
Rio Grande @ Buckman	8/26/2011	21:04																
Rio Grande @ Buckman	8/29/2011	4:21																
Rio Grande @ Buckman	8/29/2011	5:06																
Rio Grande @ Buckman	8/29/2011	5:51																
Rio Grande @ Buckman	8/29/2011	6:36																
Rio Grande @ Buckman	9/4/2011	21:54																
Rio Grande @ Buckman	9/4/2011	22:44																
Rio Grande @ Buckman	9/7/2011	14:41	0.0096	0.011	0.0091	U	0.68	0.048	0.17		0.019	0.032	0.028	U	0.5	0.041	0.14	
Rio Grande @ Buckman	9/7/2011	15:26	0.0065	0.024	0.013	U	0.82	0.049	0.19		0.046	0.029	0.035	LT	0.61	0.03	0.15	
Rio Grande @ Buckman	9/7/2011	15:56	0.016	0.014	0.012	LT	1	0.049	0.23		0.062	0.049	0.041	LT	0.78	0.043	0.18	
Rio Grande @ Buckman	9/7/2011	16:11																
Rio Grande @ Buckman	9/7/2011	16:56	0.021	0.016	0.016	LT	0.89	0.036	0.2		0.038	0.015	0.03	LT	0.57	0.039	0.14	
Rio Grande @ Otowi	8/21/2011	18:11																
Rio Grande @ Otowi	8/21/2011	18:51																
Rio Grande @ Otowi	8/21/2011	19:31																
Rio Grande @ Otowi	8/26/2011	19:40																
Rio Grande @ Otowi	8/26/2011	20:20																
Rio Grande @ Otowi	8/26/2011	21:00																
Rio Grande @ Otowi	9/4/2011	23:48																
Rio Grande @ Otowi	9/5/2011	0:08																
Rio Grande @ Otowi	9/5/2011	1:08																
Rio Grande above Alameda	8/13/2011	4:53																
Rio Grande above Alameda	8/13/2011	4:53																
Rio Grande above Alameda	8/13/2011	4:53																
Rio Grande above Alameda	8/17/2011	21:47																
Rio Grande above Alameda	8/21/2011	4:53																
count			6				10				10				10			
maximum			0.021				1.7				0.089				0.98			
minimum			0.0063				0.19				0.018				0.18			
Standard deviation			0.005432				0.358478				0.030104				0.244406			
mean			0.0124				0.851				0.0394				0.643			
median			0.0113				0.805				0.0355				0.595			
Outlier 90 percentile			0.0185				1.07				0.0776				0.917			

Abreviations
MDA Minimum Detectable Activity or Concentration
Uncert Uncertainty - total Propagated Uncertainty at 95% confidence (2 x sigma)

Qual Qualifiers or Flag
U Result is less than the sample specific MDC
LT Result is less than the requested MDC, greater than the sample specific MDC

Table 3. Dissolved Trace and Heavy Metal Concentrations (mg/kg) in Stormwater during 2011

Location	E110			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			E110			E050			E050			E050			E050		
Date/Time	7/22/11			8/3/11 18:05			8/3/11 18:59			8/5/11 17:54			8/5/11 15:44			8/5/11			8/13/11 18:48			8/19/11			9/19/11			8/22/11 16:28		
Dissolved mg/kg	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.042	0.031	B	1.5	0.031		0.61	0.031		0.42	0.031		0.31	0.031		0.11	0.031	B	1.3	0.031		2.7	0.031		1.6	0.031		0.031	0.031	U
As	0.017	0.0026		0.006	0.0026	B	0.0026	0.0026	U	0.0026	0.0026	U	0.0026	0.0026	U	0.01	0.0026	U	0.0026	0.0026	U	0.0026	0.0026	U	0.0026	0.0026	U	0.0089	0.0026	B
Ba	0.36	0.0017		0.15	0.0017		0.14	0.0017		0.099	0.0017	B	0.092	0.0017	B	0.35	0.0017		0.033	0.0017	B	0.043	0.0017	B	0.038	0.0017	B	0.22	0.0017	
Be	0.00018	0.00018	U	0.00043	0.00018	B	0.00029	0.00018	B	0.00025	0.00018	B	0.00039	0.00018	B	0.00045	0.00018	B	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	180	0.13		48	0.13		44	0.13		36	0.13		40	0.13		180	0.13		7	0.13		9.6	0.13		7.5	0.13		100	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN (TOTAL)	0.01	0.01	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U
Co	0.004	0.00088	B	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.0024	0.00088	B	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.007	0.00088	B
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0029	0.0018	B	0.0018	0.0018	B	0.0018	0.0018	U
Cu	0.013	0.0016		0.0024	0.0016	B	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0049	0.0016	B	0.003	0.0016	B	0.0041	0.0016	B	0.0034	0.0016	B	0.0041	0.0016	B
Fe	0.18	0.037		0.21	0.037		0.34	0.037		0.23	0.037		0.14	0.037		0.35	0.037		3.55	0.037		1.8	0.037		2.1	0.037		0.094	0.037	B
Hg	0.00015	4.0E-05		0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	46	0.36		7.6	0.36		5.8	0.36		3.6	0.36		4.4	0.36		54	0.36		3	0.36		3.9	0.36		3.6	0.36		17	0.36	
Mg	35	0.12		7.7	0.12		6.7	0.12		6.9	0.12		6.1	0.12		36	0.12		1.2	0.12		1.8	0.12		1.6	0.12		18	0.12	
Mn	8.2	0.0014		0.34	0.0014		0.039	0.0014		0.075	0.0014		0.015	0.0014		5.2	0.0014		0.0071	0.0014	B	0.018	0.0014		0.011	0.0014		5.2	0.0014	
Na	18	0.39		17	0.39		12	0.39		12	0.39		12	0.39		6.4	0.39		6.1	0.39		8.8	0.39		5	0.39		8.7	0.39	
Ni	0.005	0.0015	B	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0060	0.0015	B	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	B	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.009	0.0022		0.0022	0.0022	U	0.0022	0.0022	U	0.0027	0.0022	U	0.0022	0.0022	U	0.0085	0.0022	U	0.0027	0.0022	B	0.0022	0.0022	U	0.0022	0.0022	U	0.0041	0.0022	B
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0047	0.0016	B	0.0034	0.0016	B	0.0032	0.0016	B	0.004	0.0016	B	0.0025	0.0016	B	0.0055	0.0016	B	0.0037	0.0016	B	0.0028	0.0016	B	0.0023	0.0016	B	0.0016	0.0016	U
Zn	0.0048	0.0021	B	0.0024	0.0021	B	0.0071	0.0021	B	0.0071	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.544	0.0021	U	0.036	0.0041		0.077	0.0021		0.0047	0.0021	B

Abbreviations

MDL Minimum Detectable Level or Concentration

Qual Qualifier or Flag

U Not detected at or above the client requested detection limit

B Below reporting limit but above the Detection Limit

Table 3. Dissolved Phase and Heavy Metal Concentrations (mg/kg) in Stormwater during 2011 (continued)

Location	E050			E050			E110			E610			Pueblo Canyon		
Date/Time	8/22/11			8/22/11 14:47			8/22/11 15:49			8/22/11 17:20			8/24/11 17:15		
(dissolved mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.031	0.031	U	0.358	0.031	B	0.031	0.031	U	0.031	0.031	U	0.031	0.031	U
As	0.0079	0.0026	B	0.0042	0.0026	B	0.0096	0.0026	B	0.0042	0.0026	B	0.0093	0.0026	B
Ba	0.35	0.0017		0.24	0.0017		0.34	0.0017		0.22	0.0017		3.7	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00019	0.00018	B	0.00018	0.00018	U	0.00018	0.00018	U
Ca	150	0.13		59	0.13		100	0.13		100	0.13		150	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN (TOTAL)	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U
Co	0.0025	0.00088	B	0.0023	0.00088	B	0.0023	0.00088	B	0.0021	0.00088	B	0.004	0.00088	B
Cr	0.0018	0.0018	U	0.0019	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0044	0.0016	B	0.0048	0.0016	B	0.0044	0.0016	B	0.0052	0.0016	B	0.0028	0.0016	B
Fe	0.11	0.037		0.13	0.037		0.26	0.037		0.11	0.037		0.075	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	19	0.36		17	0.36		39	0.36		38	0.36		14	0.36	
Mg	30	0.12		18	0.12		41	0.12		28	0.12		22	0.12	
Mn	8	0.0014		7.4	0.0014		2	0.0014		3	0.0014		4.8	0.0014	
Na	7.3	0.39		2.1	0.39		7.5	0.39		12	0.39		8.1	0.39	
Ni	0.0022	0.0015	B	0.0037	0.0015	B	0.0042	0.0015	B	0.0030	0.0015	B	0.004	0.0015	B
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0057	0.0022		0.004	0.0022	B	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0016	0.0016	U	0.0016	0.0016	U	0.0049	0.0016	B	0.0073	0.0016	B	0.0018	0.0016	B
Zn	0.0026	0.0021	B	0.0041	0.0021	B	0.0065	0.0021	B	0.0043	0.0021	B	0.004	0.0021	B

Location	Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman		
Date/Time	8/21/11 18:43			8/21/11 19:37			8/21/11 19:29			8/21/11 20:19			8/22/11 18:11		
(dissolved mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0020	0.0016	U	0.0016	0.0016	U
Al	0.031	0.031	U	0.031	0.031	U	0.031	0.031	U	0.031	0.031	U	0.031	0.031	U
As	0.0081	0.0026	B	0.0037	0.0026	B	0.0045	0.0026	B	0.0032	0.0026	B	0.0056	0.0026	B
Ba	0.18	0.0017		2.14	0.0017		0.12	0.0017		0.11	0.0017		0.11	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	62	0.13		45	0.13		41	0.13		41	0.13		39	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN (TOTAL)	0.01	0.01	U	0.014	0.014	U	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0037	0.0016	B	0.0024	0.0016	B	0.0017	0.0016	B	0.0025	0.0016	B	0.0016	0.0016	U
Fe	0.052	0.037	B	0.037	0.037	U	0.037	0.037	U	0.037	0.037	U	0.037	0.037	U
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	11	0.36		4.7	0.36		4.2	0.36		4.2	0.36		2.9	0.36	
Mg	11	0.12		4.6	0.12		3.8	0.12		4.3	0.12		2.9	0.12	
Mn	2.3	0.0014		1.64	0.0014		0.36	0.0014		0.016	0.0014		0.041	0.0014	
Na	12	0.39		11	0.39		12	0.39		17	0.39		13	0.39	
Ni	0.0017	0.0015	B	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0053	0.0022		0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0041	0.0037	B	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0084	0.0016	B	0.0033	0.0016	B	0.0016	0.0016	B	0.0053	0.0016	B	0.0055	0.0016	B
Zn	0.0028	0.0021	B	0.0028	0.0021	B	0.0027	0.0021	B	0.0045	0.0021	B	0.0052	0.0021	B

Abbreviations
MDL Minimum Detectable Level or Concentration

Qual Qualifiers or Flag
U Not detected at or above the client requested detection limit
B Below reporting limit but above the Detection Limit

Table 3. Dissolved Trace and Heavy Metal Concentrations (mg/kg) in Stormwater during 2012 (continued)

Location	Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande above Alameda			Rio Grande above Alameda			Rio Grande @ Buckman		
Date/Time	8/21/12			8/23/12 19:31			8/23/12 4:53			8/27/12 4:53			9/6/12 21:54		
Dissolved mg/L	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.031	0.031	U	0.031	0.031	U	0.031	0.031	U	0.29	0.031		0.031	0.031	U
As	0.0026	0.0026	U	0.0026	0.0026	U	0.0026	0.0026	U	0.0026	0.0026	B	0.0026	0.0026	U
Ba	0.12	0.0017		0.1	0.0017		0.23	0.0023	B	0.1	0.0017		0.21	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	39	0.13		42	0.13		35	0.13		37	0.11		58	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN(TOTAL)	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U	0.01	0.01	U	0.003	0.003	U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00058	0.00058	U	0.00058	0.00058	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0016	0.0016	U	0.0016	0.0016	U	0.0045	0.0016	B	0.0016	0.0016	U	0.0048	0.0016	B
Fe	0.037	0.037	U	0.037	0.037	U	0.14	0.037		0.46	0.037		0.07	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	4.1	0.36		3.5	0.36		2.7	0.36		2.7	0.36		17	0.36	
Mg	9	0.12		9.8	0.12		7	0.12		2.8	0.12		17	0.12	
Mn	0.0014	0.0014	U	0.0014	0.0014	U	0.0014	0.0014	U	0.019	0.0014		3.7	0.0014	
Na	12	0.39		13	0.39		6.5	0.39		11	0.39		12	0.39	
Ni	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0041	0.0037	B	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	B
V	0.0054	0.0016	B	0.0045	0.0016	B	0.0019	0.0016	B	0.0019	0.0016	B	0.0032	0.0016	B
Zn	0.0093	0.0021	B	0.0044	0.0021	B	0.0031	0.0021	B	0.0021	0.0021	U	0.0028	0.0021	B

Location	Rio Grande @ Buckman			E052			D050			E050			E058		
Date/Time	9/4/12 22:44			9/7/12 18:18			9/1/12 19:28			8/23/12 20:18			9/4/12 20:58		
Dissolved mg/L	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.19	0.031	B	0.16	0.031	B	0.18	0.031	B	0.064	0.031	B	0.031	0.031	U
As	0.0031	0.0026	B	0.0049	0.0026	B	0.0069	0.0026	B	0.0026	0.0026	U	0.0026	0.0026	U
Ba	0.12	0.0017		0.087	0.0017		0.017	0.0017	B	0.1	0.0017	B	0.26	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	49	0.13		5.7	0.13		4.5	0.13		18	0.13		110	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN(TOTAL)	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U
Co	0.00065	0.00058	B	0.00058	0.00058	U	0.00058	0.00058	U	0.00058	0.00058	U	0.0015	0.00058	B
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0039	0.0018	B	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0018	0.0016	B	0.0037	0.0016	B	0.0022	0.0016	B	0.0021	0.0016	B	0.0047	0.0016	B
Fe	2.3	0.037		0.091	0.037		0.093	0.037	B	0.08	0.037	B	0.047	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	7.7	0.36		2.2	0.36		1.9	0.36		5.9	0.36		15	0.36	
Mg	8.0	0.12		0.58	0.12		0.53	0.12	B	6.2	0.12		20	0.12	
Mn	1.6	0.0014		0.0072	0.0014		0.0033	0.0014	B	0.0094	0.0014	B	4.4	0.0014	
Na	17	0.39		2.2	0.39		2.6	0.39		11	0.39		9.9	0.39	
Ni	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	B	0.0037	0.0037	U	0.0037	0.0037	B	0.0037	0.0037	U	0.0037	0.0037	U
V	0.005	0.0016	B	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Zn	0.0042	0.0021	B	0.01	0.0021	B	0.015	0.0021	B	0.023	0.0021		0.0027	0.0021	B

Abbreviations:

MDL — Minimum Detectable Level or Concentration

Qual — Qualifier or Flag

U — Not detected at or above the client requested detection limit

B — Below reporting limit but above the detection limit

Table 3. Dissolved Trace and Heavy Metal Concentrations (mg/L) in Stormwater during 2011 (continued)

Location	E050			E050			X110		
Date/Time	7/4/11			7/4/11 22:38			8/4/11 18:55		
Dissolved (mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.19	0.031	B	0.51	0.031		0.031	0.031	U
As	0.0095	0.0026	B	0.0037	0.0026	B	0.0034	0.0026	B
Ba	0.25	0.0017		0.18	0.0017		0.21	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	22	0.13		57	0.13		58	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CR(TOTAL)	0.003	0.003	U	0.0031	0.0031	U	0.0031	0.0031	U
Co	0.0015	0.00088	B	0.0014	0.00088	B	0.0011	0.00088	B
Cr	0.0018	0.0018	U	0.0019	0.0019	U	0.0018	0.0018	U
Cu	0.004	0.0016	B	0.0044	0.0016	B	0.0017	0.0016	B
Fe	0.16	0.037		3.1	0.037		0.384	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	15	0.36		11	0.36		6.4	0.36	
Mg	1.5	0.17		10	0.17		7.9	0.17	
Mn	3.9	0.0014		2.4	0.0014		1.4	0.0014	
Na	7.6	0.39		7.5	0.39		6.4	0.39	
Ni	0.0029	0.0015	B	0.0018	0.0015	B	0.0024	0.0015	B
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0027	0.0022	B	0.0044	0.0022	B	0.0031	0.0022	B
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0037	0.0016	B	0.0064	0.0016	B	0.0032	0.0016	B
Zn	0.0025	0.0021	B	0.0029	0.0021	B	0.0021	0.0021	U

Location	RG at Otowi			RG at Otowi			RG at Otowi			Rio Grande above Alameda		
Date/Time	8/4/11 23:48			8/5/11 0:08			8/5/11 1:08			8/17/11 21:47		
Dissolved (mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.9	0.031		0.37	0.031		0.1	0.031	B	0.097	0.031	B
As	0.0039	0.0026	B	0.0076	0.0026	U	0.0037	0.0026	B	0.0026	0.0026	U
Ba	0.082	0.0017	B	0.087	0.0017	B	0.18	0.0017		0.077	0.0017	B
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	39	0.13		47	0.13		61	0.13		47	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CR(TOTAL)	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0016	0.0016	U	0.0016	0.0016	U	0.0033	0.0016	B	0.0046	0.0016	B
Fe	2.3	0.037		0.21	0.047		0.094	0.037	B	0.058	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	2.5	0.36		2.7	0.36		8.3	0.36		3	0.36	
Mg	5.2	0.17		6.1	0.17		10	0.17		1.9	0.17	
Mn	0.317	0.0014		0.0074	0.0014	B	7.8	0.0014		0.002	0.0014	B
Na	14	0.39		12	0.39		17	0.39		13	0.39	
Ni	0.0015	0.0015	U	0.0019	0.0015	U	0.0019	0.0015	B	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0023	0.0022	U	0.0023	0.0022	B	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0064	0.0016	B	0.0024	0.0016	B	0.0042	0.0016	B	0.0024	0.0016	B
Zn	0.0027	0.0021	B	0.0031	0.0021	B	0.0021	0.0021	U	0.0075	0.0021	B

Location	E050			E050			E050		
Date/Time	8/25/11 2:55			8/28/11 3:45			8/28/11 4:35		
Dissolved (mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.031	0.031	U	0.031	0.031	U	0.031	0.031	U
As	0.0026	0.0026	U	0.0033	0.0026	B	0.0045	0.0025	B
Ba	0.13	0.0017		0.13	0.0017		0.14	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	65	0.13		65	0.13		65	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CR(TOTAL)	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0019	0.0016	B	0.0018	0.0016	B	0.0026	0.0016	B
Fe	0.037	0.037	U	0.37	0.037		0.037	0.037	U
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	18	0.36		18	0.36		18	0.36	
Mg	17	0.17		12	0.17		13	0.17	
Mn	0.0035	0.0014	B	0.0036	0.0014	B	0.0036	0.0014	B
Na	19	0.39		15	0.39		15	0.39	
Ni	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Zn	0.014	0.0021	B	0.01	0.0021	B	0.0095	0.0021	B

Abbreviations

MDL Minimum Detectable Level or Concentration

Qual Qualifier or Flag

U Not detected at or above the client requested detection limit

B Below reporting limit but above the Detection Limit

Table 3. Dissolved Trace and Heavy Metal Concentrations (mg/L) in Stormwater during 2011 (continued)

Location	I-232			Rio Grande at 600			Rio Grande at 800			Rio Grande at 540			Rio Grande at 600		
Date/Time	6/28/11			8/26/11 20:14			8/26/11 21:04			8/29/11 4:21			8/29/11 5:06		
Analyte (mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.37	0.031		0.041	0.031	U	0.088	0.031	B	0.043	0.031	U	0.25	0.031	B
As	0.0050	0.0026	B	0.0026	0.0026	U	0.0047	0.0026	B	0.0026	0.0026	U	0.0045	0.0026	B
Ba	0.33	0.0017		0.048	0.0017	B	0.048	0.0017	B	0.12	0.0017		0.11	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	110	0.13		96	0.13		37	0.13		45	0.13		42	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
Cr (HEX)	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U
Co	0.0014	0.00088	B	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0059	0.0016	B	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Fe	0.27	0.037		0.037	0.037	U	0.3	0.037		0.047	0.037	B	0.076	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	27	0.36		2.7	0.36		2.3	0.36		4.3	0.36		4.2	0.36	
Mg	21	0.12		5.6	0.12		5.6	0.12		6	0.12		5.9	0.12	
Mn	4.3	0.0014		0.0014	0.0014	U	0.0037	0.0014	B	0.0014	0.0014	B	0.0057	0.0014	B
Na	5.3	0.39		17	0.39		13	0.39		14	0.39		13	0.39	
Ni	0.0018	0.0015	B	0.0015	0.0015	U	0.0015	0.0015	B	0.0019	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0043	0.0022	B	0.0022	0.0022	U	0.003	0.0022	B	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	B	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0043	0.0016	B	0.0024	0.0016	B	0.0028	0.0016	B	0.004	0.0016	B	0.0041	0.0016	B
Zn	0.0074	0.0021	B	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U

Location	Rio Grande @ Buckman			Rio Grande @ Guttman			Rio Grande at Otowi			Rio Grande at Otowi			Rio Grande at Otowi		
Date/Time	8/29/11 5:56			8/29/11 6:36			8/26/11 19:40			8/26/11 20:20			8/26/11 21:02		
Analyte (mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.8	0.031		0.18	0.031	B	0.031	0.031	U	0.031	0.031	U	0.1	0.031	B
As	0.0076	0.0026	U	0.0025	0.0026	U	0.0026	0.0026	U	0.0026	0.0026	U	0.0026	0.0026	U
Ba	0.13	0.0017		0.12	0.0017		0.085	0.0017	B	0.087	0.0017	B	0.12	0.0017	
Be	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U	0.00018	0.00018	U
Ca	41	0.13		43	0.13		35	0.13		39	0.13		54	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
Cr (HEX)	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.003	0.003	U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0016	0.0016	U	0.0016	0.0016	B	0.0016	0.0016	U	0.0016	0.0016	U	0.0026	0.0016	B
Fe	0.25	0.037		0.14	0.037		0.037	0.037	U	0.1	0.037		0.67	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	3.9	0.36		4.7	0.36		2	0.36		2	0.36		2.1	0.36	
Mg	5.7	0.12		5.9	0.12		5.6	0.12		5.6	0.12		5.4	0.12	
Mn	0.035	0.0014		1.3	0.0014		0.0014	0.0014	U	0.0014	0.0014	U	2.5	0.0014	
Na	14	0.39		13	0.39		13	0.39		13	0.39		13	0.39	
Ni	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0018	0.0037	B	0.0064	0.0037	B	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0034	0.0016	B	0.0071	0.0016	B	0.0043	0.0016	B	0.0052	0.0016	B	0.0058	0.0016	B
Zn	0.0021	0.0021	U	0.0066	0.0021	B	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U

Abbreviations
MDL Minimum Detectable Level of Concentration

Qual Qualifier or Flag
U Not detected at or above the client requested detection limit
B Below reporting limit but above the Detection Limit

Table 5. Dissolved Trace and Heavy Metal Concentrations (mg/kg) in Stormwater during 2011 (continued)

Location	Blind Canyon			E119			Peralta Canyon			Peralta Canyon		
Date/Time	9/19/11			7/7/11 14:22			10/4/11 19:57			10/7/11 15:29		
Dissolved mg/L	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.2	0.031		0.33	0.031		0.59	0.031		0.068	0.031	B
As	0.0044	0.0026	B	0.0074	0.0026	B	0.0061	0.0026	B	0.0046	0.0026	B
Ba	0.16	0.0017		0.12	0.0017		0.09	0.0017	B	0.041	0.0017	B
Be	0.00038	0.00018	B	0.00036	0.00018	B	0.00038	0.00018	B	0.00037	0.00018	B
Ca	87	0.13		21	0.13		22	0.13		67	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN(TOTAL)	0.0034	0.0034	U	0.0034	0.0034	U	0.0036	0.0036	U	0.0032	0.0032	U
Co	0.0031	0.00088	B	0.0026	0.00088	B	0.0014	0.00088	B	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Fe	0.15	0.037		0.57	0.037		0.5	0.037		0.037	0.037	U
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	14	0.36		5	0.36		8.5	0.36		9.1	0.36	
Mg	35	0.12		3.8	0.12		12	0.12		24	0.12	
Mn	3.4	0.0014		4.0	0.0014		3.3	0.0014		0.0014	0.0014	U
Na	5.2	0.39		8.5	0.39		2.3	0.39		4.7	0.39	
Ni	0.0072	0.0015	B	0.0034	0.0015	B	0.0017	0.0015	B	0.0019	0.0015	B
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0055	0.0016	B	0.0016	0.0016	U	0.0054	0.0016	B	0.002	0.0016	B
Zn	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U

Location	Peralta Canyon			Rio Grande @ Buckman			Rio Grande @ Buckman		
Date/Time	10/7/11 20:49			7/7/11 14:41			9/7/11 15:13		
Dissolved mg/L	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.098	0.031	B	0.56	0.031		3.11	0.031	
As	0.0049	0.0026	B	0.0039	0.0026	B	0.0051	0.0026	B
Ba	0.034	0.0017	B	0.18	0.0017		0.083	0.0017	B
Be	0.00055	0.00018	B	0.00039	0.00018	B	0.00018	0.00018	U
Ca	60	0.13		54	0.13		43	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN(TOTAL)	0.0032	0.0032	U	0.011		U	0.011		U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0016	0.0016	U	0.016	0.0016		0.0016	0.0016	U
Fe	0.037	0.037	U	0.25	0.037		0.346	0.037	B
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	4.4	0.36		5.3	0.36		2.5	0.36	
Mg	14	0.12		5.5	0.12		5.4	0.12	
Mn	0.0014	0.0014	U	0.31	0.0014		0.0014	0.0014	U
Na	5.3	0.39		13	0.39		15	0.39	
Ni	0.0015	0.0015	U	0.0029	0.0015	B	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.014	0.0021		0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0024	0.0016	B	0.006	0.0016	B	0.0044	0.0016	B
Zn	0.0024	0.0021	B	0.07	0.0021		0.0021	0.0021	U

Location	Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman		
Date/Time	9/7/11 15:36			9/7/11 15:56			9/7/11 16:11		
Dissolved mg/L	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.096	0.031	B	7.3	0.031		0.75	0.031	
As	0.0026	0.0026	U	0.0043	0.0026	B	0.0042	0.0026	B
Ba	0.084	0.0017	B	0.16	0.0017		0.14	0.0017	
Be	0.00018	0.00018	U	0.00044	0.00018	B	0.00045	0.00018	B
Ca	41	0.13		41	0.13		41	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0008	0.0008	U
CN(TOTAL)	0.011		U	0.011		U	0.011		U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.00088	0.00088	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0016	0.0016	U	0.0028	0.0016	B	0.0016	0.0016	U
Fe	0.037	0.037	U	1.6	0.037		0.45	0.037	
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	2.3	0.36		4.6	0.36		4.5	0.36	
Mg	5.4	0.12		7	0.12		6.2	0.12	
Mn	0.0014	0.0014	U	0.089	0.0014		0.31	0.0014	
Na	14	0.39		17	0.39		12	0.39	
Ni	0.0015	0.0015	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.0037	0.0037	U
V	0.0048	0.0016	B	0.0052	0.0016	B	0.008	0.0016	B
Zn	0.0021	0.0021	U	0.0046	0.0021	B	0.0021	0.0021	U

Abbreviations
MDL Minimum Detectable Level or Concentration

Qual Qualifiers or Flag
U Not detected at or above the direct reported detection limit
B Below reporting limit but above the Detection Limit

Table 3. Dissolved [illegible] and Heavy Metal Concentrations (mg/kg) in stormwater during 2011 (continued)

Location	Rio Grande at Buckman			E050			E050 DUP			E060			E090		
Date/Time	9/7/11			10/2/11 18:56			10/2/11 18:56			9/10/11 13:59			9/7/11 15:50		
Dissolved (mg/L)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.00153	0.00153	U	0.0016	0.0016	U	0.0016	0.0016	U
Al	0.34	0.041		4	0.341		4.95	0.0312		3.94	0.031		8.25	0.041	
As	0.0058	0.0026	B	0.0051	0.0026	B	0.00549	0.00255	B	0.0062	0.0026	B	0.0057	0.0026	B
Ba	0.17	0.0017		0.12	0.0017		0.371	0.00173		0.036	0.0017	B	0.29	0.0017	B
Be	0.00034	0.00018	B	0.00025	0.00018	B	0.00077	0.000176	B	0.00033	0.00018	B	0.00032	0.00018	B
Ca	47	0.13		50	0.13		49.7	0.125		99	0.13		59	0.13	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.000797	0.000797	U	0.0008	0.0008	U	0.0008	0.0008	U
CN(TOTAL)	0.0033	0.0033	U	0.031		U	0.0299		U	0.013		U	0.031		U
Co	0.00088	0.00088	U	0.00088	0.00088	U	0.000481	0.000481	U	0.00088	0.00088	U	0.00086	0.00086	U
Cr	0.0018	0.0018	U	0.0018	0.0018	U	0.00179	0.00179	U	0.0018	0.0018	U	0.0018	0.0018	U
Cu	0.0016	0.0016	U	0.0016	0.0016	U	0.00158	0.00158	U	0.0016	0.0016	U	0.0016	0.0016	U
Fe	0.19	0.037		2.4	0.037		7.46	0.0366		0.29	0.037		3.74	0.037	
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K	3.5	0.36		10	2.38		10.3	0.361		5.1	0.36		8.3	0.36	
Mg	5.7	0.12		9.5	0.12		8.92	0.171		2.3	0.17		5.9	0.12	
Mn	0.0067	0.0014	B	0.11	0.0014		0.12	0.00143		0.067	0.0014	B	0.0039	0.0014	B
Na	14	0.39		17	0.39		17	0.388		32	0.39		6.6	0.44	
Ni	0.0015	0.0015	U	0.0015	0.0015	B	0.00349	0.00148	U	0.0015	0.0015	U	0.0015	0.0015	U
Pb	0.0021	0.0021	U	0.0041	0.0021		0.00479	0.00205	B	0.0021	0.0021	U	0.0021	0.0021	U
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.00358	0.00358	U	0.0036	0.0036	U	0.0036	0.0036	U
Se	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U	0.0022	0.0022	U
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.00473	0.00371	U	0.0037	0.0037	U	0.0037	[illegible]	U
V	0.0035	0.0016	B	0.0045	0.0016	B	0.00363	0.00163	B	0.0016	0.0016	U	0.0016	0.0016	U
Zn	0.0021	0.0021	U	0.057	0.0021	B	0.0161	0.00206	B	0.0032	0.0021	B	0.0021	0.0021	U

Abbreviations:

MDL — Minimum Detectable Level or Concentration

Qual — Qualifier or Flag

U — Not detected at or above the client requested detection limit

B — Below reporting limit but above the Detection Limit

Table 6. Total Trace and Heavy Metal Concentrations (mg/kg) in Storm Water during 2011 (continued)

CLIENT_SAMPLE_ID	Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			ETID			ETID			RBSD			EDSC			RBSD			ETBD		
Date/Time	8/3/11 18:09			8/3/11 18:59			8/3/11 17:54			8/5/11 10:04			8/5/11 14:47			7/22/11			8/22/11 16:08			8/22/11 16:57			8/22/11 17:47			8/22/11 16:30		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	410	10		160	20		130	20		210	50		9800	500		1000	100		410	10		440	10		370	10		660	10	
Carbonate alkalinity	10	10	U	20	20	U	20	20	U	50	50	U	3700	500		600	100	U	10	10	U	10	10	U	10	10	U	10	10	U
TOTAL ALKALINITY AS CaCO3	410	10		160	20		130	20		210	50		13000	500		1000	100		410	10		440	10		370	10		660	10	
Total Organic Carbon	81	1		5.8	1		5.9	1		6.4	1		83	10					41	5		40	5		38	5		77	5	
Ag																														
Al																														
As																														
Be																														
Ba																														
Cd																														
Cm (Total)																			0.071	0.0019		0.081	0.01		0.052	0.01		0.27	0.019	
Co																														
Cr																														
Cu																														
Fe																														
Hg																			0.00006	0.000100	U	0.00006	0.00006	U	0.00009	0.00006	B	0.00009	0.00006	B
K																														
Mg																														
Mn																														
Na																														
Ni																														
Pb																														
Sb																														
Se																														
Tl																														
V																														
Zn																														

Abbreviation:

MDL	Minimum Detectable Level or Concentration
Qual	Qualifiers or Flag
U	Not detected at or above the client requested detection level
B	Below reporting limit but above the Detection Limit

Table 4. Total TOC and Heavy Metal Concentrations (mg/kg) in Stormwater during 2013 (continued)

CLIENT_SAMPLE_ID	E110			Peralta Canyon			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman		
Date/Time	8/22/13 12:20			8/24/13 13:15			8/21/13 18:42			8/21/13 19:27			8/21/13 20:25		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	410	10		470	15		130	10		77	10		87	10	
Carbonate Alkalinity	10	10	U	10	10	U	10	10	U	10	10	U	10	10	U
TOTAL ALKALINITY AS CaCO3	410	10		470	10		130	10		77	10		87	10	
Total Organic Carbon	40	5		40	5		15	1		11	1		8	1	
Ag															
Al															
As															
Ba															
Be															
Ca															
Cd															
CN (total)	0.2	0.08		0.08	0.017		0.04	0.0041		0.02	0.0031		0.019	0.0031	
Co															
Cr															
Cu															
Fe															
Hg	0.00006	0.00006	U	0.00039	0.00006	B	0.00006	0.00006	U	0.00006	0.00006	U	0.00007	0.00006	U
K															
Mg															
Mn															
Na															
Ni															
Pb															
Sb															
Se															
Tl															
V															
Zn															

CLIENT_SAMPLE_ID	Rio Grande @ Buckman			Rio Grande @ Otowi			Rio Grande @ Otowi			Rio Grande @ Otowi			Rio Grande above Frijoles		
Date/Time	8/22/13 16:19			8/21/13 18:31			8/21/13 18:57			8/21/13 19:31			9/13/13 8:53		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	47	10		98	10		56	10		61	10		50	10	U
Carbonate Alkalinity	10	10	U	10	10	U	10	10	U	10	10	U	10	10	U
TOTAL ALKALINITY AS CaCO3	47	10		98	10		56	10		61	10		53?	10	U
Total Organic Carbon	6.2	1		6	1		5.4	1		3.7	1		14?	1	
Ag															
Al															
As															
Ba															
Be															
Ca															
Cd															
CN (total)	0.004	0.004	U	0.003	0.003	U	0.003	0.003	U	0.0031	0.0031	U	0.003	0.003	U
Co															
Cr															
Cu															
Fe															
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U
K															
Mg															
Mn															
Na															
Ni															
Pb															
Sb															
Se															
Tl															
V															
Zn															

Abbreviations
MDL Minimum Detectable Level or Concentration

Qual Qualifier or Flag
U Not detected at or above the client requested detection limit
B Below reporting limit but above the Detection Limit

Table 4. Total Trace and Heavy Metal Concentrations (mg/kg) in Stormwater during 2011 (continued)

CLIENT_SAMPLE_ID	Rio Grande at Otowi			Rio Grande at Otowi			Rio Grande at Otowi		
Date/Time	8/26/11 18:40			8/26/11 20:25			8/26/11 21:00		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	100	10		150	10		130	10	
Carbonate alkalinity	10	10	U	10	10	U	10	10	U
TOTAL ALKALINITY AS CaCO3	100	10		150	10		130	10	
Total Organic Carbon	3.2	1		3.4	1		15	1	
Ag	0.0016	0.0016	U	0.0016	0.0016	U	0.0081	0.0081	U
Al	16	0.031		17	0.031		400	0.16	
As	0.0047	0.0026	B	0.0035	0.0026	B	0.092	0.013	
Ba	0.33	0.0017		0.37	0.0017		7	0.0086	
Be	0.00055	0.00015	B	0.00036	0.00018	B	0.038	0.00088	
Ca	54	0.13		42	0.13		300	0.63	
Cd	0.0008	0.0008	U	0.0008	0.0008	U	0.0042	0.004	B
Cr (total)									
Co	0.0051	0.00044	B	0.0035	0.00088	B	0.16	0.0044	
Cr	0.0073	0.0018	B	0.0072	0.0018	B	0.25	0.009	
Cu	0.011	0.0016		0.0086	0.0016	B	0.32	0.0083	
Fe	11	0.037		8.5	0.037		390	0.18	
Hg	0.00006	0.00006	U	0.00006	0.00006	U	0.00049	0.00006	
K	5.5	0.34		4.6	0.36		61	1.6	
Mg	11	0.12		9.3	0.12		78	0.61	
Mn	0.58	0.0014		0.46	0.0014		17	0.0071	
Na	14	0.40		14	0.40		71	2	
Ni	0.002	0.0015	B	0.0081	0.0015	B	0.31	0.0074	
Pb	0.012	0.0021		0.0089	0.0021		0.63	0.01	
Sb	0.0036	0.0036	U	0.0036	0.0036	U	0.018	0.018	U
Se	0.004	0.0022	B	0.0024	0.0022	B	0.017	0.011	B
Tl	0.0037	0.0037	U	0.0037	0.0037	U	0.019	0.019	U
V	0.023	0.0016		0.019	0.0016		0.46	0.0081	
Zn	0.043	0.0063		0.030	0.0063		1.9	0.01	

CLIENT_SAMPLE_ID	Rio Grande @ Buckman			Rio Grande @ Buckman			E050			E050			E050			E050			E050		
Date/Time	9/4/11 21:54			9/4/11 22:44			9/3/11 16:38			9/3/11 10:28			9/3/11 20:18			9/4/11 20:58			9/4/11 21:48		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	230	10		190	11		29	10		38	10		120	10		110	11		220	11	
Carbonate alkalinity	10	10	U	11	11	U	10	10	U	10	10	U	10	10	U	11	11	U	11	11	U
TOTAL ALKALINITY AS CaCO3	230	10		190	11		30	10		58	10		120	10		110	11		220	11	
Total Organic Carbon	18	2		13	3		5	1		4.2	1		71	5		47	5		35	5	
Cr (total)	0.023	0.003		0.016	0.003		0.003	0.003	U	0.003	0.003	U	0.003	0.003	U	0.028	0.003		0.051	0.003	
Hg	0.0017	0.00006		0.00006	0.00005		0.00006	0.00006	U	0.00006	0.00006	U	0.00006	0.00006	U	0.0020	0.00006		0.0012	0.00006	

Abbreviations

MDL Minimum Detectable Level or Concentration

Qual Qualifiers or Flag

U Not detected at or above the stated/reported detection limit

B Below reporting limit but above the Detection limit

Table 4. Total Trace and Heavy Metal Concentrations (mg/kg) in Stormwater during 2011 (continued)

CLIENT_SAMPLE_ID	E056			E110			Rio Grande at Otowi			Rio Grande at Otowi			Rio Grande at Otowi			Rio Grande above Alameda			Blanco Canyon			E110			Pueblo Canyon			Pueblo Canyon		
Date/Time	9/4/11 13:38			9/1/11 18:33			9/4/11 13:48			9/5/11 9:06			9/5/11 2:05			9/17/11 21:47			9/15/11 17:00			9/7/11 14:22			10/4/11 10:57			10/7/11 10:29		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	220	11		210	10		110	10		140	10		210	10		94	10		320	10		250	10		280	10				
Carbonate alkalinity	11	11	U	10	10	U	10	10	U	10	10	U	10	10	U	10	10	U	10	10	U	10	10	U	10	10	U			
TOTAL ALKALINITY AS CACO3	220	11		230	10		110	10		170	10		210	10		94	10		320	10		250	10		280	10				
Total Organic Carbon	30	5		19	2		5.5	1		5.8	1		19	2		15	1		35	10		17	1		14	1				
Ag																														
Al																														
As																														
Ba																														
Be																														
Ca																														
Cd																														
Cr (Total)	0.019	0.003		0.011	0.003		0.003	0.003	U	0.003	0.003	U	0.011	0.0013		0.0034	0.0034	U	0.071	0.011		0.0031	0.01	U	0.037	0.003		0.0032	0.0017	U
Co																														
Cr																														
Cu																														
Fe																														
Hg	0.0015	0.00006		0.00087	0.00004		0.00013	0.00004		0.00014	0.00004		0.0012	0.00006		0.000071	0.00006	U	0.013	0.0007		0.00031	0.0004		0.00094	0.00006		0.00006	0.00006	B
K																														
Mg																														
Mn																														
Na																														
Ni																														
Pb																														
Sb																														
Se																														
Tl																														
V																														
Zn																														

Abbreviations:
MDL Minimum Detectable Level or concentration

Qual Qualifier or flag
U Not detected at or above the client requested detection limit
B Below reporting limit but above the Detection Limit

Table 4. Total Trace and Heavy Metal Concentrations (mg/kg) in Stormwater during 2011 (continued)

CLIENT_SAMPLE_ID	Morena Canyon			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Buckman			EOS 0			EOS 0			EOS 0		
Date/Time	10/7/11 11:29			9/7/11 14:41			9/7/11 15:31			9/7/11 15:46			9/7/11 19:56			9/7/11 20:11			9/7/11 18:56			10/7/11 18:00			10/7/11 18:56			9/19/11 2:10		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Hydroxide Alkalinity				360	10					130	10		140	10		140	10		130	10										
Carbonate Alkalinity				10	10	U				10	10	U	10	10	U	10	10	U	10	10	U									
TOTAL ALKALINITY AS CACO3				360	10					130	10		150	10		140	10		130	10										
Total Organic Carbon				2.5	1					3	1		6	1		6.3	1		9	1		1.3	1		14	1		7.7	1	
Ag																														
Al																														
As																														
Ba																														
Be																														
Ca																														
Cd																														
Co (Total)	0.0091	0.0093	U	0.0031	0.01	U	0.0092	0.011	U	0.0043	0.01	U	0.005	0.01	U	0.0047	0.011	U	0.0021	0.02	U	0.014	0.0051		0.0051	0.0091	U	0.0036	0.0046	U
Cu																														
Cr																														
Cu																														
Fe																														
Hg	0.000064	0.00006	B	0.00033	0.0003		0.00011	0.0001		0.000023	0.0001	B	0.00007	0.0001		0.00008	0.0001		0.00041	0.0001		0.00042	0.00006		0.00037	0.00006		0.0000389	0.00006	B
K																														
Mg																														
Mn																														
Na																														
Ni																														
Pb																														
Sb																														
Se																														
Tl																														
V																														
Zn																														

Abbreviations

MDL	Method Detectable Level or Concentration
Ques	Question or Flag
U	Not detected at or above the client requested detection limit
B	Below reporting limit but above the Detection Limit

Table 4. Total Trace and Heavy Metal Concentrations (mg/kg) in Stormwater Spring 2013 (continued)

CLIENT_SAMPLE_ID	E050			E059			E060		
Date/Time	9/10/13 3:00			9/7/13 14:30			9/7/13 15:00		
ANALYTE_CODE	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity									
Carbonate Alkalinity									
TOTAL ALKALINITY AS CACO3									
Total Organic Carbon	6.5	1		14	1		17	1	
Ag									
Al									
As									
Ba									
Be									
Ca									
Cd									
Cr (Total)	0.0013	0.0013	J	0.003	0.003	U	0.0024	0.0024	U
Co									
Cr									
Cu									
Fe									
Hg	0.00011	0.000066		0.00018	0.00050		0.000044	[illegible]	B
K									
Mg									
Mn									
Na									
Ni									
Pb									
Sb									
Se									
Tl									
V									
Zn									

Abbreviations

MDL Minimum Detectable Level or Concentration

Qual Qualifiers or Flag

U Not detected at or above the stated reported detection limit

B Below reporting limit but above the Detection Limit

Table 5. Total Radionuclide Concentrations (pCi/g) in Stormwater Suspended Sediments during 2011

pCi/g			SSC	Sr-90				Cs-137				Gross α				Gross β			
Location	Date	Time	RESULT (mg/kg)	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL
E110	7/22/2011		350000	1.0	0.51	0.33		2.5	0.58	0.67	M1,G	8.4	1.2	0.6		13	2.4	1.3	
E110 (DUP)	7/22/2011							2.6	0.61	0.51	M1,G								
Rio Grande @ Buckman	8/3/2011	18:09	9100																
Rio Grande @ Buckman	8/3/2011	18:59	4900																
Rio Grande @ Buckman	8/5/2011	17:54	2100																
Rio Grande @ Buckman	8/5/2011	18:44	2900																
E110	8/5/2011	14:57	250000																
E110 (DUP)	8/5/2011	14:57																	
Rio Grande above Alameda	8/21/2011	4:53	940	0.078	0.12	0.23	U												
Rio Grande above Alameda	8/21/2011	4:53	1600																
Rio Grande @ Otowi	8/21/2011	19:31	16000	0.017	0.11	0.22	U												
Rio Grande @ Otowi	8/21/2011	18:51	21000	0.12	0.11	0.21	U												
Rio Grande @ Otowi	8/21/2011	18:13	47000	0.14	0.11	0.21	U												
Rio Grande @ Buckman	8/21/2011	20:19	26000	0.23	0.13	0.23	U												
Rio Grande @ Buckman	8/21/2011	19:29	43000	0.11	0.12	0.23	U												
Rio Grande @ Buckman	8/21/2011	19:27	46000	0.11	0.12	0.24	U												
Rio Grande @ Buckman	8/21/2011	18:42	32000	0.43	0.18	0.23	LT												
Peralta Canyon	8/24/2011	17:15	160000	0.15	0.16	0.26	LT												
E110	8/22/2011	17:20	120000																
E110 (DUP)	8/22/2011	17:20		0.58	0.2	0.27													
E110	8/22/2011	16:10	280000	0.59	0.21	0.29													
E110 (DUP)	8/22/2011	16:10																	
E050	8/22/2011	17:47	66000	0.59	0.2	0.26													
E050	8/22/2011	16:57	96000	0.5	0.19	0.26	LT												
E050	8/22/2011	16:08	85000	0.62	0.23	0.28													
E050	8/19/2011	20:29	760																
E050	8/19/2011	19:39	880																
E050	8/19/2011	18:49	1280																
Rio Grande @ Buckman	9/4/2011	21:54	46000	0.52	0.21	0.31													
Rio Grande @ Buckman	9/4/2011	22:44	22000	0.38	0.18	0.31	LT												
E050	9/1/2011	18:18	220																
E050	9/1/2011	19:28	110																
E050	9/1/2011	20:18	110																
E050	9/4/2011	20:58	140000	0.45	0.19	0.31	LT												
E050	9/4/2011	21:48	93000	0.44	0.2	0.33	LT												
E050	9/4/2011	22:38	33000	0.47	0.2	0.27													
E110	9/3/2011	18:13	70000	0.056	0.14	0.32	U												
Rio Grande @ Otowi	9/3/2011	23:48	5700	0.028	0.16	0.33	U												
Rio Grande @ Otowi	9/5/2011	6:08	5300	0.46	0.2	0.31	LT												
Rio Grande @ Otowi	9/5/2011	7:08	41000	0.6	0.28	0.37													
Rio Grande above Alameda	8/17/2011	21:47	410																
E050	8/28/2011	2:53	110																
E050	8/28/2011	3:03	220																
E050	8/28/2011	4:43	110																
E110	8/28/2011	20:41		0.56	0.23	0.36		1.8	0.26	0.33	C								
E110 (DUP)	8/28/2011	20:41						2	0.41	0.26	C								
Rio Grande @ Buckman	8/26/2011	20:14	1900																
Rio Grande @ Buckman	8/26/2011	21:04	1100																
Rio Grande @ Buckman	8/29/2011	4:23	13000	0.16	0.17	0.36	U												
Rio Grande @ Buckman	8/29/2011	5:36	11000	0.46	0.2	0.32	LT												
Rio Grande @ Buckman	8/29/2011	5:51	8500	0.29	0.18	0.35	U												
Rio Grande @ Buckman	8/29/2011	6:36	14000	0.15	0.18	0.32	LT												
Rio Grande @ Otowi	8/26/2011	19:40	850																
Rio Grande @ Otowi	8/26/2011	20:20	530																
Rio Grande @ Otowi	8/26/2011	21:00	21000	0.55	0.23	0.31													
E110	9/7/2011	14:37	120000	0.528	0.16	0.34	U					4.9	1.4	0.73		6.7	1.3	1	
Peralta Canyon	10/8/2011	19:57	80000	0.0025	0.14	0.29	U					6.8	1.9	0.96		8.3	1.8	1.4	
Rio Grande @ Buckman	9/7/2011	14:47	20000	0.611	0.32	0.85	U					7.3	1.7	0.76		7	1.9	1.3	
Rio Grande @ Buckman	9/7/2011	14:41	17500																
Rio Grande @ Buckman	9/7/2011	15:11	5200	0.048	0.16	0.34	U												
Rio Grande @ Buckman	9/7/2011	15:26	3500	0.18	0.13	0.25	U												
Rio Grande @ Buckman	9/7/2011	17:56	15500	0.36	0.25	0.48	U					7.8	2.1	0.98		8.8	1.9	1.5	
Rio Grande @ Buckman	9/7/2011	16:11	18500	0.52	0.24	0.46	Y2,U					9.6	2.5	1.1		10	2.2	1.6	M3
Rio Grande @ Buckman	9/7/2011	16:56	7900	0.057	0.2	0.43	U												
E050	10/7/2011	18:06	6300	0.65	0.24	0.32													
E050 (DUP)	10/7/2011	18:06	4700	2.2	0.57	0.32	D												
E050	9/10/2011	2:30	500	1.1	0.45	0.65	Y2,M3												
E050	9/7/2011	14:10	2800	0.46	0.24	0.42	Y2,T												

Abbreviations

CS	Customer Sample
DUP	Duplicate
MDA	Minimum Detectable Activity or Concentration
Uncert	Uncertainty - Total Propagated Uncertainty at 95% confidence (2 x sigma)
Qual	Qualifiers or Flag
M	The requested MDC was not met
M3	The requested MDC was not met, but the reported activity is greater than the reported MDC
U	Result is less than the sample specific MDC
LT	Result is less than the requested MDC, greater than the sample specific MDC
C	Sample density differs more than 15% of Laboratory Control Sample density
W	Duplicate Error Ratio is greater than Warning Limit of 1.42
Y2	Chemical Yield outside default limits

Table 5. Total Radionuclide Concentrations (pCi/g) in Stormwater Suspended Sediments during 2011 (continued)

pCi/g			Pu-238				Pu-239/240				Am-241				U-234				U-235				U-238			
Location	Date	Time	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL	RESULT	UNCERT	MDA	QUAL
E110	7/22/2011		0.0051	0.0095	0.007	U	0.21	0.058	0.012						1.5	0.27	0.02		0.071	0.031	0.015	LT	1.3	0.26	0.022	
E110 (Dup)	7/22/2011		0	0.008	0.0059	U	0.15	0.045	0.012						1.4	0.25	0.016		0.065	0.028	0.0078	LT	1.5	0.27	0.018	
Rio Grande @ Buckman	8/3/2011	18:29	0.0089	0.0086	0.012	U	0.23	0.052	0.0041		0.074	0.028	0.012		1.7	0.3	0.0081		0.094	0.04	0.0095	LT	1.7	0.31	0.0089	
Rio Grande @ Buckman	8/4/2011	18:59	0.0089	0.0074	0.0093	U	0.21	0.049	0.0039		0.077	0.024	0.0049		2	0.33	0.021		0.095	0.036	0.0092	LT	1.8	0.34	0.024	
Rio Grande @ Buckman	8/5/2011	17:54	0.015	0.011	0.018	LT	0.26	0.061	0.01		0.059	0.02	0.008		1.6	0.31	0.016		0.067	0.038	0.03	LT	1.5	0.3	0.025	
Rio Grande @ Buckman	8/5/2011	18:06	0.018	0.012	0.015	LT	0.29	0.061	0.012		0.079	0.027	0.013		1.9	0.29	0.028		0.079	0.038	0.011	LT	1.9	0.31	0.026	
E110	8/5/2011	14:57	0.021	0.012	0.0083	LT	0.2	0.047	0.0043		0.07	0.023	0.0091		1.4	0.28	0.033		0.1	0.045	0.011		1.5	0.29	0.03	
E110 (DUP)	8/5/2011	14:57	0.017	0.011	0.013	LT	0.18	0.042	0.013		0.07	0.025	0.008		1.4	0.35	0.033		0.051	0.023	0.023	LT,W	1.6	0.33	0.034	
Rio Grande above Alameda	8/21/2011	9:51	0.0067	0.0043	0.0032	LT	0.075	0.023	0.013																	
Rio Grande above Alameda	8/21/2011	9:51	0.0067	0.011	0.022	U	0.03	0.021	0.035																	
Rio Grande @ Otowi	8/21/2011	19:41	0.0017	0.0068	0.011	U	0.0051	0.0084	0.013	U,																
Rio Grande @ Otowi	8/21/2011	18:51	0.0015	0.0077	0.004	U	0.0058	0.0072	0.004	LT																
Rio Grande @ Otowi	8/21/2011	18:11	0.0017	0.0059	0.013	U	0.0028	0.0056	0.0089	U																
Rio Grande @ Buckman	8/21/2011	20:19	0.0014	0.0038	0.0049	LT	0.042	0.016	0.0089																	
Rio Grande @ Buckman	8/21/2011	19:29	0.002	0.0046	0.0054	U	0.018	0.017	0.0054	T																
Rio Grande @ Buckman	8/21/2011	18:27	0.0025	0.0056	0.012	U	0.032	0.013	0.013																	
Rio Grande @ Buckman	8/21/2011	18:42	0.0022	0.0065	0.015	U	0.078	0.022	0.013																	
Peralta Canyon	8/24/2011	17:15	0.0025	0.0055	0.01	U	0.049	0.017	0.0089																	
E110	8/22/2011	17:25	0.0054	0.0067	0.01	U	0.33	0.064	0.026																	
E110 (DUP)	8/22/2011	17:25	0.0077	0.0059	0.023	LT	0.24	0.049	0.012																	
E110	8/22/2011	16:53	0.006	0.0065	0.0136	LT	0.8	0.079	0.016																	
E110 (DUP)	8/22/2011	16:30	0.0012	0.0064	0.013	U	0.81	0.03	0.016																	
E050	8/22/2011	17:47	0.018	0.015	0.019	U	0.85	0.125	0.028																	
E050	8/22/2011	16:57	0.0023	0.011	0.0062	U	0.083	0.043	0.017																	
E050	8/22/2011	16:08	0.01	0.014	0.023	U	0.23	0.057	0.027																	
E050	8/19/2011	20:29	0.18	0.064	0.049		2.5	0.42	0.011																	
E050	8/19/2011	19:39	0.15	0.05	0.041		1.7	0.3	0.0077																	
E050	8/19/2011	18:59	0.15	0.04	0.019		1.3	0.23	0.025																	
Rio Grande @ Buckman	9/4/2011	23:54	0.002	0.005	0.012	U	0.096	0.025	0.012																	
Rio Grande @ Buckman	9/4/2011	22:44	0.00038	0.0045	0.0067	U	0.083	0.021	0.0025																	
E050	9/1/2011	18:38	0	0.055	0.23	U, M	0.2	0.11	0.12	M3																
E050	9/1/2011	18:28	0.023	0.13	0.21	U, M	0.14	0.14	0.21	U, M																
E050	9/1/2011	20:18	0.024	0.56	0.11	U, M	0.24	0.12	0.09	M3																
E050	9/4/2011	20:58	0.0057	0.0046	0.0026	LT	0.1	0.026	0.0086																	
E050	9/4/2011	23:48	0.012	0.0071	0.0027	LT	0.32	0.058	0.011																	
E050	9/4/2011	22:38	0.0058	0.0046	0.0026	LT	0.19	0.025	0.0071																	
E110	9/13/2011	18:33	0.00099	0.0049	0.0075	U	0.045	0.016	0.0092																	
Rio Grande @ Otowi	9/4/2011	21:48	0.0018	0.0047	0.007	U	0.031	0.013	0.01																	
Rio Grande @ Otowi	9/5/2011	9:08	0.00091	0.0044	0.0084	U	0.031	0.012	0.0092																	
Rio Grande @ Otowi	9/5/2011	1:08	0.0043	0.0054	0.0029	LT	0.068	0.02	0.0078																	
Rio Grande above Alameda	8/17/2011	21:47	0.0032	0.016	0.0086	U	0.028	0.025	0.044	U, M																
E050	8/28/2011	2:55	0.038	0.15	0.23	U, M	0.33	0.25	0.22	M3																
E050	8/28/2011	1:45	0.015	0.16	0.089	U, M	0.23	0.28	0.3	M3																
E050	8/28/2011	4:35	0	0.014	0.0075	U	0.25	0.078	0.05																	
E110	8/28/2011	20:41	0.011	0.0081	0.0096	LT	0.087	0.026	0.011		0.025	0.013	0.0097	LT												
E110 (DUP)	8/28/2011	20:41																								
Rio Grande @ Buckman	8/26/2011	20:43	0.0012	0.0057	0.014	U	0.068	0.021	0.014																	
Rio Grande @ Buckman	8/26/2011	21:58	-0.0019	0.0057	0.014	U	0.081	0.028	0.017																	
Rio Grande @ Buckman	8/29/2011	9:21	0.0045	0.0049	0.0068	U	0.051	0.016	0.0065																	
Rio Grande @ Buckman	8/29/2011	8:06	0.002	0.005	0.0094	U	0.021	0.021	0.0094																	
Rio Grande @ Buckman	8/29/2011	9:51	0.0048	0.0059	0.0068	U	0.054	0.019	0.013																	
Rio Grande @ Buckman	8/29/2011	8:36	0.0029	0.0049	0.0026	LT	0.054	0.017	0.0071																	
Rio Grande @ Otowi	8/26/2011	18:49	0.0024	0.013	0.027	U	0.049	0.019	0.028	U																
Rio Grande @ Otowi	8/26/2011	23:29	0	0.013	0.027	U	0.044	0.028	0.027																	
Rio Grande @ Otowi	8/26/2011	21:09	0.00055	0.0048	0.0092	U	0.063	0.023	0.0097																	
E110	9/7/2011	14:27	0.0049	0.0053	0.0079	U	0.088	0.017	0.012						1.5	0.28	0.04		0.043	0.029	0.016	LT	1.4	0.27	0.024	
Peralta Canyon	10/4/2011	19:57	0.0065	0.0059	0.01	U	0.083	0.015	0.0079						1.3	0.25	0.027		0.054	0.032	0.029	LT	1.1	0.22	0.035	
Rio Grande @ Buckman	9/7/2011	14:41	0.0044	0.0054	0.0081	U	0.02	0.013	0.012	LT					0.84	0.17	0.022		0.025	0.02	0.021	LT	0.91	0.18	0.015	
Rio Grande @ Buckman	9/7/2011	14:43																								
Rio Grande @ Buckman	9/7/2011	15:11	0.0015	0.0074	0.011	U	0.03	0.014	0.0081						1	0.2	0.021		0.055	0.033	0.027	LT	0.98	0.19	0.019	
Rio Grande @ Buckman	9/7/2011	15:26	0.0025	0.006	0.0033	LT	0.024	0.012	0.0089	LT					1	0.2	0.028		0.048	0.027	0.018	LT	0.95	0.18	0.028	
Rio Grande @ Buckman	9/7/2011	15:56	0.0036	0.0071	0.0081	LT	0.029	0.026	0.018						1.1	0.26	0.029		0.052	0.029	0.02	LT	1.3	0.27	0.023	
Rio Grande @ Buckman	9/7/2011	16:31	0.0091	0.0088	0.017	U	0.13	0.031	0.012						1.1	0.26	0.022		0.064	0.041	0.0091	LT	1.4	0.26	0.018	
Rio Grande @ Buckman	9/7/2011	16:56	0	0.0086	0.017	U	0.08	0.023	0.013						1.2	0.32	0.028		0.08	0.043	0.041	LT	1.5	0.29	0.03	
E050	10/2/2011	18:06	0.0095	0.0085	0.0029	LT	0.15	0.015	0.011						1.2	0.31	0.03		0.087	0.048	0.0093	LT	1.6	0.3	0.022	
E050 (DUP)	10/2/2011	18:06	0.0016	0.0078	0.012	U	0.15	0.04	0.017						1.4	0.26	0.027		0.082	0.035	0.017	LT	1.6	0.29	0.027	
E050	9/18/2011	8:10	0.038	0.017	0.012	LT	0.37	0.11	0.0043						2	0.39	0.045		0.13	0.058	0.032		1.9	0.37	0.048	
E050	9/7/2011	14:10	0	0.0071	0.015	U	0.15	0.038	0.0041						2.3	0.42	0.032		0.13	0.056	0.026		2.2	0.43	0.03	

Abbreviations

CS	Customer Sample
DUP	Duplicate
MDA	Minimum Detectable Activity or Concentration
Uncert	Uncertainty - Total Propagated Uncertainty at 95% confidence (2 x sigma)

Qual	Qualifiers or Flag
M	The requested MDC was not met.
M3	The requested MDC was not met, but the reported activity is greater than the reported MDC
U	Result is less than the sample specific MDC
LT	Result is less than the requested MDC, greater than the sample specific MDC
G	Sample density differs more than 15% of Laboratory Control Sample density
W	Duplicate Error Ratio is greater than Warning Limit of 1.42
Y2	Chemical Yield outside default limits

Table 5. Total Trace and Heavy Concentrations (mg/kg) in Stormwater Suspended Sediments during 2011

Location	E110			Rio Grande @ Buckman			Rio Grande @ Buckman			E110		
Date / time	2/22/2011			8/3/2011 16:09			8/3/2011 18:50			8/5/2011 14:42		
ANALYTE (all units mg/kg)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	3200	50								950	50	
Carbonate alkalinity	50	50	U							50	50	U
TOTAL ALKALINITY AS CaCO3	3200	50								950	50	
TOC	98000	11000		47000	11000		52000	9600		41000	8000	
[illegible]												
Ag	0.19	0.19	U	0.19	0.19	U	0.2	0.2	U	0.2	0.2	U
Al	15000	8.8		12000	3.6		13000	3.7		11000	3.3	
As	3.4	0.22		3.7	0.23		4	0.23		2.2	0.22	
Ba	530	0.08		490	0.081		420	0.082		370	0.083	
Be	1.4	0.017		1.8	0.017		1.6	0.017		1.5	0.017	
Ca	26000	13		17000	13		15000	13		21000	13	
Cd	0.40	0.06	B	0.56	0.062		0.6	0.062		0.42	0.061	B
CN(TOTAL)	4	3.5		1.5	0.35					3.5	0.15	
Co	7.3	0.087		6.3	0.088		5.3	0.084		6.1	0.088	
Cr	9	0.36		8.8	0.16		10	0.17		8.4	0.17	
Cu	25	0.35		18	0.16		19	0.16		16	0.16	
Fe	15000	3.1		14000	3.3		16000	3.1		12000	3.1	
Hg	0.044	0.0032		0.032	0.0032	B	0.041	0.0032		0.021	0.0037	B
K	3700	35		2600	35		2700	36		2000	35	
Mg	5700	13		2020	13		2800	13		2700	13	
Mn	1600	1		2100	1		2300	1		2100	1	
Na	170	28		230	29		250	29		150	29	
Ni	13	0.15		9.6	0.15		9.3	0.15		12	0.15	
Pb	29	0.13		35	0.13		42	0.13		31	0.13	
Sb	0.3	0.3	U	0.3	0.3	U	0.32	0.3	B	0.35	0.3	B
Se	1	0.28		1.1	0.29		0.97	0.29		0.76	0.28	
Tl	3.2	3.2	U	3.3	3.3	U	3.3	3.3	U	3.2	3.2	U
V	17	0.1		16	0.1		17	0.1		19	0.1	
Zn	85	0.25		97	0.25		110	0.25		73	0.25	

Location	E050			E050			E050		
Date / time	8/22/2011 15:08			8/22/2011 16:47			8/22/2011 17:47		
ANALYTE (all units mg/kg)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	580			380			570		
Carbonate alkalinity	50		U	50		U	50		U
TOTAL ALKALINITY AS CaCO3	580			380			570		
TOC	48000			41000			47000		
[illegible]									
Ag	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U
Al	17000	3.8	*	14000	3.8		18000	3.5	
As	3.6	0.23		3	0.23		3.9	0.22	
Ba	370	0.083	N	300	0.081		400	0.079	
Be	2	0.017		1.5	0.017		2	0.016	
Ca	14000	13	N	10000	13		16000	12	
Cd	0.31	0.061		0.33	0.061	B	0.40	0.059	
CN(TOTAL)	1.7	0.15		1.3	0.15		1.6	0.15	
Co	6.8	0.088		5.5	0.088		6.9	0.085	
Cr	11	0.16		8.8	0.16		15	0.15	
Cu	21	0.16	*	13	0.16		21	0.15	
Fe	14000	3.1		13000	3.1		18000	3	
Hg	0.049	0.0037		0.042	0.0032		0.045	0.0032	
K	3300	35	E	2300	35		3500	34	
Mg	3700	13		3100	13		3700	13	
Mn	1000	0.52		1300	0.51		1600	0.49	
Na	190	29		140	29		180	28	
Ni	14	0.15		11	0.15		13	0.15	
Pb	38	0.13	N,*	28	0.13		35	0.13	
Sb	0.3	0.3	U,N	0.3	0.3	U	0.29	0.29	U
Se	0.77	0.28		0.82	0.28		0.49	0.27	
Tl	3.2	1.6	U	3.2	1.6	U	1.6	1.6	U
V	30	0.1		26	0.1		19	0.095	
Zn	100	0.26	N	83	0.26		150	0.24	

Location	E110			E110 (DUP)			E110		
Date / time	8/23/2011 16:30			8/22/2011 16:30			8/24/2011 17:39		
ANALYTE (all units mg/kg)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	380			382			380		
Carbonate alkalinity	50		U	50		U	50		U
TOTAL ALKALINITY AS CaCO3	380			382			380		
TOC	36000						34000		
[illegible]									
Ag	0.19	0.19	U				0.19	0.19	U
Al	11000	3.6					12000	3.5	
As	2.8	0.22					2.8	0.21	
Ba	440	0.08					270	0.081	
Be	0.95	0.017					1.3	0.017	
Ca	19000	13					11000	13	
Cd	0.37	0.06	B				0.32	0.061	B
CN(TOTAL)	3.8	0.15					3.85	0.15	
Co	5.9	0.087					5.4	0.088	
Cr	9.0	0.15					8.5	0.16	
Cu	16	0.15					15	0.16	
Fe	13000	3.1					13000	3.1	
Hg	0.025	0.0032	B				0.034	0.0032	
K	2500	35					2200	35	
Mg	2200	13					2200	13	
Mn	1400	0.5					1200	0.51	
Na	150	28					140	29	
Ni	9	0.15					15	0.15	
Pb	24	0.13					25	0.13	
Sb	0.3	0.3	U				0.3	0.3	U
Se	0.96	0.28	B				0.28	0.28	U
Tl	1.6	1.6	U				1.6	1.6	U
V	10	0.1					16	0.1	
Zn	74	0.25					73	0.25	

Abbreviations
MDL Minimum Detectable Level of Concentration

Qual Qualifiers or Flag
U Not detected at or above the client requested detection limit
B Below reporting limit but above the detection limit

Table 6. Total Trace and Heavy Concentrations (mg/kg) in Stormwater Suspended Sediments during 2011 (continued)

Location	Peralta Canyon			Rio Grande @ Buckman			Rio Grande @ Buckman		
Date / Time	8/24/2011 17:15			8/21/2011 18:42			8/21/2011 19:27		
ANALYTE (all units mg/kg)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	420			240			400		
Carbonate Alkalinity	50		U	50		U	50		U
TOTAL ALKALINITY AS CACO3	420			240			490		
TOC	28000			35000			13000		
TOC (DUP)									
Ag	0.19	0.19	U	0.19	0.19	U	0.10	0.10	U
Al	13000	3.6		14000	3.5		17000	3.6	
As	3	0.23		2.5	0.22		2.8	0.22	
Ba	140	0.081		340	0.079		300	0.08	
Be	0.82	0.017		1.2	0.016		1.2	0.017	
Ca	8000	13		15000	12		28000	13	
Cd	0.19	0.061	B	0.3	0.055	B	0.13	0.06	B
CR(TOTAL)	0.31	0.15		1	0.15		0.15	0.15	U
Co	6.6	0.088		9	0.086		6.7	0.087	
Cr	8	0.16		9.2	0.16		13	0.16	
Cu	17	0.36		17	0.35		15	0.15	
Fe	15000	3.1		16000	3		19000	3.1	
Hg	0.022	0.0032	B	0.025	0.0032	B	0.014	0.0032	B
K	2300	35		2700	34		4500	35	
Mg	3100	13		2700	13		6300	13	
Mn	810	0.1		1200	0.09		620	0.1	
Na	150	29		130	28		230	28	
Ni	9.9	0.15		11	0.15		13	0.15	
Pb	36	0.13		22	0.13		18	0.13	
Sb	0.3	0.3	U	0.35	0.29	U	0.3	0.3	U
Se	0.64	0.28		3.3	0.37		0.32	0.28	B
Tl	0.32	0.32	U	1.1	3.1	B	0.32	0.32	U
V	23	0.3		18	0.099		36	3.1	
Zn	41	0.25		73	0.24		51	0.25	

Location	Rio Grande @ Buckman			Rio Grande @ Buckman			Rio Grande @ Otowi		
Date / Time	8/21/2011 19:29			8/21/2011 20:15			8/21/2011 18:11		
ANALYTE (all units mg/kg)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	500						470		
Carbonate Alkalinity	50		U				50		U
TOTAL ALKALINITY AS CACO3	500						530		
TOC	9500			11000			4700		
TOC (DUP)									
Ag	0.10	0.10	U	0.19	0.19	U	0.2	0.2	U
Al	17000	3.6		14000	3.6		19000	3.7	
As	3	0.22		2.8	0.23		3.1	0.23	
Ba	330	0.079		320	0.082		450	0.082	
Be	1.3	0.016		1.7	0.017		1.1	0.017	
Ca	32000	13		33000	13		42000	13	
Cd	0.13	0.06	B	0.17	0.061	B	0.34	0.062	B
CR(TOTAL)	0.15	0.15	U	0.15	0.15	U	0.15	0.15	U
Co	6.3	0.086		7.2	0.086		8.1	0.089	
Cr	13	0.16		15	0.16		16	0.17	
Cu	14	0.15		16	0.16		16	0.16	
Fe	21000	3		20000	3.1		21000	3.2	
Hg	0.017	0.0032	B	0.022	0.0032	B	0.0073	0.0032	B
K	4500	34		5200	35		5200	36	
Mg	6300	13		7300	13		7500	13	
Mn	540	0.095		580	0.1		430	0.1	
Na	230	28		240	29		210	29	
Ni	13	0.15		14	0.15		16	0.15	
Pb	12	0.13		13	0.13		17	0.87	
Sb	0.29	0.29	U	0.3	0.3	U	0.3	0.3	U
Se	0.26	0.26	U	0.28	0.28	U	1.4	1.4	U
Tl	0.31	0.31	U	0.32	0.32	U	5.2	1.6	
V	27	0.1		29	0.1		38	0.52	
Zn	47	0.26		52	0.25		47	0.25	

Location	Rio Grande @ Otowi			Rio Grande @ Otowi			Rio Grande @ Buckman			Rio Grande @ Buckman		
Date / Time	8/21/2011 18:51			8/21/2011 19:35			9/4/2011 21:54			9/4/2011 22:44		
ANALYTE (all units mg/kg)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity							600	50		530	50	
Carbonate Alkalinity							50	50	U	50	50	U
TOTAL ALKALINITY AS CACO3							600	50		530	50	
TOC	3500			4100			16000	10000		30000	5000	
TOC (DUP)												
Ag	0.19	0.19	U	0.2	0.2	U	0.2	0.2	U	0.2	0.2	U
Al	20000	3.5		17000	3.7		10000	3.7		17000	3.6	
As	3.3	0.22		3.6	0.23		2.8	0.23		4.9	0.23	
Ba	370	0.079		340	0.082		270	0.082		250	0.082	
Be	1.2	0.016		1	0.017		1.5	0.017		1.6	0.017	
Ca	40000	12		37000	13		9700	13		9000	13	
Cd	0.096	0.059	B	0.097	0.062	B	0.29	0.062	B	0.3	0.062	B
CR(TOTAL)	0.15	0.15	U	0.15	0.15	U	3.8	0.15		1.2	0.15	
Co	7.7	0.085		7.7	0.089		5.5	0.089		5.8	0.089	
Cr	15	0.16		15	0.17		8.1	0.17		9.4	0.17	
Cu	15	0.15		15	0.16		19	0.16		14	0.16	
Fe	20000	3		19000	3.1		14000	3.2		14000	3.1	
Hg	0.017	0.0032	B	0.011	0.0032	B	0.032	0.0032	B	0.035	0.0031	
K	5600	34		5300	36		2100	36		1900	35	
Mg	8000	13		7500	13		2100	13		2500	13	
Mn	450	0.095		430	0.1		1100	0.51		1100	0.51	
Na	200	28		250	29		180	29		150	29	
Ni	15	0.15		14	0.15		5.9	0.15		9.8	0.15	
Pb	12	0.84		10	0.13		24	0.13		26	0.13	
Sb	0.29	0.29	U	0.3	0.3	U	0.3	0.3	U	0.3	0.3	U
Se	1.4	1.4	U	0.29	0.29	U	0.89	0.29		0.91	0.28	
Tl	5.2	1.2		2.33	0.44	U	1.6	1.6	U	1.6	1.6	U
V	38	0.47		27	0.1		13	0.3		17	0.3	
Zn	49	0.24		44	0.25		37	0.25		77	0.25	

Abbreviations

MDL — Minimum Detectable Level or Detection Limit

Qual — Qualifiers or Flag

U — Not detected at or above the client requested detection limit

B — Below reporting limit but above the Detection Limit

Table 6. Total Trace and Heavy Concentrations (mg/kg) in Stormwater Suspended Sediments during 2011 (continued)

Location	E050			E050			E050			E110			Rio Grande @ Otowi			Rio Grande @ Otowi			Rio Grande @ Otowi			E110			Rio Grande @ Buckman			Rio Grande @ Buckman		
Date / Time	9/4/2011 20:58			9/4/2011 21:48			9/4/2011 22:38			9/1/2011 18:33			9/4/2011 21:48			9/5/2011 0:08			9/5/2022 1:08			8/28/2011 20:41			8/29/2011 4:21			8/29/2011 5:06		
ANALYTE (all units mg/kg)	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL	RESULT	MDL	QUAL
Bicarbonate Alkalinity	770	50		670	50		610	50		490	50								540	50					400	50				
Carbonate alkalinity	50	50	U	50	50	U	50	50	U	50	50	U							50	50	U				50	50	U			
TOTAL ALKALINITY AS CACO3	720	50		670	50		610	50		490	50								540	50					400	50				
TOC	37000	8300		30000	9600		28000	8100		13000	3200		17000	8300		25000	10000		38000	13000		29000	6100		22000	9600		25000	10000	
TOC (DUP)																						29400	7810		20300	9620				
Ag	0.2	0.2	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.2	0.2	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U
Al	9600	3.7		11300	3.6		10900	3.6		3600	3.6		5700	3.6		10300	3.6		11000	3.6		8600	3.6		14000	3.6		10600	3.6	
As	2.4	0.23		2.9	0.22		3.6	0.22		2	0.23		1.9	0.23		2.6	0.22		2.9	0.22		2.7	0.22		3.5	0.22		2.5	0.22	
Ba	220	0.082		260	0.08		300	0.081		210	0.081		200	0.084		430	0.081		260	0.081		280	0.08		280	0.08		260	0.079	
Be	1.5	0.017		1.9	0.016		2.5	0.017		0.92	0.017		0.91	0.017		2.1	0.017		1.7	0.017		1	0.017		1.4	0.016		0.96	0.016	
Ca	8100	33		8800	13		9700	13		12000	13		11000	13		11000	13		9000	13		12000	13		25000	13		16000	13	
Cd	0.28	0.061	B	0.4	0.06	B	0.41	0.061	B	0.14	0.061	B	0.19	0.061	B	0.24	0.061	B	0.25	0.061	B	0.27	0.06	B	0.25	0.06	B	0.2	0.06	B
CN(TOTAL)	2.6	0.15		1.6	0.15		1.7	0.15		0.15	0.15	U							1.1	0.15										
Co	5.1	0.089		5.7	0.086		6	0.087		5.4	0.088		5.1	0.088		5.8	0.087		6.4	0.087		4.7	0.087		7.1	0.086		6	0.086	
Cr	7.3	0.17		9.8	0.16		9.1	0.16		7.7	0.16		6	0.17		8.8	0.16		9.3	0.16		6.2	0.16		12	0.16		9.8	0.16	
Cu	12	0.16		14	0.15		17	0.15		12	0.16		10	0.16		12	0.16		15	0.15		13	0.16		16	0.15		13	0.15	
Fe	14000	3.1		15000	3		17000	3.1		14000	3.1		12000	3.1		13000	3.1		15000	3.1		12000	3.1		18000	3		14000	3	
Hg	0.038	0.0032		0.04	0.0032		0.041	0.0032		0.015	0.0042	B	0.017	0.0042	B	0.021	0.0042	B	0.029	0.0031	B	0.016	0.0031	B	0.018	0.0032	B	0.02	0.0042	B
K	1700	35		2000	34		2200	35		2300	35		1700	35		2100	35		2000	35		2100	35	E	3200	34		2700	34	
Mg	1700	13		2000	13		2200	13		3500	13		2400	13		4500	13		2300	13		1800	13		4800	13		3200	13	
Mn	1100	0.61		1100	0.6		1400	0.61		430	0.1		640	0.1		750	0.1		870	0.1		1400	0.6		1100	0.6		870	0.099	
Na	130	29		170	28		200	29		160	29		180	29		1100	28		210	29		180	28		240	28		200	28	
Ni	9.6	0.15		11	0.15		12	0.15		10	0.15		8.1	0.15		9.8	0.15		11	0.15		7.7	0.15		14	0.15		11	0.15	
Pb	14	0.13		19	0.13		24	0.13		13	0.14		15	0.13		18	0.13		21	0.13		21	0.13		21	0.14		17	0.13	
Sb	0.3	0.3	U	0.29	0.29	U	0.31	0.3	B	0.3	0.3	U	0.3	0.3	U	0.3	0.3	U	0.3	0.3	U	0.29	0.29	U	0.29	0.29	U	0.29	0.29	U
Se	0.69	0.28		0.56	0.28		0.64	0.28		0.41	0.28	B	0.28	0.28	U	0.28	0.28	U	0.55	0.28		0.71	0.28		0.68	0.28		0.34	0.28	B
Tl	3	1.6	B	3	1.6	B	4	1.6	B	0.32	0.32	U	0.32	0.32	U	0.32	0.32	U	0.32	0.32	U	2.6	1.6	B	2.6	1.6	B	0.31	0.31	U
V	15	0.1		16	0.1		17	0.1		14	0.1		17	0.1		18	0.1		15	0.1		14	0.1		24	0.1		19	0.099	
Zn	66	0.25		78	0.24		90	0.25		55	0.25		43	0.25		140	0.25		55	0.25		60	0.25		65	0.24		53	0.24	

Abbreviations

MDL — Minimum Detectable Level or Concentration

Qual — Qualifiers or Flag

U — Not detected at or above the client-requested detection limit

B — Below reporting limit but above the Detection Limit

Table [illegible]. [illegible] Concentrations [illegible] in Stormwater [illegible] Sediment during 2011 [illegible]

Location / Date-Time / Analyte	Rio Grande @ Buckman 8/25/2011	Rio Grande @ Buckman 8/25/2011	Rio Grande @ Otowi [illegible]	[illegible]	Pueblo Canyon [illegible]	Rio Grande @ Buckman [illegible]	Rio Grande @ Buckman [illegible]	Rio Grande @ Buckman [illegible]	Rio Grande @ Buckman [illegible]	Rio Grande @ Buckman [illegible]	Rio Grande @ Buckman [illegible]
ANALYTE	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL	RESULT / MDL / QUAL
[illegible] Alkalinity	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Carbonate Alkalinity	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL ALKALINITY AS CaCO3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
TOC	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	
TOC [illegible]											
Ag	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Al	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
As	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ba	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Be	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ca	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cd	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Chromium				[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Co	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cr	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cu	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fe	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
K	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mg	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mn	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Na	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ni	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pb	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sb	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Se	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
Tl	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
V	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					
Zn	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]					

Abbreviations

MDL Minimum Detectable Level [illegible]

QUAL Qualifier Flag

U Not detected at or above the [illegible]

J [illegible]

Table 7. Radionuclides in Ash Fadon Sediments and Black Water Irrigated Soils

Location	Date	Gross Alpha		Gross Beta		Uranium-234		Uranium-235		Uranium-236		Americium-241			Pu-239/240			Plutonium-238			Strontium-90			Cesium-137			Th-228			Th-230			Th-232		
		Result	Unc.	Result	Unc.	Result	Unc.	Result	Unc.	Result	Unc.	Result	Unc.		Result	Unc.		Result	Unc.		Result	Unc.		Result	Unc.		Result	Unc.		Result	Unc.		Result	Unc.	
																											pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g	
Farm Field																																			
Lower Pecos Field-1	4-Jan-12	3.3	0.87	5.1	1.2	0.79	0.13	0.046	0.045	0.03	0.13	0.000077	0.013	U	0.0028	0.011	LT	0.0026	0.0057	U	2	0.53		0.962	0.018	G	1.1	0.2	M3	0.88	0.16		0.95	0.17	
Upper Pecos Field-2	4-Jan-12	2.6	0.72	2.9	0.87	0.7	0.12	0.04	0.014	0.24	0.12	-0.0016	0.015	U	0.019	0.018	LT	0.07	0.017	U	0.1	0.12	U	0.052	0.037	G	0.46	0.15		0.79	0.14		0.83	0.14	
Upper Pecos Field-2 DUP	4-Jan-12	2.8	0.84	4.1	1	0.72	0.12	0.048	0.046	0.67	0.13	0.004	0.015	U	0.0083	0.015	U	0.0073	0.0066	LT	0.077	0.12	U	0.025	0.035	U,G									
Top of Lower Field @ Site	15-Dec-11	4.2	1.2	4.8	1.2	0.85	0.15	0.039	0.027	0.83	0.15	0.0083	0.01	LT	0.0075	0.011	U	0.0086	0.0087	LT	3.2	0.75		0.061	0.015	G	1.1	0.16	M3	0.84	0.15		0.94	0.16	
Salina Field composite	16-Feb-12	6.4	1.5	7.3	1.5	0.94	0.16	0.042	0.035	0.97	0.15	0.0079	0.016	U	0.3	0.028		0.0053	0.0057	LT	0.18	0.13	U	0.39	0.053	G	1.2	0.21		1.2	0.21		1.2	0.2	
Top of Upper Field @ Site	15-Dec-11	2.7	0.72	3.2	0.9	0.77	0.14	0.036	0.018	0.75	0.13	0.015	0.013	LT	0.036	0.018		0.0016	0.008	U	0.2	0.13	U	0.048	0.014	LT,G	0.95	0.17	M3	0.73	0.13		0.84	0.15	
Bottom of Upper Field @ Site	15-Dec-11	8	1.1	4.1	0.91	0.75	0.13	0.038	0.037	0.78	0.14	0.023	0.015	LT	0.06	0.024		0.0042	0.0079	U	0.24	0.15	U	0.085	0.021	G	0.92	0.16		0.88	0.15		0.88	0.15	
Bottom of Upper Field @ Site DUP	15-Dec-11																							0.088	0.019	G									
Bottom of Lower Field @ Site	15-Dec-11	3.7	0.93	3.8	0.87	0.64	0.14	0.034	0.015	0.83	0.14	0.022	0.015	LT	0.028	0.017	LT	0.0076	0.0089	U	0.074	0.12	U	0.085	0.018	G	0.93	0.17		0.83	0.15		0.84	0.16	
Bottom of Lower Field @ Site DUP	16-Dec-11					0.59	0.14	0.031	0.016	0.85	0.15	0.011	0.015	U	0.05	0.022		-0.00088	0.0079	U	0.93	0.26	G				0.91	0.16	M3	0.79	0.14		0.81	0.15	
Muck																																			
Peralta Rs North	24-Jan-12	3.1	2.2	14	3.4	1.8	0.26	0.074	0.022	1.5	0.24	0.046	0.043		0.18	0.043		0.013	0.0083	LT	0.89	0.29		4.4	0.52	G	1.4	0.24	M3	1.3	0.23		1.3	0.22	
Peralta RS South	24-Jan-12	3.2	0.87	6.3	1.3	0.93	0.16	0.033	0.015	0.86	0.15	0.012	0.02	U	0.026	0.014	LT	0.0065	0.007	LT	0.79	0.16	U	1.3	0.13	G	0.9	0.16	M3	0.88	0.16		0.82	0.15	
Peralta Berm 1	24-Jan-12	6.5	1.4	10	1.9	1.5	0.25	0.073	0.022	1.3	0.23	0.036	0.027	U	0.078	0.024		0.003	0.0056	U	0.47	0.16	LT	1.7	0.2		1.4	0.25	M3	1.2	0.2		1.2	0.21	
Peralta Berm 3	24-Jan-12	10	2.1	15	2.6	1.5	0.21	0.077	0.026	1.4	0.24	0.046	0.079	LT	0.13	0.034		0.013	0.0089	LT				2.6	0.33	G	2	0.34	M3	1.7	0.29		1.6	0.3	
Peralta Berm 3 DUP	24-Jan-12																										1.7	0.33	Y2,M3	1.6	0.3	Y2,M3	1.6	0.29	Y2
Peralta Stream Bank	29-Dec-11	3.7	0.79	6	1.1	1	0.16	0.059	0.022	0.95	0.17	0.02	0.015	LT	0.053	0.025		0.0074	0.0068	U	0.25	0.15	U	1.7	0.14	G	1.1	0.2	M3	0.98	0.17		1.1	0.19	
Peralta Stream Bank DUP	29-Dec-11					0.99	0.17	0.044	0.018	0.95	0.16	0.032	0.023	LT	0.053	0.024		0.014	0.013	U	0.14	0.14	U												
Peralte Terrace A	28-Dec-11	6.3	1.3	8.6	1.6	1.2	0.2	0.05	0.019	1.2	0.21	0.041	0.034		0.06	0.026		0.012	0.011	U	1.2	0.34		1.7	0.2	G	1.5	0.25		1.5	0.22		1.4	0.24	
Water Canyon Near Rio Grande	31-Jan-12	7.9	1.6	13	2.3	1.3	0.27	0.053	0.021	1.3	0.21	0.042	0.019	U	0.082	0.026		0.01	0.0083	LT	0.46	0.18	LT	3.6	0.19		1.6	0.27	M3	1.2	0.2		1.5	0.26	
Rio Grande @ Site	15-Dec-11	5.4	1.2	7.7	1.4	1.3	0.21	0.037	0.027	1.2	0.2	0.003	0.011	U	0.051	0.024		0.0014	0.0089	U	0.45	0.19	LT	3.5	0.18	G	1.3	0.22	M3	1.1	0.19		1.2	0.2	
Rio Grande @ Santa Fe River	16-Feb-12	8	1.9	9.6	1.9	2	0.33	0.059	0.029	1.8	0.28	0.032	0.03	Y2,U	0.065	0.025		0.0079	0.0088	U	0.078	0.13	U	1.4	0.17	G	1.9	0.32	M3	1.7	0.28		1.7	0.29	
Nambe 1 East	9-Dec-11	16	3.2	34	7.6	4.5	1.4	0.35	0.078	6.6	1.1	0.047	0.024	LT	0.039	0.029		0.0047	0.0069	U	0.48	0.33	LT	0.6	0.085	M3,G	1.8	0.31	M3	1.5	0.25		1.5	0.25	
Nambe 1 East DUP	9-Dec-11																							0.65	0.093	M3,G									
Nambe 2 West	9-Dec-11	19	3.6	23	4.1	11	1.8	0.45	0.087	5.8	1.4	0.077	0.018	LT	0.058	0.026		0.0069	0.0087	LT	0.39	0.18	LT	1.7	0.21		1.7	0.28		1.9	0.32		1.3	0.21	
High-elevation Soils																																			
Granite Lake	2-Sep-11	17	3.6	31	2.4	3.6	0.58	0.11	0.043	3	0.55	0.031	0.019	LT	0.058	0.023		0.0063	0.008	LT	0.86	0.28		0.76	0.11	M3,G	2.3	0.39	Y2,M3	1.5	0.28	Y2,M3	1.7	0.3	Y2
Granite Lake DUP																											2.3	0.39	M3	1.6	0.27		1.9	0.33	
Nostrich	3-Sep-11	6.8	1.6	6.3	1.3	3.7	0.61	0.13	0.038	3	0.5	0.029	0.016	LT	0.037	0.014	U	0.0013	0.0085	U	0.063	0.14	U	0.2	0.045	M3,G	1	0.19	M3	1.2	0.21		0.86	0.16	

U=Result is less than the sample specific MDC

Y1=Chemical Yield is not within 30 - 110%. Quantitative Yield is assumed.

Y2=Chemical Yield outside default limits.

LT=Result is less than Requested MDC, greater than sample-specific MDC.

M=Requested MDC not met.

B=Analyte concentration greater than MDC

BJ=Analyte concentration greater than MDC but less than Requested MDC

M3=The requested MDC was not met, but the reported activity is greater than the reported MDC.

Table B Gamma Measurements in Ash Lagoon Sediments and Black Water Irrigated Soils

Location	Date	Ac-228 Result	Ac-228 Unc.	Ac-228 Qual	Be-7 Result	Be-7 Unc.	Be-7 Qual	Bi-212 Result	Bi-212 Unc.	Bi-212 Qual	Bi-214 Result	Bi-214 Unc.	Bi-214 Qual	Co-60 Result	Co-60 Unc.	Co-60 Qual	Cs-134 Result	Cs-134 Unc.	Cs-134 Qual	Cs-137 Result	Cs-137 Unc.	Cs-137 Qual
Farm Soils		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g	
Bottom of Lower Field @ Site	15-Dec-11	1.2	0.17	G	0.45	0.18	G	1.5	0.25	G	0.96	0.13	G,I	-0.0051	0.014	U,G	0.002	0.014	U,G	0.065	0.018	G
Bottom of Upper Field @ Site DUP	15-Dec-11	1.3	0.18	G	0.033	0.26	U,S	1.7	0.36	G	0.99	0.13	G,I	0.0054	0.018	U,G	-0.042	0.18	U,G	0.065	0.021	G
Bottom of Upper Field @ Site	15-Dec-11	1.2	0.17	G	0.2	0.17	U,S	1.4	0.26	G	0.75	0.21	G,I	0.007	0.015	U,G	0.026	0.012	G,SI	0.068	0.019	G
Top of Lower Field @ Site	15-Dec-11	1.2	0.16	G	0.43	0.17	G	1.5	0.27	G	0.95	0.12	G,I	-0.0028	0.013	U,G	-0.0053	0.017	U,G	0.061	0.015	G
Top of Upper Field @ Site	15-Dec-11	1.1	0.14	G	0.15	0.13	U,G	1.4	0.22	G	0.74	0.16	G,I	-0.0072	0.012	U,G	0.021	0.0095	G,SI	0.046	0.014	U,G
LowerPecos Field-1	24-Jan-12	1.3	0.17	G	0.14	0.19	U,G	1.1	0.26	G	0.87	0.17	G,I	-0.013	0.018	U,G	-0.016	0.017	U,G	0.062	0.016	G
Sluna Field composite	16-Feb-12	1.5	0.2	G	-0.033	0.16	U,G	1.7	0.34	G	0.87	0.16	G,I	-0.0029	0.021	U,G	0.045	0.018	G,NQ	0.39	0.053	G
Upper Pecos Field-2	24-Jan-12	1.1	0.14	G	0.16	0.17	U,G	1.2	0.27	G	0.83	0.11	G,I	-0.013	0.016	U,G	0.0069	0.13	U,G	0.052	0.017	G
Upper Pecos Field-2 DUP	24-Jan-12	1.1	0.15	G	0.18	0.15	U,G	1.2	0.28	G	0.89	0.1	G,I	-0.0015	0.016	U,G	-0.0093	0.013	U,G	0.021	0.015	U,G
Muck																						
Peralta Stream Bank	29-Dec-11	1.5	0.19	G	0.086	0.22	U,SI	1.5	0.33	G	1.4	0.17	G,I	-0.02	0.027	U,G	0.049	0.03	G,SI	1.2	0.14	G
Peralta Terrace A	28-Dec-11	1.9	0.24	G	0.56	0.21	G	2.2	0.36	G	1.5	0.26	G,I	-0.0097	0.035	U,G	0.057	0.033	G,SI	1.7	0.2	G
Rio Grande @ Site	15-Dec-11	1.8	0.24	G	0.18	0.3	U,G	2.3	0.44	G	1.5	0.35	G,I	-0.00024	0.02	U,G	0.011	0.028	U,G	1.9	0.18	G
Peralta BS North	24-Jan-12	1.7	0.23	G	0.49	0.31	U,S	1.7	0.35	G	1.1	0.26	G,I	0.01	0.021	U,G	-0.033	0.022	U,G	0.4	0.52	G
Peralta BS South	24-Jan-12	1.2	0.15	G	0.077	0.15	U,G	1.7	0.28	G	0.93	0.17	G,I	+0.0064	0.017	U,G	-0.014	0.013	U,G	1.1	0.13	G
Peralta Berm 1	24-Jan-12	1.4	0.18		0.095	0.17	U	1.5	0.3		1.2	0.18	J	-0.019	0.033	U	0.028	0.011	NQ	1.7	0.2	
Peralta Berm 3	24-Jan-12	2.1	0.27	G	0.3	0.28	U,G	2.3	0.45	G	1.5	0.28	G,I	-0.0074	0.039	U,G	-0.016	0.021	U,G	2.6	0.33	G
Rio Grande @ Santa Fe River	16-Feb-12	2.5	0.31	G	0.18	0.33	U,G	2.6	0.45	G	2	0.25	G,I	+0.02	0.019	U,G	0.018	0.015	U,G	3.4	0.17	G
Water Canyon Near Rio Grande	31-Jan-12	1.9	0.23		0.87	0.28		1.2	0.33		1.3	0.22	I	-0.0047	0.014	U	0.034	0.011	NQ	1.6	0.19	
Numbe 1 East	9-Dec-11	2.3	0.31	G	-0.1	0.55	U,G	2.2	0.43	G	1.9	0.31	G,I	-0.019	0.042	U,G	0.052	0.045	G,SI	0.45	0.093	M3,G
Numbe 1 East DUP	9-Dec-11	2.3	0.28	G	-0.0063	0.38	U,G	2	0.52	G	1.6	0.25	G,I	-0.004	0.031	U,G	0.035	0.024	U,G	0.6	0.085	M3,G
Numbe 2 West	9-Dec-11	2.7	0.37	G	1.1	0.34	G	2.4	0.45	G	2.1	0.28	G,I	+0.0073	0.022	U,G	0.052	0.23	U,G	1.7	0.21	G
Bland Sed 1	4/18/2012	1.3	0.15	G	0.031	0.038	U,S	1.1	0.26	G	1	0.16	G,I	0.0045	0.012	U,G	0.014	0.0089	U,G	0.2	0.029	G
Bland Sed 2	4/18/2012	1.5	0.18	G	-0.064	0.094	U,G	1.5	0.25	G	1.3	0.15	G,I	0.0045	0.013	U,G	0.07	0.0089	G,SI	0.3	0.039	G
High-elevation Soils																						
Granite Lake	2-Sep-11	1.2	0.24	G	7	7	U,G	3	0.86	G	1.2	0.23	G,I	0.069	0.046	U,G	0.041	0.035	U,G	0.76	0.11	M3,G
Hossick	3-Sep-11	1.1	0.25	G,R	-0.75	15	U,G	1.2	0.58	G	0.82	0.26	G,I	-0.011	0.037	U,G	0.012	0.023	U,G	0.2	0.045	M3,G

Location	Date	I-131 Result	I-131 Unc.	I-131 Qual	K-40 Result	K-40 Unc.	K-40 Qual	Ra-226 Result	Ra-226 Unc.	Ra-226 Qual	Pa-234m Result	Pa-234m Unc.	Pa-234m Qual	Pb-212 Result	Pb-212 Unc.	Pb-212 Qual	Pb-214 Result	Pb-214 Unc.	Pb-214 Qual	Th-234 Result	Th-234 Unc.	Th-234 Qual	Tl-208 Result	Tl-208 Unc.	Tl-208 Qual
Farm Soils		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g		pCi/g	pCi/g	
Bottom of Lower Field @ Site	15-Dec-11	-0.68	0.93	U,G	20	3.4	G	-0.00078	0.033	U,G	3.7	2.4	U,G	1.4	0.17	G	1.1	0.14	G,I	1.9	0.32	G	0.4	0.057	G
Bottom of Upper Field @ Site DUP	15-Dec-11	-0.18	1.1	U,G	22	3.7	G	-0.021	0.021	U,G	4.1	3	U,G	1.5	0.19	G	1.2	0.15	G,I	2.2	0.47	G	0.46	0.063	G
Bottom of Upper Field @ Site	15-Dec-11	0.054	0.94	U,G	22	3.7	G	0.012	0.046	U,G	3	2.3	U,G	1.4	0.17	G	1	0.13	G,I	1.8	0.32	G	0.43	0.061	G
Top of Lower Field @ Site	15-Dec-11	0.26	0.67	U,G	21	2.6	G	-0.00048	0.015	U,G	1.8	2	U,G	1.4	0.17	G	1.1	0.13	G,I	1.7	0.37	G	0.41	0.055	G
Top of Upper Field @ Site	15-Dec-11	0.023	0.77	U,G	22	2.6	G	-0.012	0.015	U,G	2.4	1.5	G	1.2	0.15	G	0.92	0.12	G,I	1.5	0.38	G	0.36	0.049	G
LowerPecos Field-1	24-Jan-12	0.037	0.39	U,G	20	2.6	G	-0.0024	0.019	U,G	3.4	2	U,G	1.3	0.16	G	1.1	0.14	G,I	1.7	0.32	G	0.4	0.061	G
Sluna Field composite	16-Feb-12	0.083	0.058	U,G	20	2.8	G	0.0019	0.027	U,G	3.6	3.3	U,G	1.5	0.19	G	1.1	0.14	G,I	2.5	0.61	G	0.45	0.063	G
Upper Pecos Field-2	24-Jan-12	-0.19	0.37	U,G	19	2.3	G	0.0086	0.019	U,G	3.1	2	U,G	1.2	0.15	G	0.91	0.11	G,I	1.8	0.42	G	0.35	0.049	G
Upper Pecos Field-2 DUP	24-Jan-12	-0.22	0.34	U,G	19	2.4	G	-0.011	0.018	U,G	-0.56	4	U,G	1.2	0.16	G	1	0.13	G,I	1.9	0.44	G	0.37	0.052	G
Muck																									
Peralta Stream Bank	29-Dec-11	0.051	0.31	U,G	25	3	G	-0.027	0.024	U,G	3.3	3.3	U,G	1.7	0.2	G	1.5	0.19	G,I	2.4	0.56	G	0.54	0.078	G
Peralta Terrace A	28-Dec-11	-0.1	0.34	U,G	25	3	G	0.0016	0.018	U,G	2.5	3.6	U,G	2.1	0.25	G	1.7	0.22	G,I	4	0.62	G,R	0.62	0.082	G
Rio Grande @ Site	15-Dec-11	0.012	1.2	U,G	24	3.9	G	-0.0067	0.023	U,G	3.8	3.3	U,G	2.1	0.25	G	1.8	0.22	G,I	3	0.58	G	0.64	0.084	G
Peralta BS North	24-Jan-12	-0.18	0.48	U,G	21	2.6	G	-0.0078	0.023	U,G	2.6	3.2	U,G	2	0.24	G	1.4	0.18	G,I	2.7	0.65	G	0.57	0.08	G
Peralta BS South	24-Jan-12	0.1	0.37	U,G	22	2.6	G	0.0065	0.015	U,G	2	2.9	U,G	1.2	0.15	G	1.1	0.13	G,I	2.1	0.56	G,R	0.37	0.049	G
Peralta Berm 1	24-Jan-12	-0.12	0.34	U	19	2.3		0.0012	0.016	U	2.2	3.1	U	1.5	0.18		1.3	0.16	J	2.4	0.64	YI	0.47	0.061	
Peralta Berm 3	24-Jan-12	-0.33	0.58	U,G	31	3.5	G	-0.033	0.031	U,G	4	3.5	U,G	2.3	0.28	G	1.7	0.22	G,I	3.2	0.71	G	0.7	0.094	G
Rio Grande @ Santa Fe River	16-Feb-12	0.048	0.069	U,G	22	2.6	G	-0.0024	0.021	U,G	2.4	3.9	G	2.4	0.29	G	2.3	0.27	G,I	3.1	0.66	G	0.74	0.096	G
Water Canyon Near Rio Grande	31-Jan-12	0.062	0.19	U	20	2.4		0.0087	0.036	U	3.6	2		2.1	0.25		1.5	0.18	J	3.4	0.56	YI	0.61	0.077	
Numbe 1 East	9-Dec-11	-2.2	3	U,G	23	3	G	0.03	0.046	U,G	18	7.3	G	2.4	0.3	G	1.9	0.25	G,I	10	1.6	G	0.75	0.13	G
Numbe 1 East DUP	9-Dec-11	0.98	2.9	U,G	22	2.6	G	-0.013	0.024	U,G	17	5.9	G	2.2	0.27	G	1.7	0.22	G,I	7.4	1.1	G	0.66	0.097	G
Numbe 2 West	9-Dec-11	0.43	2	U,G	23	2.8	G	0.0022	0.025	U,G	17	4.4	G	2.2	0.27	G	2.6	0.32	G,I	13	1.6	G	0.65	0.085	G
Bland Sed 1	4/18/2012	-0.0039	0.033	U,G	24	2.9	G	0.015	0.014	U,G	1.5	1.8	U,G	1.2	0.15	G	1.1	0.13	G,I	1.7	0.39	G	0.34	0.047	G
Bland Sed 2	4/18/2012	0.004	0.037	U,G	28	3.3	G	-0.0033	0.024	U,G	0.74	2.9	U,G	1.5	0.18	G	1.4	0.16	G,I	2.2	0.38	G	0.47	0.059	G
High-elevation Soils																									
Granite Lake	2-Sep-11	16000	14000	U,G,R	14	2.1	G	0.031	0.046	U,G	10	6.2	G	2.4	0.32	G	1.4	0.22	G,I	6.9	1.3	G	0.72	0.13	G
Hossick	3-Sep-11	-7200	18000	U,G,R	18	2.4	G	-0.047	0.043	U,G	7.2	5.5	U,G	1.7	0.18	G	0.9	0.14	G,I	3.6	0.61	G	0.35	0.086	G

U=Result is less than the sample specific MDC
Y1=Chemical Yield is in control at 100 - 110%. Quantitative Yield is assumed.
Y2=Chemical Yield outside default limits.
E=Result is less than Requested MDC, greater than sample specific MDC.
N=requested MDC not met.
B=Analyte concentration greater than MDC
E3=Analyte concentration greater than MDC but less than Requested MDC
M3=The requested MDC was not met, but the reported activity is greater than the reported MDC.

Table 9. Metals, Total Organic Carbon, and Cyanide in Ash Laden Sediments and Black Water Irrigated Soils

Location	Date	Arsenic		Barium		Beryllium		Cadmium		Calcium		Chromium		Cobalt		Copper		Cyanide, Total		Iron		Lead		Magnesium		Manganese	
		Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
LowerPecos Field-1	4-Jan-12	3.6		160		0.00002	U	0.000073	U	19000		7.7		5.3		10		0.18	U	13000		9.2		3900		320	
Upper Pecos Field 2	4-Jan-12	2.1		130		0.000019	U	0.000069	U	13000		5.5		3.6		7.2		0.18	U	9100		6.6		2600		210	
Top of Lower Field @ Site	15-Dec-11	3.4		200		0.6	B	0.25	B	18000		7.4		5.2		11		0.21	U	12000		9.9		4500		360	
Salina Field composite	16-Feb-12	5.1		200		0.99		0.000075	U	27000		11		7.4		16		0.39	U	18000		14		5700		450	
Top of Upper Field @ Site	15-Dec-11	1.8		180		0.44	B	0.11	B	9000		5.8		4.1		8.4		0.18	U	9400		8.4		3100		320	
Bottom of Upper Field @ Site	15-Dec-11	2.3		170		0.5	B	0.16	B	12000		13		4.6		9.6		0.2	U	10000		9.3		3500		330	
Bottom of Lower Field @ Site	15-Dec-11	2.9		160		0.47	B	0.16	B	16000		7.3		4.3		8.9		0.22	U	10000		8.5		3800		270	
Peralta 85 North	24-Jan-12	3.5		520		1		0.000083	U	28000		7.2		7.1		21		4.2		13000		35		3900		2100	
Peralta 85 South	24-Jan-12	1.8		130		0.000019	U	0.00007	U	6200		7.2		4.6		7.6		0.65		10000		12		3000		520	
Peralta Berm 1	24-Jan-12	2.7		270		0.83		0.000097	U	12000		6.9		6		13		1.1		11000		19		2900		790	
Peralta Berm 3	24-Jan-12	3.8		230		1.4		0.00011	U	13000		6.9		6		16		1.2		13000		31		2900		1000	
Peralta Stream Bank	29-Dec-11	1.4		160		0.37	B	0.15	B	5400		7.4		4.2		7.2		0.91		8600		11		2200		530	
Peralta Terrace A	29-Dec-11	2.6		150		0.73	B	0.23	B	7100		5.3		3.9		9.3		0.26	U	8500		17		2000		580	
Water Canyon Near Rio Grande	31 Jan-12	3.2		650		1.2		0.000098	U	11000		8.5		6.4		17		1		15000		25		2300		1100	
Rio Grande @ Site	15-Dec-11	2.5		170		0.66	B	0.24	B	9500		5.8		4.3		9.2		0.92		8600		15		2500		720	
Rio Grande @ Santa Fe River	16 Feb-12	2.5		270		1.3		0.00012	U	16000		7.8		5.7		13		0.29	U	13000		20		3100		950	
Nambe 1 East	9 Dec-11	2.1		160		1.1		0.14	B	6100		12		8.5		23		0.23	U	22000		16		5400		590	
Nambe 2 West	9 Dec-11	1.7		140		0.94		0.26	B	7200		12		9.4		27		0.24	U	23000		19		5800		1000	
Granite Lake	2-Sep-11	4.2		220		1.2		0.35	B	6200		11		9.2		15		0.96		28000		17		4500		1200	
Hossick	3 Sep-11	4.7		120		0.56	B	0.65		10000		4.6		7		16		0.19	U	19000		8.8		1900		360	

Location	Date	Mercury		Mercury (DUP)		Nickel		Potassium		Selenium		Silver		Sodium		Strontium		Strontium (DUP)		Thallium		TOC		TOC (DUP)		Vanadium		Zinc	
		Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
LowerPecos Field-1	4-Jan-12	0.016	B			11		2450		0.00034	U	0.00023	U	0.035	U	982				0.00039	U	7400				19		32	
Upper Pecos Field-2	4-Jan-12	0.0082	B			7.3		1800		0.00032	U	0.00022	U	0.033	U	919		351		0.00036	U	5000				14		25	
Top of Lower Field @ Site	15-Dec-11	0.017	B			9.7		2800		0.39	U	0.27	U	930		976				0.67	B	8400				18		31	
Salina Field composite	16-Feb-12	0.023	B			15		3200		0.00035	U	0.00024	U	140		896				0.00039	U	7700				23		47	
Top of Upper Field @ Site	15-Dec-11	0.015	B			7.1		2400		0.36	U	0.25	U	230		917				0.79	B	12000				16		29	
Bottom of Upper Field @ Site	15-Dec-11	0.021	B			11		3000		0.52	B	0.26	U	190		917				0.67		17000	B			17		32	
Bottom of Lower Field @ Site	15-Dec-11	0.017	B			8.1		2500		0.4	U	0.28	U	840		968				1.1	B	13000				18		28	
Peralta 85 North	24-Jan-12	0.053				11		3300		1.5		0.00026	U	290		1040				0.00032	U	64000				17		67	
Peralta 85 South	24-Jan-12	0.013	B	0.0141	B	8.6		1200		0.00032	U	0.00022	U	0.033	U	841				0.00037	U	8700				14		28	
Peralta Berm 1	24-Jan-12	0.044	B			9.3		1900		0.78		0.00031	U	0.045	U	950				0.00051	U	38000		40000		16		48	
Peralta Berm 3	24-Jan-12	0.093				9.3		2700		0.00051	U	0.00035	U	0.052	U	895				0.00069	U	42000				16		56	
Peralta Stream Bank	29-Dec-11	0.014	B			7.2		1500		0.34	U	0.23	U	98	B	893				0.39		7300	U			14		27	
Peralta Terrace A	29-Dec-11	0.042	B			6.3		1600		0.54	B	0.33	U	38	B	741				0.54	U	30000				12		34	
Water Canyon Near Rio Grande	31 Jan-12	0.047	B			10		2200		0.00046	U	0.00031	U	0.046	U	865				0.00052	U	31000				18		61	
Rio Grande @ Site	15-Dec-11	0.031	B			6.8		1600		0.44	U	0.3	U	310		779				0.5	U	25000				12		31	
Rio Grande @ Santa Fe River	16-Feb-12	0.052	B			9.9		1900		0.00054	U	0.00035	U	298		935				0.00062	U	42000				16		50	
Nambe 1 East	9 Dec-11	0.039	B			12		3600		0.43	U	0.3	U	87	B	759				1.2	B	36000				29		66	
Nambe 2 West	9-Dec-11	0.029	B			12		2400		0.44	U	0.3	U	110	B	780				0.5	U	34000				30		70	
Granite Lake	2 Sep-11	0.072				10		2300		0.96		0.31		46	U	609				2		78000				34		70	
Hossick	3 Sep-11	0.095				6.8		1500		2.2		0.25	U	84	B	813				0.82	B	44000				38		54	

U = Not Detected at or above the client requested detection limit
B = Below reporting limit but above detection limit

Table 10 Farm Soils and Muck Particle Size

Farm Soils		GRAVEL	Total Sand	Total Silt	Total Clay	Laser fraction=0.0000-0.0005mm. For soil: Clay	Laser fraction=0.0005-0.0010mm. For soil: Clay	Laser fraction=0.0010-0.0015mm. For soil: Clay	Laser fraction=0.0015-0.002mm. For soil: Clay	Percent Moisture	Sieve fraction=0.0625-0.125 mm. For soil: Very Fine Sand	Sieve fraction=0.1-0.25 mm. For soil: Fine Sand	Sieve fraction=0.25-0.5 mm. For soil: Medium Sand	Sieve fraction=0.5-1.0 mm. For soil: Coarse Sand	Sieve fraction=1.0-2.0 mm. For soil: Very Coarse Sand	Laser fraction=0.002-0.003mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.003-0.004mm. For soil: Fine and Very Fine Silt (Mud)
Lower Pecos Field-1	24-Jan-12	0.8	43.4	46.8	9.8	1.3	1.7	2.6	2.2	17.9	25	9.6	4.6	2.8	1.4	3.4	2.5
Upper Pecos Field-2	24-Jan-12	4.3	58.1	34	7.8	1.2	2.8	2	1.6	18.3	22.7	12.9	20.7	8.6	3.2	2.4	1.8
Top of Lower Field @ Site	15-Dec-11	0.1	44.2	44.7	11.2	1.8	4	2.9	2.4	42.4	17.8	10.3	10.6	4.8	0.7	3.5	2.7
Salina Field Composite	16-Feb-12	0	19.3	63.3	17.5	2.5	6.1	4.8	4.1	18.7	10.6	5.7	2.5	0.4	0.1	8.6	5.2
Salina Field Composite DUP	16-Feb-12		18.7	63.2	17.2	2.4	6	4.7	4.1		11.1	5.8	2.5	0.2	0.1	6.5	5.2
Top of Upper Field @ Site	15-Dec-11	0.8	66.6	25.3	7.7	1.3	2.5	1.8	1.5	28	17	14.1	20.4	12.9	2.2	2.3	1.7
Top of Upper Field @ Site DUP	15-Dec-11		66.8	26.1	7.5	1.4	2.6	1.9	1.6		17	14.9	21.5	10.9	2.1	2.3	1.8
Bottom of Upper Field @ Site	15-Dec-11	0.7	39.6	47.1	13.9	2.2	4.7	3.4	2.9	35.9	13.2	8.1	9.7	6.9	1.7	4.4	3.3
Bottom of Lower Field @ Site	15-Dec-11	1.1	52.6	38.4	10.2	1.8	3.4	2.4	2	52.4	16.5	13.7	15.7	7.2	1.5	3	2.3
Muck																	
Peralta 85 North	24-Jan-12	5.2	15.7	71.1	13.4	0.9	4.9	4	3.6	88.6	6.6	3.2	3.2	1.8	0.9	6	4.9
Peralta 85 South	24-Jan-12	3.7	66.7	28.8	4.4	0.3	1.7	1.3	1.1	12.7	37	14.8	15	10.1	9.8	1.8	1.4
Peralta Berm 1	24-Jan-12	0.4	25.8	65.1	9.3	0.6	3.6	2.7	2.4	61	18.1	4.5	2.1	1	0.1	3.8	2.9
Peralta Berm 3	24-Jan-12	0.4	2	83.3	14.6	0.9	5.2	4.4	4.1	77.7	1	0.4	0.3	0.3	0	6.7	5.4
Peralta Stream Bank	29-Dec-11	1.7	72	24.3	3.4	0.2	1.4	1.1	1	21.3	17.2	17.4	17.3	12	8.1	1.4	1.1
Peralta Terrace A	28-Dec-11	1.3	25.9	70.3	3.8	0	1.4	1.2	1.3	63.8	17.7	2.8	1.9	2.6	0.9	1.9	1.6
Water Canyon Near Rio Grande	31-Jan-12	0.4	8	74.5	17.4	1.8	6.1	5.1	4.4	55.5	3.5	2	1.7	0.7	0.1	7	5.6
Rio Grande @ Site	15-Dec-11	0.1	34.9	61.6	3.5	0	1.3	1	1.1	55.8	24.4	5.2	1	2.2	0.1	1.6	1.4
Rio Grande @ Santa Fe River	16-Feb-12	0	3	85.9	11.4	0.8	4.4	3.3	2.9	91.5	2.3	0.4	0.2	0.2	0	4.4	3.5
Nambe East	9 Dec-11	0.5	25.5	69.6	5.2	0	1.9	1.4	1.4	52.7	16.5	3.7	2.1	1.9	1.3	2	1.7
Nambe 2 West	9-Dec-11	3.2	35.1	61.8	6.4	0	1	1	1.1	73.5	13.8	4.9	4.7	6.7	5	1.5	1.8
High Elevation Soils																	
Granite Lake	2 Sep-11	22.3	25.9	60.2	14	1.3	5.1	4	3.6	52.7	8.5	3.8	4.1	4.6	4.8	5.7	4.3
Hossick	3-Sep-11	4.5	37.1	47.9	19.6	3.2	5.2	3.7	3	24.4	11.4	4	7.8	6	3.9	4.8	3.1

Farm Soils		Laser fraction=0.004-0.005 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.005-0.006 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.006-0.007 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.007-0.008 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.008-0.009 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.009-0.010 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.010-0.011 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.011-0.012 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.012-0.013 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.013-0.014 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.014-0.015 mm. For soil: Fine and Very Fine Silt (Mud)	Laser fraction=0.015-0.016 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.016-0.017 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.017-0.018 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.018-0.019 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.019-0.020 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.02-0.03 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.03-0.04 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.04-0.05 mm. For soil: Coarse Silt (Mud)	Laser fraction=0.05-0.0625 mm. For soil: Coarse Silt (Mud)
Lower Pecos Field-1	24-Jan-12	2.1	1.8	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1	0.9	0.9	0.8	0.8	0.7	0.7	6.4	5.9	5.1	4.5
Upper Pecos Field-2	24-Jan-12	1.4	1.2	1.1	1	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	4.6	4.6	4.1	3.7
Top of Lower Field @ Site	15-Dec-11	2.2	1.9	1.7	1.5	1.4	1.4	1.3	1.2	1.1	1	1	0.9	0.8	0.8	0.7	0.7	5.8	5	4.2	3.7
Salina Field Composite	16-Feb-12	4.5	4	3.6	3.3	3	2.7	2.5	2.3	2	1.8	1.6	1.4	1.3	1.1	1	0.9	6	3.7	2.7	2.2
Salina Field Composite DUP	16-Feb-12	4.5	4	3.6	3.3	3	2.7	2.5	2.3	2	1.8	1.6	1.4	1.3	1.1	1	0.9	6	3.7	2.7	2.2
Top of Upper Field @ Site	15-Dec-11	1.4	1.1	1	0.9	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	3.1	2.9	2.7	2.7
Top of Upper Field @ Site DUP	15-Dec-11	1.4	1.2	1	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	3	2.7	2.6	2.5
Bottom of Upper Field @ Site	15-Dec-11	2.7	2.3	2	1.8	1.6	1.5	1.4	1.3	1.2	1.1	1	0.9	0.9	0.8	0.8	0.7	5.7	4.6	3.8	3.3
Bottom of Lower Field @ Site	15-Dec-11	1.9	1.6	1.4	1.3	1.2	1.1	1	1	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6	4.9	4.4	3.9	3.6
Muck																					
Peralta 85 North	24-Jan-12	4.2	3.7	3.4	3.2	2.9	2.7	2.5	2.3	2.1	2	1.8	1.7	1.5	1.4	1.3	1.2	9.2	6.1	4.1	2.9
Peralta 85 South	24-Jan-12	1.2	1	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	4.1	4.1	3.6	3.3
Peralta Berm 1	24-Jan-12	2.4	2	1.8	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.3	1.2	1.2	1.1	1.1	1.1	10.4	9.2	7.8	6.9
Peralta Berm 3	24-Jan-12	4.6	4.1	3.8	3.7	3.5	3.3	3.1	3	2.8	2.6	2.5	2.3	2.1	2	1.9	1.7	12.5	6.6	3.3	1.7
Peralta Stream Bank	29-Dec-11	0.9	0.8	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	3.5	3.5	3.1	2.8
Peralta Terrace A	28-Dec-11	1.4	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	13.1	14.1	11.5	9.4
Water Canyon Near Rio Grande	31-Jan-12	4.8	4.3	3.9	3.6	3.3	3	2.9	2.6	2.3	2.1	2	1.8	1.6	1.5	1.4	1.3	9	5.3	3.2	2.1
Rio Grande @ Site	15-Dec-11	1.2	1.1	1	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1	11.1	12.4	10.7	9.3
Rio Grande @ Santa Fe River	16-Feb-12	3.1	3	2.9	2.9	2.9	2.9	2.8	2.8	2.7	2.6	2.6	2.5	2.4	2.3	2.2	2.1	16.8	10	5.4	3.1
Nambe East	9 Dec-11	1.6	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	13.7	12.9	10	8.3
Nambe 2 West	9-Dec-11	1.8	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.2	1.2	11.5	9.7	7.2	5.8
High Elevation Soils																					
Granite Lake	2 Sep-11	3.4	2.8	2.5	2.2	2	1.9	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1	1	8	6.2	4.6	3.7
Hossick	3-Sep-11	2.6	2.3	2.1	1.9	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1	1	0.9	0.8	0.8	6.1	4.5	3.5	3

Table 11. Total PCB in Stormwater and Precipitation

	Date/Time	SSC mg/L	Total PCB (sum of congeners) pg/L	Mono-Cl pg/L	Di-Cl pg/L	Tri-Cl pg/L	TE-Cl pg/L	Pe-Cl pg/L	Hx-Cl pg/L	Hp-Cl pg/L	Oc-Cl pg/L	No-Cl pg/L	De-Cl pg/L	SSC Total PCB pg/g	SSC Total PCB ng/g	Data Valid for All Uses	Data Rejected due to Data quality Issues
Rio Grande @ Buckman	7/26/2011 19:06		722	0	0	548	141	33	0	0	0	0	0			Y	
Rio Grande @ Buckman	7/26/2011 19:56		247	9	0	104	75	51	5	3	0	0	0			Y	
Rio Grande @ Buckman	8/3/2011 18:09	9,100	403	13	102	96	34	54	49	36	15	4	1	44	0.04	Y	
Rio Grande @ Buckman	8/3/2011 18:59	5,900	204	11	36	74	15	13	28	16	8	4	0	35	0.03	Y	
Rio Grande @ Buckman	8/5/2011 17:54	2,000	1,747	0	226	116	255	320	414	242	126	39	9	874	0.87	Y	
Rio Grande @ Buckman	8/5/2011 18:44	2,900	34	6	3	25	0	0	0	0	0	0	0	12	0.01	Y	
Rio Grande @ Buckman	8/29/2011 5:06	11,000	846	66	439	202	30	52	33	24	0	0	0	77	0.08	N	
Rio Grande @ Buckman	8/29/2011 4:21	15,000	5,995	47	464	757	816	1,998	1,885	20	8	0	0	400	0.40	N	
Rio Grande @ Buckman	8/26/2011 21:04	1,100	1,054	32	421	304	80	60	105	39	6	8	0	958	0.96	N	
Rio Grande @ Buckman	8/26/2011 20:14	1,900	2,293	58	756	165	164	406	636	99	8	0	0	1,207	1.21	N	
Rio Grande @ Buckman (REG)	8/21/2011 18:41	32,000	1,074	31	94	410	205	156	91	72	16	0	0	34	0.03	N	R
Rio Grande @ Buckman (WS)	8/21/2011 19:29	43,000	1,594	0	0	466	425	389	237	49	6	0	0	37	0.04	N	R
Rio Grande @ Buckman (WS)	8/21/2011 20:19	20,000	2,495	0	174	218	393	963	591	99	11	11	14	125	0.12	N	R
Rio Grande @ Buckman (WS)	9/4/2011 21:54	46,000	2,514	105	381	752	264	378	388	137	53	55	0	55	0.05	N	R
Rio Grande @ Buckman (WS)	9/4/2011 22:44	22,000	847	34	94	296	9	70	78	28	23	14	0	29	0.03	N	R
Rio Grande @ Buckman (REG)	9/4/2011 22:46	22,000	1,210	18	188	246	184	254	169	57	12	81	0	55	0.05	N	R
Rio Grande @ Buckman (REG)	9/4/2011 21:55	46,000	5,519	159	420	913	380	1,510	1,569	471	54	43	0	120	0.12	N	
Rio Grande @ Buckman (REG)	9/7/2011 15:11	5,000	1,248	33	0	462	198	141	273	116	19	6	0	250	0.25	Y	
Rio Grande @ Buckman (REG)	9/7/2011 15:56	19,000	46,219	2,237	3,838	6,694	1,421	5,954	14,228	9,472	2,126	248	0	2,433	2.43 0.40	Y	
Rio Grande @ Otowi	8/21/2011 18:11	47,000	2,624	0	157	567	851	541	314	149	21	0	22	56	0.06	N	R
Rio Grande @ Otowi	8/26/2011 19:40	830	4,968	194	3,293	1,278	102	73	20	7	0	0	0	5,985	5.99	N	
Rio Grande @ Otowi	9/4/2011 23:48	5,700	5,110	40	268	696	598	1,650	1,498	323	34	0	3	896	0.90	N	
E050	8/19/2011 18:49	1,200	29,239	0	0	223	710	4,732	12,085	9,285	1,999	170	36	24,366	24.37	N	
E050	8/22/2011 16:08	85,000	14,108	65	0	769	458	2,330	5,739	3,868	862	18	0	166	0.17	N	
E050	9/1/2011 18:38	220	3403	1	2	32	69	584	1891	824	0	0	0	15,468	15.47	Y	
E050	8/28/2011 2:55	110	2435	2	0	39	25	490	1148	651	79	0	0	22,137	22.14	Y	
E050	9/10/2011 2:10	500	39,760	0	0	0	271	7,008	18,242	12,309	1,749	182	0	79,520	79.52	Y	
E050	9/7/2011 14:10	2,800	21,872	48	337	465	502	4,241	9,642	5,637	890	83	26	7,811	7.81	Y	
E050	10/2/2011 18:06	6,300	67,746	151	663	1,577	1,778	15,957	28,297	15,550	3,059	424	289	10,753	10.75	Y	
E050	9/4/2011 20:58	140,000	6,109	34	0	292	149	1,299	2,348	1,688	286	0	14	44	0.04	Y	
Peralta Canyon	10/4/2011 19:57	30,000	39,052	2,881	4,490	16,310	1,861	5,874	5,227	1,756	463	190	0	1,302	1.30	Y	
Peralta Canyon	10/7/2011 19:29	670	1,027	0	13	426	111	330	147	0	0	0	0	1,532	1.53	Y	
Peralta Canyon	10/7/2011 20:09	840	1,040	19	110	364	138	342	63	3	0	0	0	1,238	1.24	Y	
Rio Grande above Alameda	8/13/2011 20:04	520	38,471	6	401	666	955	3,058	15,266	14,999	2,925	171	23	73,983	73.98	N	
Rio Grande above Alameda	8/17/2011 21:42	410	30,945	91	1,705	1,639	2,283	3,507	10,928	9,029	1,642	121	0	75,477	75.48	N	
Rio Grande above Alameda	8/21/2011 4:51	1,600	3,198	0	174	205	364	969	986	452	48	0	0	1,999	2.00	N	R
Bandelier National Monument	7/27/2011		81,296	79	523	6,746	11,348	24,622	30,278	6,913	716	0	70			N	
Bandelier National Monument	8/10/2011		235	18	29	42	123	22	0	0	0	0	0			Y	
Bandelier National Monument	8/23/2011		13,564	3	114	1,164	2,024	4,985	4,675	525	74	0	0			N	R
Bandelier National Monument	8/23/2011 15:00		323	0	0	0	323	0	0	0	0	0	0			Y	
Bandelier National Monument	9/6/2011 14:20		68	0	0	24	41	3	0	0	0	0	0			Y	
Los Alamos County Airport	8/9/2011		39	6	0	2	17	4	7	3	1	0	0			Y	

Table 12. Dioxin/Furans in 2011 Stormwater

ANALYTE_NAME	Rio Grande @ Buckman 7/28/11 19:06 pg/L	Rio Grande @ Buckman 7/28/2011 19:56 pg/L	Rio Grande @ Buckman 8/3/2011 16:09 pg/L	Rio Grande @ Buckman 8/3/2011 18:59 pg/L	Rio Grande @ Buckman 8/5/2011 17:14 pg/L	Rio Grande @ Buckman 8/5/2011 18:49 pg/L	Rio Grande @ Buckman Reg 9/4/2011 21:55 pg/L	Rio Grande @ Buckman Reg 9/4/2011 21:46 pg/L	Rio Grande @ Buckman WS 9/4/2011 21:58 pg/L	Rio Grande @ Buckman WS 9/4/2011 22:44 pg/L	Rio Grande @ Buckman 8/29/2011 4:21 pg/L
Heptachlorodibenzodioxin[1,2,3,4,6,7,8-]	19 J,Q,B	3.4 J,Q,B	640 B	4.5 J,B	15 J,B	28 J,B	12 J	5.8 J,Q	12 J	7.9 J	24 J,B
Heptachlorodibenzodioxins (Total)			1700	7.4	40	48	24	9.8	24	15	55
Heptachlorodibenzofuran[1,2,3,4,6,7,8-]	17 J,Q,B	4.8 J,Q,B	53 B	2.1 J,Q,B	15 J,B	5.5 J,Q,B	5.5 J,B	4.7 J,Q,B	5.9 J,Q,B	8.7 J,Q,B	7 J,B
Heptachlorodibenzofuran[1,2,3,4,7,8,9-]	18 J,Q,B	6.2 J,Q	11 J,B	2.1 U	17 J,B	3.6 J,Q,B	1.9 U	5.6 J,B	2.9 U	3.8 U	2.2 J
Heptachlorodibenzofurans (Total)			330	2.1	34	22	15	16	11	8.7	22
Hexachlorodibenzodioxin[1,2,3,4,7,8-]	14 J	1.4 U	8 J,Q	0.62 U	7 J,Q	2.3 J,Q	2.3 U	2.4 U	2 U	2.6 U	1.4 U
Hexachlorodibenzodioxin[1,2,3,6,7,8-]	15 J,B	0.64 U	11 J,Q	0.57 U	5.6 J	1.5 U	2 U	2.2 U	1.7 U	2.5 U	1.2 U
Hexachlorodibenzodioxin[1,2,3,7,8,9-]	13 J	0.65 U	17 J	0.56 U	7.8 J,Q	1.7 J,Q	2.1 U	2.2 U	1.8 U	2.5 U	1.4 U
Hexachlorodibenzodioxins (Total)			170	0.62 U	20	5	2.1 U	2.4 U	2 U	2.6 U	1.4 U
Hexachlorodibenzofuran[1,2,3,4,7,8-]	19 J,B	9.4 J,B	5.5 J,B	2.8 J,Q,B	12 J,Q,B	4.2 J,B	4.3 Q,J,B	1.9 J,B	3.5 J,B	4.9 J,B	7.7 J,B
Hexachlorodibenzofuran[1,2,3,6,7,8-]	15 J,B	2 U	3.4 J,B	1.1 J,Q,B	8.7 J,Q,B	3.3 J,B	1.6 Q,J	1.6 U	1.6 U	2 U	0.99 J,B
Hexachlorodibenzofuran[1,2,3,7,8,9-]	12 J,B	1.7 J,Q,B	0.97 U	0.61 U	9.2 J	2.8 J	1.6 U	2.1 U	2.2 U	2.8 U	0.8 U
Hexachlorodibenzofuran[2,3,4,6,7,8-]	13 J	0.96 U	4.1 J,Q,B	0.51 U	5.3 J,Q,B	3.1 J,Q,B	1.2 U	2.3 J	1.7 J,Q	2 U	1.1 J,B
Hexachlorodibenzofurans (Total)			80	6.7	44	29	16	14	11	17	16
Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	58 J,B	17 J,B	8500 B	26 J,B	54 J,B	320 B	85 J,B	44 J,B	47 J,B	68 J,Q,B	210 B
Octachlorodibenzofuran[1,2,3,4,6,7,8,9-]	J,B	13 J,Q,B	430 B	7.8 J,Q,B	32 J,B	27 J,B	12 J,B	7.5 J,B	11 J,B	15 J,B	17 J,B
Pentachlorodibenzodioxin[1,2,3,7,8-]	40 J,Q	1.7 U	4.4 J	1.3 U	5.1 J,Q	2 U	4.9 U	4 U	2.5 U	3.8 U	1.6 U
Pentachlorodibenzodioxins (Total)			4.4	1.3 U	5.1	2 U	3.8 U	4 U	2.5 U	5.9 U	4 U
Pentachlorodibenzofuran[1,2,3,7,8-]	12 J	1.5 U	3.3 U	2.1 U	7.7 J	3 U	2.6 U	5.8 J	3.9 J	3.3 U	2.8 J
Pentachlorodibenzofuran[2,3,4,7,8-]	14 J	1.6 U	3.4 U	0.85 U	5.7 J,Q	1.7 U	2.7 J	4.5 J	3.3 U	2.8 U	2 J
Pentachlorodibenzofurans (Totals)			4.3	2.1 U	24	3 U	8.4	19	8.8	4.2	11
Tetrachlorodibenzodioxin[2,3,7,8-]	15 U	2.3 U	6.5 U	0.54 U	0.57 U	0.33 U	1.4 U	1.7 U	1.3 U	1.8 U	1.2 U
Tetrachlorodibenzodioxins (Total)			3.4 U	3.1 U	1.7 U	3.3 U	2.3 U	1.7 U	1.5 U	1.8 U	1.2 U
Tetrachlorodibenzofuran[2,3,7,8-]	0.98 J	0.86 U	3.3 U	0.76 U	1.6 U	0.47 U	8.2 J,B	7.3 J,Q,B	2.8 J,B	5.7 J,Q,B	3.6 J,Q,B
Tetrachlorodibenzofurans (Totals)			3.2 U	0.76 U	1.6 U	1.1 U	14	18	13	33	8.6
TEQ 2005 (ND=0.5)	26 J,B	3.26 J,Q,B	19.6 B	1.59 J,Q,B	15.3 J,B	3.64 J,B	6.09 J,B	6.47 J,B	3.3 J,B	5.32 J,B	3.52 J,B
TEQ 2005 (ND=0)	27.5 J,B	1.28 J,Q,B	19.7 B	0.465 J,Q,B	14.8 J,B	2.5 J,B	2.74 J,B	3.09 J,B	1.57 J,B	1.26 J,B	1.93 J,B

ANALYTE_NAME	Rio Grande @ Buckman 8/29/2011 5:06 pg/L	Rio Grande @ Buckman 8/26/2011 20:14 pg/L	Rio Grande @ Buckman Reg 8/21/2011 18:41 pg/L	Rio Grande @ Buckman WS 8/31/2011 20:19 pg/L	Rio Grande @ Buckman WS 8/21/2011 19:59 pg/L	Rio Grande @ Buckman Reg 9/7/2011 16:15 pg/L	Rio Grande @ Buckman Reg 9/7/2011 16:56 pg/L
Heptachlorodibenzodioxin[1,2,3,4,6,7,8-]	6.8 J,B	2.3 J,B	15 U	32 J	17 U	4.8 J,B	140 B
Heptachlorodibenzodioxins (Total)	13	15	15 U	12	17 U	8.8	280
Heptachlorodibenzofuran[1,2,3,4,6,7,8-]	4 J,Q,B	3.5 J,Q,B	15 U	9.4 U	18 U	4.6 J,Q,B	66 J,Q,B
Heptachlorodibenzofuran[1,2,3,4,7,8,9-]	2.2 U	3.5 U	22 U	12 U	16 U	4.5 J,Q,B	4.9 J,Q,B
Heptachlorodibenzofurans (Total)	8.2	7.3	22 U	12 U	16 U	15	170
Hexachlorodibenzodioxin[1,2,3,4,7,8-]	1.5 U	1 U	16 U	10 U	13 U	3.6 U	3.9 U
Hexachlorodibenzodioxin[1,2,3,6,7,8-]	1.4 U	1 U	15 U	10 U	12 U	3.5 U	6.1 J,Q
Hexachlorodibenzodioxin[1,2,3,7,8,9-]	1.3 U	0.96 U	15 U	7.9 U	10 U	2.9 U	4.6 J,Q
Hexachlorodibenzodioxins (Total)	1.5 U	1 U	16 U	19	13 U	3.6 U	44
Hexachlorodibenzofuran[1,2,3,4,7,8-]	3.8 J,B	1.5 J,Q,B	21 U	15 U	20 U	5.2 J,B	9.5 J,B
Hexachlorodibenzofuran[1,2,3,6,7,8-]	1.5 J,Q,B	0.62 J,Q,B	19 U	14 U	12 U	2.3 U	3.7 J,Q,B
Hexachlorodibenzofuran[1,2,3,7,8,9-]	1.7 J,B	0.81 J,B	29 U	18 U	22 U	2.6 U	3.7 U
Hexachlorodibenzofuran[2,3,4,6,7,8-]	1.7 J,Q,B	1.2 J,Q,B	21 U	14 U	18 U	2.4 U	3.2 U
Hexachlorodibenzofurans (Total)	21	12	20 U	18 U	22 U	9.8	50
Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	61 J,B	52 J,B	110 J,B	43 J,B	44 J,Q,B	26 J,Q,B	1100 B
Octachlorodibenzofuran[1,2,3,4,6,7,8,9-]	5.4 J,Q,B	5.6 J,Q,B	75 U	27 J,Q,B	24 U	10 J,B	120 B
Pentachlorodibenzodioxin[1,2,3,7,8-]	2.2 U	1.3 U	37 U	20 U	24 U	4.1 U	4.6 U
Pentachlorodibenzodioxins (Total)	2.2 U	1.6 U	37 U	20 U	24 U	4.1 U	5
Pentachlorodibenzofuran[1,2,3,7,8-]	4.5 J,Q	2.3 J	37 U	20 U	25 U	3 U	3.6 J,B
Pentachlorodibenzofuran[2,3,4,7,8-]	2.5 J	3.3 J,Q	40 U	24 U	28 U	3.2 U	3 U
Pentachlorodibenzofurans (Totals)	18	10	40 U	23 U	28 U	3.2 U	18
Tetrachlorodibenzodioxin[2,3,7,8-]	1.4 U	0.8 U	2.7 U	21 U	12 U	2.9 U	7.6 J
Tetrachlorodibenzodioxins (Total)	2.6	3.2	2.7 U	11 U	37 U	2.8 U	14
Tetrachlorodibenzofuran[2,3,7,8-]	5.3 J,B	3.5 J,B	4.2 U	8.6 J,EDM,B	8.5 U	2.3 U	4 J,B
Tetrachlorodibenzofurans (Totals)	17	7.6	4.9 U	12 U	8.8 U	2.5 U	22
TEQ 2005 (ND=0.5)	4.45 J,Q,B	2.87 J,Q,B	33.6 U	25.2 J,Q,B	28.8 U	5.72 J,B	6.67 B
TEQ 2005 (ND=0)	2.41 J,Q,B	1.62 J,Q,B	0.031 U	2 J,Q,B	0.0312 U	0.673 J,B	1.57 B

ANALYTE_NAME	Rio Grande @ Otowi 9/6/2011 23:48 pg/L	Rio Grande @ Otowi 8/26/2011 19:40 pg/L	Rio Grande @ Otowi 8/21/2011 18:13 pg/L
Heptachlorodibenzodioxin[1,2,3,4,6,7,8-]	9.5 J,Q	7.8 J,B	39 J,Q
Heptachlorodibenzodioxins (Total)	16	16	86
Heptachlorodibenzofuran[1,2,3,4,6,7,8-]	5.5 J,Q,B	6.4 J,B	18 U
Heptachlorodibenzofuran[1,2,3,4,7,8,9-]	3.7 U	2 U	34 U
Heptachlorodibenzofurans (Total)	8.7	10	24 U
Hexachlorodibenzodioxin[1,2,3,4,7,8-]	2.5 U	1.2 U	24 U
Hexachlorodibenzodioxin[1,2,3,6,7,8-]	2.3 U	1.1 U	10 U
Hexachlorodibenzodioxin[1,2,3,7,8,9-]	2.4 U	1.2 U	18 U
Hexachlorodibenzodioxins (Total)	2.5 U	1.2 U	24 U
Hexachlorodibenzofuran[1,2,3,4,7,8-]	6.4 J,B	2.4 J,Q,B	30 U
Hexachlorodibenzofuran[1,2,3,6,7,8-]	6.1 J	1.5 J,Q,B	26 U
Hexachlorodibenzofuran[1,2,3,7,8,9-]	2.7 J,Q	2.3 J,B	35 U
Hexachlorodibenzofuran[2,3,4,6,7,8-]	3.3 J	1.4 J,Q,B	27 U
Hexachlorodibenzofurans (Total)	28	16	35 U
Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	47 J,B	86 J,B	420 B
Octachlorodibenzofuran[1,2,3,4,6,7,8,9-]	18 J,B	12 J,B	38 J,Q,B
Pentachlorodibenzodioxin[1,2,3,7,8-]	3.8 U	1.6 U	40 U
Pentachlorodibenzodioxins (Total)	3.4 U	2.2 U	40 U
Pentachlorodibenzofuran[1,2,3,7,8-]	6.8 J	2.5 J	45 U
Pentachlorodibenzofuran[2,3,4,7,8-]	4 J,Q	2.3 J	46 U
Pentachlorodibenzofurans (Totals)	16	10	46 U
Tetrachlorodibenzodioxin[2,3,7,8-]	1.4 U	1 U	3.1 U
Tetrachlorodibenzodioxins (Total)	1.4 U	2.4	3.1 U
Tetrachlorodibenzofuran[2,3,7,8-]	2.1 J,B	4.6 J,B	3 U
Tetrachlorodibenzofurans (Totals)	26	5.4	3 U
TEQ 2005 (ND=0.5)	7.21 J,B	3.57 J,B	39 J,Q,B
TEQ 2005 (ND=0)	4.23 J,B	2.08 J,B	0.535 J,Q,B

ANALYTE_NAME	E050 8/7/2011 14:30 pg/L	E030 10/2/2011 18:06 pg/L	E038 8/19/2011 18:45 pg/L	E060 8/22/2011 18:49 pg/L	E045 9/17/2011 15:36 pg/L	C050 8/28/2011 2:56 pg/L	C059 9/16/2011 2:10 pg/L
Heptachlorodibenzodioxin[1,2,3,4,6,7,8-]	7.73 J	12.7 Q,J	65.5 J	68 J	15.5 J	3.03 Q,J	83.1
Heptachlorodibenzodioxins (Total)	14.8 Q,J	20.6 J,Q	139	420	28.3 Q,J	2.03 Q,J	172
Heptachlorodibenzofuran[1,2,3,4,6,7,8-]	3.06 Q,J	4.29 Q,J	12 J,B	27 J,Q,B	4.38 J	1.51 U	25.3 J
Heptachlorodibenzofuran[1,2,3,4,7,8,9-]	1.63 U	1.46 U	32 U	16 U	1.75 Q,J	1.7 U	1.32 U
Heptachlorodibenzofurans (Total)	6.38 J,Q	13.1 J,Q	37	47	11.5 J,Q	1.36 U	52.3 J
Hexachlorodibenzodioxin[1,2,3,4,7,8-]	1.21 U	1.06 U	9.5 U	16 J,Q	1.66 U	1.34 U	1.76 U
Hexachlorodibenzodioxin[1,2,3,6,7,8-]	1.3 U	1.11 U	8 U	17 J,Q	1.79 Q,J	1.48 U	2.86 Q,J
Hexachlorodibenzodioxin[1,2,3,7,8,9-]	1.14 U	0.893 U	7.2 U	15 J,Q	1.76 Q,J	1.53 U	3.33 Q,J
Hexachlorodibenzodioxins (Total)	1.18 U	2.1 J	9.5 U	46	3.56 Q,J	1.58 U	17.2 Q,J
Hexachlorodibenzofuran[1,2,3,4,7,8-]	0.757 U	0.758 U	13 U	18 U	1.07 U	0.991 U	1.44 Q,J
Hexachlorodibenzofuran[1,2,3,6,7,8-]	0.801 U	0.715 U	11 U	16 U	1.45 J	0.768 U	0.74 U
Hexachlorodibenzofuran[1,2,3,7,8,9-]	1.75 U	1.37 U	16 U	22 U	1.82 J	1.2 U	1.52 U
Hexachlorodibenzofuran[2,3,4,6,7,8-]	0.783 U	0.682 U	12 U	16 U	1.39 Q,J	0.752 U	1.09 Q,J
Hexachlorodibenzofurans (Total)	1.15 Q,J	2.28 J	16 U	27 U	11.2 J,Q	0.945 U	31.4 J,Q,S
Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	62.7 B,J	151 B	520 B	670 B	137	23 Q,J	771 B
Octachlorodibenzofuran[1,2,3,4,6,7,8,9-]	4.06 J	6.97 S,J	23 J,Q,B	50 J,Q,B	16.5 J	3.26 Q,J	25.9 S,J
Pentachlorodibenzodioxin[1,2,3,7,8-]	1.64 U	1.44 U	16 U	21 U	2.59 U	1.64 U	1.62 U
Pentachlorodibenzodioxins (Total)	1.64 U	1.44 U	16 U	21 U	2.59 U	1.64 U	1.62 U
Pentachlorodibenzofuran[1,2,3,7,8-]	1.27 U	1.06 U	13 U	25 U	1.74 U	1.31 U	1.2 U
Pentachlorodibenzofuran[2,3,4,7,8-]	1.15 U	0.961 U	19 U	24 U	1.51 U	1.12 U	1.07 U
Pentachlorodibenzofurans (Totals)	1.22 U	1.01 U	19 U	24 U	1.57 U	1.2 U	15.6 Q,J
Tetrachlorodibenzodioxin[2,3,7,8-]	3.55 U	2.76 U	7.3 U	10 U	2.77 U	2.85 U	2.76 U
Tetrachlorodibenzodioxins (Total)	3.55 U	2.76 U	7.3 U	10 U	2.77 U	2.85 U	2.76 U
Tetrachlorodibenzofuran[2,3,7,8-]	1.98 U	1.73 U	11 U	5.5 U	1.73 U	1.85 U	1.68 U
Tetrachlorodibenzofurans (Totals)	1.98 U	1.73 U	11 U	5.5 U	1.73 U	1.04 Q,J	5.23 Q,J
TEQ 2005 (ND=0.5)	3.29 J	2.92 S,J	20.2 J,Q,B	29 J,Q,B	4.22 J	2.96 Q,J	4.7 S,J
TEQ 2005 (ND=0)	0.327 J	0.217 S,J	0.551 J,Q,B	9.21 J,Q,B	1.28 J	0.328 Q,J	1.67 S,J

ANALYTE_NAME	Pajarito Canyon 10/4/2011 15:57 pg/L	Pajarito Canyon 10/7/2011 19:29 pg/L	Pajarito Canyon 10/7/2011 20:09 pg/L	Rio Grande above Alameda 8/13/2011 21:42 pg/L	RG above Alameda 8/13/2011 20:34 pg/L	RG above Alameda 8/21/2011 4:51 pg/L
Heptachlorodibenzodioxin[1,2,3,4,6,7,8-]	46 J,B	5.2 U	10 J,Q,B	270 B	170	33 J
Heptachlorodibenzodioxins (Total)	97	5.1 U	21	460	930	59
Heptachlorodibenzofuran[1,2,3,4,6,7,8-]	23 J,Q,B	5 J,Q,B	6.5 J,Q,B	71 B	37 J,Q,B	2.7 U
Heptachlorodibenzofuran[1,2,3,4,7,8,9-]	8.6 J,Q,B	5.2 J,Q,B	4.8 J,Q,B	7.4 J	14 U	14 U
Heptachlorodibenzofurans (Total)	48	14	17	180 B	110	14 U
Hexachlorodibenzodioxin[1,2,3,4,7,8-]	2.3 J,Q	1.7 U	4.1 U	6.3 J,Q	11 U	10 U
Hexachlorodibenzodioxin[1,2,3,6,7,8-]	4.5 J,Q	2.2 J	4.1 U	14 J	9 U	9 U
Hexachlorodibenzodioxin[1,2,3,7,8,9-]	3.3 J,Q	1 U	4.4 U	9.6 J	8.3 U	8 U
Hexachlorodibenzodioxins (Total)	31	2.2	3.8 J,Q,B	81	9.9	10 U
Hexachlorodibenzofuran[1,2,3,4,7,8-]	17 J,Q,B	6.5 J,Q,B	2.3 U	6.1 J,B	15 U	15 U
Hexachlorodibenzofuran[1,2,3,6,7,8-]	8.3 J,B	2.6 J,Q,B	3.6 U	6.8 J,B	14 U	14 U
Hexachlorodibenzofuran[1,2,3,7,8,9-]	3.7 J,B	1.2 J,Q,B	2.8 U	3 J,B	18 U	19 U
Hexachlorodibenzofuran[2,3,4,6,7,8-]	4.7 J,Q	1 J,Q	2.3 U	4.8 J,B	13 U	14 U
Hexachlorodibenzofurans (Total)	47	16	3.8	84	18 U	19 U
Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	730 B	21 J,Q,B	78 J,B	2300 B	1200 B	700 B
Octachlorodibenzofuran[1,2,3,4,6,7,8,9-]	78 J,Q,B	9.3 J,Q,B	14 J,Q,B	260 B	130 B	70 J,B
Pentachlorodibenzodioxin[1,2,3,7,8-]	4.2 U	5.9 U	5.6 U	3 U	15 U	21 U
Pentachlorodibenzodioxins (Total)	5.3 U	5.9 U	5.6 U	3.4 U	15 U	21 U
Pentachlorodibenzofuran[1,2,3,7,8-]	7.3 J,Q,B	5.3 J,B	2.5 U	4.3 J,Q	17 U	24 U
Pentachlorodibenzofuran[2,3,4,7,8-]	4.4 J,Q	4 U	3.3 U	5.7 J,Q	19 U	25 U
Pentachlorodibenzofurans (Totals)	26	3.3	3.3 U	27	19 U	25 U
Tetrachlorodibenzodioxin[2,3,7,8-]	2.7 U	2.4 U	3.4 U	1.8 U	8.4 U	13 U
Tetrachlorodibenzodioxins (Total)	90	2.4 U	8.7	1.5 U	8.4 U	13 U
Tetrachlorodibenzofuran[2,3,7,8-]	8 J,B	1.8 U	7.6 U	4.4 J,B	1.9 U	6.9 U
Tetrachlorodibenzofurans (Totals)	58	1.8 U	2.6 U	5.5	1.9 U	6.9 U
TEQ 2005 (ND=0.5)	11 J,Q,B	6.6 J,Q,B	4.88 J,Q,B	13.2 B	21.6 B	25.2 J,B
TEQ 2005 (ND=0)	7.23 J,Q,B	1.61 J,Q,B	0.815 J,Q,B	10.9 B	2.47 B	0.398 J,B

Table 13 2012 Muck and Farm Soils Total PCB

	Total PCB (sum of congeners)		Mono-CB	Di-CB	Tri-CB	TE-CB	Pe-CB	Hx-CB	Hp-CB	Oc-CB	No-CB	De-CB	TEQ 2005 (ND=0)
Muck	pg/g	mg/kg	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g	pg/g
Peralta Berm 1	1128.71	1.13E-03	146	226	640	3.9	32.81	44.04	20.78	9.7	1.98	3.5	0.000338
Peralta Berm 3	854.25	8.54E-04	95	93	383.2	14.38	65.27	89	69.99	26.61	10.5	7.3	0.069769
Peralta 85 North	2443.47	2.44E-03	310	514	1306	8.5	53.32	69.23	46.9	20.02	5.1	110	0.049693
Peralta 85 South	354.64	3.55E-04	29	79	220	0	5.35	11.35	7.23	1.61	1.1	0	0.006339
Peralta Terrace A	734.85	7.35E-04	88	95.1	300	18.08	55.37	82.7	60.6	22.2	8.1	4.7	0.000537
Peralta Stream Bank	606.64	6.07E-04	60	120.9	350	3.5	20.05	29.99	18.8	1.4	0	2	0.000309
Nambe 1 East	155.04	1.55E-04	1.4	15	39	5.65	28.87	34.01	22.3	7.9	0.91	0	0.000463
Nambe 2 West	779.81	7.80E-04	94	142.5	351.3	15.5	48.14	62.08	49.71	11.47	1.2	3.9	0.012135
Rio Grande @ Sile	763.99	7.64E-04	97	156.7	422	3.7	20.36	32.37	16.6	8.95	3.87	2.4	0.000331
Rio Grande @ Santa Fe River	1361.38	1.36E-03	103	189.6	554.3	117.8	104.2	122.61	100.2	30.76	11.9	27	0.001283
Water Canyon Near Rio Grande	8448.05	8.45E-03	88	161	597.1	699.7	1030	2537.2	2689	572	47.4	27	0.011952
Farm Field Soils Irrigated with Black water													
Suina Field Composite	1004.22	1.00E-03	1.92	0	2.1	38.37	265	373.02	210.6	58.2	25	30	0.089638
Upper Pecos Field-2	73.46	7.35E-05	3.27	0	1.9	9.4	8.65	12.04	8.6	3.6	0	26	0.000164
Lower Pecos Field-1	80.3	8.03E-05	2.44	0	0.84	2.06	14.3	24.6	12.8	5.06	5.2	13	0.000288
Top of Upper Field @ Sile	222.6	2.23E-04	10.5	16	4.47	14.18	19.18	47.45	44.68	12.34	28.8	25	0.000483
Bottom of Upper Field @ Sile	254.47	2.54E-04	19.93	7.3	3.87	20.29	34.18	51.7	44.6	19.6	28	25	0.000408
Top of Lower Field @ Sile	578.73	5.79E-04	12.3	0	6.4	14.55	37.63	171.4	234.8	62.65	17	22	0.000648
Bottom of Lower Field @ Sile	580.61	5.81E-04	17.2	59	3.7	47.12	106.4	132.8	128.1	21.33	6	59	0.000849

Table 14. 2012 Dioxin/Furan in Farm Soils and Muck

Farm Soils Irrigated with Black Water

	Bottom of Lower 12/15/2011 12:30		Bottom of Upper 12/15/2011 13:00		Salina Field 2/16/2012 13:16		Upper Pecos Field-2 1/24/2012 14:35		Top of Lower Field @ 12/15/2011 14:00		Top of Upper Field @ 12/15/2011 13:30	
	pg/g		pg/g		pg/g		pg/g		pg/g		pg/g	
Heptachlorodibenzodioxin[1,2,3,4,6,7,8-]	12	0,B	7.3	0,B	1.9	D,J,Q	0.54	D,J,Q	4.2	D,J,B	13	0,B
Heptachlorodibenzodioxins (Total)	24	D	15	D	4.7	D	1.2	D	7.4	D	27	D
Heptachlorodibenzofuran[1,2,3,4,6,7,8-]	1.9	D,J,Q,B	2.8	D,J,B	0.78	D,J,B	0.23	D,J,Q,B	1.1	D,J,Q,B	4.3	D,J,Q,B
Heptachlorodibenzofuran[1,2,3,4,7,8,9-]	0.16	D,U	0.34	D,U	0.32	D,J,B	0.15	D,J,Q,B	0.28	D,U	0.43	D,U
Heptachlorodibenzofurans (Total)	4.2	D	6.8	D	2.2	D	0.71	D	3.3	D	11	D
Hexachlorodibenzodioxin[1,2,3,4,7,8-]	0.21	D,U	0.25	D,U	0.35	D,U	0.28	D,U	0.074	D,U	0.31	D,U
Hexachlorodibenzodioxin[1,2,3,6,7,8-]	0.39	D,J	0.35	D,J	0.25	D,U	0.2	D,U	0.28	D,U	0.63	D,J
Hexachlorodibenzodioxin[1,2,3,7,8,9-]	0.25	D,J,Q	0.31	D,J	0.25	D,U	0.21	D,U	0.14	D,U	0.81	D,J
Hexachlorodibenzodioxins (Total)	2.6	D	2.5	D	0.73	D	0.28	D,U	0.48	D	6.3	D
Hexachlorodibenzofuran[1,2,3,4,7,8-]	0.23	D,J,Q,B	0.35	D,U	0.69	D,J,B	0.42	D,J,B	0.29	D,J,B	0.46	D,U
Hexachlorodibenzofuran[1,2,3,6,7,8-]	0.11	D,U	0.31	D,U	0.069	D,U	0.06	D,J,Q,B	0.054	D,U	0.35	D,U
Hexachlorodibenzofuran[1,2,3,7,8,9-]	0.14	D,U	0.19	D,U	0.15	D,J,Q,B	0.028	D,U	0.073	D,U	0.45	D,U
Hexachlorodibenzofuran[2,3,4,6,7,8-]	0.021	D,U	0.34	D,U	0.072	D,U	0.038	D,J,Q,B	0.031	D,U	0.39	D,U
Hexachlorodibenzofurans (Total)	2	D	1.6	D	2	D	1.1	D	0.84	D	3.6	D
Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	92	D,B	80	D,B	16	D	6.6	D,J	29	D,B	100	D,B
Octachlorodibenzofuran[1,2,3,4,6,7,8,9-]	3.9	D,J,B	7.5	D,J,B	1.4	D,J,B	0.53	D,J,Q,B	3.7	D,J,B	11	D,J,B
Pentachlorodibenzodioxin[1,2,3,7,8-]	0.16	D,U	0.49	D,U	0.081	D,U	0.083	D,U	0.093	D,U	0.7	D,U
Pentachlorodibenzodioxins (Total)	0.16	D,U	0.49	D,U	0.081	D,U	0.083	D,U	0.093	D,U	0.7	D,U
Pentachlorodibenzofuran[1,2,3,7,8-]	0.38	D,U	0.57	D,U	0.38	D,J,B	0.13	D,U	0.1	D,U	0.76	D,U
Pentachlorodibenzofuran[2,3,4,7,8-]	0.14	D,U	0.19	D,U	0.16	D,J,Q,B	0.056	D,U	0.065	D,U	0.8	D,U
Pentachlorodibenzofurans (Totals)	1.9	D	0.59	D,U	1.3	D	0.3	D	0.42	D,U	0.79	D,U
Tetrachlorodibenzodioxin[2,3,7,8-]	0.066	D,U	0.26	D,U	0.098	D,U	0.048	D,U	0.17	D,U	0.26	D,U
Tetrachlorodibenzodioxins (Total)	0.18	D,U	0.26	D,U	0.098	D,U	0.048	D,U	0.17	D,U	0.26	D,U
Tetrachlorodibenzofuran[2,3,7,8-]	0.33	D,U	0.55	D,U	0.15	D,J,Q	0.086	D,J	0.1	D,U	0.45	D,U
Tetrachlorodibenzofurans (totals)	0.33	D,U	0.55	D,U	0.62	D	0.14	D	0.1	D,U	0.45	D,U
TOXIC EQUIVALENCY QUOTIENT 7 WHO TEFs 2005	0.423	D,J,B	0.772	D,J,B	0.333	D,J,B	0.182	D,J,Q,B	0.275	D,J,B	1.07	D,J,B
TOXIC EQUIVALENCY QUOTIENT 8 WHO TEFs 2005	0.255	D,J,B	0.187	D,J,B	0.194	D,J,B	0.0718	D,J,Q,B	0.0916	D,J,B	0.35	D,J,B

MUCK

	Lower Pecos Field-1 1/24/2012 14:20		Peralta SS North 1/24/2012 11:00		Nambe 1 East 12/9/2011 14:07		Nambe 2 West 12/9/2011 14:15		Peralta Stream Bank 12/28/2011 11:35		Peralta Terrace A 12/28/2011 11:27		Peralta BS South 1/24/2012 11:25		Peralta Berm 1 1/24/2012 12:30		Peralta Berm 3 1/24/2012 13:05		Rio Grande @ Santa Fe River 2/16/2012 13:51		Rio Grande @ Site 12/15/2011 13:30		Water Canyon Near Rio Grande 1/31/2012 13:00	
	pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g		pg/g	
Heptachlorodibenzodioxin[1,2,3,4,6,7,8-]	0.96	D,J,Q	1.5	D,J	0.66	D,J,Q,B	0.91	D,J,B	0.75	D,J,B	0.9	D,J,Q,B	0.33	D,U	0.76	D,U	1.7	D,J	5	D,J	0.59	D,J,B	5.9	D,J
Heptachlorodibenzodioxins (Total)	1.8	D	3.3	D	1.7	D	2	D	1.3	D	2.1	D	0.33	D,U	0.97	D	4	D	10	D	1.3	D	15	D
Heptachlorodibenzofuran[1,2,3,4,6,7,8-]	0.29	D,J,Q,B	0.55	D,J,B	0.38	D,J,Q,B	0.32	D,J,Q,B	0.23	D,J,B	0.37	D,J,Q,B	0.16	D,J,B	0.53	D,J,B	0.84	D,J,Q,B	1.7	D,J,Q,B	0.42	D,J,Q,B	1.9	D,J,B
Heptachlorodibenzofuran[1,2,3,4,7,8,9-]	0.11	D,U	0.26	D,J,Q,B	0.47	D,U	0.38	D,U	0.13	D,J,Q	0.17	D,J	0.2	D,J,B	0.38	D,J,Q,B	0.35	D,J,Q,B	0.56	D,J,B	0.067	D,U	0.37	D,J,Q,B
Heptachlorodibenzofurans (Total)	0.75	D	1.2	D	0.8	D	0.32	D	0.75	D	0.96	D	0.58	D	1.4	D	1.9	D	4.8	D	0.84	D	8.9	D
Hexachlorodibenzodioxin[1,2,3,4,7,8-]	0.31	D,U	0.39	D,U	0.42	D,U	0.26	D,U	0.08	D,U	0.18	D,U	0.23	D,U	0.5	D,U	0.42	D,U	0.45	D,U	0.21	D,U	0.33	D,U
Hexachlorodibenzodioxin[1,2,3,6,7,8-]	0.22	D,U	0.28	D,U	0.38	D,U	0.24	D,U	0.069	D,U	0.14	D,U	0.16	D,U	0.36	D,U	0.29	D,U	0.32	D,U	0.15	D,U	0.24	D,J,Q
Hexachlorodibenzodioxin[1,2,3,7,8,9-]	0.22	D,U	0.28	D,U	0.36	D,U	0.23	D,U	0.073	D,U	0.15	D,U	0.17	D,U	0.36	D,U	0.3	D,U	0.32	D,U	0.15	D,U	0.24	D,U
Hexachlorodibenzodioxins (Total)	0.31	D,U	0.74	D	0.42	D,U	0.27	D,U	0.077	D,U	0.16	D,U	0.23	D,U	0.5	D,U	0.57	D	1	D	0.21	D,U	2.1	D
Hexachlorodibenzofuran[1,2,3,4,7,8-]	0.51	D,J,Q,B	0.67	D,J,B	0.46	D,U	0.38	D,U	0.1	D,U	1.9	D,U	0.46	D,J,B	0.72	D,J,B	0.95	D,J,B	0.96	D,J,B	0.3	D,J,B	1.3	D,J,B
Hexachlorodibenzofuran[1,2,3,6,7,8-]	0.11	D,J,Q,B	0.12	D,J,Q,B	0.4	D,U	0.33	D,U	0.086	D,U	0.092	D,U	0.052	D,J,Q,B	0.14	D,J,Q,B	0.2	D,J,Q,B	0.22	D,J,Q,B	0.054	D,U	0.32	D,J,B
Hexachlorodibenzofuran[1,2,3,7,8,9-]	0.12	D,J,B	0.084	D,J,Q,B	0.51	D,U	0.42	D,U	0.11	D,U	0.12	D,U	0.053	D,J,Q,B	0.084	D,U	0.15	D,J,B	0.16	D,J,Q,B	0.026	D,U	0.12	D,J,B
Hexachlorodibenzofuran[2,3,4,6,7,8-]	0.045	D,J,Q,B	0.11	D,J,B	0.44	D,U	0.37	D,U	0.095	D,U	0.1	D,U	0.03	D,J,Q,B	0.087	D,J,B	0.052	D,J,Q,B	0.14	D,J,Q,B	0.14	D,U	0.18	D,J,B
Hexachlorodibenzofurans (Total)	1.6	D	2.1	D	0.51	D,U	0.43	D,U	0.13	D	0.49	D	1	D	2	D	2.7	D	3.3	D	0.84	D	4.7	D
Octachlorodibenzodioxin[1,2,3,4,6,7,8,9-]	7.5	D,J	7	D,J	4.5	D,J,B	5	D,J,B	2.4	D,J,B	5.2	D,J,B	1.2	D,J,Q	4.7	D,J	10	D,J	42	D	3	D,J,Q,B	52	D
Octachlorodibenzofuran[1,2,3,4,6,7,8,9-]	0.49	D,J,Q,B	0.63	D,J,Q,B	0.76	D,U	0.5	D,U	0.81	D,J,B	0.72	D,J,Q,B	0.27	D,J,B	0.76	D,J,B	1.1	D,J,Q,B	3.5	D,J,B	0.23	D,J,Q,B	4.9	D,J,B
Pentachlorodibenzodioxin[1,2,3,7,8-]	0.09	D,U	0.13	D,U	0.65	D,U	0.49	D,U	0.12	D,U	0.18	D,U	0.071	D,U	0.2	D,U	0.22	D,U	0.24	D,U	0.079	D,U	0.23	D,U
Pentachlorodibenzodioxins (Total)	0.09	D,U	0.13	D,U	0.65	D,U	0.49	D,U	0.12	D,U	0.18	D,U	0.071	D,U	0.2	D,U	0.22	D,U	0.24	D,U	0.079	D,U	0.23	D,U
Pentachlorodibenzofuran[1,2,3,7,8-]	0.38	D,J,B	0.38	D,J,B	0.84	D,U	0.63	D,U	0.062	D,U	0.095	D,U	0.2	D,J,Q,B	0.58	D,J,B	0.62	D,J,B	0.54	D,J,B	0.11	D,U	0.65	D,J,B
Pentachlorodibenzofuran[2,3,4,7,8-]	0.045	D,U	0.16	D,J,Q,B	0.88	D,U	0.66	D,U	0.064	D,U	0.098	D,U	0.035	D,U	0.12	D,U	0.17	D,J,Q,B	0.11	D,U	0.12	D,U	0.29	D,J,Q,B
Pentachlorodibenzofurans (Totals)	0.75	D	1.3	D	0.88	D,U	0.67	D,U	0.15	D,U	0.88	D,U	0.36	D	1.3	D	1.5	D	1.4	D	0.22	D,U	2.3	D
Tetrachlorodibenzodioxin[2,3,7,8-]	0.054	D,U	0.11	D,U	0.3	D,U	0.29	D,U	0.057	D,U	0.094	D,U	0.063	D,U	0.11	D,U	0.055	D,U	0.11	D,U	0.043	D,U	0.43	D,U
Tetrachlorodibenzodioxins (Total)	0.054	D,U	3.4	D	0.3	D,U	0.57	D	1.1	D	1.5	D	0.58	D	1.9	D	4.9	D	1.1	D	1.5	D	1.6	D
Tetrachlorodibenzofuran[2,3,7,8-]	0.1	D,J,Q	0.21	D,J	0.61	D,U	0.63	D,U	0.061	D,U	0.086	D,U	0.058	D,U	0.23	D,J,Q	0.29	D,U	0.32	D,J	0.12	D,U	0.83	D,J
Tetrachlorodibenzofurans (totals)	0.1	D	1.8	D	0.61	D,U	0.63	D,U	0.43	D	0.36	D	0.38	D	0.88	D	1.5	D	0.92	D	0.52	D	2.7	D
TOXIC EQUIVALENCY QUOTIENT 7 WHO TEFs 2005	0.232	D,J,Q,B	0.371	D,J,Q,B	0.814	D,U	0.656	D,U	0.144	D,J,B	0.308	D,J,Q,B	0.176	D,J,B	0.354	D,J,B	0.462	D,J,Q,B	0.502	D,J,B	0.337	D,J,Q,B	0.667	D,J,B
TOXIC EQUIVALENCY QUOTIENT 8 WHO TEFs 2005	0.115	D,J,Q,B	0.203	D,J,Q,B	0.0118	D,U	0.0138	D,U	0.012	D,J,B	0.0162	D,J,Q,B	0.0716	D,J,B	0.146	D,J,B	0.237	D,J,Q,B	0.283	D,J,B	0.0411	D,J,Q,B	0.503	D,J,B