Air Quality Monitoring and Sampling Summary Report

Air Quality Monitoring of the Work Zone Perimeter, Localized Weather Patterns

DWR Oroville Dam Recovery

August 11 thru August 24, 2017

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August 11 thru August 24, 2017

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Summary

The work site air monitoring activities were stable during this time period and no additional monitoring stations were added. None of the established stations were modified, or moved.

Air quality monitoring at all of the perimeter monitoring stations were continuous throughout the time period with few interruptions as noted in this report. All sampling methodology adhered to established protocols and there were no changes or modifications to test methodology. All of the work stations were inspected daily as part of the established quality control protocols.

The air monitoring equipment is inspected throughout the sampling episodes to ensure proper operation and to assess the site conditions which may impact sample results. We experienced zero (0) storms during this time period. None (0) of the air quality samples were analyzed "for reference only" because of minor equipment failure or loss of power during this monitoring period.

The equipment in the field continues to perform well and meets the sampling design for flow rates, volumes, and dependability for the CARB Modified AHERA methodology. Sample 0824-OFD-TPT-16 demonstrated a post flow calibration shift which exceeded 5% increase/decrease; for this samples, the volumes were calculated using the lower of the values to produce a more conservative structure concentration.

The majority of the asbestos structure counts at the perimeter remain predominantly "None Detected":

- Total number of samples: 420
- Total number of samples that were "None Detected": 299 (71%)
- Total number of samples where asbestos was detected but did not exceed the action level: 116 (28%)
- Total number of samples that exceeded the action level: 5 (1%)
- Total number of samples that were archived: 0
- Total number of samples that were "Overloaded": 0

Actinolite (amphibole) and Chrysotile (serpentine) asbestos structures are being detected in several of the samples. The Action Level of 0.0050 S/cc was met or exceeded five (5) times during this sampling time frame triggering investigations into possible cause and corrective actions. Non-asbestos structures are detectible and noted in the sample summary and in the laboratory reports and include a contribution from non-regulated amphiboles.

Dry weather and diminishing soil moisture conditions require the continual application of water and dust mitigation techniques to maintain low structure and dust levels at the perimeter of the work zone.

1.0 Sample Locations

Sample locations are established and/or moved in cooperation and with advanced approval by Butte County Air Quality Management District (BCAQMD). The sites that have been selected best represents the quality of the air as it leaves the "outer work zone perimeter". Additionally, the locations are chosen based on alignment with "sensitive receptors".

Sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Extra care must be taken when dealing with contaminants and pollutants in close proximity to areas recognized as sensitive receptors.

Table 1 Dust and Asbestos Structure Monitoring Station Locations

Station	Location	Way Point ID	Latitude	Longitude
1	Intake Yard	WP 246	39°32'5.44"N	121°28'29.37"W
2	Upper Overlook Entry	WP 247	39°31'51.40"N	121°28'36.65"W
3	Upper Overlook	WP 248	39°31'47.46"N	121°28'41.46"W
4	Canyon Drive	WP 249	39°31'40.23"N	121°28'52.17"W
5	N. Diversion Dam	WP 278	39°31'55.71"N	121°33'2.96"W
6	Diversion Dam Yard	WP 251	39°31'53.20"N	121°32'46.61"W
7	SE Diversion Dam	WP 279	39°31'44.35"N	121°32'58.90"W
8	SW Diversion Dam	WP 277	39°31'48.09"N	121°33'7.14"W
9	Burma	WP 017A	39°32'19.69"N	121°30'48.76"W
10	Cherokee Road	WP 281	39°32'13.44"N	121°32'48.07"W
11	Launch Ramp Parking	WP 009A	39°32'47.34"N	121°29'33.10"W
12	Launch Ramp Turnaround	WP 010A	39°32'50.64"N	121°29'50.25"W
13	E. Diversion Dam (PENDING APPROVAL)	WP 019A	39°31'42.97"N	121°32'35.30"W
14	S.E. Canal (PENDING APPROVAL)	WP 020A	39°31'37.77"N	121°33'2.45"W
15	S.W. Canal (PENDING APPROVAL)	WP 021A	39°31'41.01"N	121°33'17.04"W

Figure 1 Upper Overlook Sample Station Locations

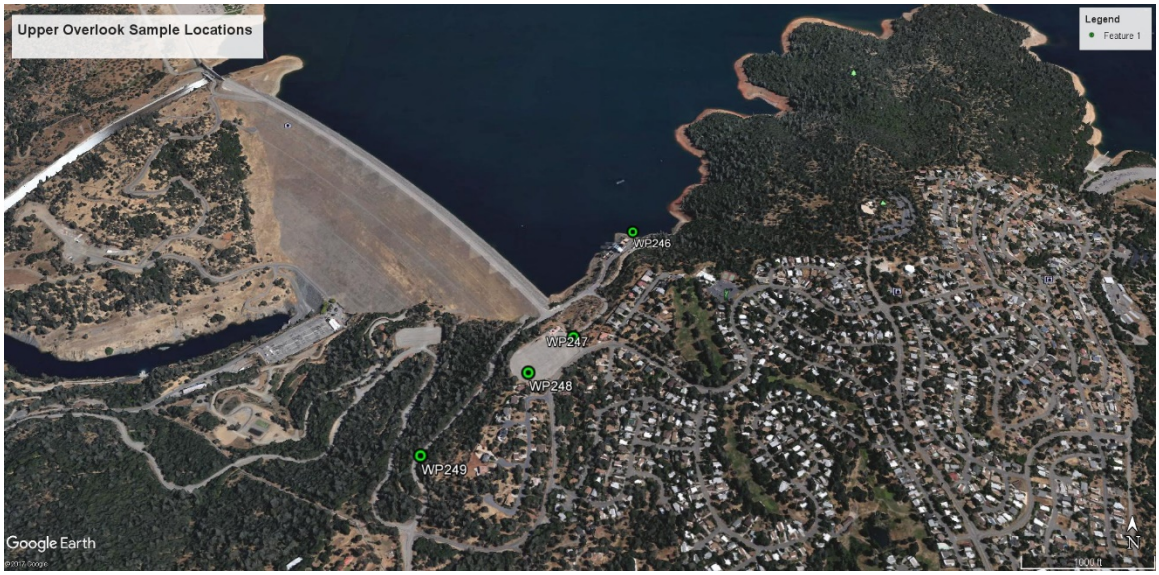


Figure 2 Diversion Dam Sample Station Locations

Figure 3 Burma Road Sampling Location

Figure 4 Launch Ramp Sampling Locations

2.0 Sample Time/Rates/Volume

Air monitoring Sample data is the crux of the monitoring program at the Oroville Dam project and strict quality assurance procedures are practiced.

The sampling strategy dictates that two (2) twelve (12) +/- hour samples are collected each day, representing a continuous history of dust and asbestos structures that are experienced at the work zone perimeter.

The following tables show the critical information that is collected on each sample and is provided for evaluation of the thoroughness and accuracy of air sampling episodes.

The headings of the tables are explained below:

- Sample Date – Date that the sample was started.
- Sample Number – A specific and unique alpha-numeric numbering system to identify and track each individual sample throughout the journey from collection, sample shipping preparation and Chain of Custody through the laboratory analysis and finally to the report.
- Chain of Custody (COC) – In order to use the results of a sampling program as evidence, a written record must be available listing the location of the samples at all times. This is also an important component of good laboratory practices. The COC record is necessary to make a prima facie showing the integrity of the samples. The samples should be handled only by persons associated in some way with the monitoring program.
- Pre-flow Rate (L/min) – The pre-flow rate (liter/minute) is measured using a NIST traceable Primary Standard. Pumps are allowed a warm-up period according to manufactures specifications.
- Post-flow Rate (L/min) – The post-flow rate (liter/minute) is measured using a NIST traceable Primary Standard at the end of the sampling cycle.
- Avg (liter/min) – The average flow rate (liter/minute) is calculated by averaging the pre and post flow rates.
- Time On – Sample Start Time in hours and minutes.
- Time Off – Sample Stop Time in hours and minutes.
- Day/Night Shift – Identifies the portion of the day when this sample was collected.
- Total Minutes – Based on the difference, in minutes, between the start and stop time that the sample was collected.
- Sample Volume (Liters) – is calculated by using the total minutes samples multiplied by the average flow rate.

Table 2 Perimeter – Upper Overlook Sample Time/Rates/Volume

Upper Lookout Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/11/2017	0811-OFD-PMT-01	041723826	2.70	2.69	2.70	05:52	17:47	Day	715	1930.50
	0811-OFD-PMT-02		2.70	2.66	2.68	05:43	17:39		716	1918.88
	0811-OFD-PMT-03		2.70	2.68	2.69	05:35	17:30		715	1923.35
	0811-OFD-PMT-04		2.70	2.65	2.68	05:23	17:20		717	1921.56
	0811-OFD-PMT-05		2.70	2.69	2.70	17:48	05:57	Night	729	1968.30
	0811-OFD-PMT-06		2.70	2.70	2.70	17:40	05:49		729	1968.30
	0811-OFD-PMT-07		2.70	2.70	2.70	17:31	01:26		475	1282.50
	0811-OFD-PMT-08		2.70	2.68	2.69	17:21	05:26		725	1950.25
08/12/2017	0812-OFD-PMT-01	141704297	2.70	2.69	2.70	05:58	17:39	Day	701	1892.70
	0812-OFD-PMT-02		2.70	2.66	2.68	05:50	17:30		700	1876.00
	0812-OFD-PMT-03		2.70	2.69	2.70	05:41	17:22		701	1892.70
	0812-OFD-PMT-04		2.70	2.67	2.69	05:27	17:12		705	1896.45
	0812-OFD-PMT-05		2.70	2.71	2.71	17:40	05:49	Night	729	1975.59
	0812-OFD-PMT-06		2.70	2.70	2.70	17:31	05:43		732	1976.40
	0812-OFD-PMT-07		2.70	2.72	2.71	17:23	05:35		732	1983.72
	0812-OFD-PMT-08		2.70	2.70	2.70	17:13	05:24		731	1973.70
08/13/2017	0813-OFD-PMT-01	161715122	2.70	2.69	2.70	05:50	17:46	Day	716	1933.20
	0813-OFD-PMT-02		2.70	2.66	2.68	05:44	17:38		714	1913.52
	0813-OFD-PMT-03		2.70	2.67	2.69	05:36	17:32		716	1926.04
	0813-OFD-PMT-04		2.70	2.68	2.69	05:25	17:20		715	1923.35
	0813-OFD-PMT-05		2.70	2.70	2.70	17:46	05:58	Night	732	1976.40
	0813-OFD-PMT-06		2.70	2.69	2.70	17:39	05:50		731	1973.70
	0813-OFD-PMT-07		2.70	2.70	2.70	17:33	05:44		731	1973.70
	0813-OFD-PMT-08		2.70	2.67	2.69	17:21	05:30		729	1961.01
08/14/2017	0814-OFD-PMT-01	621701288	2.70	2.68	2.69	05:59	17:46	Day	707	1901.83
	0814-OFD-PMT-02		2.70	2.70	2.70	05:51	17:40		709	1914.30
	0814-OFD-PMT-03		2.70	2.69	2.70	05:45	17:32		707	1908.90
	0814-OFD-PMT-04		2.70	2.68	2.69	05:31	17:21		710	1909.90
	0814-OFD-PMT-05		2.70	2.71	2.71	17:47	06:17	Night	750	2032.50
	0814-OFD-PMT-06		2.70	2.70	2.70	17:41	06:07		746	2014.20
	0814-OFD-PMT-07		2.70	2.70	2.70	17:33	06:03		750	2025.00
	0814-OFD-PMT-08		2.70	2.70	2.70	17:22	05:53		751	2027.70

Upper Lookout Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/15/2017	0815-OFD-PMT-01	241703492	2.70	2.68	2.69	06:18	18:07	Day	709	1907.21
	0815-OFD-PMT-02		2.70	2.66	2.68	06:08	18:01		713	1910.84
	0815-OFD-PMT-03		2.70	2.67	2.69	06:04	17:56		712	1915.28
	0815-OFD-PMT-04		2.70	2.68	2.69	05:54	17:46		712	1915.28
	0815-OFD-PMT-05		2.70	2.67	2.69	18:08	05:50	Night	702	1888.38
	0815-OFD-PMT-06		2.70	2.68	2.69	18:02	05:42		700	1883.00
	0815-OFD-PMT-07		2.70	2.66	2.68	17:57	05:36		699	1873.32
	0815-OFD-PMT-08		2.70	2.70	2.70	17:47	05:25		698	1884.60
08/16/2017	0816-OFD-PMT-01	311700412	2.70	2.71	2.71	05:51	17:46	Day	715	1937.65
	0816-OFD-PMT-02		2.70	2.68	2.69	05:43	17:39		716	1926.04
	0816-OFD-PMT-03		2.70	2.69	2.70	05:37	17:33		716	1933.20
	0816-OFD-PMT-04		2.70	2.70	2.70	05:26	17:23		717	1935.90
	0816-OFD-PMT-05		2.70	2.66	2.68	17:47	05:51	Night	724	1940.32
	0816-OFD-PMT-06		2.70	2.68	2.69	17:40	05:43		723	1944.87
	0816-OFD-PMT-07		2.70	2.68	2.69	17:34	05:31		717	1928.73
	0816-OFD-PMT-08		2.70	2.70	2.70	17:24	05:22		718	1938.60
08/17/2017	0817-OFD-PMT-01	331716282	2.70	2.68	2.69	05:52	17:41	Day	709	1907.21
	0817-OFD-PMT-02		2.70	2.67	2.69	05:44	17:34		710	1909.90
	0817-OFD-PMT-03		2.70	2.68	2.69	05:32	17:28		716	1926.04
	0817-OFD-PMT-04		2.70	2.69	2.70	05:23	17:16		713	1925.10
	0817-OFD-PMT-05		2.70	2.70	2.70	17:42	05:56	Night	734	1981.80
	0817-OFD-PMT-06		2.70	2.69	2.70	17:35	05:40		725	1957.50
	0817-OFD-PMT-07		2.70	2.67	2.69	17:29	05:33		724	1947.56
	0817-OFD-PMT-08		2.70	2.70	2.70	17:17	05:19		722	1949.40
08/18/2017	0818-OFD-PMT-01	041724636	2.70	2.67	2.69	05:57	17:42	Day	705	1896.45
	0818-OFD-PMT-02		2.70	2.67	2.69	05:41	17:34		713	1917.97
	0818-OFD-PMT-03		2.70	2.67	2.69	05:34	17:27		713	1917.97
	0818-OFD-PMT-04		2.70	2.67	2.69	05:20	17:16		716	1926.04
	0818-OFD-PMT-05		2.70	2.68	2.69	17:43	05:39	Night	716	1926.04
	0818-OFD-PMT-06		2.70	2.67	2.69	17:35	05:33		718	1931.42
	0818-OFD-PMT-07		2.70	2.67	2.69	17:28	05:26		718	1931.42
	0818-OFD-PMT-08		2.70	2.71	2.71	17:17	05:16		719	1948.49

Upper Lookout Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/19/2017	0819-OFD-PMT-01	141704492	2.70	2.68	2.69	05:40	17:37	Day	717	1928.73
	0819-OFD-PMT-02		2.70	2.70	2.70	05:34	17:30		716	1933.20
	0819-OFD-PMT-03		2.70	2.67	2.69	05:27	17:25		718	1931.42
	0819-OFD-PMT-04		2.70	2.68	2.69	05:17	17:16		719	1934.11
	0819-OFD-PMT-05		2.70	2.69	2.70	17:38	05:44	Night	726	1960.20
	0819-OFD-PMT-06		2.70	2.69	2.70	17:31	05:36		725	1957.50
	0819-OFD-PMT-07		2.70	2.70	2.70	17:26	05:29		723	1952.10
	0819-OFD-PMT-08		2.70	2.70	2.70	17:17	05:19		722	1949.40
08/20/2017	0820-OFD-PMT-01	151704926	2.70	2.69	2.70	05:45	17:38	Day	713	1925.10
	0820-OFD-PMT-02		2.70	2.68	2.69	05:37	17:31		714	1920.66
	0820-OFD-PMT-03		2.70	2.69	2.70	05:30	17:25		715	1930.50
	0820-OFD-PMT-04		2.70	2.69	2.70	05:20	17:14		714	1927.80
	0820-OFD-PMT-05		2.70	2.65	2.68	17:39	05:50	Night	731	1959.08
	0820-OFD-PMT-06		2.70	2.67	2.69	17:32	05:43		731	1966.39
	0820-OFD-PMT-07		2.70	2.66	2.68	17:26	05:36		730	1956.40
	0820-OFD-PMT-08		2.70	2.70	2.70	17:15	05:25		730	1971.00
08/21/2017	0821-OFD-PMT-01	351706268	2.70	2.70	2.70	05:51	17:35	Day	704	1900.80
	0821-OFD-PMT-02		2.70	2.69	2.70	05:44	17:28		704	1900.80
	0821-OFD-PMT-03		2.70	2.70	2.70	05:37	17:23		706	1906.20
	0821-OFD-PMT-04		2.70	2.67	2.69	05:26	17:13		707	1901.83
	0821-OFD-PMT-05		2.70	2.61	2.61	17:36	05:00	Night	684	1785.24
	0821-OFD-PMT-06		2.70	2.70	2.70	17:29	05:29		720	1944.00
	0821-OFD-PMT-07		2.70	2.69	2.70	17:24	05:22		718	1938.60
	0821-OFD-PMT-08		2.70	2.67	2.69	17:14	05:12		718	1931.42
08/22/2017	0822-OFD-PMT-01	321720282	2.70	2.65	2.68	05:38	17:33	Day	715	1916.20
	0822-OFD-PMT-02		2.70	2.65	2.68	05:30	17:27		717	1921.56
	0822-OFD-PMT-03		2.70	2.66	2.68	05:23	17:20		717	1921.56
	0822-OFD-PMT-04		2.70	2.69	2.70	05:13	17:06		713	1925.10
	0822-OFD-PMT-05		2.70	2.71	2.71	17:34	06:21	Night	767	2078.57
	0822-OFD-PMT-06		2.70	2.71	2.71	17:28	06:28		780	2113.80
	0822-OFD-PMT-07		2.70	2.71	2.71	17:21	06:32		791	2143.61
	0822-OFD-PMT-08		2.70	2.70	2.70	17:07	06:11		784	2116.80

Upper Lookout Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/23/2017	0823-OFD-PMT-01	311700423	2.70	2.67	2.69	06:22	17:55	Day	693	1864.17
	0823-OFD-PMT-02		2.70	2.62	2.66	06:29	17:48		679	1806.14
	0823-OFD-PMT-03		2.70	2.67	2.69	06:35	17:42		667	1794.23
	0823-OFD-PMT-04		2.70	2.67	2.69	06:11	17:34		683	1837.27
	0823-OFD-PMT-05		2.70	2.68	2.69	17:56	02:58	Night	542	1457.98
	0823-OFD-PMT-06		2.70	2.76	2.73	17:49	06:10		741	2022.93
	0823-OFD-PMT-07		2.70	2.77	2.74	17:44	06:05		741	2030.34
	0823-OFD-PMT-08		2.70	2.67	2.69	17:35	05:40		725	1950.25
08/24/2017	0824-OFD-PMT-01	321720447	2.70	2.70	2.70	06:19	17:59	Day	700	1890.00
	0824-OFD-PMT-02		2.70	2.71	2.71	06:11	17:51		700	1897.00
	0824-OFD-PMT-03		2.70	2.68	2.69	06:06	17:45		699	1880.31
	0824-OFD-PMT-04		2.70	2.68	2.69	05:47	17:36		709	1907.21
	0824-OFD-PMT-05		2.70	2.76	2.73	18:00	06:13	Night	733	2001.09
	0824-OFD-PMT-06		2.70	2.75	2.73	17:52	06:06		734	2003.82
	0824-OFD-PMT-07		2.70	2.75	2.73	17:46	06:00		734	2003.82
	0824-OFD-PMT-08		2.70	2.68	2.69	17:37	05:45		728	1958.32

Table 3 Perimeter - Diversion Dam Sample Time/Rates/Volume

Diversion Dam Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/11/2017	0811-OFD-TPT-01	041723825	2.70	2.69	2.70	05:47	17:26	Day	699	1887.30
	0811-OFD-TPT-02		2.70	2.67	2.69	05:57	17:34		697	1874.93
	0811-OFD-TPT-03		2.70	2.69	2.70	06:08	17:43		695	1876.50
	0811-OFD-TPT-04		2.70	2.68	2.69	06:14	17:50		696	1872.24
	0811-OFD-TPT-05		2.70	2.69	2.70	06:24	18:04		700	1890.00
	0811-OFD-TPT-06		2.70	2.69	2.70	06:35	18:13		698	1884.60
	0811-OFD-TPT-07		2.70	2.69	2.70	06:44	18:23		699	1887.30
	0811-OFD-TPT-08		2.70	2.73	2.72	07:01	18:44		703	1912.16
	0811-OFD-TPT-09		2.70	2.74	2.72	17:28	05:48	Night	740	2012.80
	0811-OFD-TPT-10		2.70	2.73	2.72	17:35	05:58		743	2020.96
	0811-OFD-TPT-11		2.70	2.74	2.72	17:45	06:12		747	2031.84
	0811-OFD-TPT-12		2.70	2.73	2.72	17:53	06:18		745	2026.40
	0811-OFD-TPT-13		2.70	2.75	2.73	18:06	06:35		749	2044.77
	0811-OFD-TPT-14		2.70	2.76	2.73	18:15	06:45		750	2047.50
	0811-OFD-TPT-15		2.70	2.71	2.71	18:25	06:54		749	2029.79
	0811-OFD-TPT-16		2.70	2.68	2.69	18:46	07:10		744	2001.36
08/12/2017	0812-OFD-TPT-01	151704757	2.70	2.69	2.70	05:50	17:20	Day	690	1863.00
	0812-OFD-TPT-02		2.70	2.66	2.68	06:00	17:28		688	1843.84
	0812-OFD-TPT-03		2.70	2.68	2.69	06:14	17:37		683	1837.27
	0812-OFD-TPT-04		2.70	2.69	2.70	06:21	17:43		682	1841.40
	0812-OFD-TPT-05		2.70	2.70	2.70	06:37	17:55		678	1830.60
	0812-OFD-TPT-06		2.70	2.67	2.69	06:46	18:05		679	1826.51
	0812-OFD-TPT-07		2.70	2.69	2.70	06:56	18:13		677	1827.90
	0812-OFD-TPT-08		2.70	2.73	2.72	07:12	18:29		677	1841.44
	0812-OFD-TPT-09		2.70	2.69	2.70	17:22	05:40	Night	738	1992.60
	0812-OFD-TPT-10		2.70	2.71	2.71	17:30	05:49		739	2002.69
	0812-OFD-TPT-11		2.70	2.75	2.73	17:38	05:58		740	2020.20
	0812-OFD-TPT-12		2.70	2.73	2.72	17:45	06:06		741	2015.52
	0812-OFD-TPT-13		2.70	2.71	2.71	17:57	06:16		739	2002.69
	0812-OFD-TPT-14		2.70	2.76	2.73	18:07	06:25		738	2014.74
	0812-OFD-TPT-15		2.70	2.75	2.73	18:15	06:33		738	2014.74
	0812-OFD-TPT-16		2.70	2.74	2.72	18:31	06:45		734	1996.48

Diversion Dam Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/13/2017	0813-OFD-TPT-01	141704296	2.70	2.69	2.70	05:43	17:51	Day	728	1965.60
	0813-OFD-TPT-02		2.70	2.70	2.70	05:52	18:00		728	1965.60
	0813-OFD-TPT-03		2.70	2.74	2.72	06:01	18:08		727	1977.44
	0813-OFD-TPT-04		2.70	2.68	2.69	06:07	18:15		728	1958.32
	0813-OFD-TPT-05		2.70	2.71	2.71	06:18	18:26		728	1972.88
	0813-OFD-TPT-06		2.70	2.75	2.73	06:27	18:36		729	1990.17
	0813-OFD-TPT-07		2.70	2.74	2.72	06:35	18:43		728	1980.16
	0813-OFD-TPT-08		2.70	2.76	2.73	06:47	18:58		731	1995.63
	0813-OFD-TPT-09		2.70	2.69	2.70	17:52	05:45	Night	713	1925.10
	0813-OFD-TPT-10		2.70	2.66	2.68	18:02	05:54		712	1908.16
	0813-OFD-TPT-11		2.70	2.71	2.71	18:10	06:05		715	1937.65
	0813-OFD-TPT-12		2.70	2.68	2.69	18:16	06:16		720	1936.80
	0813-OFD-TPT-13		2.70	2.69	2.70	18:28	06:30		722	1949.40
	0813-OFD-TPT-14		2.70	2.71	2.71	18:38	02:48		490	1327.90
	0813-OFD-TPT-15		2.70	2.73	2.72	18:45	06:48		723	1966.56
	0813-OFD-TPT-16		2.70	2.65	2.68	19:00	07:03		723	1937.64
08/14/2017	0814-OFD-TPT-01	331715914	2.70	2.71	2.71	05:47	18:00	Day	733	1986.43
	0814-OFD-TPT-02		2.70	2.67	2.69	05:56	18:07		731	1966.39
	0814-OFD-TPT-03		2.70	2.72	2.71	06:07	18:16		729	1975.59
	0814-OFD-TPT-04		2.70	2.69	2.70	06:17	18:21		724	1954.80
	0814-OFD-TPT-05		2.70	2.70	2.70	06:31	18:30		719	1941.30
	0814-OFD-TPT-06		2.70	2.72	2.71	06:44	18:39		715	1937.65
	0814-OFD-TPT-07		2.70	2.69	2.70	06:50	18:46		716	1933.20
	0814-OFD-TPT-08		2.70	2.73	2.72	07:05	19:04		719	1955.68
	0814-OFD-TPT-09		2.70	2.62	2.66	18:02	05:05		663	1763.58
	0814-OFD-TPT-10		2.70	2.70	2.70	18:09	05:54	Night	705	1903.50
	0814-OFD-TPT-11		2.70	2.71	2.71	18:17	06:03		706	1913.26
	0814-OFD-TPT-12		2.70	2.69	2.70	18:22	06:11		709	1914.30
	0814-OFD-TPT-13		2.70	2.70	2.70	18:31	06:21		710	1917.00
	0814-OFD-TPT-14		2.70	2.70	2.70	18:41	06:31		710	1917.00
	0814-OFD-TPT-15		2.70	2.70	2.70	18:47	06:39		712	1922.40
	0814-OFD-TPT-16		2.70	2.72	2.71	19:04	06:57		713	1932.23

Diversion Dam Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/15/2017	0815-OFD-TPT-01	321720416	2.70	2.70	2.70	05:47	17:18	Day	691	1865.70
	0815-OFD-TPT-02		2.70	2.65	2.68	05:55	17:25		690	1849.20
	0815-OFD-TPT-03		2.70	2.67	2.69	06:04	17:33		689	1853.41
	0815-OFD-TPT-04		2.70	2.68	2.69	06:12	17:40		688	1850.72
	0815-OFD-TPT-05		2.70	2.68	2.69	06:22	17:49		687	1848.03
	0815-OFD-TPT-06		2.70	2.67	2.69	06:32	17:57		685	1842.65
	0815-OFD-TPT-07		2.70	2.69	2.70	06:40	18:03		683	1844.10
	0815-OFD-TPT-08		2.70	2.69	2.70	06:59	18:16		677	1827.90
	0815-OFD-TPT-09		2.70	2.70	2.70	17:19	06:17	Night	778	2100.60
	0815-OFD-TPT-10		2.70	2.68	2.69	17:26	06:22		776	2087.44
	0815-OFD-TPT-11		2.70	2.67	2.69	17:35	06:29		774	2082.06
	0815-OFD-TPT-12		2.70	2.68	2.69	17:42	06:33		771	2073.99
	0815-OFD-TPT-13		2.70	2.66	2.68	17:50	06:42		772	2068.96
	0815-OFD-TPT-14		2.70	2.69	2.70	17:58	06:50		772	2084.40
	0815-OFD-TPT-15		2.70	2.67	2.69	18:05	06:55		770	2071.30
	0815-OFD-TPT-16		2.70	2.69	2.70	18:17	07:07		770	2079.00
08/16/2017	0816-OFD-TPT-01	411706352	2.70	2.67	2.69	06:18	17:45	Day	687	1848.03
	0816-OFD-TPT-02		2.70	2.68	2.69	06:24	17:55		691	1858.79
	0816-OFD-TPT-03		2.70	2.65	2.68	06:30	18:03		693	1857.24
	0816-OFD-TPT-04		2.70	2.69	2.70	06:35	18:08		693	1871.10
	0816-OFD-TPT-05		2.70	2.68	2.69	06:44	18:17		693	1864.17
	0816-OFD-TPT-06		2.70	2.67	2.69	06:51	18:28		697	1874.93
	0816-OFD-TPT-07		2.70	2.67	2.69	06:56	18:36		700	1883.00
	0816-OFD-TPT-08		2.70	2.70	2.70	07:08	18:51		703	1898.10
	0816-OFD-TPT-09		2.70	2.63	2.67	17:46	05:42	Night	716	1911.72
	0816-OFD-TPT-10		2.70	2.68	2.69	17:56	06:00		724	1947.56
	0816-OFD-TPT-11		2.70	2.69	2.70	18:04	06:08		724	1954.80
	0816-OFD-TPT-12		2.70	2.67	2.69	18:09	06:13		724	1947.56
	0816-OFD-TPT-13		2.70	2.67	2.69	18:18	06:23		725	1950.25
	0816-OFD-TPT-14		2.70	2.70	2.70	18:29	06:30		721	1946.70
	0816-OFD-TPT-15		2.70	2.69	2.70	18:38	06:35		717	1935.90
	0816-OFD-TPT-16		2.70	2.69	2.70	18:52	06:48		716	1933.20

Diversion Dam Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/17/2017	0817-OFD-TPT-01	321719765	2.70	2.70	2.70	05:49	17:19	Day	690	1863.00
	0817-OFD-TPT-02		2.70	2.67	2.69	06:01	17:26		685	1842.65
	0817-OFD-TPT-03		2.70	2.68	2.69	06:10	17:34		684	1839.96
	0817-OFD-TPT-04		2.70	2.69	2.70	06:15	17:39		684	1846.80
	0817-OFD-TPT-05		2.70	2.66	2.68	06:24	17:50		686	1838.48
	0817-OFD-TPT-06		2.70	2.66	2.68	06:31	17:59		688	1843.84
	0817-OFD-TPT-07		2.70	2.67	2.69	06:37	18:06		689	1853.41
	0817-OFD-TPT-08		2.70	2.71	2.71	06:49	18:19		690	1869.90
	0817-OFD-TPT-09		2.70	2.71	2.71	17:20	05:37	Night	737	1997.27
	0817-OFD-TPT-10		2.70	2.68	2.69	17:27	05:44		737	1982.53
	0817-OFD-TPT-11		2.70	2.68	2.69	17:35	05:51		736	1979.84
	0817-OFD-TPT-12		2.70	2.69	2.70	17:40	05:57		737	1989.90
	0817-OFD-TPT-13		2.70	2.66	2.68	17:51	06:06		735	1969.80
	0817-OFD-TPT-14		2.70	2.69	2.70	18:00	06:14		734	1981.80
	0817-OFD-TPT-15		2.70	2.68	2.69	18:07	06:22		735	1977.15
	0817-OFD-TPT-16		2.70	2.73	2.72	18:20	06:40		740	2012.80
08/18/2017	0818-OFD-TPT-01	041724637	2.70	2.69	2.70	05:38	17:15	Day	697	1881.90
	0818-OFD-TPT-02		2.70	2.67	2.69	05:45	17:22		697	1874.93
	0818-OFD-TPT-03		2.70	2.68	2.69	05:53	17:30		697	1874.93
	0818-OFD-TPT-04		2.70	2.70	2.70	05:58	17:35		697	1881.90
	0818-OFD-TPT-05		2.70	2.66	2.68	06:07	17:45		698	1870.64
	0818-OFD-TPT-06		2.70	2.67	2.69	06:15	17:54		699	1880.31
	0818-OFD-TPT-07		2.70	2.66	2.68	06:23	18:01		698	1870.64
	0818-OFD-TPT-08		2.70	2.72	2.71	06:41	18:15		694	1880.74
	0818-OFD-TPT-09		2.70	2.71	2.71	17:16	05:45	Night	749	2029.79
	0818-OFD-TPT-10		2.70	2.67	2.69	17:23	05:52		749	2014.81
	0818-OFD-TPT-11		2.70	2.68	2.69	17:31	06:00		749	2014.81
	0818-OFD-TPT-12		2.70	2.69	2.70	17:37	06:05		748	2019.60
	0818-OFD-TPT-13		2.70	2.66	2.68	17:46	06:15		749	2007.32
	0818-OFD-TPT-14		2.70	2.67	2.69	17:55	05:25		690	1856.10
	0818-OFD-TPT-15		2.70	2.68	2.69	18:03	06:32		749	2014.81
	0818-OFD-TPT-16		2.70	2.69	2.70	18:16	06:46		750	2025.00

Diversion Dam Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/19/2017	0819-OFD-TPT-01	091717015	2.70	2.69	2.70	05:46	17:25	Day	699	1887.30
	0819-OFD-TPT-02		2.70	2.65	2.68	05:53	17:32		699	1873.32
	0819-OFD-TPT-03		2.70	2.71	2.71	06:01	17:39		698	1891.58
	0819-OFD-TPT-04		2.70	2.69	2.70	06:06	17:44		698	1884.60
	0819-OFD-TPT-05		2.70	2.69	2.70	06:16	17:53		697	1881.90
	0819-OFD-TPT-06		2.70	2.69	2.70	06:26	18:02		696	1879.20
	0819-OFD-TPT-07		2.70	2.67	2.69	06:33	18:09		696	1872.24
	0819-OFD-TPT-08		2.70	2.72	2.71	06:47	18:22		695	1883.45
	0819-OFD-TPT-09		2.70	2.72	2.71	17:26	05:30	Night	724	1962.04
	0819-OFD-TPT-10		2.70	2.68	2.69	17:33	05:39		726	1952.94
	0819-OFD-TPT-11		2.70	2.70	2.70	17:41	05:48		727	1962.90
	0819-OFD-TPT-12		2.70	2.71	2.71	17:46	05:56		730	1978.30
	0819-OFD-TPT-13		2.70	2.70	2.70	17:54	06:06		732	1976.40
	0819-OFD-TPT-14		2.70	2.69	2.70	18:03	06:18		735	1984.50
	0819-OFD-TPT-15		2.70	2.70	2.70	18:10	06:27		737	1989.90
	0819-OFD-TPT-16		2.70	2.71	2.71	18:24	06:34		730	1978.30
08/20/2017	0820-OFD-TPT-01	141704451	2.70	2.67	2.69	05:31	17:15	Day	704	1893.76
	0820-OFD-TPT-02		2.70	2.65	2.68	05:40	17:22		702	1881.36
	0820-OFD-TPT-03		2.70	2.68	2.69	05:49	17:30		701	1885.69
	0820-OFD-TPT-04		2.70	2.68	2.69	05:58	17:35		697	1874.93
	0820-OFD-TPT-05		2.70	2.67	2.69	06:07	17:44		697	1874.93
	0820-OFD-TPT-06		2.70	2.67	2.69	06:19	17:53		694	1866.86
	0820-OFD-TPT-07		2.70	2.67	2.69	06:29	18:02		693	1864.17
	0820-OFD-TPT-08		2.70	2.69	2.70	06:35	18:14		699	1887.30
	0820-OFD-TPT-09		2.70	2.68	2.69	17:17	05:34	Night	737	1982.53
	0820-OFD-TPT-10		2.70	2.67	2.69	17:23	05:41		738	1985.22
	0820-OFD-TPT-11		2.70	2.68	2.69	17:31	05:50		739	1987.91
	0820-OFD-TPT-12		2.70	2.68	2.69	17:36	05:56		740	1990.60
	0820-OFD-TPT-13		2.70	2.67	2.69	17:45	06:07		742	1995.98
	0820-OFD-TPT-14		2.70	2.69	2.70	17:54	06:16		742	2003.40
	0820-OFD-TPT-15		2.70	2.69	2.70	18:03	06:23		740	1998.00
	0820-OFD-TPT-16		2.70	2.71	2.71	18:14	06:38		744	2016.24

Diversion Dam Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/21/2017	0821-OFD-TPT-01	331716517	2.70	2.69	2.70	05:36	17:17	Day	701	1892.70
	0821-OFD-TPT-02		2.70	2.70	2.70	05:42	17:23		701	1892.70
	0821-OFD-TPT-03		2.70	2.69	2.70	05:52	17:31		699	1887.30
	0821-OFD-TPT-04		2.70	2.70	2.70	05:58	17:36		698	1884.60
	0821-OFD-TPT-05		2.70	2.72	2.71	06:09	17:44		695	1883.45
	0821-OFD-TPT-06		2.70	2.70	2.70	06:18	17:52		694	1873.80
	0821-OFD-TPT-07		2.70	2.69	2.70	06:25	18:00		695	1876.50
	0821-OFD-TPT-08		2.70	2.72	2.71	06:40	18:14		694	1880.74
	0821-OFD-TPT-09		2.70	2.70	2.70	17:18	05:38	Night	740	1998.00
	0821-OFD-TPT-10		2.70	2.72	2.71	17:24	05:46		742	2010.82
	0821-OFD-TPT-11		2.70	2.69	2.70	17:32	05:56		744	2008.80
	0821-OFD-TPT-12		2.70	2.72	2.71	17:37	06:01		744	2016.24
	0821-OFD-TPT-13		2.70	2.73	2.72	17:45	06:11		746	2029.12
	0821-OFD-TPT-14		2.70	2.74	2.72	17:54	06:21		747	2031.84
	0821-OFD-TPT-15		2.70	2.73	2.72	18:01	06:47		766	2083.52
	0821-OFD-TPT-16		2.70	2.72	2.71	18:15	07:03		768	2081.28
08/22/2017	0822-OFD-TPT-01	241703589	2.70	2.65	2.68	05:40	17:20	Day	700	1876.00
	0822-OFD-TPT-02		2.70	2.66	2.68	05:48	17:29		701	1878.68
	0822-OFD-TPT-03		2.70	2.66	2.68	05:58	17:38		700	1876.00
	0822-OFD-TPT-04		2.70	2.68	2.69	06:03	17:43		700	1883.00
	0822-OFD-TPT-05		2.70	2.66	2.68	06:13	17:52		699	1873.32
	0822-OFD-TPT-06		2.70	2.67	2.69	06:22	18:00		698	1877.62
	0822-OFD-TPT-07		2.70	2.65	2.68	06:48	18:06		678	1817.04
	0822-OFD-TPT-08		2.70	2.68	2.69	07:04	18:20		676	1818.44
	0822-OFD-TPT-09		2.70	2.72	2.71	17:22	05:03	Night	701	1899.71
	0822-OFD-TPT-10		2.70	2.72	2.71	17:30	05:20		710	1924.10
	0822-OFD-TPT-11		2.70	2.72	2.71	17:39	05:30		711	1926.81
	0822-OFD-TPT-12		2.70	2.75	2.73	17:44	05:36		712	1943.76
	0822-OFD-TPT-13		2.70	2.70	2.70	17:53	06:00		727	1962.90
	0822-OFD-TPT-14		2.70	2.72	2.71	18:01	06:08		727	1970.17
	0822-OFD-TPT-15		2.70	2.72	2.71	18:07	06:15		728	1972.88
	0822-OFD-TPT-16		2.70	2.73	2.72	18:22	06:29		727	1977.44

Diversion Dam Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/23/2017	0823-OFD-TPT-01	331716726	2.70	2.67	2.69	05:04	16:36	Day	692	1861.48
	0823-OFD-TPT-02		2.70	2.64	2.67	05:22	16:44		682	1820.94
	0823-OFD-TPT-03		2.70	2.66	2.68	05:31	16:54		683	1830.44
	0823-OFD-TPT-04		2.70	2.70	2.70	06:01	17:00		659	1779.30
	0823-OFD-TPT-05		2.70	2.65	2.68	06:05	17:11		666	1784.88
	0823-OFD-TPT-06		2.70	2.66	2.68	06:09	17:21		672	1800.96
	0823-OFD-TPT-07		2.70	2.66	2.68	06:16	17:28		672	1800.96
	0823-OFD-TPT-08		2.70	2.68	2.69	06:30	17:45		675	1815.75
	0823-OFD-TPT-09		2.70	2.73	2.72	16:38	05:06	Night	748	2034.56
	0823-OFD-TPT-10		2.70	2.80	2.75	16:47	05:13		746	2051.50
	0823-OFD-TPT-11		2.70	2.79	2.75	16:57	05:21		744	2046.00
	0823-OFD-TPT-12		2.70	2.80	2.75	17:01	05:28		747	2054.25
	0823-OFD-TPT-13		2.70	2.78	2.74	17:13	05:40		747	2046.78
	0823-OFD-TPT-14		2.70	2.80	2.75	17:22	05:51		749	2059.75
	0823-OFD-TPT-15		2.70	2.81	2.76	17:29	06:00		751	2072.76
	0823-OFD-TPT-16		2.70	2.78	2.74	17:46	06:14		748	2049.52
08/24/2017	0824-OFD-TPT-01	331716785	2.70	2.72	2.71	05:06	16:41	Day	695	1883.45
	0824-OFD-TPT-02		2.70	2.68	2.69	05:14	16:51		697	1874.93
	0824-OFD-TPT-03		2.70	2.70	2.70	05:23	17:01		698	1884.60
	0824-OFD-TPT-04		2.70	2.69	2.70	05:29	17:09		700	1890.00
	0824-OFD-TPT-05		2.70	2.67	2.69	05:41	17:22		701	1885.69
	0824-OFD-TPT-06		2.70	2.67	2.69	05:53	17:34		701	1885.69
	0824-OFD-TPT-07		2.70	2.66	2.68	06:02	17:41		699	1873.32
	0824-OFD-TPT-08		2.70	2.68	2.69	06:16	17:57		701	1885.69
	0824-OFD-TPT-09		2.70	2.74	2.72	16:45	05:04	Night	739	2010.08
	0824-OFD-TPT-10		2.70	2.77	2.74	16:53	05:10		737	2019.38
	0824-OFD-TPT-11		2.70	2.76	2.73	17:03	05:18		735	2006.55
	0824-OFD-TPT-12		2.70	2.77	2.74	17:11	05:23		732	2005.68
	0824-OFD-TPT-13		2.70	2.76	2.73	17:23	05:35		732	1998.36
	0824-OFD-TPT-14		2.70	2.77	2.74	17:38	05:44		726	1989.24
	0824-OFD-TPT-15		2.70	2.76	2.73	17:44	05:52		728	1987.44
	0824-OFD-TPT-16		2.70	2.53	2.53	17:59	03:19		560	1416.80

Table 4 Perimeter – Burma Road Perimeter Sample Time/Rates/Volume

Burma Road Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/11/2017	0811-OFD-BPT-01	041723829	2.70	2.67	2.69	05:21	17:00	Day	699	1880.31
	0811-OFD-BPT-02		2.70	2.73	2.72	17:01	05:03	Night	722	1963.84
08/12/2017	0812-OFD-BPT-01	141704299	2.70	2.68	2.69	05:04	16:54	Day	710	1909.90
	0812-OFD-BPT-02		2.70	2.70	2.70	16:55	05:16	Night	741	2000.70
08/13/2017	0813-OFD-BPT-01	161715117	2.70	2.69	2.70	05:17	17:05	Day	708	1911.60
	0813-OFD-BPT-02		2.70	2.70	2.70	17:06	05:12	Night	726	1960.20
08/14/2017	0814-OFD-BPT-01	621701286	2.70	2.70	2.70	05:13	16:56	Day	703	1898.10
	0814-OFD-BPT-02		2.70	2.70	2.70	16:58	05:29	Night	751	2027.70
08/15/2017	0815-OFD-BPT-01	241703490	2.70	2.70	2.70	05:30	17:03	Day	693	1871.10
	0815-OFD-BPT-02		2.70	2.67	2.69	17:04	05:15	Night	731	1966.39
08/16/2017	0816-OFD-BPT-01	311700413	2.70	2.68	2.69	05:16	17:08	Day	712	1915.28
	0816-OFD-BPT-02		2.70	2.68	2.69	17:09	05:30	Night	741	1993.29
08/17/2017	0817-OFD-BPT-01	331716281	2.70	2.71	2.71	05:32	17:15	Day	703	1905.13
	0817-OFD-BPT-02		2.70	2.71	2.71	17:16	05:38	Night	742	2010.82
08/18/2017	0818-OFD-BPT-01	041724633	2.70	2.69	2.70	05:39	17:16	Day	697	1881.90
	0818-OFD-BPT-02		2.70	2.68	2.69	17:17	05:08	Night	711	1912.59
08/19/2017	0819-OFD-BPT-01	031726836	2.70	2.68	2.69	05:09	17:03	Day	714	1920.66
	0819-OFD-BPT-02		2.70	2.75	2.73	17:04	05:18	Night	734	2003.82
08/20/2017	0820-OFD-BPT-01	151704924	2.70	2.69	2.70	05:19	17:01	Day	702	1895.40
	0820-OFD-BPT-02		2.70	2.69	2.70	17:02	05:08	Night	726	1960.20
08/21/2017	0821-OFD-BPT-01	351706273	2.70	2.69	2.70	05:09	16:50	Day	701	1892.70
	0821-OFD-BPT-02		2.70	2.67	2.69	16:51	05:17	Night	746	2006.74
08/22/2017	0822-OFD-BPT-01	511702333	2.70	2.65	2.68	05:18	16:55	Day	697	1867.96
	0822-OFD-BPT-02		2.70	2.70	2.70	16:56	05:23	Night	747	2016.90
08/23/2017	0823-OFD-BPT-01	311700421	2.70	2.71	2.71	05:24	17:09	Day	705	1910.55
	0823-OFD-BPT-02		2.70	2.71	2.71	17:10	05:07	Night	717	1943.07
08/24/2017	0824-OFD-BPT-01	321720445	2.70	2.68	2.69	05:08	16:54	Day	706	1899.14
	0824-OFD-BPT-02		2.70	2.73	2.72	16:54	05:11	Night	737	2004.64

Table 5 Perimeter – Launch Ramp Perimeter Sample Time/Rates/Volume

Launch Ramp Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/11/2017	0811-OFD-LRP-01	041723828	2.70	2.69	2.70	06:08	18:03	Day	715	1930.50
	0811-OFD-LRP-02		2.70	2.69	2.70	06:20	18:14		714	1927.80
	0811-OFD-LRP-03		2.70	2.66	2.68	18:04	06:13	Night	729	1953.72
	0811-OFD-LRP-04		2.70	2.69	2.70	18:15	06:26		731	1973.70
08/12/2017	0812-OFD-LRP-01	141704298	2.70	2.69	2.70	06:15	17:54	Day	699	1887.30
	0812-OFD-LRP-02		2.70	2.70	2.70	06:27	18:06		699	1887.30
	0812-OFD-LRP-03		2.70	2.72	2.71	17:55	06:04	Night	729	1975.59
	0812-OFD-LRP-04		2.70	2.69	2.70	18:07	06:18		731	1973.70
08/13/2017	0813-OFD-LRP-01	161715119	2.70	2.69	2.70	06:05	17:59	Day	714	1927.80
	0813-OFD-LRP-02		2.70	2.70	2.70	06:19	18:11		712	1922.40
	0813-OFD-LRP-03		2.70	2.70	2.70	18:00	06:11	Night	731	1973.70
	0813-OFD-LRP-04		2.70	2.71	2.71	18:12	06:21		729	1975.59
08/14/2017	0814-OFD-LRP-01	621701287	2.70	2.67	2.69	06:12	18:08	Day	716	1926.04
	0814-OFD-LRP-02		2.70	2.68	2.69	06:22	18:19		717	1928.73
	0814-OFD-LRP-03		2.70	2.68	2.69	18:09	06:31	Night	742	1995.98
	0814-OFD-LRP-04		2.70	2.68	2.69	18:20	06:40		740	1990.60
08/15/2017	0815-OFD-LRP-01	241703491	2.70	2.68	2.69	06:32	18:24	Day	712	1915.28
	0815-OFD-LRP-02		2.70	2.70	2.70	06:41	18:36		715	1930.50
	0815-OFD-LRP-03		2.70	2.70	2.70	18:25	06:09	Night	704	1900.80
	0815-OFD-LRP-04		2.70	2.68	2.69	18:37	06:22		705	1896.45
08/16/2017	0816-OFD-LRP-01	311700414	2.70	2.70	2.70	06:10	18:07	Day	717	1935.90
	0816-OFD-LRP-02		2.70	2.68	2.69	06:22	18:17		715	1923.35
	0816-OFD-LRP-03		2.70	2.68	2.69	18:08	06:08	Night	720	1936.80
	0816-OFD-LRP-04		2.70	2.68	2.69	18:19	06:21		722	1942.18
08/17/2017	0817-OFD-LRP-01	331716276	2.70	2.66	2.68	06:09	17:58	Day	709	1900.12
	0817-OFD-LRP-02		2.70	2.65	2.68	06:22	18:10		708	1897.44
	0817-OFD-LRP-03		2.70	2.70	2.70	17:59	06:12	Night	733	1979.10
	0817-OFD-LRP-04		2.70	2.70	2.70	18:11	06:27		736	1987.20

Launch Ramp Perimeter Samples										
Sample Date	Sample Number	COC	Pre-flow Rate (L/min)	Post-flow Rate (L/min)	Avg (L/min)	Time On	Time Off	Day/Night Shift	Total Minutes	Sample Volume (Liters)
08/18/2017	0818-OFD-LRP-01	041724635	2.70	2.69	2.70	06:13	17:57	Day	704	1900.80
	0818-OFD-LRP-02		2.70	2.63	2.67	06:28	18:08		700	1869.00
	0818-OFD-LRP-03		2.70	2.68	2.69	17:58	05:55	Night	717	1928.73
	0818-OFD-LRP-04		2.70	2.67	2.69	18:09	06:08		719	1934.11
08/19/2017	0819-OFD-LRP-01	241703539	2.70	2.69	2.70	05:56	17:54	Day	718	1938.60
	0819-OFD-LRP-02		2.70	2.66	2.68	06:09	18:05		716	1918.88
	0819-OFD-LRP-03		2.70	2.72	2.71	17:55	05:58	Night	723	1959.33
	0819-OFD-LRP-04		2.70	2.71	2.71	18:06	06:11		725	1964.75
08/20/2017	0820-OFD-LRP-01	151704925	2.70	2.67	2.69	05:59	17:53	Day	714	1920.66
	0820-OFD-LRP-02		2.70	2.66	2.68	06:12	18:06		714	1913.52
	0820-OFD-LRP-03		2.70	2.67	2.69	17:54	06:06	Night	732	1969.08
	0820-OFD-LRP-04		2.70	2.67	2.69	18:07	06:24		737	1982.53
08/21/2017	0821-OFD-LRP-01	351706271	2.70	2.68	2.69	06:07	17:56	Day	709	1907.21
	0821-OFD-LRP-02		2.70	2.70	2.70	06:24	18:07		703	1898.10
	0821-OFD-LRP-03		2.70	2.76	2.73	17:57	06:07	Night	730	1992.90
	0821-OFD-LRP-04		2.70	2.77	2.74	18:08	06:16		728	1994.72
08/22/2017	0822-OFD-LRP-01	511702331	2.70	2.68	2.69	06:08	17:55	Day	707	1901.83
	0822-OFD-LRP-02		2.70	2.66	2.68	06:16	18:08		712	1908.16
	0822-OFD-LRP-03		2.70	2.70	2.70	17:56	06:51	Night	775	2092.50
	0822-OFD-LRP-04		2.70	2.74	2.72	18:09	07:01		772	2099.84
08/23/2017	0823-OFD-LRP-01	311700422	2.70	2.64	2.67	06:53	18:07	Day	674	1799.58
	0823-OFD-LRP-02		2.70	2.64	2.67	07:03	18:16		673	1796.91
	0823-OFD-LRP-03		2.70	2.77	2.74	18:08	06:34	Night	746	2044.04
	0823-OFD-LRP-04		2.70	2.75	2.73	18:17	06:44		747	2039.31
08/24/2017	0824-OFD-LRP-01	331716785	2.70	2.65	2.68	06:36	18:14	Day	698	1870.64
	0824-OFD-LRP-02		2.70	2.70	2.70	06:46	18:24		698	1884.60
	0824-OFD-LRP-03		2.70	2.75	2.73	18:15	06:27	Night	732	1998.36
	0824-OFD-LRP-04		2.70	2.73	2.72	18:25	06:37		732	1991.04

3.0 Sampling Media and Target Analysis

Dust Monitoring Sample Methods

TSI DustTrak DRX 8533

The DustTrak DRX Aerosol Monitors are laser photometers that simultaneously measure mass and size fraction. These monitors are continuous, real-time, 90˚ light-scattering laser photometers that simultaneously measure size-segregated mass fraction concentration corresponding to PM2.5, PM10, and Total PM size fraction. They combine both particle cloud (total area of scattered light) and single particle detection to achieve mass fraction measurements. This size-segregated mass fraction measurement technique is superior to either a basic photometer or optical counter (OPC). It delivers the mass concentration of a photometer and the size resolution of an OPC.

- Photometers can be used at high mass concentration, but they do not give any size information and significantly underestimate large particle mass concentrations.
- OPC's provide size and count information; however, they do not provide any mass concentration information and cannot be used in high mass concentration environments.

TrakPro software shall be utilized for exposure studies and environmental dust monitoring. TrakPro™ Data Analysis Software is a Microsoft Windows®-based software program that works with a variety of TSI data logging instruments. This software helps pre-program instruments, store and organize test data, and generate detailed graphs and reports needed to effectively communicate results.

Perimeter Air Sample Methods – CARB Modified TEM

Analysis of all air samples shall follow the analytical method specified by the United States Environmental Protection Agency, Asbestos Hazard Emergency Response ACT (AHERA) criteria for asbestos (40 CFR, Part 763 Subpart E, Appendix A, adopted October 30, 1987), with the following exceptions CARB Modified TEM:

- The analytical sensitivity shall be 0.001 structures per cubic centimeter (0.001 s/cc); and
- All asbestos structures with an aspect ratio greater than three to one (3 to 1) shall be counted irrespective of length.

The results of the analysis of air samples shall be reported as transmission electron microscopy (TEM) asbestos structures per cubic centimeter (s/cc).

The method requires the use of TEM 25 mm air sampling cassettes, designed and manufactured to meet all applicable NIOSH, OSHA, and EPA standards.

Sampling media for perimeter sampling shall comply with the following:

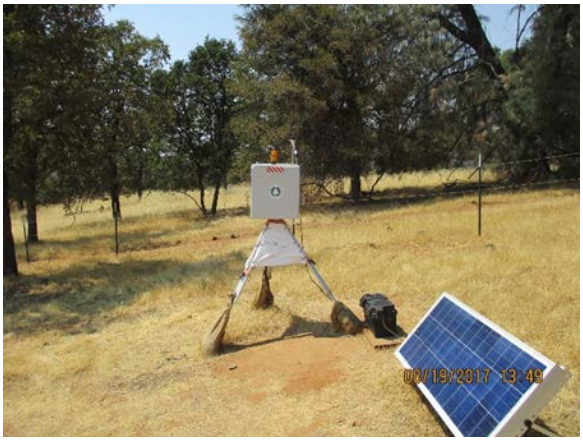
- 0.45 µm pore size, Mixed Cellulose Esther (MCE) Filter Material
- 5.0 µm Filter is placed under the 0.45 µm filter as a diffuser
- 2" Static Conductive Extension Cowl
- Meets AHERA Requirements Asbestos TEM 25 mm 0.45 µm Cassette-Individual

4.0 Photo Documentation

Table 6 Photo Documentation of Air Monitoring Stations and Weather Stations – Current Condition

Station 1 – WP 246 Intake Yard	Station 2 – WP 247 Upper Overlook Entry
Station 3 – WP 248 Upper Overlook	Station 4 – WP 249 Canyon Drive

Station 5 – WP 278 N. Diversion Dam	Station 6 – WP 251 Diversion Dam Yard
Station 7 – WP 279 SE Diversion Dam	Station 8 – WP 277 SW Diversion Dam

Station 9 – 017A Burma Road	Station 10 – WP 281 Cherokee Rd.
	
Station 11 – WP 009A Launch Ramp Parking	Station 12 – WP 010A Launch Ramp Turnaround

Station 13 – WP 019A E. Diversion Dam **(PENDING APPROVAL)**

Station 14 – WP 020A SE Canal **(PENDING APPROVAL)**

Station 15 – WP 021A SW Canal **(PENDING APPROVAL)**

Weather Station #1 – WP 045A	Weather Station #2 – WP 044A

5.0 Air Sampling Equipment Malfunctions & Corrective Actions

Table 7 – Equipment Failures

EQUIPMENT	Date/Time	EXCEPTION	REMEDY
DM10	08/13/20171830 hrs	WP281 Station 10 Cherokee Road Dust Trak stopped at 1830hrs to 8/14/17 at 0700 hrs. Night QC did not recognize unit not operating. This affected data for 8/13/17 PM shift and 8/14/17 AM shift during those time frames. Technician checked and said during sample change out he failed to hit start button after QC.	Night QC was coached in what to do to ensure units are operating during QC
DM12	08/14/2017 0225 hrs	Zero calibration was performed and unit in operation again. Night QC did not recognize unit not operating. Unit was not operating until 8/14/2017 0622 hrs.	Night QC was coached in what to do to ensure units are operating during QC.
DM21	08/17/2017 1654 hrs	At night QC first check, IH Tech found Dust Trak not running. Data collection restarted 8/17/17 2121 hrs.	Night QC started the Dust Trak.
DM14	08/21/2017 2057 hrs	WP020A Station 14 SE Canal Dust Trak experienced internal pump failure. Review of Dust Data indicates that the internal pump became nonoperational on 8/21 at 2057 hrs to 8/22 at 0842 hrs.	Dust Trak was replaced on 8/22 at 0842 hrs.
DM08	08/22/2017 0135 hrs	Field Technician discovered Dust Trak at WP277 SW Diversion Dam not running during PM sample change out. Both the internal DT batteries and the external 12V battery were dead. Environet Data indicates that the monitor was not running until 08/23 0539 hrs.	Batteries were replaced and issue was resolved.
Air Sampling Pump	08/24/2017 0319 hrs	WP281 Cherokee Rd's asbestos pump was discovered off during the PM sample change out on the morning of 8/25. The pump history shows it flow faulting at 0319. The pump was not running	The pump history was used to determine the time it shut off and calculate total minutes of run time. Faulty pump was replaced and removed from field for evaluation.

EQUIPMENT	Date/Time	EXCEPTION	REMEDY
SKC Pump	08/11/2017 09:59 hrs	Sample ID 0811-OFD-PMT-07. SKC pump was not running at first QC.	Pump was swapped and the pump history was used to calculate the total minutes from both pumps added.
SKC Pump	08/21/2017 0242 hrs	Sample ID 0821-OFD-PMT-05. Intake pump flow fault.	Pump was replaced. total run time from both pumps was 684 minutes. Original pump start & stop times were 1736/0242. Replacement pump start & stop times were 0318/0536. Lowest flow rate was used as default average.
SKC Pump	08/23/2017 0248 hrs	Sample ID: 0823-OFD-PMT-05. Pump was not operating at QC2.	Pump was replaced. Total run time for both pumps 542 minutes

Table 8 – Sample Failure

Date	Sample ID	Discussion
There were no asbestos perimeter sample failures for this time period.		

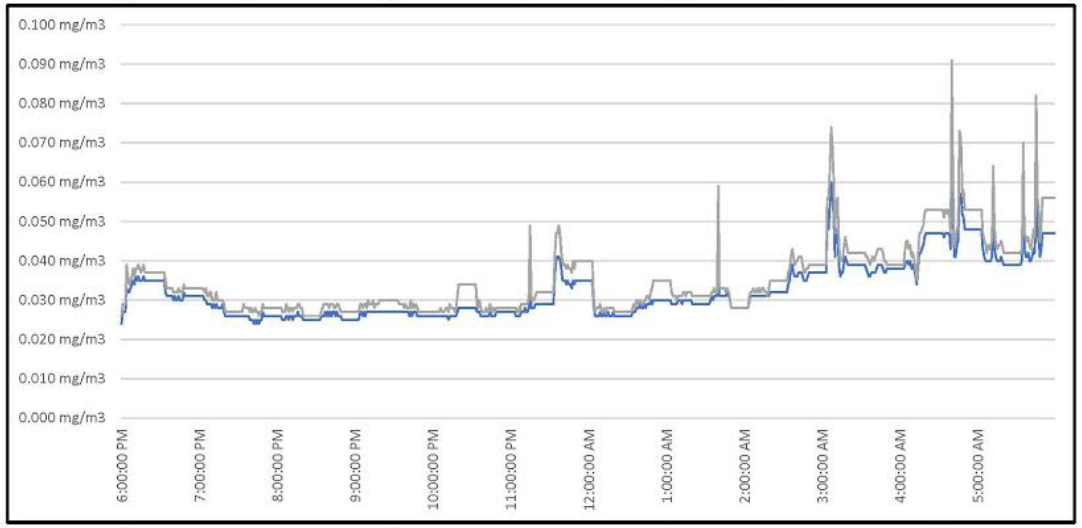
6.0 Exceedances & Corrective Actions

Table 9 – Upper Overlook Entry, Upper Overlook, and Canyon Drive Exceedance 08/15/2017

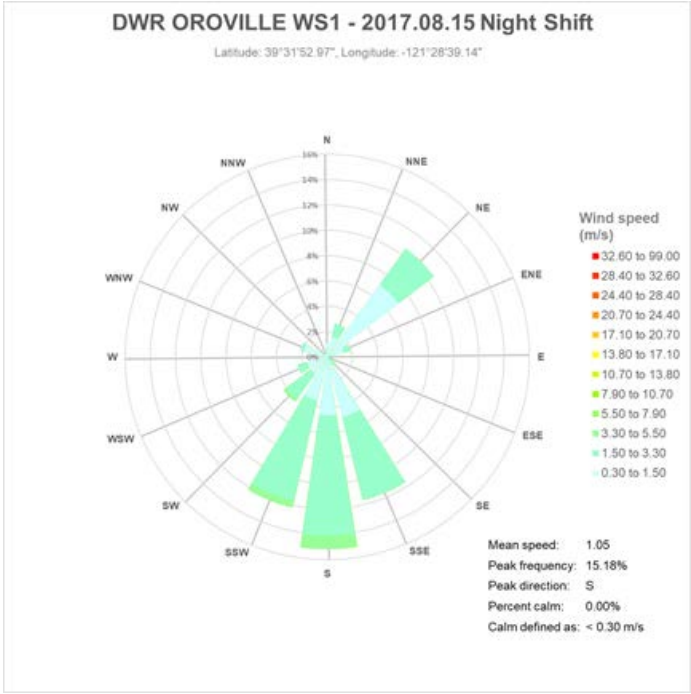
WP 247 Upper Overlook Entry, WP 248 Upper Overlook & WP 249 Canyon Drive							
Sample ID	Location	Non-Asbestos Structures	Asbestos Types	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
				≥ 0.5 µm < 5 µm	≥ 5 µm		
0815-OFD-PMT-06	WP247 Upper Overlook Entry PM Shift	11	Actinolite	4	5	0.0010	0.0087
		Non-asbestos structures reported above includes a contribution from non-regulated amphiboles					
0815-OFD-PMT-07	WP248 Upper Overlook PM Shift	8	Actinolite	7	4	0.0010	0.0110
		Non-asbestos structures reported above includes a contribution from non-regulated amphiboles					
0815-OFD-PMT-08	WP249 Canyon Drive PM Shift	7	Actinolite	6	2	0.0010	0.0077
		Non-asbestos structures reported above includes a contribution from non-regulated amphiboles					
Investigative & Corrective Actions	**WP247 Upper Overlook Entry 08/15/2017 Night Shift:** • 2233 No work activity near air monitoring station observed by technician per field notes. • 0310 No work activity near air monitoring station observed by technician per field notes. Road is dry. **WP248 Upper Overlook 08/15/2017 Night Shift:** • 2229 Vehicle traffic observed on dry aggregate covered parking area creating visible dust emissions. • 0306 No work activity near air monitoring station observed by technician per field notes. **WP249 Canyon Drive 08/15/2017 Night Shift:** • 2240 Vehicle traffic observed traveling on Canyon Drive. • 0320 No work activity near air monitoring station observed by technician per field notes. **Corrective Actions:** • Notify DWR of the event. • Increase water application for dust suppression at parking area to reduce airborne fiber counts. • Identify origin of aggregate covering the parking area, conduct bulk sampling if needed.						

WP 247 Upper Overlook Entry

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/15/17 6:00 PM
Overlook Entry	Dustrak DRX	8533142005	39°31'51.40"N, 121°28'36.65"W	Episode Stop:	8/16/17 5:59 AM

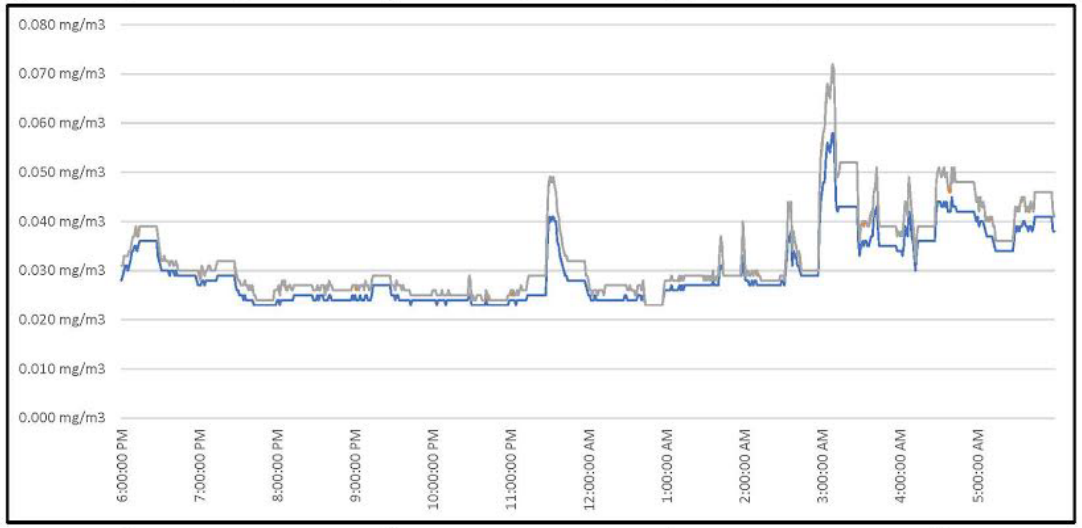


PM2.5 (mg/m³)	PM10 (mg/m³)	Mass Conc. Total (mg/m³)
Min 0.024	**Min** 0.026	**Min** 0.026
Avg 0.032	**Avg** 0.035	**Avg** 0.035
Max 0.066	**Max** 0.091	**Max** 0.091

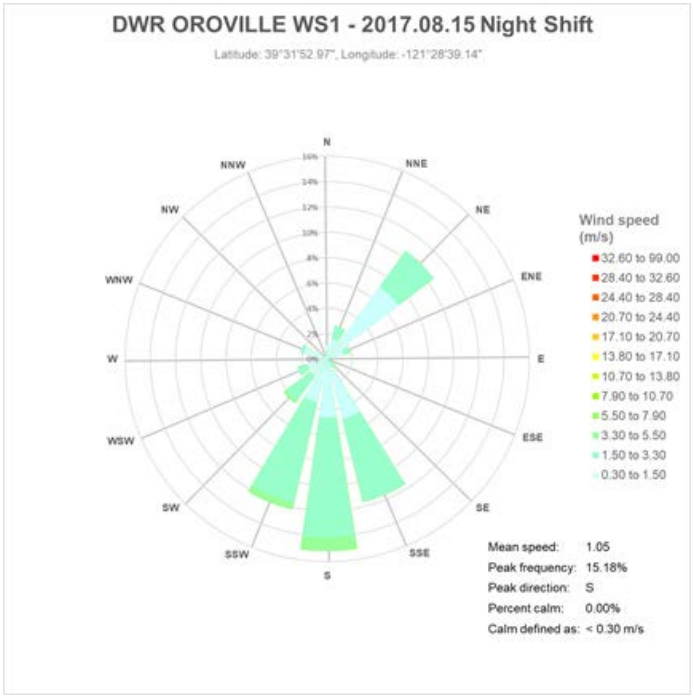


WP 248 Upper Overlook

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/15/17 6:00 PM
Upper Overlook	Dustrak DRX	8533142802	39°31'47.46"N, 121°28'41.46"W	Episode Stop:	8/16/17 5:59 AM

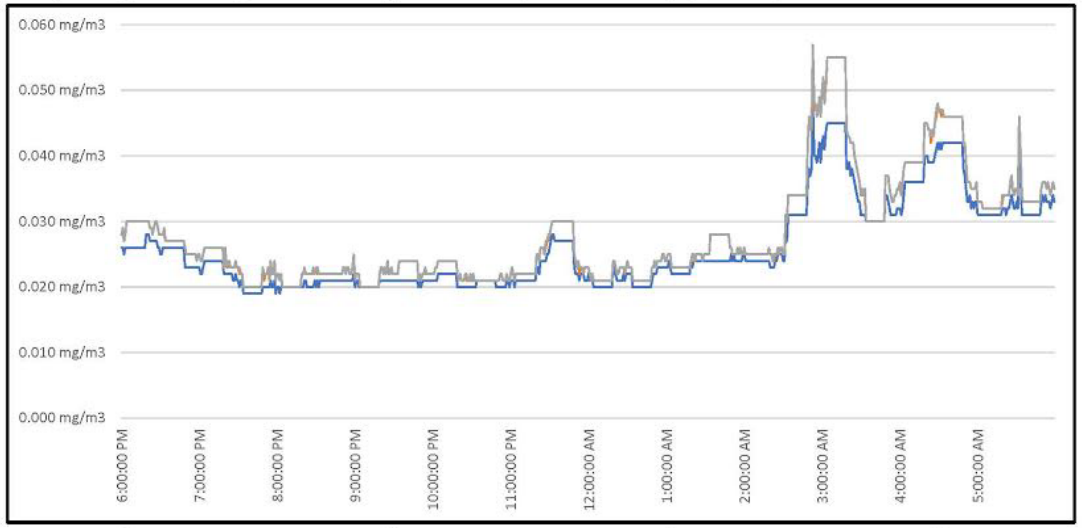


PM2.5 (mg/m³)	PM10 (mg/m³)	Mass Conc. Total (mg/m³)
Min 0.023	**Min** 0.023	**Min** 0.023
Avg 0.030	**Avg** 0.033	**Avg** 0.033
Max 0.058	**Max** 0.072	**Max** 0.072



WP 249 Canyon Drive

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/15/17 6:00 PM
Canyon Dr	Dustrak DRX	8533172206	39°31'40.23"N, 121°28'52.17"W	Episode Stop:	8/16/17 5:59 AM



PM2.5 (mg/m³)	PM10 (mg/m³)	Mass Conc. Total (mg/m³)
Min 0.019	**Min** 0.020	**Min** 0.020
Avg 0.026	**Avg** 0.028	**Avg** 0.028
Max 0.048	**Max** 0.057	**Max** 0.057

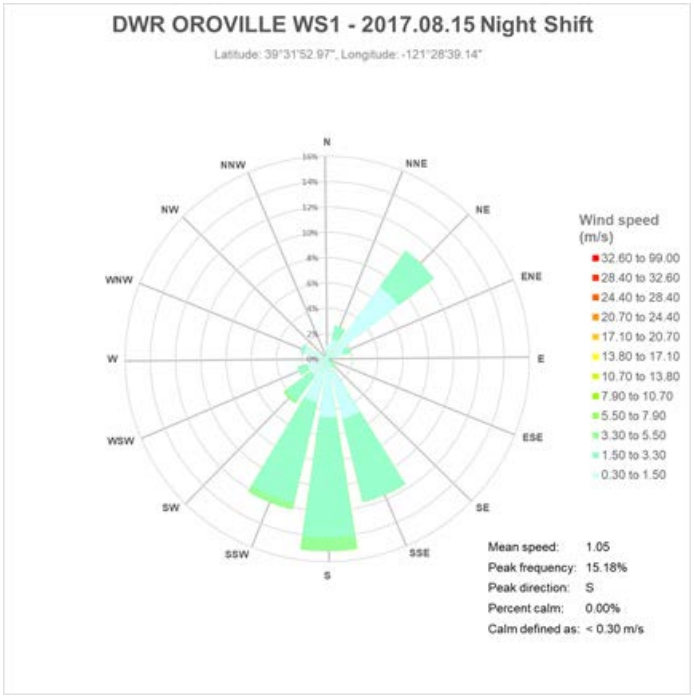
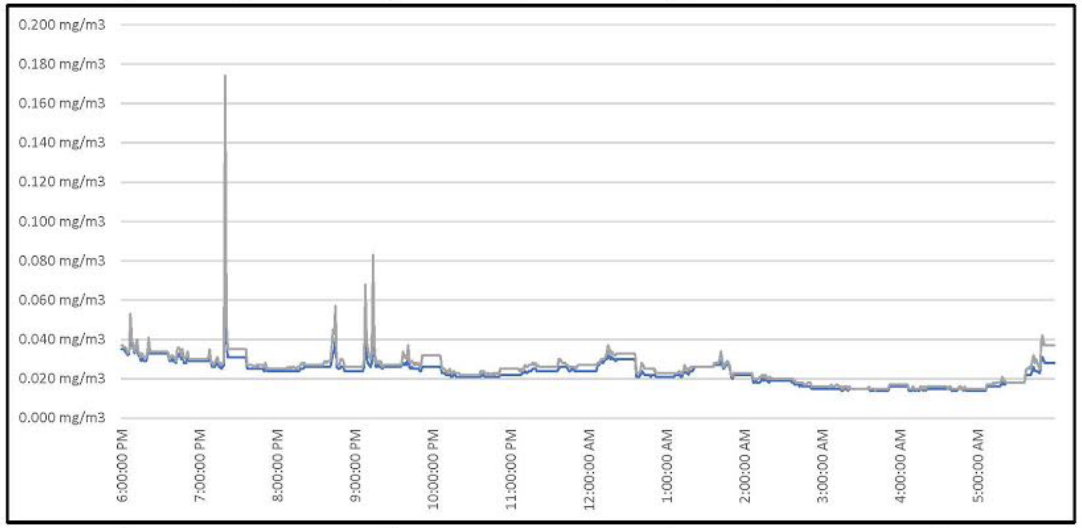


Table 10 – Launch Ramp Turnaround Exceedance 08/19/2017

WP 010A Launch Ramp Turnaround							
Sample ID	Location	Non-Asbestos Structures	Asbestos Types	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
				≥ 0.5 µm < 5 µm	≥ 5 µm		
0819-OFD-LRP-04	WP010A Launch Ramp Turnaround PM Shift	4	Actinolite	1	5	0.0010	0.0059
Investigative & Corrective Actions	**WP010A Launch Ramp Turnaround 08/19/2017 Night Shift:** • 2205 Drilling operations for the secant wall construction downhill (south) of air monitoring station observed by technician per field notes. • 0236 No work activity observed by technician per field notes. The drilling operations near station were shut down. **Corrective Actions:** • Notify DWR of the event. • Implement NOA dust control measures during construction activities. • Increase water application during night shift for dust suppression.						

WP 010A Launch Ramp Turnaround

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/19/17 6:00 PM
L.R. Turnaround	Dustrak DRX	8533113406	39°32'50.64"N, 121°29'50.25"W	Episode Stop:	8/20/17 5:59 AM



PM2.5 (mg/m³)	PM10 (mg/m³)	Mass Conc. Total (mg/m³)
Min 0.014	Min 0.014	Min 0.014
Avg 0.023	Avg 0.025	Avg 0.025
Max 0.105	Max 0.173	Max 0.174

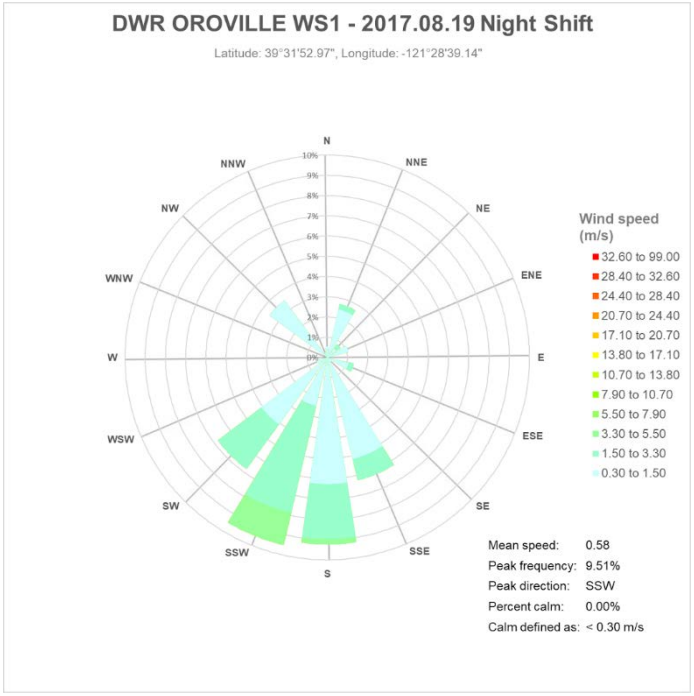
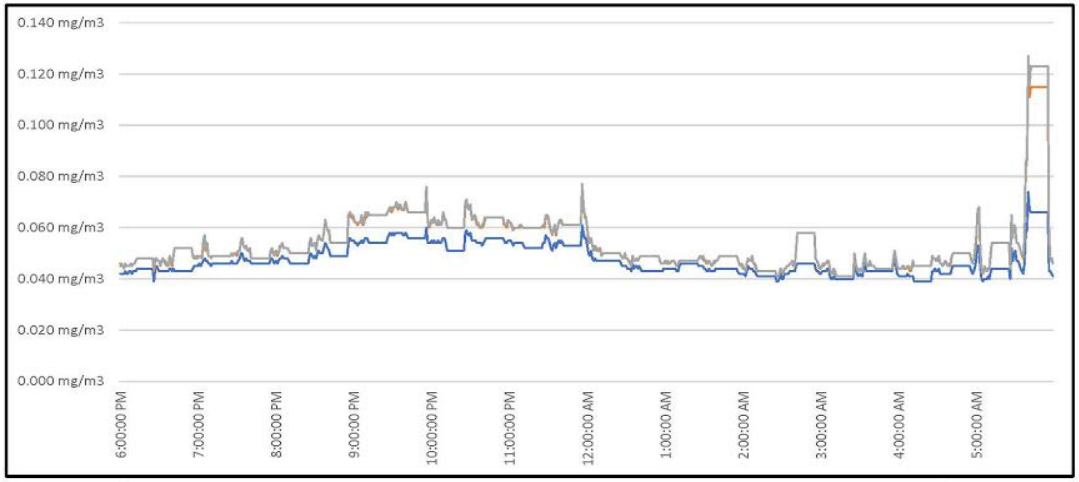


Table 11 – Cherokee Road Exceedance 08/22/2017

WP 281 Cherokee Rd							
Sample ID	Location	Non-Asbestos Structures	Asbestos Types	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
				≥ 0.5 µm < 5 µm	≥ 5 µm		
0822-OFD-TPT-16	WP281 Cherokee Rd. PM Shift	0	Actinolite	4	1	0.0010	0.0050
Investigative & Corrective Actions	**WP281 Cherokee Rd 08/22/2017 Night Shift:** • 1945 No work activity observed by technician per field notes. Light plant running on access road below station and vehicle traffic on Cherokee Rd was documented on the field notes. • 2031 A large cloud of dust was observed by the technician off the project site west of the perimeter which potentially could have contaminated the sample during the shift. • 0050 No work activity observed by technician per field notes. Light plant running on access road below station and vehicle traffic on Cherokee Rd was documented on the field notes. Wildlife (deer) was observed near the air monitoring station. • No construction activity was observed by the technician at the Diversion Dam area during the PM shift. **Corrective Actions:** • Notify DWR of the event. • Increase water application during night shift for dust suppression.						

WP 281 Cherokee Rd

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/22/17 6:00 PM
Cherokee Rd	Dustrak DRX	8533151202	39°32'13.44"N, 121°32'48.07"W	Episode Stop:	8/23/17 5:59 AM



PM2.5 (mg/m³)	PM10 (mg/m³)	Mass Conc. Total (mg/m³)
Min 0.039	**Min** 0.041	**Min** 0.041
Avg 0.047	**Avg** 0.054	**Avg** 0.054
Max 0.074	**Max** 0.125	**Max** 0.127

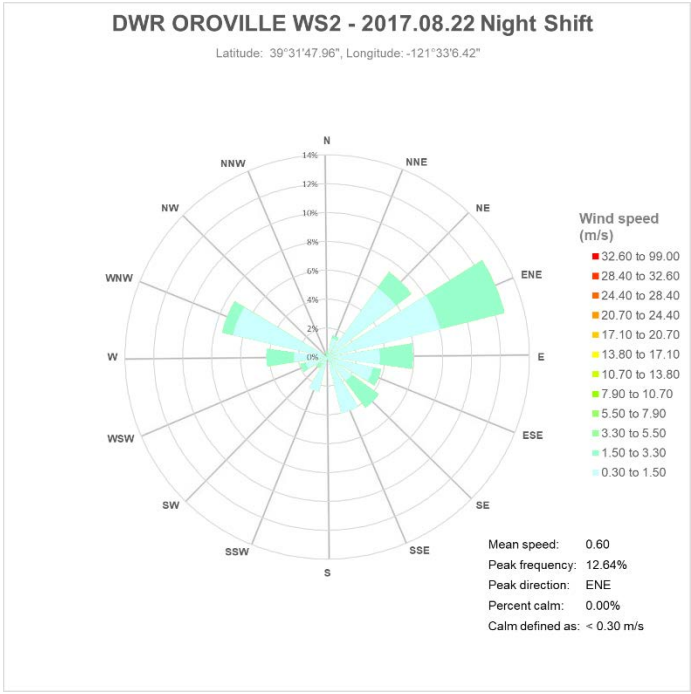
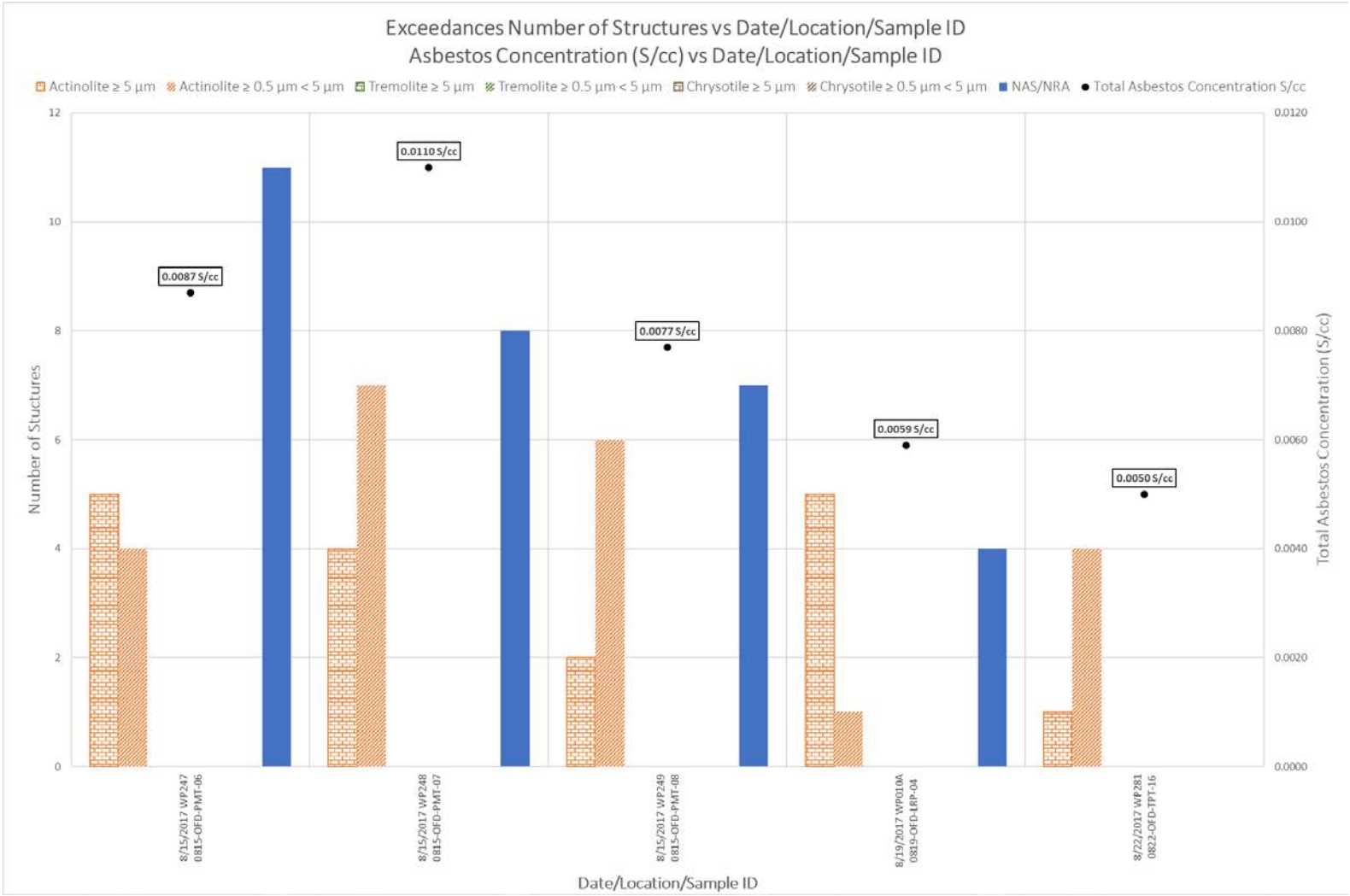


Table 12 Exceedance Chart



7.0 Laboratory Analysis Summary

Copies of the Laboratory reports are included as Appendix A – Laboratory

Table Heading Explanations	
Zone	A designation of area of the work zone.
Sample ID	An alpha-numeric identified, unique to a particular sample.
Location	A description of the location where the sample was collected, often accompanied by a way point.
Non – Asbestos Structures	Non-asbestos minerals that have fibrous morphology and aspect ratio of 3:1, irrespective of length.
Asbestos Type	Regulated asbestiforms of the following minerals: chrysotile (fibrous serpentine), crocidolite (fibrous riebeckite), amosite (fibrous cummingtonite—grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthophyllite.
Structure	A microscopic bundle, cluster, fiber, or matrix which may contain asbestos ranked by aspect ratio of 3:1 and length.
Analytical Sensitivity	The analytical sensitivity is defined as the concentration that would result from the finding of one fiber or structure. The higher the total volume of air pulled through the filter and the more filter area analyzed the lower the analytical sensitivity. The target analytical sensitivity for this method is 0.001 structures per cc of air (s/cc).
Asbestos Concentration	The asbestos concentration in structures per cc (S/cc) is equal to the analytical sensitivity for that sample multiplied by the number of asbestos structures identified. BCAQMD has approved the DWR Community Action Level at the Perimeter of the Oroville Dam property of 0.005 regulated asbestos structures/cubic centimeter (S/cc) of air.

Table 13 - 2017.08.11 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0811-OFD-PMT-01	WP246 AM Intake Yard	0	Actinolite	1	0	0.0010	0.00095
	0811-OFD-PMT-02	WP247 AM Upper Overlook Entry	0	None Detected			0.0010	<0.0010
	0811-OFD-PMT-03	WP248 AM Upper Overlook	0	Tremolite	0	1	0.0010	0.00096
	0811-OFD-PMT-04	WP249 AM Canyon Drive	0	None Detected			0.0010	<0.0010
	0811-OFD-PMT-05	WP246 PM Intake Yard	0	None Detected			0.0010	<0.0010
	0811-OFD-PMT-06	WP247 PM Upper Overlook Entry	0	None Detected			0.0010	<0.0010
	0811-OFD-PMT-07	WP248 PM Upper Overlook	0	None Detected			0.0010	<0.0010
	0811-OFD-PMT-08	WP249 PM Canyon Drive	0	None Detected			0.0009	<0.0009
Diversion Dam	0811-OFD-TPT-01	WP278 AM N. Diversion Dam	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0811-OFD-TPT-02	WP251 AM Diversion Dam Yard	0	None Detected			0.0010	<0.0010
	0811-OFD-TPT-03	WP279 AM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0811-OFD-TPT-04	WP277 AM SW Diversion Dam	0	None Detected			0.0010	<0.0010
	0811-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	0	Actinolite	0	1	0.0010	0.00097
	0811-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0811-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	1	Actinolite	1	0	0.0010	0.00097
	0811-OFD-TPT-08	WP281 AM Cherokee Road	0	None Detected			0.0010	<0.0010
	0811-OFD-TPT-09	WP278 PM N. Diversion Dam	0	Actinolite	0	1	0.0010	0.00097
	0811-OFD-TPT-10	WP251 PM Diversion Dam Yard	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0811-OFD-TPT-11	WP279 PM SE Diversion Dam	0	Actinolite	1	0	0.0010	0.00096
	0811-OFD-TPT-12	WP277 PM SW Diversion Dam	0	None Detected			0.0010	<0.0010
	0811-OFD-TPT-13	WP019A PM E. Diversion Dam (Pending Approval)	1	None Detected			0.0010	<0.0010
	0811-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0811-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	2	None Detected			0.0010	<0.0010
	0811-OFD-TPT-16	WP281 PM Cherokee Road	0	None Detected			0.0010	<0.0010
Burma Road	0811-OFD-BPT-01	WP017A AM Burma Road	0	None Detected			0.0010	<0.0010
	0811-OFD-BPT-02	WP017A PM Burma Road	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
Launch Ramp	0811-OFD-LRP-01	WP009A AM Launch Ramp Parking	1	None Detected			0.0010	<0.0010
	0811-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1	Actinolite	0	1	0.0010	0.00095
				Chrysotile	1	0		0.00095
				Total for all types.....				0.0019
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0811-OFD-LRP-03	WP009A PM Launch Ramp Parking	0	None Detected			0.0009	<0.0009
	0811-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	0	Actinolite	0	1	0.0010	0.00099

Table 14 - 2017.08.12 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0812-OFD-PMT-01	WP246 AM INTAKE YARD	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-PMT-02	WP247 AM UPPER OVERLOOK ENTRY	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-PMT-03	WP248 AM UPPER OVERLOOK	0	None Detected			0.0010	<0.0010
	0812-OFD-PMT-04	WP249 AM CANYON DRIVE	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-PMT-05	WP246 PM INTAKE YARD	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-PMT-06	WP247 PM UPPER OVERLOOK ENTRY	1	Actinolite	0	1	0.0010	0.00098
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-PMT-07	WP248 PM UPPER OVERLOOK	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-PMT-08	WP249 PM CANYON DRIVE	0	None Detected			0.0010	<0.0010
Diversion Dam	0812-OFD-TPT-01	WP278 AM N DIVERSION DAM	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-TPT-02	WP251 AM DIVERSION DAM YARD	5	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-TPT-03	WP279 AM SE DIVERSION DAM	2	None Detected			0.0010	<0.0010
	0812-OFD-TPT-04	WP277 AM SW DIVERSION DAM	1	None Detected			0.0010	<0.0010
	0812-OFD-TPT-05	WP019A AM E DIVERSION DAM (Pending Approval)	9	None Detected			0.0010	<0.0010
	0812-OFD-TPT-06	WP020A AM SE CANAL (Pending Approval)	5	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-TPT-07	WP021A AM SW CANAL (Pending Approval)	0	None Detected			0.0010	<0.0010
	0812-OFD-TPT-08	WP281 AM CHEROKEE RD	3	None Detected			0.0010	<0.0010
	0812-OFD-TPT-09	WP278 PM N DIVERSION DAM	2	None Detected			0.0009	<0.0010
	0812-OFD-TPT-10	WP251 PM DIVERSION DAM YARD	2	None Detected			0.0009	<0.0009

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-TPT-11	WP279 PM SE DIVERSION DAM	0	None Detected			0.0010	<0.0010
	0812-OFD-TPT-12	WP277 PM SW DIVERSION DAM	3	None Detected			0.0010	<0.0010
	0812-OFD-TPT-13	WP019A PM E DIVERSION DAM (Pending Approval)	0	None Detected			0.0009	<0.0009
	0812-OFD-TPT-14	WP020A PM SE CANAL (Pending Approval)	0	None Detected			0.0010	<0.0010
	0812-OFD-TPT-15	WP021A PM SW CANAL (Pending Approval)	2	None Detected			0.0010	<0.0010
	0812-OFD-TPT-16	WP281 PM CHEROKEE RD	2	None Detected			0.0009	<0.0010
Burma Road	0812-OFD-BPT-01	WP017A AM BURMA ROAD	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-BPT-02	WP017A PM BURMA ROAD	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
Launch Ramp	0812-OFD-LRP-01	WP009A AM LAUNCH RAMP PARKING	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-LRP-02	WP010A AM LAUNCH RAMP TURNAROUND	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0812-OFD-LRP-03	WP009A PM LAUNCH RAMP PARKING	0	None Detected			0.0010	<0.0010
	0812-OFD-LRP-04	WP010A PM LAUNCH RAMP TURNAROUND	0	None Detected			0.0010	<0.0010

Table 15 - 2017.08.13 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0813-OFD-PMT-01	WP246 AM Intake Yard	1	Actinolite	0	1	0.0010	0.00099
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-PMT-02	WP247 AM Upper Overlook Entry	2	Actinolite	0	1	0.0010	0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-PMT-03	WP248 AM Upper Overlook	5	Actinolite	0	1	0.0010	0.00099
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-PMT-04	WP249 AM Canyon Drive	7	Actinolite	2	0	0.0010	0.0020
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-PMT-05	WP246 PM Intake Yard	20	Actinolite	2	0	0.0010	0.0019
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-PMT-06	WP247 PM Upper Overlook Entry	8	Actinolite	0	2	0.0010	0.0019
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-PMT-07	WP248 PM Upper Overlook	10	Actinolite	1	1	0.0010	0.0019
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-PMT-08	WP249 PM Canyon Drive	35	Actinolite	1	2	0.0010	0.0029
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
Diversion Dam	0813-OFD-TPT-01	WP278 AM N. Diversion Dam	0	None Detected			0.0010	<0.0010
	0813-OFD-TPT-02	WP251 AM Diversion Dam Yard	0	None Detected			0.0010	<0.0010
	0813-OFD-TPT-03	WP279 AM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0813-OFD-TPT-04	WP277 AM SW Diversion Dam	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0813-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	4	None Detected			0.0010	<0.0010
	0813-OFD-TPT-08	WP281 AM Cherokee Rd.	0	None Detected			0.0010	<0.0010
	0813-OFD-TPT-09	WP278 PM N. Diversion Dam	0	None Detected			0.0009	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0813-OFD-TPT-10	WP251 PM Diversion Dam Yard	0	Actinolite	0	2	0.0010	0.0019
	0813-OFD-TPT-11	WP279 PM SE Diversion Dam	0	None Detected			0.0009	<0.0009
	0813-OFD-TPT-12	WP277 PM SW Diversion Dam	0	None Detected			0.0009	<0.0009
	0813-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	0	None Detected			0.0010	<0.0010
	0813-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0813-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
	0813-OFD-TPT-16	WP281 PM Cherokee Rd.	2	None Detected			0.0009	<0.0009
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
Burma Road	0813-OFD-BPT-01	WP017A AM Burma Road	5	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0813-OFD-BPT-02	WP017A PM Burma Road	11	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
Launch Ramp	0813-OFD-LRP-01	WP009A AM Launch Ramp Parking	6	None Detected			0.0010	<0.0010
			Non-asbestos structures include a contribution from non-regulated amphiboles.					
	0813-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	4	None Detected			0.0010	<0.0010
			Non-asbestos structures include a contribution from non-regulated amphiboles.					
	0813-OFD-LRP-03	WP009A PM Launch Ramp Parking	8	None Detected			0.0010	<0.0010
			Non-asbestos structures include a contribution from non-regulated amphiboles.					
	0813-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	6	None Detected			0.0010	<0.0010
			Non-asbestos structures include a contribution from non-regulated amphiboles.					

Table 16 – 2017.08.14 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0814-OFD-PMT-01	WP246 AM Intake Yard	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0814-OFD-PMT-02	WP247 AM Upper Overlook Entry	8	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0814-OFD-PMT-03	WP248 AM Upper Overlook	5	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0814-OFD-PMT-04	WP249 AM Canyon Drive	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0814-OFD-PMT-05	WP246 PM Intake Yard	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0814-OFD-PMT-06	WP247 PM Upper Overlook Entry	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0814-OFD-PMT-07	WP248 PM Upper Overlook	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0814-OFD-PMT-08	WP249 PM Canyon Drive	6	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
Diversion Dam	0814-OFD-TPT-01	WP278 AM N. Diversion Dam	3	None Detected			0.0010	<0.0010
	0814-OFD-TPT-02	WP251 AM Diversion Dam Yard	0	None Detected			0.0010	<0.0010
	0814-OFD-TPT-03	WP279 AM SE Diversion Dam	1	None Detected			0.0010	<0.0010
	0814-OFD-TPT-04	WP277 AM SW Diversion Dam	0	None Detected			0.0010	<0.0010
	0814-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	2	None Detected			0.0010	<0.0010
	0814-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0814-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
	0814-OFD-TPT-08	WP281 AM Cherokee Rd.	0	None Detected			0.0010	<0.0010
	0814-OFD-TPT-09	WP278 PM N. Diversion Dam	4	None Detected			0.0010	<0.0010
	0814-OFD-TPT-10	WP251 PM Diversion Dam Yard	0	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0814-OFD-TPT-11	WP279 PM SE Diversion Dam	59	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0814-OFD-TPT-12	WP277 PM SW Diversion Dam	7	None Detected			0.0010	<0.0010
	0814-OFD-TPT-13	W019A PM E Diversion Dam (Pending Approval)	4	None Detected			0.0010	<0.0010
	0814-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	3	None Detected			0.0010	<0.0010
	0814-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	5	None Detected			0.0010	<0.0010
	0814-OFD-TPT-16	WP281 PM Cherokee Rd.	0	None Detected			0.0010	<0.0010
Burma Road	0814-OFD-BPT-01	WP017A AM Burma Road	0	None Detected			0.0010	<0.0010
	0814-OFD-BPT-02	WP017A PM Burma Road	2	None Detected			0.0010	<0.0010
Launch Ramp	0814-OFD-LRP-01	WP009A AM Launch Ramp Parking	4	None Detected			0.0009	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0814-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	0	None Detected			0.0009	<0.0010
	0814-OFD-LRP-03	WP009A PM Launch Ramp Parking	0	None Detected			0.0010	<0.0010
	0814-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	0	None Detected			0.0010	<0.0010

Table 17 - 2017.08.15 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0815-OFD-PMT-01	WP246 AM INTAKE YARD	0	Actinolite	1	0	0.0010	0.00096
	0815-OFD-PMT-02	WP247 AM UPPER OVERLOOK ENTRY	0	Actinolite	0	1	0.0010	0.00095
	0815-OFD-PMT-03	WP248 AM UPPER OVERLOOK	1	Actinolite	0	1	0.0010	0.00095
	0815-OFD-PMT-04	WP249 AM CANYON DRIVE	2	Actinolite	0	1	0.0010	0.00095
	0815-OFD-PMT-05	WP246 PM INTAKE YARD	0	Actinolite	1	1	0.0010	0.0019
	0815-OFD-PMT-06	WP247 PM UPPER OVERLOOK ENTRY	11	Actinolite	4	5	0.0010	0.0087
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-PMT-07	WP248 PM UPPER OVERLOOK	8	Actinolite	7	4	0.0010	0.0110
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-PMT-08	WP249 PM CANYON DRIVE	7	Actinolite	6	2	0.0010	0.0077
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
Diversion Dam	0815-OFD-TPT-01	WP278 AM N. Diversion Dam	11	Actinolite	0	1	0.0009	0.00095
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-02	WP251 AM Diversion Dam Yard	14	Actinolite	1	1	0.0010	0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-03	WP279 AM SE Diversion Dam	8	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-04	WP277 AM SW Diversion Dam	9	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	13	Actinolite	0	1	0.0010	0.00096
				Chrysotile	1	0		0.00096
				Total for all types.....				0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	10	Actinolite	1	0	0.0010	0.00096
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-08	WP281 AM Cherokee Rd.	8	Actinolite	0	1	0.0010	0.00097
				Chrysotile	1	0		0.00097

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
				Total for all types.....				0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-09	WP278 PM N. Diversion Dam	17	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-10	WP251 PM Diversion Dam Yard	28	None Detected			0.0010	<0.0010
	0815-OFD-TPT-11	WP279 PM SE Diversion Dam	24	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-12	WP277 PM SW Diversion Dam	7	Actinolite	2	1	0.0010	0.0029
	0815-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	7	None Detected			0.0010	<0.0010
	0815-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	4	Actinolite	0	1	0.0009	0.0009
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	9	None Detected			0.0010	<0.0010
	0815-OFD-TPT-16	WP281 PM Cherokee Rd.	8	Actinolite	0	1	0.0010	0.00096
Burma Road	0815-OFD-BPT-01	WP017A AM BURMA ROAD	1	Actinolite	1	1	0.0010	0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-BPT-02	WP017A PM BURMA ROAD	2	Actinolite	0	1	0.0010	0.00099
Launch Ramp	0815-OFD-LRP-01	WP009A AM LAUNCH RAMP PARKING	7	Actinolite	2	3	0.0010	0.0048
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-LRP-02	WP010A AM LAUNCH RAMP TURNAROUND	2	Actinolite	2	1	0.0009	0.0028
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-LRP-03	WP009A PM LAUNCH RAMP PARKING	7	Actinolite	2	2	0.0010	0.0038
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0815-OFD-LRP-04	WP010A PM LAUNCH RAMP TURNAROUND	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					

Table 18 – 2017.08.16 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0816-OFD-PMT-01	WP246 AM Intake Yard	10	Actinolite	1	0	0.0010	0.00096
	0816-OFD-PMT-02	WP247 AM Upper Overlook Entry	6	Actinolite	1	0	0.0010	0.00097
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0816-OFD-PMT-03	WP248 AM Upper Overlook	3	None Detected			0.0010	<0.0010
	0816-OFD-PMT-04	WP249 AM Canyon Drive	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0816-OFD-PMT-05	WP246 PM Intake Yard	2	None Detected			0.0010	<0.0010
	0816-OFD-PMT-06	WP247 PM Upper Overlook Entry	18	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0816-OFD-PMT-07	WP248 PM Upper Overlook	10	Actinolite	0	1	0.0010	0.00097
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0816-OFD-PMT-08	WP249 PM Canyon Drive	9	Actinolite	1	0	0.0010	0.00096
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
Diversion Dam	0816-OFD-TPT-01	WP278 AM N. Diversion Dam	0	None Detected			0.0009	<0.0009
	0816-OFD-TPT-02	WP251 AM Diversion Dam Yard	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-03	WP279 AM SE Diversion Dam	2	Actinolite	1	0	0.0010	0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-04	WP277 AM SW Diversion Dam	1	Actinolite	0	1	0.0010	0.00099
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0816-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-08	WP281 AM Cherokee Rd.	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-09	WP278 PM N. Diversion Dam	2	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-10	WP251 PM Diversion Dam Yard	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-11	WP279 PM SE Diversion Dam	7	None Detected			0.0009	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-12	WP277 PM SW Diversion Dam	8	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	7	None Detected			0.0009	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	6	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	5	None Detected			0.0010	<0.0010
	0816-OFD-TPT-16	WP281 PM Cherokee Rd.	11	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
Burma Road	0816-OFD-BPT-01	WP017A AM Burma Road	8	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-BPT-02	WP017A PM Burma Road	14	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
Launch Ramp	0816-OFD-LRP-01	WP009A AM Launch Ramp Parking	8	Actinolite	1	0	0.0010	0.00096
	0816-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	4	None Detected			0.0039	<0.0039
	0816-OFD-LRP-03	WP009A PM Launch Ramp Parking	5	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0816-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	6	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					

Table 19 – 2017.08.17 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0817-OFD-PMT-01	WP246 AM Intake Yard	0	None Detected			0.0010	<0.0010
	0817-OFD-PMT-02	WP247 AM Upper Overlook Entry	1	None Detected			0.0009	<0.0010
	0817-OFD-PMT-03	WP248 AM Upper Overlook	1	None Detected			0.0010	<0.0010
	0817-OFD-PMT-04	WP248 AM Canyon Drive	0	None Detected			0.0010	<0.0010
	0817-OFD-PMT-05	WP246 PM Intake Yard	0	None Detected			0.0010	<0.0010
	0817-OFD-PMT-06	WP247 PM Upper Overlook Entry	3	None Detected			0.0010	<0.0010
	0817-OFD-PMT-07	WP248 PM Upper Overlook	1	None Detected			0.0010	<0.0010
	0817-OFD-PMT-08	WP249 PM Canyon Drive	0	Actinolite	0	1	0.0010	0.00099
Diversion Dam	0817-OFD-TPT-01	WP278 AM N. DIVERSION DAM	9	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-02	WP251 AM DIVERSION DAM YARD	24	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-03	WP279 AM SE DIVERSION DAM	2	None Detected			0.0010	<0.0010
	0817-OFD-TPT-04	WP277 AM SW DIVERSION DAM	7	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-05	WP019A AM E. DIVERSION DAM (Pending Approval)	4	Actinolite	1	0	0.0010	0.00096
	0817-OFD-TPT-06	WP020A AM SE CANAL (Pending Approval)	12	Actinolite	0	3	0.0010	0.0029
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-07	WP021A AM SW CANAL (Pending Approval)	14	None Detected			0.0010	<0.0010
	0817-OFD-TPT-08	WP281 AM CHEROKEE RD.	7	None Detected			0.0009	<0.0010
	0817-OFD-TPT-09	WP278 PM N. DIVERSION DAM	10	Actinolite	1	2	0.0009	0.0028
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-10	WP251 PM DIVERSION DAM YARD	13	Actinolite	0	1	0.0009	0.00095
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-11	WP279 PM SE DIVERSION DAM	16	Actinolite	1	0	0.0010	0.00095
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-12	WP277 PM SW DIVERSION DAM	11	None Detected			0.0009	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-13	WP019A PM E DIVERSION DAM (Pending Approval)	17	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-14	WP020A PM SE CANAL (Pending Approval)	14	Actinolite	1	2	0.0009	0.0028
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-15	WP021A PM SW CANAL (Pending Approval)	6	Actinolite	0	2	0.0010	0.0019
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0817-OFD-TPT-16	WP281 PM CHEROKEE RD.	6	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
Burma Road	0817-OFD-BPT-01	WP017A AM Burma Road	0	None Detected			0.0010	<0.0010
Burma Road	0817-OFD-BPT-02	WP017A PM Burma Road	0	None Detected			0.0010	<0.0010
Launch Ramp	0817-OFD-LRP-01	WP009A AM Launch Ramp Parking	3	None Detected			0.0010	<0.0010
Launch Ramp	0817-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	1	None Detected			0.0010	<0.0010
Launch Ramp	0817-OFD-LRP-03	WP009A PM Launch Ramp Parking	3	None Detected			0.0010	<0.0010
Launch Ramp	0817-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	0	None Detected			0.0010	<0.0010

Table 20 – 2017.08.18 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0818-OFD-PMT-01	WP246 AM Intake Yard	1	Actinolite	0	1	0.0010	0.00098
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0818-OFD-PMT-02	WP247 AM Upper Overlook Entry	3	Actinolite	1	2	0.0010	0.0029
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0818-OFD-PMT-03	WP248 AM Upper Overlook	2	Actinolite	0	1	0.0010	0.00097
	0818-OFD-PMT-04	WP249 AM Canyon Drive	0	None Detected			0.0010	<0.0010
	0818-OFD-PMT-05	WP246 PM Intake Yard	1	None Detected			0.0010	<0.0010
	0818-OFD-PMT-06	WP247 PM Overlook Entry	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0818-OFD-PMT-07	WP248 PM Upper Overlook	0	None Detected			0.0010	<0.0010
	0818-OFD-PMT-08	WP249 AM Canyon Drive	0	Actinolite	0	1	0.0010	0.00095
Diversion Dam	0818-OFD-TPT-01	WP278 AM N. Diversion Dam	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0818-OFD-TPT-02	WP251 AM Diversion Dam Yard	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0818-OFD-TPT-03	WP 279 AM SE Diversion Dam	0	Actinolite	0	1	0.0010	0.00099
	0818-OFD-TPT-04	WP277 AM SW Diversion Dam	1	Actinolite	0	1	0.0010	0.00098
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0818-OFD-TPT-05	WP019A AM E. Diversion Dam	0	None Detected			0.0010	<0.0010
	0818-OFD-TPT-06	WP020A AM SE Canal	0	Actinolite	0	3	0.0010	0.0030
	0818-OFD-TPT-07	WP021A AM SW Canal	1	Actinolite	1	0	0.0010	0.00099
	0818-OFD-TPT-08	WP281 AM Cherokee Rd.	0	Chrysotile	0	1	0.0010	0.00098
	0818-OFD-TPT-09	WP278 PM N. Diversion Dam	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0818-OFD-TPT-10	WP251 PM Diversion Dam Yard	1	None Detected			0.0010	<0.0010
	0818-OFD-TPT-11	WP 279 PM SE Diversion Dam	4	Actinolite	1	0	0.0010	0.00098
	0818-OFD-TPT-12	WP277 PM SW Diversion Dam	0	Actinolite	1	0	0.0010	0.00098
	0818-OFD-TPT-13	WP019A PM E. Diversion Dam (Pending Approval)	1	Actinolite	0	3	0.0010	0.0030

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0818-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	1	Actinolite	1	1	0.0010	0.0020
	0818-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	0	Actinolite	0	5	0.0010	0.0049
	0818-OFD-TPT-16	WP281 PM Cherokee Rd.	1	Actinolite	0	2	0.0010	0.0019
Burma Road	0818-OFD-BPT-01	WP017A AM Burma Rd.	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0818-OFD-BPT-02	WP017A PM Burma Rd.	0	Actinolite	1	1	0.0010	0.0019
Launch Ramp	0818-OFD-LRP-01	WP009A AM Launch Ramp Parking	1	Actinolite	1	0	0.0010	0.00097
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0818-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	0	Actinolite	0	2	0.0010	0.0020
	0818-OFD-LRP-03	WP009A PM Launch Ramp Parking	0	None Detected			0.0010	<0.0010
	0818-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	0	Actinolite	0	1	0.0010	0.00096

Table 21 - 2017.08.19 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0819-OFD-PMT-01	WP246 AM Intake Yard	0	None Detected			0.0009	<0.0010
	0819-OFD-PMT-02	WP247 AM Upper Overlook Entry	0	None Detected			0.0009	<0.0009
	0819-OFD-PMT-03	WP248 AM Upper Overlook	0	None Detected			0.0009	<0.0009
	0819-OFD-PMT-04	WP249 AM Canyon Drive	3	None Detected			0.0009	<0.0009
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0819-OFD-PMT-05	WP246 PM Intake Yard	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0819-OFD-PMT-06	WP247 PM Upper Overlook Entry	0	None Detected			0.0010	<0.0010
	0819-OFD-PMT-07	WP248 PM Upper Overlook	1	None Detected			0.0010	<0.0010
	0819-OFD-PMT-08	WP249 PM Canyon Drive	0	None Detected			0.0010	<0.0010
Diversion Dam	0819-OFD-TPT-01	WP278 AM N. Diversion Dam	1	None Detected			0.0010	<0.0010
	0819-OFD-TPT-02	WP251 AM Diversion Dam Yard	0	None Detected			0.0010	<0.0010
	0819-OFD-TPT-03	WP279 AM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0819-OFD-TPT-04	WP277 AM SW Diversion Dam	1	None Detected			0.0010	<0.0010
	0819-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	0	None Detected			0.0010	<0.0010
	0819-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
	0819-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0819-OFD-TPT-08	WP281 AM Cherokee Rd.	0	None Detected			0.0010	<0.0010
	0819-OFD-TPT-09	WP278 PM N. Diversion Dam	0	None Detected			0.0010	<0.0010
	0819-OFD-TPT-10	WP251 PM Diversion Dam Yard	2	None Detected			0.0009	<0.0009
	0819-OFD-TPT-11	WP279 PM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0819-OFD-TPT-12	WP277 PM SW Diversion Dam	0	None Detected			0.0010	<0.0010
	0819-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0819-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	3	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0819-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
	0819-OFD-TPT-16	WP281 PM Cherokee Rd.	1	None Detected			0.0010	<0.0010
Burma Road	0819-OFD-BPT-01	WP017A AM Burma Road	15	Actinolite	1	3	0.0010	0.0039
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
	0819-OFD-BPT-02	WP017A PM Burma Road	7	Actinolite	1	4	0.0010	0.0049
			Non-asbestos structures reported above includes a contribution from non-regulated amphiboles.					
Launch Ramp	0819-OFD-LRP-01	WP009A AM Launch Ramp Parking	4	Actinolite	1	1	0.0009	0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0819-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	0	Actinolite	4	1	0.0010	0.0047
	0819-OFD-LRP-03	WP009A PM Launch Ramp Parking	9	None Detected			0.0010	<0.0010
	0819-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	4	Actinolite	1	5	0.0010	0.0059
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					

Table 22 - 2017.08.20 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0820-OFD-PMT-01	WP246 AM Intake yard	3	Actinolite	1	0	0.0010	0.00098
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0820-OFD-PMT-02	WP247 AM Upper overlook entry	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0820-OFD-PMT-03	WP248 AM Upper overlook	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0820-OFD-PMT-04	WP249 AM Canyon drive	1	Actinolite	1	0	0.0010	0.00098
	0820-OFD-PMT-05	WP246 PM Intake yard	0	None Detected			0.0010	<0.0010
	0820-OFD-PMT-06	WP247 PM Upper overlook entry	3	Actinolite	1	0	0.0010	0.00096
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0820-OFD-PMT-07	WP248 PM Upper overlook	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0820-OFD-PMT-08	WP249 PM Canyon drive	2	None Detected			0.0010	<0.0010
Diversion Dam	0820-OFD-TPT-01	WP278 AM N. Diversion Dam	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-02	WP251 AM Diversion Dam Yard	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-03	WP279 AM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-04	WP277 AM SW Diversion Dam	0	Actinolite	0	1	0.0010	0.00097
	0820-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-08	WP281 AM Cherokee Rd.	1	Actinolite	0	1	0.0010	0.00097
	0820-OFD-TPT-09	WP278 PM N. Diversion Dam	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-10	WP251 PM Diversion Dam Yard	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0820-OFD-TPT-11	WP279 PM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-12	WP277 PM SW Diversion Dam	0	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0820-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0820-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0820-OFD-TPT-16	WP281 PM Cherokee Rd.	0	None Detected			0.0010	<0.0010
Burma Road	0820-OFD-BPT-01	WP017A AM Burma Rd	5	None Detected			0.0010	<0.0010
	0820-OFD-BPT-02	WP017A PM Burma Rd	3	None Detected			0.0010	<0.0010
Launch Ramp	0820-OFD-LRP-01	WP009A AM Launch ramp parking	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0820-OFD-LRP-02	WP010A AM Launch ramp turnaround	0	None Detected			0.0010	<0.0010
	0820-OFD-LRP-03	WP009A PM Launch ramp parking	0	Actinolite	0	1	0.0010	0.00096
	0820-OFD-LRP-04	WP010A PM Launch ramp turnaround	2	None Detected			0.0010	<0.0010

Table 23 - 2017.08.21 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0821-OFD-PMT-01	WP246 AM Intake Yard	24	Actinolite	2	0	0.0010	0.0019
	0821-OFD-PMT-02	WP247 AM Upper Overlook Entry	19	None Detected			0.0010	<0.0010
	0821-OFD-PMT-03	WP248 AM Upper Overlook	24	None Detected			0.0010	<0.0010
	0821-OFD-PMT-04	WP249 AM Canyon Drive	19	None Detected			0.0010	<0.0010
	0821-OFD-PMT-05	WP246 PM Intake Yard	6	None Detected			0.0010	<0.0010
	0821-OFD-PMT-06	WP247 PM Upper Overlook Entry	7	Chrysotile	1	0	0.0010	0.0010
	0821-OFD-PMT-07	WP248 PM Upper Overlook	15	None Detected			0.0009	<0.0009
	0821-OFD-PMT-08	WP249 PM Canyon Drive	12	None Detected			0.0009	<0.0010
Diversion Dam	0821-OFD-TPT-01	WP278 AM N. Diversion Dam	4	None Detected			0.0010	<0.0010
	0821-OFD-TPT-02	WP251 AM Diversion Dam Yard	2	None Detected			0.0010	<0.0010
	0821-OFD-TPT-03	WP279 AM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0821-OFD-TPT-04	WP277 AM SW Diversion Dam	0	None Detected			0.0010	<0.0010
	0821-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	1	None Detected			0.0010	<0.0010
	0821-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
	0821-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
	0821-OFD-TPT-08	WP281 AM Cherokee Rd.	0	None Detected			0.0010	<0.0010
	0821-OFD-TPT-09	WP278 PM N. Diversion Dam	0	None Detected			0.0010	<0.0010
	0821-OFD-TPT-10	WP251 PM Diversion Dam Yard	0	None Detected			0.0010	<0.0010
	0821-OFD-TPT-11	WP279 PM SE Diversion Dam	9	Actinolite	1	0	0.0010	0.00097
				Chrysotile	1	0	0.0010	0.00097
				Total for all types.....				0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0821-OFD-TPT-12	WP277 PM SW Diversion Dam	1	None Detected			0.0010	<0.0010
	0821-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	0	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0821-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	1	None Detected			0.0010	<0.0010
	0821-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	1	None Detected			0.0009	<0.0009
	0821-OFD-TPT-16	WP281 PM Cherokee Rd.	0	None Detected			0.0009	<0.0009
Burma Road	0821-OFD-BPT-01	WP017A AM Burma Road	3	None Detected			0.0010	<0.0010
	0821-OFD-BPT-02	WP017A PM Burma Road	9	None Detected			0.0010	<0.0010
Launch Ramp	0821-OFD-LRP-01	WP009A AM Launch Ramp Parking	22	None Detected			0.0010	<0.0010
	0821-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	17	None Detected			0.0010	<0.0010
	0821-OFD-LRP-03	WP009A PM Launch Ramp Parking	6	None Detected			0.0010	<0.0010
	0821-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	12	Actinolite	1	0	0.0010	0.00097

Table 24 – 2017.08.22 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper Perimeter	0822-OFD-PMT-01	WP246 AM INTAKE YARD	7	Actinolite	1	0	0.0010	0.00098
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-PMT-02	WP247 AM UPPER OVERLOOK ENTRY	8	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-PMT-03	WP248 AM UPPER OVERLOOK	7	Actinolite	0	1	0.0010	0.00098
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-PMT-04	WP249 AM CANYON DRIVE	5	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-PMT-05	WP246 PM INTAKE YARD	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-PMT-06	WP247 PM UPPER OVERLOOK ENTRY	2	None Detected			0.0009	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-PMT-07	WP248 PM UPPER OVERLOOK	5	None Detected			0.0009	<0.0009
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-PMT-08	WP249 PM CANYON DRIVE	4	None Detected			0.0009	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
Diversion Dam	0822-OFD-TPT-01	WP278 AM N. DIVERSION DAM	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-TPT-02	WP251 AM DIVERSION DAM YARD	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-TPT-03	WP279 AM SE DIVERSION DAM	2	Actinolite	1	1	0.0010	0.0020
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-TPT-04	WP277 AM SW DIVERSION DAM	1	Actinolite	0	3	0.0010	0.0029
	0822-OFD-TPT-05	WP019A AM E. DIVERSION DAM (Pending Approval)	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-TPT-06	WP020A AM SE CANAL (Pending Approval)	1	Actinolite	1	1	0.0010	0.0020
	0822-OFD-TPT-07	WP021A AM SW CANAL (Pending Approval)	2	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0822-OFD-TPT-08	WP281 AM CHEROKEE RD.	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-TPT-09	WP278 PM N. DIVERSION DAM	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-TPT-10	WP251 PM DIVERSION DAM YARD	3	Actinolite	2	2	0.0010	0.0038
	0822-OFD-TPT-11	WP279 PM SE DIVERSION DAM	0	Actinolite	1	3	0.0010	0.0038
	0822-OFD-TPT-12	WP277 PM SW DIVERSION DAM	0	Actinolite	2	1	0.0009	0.0028
	0822-OFD-TPT-13	WP019A PM E DIVERSION DAM (Pending Approval)	1	Tremolite	3	1	0.0010	0.0040
	0822-OFD-TPT-14	WP020A PM SE CANAL (Pending Approval)	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0822-OFD-TPT-15	WP021A PM SW CANAL (Pending Approval)	3	None Detected			0.0010	<0.0010
	0822-OFD-TPT-16	WP281 PM CHEROKEE RD.	0	Actinolite	4	1	0.0010	0.0050
Burma Road	0822-OFD-BPT-01	WP017A AM BURMA ROAD	4	None Detected			0.0010	<0.0010
Burma Road	0822-OFD-BPT-02	WP017A PM BURMA ROAD	3	None Detected			0.0010	<0.0010
Launch Ramp	0822-OFD-LRP-01	WP009A AM LAUNCH RAMP PARKING	3	None Detected			0.0010	<0.0010
Launch Ramp	0822-OFD-LRP-02	WP010A AM LAUNCH RAMP TURNAROUND	2	None Detected			0.0009	<0.0010
Launch Ramp	0822-OFD-LRP-03	WP009A PM LAUNCH RAMP PARKING	2	None Detected			0.0010	<0.0010
Launch Ramp	0822-OFD-LRP-04	WP010A PM LAUNCH RAMP TURNAROUND	1	None Detected			0.0010	<0.0010

Table 25 – 2017.08.23 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper perimeter	0823-OFD-PMT-01	WP246 AM Intake Yard	2	None Detected			0.0009	<0.0009
	0823-OFD-PMT-02	WP247 AM Upper Overlook Entry	7	Actinolite	3	0	0.0010	0.0029
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0823-OFD-PMT-03	WP248 AM Upper Overlook	1	None Detected			0.0010	<0.0010
	0823-OFD-PMT-04	WP249 AM Canyon Drive	7	Actinolite	1	1	0.0010	0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0823-OFD-PMT-05	WP246 PM Intake Yard	7	None Detected			0.0010	<0.0010
	0823-OFD-PMT-06	WP247 PM Upper Overlook Entry	8	Actinolite	1	1	0.0009	0.0017
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0823-OFD-PMT-07	WP248 PM Upper Overlook	5	Actinolite	2	0	0.0010	0.0020
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0823-OFD-PMT-08	WP249 PM Canyon Drive	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
Diversion Dam	0823-OFD-TPT-01	WP278 AM N. Diversion Dam	0	None Detected			0.0010	<0.0010
	0823-OFD-TPT-02	WP251 AM Diversion Dam Yard	2	None Detected			0.0010	<0.0010
	0823-OFD-TPT-03	WP279 AM SE Diversion Dam	0	None Detected			0.0010	<0.0010
	0823-OFD-TPT-04	WP277 AM SW Diversion Dam	0	None Detected			0.0010	<0.0010
	0823-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	1	None Detected			0.0010	<0.0010
	0823-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	1	Actinolite	1	0	0.0010	0.00097
	0823-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0823-OFD-TPT-08	WP281 AM Cherokee Rd.	0	None Detected			0.0010	<0.0010
	0823-OFD-TPT-09	WP278 PM N. Diversion Dam	1	None Detected			0.0010	<0.0010
	0823-OFD-TPT-10	WP251 PM Diversion Dam Yard	2	None Detected			0.0010	<0.0010
	0823-OFD-TPT-11	WP279 PM SE Diversion Dam	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0823-OFD-TPT-12	WP277 PM SW Diversion Dam	0	Actinolite	0	1	0.0010	0.00095

	0823-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	0	None Detected			0.0010	<0.0010
	0823-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0823-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	0	None Detected			0.0009	<0.0009
	0823-OFD-TPT-16	WP281 PM Cherokee Rd.	0	None Detected			0.0010	<0.0010
Burma Road	0823-OFD-BPT-01	WP017A AM Burma Road	15	Actinolite	2	0	0.0010	0.0020
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0823-OFD-BPT-02	WP017A PM Burma Road	11	Actinolite	0	1	0.0010	0.00096
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
Launch Ramp	0823-OFD-LRP-01	WP009A AM Launch Ramp Parking	5	Actinolite	0	1	0.0009	0.00092
	0823-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	13	Actinolite	1	1	0.0010	0.0020
				Tremolite	1	0		0.00098
				Total for all types.....				0.0030
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0823-OFD-LRP-03	WP009A PM Launch Ramp Parking	2	Actinolite	0	1	0.0009	0.00091
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0823-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	10	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					

Table 26 – 2017.08.24 Laboratory Analysis Summary

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
Upper perimeter	0824-OFD-PMT-01	WP246 AM Intake Yard	15	Actinolite	1	1	0.0010	0.0020
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-PMT-02	WP247 AM Upper Overlook Entry	20	Actinolite	2	1	0.0010	0.0030
				Chrysotile	1	0		0.00099
				Total for all types.....				0.0040
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-PMT-03	WP248 AM Upper Overlook	13	Actinolite	1	2	0.0010	0.0030
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-PMT-04	WP249 AM Canyon Drive	12	Actinolite	0	1	0.0010	0.00099
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-PMT-05	WP246 PM Intake Yard	6	None Detected			0.0009	<0.0009
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-PMT-06	WP247 PM Upper Overlook Entry	0	None Detected			0.0009	<0.0009
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-PMT-07	WP248 PM Upper Overlook	2	None Detected			0.0009	<0.0009
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-PMT-08	WP249 PM Canyon Drive	4	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
Diversion Dam	0824-OFD-TPT-01	WP278 AM N. Diversion Dam	0	Actinolite	0	1	0.0010	0.00098
	0824-OFD-TPT-02	WP251 AM Diversion Dam Yard	0	Actinolite	0	1	0.0010	0.00098
	0824-OFD-TPT-03	WP279 AM SE Diversion Dam	1	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-TPT-04	WP277 AM SW Diversion Dam	2	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
	0824-OFD-TPT-05	WP019A AM E. Diversion Dam (Pending Approval)	0	None Detected			0.0010	<0.0010
	0824-OFD-TPT-06	WP020A AM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
	0824-OFD-TPT-07	WP021A AM SW Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0824-OFD-TPT-08	WP281 AM Cherokee Rd.	0	None Detected			0.0010	<0.0010
	0824-OFD-TPT-09	WP278 PM N. Diversion Dam	0	None Detected			0.0010	<0.0010
	0824-OFD-TPT-10	WP251 PM Diversion Dam Yard	0	None Detected			0.0010	<0.0010
	0824-OFD-TPT-11	WP279 PM SE Diversion Dam	5	None Detected			0.0010	<0.0010
	0824-OFD-TPT-12	WP277 PM SW Diversion Dam	1	None Detected			0.0010	<0.0010
	0824-OFD-TPT-13	WP019A PM E Diversion Dam (Pending Approval)	5	Actinolite	0	2	0.0010	0.0020
	0824-OFD-TPT-14	WP020A PM SE Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0824-OFD-TPT-15	WP021A PM SW Canal (Pending Approval)	0	None Detected			0.0010	<0.0010
	0824-OFD-TPT-16	WP281 PM Cherokee Rd.	3	None Detected			0.0010	<0.0010
			Non-asbestos structures reported includes a contribution from non-regulated amphiboles.					
Burma Road	0824-OFD-BPT-01	WP017A AM Burma Road	6	None Detected			0.0010	<0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0824-OFD-BPT-02	WP017A PM Burma Road	21	Actinolite	0	1	0.0009	0.00094
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
Launch Ramp	0824-OFD-LRP-01	WP009A AM Launch Ramp Parking	27	Actinolite	1	0	0.0009	0.00095
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0824-OFD-LRP-02	WP010A AM Launch Ramp Turnaround	23	Actinolite	0	1	0.0010	0.0010
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0824-OFD-LRP-03	WP009A PM Launch Ramp Parking	14	Actinolite	2	0	0.0009	0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					
	0824-OFD-LRP-04	WP010A PM Launch Ramp Turnaround	24	Actinolite	0	1	0.0009	0.00094
				Chrysotile	1	0		0.00094

Zone	Sample ID	Location	Non-Asbestos Structures	Asbestos Type	# Structures		Analytical Sensitivity (S/cc)	Asbestos Concentration (S/cc)
					≥0.5µm <5µm	≥5µm		
				Total for all types.....				0.0019
			Non-asbestos structures reported include a contribution from non-regulated amphiboles.					

8.0 Perimeter Dust Monitoring Summary

The dust monitoring data is compiled in twelve (12) hour increments for day/night shifts. Information is logged for PM10, PM2.5, and Total Dust.

Particle pollution includes:

PM10: inhalable particles, with diameters that are generally 10 micrometers and smaller; and

PM2.5: fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

Total inhalable dust is the fraction of airborne material which enters the nose and mouth during breathing and is therefore liable to deposition anywhere in the respiratory tract. The particle sizes of total inhalable dust are up to 100 microns.

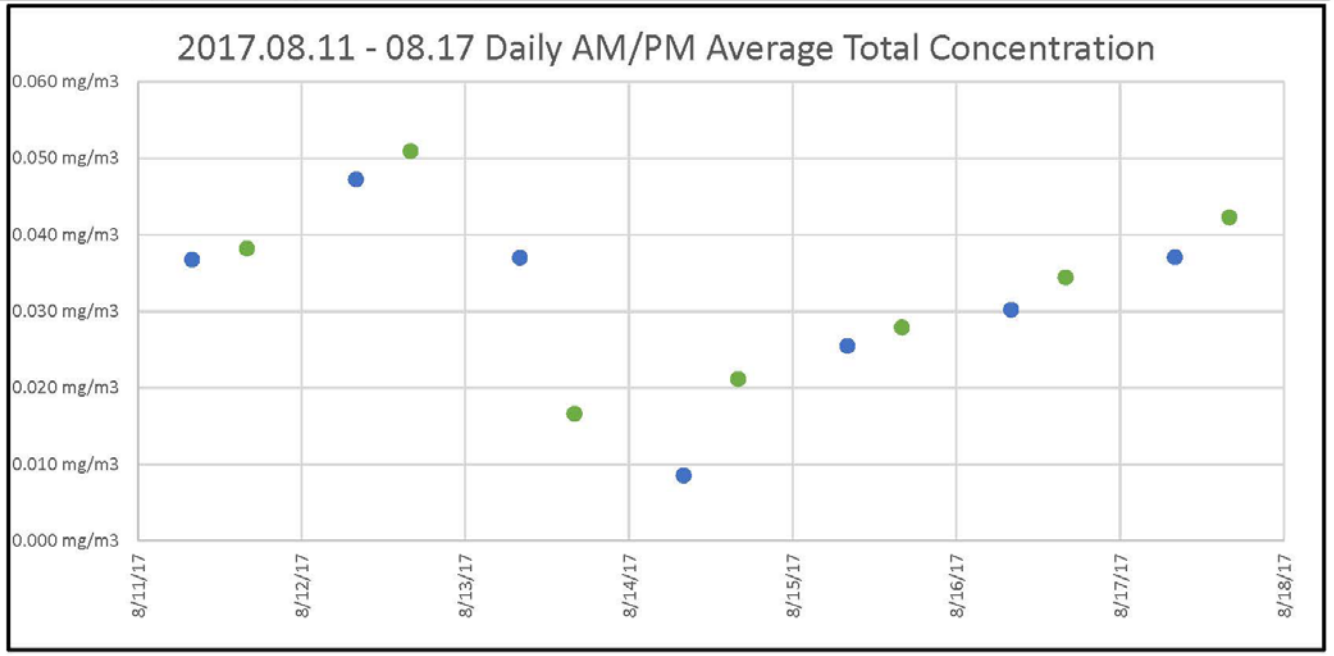
Perimeter dust levels for this time period were unremarkable, with intermittent spikes due to wind gust. There were no citable episodes of “visible emissions” at the work zone perimeter.

Dust results are presented in Appendix B.

Figure 5 WP 246 Intake Yard Dust Daily Average (mg/m^3) 8/11-8/17

WP 246 Intake Yard

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/11/17 6:00 AM
Intake Yard	Dustrak DRX	8533143702	39°32'5.44"N, 121°28'29.37"W	Episode Stop:	8/18/17 5:59 AM

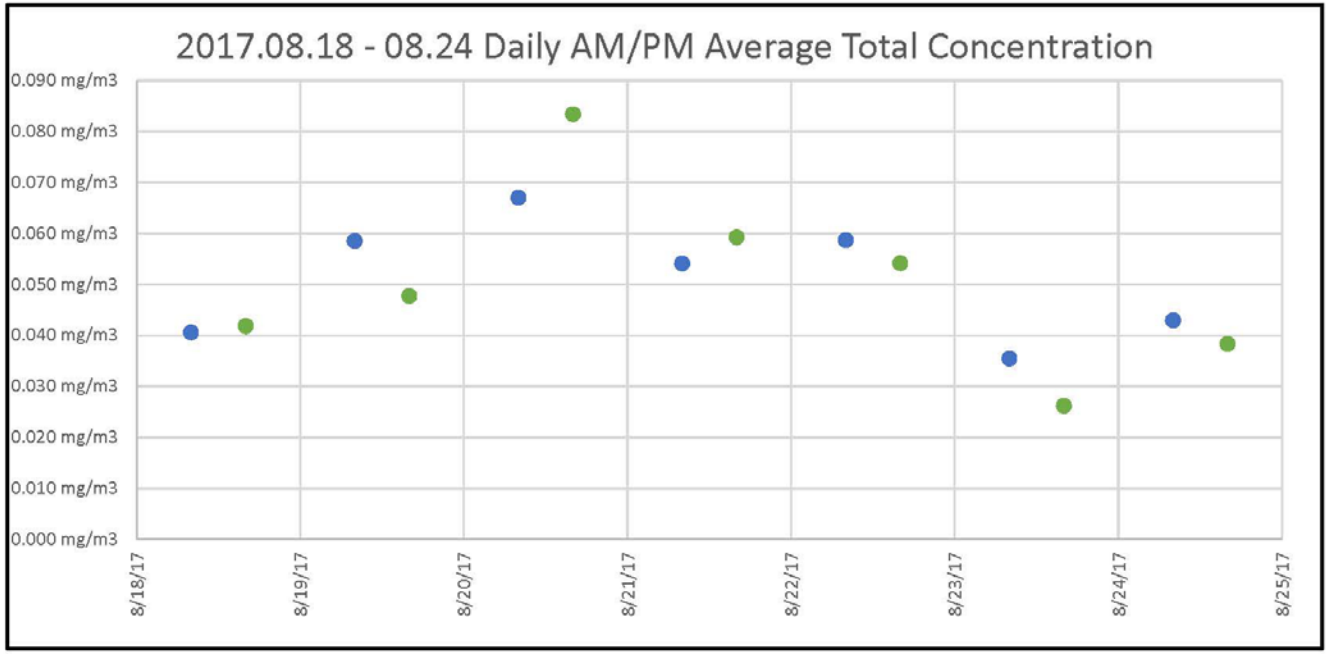


	8/11/17	8/12/17	8/13/17	8/14/17	8/15/17	8/16/17	8/17/17
Day Shift	0.037	0.047	0.037	0.009	0.025	0.030	0.037
Night Shift	0.038	0.051	0.017	0.021	0.028	0.034	0.042

Figure 6 WP 246 Intake Yard Dust Daily Average (mg/m^3) 8/18-8/24

WP 246 Intake Yard

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/18/17 6:00 AM
Intake Yard	Dustrak DRX	8533143702	39°32'5.44"N, 121°28'29.37"W	Episode Stop:	8/25/17 5:59 AM

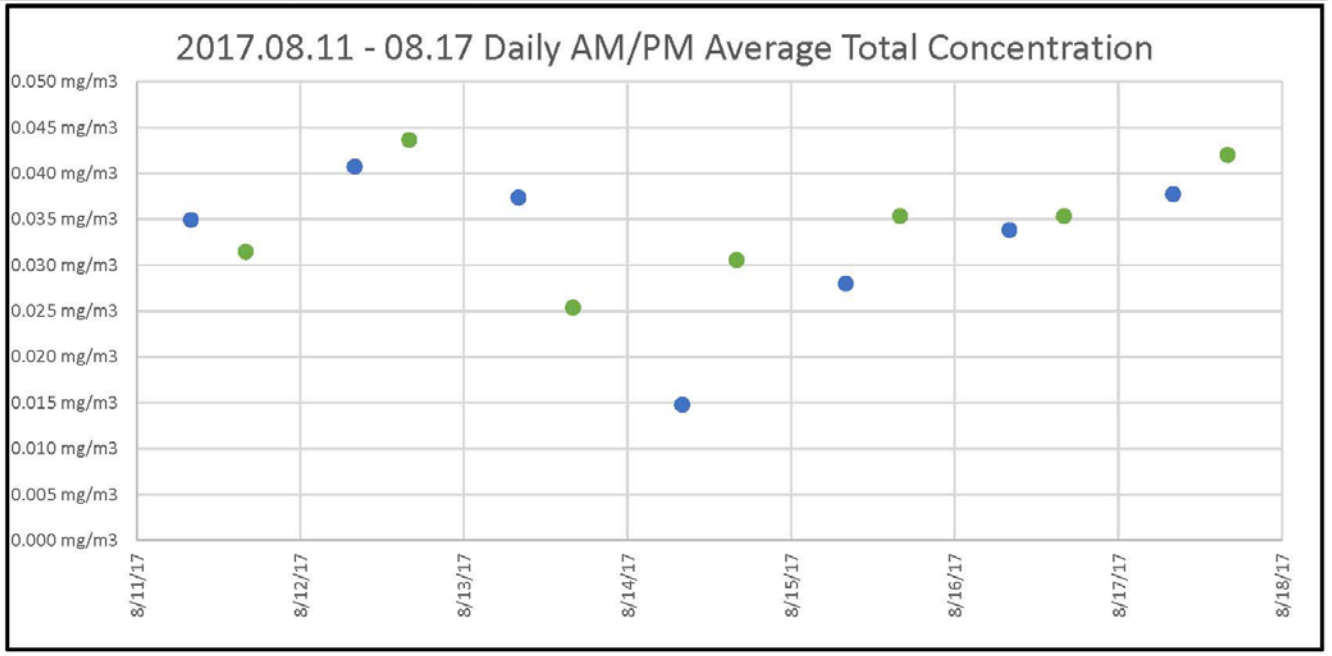


	8/18/17	8/19/17	8/20/17	8/21/17	8/22/17	8/23/17	8/24/17
Day Shift	0.041	0.058	0.067	0.054	0.059	0.035	0.043
Night Shift	0.042	0.048	0.083	0.059	0.054	0.026	0.038

Figure 7 WP 247 Upper Overlook Entry Dust Daily Average (mg/m^3) 8/11-8/17

WP 247 Upper Overlook Entry

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/11/17 6:00 AM
Overlook Entry	Dustrak DRX	8533142005	39°31'51.40"N, 121°28'36.65"W	Episode Stop:	8/18/17 5:59 AM

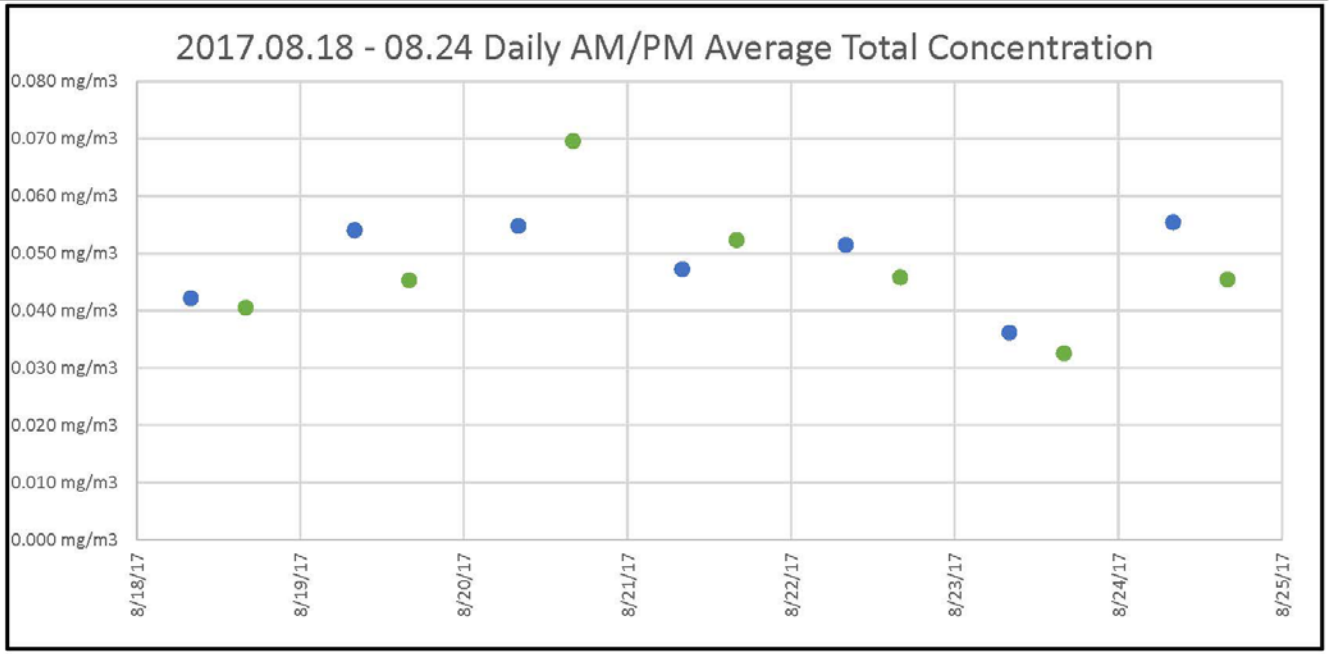


	8/11/17	8/12/17	8/13/17	8/14/17	8/15/17	8/16/17	8/17/17
Day Shift	0.035	0.041	0.037	0.015	0.028	0.034	0.038
Night Shift	0.031	0.044	0.025	0.031	0.035	0.035	0.042

Figure 8 WP 247 Upper Overlook Entry Dust Daily Average (mg/m^3) 8/18-8/24

WP 247 Upper Overlook Entry

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/18/17 6:00 AM
Overlook Entry	Dustrak DRX	8533142005	39°31'51.40"N, 121°28'36.65"W	Episode Stop:	8/25/17 5:59 AM

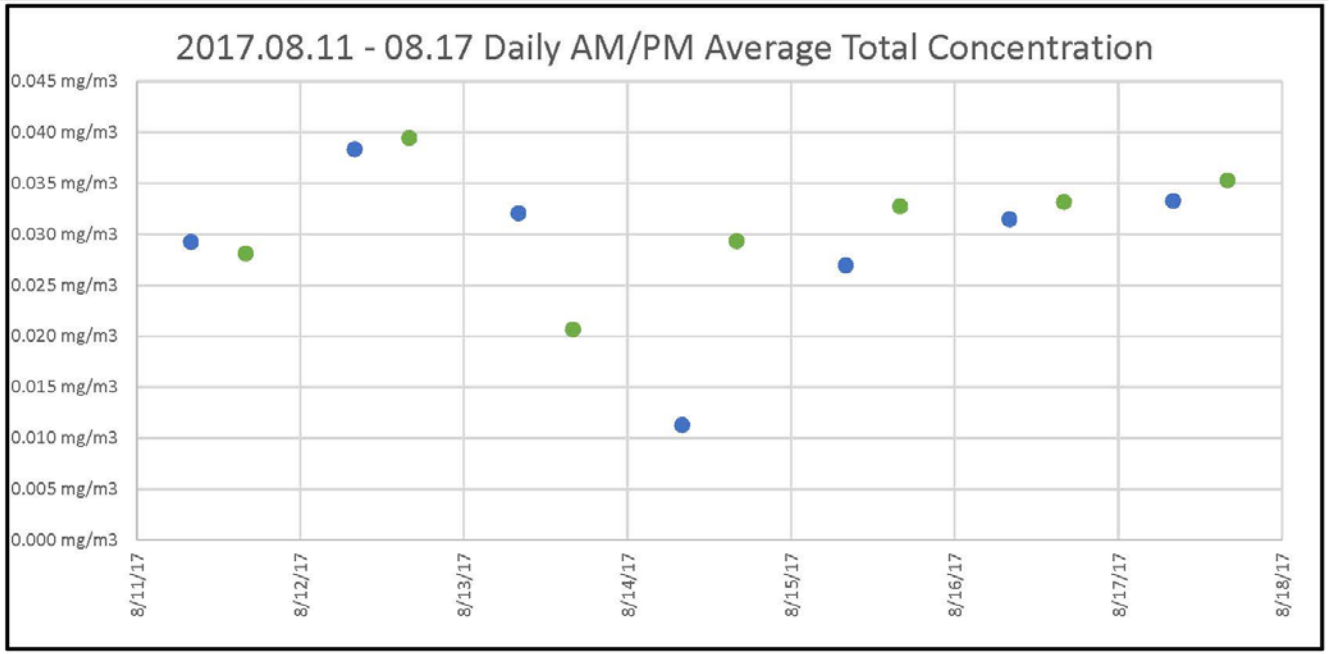


	8/18/17	8/19/17	8/20/17	8/21/17	8/22/17	8/23/17	8/24/17
Day Shift	0.042	0.054	0.055	0.047	0.051	0.036	0.055
Night Shift	0.041	0.045	0.070	0.052	0.046	0.033	0.045

Figure 9 WP 278 Upper Overlook Dust Daily Average (mg/m^3) 8/11-8/17

WP 248 Upper Overlook

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/11/17 6:00 AM
Upper Overlook	Dustrak DRX	8533142802	39°31'47.46"N, 121°28'41.46"W	Episode Stop:	8/18/17 5:59 AM

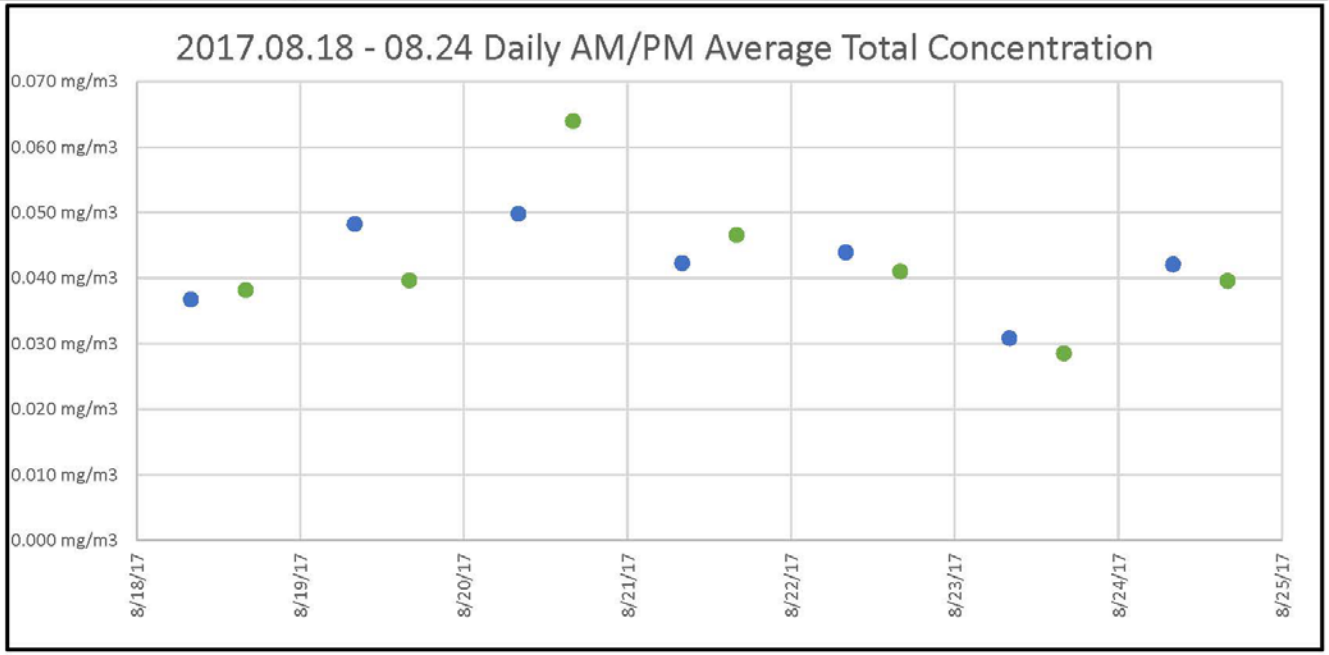


	8/11/17	8/12/17	8/13/17	8/14/17	8/15/17	8/16/17	8/17/17
Day Shift	0.029	0.038	0.032	0.011	0.027	0.031	0.033
Night Shift	0.028	0.039	0.021	0.029	0.033	0.033	0.035

Figure 10 WP 278 Upper Overlook Dust Daily Average (mg/m^3) 8/18-8/24

WP 248 Upper Overlook

INSTRUMENT				DATA PROPERTIES	
Location:	Model:	Instrument S/N:	GPS Coordinates:	Episode Start:	8/18/17 6:00 AM
Upper Overlook	Dustrak DRX	8533142802	39°31'47.46"N, 121°28'41.46"W	Episode Stop:	8/25/17 5:59 AM



	8/18/17	8/19/17	8/20/17	8/21/17	8/22/17	8/23/17	8/24/17
Day Shift	0.037	0.048	0.050	0.042	0.044	0.031	0.042
Night Shift	0.038	0.040	0.064	0.047	0.041	0.029	0.040