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April 14, 2014

Mr. Mark Nations
The Doe Run Company
P.O. Box 1633
Desloge, Missouri 63601

Re: Ambient Air Monitoring Report – Rivermines Site

Dear Mr. Nations:

Please find attached the January 2014 "*Ambient Air Monitoring Report*" for The Doe Run Company at the Rivermines Sites, located near Park Hills, Missouri.

This report will include the following:

- **Glossary of Terms** – Listing of the abbreviations used for each parameter and unit.
- **Ambient Air Quality Standards** – Lists the maximum allowable concentrations for the measured parameters.
- **TSP, Lead & PM_{10} Particulate Summaries** – Includes the averages of each monitored parameter, which relates to the federal standards.
- **Particulate and Lead Analysis Spreadsheets.**
- **Lab Results (lead & cadmium)** – Lab reports from Inovatia Laboratories, LLC.
- **Meteorological Data Printouts** – This supplies printouts of each parameter.

Barr Engineering Company offers this report as an independent laboratory. This includes the weighing of filters, obtaining lead and cadmium analysis, compiling the data, and preparing the report. No interpretation of the data or analysis of the results is implied or intended. Should you have any questions regarding this report, please call.

Respectfully,

Richard J. Campbell, PE
Chemical Engineer
Senior Environmental Consultant

c: Bob Hinkson
Jason Gunter
Ty Morris

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Superfund

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Ambient Air Monitoring Report

Rivermines
Park Hills, Missouri

Prepared for
The Doe Run Company

January 2014

BARR

Ambient Air Monitoring Report

Rivermines
Park Hills, Missouri

Prepared for
The Doe Run Company

January 2014

BARR

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Jefferson City, MO 65109
Phone: (573) 638-5000
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GLOSSARY OF TERMS

$\mu g/m^3$	Micrograms per Cubic Meter
mph	Miles per Hour
Wind Direction	Degrees from True North
TSP	Total Suspended Particulate
PM_{10}	Particulate Matter - 10 Microns or Less
mmHg	Millimeters of Mercury

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

PM_{10} – Particulate Matter	24-Hour*	Annual Maximum	150 $\mu g/m^3$
Lead	Calendar Quarter	Arithmetic Mean	1.5 $\mu g/m^3$
Lead	Rolling 3-Month Average	Arithmetic Mean	0.15 $\mu g/m^3$

TSP (Total Suspended Particulate) – There are no Federal Standards that apply solely for TSP.

*This standard must be exceeded more than once a year to constitute a violation.

TSP and Lead Concentration Summary

Rivermines
Park Hills, Missouri

Date 2013	TSP Big River #4 (µg/m³)	TSP South #1 (µg/m³)	TSP North #2 (µg/m³)	TSP East #3 (µg/m³)	LEAD Big River #4 (µg/m³)	LEAD South #1 (µg/m³)	LEAD North #2 (µg/m³)	LEAD East #3 (µg/m³)
1/2/14	11	15	10	11	0.000	0.007	0.000	0.007
1/3/14	7	9	21	5	0.011	0.000	0.345	0.000
1/6/14	13	10	7	10	0.013	0.016	0.016	0.014
1/7/14	15	20	10	12	0.000	0.000	0.008	0.000
1/8/14	20	16	10	13	0.000	0.007	0.000	0.000
1/9/14	4	8	3	INVALID	0.000	0.000	0.000	INVALID
1/10/14	2	3	2	INVALID	0.000	0.000	0.026	INVALID
1/13/14	10	60	12	23	0.012	0.075	0.000	0.051
1/14/14	16	64	17	24	0.017	0.071	0.000	0.161
1/15/14	14	38	13	14	0.014	0.036	0.059	0.019
1/16/14	30	105	26	44	0.025	0.111	0.008	0.334
1/17/14	24	42	11	26	0.027	0.038	0.022	0.058
1/20/14	18	43	21	23	0.011	0.097	0.017	0.035
1/21/14	14	34	15	14	0.007	0.072	0.008	0.009
1/22/14	26	54	29	25	0.028	0.092	0.010	0.108
1/23/14	26	INVALID	25	18	0.034	INVALID	0.012	0.024
1/24/14	24	24	18	21	0.030	0.031	0.026	0.035
1/27/14	22	57	17	15	0.027	0.124	0.000	0.011
1/28/14	28	47	13	17	0.035	0.087	0.007	0.018
1/29/14	20	25	INVALID	18	0.011	0.011	INVALID	0.012
1/30/14	56	73	INVALID	57	0.020	0.048	INVALID	0.033
1/31/14	19	27	20	21	0.000	0.020	0.000	0.000
Monthly Average	19	37	15	20	0.015	0.045	0.028	0.046
Dec 2013					0.006	0.013	0.036	0.013
Nov 2013					0.012	0.104	0.016	0.012
Rolling 3-month Average					0.01	0.05	0.03	0.02
					3-month Average Lead NAAQS µg/m³			**0.15**

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

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Particulate Summary

Rivermines
Park Hills, Missouri

Date 2013	PM_{10} Big River #4 ($\mu g/m^3$)	PM_{10} South #1 ($\mu g/m^3$)	PM_{10} North #2 ($\mu g/m^3$)	PM_{10} East #3 ($\mu g/m^3$)	PM_{10} NAAQS ($\mu g/m^3$)
2-Jan	9	12	10	8	150
5-Jan	8	13	4	8	150
8-Jan	5	7	3	4	150
11-Jan	4	4	3	6	150
14-Jan	2	16	4	14	150
17-Jan	10	21	4	19	150
20-Jan	9	14	6	9	150
23-Jan	9	20	11	9	150
26-Jan	6	6	3	7	150
29-Jan	8	18	6	12	150
Monthly Average	7	13	5	10	

Please see the particulate analysis sheets for explanations of missing or invalid data.

Note: A summary of the Big River #4 sampler data is also included, because it was part of the QA plan.

Particulate and Lead Analysis

TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P2940 — **Elvins Rivermines Site #1 by Office**

Sample Date 2013	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. mg	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Concentations TSP µg/m^3	Mass Concentations Lead µg/m^3
1/2/2014	8932510	0.0281	12	-8	751.9	32.1	0.957	1.196	1.328	23.45	1868	15	0.007
1/3/2014	8932700	0.0168	< 10	-8	753.4	32.1	0.957	1.195	1.332	23.84	1906	9	0.000
1/6/2014	8932689	0.0181	28	-20	756.7	30.6	0.960	1.059	1.241	23.89	1779	10	0.016
1/7/2014	8932679	0.0384	< 10	-13	754.3	31.5	0.958	1.186	1.349	23.97	1940	20	0.000
1/8/2014	8932669	0.0301	13	-1	753.7	32.9	0.956	1.207	1.312	23.72	1868	16	0.007
1/9/2014	8932658	0.0157	< 10	0	751.8	33.0	0.956	1.209	1.306	23.86	1870	8	0.000
1/10/2014	8932648	0.0052	< 10	4	741.5	33.6	0.955	1.217	1.274	23.68	1810	3	0.000
1/13/2014	8932637	0.1085	134	10	738.8	34.3	0.954	1.225	1.256	23.92	1802	60	0.075
1/14/2014	8932627	0.1172	130	3	743.1	33.4	0.955	1.213	1.282	23.83	1833	64	0.071
1/15/2014	8932617	0.0720	69	-3	748.0	32.6	0.956	1.203	1.309	24.00	1884	38	0.036
1/16/2014	8932607	0.1924	204	3	740.7	33.5	0.955	1.215	1.275	24.01	1837	105	0.111
1/17/2014	8932796	0.0807	73	-8	746.3	32.1	0.957	1.196	1.318	24.05	1902	42	0.038
1/20/2014	8932785	0.0773	176	7	742.3	34.0	0.954	1.222	1.268	23.85	1815	43	0.097
1/21/2014	8932775	0.0651	136	-7	750.5	32.2	0.957	1.197	1.324	23.89	1897	34	0.072
1/22/2014	8932764	0.1015	174	-4	748.3	32.6	0.956	1.202	1.311	23.99	1887	54	0.092
1/23/2014	8932757	0.0731	132	-13	760.6	31.4	0.959	1.187	1.361	22.13	1807	INVALID	INVALID
1/24/2014	8932743	0.0465	59	-8	753.1	32.1	0.957	1.196	1.330	24.05	1920	24	0.031
1/27/2014	8932732	0.1096	237	-9	753.0	32.0	0.958	1.194	1.334	23.95	1917	57	0.124
1/28/2014	8932722	0.0896	168	-12	756.0	31.6	0.958	1.189	1.349	23.81	1928	47	0.087
1/29/2014	8932712	0.0481	20	-7	752.5	32.2	0.957	1.197	1.328	23.86	1901	25	0.011
1/30/2014	8932701	0.1337	87	1	744.3	33.2	0.955	1.210	1.289	23.51	1819	73	0.048
1/31/2014	8932891	0.0496	37	0	745.3	33.0	0.956	1.208	1.294	23.94	1859	27	0.020

Data Captured	TSP	Lead
Valid Samples:	21	21
Scheduled Samples:	22	22
Percent Data Captured:	95%	95%

Monthly Average:	37	0.045
Standard Deviation:	26	0.041
Maximum:	105	0.124
Minimum:	3	0.000

NOTES

1/1/2014 - Holiday - No samples scheduled

1/23/2014 - INVALID - Short run; No explanation

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in µg/std m^3

Lead = mass concentration in µg/std m^3

TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P2941 — **Elvins Rivermines Site #2 Wood & Barton**

Sample Date 2013	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. mg	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Concentations TSP µg/m^3	Mass Concentations Lead µg/m^3
1/2/2014	8932512	0.0184	< 10	-8	751.9	32.1	0.957	1.180	1.310	23.22	1825	10	0.000
1/3/2014	8932502	0.0387	630	-8	753.4	32.1	0.957	1.179	1.315	23.20	1830	21	0.345
1/6/2014	8932691	0.0114	28	-20	756.7	30.6	0.960	1.057	1.238	23.33	1733	7	0.016
1/7/2014	8932681	0.0195	16	-13	754.3	31.5	0.958	1.170	1.331	23.35	1865	10	0.008
1/8/2014	8932671	0.0174	< 10	-1	753.7	32.9	0.956	1.192	1.296	23.33	1814	10	0.000
1/9/2014	8932660	0.0052	< 10	0	751.8	33.0	0.956	1.193	1.290	23.27	1801	3	0.000
1/10/2014	8932650	0.0041	46	4	741.5	33.6	0.955	1.200	1.257	23.37	1763	2	0.026
1/13/2014	8932639	0.0202	< 10	10	738.8	34.3	0.954	1.209	1.239	23.31	1733	12	0.000
1/14/2014	8932629	0.0293	< 10	3	743.1	33.4	0.955	1.197	1.265	23.30	1768	17	0.000
1/15/2014	8932619	0.0233	107	-3	748.0	32.6	0.956	1.187	1.291	23.33	1808	13	0.059
1/16/2014	8932609	0.0456	13	3	740.7	33.5	0.955	1.199	1.259	23.30	1760	26	0.008
1/17/2014	8932798	0.0191	41	-8	746.3	32.1	0.957	1.180	1.300	23.35	1822	11	0.022
1/20/2014	8932787	0.0360	30	7	742.3	34.0	0.954	1.206	1.251	23.36	1753	21	0.017
1/21/2014	8932777	0.0265	15	-7	750.5	32.2	0.957	1.181	1.306	23.26	1823	15	0.008
1/22/2014	8932766	0.0526	18	-4	748.3	32.6	0.956	1.186	1.294	23.39	1815	29	0.010
1/23/2014	8932754	0.0469	22	-13	760.6	31.4	0.959	1.171	1.343	23.30	1877	25	0.012
1/24/2014	8932745	0.0336	48	-8	753.1	32.1	0.957	1.180	1.312	23.39	1842	18	0.026
1/27/2014	8932734	0.0317	< 10	-9	753.0	32.0	0.958	1.178	1.316	23.30	1840	17	0.000
1/28/2014	8932724	0.0239	12	-12	756.0	31.6	0.958	1.172	1.331	23.33	1863	13	0.007
1/29/2014	8932714	0.0365	137	-7	752.5	32.2	0.957	1.181	1.310	22.91	1801	INVALID	INVALID
1/30/2014	8932703	0.1011	403	1	744.3	33.2	0.955	1.194	1.273	22.96	1753	INVALID	INVALID
1/31/2014	8932893	0.0352	< 10	0	745.3	33.0	0.956	1.193	1.278	23.41	1795	20	0.000

Data Captured	TSP	Lead
Valid Samples:	20	20
Scheduled Samples:	22	22
Percent Data Captured:	91%	91%

Monthly Average:	15	0.028
Standard Deviation:	7	0.076
Maximum:	29	0.345
Minimum:	2	0.000

NOTES

1/1/2014 - Holiday - No samples scheduled
1/29/2014 - INVALID - Short run; No explanation
1/30/2014 - INVALID - Short run; No explanation

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius
P_{av} = average station pressure in millimeters of mercury
P_f = (((Temp in °Kelvin * Temp Slope))+Temp Int.))*1.868
P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868
P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate
Q_{std} = total sample volumetric flow rate corrected to standard conditions
V_{std} = total sample volume corrected to standard conditions
TSP = mass concentration in µg/std m^3
Lead = mass concentration in µg/std m^3

TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P4475 — **Elvins Rivermines Site #3 WTP**

Sample Date 2013	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. mg	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Concentations TSP µg/m^3	Mass Concentations Lead µg/m^3
1/2/2014	8932511	0.0210	12	-8	751.9	32.1	0.957	1.178	1.307	23.41	1836	11	0.007
1/3/2014	8932501	0.0088	< 10	-8	753.4	32.1	0.957	1.177	1.312	23.85	1877	5	0.000
1/6/2014	8932690	0.0180	25	-20	756.7	30.6	0.960	1.065	1.248	23.78	1780	10	0.014
1/7/2014	8932680	0.0216	< 10	-13	754.3	31.5	0.958	1.168	1.328	23.39	1864	12	0.000
1/8/2014	8932670	0.0233	< 10	-1	753.7	32.9	0.956	1.189	1.292	23.66	1835	13	0.000
1/9/2014	8932659	0.0068	< 10	0	751.8	33.0	0.956	1.190	1.286	28.82	2224	INVALID	INVALID
1/10/2014	8932649	0.0036	< 10	4	741.5	33.6	0.955	1.198	1.255	18.66	1405	INVALID	INVALID
1/13/2014	8932638	0.0407	89	10	738.8	34.3	0.954	1.206	1.236	23.79	1764	23	0.051
1/14/2014	8932628	0.0434	290	3	743.1	33.4	0.955	1.195	1.262	23.78	1801	24	0.161
1/15/2014	8932618	0.0250	35	-3	748.0	32.6	0.956	1.185	1.288	23.75	1836	14	0.019
1/16/2014	8932608	0.0789	600	3	740.7	33.5	0.955	1.196	1.256	23.82	1795	44	0.334
1/17/2014	8932797	0.0473	107	-8	746.3	32.1	0.957	1.177	1.297	23.79	1852	26	0.058
1/20/2014	8932786	0.0401	62	7	742.3	34.0	0.954	1.203	1.248	23.76	1779	23	0.035
1/21/2014	8932776	0.0254	17	-7	750.5	32.2	0.957	1.179	1.303	23.82	1862	14	0.009
1/22/2014	8932765	0.0467	199	-4	748.3	32.6	0.956	1.184	1.291	23.75	1839	25	0.108
1/23/2014	8932753	0.0348	46	-13	760.6	31.4	0.959	1.168	1.340	23.65	1902	18	0.024
1/24/2014	8932744	0.0394	66	-8	753.1	32.1	0.957	1.178	1.310	23.74	1865	21	0.035
1/27/2014	8932733	0.0281	20	-9	753.0	32.0	0.958	1.176	1.313	23.78	1874	15	0.011
1/28/2014	8932723	0.0317	34	-12	756.0	31.6	0.958	1.170	1.328	23.73	1891	17	0.018
1/29/2014	8932713	0.0330	22	-7	752.5	32.2	0.957	1.178	1.307	23.47	1841	18	0.012
1/30/2014	8932702	0.1010	59	1	744.3	33.2	0.955	1.191	1.270	23.41	1783	57	0.033
1/31/2014	8932892	0.0381	< 10	0	745.3	33.0	0.956	1.190	1.275	23.53	1800	21	0.000

Data Captured	TSP	Lead
Valid Samples:	20	20
Scheduled Samples:	22	22
Percent Data Captured:	91%	91%

Monthly Average:	20	0.046
Standard Deviation:	12	0.079
Maximum:	57	0.334
Minimum:	5	0.000

NOTES

1/1/2014 - Holiday - No samples scheduled
1/9/2014 - INVALID - Long run, No explanation
1/10/2014 - INVALID - Short run; No explanation

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius
P_{av} = average station pressure in millimeters of mercury
P_f = (((Temp in °Kelvin * Temp Slope))+Temp Int.))*1.868
P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868
P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate
Q_{std} = total sample volumetric flow rate corrected to standard conditions
V_{std} = total sample volume corrected to standard conditions
TSP = mass concentration in µg/std m^3
Lead = mass concentration in µg/std m^3

TSP and Lead Analysis

The Doe Run Company

SAMPLER ID P04558 **Big River Site #4 - QA**

Sample Date 2013	Filter ID	TSP Filter Net Wt. g	Lead Total Wt. mg	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Concentations TSP µg/m^3	Lead µg/m^3
1/2/2014	8932524	0.0218	< 10	-8	751.9	32.1	0.957	1.186	1.317	23.36	1845	12	0.000
1/7/2014	8932692	0.0273	< 10	-13	754.3	31.5	0.958	1.176	1.338	23.81	1911	14	0.000
1/9/2014	8932661	0.0063	< 10	0	751.8	33.0	0.956	1.199	1.296	23.79	1850	3	0.000
1/14/2014	8932640	0.0312	31	3	743.1	33.4	0.955	1.203	1.271	23.65	1804	17	0.017
1/16/2014	8932603	0.0525	44	3	740.7	33.5	0.955	1.205	1.265	23.81	1807	29	0.024
1/21/2014	8932789	0.0280	12	-7	750.5	32.2	0.957	1.187	1.313	23.72	1868	15	0.006
1/23/2014	8932755	0.0490	65	-13	760.6	31.4	0.959	1.177	1.350	23.93	1938	25	0.034
1/28/2014	8932735	0.0572	71	-12	756.0	31.6	0.958	1.179	1.338	23.75	1907	30	0.037
1/30/2014	8932704	0.0954	35	1	744.3	33.2	0.955	1.200	1.279	23.59	1810	53	0.019

Valid Samples:	9	9
Scheduled Samples:	9	9
Percent Data Captured:	100%	100%

Monthly Average:	22	0.015
Standard Deviation:	14	0.015
Maximum:	53	0.037
Minimum:	3	0.000

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = (((Temp in °Kelvin * Temp Slope))+Temp Int.))*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = total sample volumetric flow rate corrected to standard conditions

V_{std} = total sample volume corrected to standard conditions

TSP = mass concentration in µg/std m^3

Lead = mass concentration in µg/std m^3

PM_{10} Analysis

The Doe Run Company

SAMPLER ID P2952 — **Big River Site #4 - Primary**

Sample Date 2013	Filter ID	PM10 Filter Net Wt. g	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Conc. PM_{10} $\mu g/m^3$
1/2/2014	289641	0.0149	-8	752.0	32.1	0.957	1.101	1.222	23.69	1736	9
1/5/2014	289631	0.0140	-7	745.0	32.2	0.957	1.101	1.209	23.60	1711	8
1/8/2014	289620	0.0083	-1	754.0	32.9	0.956	1.110	1.208	23.65	1714	5
1/11/2014	289610	0.0060	6	739.0	33.8	0.954	1.120	1.165	23.65	1653	4
1/14/2014	314200	0.0042	3	743.0	33.4	0.955	1.116	1.179	23.57	1667	2
1/17/2014	314189	0.0164	-8	746.2	32.1	0.957	1.100	1.213	23.63	1719	10
1/20/2014	314179	0.0150	8	743.2	34.1	0.954	1.125	1.165	23.60	1650	9
1/23/2014	314168	0.0160	-13	760.1	31.5	0.959	1.092	1.251	23.63	1774	9
1/26/2014	314156	0.0091	7	738.4	34.0	0.954	1.123	1.160	23.63	1645	6
1/29/2014	314147	0.0131	-7	752.2	32.2	0.957	1.101	1.221	23.61	1730	8

Valid Samples:	10
Scheduled Samples:	10
Percent Data Captured:	100%

Monthly Average:	7
Standard Deviation:	3
Maximum:	10
Minimum:	2

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = sample volumetric flow rate corrected to standard conditions

V_{std} = sample volume corrected to standard conditions

PM_{10} Analysis

The Doe Run Company

SAMPLER ID P4601 — **Elvins Rivermines Site #1 by Office**

Sample Date 2013	Filter ID	PM10 Filter Net Wt. g	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Conc. PM_{10} $\mu g/m^3$
1/2/2014	289638	0.0200	-8	752.0	32.1	0.957	1.074	1.192	23.51	1682	12
1/5/2014	289627	0.0214	-7	745.0	32.2	0.957	1.074	1.180	23.51	1664	13
1/8/2014	289617	0.0109	-1	754.0	32.9	0.956	1.084	1.179	23.58	1669	7
1/11/2014	289607	0.0061	6	739.0	33.8	0.954	1.094	1.137	23.62	1612	4
1/14/2014	314196	0.0267	3	743.0	33.4	0.955	1.090	1.151	23.57	1628	16
1/17/2014	314186	0.0345	-8	746.2	32.1	0.957	1.073	1.183	23.54	1672	21
1/20/2014	314175	0.0233	8	743.2	34.1	0.954	1.099	1.137	23.55	1607	14
1/23/2014	314165	0.0339	-13	760.1	31.5	0.959	1.066	1.221	23.56	1726	20
1/26/2014	314157	0.0089	7	738.4	34.0	0.954	1.096	1.133	23.57	1602	6
1/29/2014	314144	0.0299	-7	752.2	32.2	0.957	1.075	1.192	23.51	1681	18

Valid Samples:	10
Scheduled Samples:	10
Percent Data Captured:	100%

Monthly Average:	13
Standard Deviation:	6
Maximum:	21
Minimum:	4

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = sample volumetric flow rate corrected to standard conditions

V_{std} = sample volume corrected to standard conditions

PM_{10} Analysis

The Doe Run Company

SAMPLER ID P4507 — **Elvins Rivermines Site #2 Wood & Barton**

Sample Date 2013	Filter ID	PM10 Filter Net Wt. g	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Conc. PM_{10} $\mu g/m^3$
1/2/2014	289640	0.0169	-8	752.0	32.1	0.957	1.094	1.214	23.90	1741	10
1/5/2014	289629	0.0076	-7	745.0	32.2	0.957	1.094	1.201	23.89	1722	4
1/8/2014	289619	0.0053	-1	754.0	32.9	0.956	1.104	1.201	23.99	1729	3
1/11/2014	289609	0.0045	6	739.0	33.8	0.954	1.114	1.158	23.92	1662	3
1/14/2014	314198	0.0065	3	743.0	33.4	0.955	1.110	1.172	24.00	1688	4
1/17/2014	314188	0.0066	-8	746.2	32.1	0.957	1.093	1.205	23.97	1733	4
1/20/2014	314177	0.0107	8	743.2	34.1	0.954	1.119	1.158	24.06	1672	6
1/23/2014	314167	0.0204	-13	760.1	31.5	0.959	1.085	1.244	24.05	1795	11
1/26/2014	314155	0.0055	7	738.4	34.0	0.954	1.116	1.153	23.92	1655	3
1/29/2014	314146	0.0106	-7	752.2	32.2	0.957	1.094	1.214	24.01	1748	6

Valid Samples:	10
Scheduled Samples:	10
Percent Data Captured:	100%

Monthly Average:	5
Standard Deviation:	3
Maximum:	11
Minimum:	3

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = sample volumetric flow rate corrected to standard conditions

V_{std} = sample volume corrected to standard conditions

PM_{10} Analysis

The Doe Run Company

SAMPLER ID P2951 — **Elvins Rivermines Site #3 WTP**

Sample Date 2013	Filter ID	PM10 Filter Net Wt. g	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Conc. PM_{10} $\mu g/m^3$
1/2/2014	289639	0.0143	-8	752.0	32.1	0.957	1.102	1.223	23.41	1718	8
1/5/2014	289628	0.0140	-7	745.0	32.2	0.957	1.102	1.210	24.21	1757	8
1/8/2014	289618	0.0067	-1	754.0	32.9	0.956	1.112	1.210	23.41	1699	4
1/11/2014	289608	0.0093	6	739.0	33.8	0.954	1.122	1.166	23.43	1640	6
1/14/2014	314197	0.0234	3	743.0	33.4	0.955	1.118	1.181	23.46	1662	14
1/17/2014	314187	0.0324	-8	746.2	32.1	0.957	1.101	1.214	23.42	1706	19
1/20/2014	314176	0.0150	8	743.2	34.1	0.954	1.127	1.166	23.49	1644	9
1/23/2014	314166	0.0157	-13	760.1	31.5	0.959	1.093	1.253	23.44	1762	9
1/26/2014	314154	0.0119	7	738.4	34.0	0.954	1.124	1.162	23.46	1635	7
1/29/2014	314145	0.0198	-7	752.2	32.2	0.957	1.102	1.223	23.45	1720	12

Valid Samples:	10
Scheduled Samples:	10
Percent Data Captured:	100%

Monthly Average:	10
Standard Deviation:	4
Maximum:	19
Minimum:	4

NOTES

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = sample volumetric flow rate corrected to standard conditions

V_{std} = sample volume corrected to standard conditions

PM_{10} Analysis

The Doe Run Company

SAMPLER ID P1019 — **Big River Site #4 - QA**

Sample Date 2013	Filter ID	PM10 Filter Net Wt. g	T_{av} C	P_{av} mmHg	P_f mmHg	Ratio P_o/P_a	Q_a m^3/min	Q_{std} m^3/min	Elapsed Time hr	Sample Volume V_{std} m^3	Mass Conc. PM_{10} $\mu g/m^3$
1/5/2014	289642	0.0122	-7	745.0	32.2	0.957	1.114	1.223	18.91	1387	INVALID
1/11/2014	289630	0.0062	6	739.0	33.8	0.954	1.134	1.179	28.90	2044	INVALID
1/17/2014	314199	0.0127	-8	746.2	32.1	0.957	1.112	1.227	23.88	1757	7
1/23/2014	314178	0.0114	-13	760.1	31.5	0.959	1.105	1.266	23.90	1816	6
1/29/2014	314148	0.0589	-7	752.2	32.2	0.957	1.114	1.235	23.90	1771	33

Valid Samples:	3
Scheduled Samples:	5
Percent Data Captured:	60%

Monthly Average:	16
Standard Deviation:	15
Maximum:	33
Minimum:	6

NOTES

1/5/2014 - INVALID - Short run time; No explanation

1/11/2014 - INVALID - No explanation

DEFINITIONS and CALCULATIONS

T_{av} = average temperature in degrees Celcius

P_{av} = average station pressure in millimeters of mercury

P_f = ((Temp in °Kelvin * Temp Slope))+Temp Int.)*1.868

P_f = ((Temp in °Kelvin * 0.0664)+(-0.4213))*1.868

P_o/P_a = pressure ratio of P_f and P_{av} = 1 - Pf/P_{av}

Q_a = look up table volumetric flow rate

Q_{std} = sample volumetric flow rate corrected to standard conditions

V_{std} = sample volume corrected to standard conditions

Lab Results (Lead and Cadmium)

INOVATIA LABORATORIES, LLC

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0056
Date Received: 01/24/14
Analysis Method: 40 CFR §50 Appendix G

Location **Elvins River Mines**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140282	8932510	01/02/14	#1 South - Office	12	< 10	01/28/14 - DS
140283	8932512	01/02/14	#2 North - W&B	< 10	< 10	01/28/14 - DS
140284	8932511	01/02/14	#3 East - WTP	12	< 10	01/28/14 - DS
140285	8932700	01/03/14	#1 South - Office	< 10	< 10	01/28/14 - DS
140286	8932502	01/03/14	#2 North - W&B	630	< 10	01/28/14 - DS
140287	8932501	01/03/14	#3 East - WTP	< 10	< 10	01/28/14 - DS
140288	8932689	01/06/14	#1 South - Office	28	< 10	01/28/14 - DS
140289	8932691	01/06/14	#2 North - W&B	28	< 10	01/28/14 - DS
140290	8932690	01/06/14	#3 East - WTP	25	< 10	01/28/14 - DS
140291	8932679	01/07/14	#1 South - Office	< 10	< 10	01/28/14 - DS
140292	8932681	01/07/14	#2 North - W&B	16	< 10	01/28/14 - DS
140293	8932680	01/07/14	#3 East - WTP	< 10	< 10	01/28/14 - DS
140294	8932669	01/08/14	#1 South - Office	13	< 10	01/28/14 - DS
140295	8932671	01/08/14	#2 North - W&B	< 10	< 10	01/28/14 - DS
140296	8932670	01/08/14	#3 East - WTP	< 10	< 10	01/28/14 - DS
140297	8932658	01/09/14	#1 South - Office	< 10	< 10	01/28/14 - DS
140298	8932660	01/09/14	#2 North - W&B	< 10	< 10	01/28/14 - DS
140299	8932659	01/09/14	#3 East - WTP	< 10	< 10	01/28/14 - DS
140300	8932648	01/10/14	#1 South - Office	< 10	< 10	01/28/14 - DS
140301	8932650	01/10/14	#2 North - W&B	46	< 10	01/28/14 - DS
140302	8932649	01/10/14	#3 East - WTP	< 10	< 10	01/28/14 - DS

Submitted by: Jennifer Vandelicht

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1/30/14
Date

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INOVATIA LABORATORIES, LLC

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0075
Date Received: 01/31/14
Analysis Method: 40 CFR §50 Appendix G

Location **Elvins River Mines**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140376	8932637	01/13/14	#1 South - Office	134	< 10	02/06/14 - DS
140377	8932639	01/13/14	#2 North - W&B	< 10	< 10	02/06/14 - DS
140378	8932638	01/13/14	#3 East - WTP	89	< 10	02/06/14 - DS
140379	8932627	01/14/14	#1 South - Office	130	< 10	02/06/14 - DS
140380	8932629	01/14/14	#2 North - W&B	< 10	< 10	02/06/14 - DS
140381	8932628	01/14/14	#3 East - WTP	290	< 10	02/06/14 - DS
140382	8932617	01/15/14	#1 South - Office	69	< 10	02/06/14 - DS
140383	8932619	01/15/14	#2 North - W&B	107	< 10	02/06/14 - DS
140384	8932618	01/15/14	#3 East - WTP	35	< 10	02/06/14 - DS
140385	8932607	01/16/14	#1 South - Office	204	< 10	02/06/14 - DS
140386	8932609	01/16/14	#2 North - W&B	13	< 10	02/06/14 - DS
140387	8932608	01/16/14	#3 East - WTP	600	< 10	02/06/14 - DS
140388	8932796	01/17/14	#1 South - Office	73	< 10	02/06/14 - DS
140389	8932798	01/17/14	#2 North - W&B	41	< 10	02/06/14 - DS
140390	8932797	01/17/14	#3 East - WTP	107	< 10	02/06/14 - DS

Jennifer Vandelicht

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Submitted by: _____ 2/7/14
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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0094
Date Received: 02/11/14
Analysis Method: 40 CFR §50 Appendix G

Location **Elvins River Mines**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140492	8932785	01/20/14	#1 South - Office	176	< 10	02/25/14 - DS
140493	8932787	01/20/14	#2 North - W&B	30	< 10	02/25/14 - DS
140494	8932786	01/20/14	#3 East - WTP	62	< 10	02/25/14 - DS
140495	8932775	01/21/14	#1 South - Office	136	< 10	02/21/14 - DS
140496	8932777	01/21/14	#2 North - W&B	15	< 10	02/21/14 - DS
140497	8932776	01/21/14	#3 East - WTP	17	< 10	02/21/14 - DS
140498	8932764	01/22/14	#1 South - Office	174	< 10	02/21/14 - DS
140499	8932766	01/22/14	#2 North - W&B	18	< 10	02/21/14 - DS
140500	8932765	01/22/14	#3 East - WTP	199	< 10	02/21/14 - DS
140501	8932757	01/23/14	#1 South - Office	132	< 10	02/21/14 - DS
140502	8932754	01/23/14	#2 North - W&B	22	< 10	02/21/14 - DS
140503	8932753	01/23/14	#3 East - WTP	46	< 10	02/21/14 - DS
140504	8932743	01/24/14	#1 South - Office	59	< 10	02/21/14 - DS
140505	8932745	01/24/14	#2 North - W&B	48	< 10	02/21/14 - DS
140506	8932744	01/24/14	#3 East - WTP	66	< 10	02/21/14 - DS

Submitted by: Jennifer Vandelicht

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2/26/14
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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0165
Date Received: 02/25/14
Analysis Method: 40 CFR §50 Appendix G

Location **Elvins River Mines**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140779	8932732	01/27/14	#1 South - Office	237	< 10	02/27/14 - DS
140780	8932734	01/27/14	#2 North - W&B	< 10	< 10	02/27/14 - DS
140781	8932733	01/27/14	#3 East - WTP	20	< 10	02/27/14 - DS
140782	8932722	01/28/14	#1 South - Office	168	< 10	02/27/14 - DS
140783	8932724	01/28/14	#2 North - W&B	12	< 10	02/27/14 - DS
140784	8932723	01/28/14	#3 East - WTP	34	< 10	02/27/14 - DS
140785	8932712	01/29/14	#1 South - Office	20	< 10	02/27/14 - DS
140786	8932714	01/29/14	#2 North - W&B	137	< 10	02/27/14 - DS
140787	8932713	01/29/14	#3 East - WTP	22	< 10	02/27/14 - DS
140788	8932701	01/30/14	#1 South - Office	87	< 10	02/27/14 - DS
140789	8932703	01/30/14	#2 North - W&B	403	< 10	02/27/14 - DS
140790	8932702	01/30/14	#3 East - WTP	59	< 10	02/27/14 - DS
140791	8932891	01/31/14	#1 South - Office	37	< 10	02/27/14 - DS
140792	8932893	01/31/14	#2 North - W&B	< 10	< 10	02/27/14 - DS
140793	8932892	01/31/14	#3 East - WTP	< 10	< 10	02/27/14 - DS

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0056
Date Received: 01/24/14
Analysis Method: 40 CFR §50 Appendix G
Location **Big River**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140272	8932513	01/02/14	#4 Primary	< 10	< 10	01/28/14 - DS
140273	8932524	01/02/14	#4 QA	< 10	< 10	01/28/14 - DS
140274	8932503	01/03/14	#4 Primary	22	< 10	01/28/14 - DS
140275	8932693	01/06/14	#4 Primary	23	< 10	01/28/14 - DS
140276	8932682	01/07/14	#4 Primary	< 10	< 10	01/28/14 - DS
140277	8932692	01/07/14	#4 QA	< 10	< 10	01/28/14 - DS
140278	8932672	01/08/14	#4 Primary	< 10	< 10	01/28/14 - DS
140279	8932662	01/09/14	#4 Primary	< 10	< 10	01/28/14 - DS
140280	8932661	01/09/14	#4 QA	< 10	< 10	01/28/14 - DS
140281	8932651	01/10/14	#4 Primary	< 10	< 10	01/28/14 - DS

Submitted by: Jennifer Vandelicht Digitally signed by Jennifer Vandelicht DN: cn=Jennifer Vandelicht, o=Inovatia Laboratories, LLC, ou=Quality Assurance, email=jvandelicht@inovaita.com, c=US Date: 2014.01.30 11:59:11 -06'00'

1/30/14
Date

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0075
Date Received: 01/31/14
Analysis Method: 40 CFR §50 Appendix G
Location **Big River**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140369	8932641	01/13/14	#4 Primary	22	< 10	02/06/14 - DS
140370	8932630	01/14/14	#4 Primary	31	< 10	02/06/14 - DS
140371	8932640	01/14/14	#4 QA	31	< 10	02/06/14 - DS
140372	8932620	01/15/14	#4 Primary	27	< 10	02/06/14 - DS
140373	8932610	01/16/14	#4 Primary	46	< 10	02/06/14 - DS
140374	8932603	01/16/14	#4 QA	44	< 10	02/06/14 - DS
140375	8932799	01/17/14	#4 Primary	50	< 10	02/06/14 - DS

Submitted by: Jennifer Vandelicht Digitally signed by Jennifer Vandelicht DN: cn=Jennifer Vandelicht, o=Inovatia Laboratories, LLC, ou=Quality Assurance, email=jvandelicht@inovaita.com, c=US Date: 2014.02.07 12:25:37 -06'00'

2/7/14
Date

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INOVATIA LABORATORIES, LLC

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0094
Date Received: 02/11/14
Analysis Method: 40 CFR §50 Appendix G
Location **Big River**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140485	8932788	01/20/14	#4 Primary	20	< 10	02/25/14 - DS
140486	8932778	01/21/14	#4 Primary	13	< 10	02/25/14 - DS
140487	8932789	01/21/14	#4 QA	12	< 10	02/25/14 - DS
140488	8932767	01/22/14	#4 Primary	52	< 10	02/25/14 - DS
140489	8932756	01/23/14	#4 Primary	67	< 10	02/25/14 - DS
140490	8932755	01/23/14	#4 QA	65	< 10	02/25/14 - DS
140491	8932746	01/24/14	#4 Primary	57	< 10	02/25/14 - DS

Submitted by: Jennifer Vandelicht Digitally signed by Jennifer Vandelicht DN: cn=Jennifer Vandelicht, o=Inovatia Laboratories, LLC, ou=Quality Assurance, email=jvandelicht@inovalta.com, c=US Date: 2014.02.26 10:24:39 -06'00'

2/26/14
Date

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ANALYSIS REPORT

Client Information:
Barr Engineering Company
7390 Ohms Lane
Edina, MN 55439-2330

Chain of Custody No.: 14-0165
Date Received: 02/25/14
Analysis Method: 40 CFR §50 Appendix G
Location **Big River**

Lab No.	Filter ID	Date	Site	µg Pb/Filter	µg Cd/Filter	Date - Analyst
140772	8932736	01/27/14	#4 Primary	51	< 10	02/27/14 - DS
140773	8932725	01/28/14	#4 Primary	67	< 10	02/27/14 - DS
140774	8932735	01/28/14	#4 QA	71	< 10	02/27/14 - DS
140775	8932715	01/29/14	#4 Primary	21	< 10	02/27/14 - DS
140776	8932705	01/30/14	#4 Primary	37	< 10	02/27/14 - DS
140777	8932704	01/30/14	#4 QA	35	< 10	02/27/14 - DS
140778	8932894	01/31/14	#4 Primary	< 10	< 10	02/27/14 - DS

Submitted by: Jennifer Vandelicht Digitally signed by Jennifer Vandelicht DN: cn=Jennifer Vandelicht, o=Inovatia Laboratories, LLC, ou=Quality Assurance, email=jvandelicht@inovaita.com, c=US Date: 2014.02.28 15:27:20 -06'00'

2/28/14
Date

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Meteorological Data

Meteorological Report
The Doe Run Company
Wind Speed

Site Name: Rivermines

Average Interval: 01 Hour
Units: mph
Sampling Frequency: 01 Second

2014	Hour																								24 Hour Avg	
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Avg
1-Jan	7.1	5.1	6.2	3.3	0.7	0.3	0.1	0.1	1.3	4.8	6.7	4.5	5.4	4.3	3.9	3.1	1.1	0.7	0.5	0.3	0.7	8.4	7.6	6.7	8.4	3.4
2-Jan	8.4	10.4	11.7	10.0	9.7	10.4	10.8	11.7	10.4	11.9	11.6	12.0	13.5	13.1	12.8	12.3	11.3	9.0	5.9	5.2	5.0	3.2	1.1	1.1	13.5	9.3
3-Jan	0.8	0.1	0.0	0.1	0.0	0.1	0.2	0.3	1.8	4.4	6.5	8.8	9.3	9.5	10.7	10.0	8.5	8.1	9.0	9.3	9.1	11.4	11.9	14.0	14.0	6.0
4-Jan	11.9	13.6	13.1	12.0	12.2	10.7	9.2	11.3	10.6	11.2	12.7	11.4	10.9	10.7	9.8	8.4	7.7	7.1	6.3	5.9	2.6	0.3	0.0	0.1	13.6	8.7
5-Jan	1.1	0.3	0.1	0.1	0.9	3.2	8.7	8.1	9.5	8.8	8.8	11.8	12.6	12.1	14.1	14.8	14.5	13.4	16.5	14.5	11.7	8.8	9.3	9.2	16.5	8.9
6-Jan	9.7	9.3	8.5	5.9	6.4	6.7	6.8	5.6	6.0	7.5	8.2	8.2	8.4	7.7	7.6	6.5	5.2	1.8	0.6	0.1	0.3	0.1	0.9	1.1	9.7	5.4
7-Jan	2.2	3.0	3.3	3.5	2.6	1.0	1.2	1.3	0.7	1.3	7.3	10.9	10.9	10.3	10.1	10.1	9.8	7.9	5.4	4.5	4.1	3.5	3.2	3.3	10.9	5.1
8-Jan	4.2	3.9	5.1	4.5	2.8	0.1	0.3	0.2	0.2	1.4	2.2	3.2	1.7	0.3	3.1	3.8	2.6	2.6	1.0	0.7	0.5	0.6	0.9	1.9	5.1	2.0
9-Jan	1.0	2.1	3.2	2.2	2.9	5.2	5.9	6.1	6.0	7.1	6.2	5.9	6.0	5.6	4.7	3.2	2.2	2.9	2.8	3.7	3.4	4.0	4.0	3.5	7.1	4.2
10-Jan	3.3	1.9	0.7	1.7	2.5	3.1	3.8	3.8	5.2	8.5	8.2	7.9	8.4	9.6	10.0	10.1	8.0	9.0	9.0	12.0	11.4	4.6	2.3	2.8	12.0	6.2
11-Jan	4.8	5.0	6.3	5.6	3.8	4.5	5.1	4.5	5.3	6.1	7.5	7.4	6.4	6.3	6.1	6.7	5.0	4.0	1.9	2.5	3.0	3.3	1.5	1.2	7.5	4.7
12-Jan	3.4	2.8	1.4	0.5	1.0	0.2	0.0	0.1	4.0	7.9	9.6	10.1	9.9	12.5	14.5	14.5	13.6	15.1	13.4	9.7	11.1	12.6	12.3	12.9	15.1	8.0
13-Jan	13.6	10.7	9.7	8.7	7.9	8.5	9.8	8.1	5.3	4.3	5.8	5.8	6.8	7.0	7.1	7.3	5.5	5.5	3.3	2.2	0.7	1.0	0.2	0.2	13.6	6.0
14-Jan	0.0	0.1	0.2	0.1	0.4	0.1	0.3	4.2	4.3	5.4	6.7	9.8	10.8	6.8	8.2	10.9	6.9	4.4	4.6	7.9	7.1	5.7	7.6	6.5	10.9	5.0
15-Jan	6.2	5.5	7.5	4.2	4.6	4.6	6.5	8.5	10.0	9.5	10.7	8.3	6.1	5.8	5.7	5.2	5.8	1.7	0.5	0.2	3.9	1.9	2.8	5.0	10.7	5.4
16-Jan	5.0	5.4	6.8	7.8	8.3	9.1	6.4	7.3	9.2	9.0	8.6	7.1	9.2	8.0	7.5	5.3	5.9	8.0	3.7	4.6	0.9	3.7	7.4	10.2	10.2	6.8
17-Jan	9.0	9.7	8.6	7.6	7.8	6.5	5.4	5.9	6.0	5.5	3.7	5.1	6.0	7.1	6.2	5.2	4.2	0.5	0.2	0.0	0.4	0.1	1.2	0.1	9.7	4.7
18-Jan	0.3	0.0	0.0	0.2	0.3	0.3	4.6	6.2	7.4	11.6	11.8	11.7	9.0	6.5	7.1	5.4	3.6	1.8	10.4	6.4	7.0	8.7	9.3	11.5	11.8	5.9
19-Jan	9.7	7.7	8.6	6.8	4.3	1.2	2.1	3.9	6.2	6.3	6.9	7.7	7.7	8.2	9.8	9.7	10.2	8.6	8.2	6.6	7.4	8.6	7.1	6.6	10.2	7.1
20-Jan	7.2	6.6	5.5	4.5	1.7	1.2	1.5	0.3	0.7	3.2	4.4	1.3	1.7	5.0	5.0	6.6	6.4	4.9	1.8	5.4	6.8	2.6	2.7	4.2	7.2	3.8
21-Jan	5.6	13.3	14.0	17.2	17.2	14.4	14.0	12.7	13.7	12.7	11.9	10.7	9.4	8.3	7.4	7.1	4.6	3.8	1.6	0.2	0.6	3.0	1.5	0.9	17.2	8.6
22-Jan	0.7	1.2	2.6	3.5	3.0	4.0	5.8	6.5	6.3	7.1	8.6	7.4	9.0	11.4	9.5	6.2	4.1	1.2	0.8	1.8	4.7	8.1	9.7	12.4	12.4	5.6
23-Jan	13.8	13.3	10.3	9.4	9.6	9.3	8.9	7.3	6.7	9.9	9.2	7.6	7.9	7.6	6.3	5.8	5.1	4.3	1.4	0.3	0.1	0.2	0.0	0.5	13.8	6.5
24-Jan	0.4	0.0	0.0	0.0	0.3	0.9	1.2	4.6	8.0	13.2	12.0	12.1	12.9	14.1	13.2	13.8	12.6	12.1	11.4	13.1	11.5	12.1	12.4	11.7	14.1	8.5
25-Jan	11.6	10.9	10.2	10.3	8.7	6.3	4.5	8.4	7.3	8.6	11.7	13.9	14.2	16.3	16.7	15.9	8.8	8.6	3.2	0.1	0.1	0.5	0.6	0.1	16.7	8.2
26-Jan	0.1	0.3	2.4	10.1	9.4	9.2	8.4	8.9	9.0	8.7	8.3	8.4	7.7	7.4	9.3	8.3	5.6	4.9	5.1	2.9	0.1	1.6	12.5	17.4	17.4	6.9
27-Jan	16.0	15.9	16.4	14.5	15.0	13.8	11.7	13.1	12.0	10.9	9.5	9.6	9.0	9.6	9.9	9.7	8.7	7.8	5.5	7.0	6.7	5.6	6.0	5.4	16.4	10.4
28-Jan	4.7	4.3	5.4	2.6	3.7	3.5	3.0	2.1	3.0	3.2	3.0	4.4	4.6	3.7	4.8	4.7	5.5	4.0	2.4	0.0	0.0	0.0	0.2	0.2	5.5	3.0
29-Jan	0.5	0.8	1.4	0.4	0.8	0.6	0.1	0.9	0.4	4.1	9.1	9.2	8.4	7.0	8.3	8.1	7.8	4.7	5.4	5.3	6.1	7.5	8.3	9.8	9.8	4.8
30-Jan	8.6	7.4	7.1	8.8	8.5	8.7	6.7	11.2	12.6	14.9	17.7	17.5	15.7	15.0	12.1	11.6	8.0	6.6	6.0	7.6	5.8	5.4	5.4	3.7	17.7	9.7
31-Jan	0.9	0.2	0.1	0.1	0.5	0.6	0.2	0.2	0.9	2.6	4.1	4.5	4.2	4.3	4.4	2.5	2.1	1.5	1.1	0.8	0.5	0.2	0.5	0.3	4.5	1.6

Maximum Hour//Monthly Average	17.7	6.1
Total Hours In Month	744	
Valid Hours//Percent Data Captured	744	100.0%

BARR

Meteorological Report
The Doe Run Company
Wind Direction

Site Name: Rivermines

Average Interval: 01 Hour
Units: Degrees
Sampling Frequency: 01 Second

2014	Hour																								
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	24 Hour Avg
1-Jan	210	217	201	212	176	142	127	135	167	185	197	174	185	161	141	144	128	74	46	87	280	339	343	331	183
2-Jan	331	331	319	320	316	316	318	318	314	316	320	323	330	329	320	329	327	319	315	325	322	327	294	278	319
3-Jan	311	285	158	247	273	126	297	334	169	171	170	184	189	185	186	184	178	178	182	185	187	195	198	196	207
4-Jan	200	197	193	195	190	197	198	197	201	201	199	201	206	198	190	194	202	203	199	209	199	202	359	1	197
5-Jan	72	352	352	23	52	40	353	348	339	336	328	322	324	321	318	320	317	314	318	317	313	307	311	311	279
6-Jan	310	306	308	304	302	299	294	292	289	292	289	288	284	279	273	276	299	300	279	264	262	243	255	216	283
7-Jan	245	230	233	236	228	209	178	232	308	318	192	191	198	194	203	196	188	193	193	194	194	206	212	216	216
8-Jan	217	211	205	204	218	222	182	153	142	130	157	210	211	350	95	115	106	141	118	126	106	125	114	149	167
9-Jan	120	106	115	110	121	142	156	153	161	170	177	181	187	198	190	171	154	156	158	162	166	175	180	189	158
10-Jan	178	153	142	134	127	138	159	156	177	180	180	174	179	176	177	175	188	181	177	175	182	235	171	192	171
11-Jan	226	243	243	246	242	266	270	272	270	268	263	269	263	269	260	252	260	259	272	279	270	249	257	216	258
12-Jan	222	215	214	229	234	135	175	142	188	191	189	185	183	186	191	186	185	188	187	182	196	191	193	194	191
13-Jan	195	202	201	203	206	201	205	212	226	267	272	315	303	290	292	296	296	300	299	291	248	225	212	226	249
14-Jan	203	175	198	205	170	172	242	232	247	259	284	306	319	293	297	303	290	291	288	294	301	316	316	297	262
15-Jan	296	301	308	295	291	300	306	326	328	327	323	324	313	291	274	261	243	202	166	157	183	194	193	180	266
16-Jan	194	189	196	202	198	208	205	202	214	229	229	265	291	290	283	290	264	272	264	253	251	280	286	290	243
17-Jan	288	284	293	288	292	283	281	284	284	296	277	291	290	283	291	279	282	303	206	203	243	244	245	166	270
18-Jan	236	241	167	200	225	337	169	169	173	193	209	219	233	274	266	265	255	279	297	292	291	297	304	316	246
19-Jan	308	312	316	300	284	287	227	229	243	238	244	256	257	236	226	220	206	204	208	227	219	221	236	240	247
20-Jan	244	244	244	240	218	229	257	252	264	322	350	3	9	359	341	344	352	354	322	327	317	293	285	289	269
21-Jan	295	307	305	319	335	332	330	330	346	342	332	338	324	342	329	341	343	9	359	348	107	114	99	102	280
22-Jan	148	152	153	173	186	194	197	203	205	225	245	276	293	305	295	289	272	270	244	259	313	322	324	332	245
23-Jan	334	330	344	329	330	334	320	317	309	323	323	315	317	311	302	298	294	313	297	303	259	258	269	245	307
24-Jan	240	238	265	241	248	264	274	204	212	216	213	221	213	209	207	207	209	207	210	218	219	217	221	222	225
25-Jan	225	229	228	238	241	244	263	311	319	300	299	305	306	309	313	312	295	321	323	143	171	162	340	240	268
26-Jan	280	347	197	184	200	212	217	230	237	241	249	257	258	254	249	264	284	305	299	287	269	271	321	332	260
27-Jan	343	337	331	328	332	336	332	327	333	328	323	324	319	332	326	341	334	338	332	347	353	354	350	357	336
28-Jan	358	355	4	27	2	357	0	354	329	323	344	335	342	310	294	293	304	315	324	161	150	205	226	221	247
29-Jan	220	236	226	217	214	207	204	212	256	243	220	218	222	227	226	218	206	180	173	181	178	189	194	191	211
30-Jan	193	190	198	204	198	192	181	188	189	186	195	197	200	199	197	201	190	186	180	195	211	218	214	217	197
31-Jan	208	152	345	358	27	69	65	333	14	35	19	33	55	67	71	48	50	67	34	44	55	18	47	49	94

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Total Hours In Month	744
Valid Hours	744
Percent Data Captured	100.0%

Meteorological Report
The Doe Run Company
ΣΘ

Site Name: Rivermines

Average Interval: 01 Hour
Units: Degrees

2014	Hour																								
Day	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**24 Hour Avg**
1-Jan	15	16	23	16	21	6	5	2	12	19	20	22	21	21	21	20	12	10	6	14	14	16	18	15	15
2-Jan	14	16	14	14	15	16	15	15	15	16	15	16	16	17	17	15	15	14	13	13	13	12	14	14	15
3-Jan	16	5	0	3	1	8	9	10	20	21	21	20	19	19	18	20	19	19	18	20	21	17	16	18	15
4-Jan	17	17	17	17	18	17	18	18	19	20	17	18	20	17	17	16	16	18	18	18	15	4	4	2	16
5-Jan	10	8	3	4	13	19	20	18	17	18	15	15	16	16	15	15	15	17	15	15	18	16	14	15	14
6-Jan	16	17	15	15	17	18	20	20	22	22	23	23	22	23	22	23	19	13	8	2	5	4	8	9	16
7-Jan	9	12	13	15	14	16	11	23	20	25	20	17	19	18	17	16	15	14	14	13	14	16	13	12	16
8-Jan	13	11	14	12	11	2	9	6	6	16	16	18	32	13	17	20	17	17	11	8	11	11	16	17	13
9-Jan	12	14	18	16	21	22	21	20	21	20	19	18	17	19	17	17	16	16	17	18	18	20	17	15	18
10-Jan	17	17	10	18	16	18	22	24	22	17	17	18	20	18	17	18	16	17	18	18	16	26	27	13	18
11-Jan	17	15	16	19	18	18	19	19	21	20	19	19	21	21	22	21	17	16	13	16	12	12	10	10	17
12-Jan	12	9	6	5	9	5	1	3	25	19	19	20	20	20	18	17	18	17	19	23	18	16	18	17	15
13-Jan	17	19	18	19	18	18	16	16	20	20	23	25	22	24	24	24	20	17	15	13	9	8	3	4	17
14-Jan	3	0	6	6	10	3	4	13	14	17	23	20	17	22	23	19	22	18	15	20	20	19	16	21	15
15-Jan	21	18	17	19	20	19	19	16	17	19	21	19	25	30	25	21	19	11	5	6	15	17	15	17	18
16-Jan	16	15	16	17	18	17	17	16	17	20	18	23	25	22	23	22	20	23	16	18	13	20	22	22	19
17-Jan	23	22	21	22	22	24	22	23	24	22	24	20	23	23	23	23	21	12	5	1	6	3	11	18	18
18-Jan	7	3	1	15	11	6	26	18	21	19	17	18	20	23	24	21	23	17	22	22	21	21	21	16	17
19-Jan	19	17	16	19	20	14	13	15	17	19	22	22	23	23	19	17	15	13	15	18	15	16	18	17	18
20-Jan	18	16	15	14	11	9	5	4	8	20	27	31	27	20	18	20	16	15	10	9	13	16	17	18	16
21-Jan	17	19	19	16	16	16	15	15	18	17	18	21	19	23	21	21	18	15	14	5	14	18	15	12	17
22-Jan	8	14	18	19	18	15	17	15	17	22	21	22	24	20	20	25	20	11	8	11	19	14	16	16	17
23-Jan	16	16	17	17	18	17	15	17	19	17	19	21	20	23	30	21	21	13	11	11	3	4	0	11	16
24-Jan	8	1	1	4	7	8	23	13	16	17	18	20	20	18	18	18	17	15	16	16	18	18	16	16	14
25-Jan	18	18	18	18	18	17	20	18	16	22	22	20	22	19	18	16	22	13	6	2	2	8	10	5	15
26-Jan	12	27	34	16	19	17	16	20	19	19	22	23	21	24	22	20	21	17	18	16	2	10	23	17	19
27-Jan	18	17	16	15	18	18	17	16	17	17	21	24	24	22	19	20	18	17	14	17	17	17	17	16	18
28-Jan	15	16	16	17	16	15	15	14	21	29	32	39	36	33	38	29	22	14	9	0	0	1	6	8	18
29-Jan	14	14	16	11	15	13	2	14	12	23	20	20	23	30	26	24	17	12	13	13	16	16	16	16	17
30-Jan	15	16	21	18	16	16	19	18	16	17	18	18	19	18	17	17	16	17	17	16	19	18	15	16	17
31-Jan	10	4	4	1	13	24	8	6	11	19	16	18	22	19	21	19	15	14	15	12	9	5	8	8	13

BARR

Total Hours In Month	744
Valid Hours	744
Percent Data Captured	100.0%

Meteorological Report
The Doe Run Company
Temperature

Site Name: Rivermines

Average Interval: 01 Hour
Units: Deg. C
Sampling Frequency: 01 Second

2014	Hour																								24 Hour	
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Avg
1-Jan	3.3	2.9	2.7	1.7	-0.5	-2.4	-2.6	-2.4	2.2	4.6	6.5	6.5	6.7	6.2	6.0	6.2	6.1	5.4	4.2	4.2	3.0	0.2	-1.1	-1.8	6.7	2.8
2-Jan	-2.5	-3.7	-5.1	-6.5	-7.2	-7.5	-7.8	-8.2	-8.5	-8.2	-7.4	-6.3	-5.8	-5.4	-5.6	-6.3	-6.8	-7.5	-8.5	-9.3	-10.3	-11.0	-12.1	-12.7	-2.5	-7.5
3-Jan	-13.6	-14.7	-15.3	-16.1	-16.2	-16.6	-16.7	-15.9	-12.0	-8.8	-6.7	-4.3	-3.0	-2.3	-1.6	-1.8	-2.7	-3.6	-4.2	-4.3	-4.4	-4.1	-3.4	-2.8	-1.6	-8.1
4-Jan	-2.5	-2.0	-1.9	-2.1	-2.3	-2.2	-2.0	-1.9	-0.5	1.5	2.5	4.2	5.1	4.4	3.8	3.0	2.5	2.4	2.3	2.0	1.1	0.9	0.6	0.4	5.1	0.8
5-Jan	0.3	0.3	0.2	0.2	0.3	0.2	-1.6	-3.9	-5.1	-5.6	-5.9	-6.5	-7.4	-8.2	-9.5	-10.3	-10.7	-11.1	-12.2	-12.9	-14.2	-15.1	-15.4	-15.8	0.3	-7.1
6-Jan	-16.4	-17.3	-18.2	-19.3	-19.8	-20.3	-21.3	-22.0	-20.7	-19.9	-19.3	-18.3	-17.5	-16.6	-16.1	-16.3	-17.4	-19.4	-21.7	-23.2	-23.4	-24.7	-25.2	-26.1	-16.1	-20.0
7-Jan	-26.1	-25.9	-25.7	-25.5	-25.5	-25.5	-25.2	-25.0	-19.8	-15.7	-9.6	-8.5	-6.4	-4.8	-3.1	-2.8	-3.5	-4.5	-5.0	-5.5	-5.5	-5.2	-4.9	-4.9	-2.8	-13.1
8-Jan	-4.6	-4.3	-3.4	-3.3	-3.4	-4.3	-4.1	-4.4	-3.3	-2.2	-0.8	1.1	2.2	2.6	2.5	2.0	0.6	0.1	-0.2	-0.5	-0.6	-0.9	-1.1	-1.5	2.6	-1.3
9-Jan	-1.5	-1.8	-1.9	-1.9	-1.8	-1.4	-1.2	-1.2	-1.1	-0.7	-0.4	0.0	0.3	0.6	0.6	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.6	-0.4
10-Jan	0.5	0.3	0.3	0.5	0.9	1.3	2.1	2.5	3.5	3.9	4.2	4.7	5.1	6.1	6.8	7.0	8.9	7.0	6.9	7.1	7.4	7.5	7.4	7.0	7.5	4.5
11-Jan	7.9	7.0	5.6	3.6	2.9	3.2	3.2	3.1	3.2	3.9	5.7	7.2	8.9	9.8	10.3	10.0	9.1	7.6	5.8	4.9	3.9	3.2	2.1	0.9	10.3	5.5
12-Jan	1.2	-0.3	-2.0	-2.8	-2.7	-2.9	-3.6	-3.7	1.1	6.9	9.6	11.0	13.0	14.5	15.1	14.6	13.3	12.0	11.6	10.9	10.9	10.7	10.9	11.3	15.1	6.7
13-Jan	11.8	12.2	12.1	11.7	11.3	11.1	11.1	10.7	10.8	10.7	11.6	12.1	13.1	13.4	13.1	12.8	12.0	9.9	7.9	6.4	4.2	1.2	-0.6	-1.3	13.4	9.5
14-Jan	-1.7	-2.7	-2.9	-3.2	-3.4	-3.7	-4.0	-0.5	3.9	6.5	8.9	9.0	8.6	9.0	9.2	8.7	7.2	5.3	3.8	3.8	2.7	1.2	-0.4	-1.4	9.2	2.7
15-Jan	-2.0	-2.5	-3.3	-4.1	-4.6	-4.3	-4.1	-4.5	-4.7	-3.7	-2.9	-2.3	-1.3	-0.2	-0.1	-0.7	-1.9	-3.4	-5.0	-6.3	-5.1	-5.8	-6.0	-3.6	-0.1	-3.4
16-Jan	-2.0	-1.2	-0.5	0.1	0.4	0.4	0.5	1.0	1.9	4.3	6.1	9.3	10.1	8.5	7.8	6.9	6.6	5.9	4.5	3.9	1.9	1.7	2.9	0.9	10.1	3.4
17-Jan	-2.5	-5.0	-6.2	-7.4	-8.1	-8.6	-8.6	-8.4	-7.8	-7.3	-6.8	-6.8	-6.8	-6.2	-5.8	-5.2	-5.1	-6.6	-8.7	-10.3	-10.5	-11.1	-11.0	-12.4	-2.5	-7.6
18-Jan	-13.0	-13.1	-13.3	-13.1	-11.1	-9.2	-6.0	-4.2	-2.3	0.7	1.9	3.5	5.4	6.2	7.9	7.1	6.5	5.2	4.2	3.2	2.8	2.0	1.3	0.1	7.9	-1.1
19-Jan	-0.8	-1.3	-1.7	-2.1	-3.2	-4.2	-4.7	-4.6	-2.1	0.6	4.0	6.7	9.0	10.4	11.7	12.0	11.2	9.2	8.5	8.2	8.0	8.6	8.8	8.5	12.0	4.2
20-Jan	8.3	8.0	7.4	7.0	4.8	3.1	0.4	0.4	4.3	8.1	8.9	10.0	10.9	12.1	12.8	12.8	11.5	9.7	7.5	7.7	7.3	5.9	4.8	4.3	12.8	7.4
21-Jan	3.9	2.9	-0.5	-3.3	-5.7	-7.1	-7.9	-8.6	-9.5	-9.2	-9.0	-8.5	-8.7	-8.3	-7.6	-7.7	-7.8	-8.2	-8.7	-9.7	-10.0	-9.4	-9.3	-9.2	3.9	-7.0
22-Jan	-9.1	-8.9	-8.8	-8.7	-8.4	-7.9	-7.4	-6.9	-5.9	-4.3	-2.3	-0.7	-0.4	-0.4	0.0	0.2	0.0	-1.7	-2.4	-2.0	-1.6	-2.5	-3.3	-4.9	0.2	-4.1
23-Jan	-6.6	-9.2	-11.4	-12.5	-14.1	-15.3	-16.1	-16.7	-15.9	-15.0	-14.2	-12.9	-12.0	-11.1	-10.1	-10.3	-9.9	-11.1	-12.3	-13.7	-14.9	-15.6	-17.1	-17.8	-6.6	-13.1
24-Jan	-17.5	-18.3	-18.9	-19.0	-18.8	-18.9	-18.3	-15.1	-11.7	-9.1	-6.5	-4.3	-2.3	-1.0	0.0	0.6	0.4	-0.5	-1.1	-0.9	-0.4	-0.2	-0.2	0.2	0.6	-7.6
25-Jan	1.0	1.9	2.5	3.2	2.9	3.2	4.5	6.0	5.8	7.5	8.8	8.2	8.2	8.2	7.4	6.0	4.5	2.3	-0.4	-3.4	-5.0	-5.9	-6.9	-7.7	8.8	2.6
26-Jan	-8.0	-8.0	-5.2	-0.4	0.4	0.7	2.0	3.3	5.5	8.6	12.6	14.6	16.1	17.1	17.8	17.4	16.2	14.2	12.8	11.2	9.5	8.7	7.1	2.2	17.8	7.3
27-Jan	-0.7	-2.9	-5.1	-6.4	-8.1	-9.4	-9.9	-10.7	-11.2	-10.8	-10.1	-9.1	-8.1	-8.1	-8.3	-8.4	-9.0	-9.6	-9.9	-10.3	-11.0	-11.5	-11.9	-12.2	-0.7	-8.9
28-Jan	-12.8	-13.1	-13.3	-13.8	-14.2	-14.4	-14.6	-14.9	-14.0	-12.7	-11.3	-9.7	-8.8	-7.3	-6.6	-6.5	-7.0	-8.5	-10.7	-12.5	-14.2	-15.5	-16.0	-16.5	-6.5	-12.0
29-Jan	-16.8	-16.8	-17.2	-17.5	-17.7	-17.8	-18.0	-17.3	-11.6	-5.3	-3.0	-1.7	-0.6	0.7	1.3	1.4	0.9	-0.5	-1.6	-2.4	-3.0	-3.1	-3.0	-3.2	1.4	-7.2
30-Jan	-3.4	-3.6	-3.6	-3.9	-4.1	-4.3	-4.5	-3.7	-3.0	-0.9	2.3	4.4	5.6	5.7	5.4	4.6	4.0	3.6	3.0	2.6	2.6	2.7	2.5	2.3	5.7	0.7
31-Jan	1.1	-1.4	-1.4	-1.2	-2.0	-1.9	-2.4	-2.4	-0.9	1.0	1.6	1.6	1.5	1.3	0.2	-0.3	-0.6	-0.6	-0.7	-0.7	-0.6	-0.4	-0.3	-0.2	1.6	-0.4

Maximum Hour//Monthly Average	17.8	-2.3
Total Hours In Month	744	
Valid Hours	744	
Percent Data Captured	100.0%	

BARR

Meteorological Report
The Doe Run Company
Site Pressure

Site Name: Rivermines

Average Interval: 01 Hour
Units: mmHg
Sampling Frequency: 01 Second

2014	Hour																								24 Hour	
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Avg
1-Jan	750	749	749	749	749	749	749	749	749	749	749	748	747	746	746	745	745	744	745	745	745	745	746	746	750	747
2-Jan	746	746	747	748	748	749	749	750	751	752	752	752	752	752	752	753	754	755	755	756	756	756	757	757	757	752
3-Jan	757	757	757	757	757	757	758	758	757	757	756	755	753	752	751	751	751	750	750	750	749	748	747	747	758	753
4-Jan	746	746	746	746	745	745	745	745	745	746	745	745	744	743	743	743	744	744	744	744	744	744	744	744	746	745
5-Jan	743	743	743	742	741	741	741	742	742	741	741	741	742	742	743	745	746	748	749	751	752	753	753	753	753	745
6-Jan	754	754	755	755	755	756	757	757	757	758	758	757	757	756	756	757	757	757	757	758	758	758	758	758	758	757
7-Jan	758	758	758	758	758	757	757	757	757	756	756	754	753	752	751	751	750	751	751	752	752	752	752	752	758	754
8-Jan	752	752	753	753	753	753	753	754	754	754	754	754	753	753	753	754	754	754	754	755	755	755	755	755	755	754
9-Jan	755	755	755	754	754	754	753	753	753	753	753	752	751	751	750	750	750	750	750	750	750	749	749	749	755	752
10-Jan	748	748	748	747	746	746	745	745	745	744	744	742	741	740	739	738	738	738	737	736	735	736	735	735	748	742
11-Jan	734	734	735	736	736	737	737	737	738	739	739	739	739	738	739	739	740	740	741	742	743	743	744	744	744	739
12-Jan	744	744	744	744	744	744	744	744	744	744	743	742	741	739	739	738	738	738	738	738	739	739	738	738	744	741
13-Jan	737	737	737	737	737	736	736	737	738	739	739	739	738	738	738	739	739	740	741	741	742	742	742	742	742	739
14-Jan	742	742	742	742	741	740	740	740	741	741	742	742	742	742	742	743	744	745	746	746	747	747	748	748	748	743
15-Jan	748	748	748	748	748	748	749	749	749	750	750	749	749	748	748	748	748	748	748	747	747	747	746	745	750	748
16-Jan	744	744	743	743	742	741	741	740	740	740	740	739	738	738	739	739	740	740	741	741	740	741	741	742	744	741
17-Jan	743	743	744	744	745	745	745	746	746	746	746	747	746	747	747	748	748	748	748	748	748	748	748	748	748	746
18-Jan	747	747	747	747	746	745	744	743	741	740	739	738	738	738	738	738	739	739	741	741	742	743	743	744	747	742
19-Jan	745	745	746	746	747	746	747	747	746	747	747	746	744	743	742	742	741	741	741	741	741	741	741	741	747	744
20-Jan	740	740	741	741	742	742	743	743	743	743	743	743	742	742	741	742	742	742	743	743	744	744	744	743	744	742
21-Jan	743	743	745	747	748	749	751	752	753	753	754	753	753	752	752	752	752	752	752	752	751	751	751	751	754	751
22-Jan	750	750	749	749	748	748	748	748	747	747	747	747	746	746	747	747	747	748	748	749	749	750	751	752	752	748
23-Jan	753	754	755	756	757	759	760	761	761	762	763	763	762	762	762	762	762	762	763	763	763	763	763	763	763	761
24-Jan	763	763	762	762	761	761	760	760	758	757	756	755	753	751	749	748	747	746	746	745	745	743	742	742	763	753
25-Jan	740	739	739	738	738	739	739	740	740	740	741	741	741	741	742	743	743	744	744	745	745	744	744	744	745	741
26-Jan	743	742	741	739	739	738	737	738	737	737	737	736	735	734	734	734	734	735	736	737	738	739	740	743	743	738
27-Jan	745	746	748	749	750	751	752	753	753	754	754	755	754	754	754	754	754	755	755	756	756	756	757	757	757	753
28-Jan	757	757	757	757	757	757	757	758	758	758	758	757	756	755	754	754	754	754	754	755	755	755	755	755	758	756
29-Jan	755	755	755	755	754	754	755	755	754	754	754	754	753	752	751	751	751	750	750	750	750	749	749	749	755	752
30-Jan	748	748	748	747	747	746	746	748	745	744	743	742	741	741	741	742	742	743	743	743	744	744	744	744	748	744
31-Jan	744	745	745	745	745	745	746	747	747	747	747	747	746	745	745	745	745	745	745	745	745	744	744	744	747	745

Maximum Hour//Monthly Average	763	747
Total Hours in Month	744	
Valid Hours//Percent Data Captured	744	100.0%

BARR

Meteorological Report
The Doe Run Company
Precipitation

Site Name: Rivermines

Average Interval: 01 Hour
Sampling Frequency: 01 Second

2014	Hour																								24 Hour	
Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Max	Total
1-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.04	0.04
2-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
4-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.03
5-Jan	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
6-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.07	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.20
9-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.05
10-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.02	0.09	0.14	0.08	0.09	0.06	0.02	0.00	0.03	0.09	0.08	0.00	0.14	0.76
11-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
13-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
23-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31-Jan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Maximum Hour//Monthly Total	0.14	1.13
Total Hours in Month	744	
Valid Hours//Percent Data Captured	744	100.0%

BARR