

Appendix D: Background Air Quality Data

- **PM₁₀ Monitoring Data**
- **PM₁₀ Background Value Letter from APCD**

PM₁₀ Monitoring Data

Energy Fuels - Pinon Ridge
Teflon Membrane Filter
Particulate Network Summary
April 2008

Filter ID	Sampler ID	Runday	Tare Mass (mg)	Exp. Mass (mg)	Net Mass (mg)	Run Time (minutes)	Std. Volume (m ³)	Act. Volume (m ³)	STP	LTP	Comments
									Std. Conc. (µg/m ³)	Act. Conc. (µg/m ³)	
390302	1-2	04/01/08	145.373	145.534	0.161	1440	21.006	24.00	8	7	Make-up for missed 3/31/08 sample
390303	1-2	04/06/08	147.762	148.093	0.331	1440	20.594	24.00	16	14	
390304	1-2	04/12/08	147.980	148.120	0.140	1440	21.261	24.00	7	6	
390305	1-2	04/18/08	148.298	148.630	0.332	1440	20.731	24.00	16	14	
390307	1-2	04/24/08	143.414	143.843	0.429	1440	20.486	24.00	21	18	
390308	1-2	04/30/08	144.664	145.972	1.308	1440	19.832	24.00	66	55	
390306	1-2	04/23/08	143.653	143.675	0.022	0	0.000	0.00	0	0	Field Blank
390293	2-2	04/06/08	146.839	147.197	0.358	1440	20.582	24.00	17	15	
390294	2-2	04/12/08	142.587	142.721	0.134	1440	21.273	24.00	6	6	
390295	2-2	04/18/08	142.754	143.084	0.330	1440	20.727	24.00	16	14	
390296	2-2	04/24/08	143.070	143.558	0.488	1440	20.511	24.00	24	20	
390297	2-2	04/30/08	143.976	145.279	1.303	1440	19.868	24.00	66	54	

Energy Fuels - Pinon Ridge
Teflon Membrane Filter
Particulate Network Summary
May 2008

Filter ID	Sampler ID	Runday	Tare Mass (mg)	Exp. Mass (mg)	Net Mass (mg)	Run Time (minutes)	Std. Volume (m ³)	Act. Volume (m ³)	STP	LTP	Comments
									Std. Conc. (µg/m ³)	Act. Conc. (µg/m ³)	
390309	1-2	05/06/08	145.498	145.795	0.297	1440	19.832	24.00	15	12	
390310	1-2	05/12/08	144.389	144.998	0.609	1440	20.184	24.00	30	25	
390311	1-2	05/18/08	143.870	144.056	0.186	1440	20.023	24.00	9	8	
390468	1-2	05/24/08	146.229	146.437	0.208	1440	20.569	24.00	10	9	
390480	1-2	05/30/08	144.160	144.388	0.228	1440	20.096	24.00	11	10	
390298	2-2	05/06/08	143.700	144.010	0.310	1440	19.868	24.00	16	13	
390299	2-2	05/12/08	140.489	141.062	0.573	1440	20.146	24.00	28	24	
390301	2-2	05/18/08	145.952	145.250	-0.702	1440	20.018	24.00	0	0	Invalid - Lab Error
390469	2-2	05/24/08	150.362	150.550	0.188	1440	20.612	24.00	9	8	
390487	2-2	05/30/08	145.697	145.927	0.230	1440	20.123	24.00	11	10	
390300	2-2	05/13/08	147.128	147.153	0.025	0	0.000	0.00	0	0	Field Blank

Energy Fuels - Pinon Ridge
Teflon Membrane Filter
Particulate Network Summary
June 2008

Filter ID	Sampler ID	Runday	Tare Mass (mg)	Exp. Mass (mg)	Net Mass (mg)	Run Time (minutes)	Std. Volume (m ³)	Act. Volume (m ³)	STP	LTP	Comments
									Std. Conc. (µg/m ³)	Act. Conc. (µg/m ³)	
390481	1-2	06/05/08	138.219	138.291	0.072	1440	20.407	24.00	4	3	
390482	1-2	06/11/08	135.401	135.776	0.375	1440	20.068	24.00	19	16	
390483	1-2	06/17/08	147.614	147.794	0.180	1440	20.068	24.00	9	8	
390485	1-2	06/23/08	146.470	146.708	0.238	1440	19.563	24.00	12	10	
390470	1-2	06/29/08	146.586	146.918	0.332	1440	19.776	24.00	17	14	
390484	1-2	06/20/08	148.833	148.854	0.021	0	0.000	0.00	0	0	Field Blank
390486	2-2	06/05/08	145.581	145.673	0.092	1440	20.465	24.00	5	4	
390488	2-2	06/11/08	144.932	145.310	0.378	1440	20.137	24.00	19	16	
390489	2-2	06/17/08	147.814	148.004	0.190	1440	20.137	24.00	9	8	
390490	2-2	06/23/08	143.713	143.972	0.259	1440	19.602	24.00	13	11	
390471	2-2	06/29/08	149.706	149.941	0.235	1440	19.803	24.00	12	10	

Energy Fuels - Pinon Ridge
Teflon Membrane Filter
Preliminary Particulate Network Summary*
July 2008

Filter ID	Sampler ID	Runday	Tare Mass (mg)	Exp. Mass (mg)	Net Mass (mg)	Run Time (minutes)	Std. Volume (m ³)	Act. Volume (m ³)	STP	LTP	Comments
									Std. Conc. (µg/m ³)	Act. Conc. (µg/m ³)	
390472	1-2	07/05/08	147.196	147.469	0.273	1440	19.650	24.00	14	11	
390473	1-2	07/11/08	148.430	148.703	0.273	1279	17.422	21.30	16	13	Invalid - Sample Time Out of Limits
390474	1-2	07/14/08	149.522	149.794	0.272	1440	19.681	24.00	14	11	
390475	1-2	07/17/08	149.174	149.345	0.171	1440	19.820	24.00	9	7	
390476	1-2	07/23/08	146.940	147.151	0.211	1440	19.655	24.00	11	9	
390477	1-2	07/29/08	148.825	149.071	0.246	1440	19.550	24.00	13	10	
390493	2-2	07/05/08	144.507	144.740	0.233	1440	19.626	24.00	12	10	
390494	2-2	07/11/08	144.268	144.510	0.242	1279	17.439	21.30	14	11	Invalid - Sample Time Out of Limits
390491	2-2	07/14/08	145.972	146.231	0.259	1440	19.715	24.00	13	11	
390492	2-2	07/17/08	145.432	145.583	0.151	1440	19.887	24.00	8	6	
390496	2-2	07/23/08	147.191	147.331	0.140	1440	19.721	24.00	7	6	
390497	2-2	07/29/08	149.968	150.197	0.229	1440	19.721	24.00	12	10	
390495	2-2	07/18/08	144.606	144.624	0.018	0	0.000	0.00	0	0	Field Blank

Energy Fuels - Pinon Ridge
Teflon Membrane Filter
Particulate Network Summary
August 2008

Filter ID	Sampler ID	Runday	Tare Mass (mg)	Exp. Mass (mg)	Net Mass (mg)	Run Time (minutes)	Std. Volume (m ³)	Act. Volume (m ³)	STP	LTP	Comments
									Std. Conc. (µg/m ³)	Act. Conc. (µg/m ³)	
390478	1-2	08/04/08	147.851	148.064	0.213	1440	19.472	24.00	11	9	
390479	1-2	08/10/08	146.774	146.926	0.152	1440	19.623	24.00	8	6	
390500	1-2	08/16/08	147.755	147.867	0.112	1440	19.916	24.00	6	5	
390501	1-2	08/22/08	148.507	148.695	0.188	1440	19.513	24.00	10	8	
390636	1-2	08/28/08	146.787	147.128	0.341	1440	19.513	24.00	18	14	
390499	1-2	08/11/08	148.042	148.063	0.021	0	0.000	0.00	0	0	Field Blank
390498	2-2	08/04/08	151.379	151.581	0.202	1440	19.537	24.00	10	8	
390502	2-2	08/10/08	148.211	148.346	0.135	1440	19.690	24.00	7	6	
390503	2-2	08/16/08	146.571	146.715	0.144	1440	19.977	24.00	7	6	
390504	2-2	08/22/08	147.824	148.004	0.180	1440	19.977	24.00	9	8	
390631	2-2	08/28/08	141.772	142.099	0.327	1440	19.546	24.00	17	14	

Energy Fuels - Pinon Ridge
Teflon Membrane Filter
Particulate Network Summary
September 2008

Filter ID	Sampler ID	Runday	Tare Mass (mg)	Exp. Mass (mg)	Net Mass (mg)	Run Time (minutes)	Std. Volume (m ³)	Act. Volume (m ³)	STP	LTP	Comments
									Std. Conc. (µg/m ³)	Act. Conc. (µg/m ³)	
390637	1-2	09/03/08	147.179	147.354	0.175	1440	20.052	24.00	9	7	
390638	1-2	09/09/08	146.403	146.575	0.172	1440	20.133	24.00	9	7	
390639	1-2	09/15/08	147.856	147.993	0.137	1440	20.133	24.00	7	6	
390640	1-2	09/21/08	149.274	149.456	0.182	1440	19.751	24.00	9	8	
390605	1-2	09/27/08	146.719	146.896	0.177	1440	20.260	24.00	9	7	
390632	2-2	09/03/08	139.929	140.091	0.162	1440	20.066	24.00	8	7	
390633	2-2	09/09/08	149.295	149.460	0.165	1440	20.172	24.00	8	7	
390635	2-2	09/15/08	146.631	146.756	0.125	1441	20.223	24.00	6	5	
390641	2-2	09/21/08	146.600	146.762	0.162	1440	19.764	24.00	8	7	
390642	2-2	09/27/08	145.100	145.269	0.169	1440	20.267	24.00	8	7	
390634	2-2	09/10/08	145.671	145.685	0.014	0	0.000	0.00	0	0	Field Blank

**Energy Fuels Resource
Preliminary Particulate Network Summary
October - December, 2008**

Filter ID	Sampler ID	Runday	Tare Mass	Exposed Mass	Net Mass	Run Time	Std. Volume	Act. Volume	Std. Conc.	Act. Conc.	Comments
390606	1-2	10/03/08	147.308	147.520	0.212	1440	20.09	24.00	11	9	
390607	1-2	10/09/08	146.246	146.499	0.253	1440	20.06	24.00	13	11	
390645	1-2	10/10/08	147.036	147.062	0.026	0	0.00	0.00	0	0	Field blank
390608	1-2	10/15/08	147.674	147.864	0.190	1440	20.79	24.00	9	8	
390609	1-2	10/21/08	147.040	147.250	0.210	1440	20.78	24.00	10	9	
390610	1-2	10/27/08	142.309	142.504	0.195	1440	20.80	24.00	9	8	
390617	1-2	11/02/08	144.646	144.940	0.294	1440	20.40	24.00	14	12	
390618	1-2	11/08/08	141.710	141.783	0.073	1440	21.01	24.00	3	3	
390619	1-2	11/14/08	142.905	143.031	0.126	1440	21.10	24.00	6	5	
390601	1-2	11/20/08	145.021	145.142	0.121	1440	21.17	24.00	6	5	
390602	1-2	11/26/08	146.302	146.582	0.280	1440	21.15	24.00	13	12	
390603	1-2	12/02/08	144.473	144.568	0.095	1440	20.99	24.00	5	4	
390604	1-2	12/08/08	145.192	145.260	0.068	1440	20.89	24.00	3	3	
390621	1-2	12/09/08	140.102	140.130	0.028	0	0.00	0.00	0	0	Field blank.
390622	1-2	12/14/08	139.711	139.780	0.069	1440	21.59	24.00	3	3	
390623	1-2	12/20/08	141.021	141.100	0.079	1440	21.59	24.00	4	3	
390624	1-2	12/26/08	140.688	140.753	0.065	1440	21.31	24.00	3	3	
390643	2-2	10/03/08	145.960	146.182	0.222	1440	20.10	24.00	11	9	
390644	2-2	10/09/08	146.962	147.192	0.230	1440	20.08	24.00	11	10	
390611	2-2	10/15/08	140.337	140.505	0.168	1440	20.81	24.00	8	7	
390612	2-2	10/21/08	140.657	140.858	0.201	1440	20.84	24.00	10	8	
390613	2-2	10/27/08	141.867	142.065	0.198	1440	20.81	24.00	10	8	
390614	2-2	11/02/08	142.140	142.440	0.300	1440	20.41	24.00	15	13	
390615	2-2	11/08/08	143.545	143.638	0.093	1440	21.07	24.00	4	4	
390620	2-2	11/10/08	142.909	142.944	0.035	0	0.00	0.00	0	0	Field blank.
390616	2-2	11/14/08	142.812	142.923	0.111	1440	21.07	24.00	5	5	
390625	2-2	11/20/08	140.192	140.325	0.133	1440	21.17	24.00	6	6	
390626	2-2	11/26/08	140.475	140.701	0.226	1440	21.18	24.00	11	9	
390627	2-2	12/02/08	138.045	138.149	0.104	1440	21.01	24.00	5	4	
390628	2-2	12/08/08	135.295	135.357	0.062	1440	20.91	24.00	3	3	
390629	2-2	12/14/08	143.296	143.363	0.067	1440	21.62	24.00	3	3	
390630	2-2	12/20/08	139.308	139.382	0.074	1440	21.70	24.00	3	3	
390747	2-2	12/26/08	141.378	141.442	0.064	1440	21.37	24.00	3	3	

**Energy Fuels Resource
Particulate Network Summary
January 1, - March 31, 2009**

Filter ID	Sampler ID	Runday	Tare Mass	Exposed Mass	Net Mass	Run Time	Std. Volume	Act. Volume	Std. Conc.	Act. Conc.	Comments
390742	1-2	01/01/09	146.168	146.261	0.093	1440	21.74	24.00	4	4	
390743	1-2	01/07/09	143.803	143.881	0.078	1440	21.69	24.00	4	3	
390744	1-2	01/13/09	147.704	147.784	0.080	1440	21.95	24.00	4	3	
390745	1-2	01/19/09	146.946	147.032	0.086	1440	21.81	24.00	4	4	
390752	1-2	01/25/09	144.933	145.038	0.105	1440	20.77	24.00	5	4	
390756	1-2	01/30/09	150.787	150.805	0.018						Field blank
390754	1-2	01/31/09	146.328	146.407	0.079	1440	20.77	24.00	4	3	
390757	1-2	02/06/09	151.108	151.282	0.174	1440	20.87	24.00	8	7	
390759	1-2	02/12/09	148.368	148.439	0.071	1440	21.38	24.00	3	3	
390761	1-2	02/18/09	148.521	148.564	0.043	1440	21.35	24.00	2	2	
390763	1-2	02/24/09	151.573	151.659	0.086	1440	20.83	24.00	4	4	
390765	1-2	03/02/09	151.600	151.749	0.149	1440	20.73	24.00	7	6	
390768	1-2	03/03/09	151.635	151.659	0.024						Field Blank
390767	1-2	03/08/09	151.520	151.622	0.102	1440	20.98	24.00	5	4	
390868	1-2	03/14/09	143.542	143.661	0.119	1440	20.90	24.00	6	5	
390870	1-2	03/20/09	142.722	142.950	0.228	1440	20.35	24.00	11	9	
390872	1-2	03/26/09	142.729	142.902	0.173	1440	21.03	24.00	8	7	
390748	2-2	01/01/09	140.358	140.439	0.081	1440	21.73	24.00	4	3	
390749	2-2	01/07/09	140.564	140.631	0.067	1440	21.66	24.00	3	3	
390750	2-2	01/08/09	144.552	144.571	0.019						Field blank
390751	2-2	01/13/09	143.418	143.484	0.066	1440	21.90	24.00	3	3	
390746	2-2	01/19/09	142.321	142.395	0.074	1440	21.74	24.00	3	3	
390753	2-2	01/25/09	144.795	144.891	0.096	1440	20.76	24.00	5	4	
390755	2-2	01/31/09	149.208	149.283	0.075	1440	21.44	24.00	3	3	
390758	2-2	02/06/09	149.931	150.091	0.160	1440	20.84	24.00	8	7	
390760	2-2	02/12/09	149.040	149.107	0.067	1440	21.39	24.00	3	3	
390762	2-2	02/18/09	148.129	148.173	0.044	1440	21.35	24.00	2	2	
390764	2-2	02/24/09	151.726	151.803	0.077	1440	20.84	24.00	4	3	
390766	2-2	03/02/09	150.631	150.768	0.137	1440	20.69	24.00	7	6	
390770	2-2	03/03/09	151.761	151.779	0.018						Field Blank
390769	2-2	03/08/09	152.248	152.348	0.100	1440	21.05	24.00	5	4	
390869	2-2	03/14/09	144.405	144.509	0.104	1440	20.98	24.00	5	4	
390871	2-2	03/20/09	142.857	143.088	0.231	1440	20.35	24.00	11	10	
390873	2-2	03/26/09	143.700	143.857	0.157	1440	21.03	24.00	7	7	

PM₁₀ Background Value Letter from APCD

STATE OF COLORADO

Bill Ritter, Jr., Governor
James B. Martin, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

Michele Steyskal
By email: msteyskal@Kleinfelder.com

July 8, 2009

Dear Ms. Steyskal,

This letter is in response to your telephone request for a PM₁₀ background number to be used in air quality modeling for the Energy Fuels Pinon Ridge Uranium Mill Project. Prior to project start, the site collected PM₁₀ data from April 2008 – March 2009, at a 1/6 day frequency, at two site locations. Annual results from the two locations are summarized below.

Site 1	PM10 Annual Arithmetic Mean	10 ug/m ³
	PM10 24 Hour Second Maximum	30 ug/m ³
Site 2	PM10 Annual Arithmetic Mean	10 ug/m ³
	PM10 24 Hour Second Maximum	28 ug/m ³

Based on the above, please use Site 1 as the official PM10 background concentration for the project.

Sincerely,

Nancy D. Chick
Environmental Protection Specialist
Air Pollution Control Division