

**APPENDIX F1:**  
ATLANTIC RIM FAR-FIELD MODELING RESULTS

## Appendix F1 – Atlantic Rim Far-Field Modeling Results

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Table F1.1.1 Maximum Predicted NO<sub>2</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
NO <sub>2</sub>	Annual	Bridger WA	0.0000	0.10 <sup>1</sup>	2.50	3.40	3.40	100	100	--
		Dinosaur NM	0.0022	1.00	25.00	3.40	3.40	100	--	100
		Fitzpatrick WA	0.0000	0.10 <sup>1</sup>	2.50	3.40	3.40	100	100	--
		Popo Agie WA	0.0000	1.00	25.00	3.40	3.40	100	100	--
		Rawah WA	0.0018	0.10 <sup>1</sup>	2.50	3.40	3.40	100	--	100
		Rocky Mountain NP	0.0006	0.10 <sup>1</sup>	2.50	3.40	3.40	100	--	100
		Savage Run WA	0.0054	0.10 <sup>1</sup>	2.50	3.40	3.41	100	100	--
		Wind River RA	0.0018	1.00	25.00	3.40	3.40	100	100	--
		Mt. Zirkel WA	0.0039	0.10 <sup>1</sup>	2.50	3.40	3.40	100	--	100

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.1.2 Maximum Predicted NO<sub>2</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from No Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
NO <sub>2</sub>	Annual	Bridger WA	0.0936	0.10 <sup>1</sup>	2.50	3.40	3.49	100	100	--
		Dinosaur NM	0.0166	1.00	25.00	3.40	3.42	100	--	100
		Fitzpatrick WA	0.0145	0.10 <sup>1</sup>	2.50	3.40	3.41	100	100	--
		Popo Agie WA	0.0392	1.00	25.00	3.40	3.44	100	100	--
		Rawah WA	0.0028	0.10 <sup>1</sup>	2.50	3.40	3.40	100	--	100
		Rocky Mountain NP	0.0013	0.10 <sup>1</sup>	2.50	3.40	3.40	100	--	100
		Savage Run WA	0.0082	0.10 <sup>1</sup>	2.50	3.40	3.41	100	100	--
		Wind River RA	0.0346	1.00	25.00	3.40	3.43	100	100	--
		Mt. Zirkel WA	0.0070	0.10 <sup>1</sup>	2.50	3.40	3.41	100	--	100

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.1.3 Maximum Predicted NO<sub>2</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
NO <sub>2</sub>	Annual	Bridger WA	0.0936	0.10 <sup>1</sup>	2.50	3.40	3.49	100	100	--
		Dinosaur NM	0.0177	1.00	25.00	3.40	3.42	100	--	100
		Fitzpatrick WA	0.0145	0.10 <sup>1</sup>	2.50	3.40	3.41	100	100	--
		Popo Agie WA	0.0393	1.00	25.00	3.40	3.44	100	100	--
		Rawah WA	0.0046	0.10 <sup>1</sup>	2.50	3.40	3.40	100	--	100
		Rocky Mountain NP	0.0019	0.10 <sup>1</sup>	2.50	3.40	3.40	100	--	100
		Savage Run WA	0.0137	0.10 <sup>1</sup>	2.50	3.40	3.41	100	100	--
		Wind River RA	0.0346	1.00	25.00	3.40	3.43	100	100	--
		Mt. Zirkel WA	0.0109	0.10 <sup>1</sup>	2.50	3.40	3.41	100	--	100

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.2.1 Maximum Predicted SO<sub>2</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled	Significance	PSD	Background	Total	NAAQS	WAAQS	CAAQS
			Impact (ug/m <sup>3</sup> )	Level (ug/m <sup>3</sup> )	Increment (ug/m <sup>3</sup> )	Concentration (ug/m <sup>3</sup> )	Concentration (ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )
SO <sub>2</sub>	Annual	Bridger WA	0.0000	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Dinosaur NM	0.0002	1.00	20.00	9.00	9.00	1,300	--	700
		Fitzpatrick WA	0.0000	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Popo Agie WA	0.0000	1.00	20.00	9.00	9.00	1,300	1,300	--
		Rawah WA	0.0002	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
		Rocky Mountain NP	0.0001	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
		Savage Run WA	0.0005	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Wind River RA	0.0002	1.00	20.00	9.00	9.00	1,300	1,300	--
		Mt. Zirkel WA	0.0003	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
SO <sub>2</sub>	24-hr	Bridger WA	0.0010	0.20 <sup>1</sup>	5.00	43.00	43.00	365	260	--
		Dinosaur NM	0.0042	5.00	91.00	43.00	43.00	365	--	100
		Fitzpatrick WA	0.0012	0.20 <sup>1</sup>	5.00	43.00	43.00	365	260	--
		Popo Agie WA	0.0010	5.00	91.00	43.00	43.00	365	260	--
		Rawah WA	0.0019	0.20 <sup>1</sup>	5.00	43.00	43.00	365	--	100
		Rocky Mountain NP	0.0011	0.20 <sup>1</sup>	5.00	43.00	43.00	365	--	100
		Savage Run WA	0.0043	0.20 <sup>1</sup>	5.00	43.00	43.00	365	260	--
		Wind River RA	0.0035	5.00	91.00	43.00	43.00	365	260	--
		Mt. Zirkel WA	0.0036	0.20 <sup>1</sup>	5.00	43.00	43.00	365	--	100
SO <sub>2</sub>	3-hr	Bridger WA	0.0026	1.00 <sup>1</sup>	25.00	132.00	132.00	80	60	--
		Dinosaur NM	0.0174	25.00	512.00	132.00	132.02	80	--	15
		Fitzpatrick WA	0.0026	1.00 <sup>1</sup>	25.00	132.00	132.00	80	60	--
		Popo Agie WA	0.0028	25.00	512.00	132.00	132.00	80	60	--
		Rawah WA	0.0063	1.00 <sup>1</sup>	25.00	132.00	132.01	80	--	15
		Rocky Mountain NP	0.0039	1.00 <sup>1</sup>	25.00	132.00	132.00	80	--	15
		Savage Run WA	0.0153	1.00 <sup>1</sup>	25.00	132.00	132.02	80	60	--
		Wind River RA	0.0125	25.00	512.00	132.00	132.01	80	60	--
		Mt. Zirkel WA	0.0115	1.00 <sup>1</sup>	25.00	132.00	132.01	80	--	15

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.2.2 Maximum Predicted SO<sub>2</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from No Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled	Significance	PSD	Background	Total	NAAQS	WAAQS	CAAQS
			Impact	Level	Increment	Concentration	Concentration	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )
			(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )	(ug/m <sup>3</sup> )
SO <sub>2</sub>	Annual	Bridger WA	(0.0016)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Dinosaur NM	(0.0017)	1.00	20.00	9.00	9.00	1,300	--	700
		Fitzpatrick WA	(0.0014)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Popo Agie WA	(0.0031)	1.00	20.00	9.00	9.00	1,300	1,300	--
		Rawah WA	(0.0013)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
		Rocky Mountain NP	(0.0007)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
		Savage Run WA	(0.0023)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Wind River RA	(0.0015)	1.00	20.00	9.00	9.00	1,300	1,300	--
		Mt. Zirkel WA	(0.0018)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
SO <sub>2</sub>	24-hr	Bridger WA	0.0522	0.20 <sup>1</sup>	5.00	43.00	43.05	365	260	--
		Dinosaur NM	0.0135	5.00	91.00	43.00	43.01	365	--	100
		Fitzpatrick WA	0.0045	0.20 <sup>1</sup>	5.00	43.00	43.00	365	260	--
		Popo Agie WA	0.0071	5.00	91.00	43.00	43.01	365	260	--
		Rawah WA	0.0036	0.20 <sup>1</sup>	5.00	43.00	43.00	365	--	100
		Rocky Mountain NP	0.0011	0.20 <sup>1</sup>	5.00	43.00	43.00	365	--	100
		Savage Run WA	0.0045	0.20 <sup>1</sup>	5.00	43.00	43.00	365	260	--
		Wind River RA	0.0083	5.00	91.00	43.00	43.01	365	260	--
		Mt. Zirkel WA	0.0029	0.20 <sup>1</sup>	5.00	43.00	43.00	--	--	100
SO <sub>2</sub>	3-hr	Bridger WA	0.2618	1.00 <sup>1</sup>	25.00	132.00	132.26	80	60	--
		Dinosaur NM	0.0362	25.00	512.00	132.00	132.04	80	--	15
		Fitzpatrick WA	0.0182	1.00 <sup>1</sup>	25.00	132.00	132.02	80	60	--
		Popo Agie WA	0.0229	25.00	512.00	132.00	132.02	80	60	--
		Rawah WA	0.0084	1.00 <sup>1</sup>	25.00	132.00	132.01	80	--	15
		Rocky Mountain NP	0.0045	1.00 <sup>1</sup>	25.00	132.00	132.00	80	--	15
		Savage Run WA	0.0118	1.00 <sup>1</sup>	25.00	132.00	132.01	80	60	--
		Wind River RA	0.0742	25.00	512.00	132.00	132.07	80	60	--
		Mt. Zirkel WA	0.0079	1.00 <sup>1</sup>	25.00	132.00	132.01	80	--	15

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.2.3 Maximum Predicted SO<sub>2</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled	Significance	PSD	Background	Total			
			Impact (ug/m <sup>3</sup> )	Level (ug/m <sup>3</sup> )	Increment (ug/m <sup>3</sup> )	Concentration (ug/m <sup>3</sup> )	Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
SO <sub>2</sub>	Annual	Bridger WA	(0.0015)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Dinosaur NM	(0.0016)	1.00	20.00	9.00	9.00	1,300	--	700
		Fitzpatrick WA	(0.0014)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Popo Agie WA	(0.0030)	1.00	20.00	9.00	9.00	1,300	1,300	--
		Rawah WA	(0.0012)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
		Rocky Mountain NP	(0.0006)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
		Savage Run WA	(0.0019)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	1,300	--
		Wind River RA	(0.0015)	1.00	20.00	9.00	9.00	1,300	1,300	--
		Mt. Zirkel WA	(0.0016)	0.10 <sup>1</sup>	2.00	9.00	9.00	1,300	--	700
SO <sub>2</sub>	24-hr	Bridger WA	0.0522	0.20 <sup>1</sup>	5.00	43.00	43.05	365	260	--
		Dinosaur NM	0.0149	5.00	91.00	43.00	43.01	365	--	100
		Fitzpatrick WA	0.0045	0.20 <sup>1</sup>	5.00	43.00	43.00	365	260	--
		Popo Agie WA	0.0071	5.00	91.00	43.00	43.01	365	260	--
		Rawah WA	0.0036	0.20 <sup>1</sup>	5.00	43.00	43.00	365	--	100
		Rocky Mountain NP	0.0016	0.20 <sup>1</sup>	5.00	43.00	43.00	365	--	100
		Savage Run WA	0.0067	0.20 <sup>1</sup>	5.00	43.00	43.01	365	260	--
		Wind River RA	0.0089	5.00	91.00	43.00	43.01	365	260	--
		Mt. Zirkel WA	0.0038	0.20 <sup>1</sup>	5.00	43.00	43.00	--	--	100
SO <sub>2</sub>	3-hr	Bridger WA	0.2618	1.00 <sup>1</sup>	25.00	132.00	132.26	80	60	--
		Dinosaur NM	0.0386	25.00	512.00	132.00	132.04	80	--	15
		Fitzpatrick WA	0.0182	1.00 <sup>1</sup>	25.00	132.00	132.02	80	60	--
		Popo Agie WA	0.0229	25.00	512.00	132.00	132.02	80	60	--
		Rawah WA	0.0089	1.00 <sup>1</sup>	25.00	132.00	132.01	80	--	15
		Rocky Mountain NP	0.0060	1.00 <sup>1</sup>	25.00	132.00	132.01	80	--	15
		Savage Run WA	0.0222	1.00 <sup>1</sup>	25.00	132.00	132.02	80	60	--
		Wind River RA	0.0742	25.00	512.00	132.00	132.07	80	60	--
		Mt. Zirkel WA	0.0129	1.00 <sup>1</sup>	25.00	132.00	132.01	80	--	15

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.3.1 Maximum Predicted PM<sub>10</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
PM <sub>10</sub>	Annual	Bridger WA	0.000	0.20 <sup>1</sup>	4.00	16.00	16.00	150	150	--
		Dinosaur NM	0.003	1.00	17.00	16.00	16.00	150	--	150
		Fitzpatrick WA	0.000	0.20 <sup>1</sup>	4.00	16.00	16.00	150	150	--
		Popo Agie WA	0.000	1.00	17.00	16.00	16.00	150	150	--
		Rawah WA	0.003	0.20 <sup>1</sup>	4.00	16.00	16.00	150	--	150
		Rocky Mountain NP	0.001	0.20 <sup>1</sup>	4.00	16.00	16.00	150	--	150
		Savage Run WA	0.006	0.20 <sup>1</sup>	4.00	16.00	16.01	150	150	--
		Wind River RA	0.002	1.00	17.00	16.00	16.00	150	150	--
		Mt. Zirkel WA	0.004	0.20 <sup>1</sup>	4.00	16.00	16.00	150	--	150
PM <sub>10</sub>	24-hr	Bridger WA	0.013	0.30 <sup>1</sup>	8.00	33.00	33.01	50	50	--
		Dinosaur NM	0.252	5.00	30.00	33.00	33.25	50	--	50
		Fitzpatrick WA	0.016	0.30 <sup>1</sup>	8.00	33.00	33.02	50	50	--
		Popo Agie WA	0.010	5.00	30.00	33.00	33.01	50	50	--
		Rawah WA	0.030	0.30 <sup>1</sup>	8.00	33.00	33.03	50	--	50
		Rocky Mountain NP	0.022	0.30 <sup>1</sup>	8.00	33.00	33.02	50	--	50
		Savage Run WA	0.061	0.30 <sup>1</sup>	8.00	33.00	33.06	50	50	--
		Wind River RA	0.102	5.00	30.00	33.00	33.10	50	50	--
		Mt. Zirkel WA	0.049	0.30 <sup>1</sup>	8.00	33.00	33.05	50	--	50

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.3.2 Maximum Predicted PM<sub>10</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from No Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
PM <sub>10</sub>	Annual	Bridger WA	0.014	0.20 <sup>1</sup>	4.00	16.00	16.01	150	150	--
		Dinosaur NM	0.011	1.00	17.00	16.00	16.01	150	--	150
		Fitzpatrick WA	0.004	0.20 <sup>1</sup>	4.00	16.00	16.00	150	150	--
		Popo Agie WA	0.009	1.00	17.00	16.00	16.01	150	150	--
		Rawah WA	0.003	0.20 <sup>1</sup>	4.00	16.00	16.00	150	--	150
		Rocky Mountain NP	0.002	0.20 <sup>1</sup>	4.00	16.00	16.00	150	--	150
		Savage Run WA	0.006	0.20 <sup>1</sup>	4.00	16.00	16.01	150	150	--
		Wind River RA	0.009	1.00	17.00	16.00	16.01	150	150	--
		Mt. Zirkel WA	0.009	0.20 <sup>1</sup>	4.00	16.00	16.01	150	--	150
PM <sub>10</sub>	24-hr	Bridger WA	0.481	0.30 <sup>1</sup>	8.00	33.00	33.48	50	50	--
		Dinosaur NM	0.368	5.00	30.00	33.00	33.37	50	--	50
		Fitzpatrick WA	0.127	0.30 <sup>1</sup>	8.00	33.00	33.13	50	50	--
		Popo Agie WA	0.283	5.00	30.00	33.00	33.28	50	50	--
		Rawah WA	0.038	0.30 <sup>1</sup>	8.00	33.00	33.04	50	--	50
		Rocky Mountain NP	0.022	0.30 <sup>1</sup>	8.00	33.00	33.02	50	--	50
		Savage Run WA	0.073	0.30 <sup>1</sup>	8.00	33.00	33.07	50	50	--
		Wind River RA	0.247	5.00	30.00	33.00	33.25	50	50	--
		Mt. Zirkel WA	0.097	0.30 <sup>1</sup>	8.00	33.00	33.10	50	--	50

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.3.3 Maximum Predicted PM<sub>10</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
PM <sub>10</sub>	Annual	Bridger WA	0.014	0.20 <sup>1</sup>	4.00	16.00	16.01	150	150	--
		Dinosaur NM	0.014	1.00	17.00	16.00	16.01	150	--	150
		Fitzpatrick WA	0.004	0.20 <sup>1</sup>	4.00	16.00	16.00	150	150	--
		Popo Agie WA	0.009	1.00	17.00	16.00	16.01	150	150	--
		Rawah WA	0.006	0.20 <sup>1</sup>	4.00	16.00	16.01	150	--	150
		Rocky Mountain NP	0.003	0.20 <sup>1</sup>	4.00	16.00	16.00	150	--	150
		Savage Run WA	0.011	0.20 <sup>1</sup>	4.00	16.00	16.01	150	150	--
		Wind River RA	0.009	1.00	17.00	16.00	16.01	150	150	--
		Mt. Zirkel WA	0.012	0.20 <sup>1</sup>	4.00	16.00	16.01	150	--	150
PM <sub>10</sub>	24-hr	Bridger WA	0.481	0.30 <sup>1</sup>	8.00	33.00	33.48	50	50	--
		Dinosaur NM	0.368	5.00	30.00	33.00	33.37	50	--	50
		Fitzpatrick WA	0.127	0.30 <sup>1</sup>	8.00	33.00	33.13	50	50	--
		Popo Agie WA	0.283	5.00	30.00	33.00	33.28	50	50	--
		Rawah WA	0.061	0.30 <sup>1</sup>	8.00	33.00	33.06	50	--	50
		Rocky Mountain NP	0.038	0.30 <sup>1</sup>	8.00	33.00	33.04	50	--	50
		Savage Run WA	0.125	0.30 <sup>1</sup>	8.00	33.00	33.13	50	50	--
		Wind River RA	0.247	5.00	30.00	33.00	33.25	50	50	--
		Mt. Zirkel WA	0.106	0.30 <sup>1</sup>	8.00	33.00	33.11	50	--	50

<sup>1</sup> Proposed Class I significance level, *Federal Register*/Vol. 61, No. 142, pg. 38292, July 23, 1996.

Table F1.4.1 Maximum Predicted PM<sub>2.5</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS <sup>1</sup> (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
PM <sub>2.5</sub>	Annual	Bridger WA	0.000	---	---	5.00	5.00	65	65	--
		Dinosaur NM	0.003	---	---	5.00	5.00	65	--	--
		Fitzpatrick WA	0.000	---	---	5.00	5.00	65	65	--
		Popo Agie WA	0.000	---	---	5.00	5.00	65	65	--
		Rawah WA	0.003	---	---	5.00	5.00	65	--	--
		Rocky Mountain NP	0.001	---	---	5.00	5.00	65	--	--
		Savage Run WA	0.006	---	---	5.00	5.01	65	65	--
		Wind River RA	0.002	---	---	5.00	5.00	65	65	--
		Mt. Zirkel WA	0.004	---	---	5.00	5.00	65	--	--
PM <sub>2.5</sub>	24-hr	Bridger WA	0.013	---	---	13.00	13.01	15	15	--
		Dinosaur NM	0.110	---	---	13.00	13.11	15	--	--
		Fitzpatrick WA	0.016	---	---	13.00	13.02	15	15	--
		Popo Agie WA	0.010	---	---	13.00	13.01	15	15	--
		Rawah WA	0.030	---	---	13.00	13.03	15	--	--
		Rocky Mountain NP	0.022	---	---	13.00	13.02	15	--	--
		Savage Run WA	0.061	---	---	13.00	13.06	15	15	--
		Wind River RA	0.052	---	---	13.00	13.05	15	15	--
		Mt. Zirkel WA	0.049	---	---	13.00	13.05	15	--	--

<sup>1</sup> Standard not yet enforced in Wyoming per WAQSR Chapter 2 Section 2(b)(v).

Table F1.4.2 Maximum Predicted PM<sub>2.5</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from No Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS <sup>1</sup> (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
PM <sub>2.5</sub>	Annual	Bridger WA	0.016	---	---	5.00	5.02	65	65	--
		Dinosaur NM	0.009	---	---	5.00	5.01	65	--	--
		Fitzpatrick WA	0.005	---	---	5.00	5.00	65	65	--
		Popo Agie WA	0.010	---	---	5.00	5.01	65	65	--
		Rawah WA	0.004	---	---	5.00	5.00	65	--	--
		Rocky Mountain NP	0.002	---	---	5.00	5.00	65	--	--
		Savage Run WA	0.007	---	---	5.00	5.01	65	65	--
		Wind River RA	0.010	---	---	5.00	5.01	65	65	--
		Mt. Zirkel WA	0.007	---	---	5.00	5.01	65	--	--
PM <sub>2.5</sub>	24-hr	Bridger WA	0.458	---	---	13.00	13.46	15	15	--
		Dinosaur NM	0.248	---	---	13.00	13.25	15	--	--
		Fitzpatrick WA	0.127	---	---	13.00	13.13	15	15	--
		Popo Agie WA	0.270	---	---	13.00	13.27	15	15	--
		Rawah WA	0.039	---	---	13.00	13.04	15	--	--
		Rocky Mountain NP	0.023	---	---	13.00	13.02	15	--	--
		Savage Run WA	0.074	---	---	13.00	13.07	15	15	--
		Wind River RA	0.238	---	---	13.00	13.24	15	15	--
		Mt. Zirkel WA	0.071	---	---	13.00	13.07	15	--	--

<sup>1</sup> Standard not yet enforced in Wyoming per WAQSR Chapter 2 Section 2(b)(v).

Table F1.4.3 Maximum Predicted PM<sub>2.5</sub> Impacts at PSD Class I and Sensitive PSD Class II Areas from Proposed Action and Regional Sources

Pollutant	Averaging Time	Receptor Area	Direct Modeled Impact (ug/m <sup>3</sup> )	Significance Level (ug/m <sup>3</sup> )	PSD Increment (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS <sup>1</sup> (ug/m <sup>3</sup> )	CAAQS (ug/m <sup>3</sup> )
PM <sub>2.5</sub>	Annual	Bridger WA	0.016	---	---	5.00	5.02	65	65	--
		Dinosaur NM	0.012	---	---	5.00	5.01	65	--	--
		Fitzpatrick WA	0.005	---	---	5.00	5.00	65	65	--
		Popo Agie WA	0.010	---	---	5.00	5.01	65	65	--
		Rawah WA	0.007	---	---	5.00	5.01	65	--	--
		Rocky Mountain NP	0.003	---	---	5.00	5.00	65	--	--
		Savage Run WA	0.013	---	---	5.00	5.01	65	65	--
		Wind River RA	0.011	---	---	5.00	5.01	65	65	--
		Mt. Zirkel WA	0.009	---	---	5.00	5.01	65	--	--
PM <sub>2.5</sub>	24-hr	Bridger WA	0.458	---	---	13.00	13.46	15	15	--
		Dinosaur NM	0.248	---	---	13.00	13.25	15	--	--
		Fitzpatrick WA	0.128	---	---	13.00	13.13	15	15	--
		Popo Agie WA	0.270	---	---	13.00	13.27	15	15	--
		Rawah WA	0.064	---	---	13.00	13.06	15	--	--
		Rocky Mountain NP	0.038	---	---	13.00	13.04	15	--	--
		Savage Run WA	0.127	---	---	13.00	13.13	15	15	--
		Wind River RA	0.238	---	---	13.00	13.24	15	15	--
		Mt. Zirkel WA	0.109	---	---	13.00	13.11	15	--	--

<sup>1</sup> Standard not yet enforced in Wyoming per WAQSR Chapter 2 Section 2(b)(v).

Table F1.5.1 Maximum Predicted Pollutant Impacts Within the ARPA from Proposed Action Sources

Pollutant	Averaging Time	Direct Predicted Impact (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )
NO <sub>2</sub>	Annual	15.52	3.4	18.9	100	100
SO <sub>2</sub>	3-Hour	8.82	132.0	140.8	1,300	1,300
	24-Hour	1.64	43.0	44.6	365	260
	Annual	0.14	9.0	9.1	80	60
PM <sub>10</sub>	24-Hour	34.25	33.0	67.2	150	150
	Annual	3.98	16.0	20.0	50	50
PM <sub>2.5</sub>	24-Hour	10.68	13.0	23.7	65 <sup>1</sup>	65 <sup>1</sup>
	Annual	0.72	5.0	5.7	15 <sup>1</sup>	15 <sup>1</sup>

<sup>1</sup> Proposed standard.

Table F1.5.2 Maximum Predicted Pollutant Impacts Within the ARPA from No Action and Regional Sources

Pollutant	Averaging Time	Direct Predicted Impact (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )
NO <sub>2</sub>	Annual	1.13	3.4	4.5	100	100
SO <sub>2</sub>	3-Hour	1.36	132.0	133.4	1,300	1,300
	24-Hour	0.21	43.0	43.2	365	260
	Annual	0.01	9.0	9.0	80	60
PM <sub>10</sub>	24-Hour	0.32	33.0	33.3	150	150
	Annual	0.03	16.0	16.0	50	50
PM <sub>2.5</sub>	24-Hour	0.26	13.0	13.3	65 <sup>1</sup>	65 <sup>1</sup>
	Annual	0.04	5.0	5.0	15 <sup>1</sup>	15 <sup>1</sup>

<sup>1</sup> Proposed standard.

Table F1.5.3 Maximum Predicted Pollutant Impacts Within the ARPA from Proposed Action and Regional Sources

Pollutant	Averaging Time	Direct Predicted Impact (ug/m <sup>3</sup> )	Background Concentration (ug/m <sup>3</sup> )	Total Concentration (ug/m <sup>3</sup> )	NAAQS (ug/m <sup>3</sup> )	WAAQS (ug/m <sup>3</sup> )
NO <sub>2</sub>	Annual	15.77	3.4	19.2	100	100
SO <sub>2</sub>	3-Hour	8.82	132.0	140.8	1,300	1,300
	24-Hour	1.65	43.0	44.7	365	260
	Annual	0.13	9.0	9.1	80	60
PM <sub>10</sub>	24-Hour	34.24	33.0	67.2	150	150
	Annual	3.99	16.0	20.0	50	50
PM <sub>2.5</sub>	24-Hour	10.67	13.0	23.7	65 <sup>1</sup>	65 <sup>1</sup>
	Annual	0.74	5.0	5.7	15 <sup>1</sup>	15 <sup>1</sup>

<sup>1</sup> Proposed standard.

Table F1.6.1 Maximum Predicted Nitrogen Deposition Impacts (kg/ha-yr) at PSD Class I and Sensitive PSD Class II Areas from Project and Regional Sources - Direct and Total.

Receptor Area	Proposed Action Sources (kg/ha-yr)	No Action and Regional Sources (kg/ha-yr)	Proposed Action and Regional Sources (kg/ha-yr)	No Action Total <sup>1</sup> (kg/ha-yr)	Proposed Action Total <sup>1</sup> (kg/ha-yr)	Deposition Analysis Threshold for Project Alone <sup>2</sup> (kg/ha-yr)	Deposition Analysis Level of Concern for Cumulative Impacts <sup>3</sup> (kg/ha-yr)
Bridger WA	0.00027	0.02288	0.02306	1.42288	1.42306	0.005	3.00
Dinosaur NM	0.00089	0.00552	0.00622	1.40552	1.40622	0.005	3.00
Fitzpatrick WA	0.00025	0.00577	0.00598	1.40577	1.40598	0.005	3.00
Popo Agie WA	0.00030	0.01540	0.01570	1.41540	1.41570	0.005	3.00
Rawah WA	0.00140	0.00337	0.00477	2.70337	2.70477	0.005	3.00
Rocky Mountain NP	0.00082	0.00245	0.00327	2.70245	2.70327	0.005	3.00
Savage Run WA	0.00307	0.00606	0.00913	2.70606	2.70913	0.005	3.00
Wind River RA	0.00081	0.01292	0.01320	1.41292	1.41320	0.005	3.00
Mt. Zirkel WA	0.00265	0.00592	0.00857	2.70592	2.70857	0.005	3.00

<sup>1</sup> Total impacts include N Deposition values of 1.4 kg/ha-yr measured at Pinedale (2003, CASTNET) for Bridger, Dinosaur, Fitzpatrick, Popo Agie, and Wind River sensitive areas and 2.7 kg/ha-yr measured near Centennial (2002, CASTNET) for Rawah, Rocky Mountain, Savage Run and Mt. Zirkel sensitive areas.

<sup>2</sup> National Park Service (2001)

<sup>3</sup> Fox et al. (1989)

Table F1.6.2 Maximum Predicted Sulfur Deposition Impacts (kg/ha-yr) at PSD Class I and Sensitive PSD Class II Areas from Project and Regional Sources - Direct and Total.

Receptor Area	Proposed Action Sources (kg/ha-yr)	No Action and Regional Sources (kg/ha-yr)	Proposed Action and Regional Sources (kg/ha-yr)	No Action Total <sup>1</sup> (kg/ha-yr)	Proposed Action Total <sup>1</sup> (kg/ha-yr)	Deposition Analysis Threshold for Project Alone <sup>2</sup> (kg/ha-yr)	Deposition Analysis Level of Concern for Cumulative Impacts <sup>3</sup> (kg/ha-yr)
Bridger WA	0.00003	(0.00100)	(0.00098)	0.64900	0.64902	0.005	5.00
Dinosaur NM	0.00010	(0.00103)	(0.00099)	0.64897	0.64901	0.005	5.00
Fitzpatrick WA	0.00003	(0.00093)	(0.00092)	0.64907	0.64908	0.005	5.00
Popo Agie WA	0.00003	(0.00250)	(0.00248)	0.64750	0.64752	0.005	5.00
Rawah WA	0.00015	(0.00121)	(0.00111)	0.83879	0.83889	0.005	5.00
Rocky Mountain NP	0.00009	(0.00088)	(0.00082)	0.83912	0.83918	0.005	5.00
Savage Run WA	0.00032	(0.00180)	(0.00151)	0.83820	0.83849	0.005	5.00
Wind River RA	0.00009	(0.00103)	(0.00099)	0.64897	0.64901	0.005	5.00
Mt. Zirkel WA	0.00030	(0.00161)	(0.00149)	0.83839	0.83851	0.005	5.00

<sup>1</sup> Total impacts include S Deposition values of 0.65 kg/ha-yr measured at Pinedale (2003, CASTNET) for Bridger, Dinosaur, Fitzpatrick, Popo Agie, and Wind River sensitive areas and 0.84 kg/ha-yr measured near Centennial (2002, CASTNET) for Rawah, Rocky Mountain, Savage Run and Mt. Zirkel sensitive areas.

<sup>2</sup> National Park Service (2001)

<sup>3</sup> Fox et al. (1989)

Table F1.7.1 Maximum Predicted Change in Acid Neutralizing Capacity (ANC) at Acid Sensitive Lakes from Proposed Action Sources

Lake	Wilderness Area	Background ANC ( $\mu\text{eq/L}$ )	Level of Acceptable Change ( $\mu\text{eq/L}$ )	ANC Change ( $\mu\text{eq/L}$ )	Percent ANC Change (%)
Black Joe	Bridger	67.00	6.70	0.00	0.00%
Deep	Bridger	59.90	5.99	0.00	0.00%
Elbert	Zirkel	51.90	5.19	0.01	0.02%
Hobbs	Bridger	69.90	6.99	0.00	0.00%
Island	Rawah	68.70	6.87	0.01	0.01%
Kelly	Rawah	181.10	18.11	0.01	0.01%
Lazy Boy	Bridger	18.80	1.00	0.00	0.01%
Lower Saddle	Popo Agie	55.50	5.55	0.00	0.00%
Rawah #4	Rawah	41.20	4.12	0.01	0.02%
Ross	Fitzpatrick	53.50	5.35	0.00	0.00%
Seven Lakes	Zirkel	36.20	3.62	0.02	0.05%
Summit	Zirkel	47.30	4.73	0.01	0.02%
Upper Frozen	Bridger	5.00	1.00	0.00	0.05%
West Glacier	GLEES <sup>1</sup>	35.20	3.52	0.02	0.06%

<sup>1</sup>Glacier Lakes Ecosystem Experiments Site

Table F1.7.2 Maximum Predicted Change in Acid Neutralizing Capacity (ANC) at Acid Sensitive Lakes from No Action and Regional Sources

Lake	Wilderness Area	Background ANC ( $\mu\text{eq/L}$ )	Level of Acceptable Change ( $\mu\text{eq/L}$ )	ANC Change ( $\mu\text{eq/L}$ )	Percent ANC Change (%)
Black Joe	Bridger	67.00	6.70	0.11	0.16%
Deep	Bridger	59.90	5.99	0.11	0.18%
Elbert	Zirkel	51.90	5.19	0.04	0.08%
Hobbs	Bridger	69.90	6.99	0.04	0.06%
Island	Rawah	68.70	6.87	0.02	0.03%
Kelly	Rawah	181.10	18.11	0.02	0.01%
Lazy Boy	Bridger	18.80	1.00	0.03	0.14%
Lower Saddle	Popo Agie	55.50	5.55	0.13	0.23%
Rawah #4	Rawah	41.20	4.12	0.02	0.06%
Ross	Fitzpatrick	53.50	5.35	0.03	0.06%
Seven Lakes	Zirkel	36.20	3.62	0.04	0.12%
Summit	Zirkel	47.30	4.73	0.04	0.08%
Upper Frozen	Bridger	5.00	1.00	0.12	2.37%
West Glacier	GLEES <sup>1</sup>	35.20	3.52	0.05	0.13%

<sup>1</sup>Glacier Lakes Ecosystem Experiments Site









