INTERMOUNTAIN POWER SERVICE CORPORATION

April 28, 2006

Richard Sprott, Director
Division of Air Quality
Department of Environmental Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820

Attention: Jesse McDonald, Compliance Section

Dear Director Sprott,

IPSC PSD Compliance Report

The Intermountain Power Service Corporation (IPSC) is herein providing information to show compliance with federally enforceable limits set as conditions within our applicable Title V operating permit and approval order (AO). This report is required by the following conditions that were effective during the reporting period:

> Title V Operating Permit #2700010002 (Issued 8/8/2003, Amended 4/14/2005), Conditions II.B.2.f and II.B.2.g
>
> AO DAQE-AN0327015-05, Conditions 25 and 26

These conditions require IPSC to show that there were no significant emission increases of pollutants regulated under Prevention of Significant Deterioration (PSD) rules that were attributable to modifications performed by IPSC under AO DAQE-049-02 and the addition of overfire air. The specific PSD requirement implemented by these permits is promulgated as the "WEPCO" rule (see 40 CFR 52.21 and R307-101), which requires comparisons of emissions before and after source modifications.

Compliance Provisions

In order to avoid PSD major modification permitting, a modification cannot result in significant emission increases. Under the WEPCO rule, modifications can be permitted as minor if the permittee can represent projections that, all other things equal, post modification actual emissions are predicted to be less than significant increases from the actual emissions prior to the proposed change. IPSC followed this requirement when obtaining the approval to make the permitted modifications.

To show compliance with the WEPCO rule after the modifications have occurred, IPSC must compare two year actual emissions prior to the modification to actual emissions after the modification. If a significant increase in any PSD pollutant emission attributable to the

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modification is shown to have occurred, IPSC must then undergo a full PSD major modification process for that pollutant.

WEPCO allows the source to discount those emission increases not attributable to the modification. PSD provisions prevent using decreases when no netting is performed in permitting, as was the case in this particular permitting action. The permitted modifications affecting emissions at IGS are tied to increased heat input for higher generating capacity. Any emission increases not associated with the change can be excluded from the pre- and post-change emission comparison. These excluded emissions can be from non-modification related parameters such as demand growth, changes in fuel quality, operational variability in overall pollution control efficiency, operating hours, or those emissions that could have been otherwise accommodated during the baseline period. None of the modifications were non-routine replacements to accommodate forced outages. Accordingly, IPSC is not prevented to use changes in hours of operation to exclude emissions from either unit at IGS. (See the EPA policy determination letter to Henry V. Nickel on Detroit Edison, 5/23/00.)

WEPCO Compliance Analysis

Presented in the attached table (Attachment 1) are the pollutant-by-pollutant compliance determinations as required by permit and the WEPCO rule. The calculations used take into consideration the ability to adjust and discount actual emissions by subtracting emission increases from operational differences not attributable to the modifications. These include adjustments for coal quality, control technology variability, hours of operation, or those emissions that could have been otherwise accommodated during the baseline period. For purposes of the permitting modifications tied to the IGS Dense Pack Project, the positive reducing effects from the use of overfire air must be added back onto the actual compliance period emissions. Since NO_X is the only pollutant beneficially affected by overfire air (OFA), the adjustments for OFA apply only to it. This table clearly shows that the WEPCO test has been met for PSD pollutants applicable to IGS.

Fuel Quality and Control Variability

Variability in coal characteristics has an ultimate impact on emissions. Fuel parameters such as sulfur, nitrogen, volatiles, ash content, and trace metal concentrations influence the rate and form of the respective emitted counterparts. Pollutant loading also has an impact on the performance of applicable pollution control devices. For instance, higher loading of inlet sulfur compounds to the wet limestone scrubbers cause a concomitant decrease in overall efficiency when operating at capacity. IPSC has developed from baseline data the relationship of how changes in fuel quality will affect emissions, particularly for NO_X and SO2.

IPSC is calculating excluded emissions based upon the actual operating data from the baseline period. IPSC has developed curve relationships between coal quality and control device response and changes in actual emissions. In practice, IPSC back calculates based on this relationship, what the emissions for a given pollutant would have been had that particular fuel attributable to the modification been used. The difference from what could have been accommodated

during the baseline period if this fuel was used and the actual baseline emission rate are those emissions not related to the change, and are therefore excluded, and thus deductible from any emission increase.

Hours of Operation

Nothing in either the Dense Pack Project or the OFA addition affected the forced outage rate for either IGS Units 1 or 2. IPSC has no history of forced outages due to any equipment modified under either permitted action. Thus, variability in year to year operating hours is utilized to compare directly that no significant emissions increase from the modifications occurred. As WEPCO dictates, even though the ultimate test is in tons per year comparisons, emissions are reduced to pounds per hour rates, and then calculated back to tons per year using equal hours of operation. This provides a direct measurement indicating any attributable emission increases.

Discounted OFA Control

For purposes of showing WEPCO compliance for the Dense Pack Project, IPSC must discount the beneficial NO_X control aspects of the overfire air system. That is, emission decreases provided by OFA must be added back to the actual emissions to show that the Dense Pack Project itself did not cause a significant emissions increase of any pollutant. IPSC has substantial operational data to predict the effect of OFA at modified capacities.

WEPCO Methodology

To show consistency in year to year reporting, IPSC is providing an overview of formulae, bases for calculations, and sources of data in the attached spreadsheets. Outlined in them are descriptions of those components used for calculating WEPCO compliance on a plant wide basis, as well as unit by unit.

Conclusion

IPSC has shown that no significant increase has occurred for any pollutant as a result of modifications at IGS. This completes the report for showing compliance with PSD determinations for the IGS Dense Pack modifications. All supporting documentation upon which this compliance report is based is available for review at the IGS site as required by rule and permit.

If you have any questions or clarifications, please contact Mr. Dennis Killian, IPSC's Superintendent of Technical Services and (435) 864-4414, or dennis-k@ipsc.com.

Inasmuch as this notice of intent may affect our Title V Operating Permit, I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Cordially,

George W. Cross

George W. Cross
President, Chief Operations Officer, and Title V Responsible Official

RJC/BP:jmj

Enclosure: Computational Spreadsheets

cc: Blaine Ipson, IPSC
James Holtkamp, Holland & Hart
Eric Tharp, LADWP

TABLE 1 - WEPCO Emission Test - IGS

Pollutant	Baseline Emissions (3/1/2000-2/28/2002	Post change Emissions (4/2005-3/2006)	Difference increase / (decrease)	PSD Significance
Nitrogen Oxides (w/OFA)	26,733	22,431	(4,302)	40
Nitrogen Oxides (w/o OFA)	26,733	24,929	(1,805)	40
Sulfur Dioxide	3,884	3,173	(712)	40
PM (Stack)	285	217	(68)	25
PM10 (Stack)	262	199	(63)	15
Ozone (VOCs)	12.1	13.4	1.3	40
Lead	0.08	0.06	(0.02)	0.6
Beryllium	0.00087	0.00067	(0.00021)	0.0004
Mercury	0.081	0.088	0.007	0.1
Fluorides	10.7	11.7	1.1	3
Sulfuric Acid	8.2	8.7	0.5	7
Other sulfur compounds	64.0	68.8	4.9	10

NOTE: Values are in tons, and have been adjusted to disallow OFA benefits and to exclude emissions not attributable to the modifications. Baselines are shown on an hour equivalent basis. The table presents only those PSD pollutants reasonably expected to be emitted by IGS. Other sulfur compounds include total reduced sulfur and reduced sulfur compounds (TRS/RSC).

WEPCO COMPLIANCE SUMMARY

(12 month rolling total emission)

For the Period ending: **March-2006**

Pollutant (PSD)	WEPCO Trigger (tons)	UNIT ONE Adj. Baseline	UNIT ONE Adj. Emissions	UNIT ONE WEPCO Met? (Y/N)	UNIT TWO Adj. Baseline	UNIT TWO Adj. Emissions	UNIT TWO WEPCO Met? (Y/N)
NOx (w/OFA)	40	13480	12172	Y	13253	10259	Y
NOx (w/o OFA -proje	40	13480	12494	Y	13253	12435	Y
SOx	40	1879	1527	Y	2005	1646	Y
$PM_{(stack)}$	25	178	101	Y	107	116	Y
$PM_{10\ (Stack)}$	15	164	93	Y	98	106	Y
$VOC_{(ozone)}$	40	6.0	6.5	Y	6.1	6.8	Y
Lead	0.6	0.05	0.03	Y	0.03	0.03	Y
Beryllium	0.0004	0.00056	0.00031	Y	0.00031	0.00036	Y
Mercury	0.1	0.040	0.043	Y	0.041	0.045	Y
Flourides	3	5.2	5.7	Y	5.4	6.0	Y
Sulfuric Acid	7	4.1	4.3	Y	4.2	4.4	Y
TRS/RSC	10	31.5	33.7	Y	32.4	35.2	Y

NOx rolling 12 month totals

UNIT ONE

12 month ending	Actual NOx Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative NOx rate	Restructured NOx Baseline	Excluded Emissions	Non-OFA Predicted NOx Rate	Non-OFA Predicted NOx tons	Difference from Actuals (Disallowed Add-back)	Discounted Actual Emissions	Baseline (adjusted)	Actual OFA Emissions difference from baseline	Discounted OFA Actuals Difference from Baseline	PSD? (>40ton)
Jun-05	11402	6.32E+13	7,715	29635	0.938	0.436	12952	266	0.378764589	11963	562	11897	12685	-1550	-988	N
Sep-05	11366	6.20E+13	7,574	29172	0.942	0.437	12724	272	0.379048772	11743	377	11471	12452	-1358	-981	N
Dec-05	11263	6.18E+13	7,553	28829	0.933	0.436	12663	244	0.378312996	11690	427	11446	12419	-1400	-973	N
Mar-06	12342	6.74E+13	8,199	30498	0.905	0.433	13650	170	0.375981369	12664	322	12494	13480	-1308	-986	N

UNIT TWO

12 month ending	Actual NOx Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative NOx rate	Restructured NOx Baseline	Excluded Emissions	Non-OFA Predicted NOx Rate	Non-OFA Predicted NOx tons	Difference from Actuals (Disallwed Add-back)	Discounted Actual Emissions	Baseline (adjusted)	Actual OFA Emissions difference from baseline	Discounted OFA Actuals Difference from Baseline	PSD? (>40ton)
Jun-05	11442	7.05E+13	8,527	32853	0.932	0.436	14222	883	0.378196507	13338	1895	12455	13339	-2780	-884	N
Sep-05	11044	6.91E+13	8,384	32414	0.938	0.436	14009	892	0.378777401	13084	2039	12191	13116	-2965	-925	N
Dec-05	10727	6.86E+13	8,312	31797	0.927	0.435	13848	844	0.377792118	12962	2235	12117	13003	-3121	-886	N
Mar-06	11050	7.03E+13	8,472	31896	0.907	0.433	14044	791	0.376121073	13226	2175	12435	13253	-2994	-819	N

SO2 rolling 12 month totals

UNIT ONE

12 month ending	Actual SO2 Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative BaselineSO2 rate	Restructured SO2 Baseline	Excluded Emissions	Discounted Actual Emissions	Baseline (adjusted)	Discounted Actuals Difference from Baseline	PSD? (>40ton)
Jun-05	1805	6.32E+13	7,715	29635	0.938	0.072	2134	366	1459	1768	-330	N
Sep-05	1851	6.20E+13	7,574	29172	0.942	0.072	2110	374	1477	1736	-259	N
Dec-05	1776	6.18E+13	7,553	28829	0.933	0.071	2066	334	1442	1731	-289	N
Mar-06	1760	6.74E+13	8,199	30498	0.905	0.067	2112	233	1527	1879	-352	N

UNIT TWO

12 month ending	Actual SO2 Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative BaselineSO2 rate	Restructured SO2 Baseline	Excluded Emissions	Discounted Actual Emissions	Baseline (adjusted)	Discounted Actuals Difference from Baseline	PSD? (>40ton)
Jun-05	2093	7.05E+13	8,527	32853	0.932	0.067	2187	169	1924	2018	-94	N
Sep-05	1959	6.91E+13	8,384	32414	0.938	0.068	2182	198	1761	1984	-223	N
Dec-05	1821	6.86E+13	8,312	31797	0.927	0.066	2110	143	1679	1967	-289	N
Mar-06	1701	7.03E+13	8,472	31896	0.907	0.064	2060	55	1646	2005	-359	N

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Stack PM rolling 12 month totals

	UNIT ONE									
12 month ending	Actual PM Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>25ton)
Jun-05	104	6.31E+13	0.00329	7,715	98	0	104	167	-64	N
Sep-05	93	6.19E+13	0.00300	7,574	87	0	93	164	-71	N
Dec-05	93	6.18E+13	0.00300	7,553	87	0	93	164	-71	N
Mar-06	101	6.73E+13	0.00300	8,199	95	0	101	178	-77	N

	UNIT TWO									
12 month ending	Actual PM Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>25ton)
Jun-05	134	7.05E+13	0.00380	8,527	124	17	117	107	10	N
Sep-05	114	6.91E+13	0.00330	8,384	106	0	114	106	8	N
Dec-05	113	6.86E+13	0.00330	8,312	105	0	113	105	8	N
Mar-06	116	7.03E+13	0.00330	8,472	107	0	116	107	9	N

Stack PM10 rolling 12 month totals

	UNIT ONE									
12 month ending	Actual PM10 Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>15ton)
Jun-05	96	6.31E+13	0.00303	7,715	90	0	96	154	-58.5	N
Sep-05	85	6.19E+13	0.00276	7,574	80	0	85	151	-65.7	N
Dec-05	85	6.18E+13	0.00276	7,553	80	0	85	151	-65.6	N
Mar-06	93	6.73E+13	0.00276	8,199	87	0	93	164	-70.8	N

	UNIT TWO									
12 month ending	Actual PM10 Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>15ton)
Jun-05	123	7.05E+13	0.00350	8,527	114	15	108	99	9.1	N
Sep-05	105	6.91E+13	0.00304	8,384	97	0	105	97	7.4	N
Dec-05	104	6.86E+13	0.00304	8,312	97	0	104	96	7.5	N
Mar-06	107	7.03E+13	0.00304	8,472	98	0	106	98	8.3	N

Beryllium rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual Be Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.0004ton)	Actual Be Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.0004ton)
Jun-05	0.0003	7,715	0.0005	-0.0002	N	0.0004	8,527	0.0003	0.0001	N
Sep-05	0.0003	7,574	0.0005	-0.0003	N	0.0003	8,384	0.0003	0.0000	N
Dec-05	0.0003	7,553	0.0005	-0.0002	N	0.0003	8,312	0.0003	0.0000	N
Mar-06	0.0003	8,199	0.0006	-0.0003	N	0.0004	8,472	0.0003	0.0000	N

Lead rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual Pb Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.6ton)	Actual Pb Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.6ton)
Jun-05	0.0261	7,715	0.0462	-0.0201	N	0.0327	8,527	0.0343	-0.0016	N
Sep-05	0.0238	7,574	0.0453	-0.0215	N	0.0287	8,384	0.0337	-0.0050	N
Dec-05	0.0249	7,553	0.0452	-0.0203	N	0.0298	8,312	0.0334	-0.0036	N
Mar-06	0.0284	8,199	0.0491	-0.0207	N	0.0319	8,472	0.0341	-0.0022	N

Mercury rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual Hg Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.1ton)	Actual Hg Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.1ton)
Jun-05	0.0411	7,715	0.0373	0.0038	N	0.0459	8,527	0.0413	0.0046	N
Sep-05	0.0403	7,574	0.0366	0.0037	N	0.0450	8,384	0.0406	0.0044	N
Dec-05	0.0397	7,553	0.0365	0.0032	N	0.0442	8,312	0.0403	0.0039	N
Mar-06	0.0429	8,199	0.0396	0.0033	N	0.0448	8,472	0.0410	0.0038	N

Flouride rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual HF Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>3ton)	Actual HF Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>3ton)
Jun-05	5.4833	7,715	4.9225	0.5608	N	6.1288	8,527	5.4547	0.6741	N
Sep-05	5.3771	7,574	4.8321	0.5450	N	6.0024	8,384	5.3637	0.6388	N
Dec-05	5.2998	7,553	4.8192	0.4806	N	5.8985	8,312	5.3174	0.5811	N
Mar-06	5.7245	8,199	5.2309	0.4936	N	5.9827	8,472	5.4196	0.5630	N

Sulfuric Acid rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual H2SO4 Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>7ton)	Actual H2SO4 Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>7ton)
Jun-05	4.1414	7,715	3.8115	0.3299	N	4.6104	8,527	4.1809	0.4295	N
Sep-05	4.0864	7,574	3.7415	0.3450	N	4.5322	8,384	4.1111	0.4211	N
Dec-05	4.0359	7,553	3.7315	0.3044	N	4.4626	8,312	4.0757	0.3869	N
Mar-06	4.2725	8,199	4.0502	0.2222	N	4.4407	8,472	4.1540	0.2866	N

Total Reduced Sulfur / Reduced Sulfur Compounds (TRS/RSC) rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual TRS/RSC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>10ton)	Actual TRS/RSC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>10ton)
Jun-05	31.5852	7,715	29.6741	1.9111	N	35.2670	8,527	32.6398	2.6271	N
Sep-05	30.9804	7,574	29.1289	1.8515	N	34.5418	8,384	32.0953	2.4465	N
Dec-05	30.9010	7,553	29.0510	1.8500	N	34.3087	8,312	31.8187	2.4899	N
Mar-06	33.6827	8,199	31.5327	2.1500	N	35.1632	8,472	32.4302	2.7329	N

Ozone (Volatile Organic Compounds) rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual VOC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>40ton)	Actual VOC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>40ton)
Jun-05	6.2658	7,715	5.6225	0.6433	N	6.9928	8,527	6.1795	0.8134	N
Sep-05	6.1446	7,574	5.5192	0.6255	N	6.8509	8,384	6.0764	0.7745	N
Dec-05	6.0587	7,553	5.5044	0.5543	N	6.7366	8,312	6.0240	0.7125	N
Mar-06	6.5460	8,199	5.9747	0.5714	N	6.8319	8,472	6.1398	0.6921	N

INTERMOUNTAIN GENERATING STATION
EMISSION FACTOR FACT SHEET

SOURCE	EMISSION FACTOR	UNITS / Formulae	Source / Table	PM Emission Rate (lb/mmbtu) and Coal Trace Concentrations (ppm) 2000	2001	2002	2003	2004	2005	2006
Stack, PM EF, Unit 1		lb/mmbtu	Stack Test	0.0049	0.0073	0.0030	0.0033	0.0040	0.0030	0.0031
Stack, PM EF, Unit 2		lb/mmbtu	Stack Test	0.0034	0.0037	0.0024	0.0032	0.0052	0.0033	0.0030
Stack, VOC (coal) Cummulative AP42	0.004292	lbs/ton	AP-42 1.1-13							
Stack, VOC (coal) Cumulative EPRI	8.2	lb/10^12 btu	EPRI Trace SubstancesReport							
Stack, VOC (oil) Cummulative AP42	0.2	lb/1000gal	AP-42 1.1-13							
Stack, VOC (oil) Cummulative EPRI	31	lb/10^12 btu	EPRI Trace SubstancesReport							
Stack, Be (coal)	1.2*(C/A*PM)^1.1	lb/10^12 btu	AP-42 1.1-15	0.38	0.39	0.41	0.41	0.40	0.40	0.40
Stack, Pb (coal)	3.4*(C/A*PM)^0.80	lb/10^12 btu	AP-42 1.1-15	7.1	6.8	6.2	6	8	6	8
Stack, Hg (coal) Control Efficiency	76.9	%	Source Testing	0.061	0.068	0.065	0.06	0.08	0.06	0.06
Stack, F (coal) Control Efficiency	97	%	EPRI Trace SubstancesReport	63	68	68	65	66	66	66
Stack, Se (oil)	0.2	lb/10^12 btu	EPRI Trace SubstancesReport							
Stack, Be (oil) Control Efficiency	30	%	EPRI Trace SubstancesReport							
Stack, Pb (oil)	7	lb/10^12 btu	EPRI Trace SubstancesReport							
Stack, Pb (oil) Control Efficiency	30	%	EPRI Trace SubstancesReport							
Stack, Hg (oil)	0.46	lb/10^12 btu	EPRI Trace SubstancesReport							
Stack, Hg (Control Efficiency)	76.9	%	Source Testing							
Stack, H2SO4 (coal)	6.45986	lb/ton	Source Testing							
Stack, H2SO4 Control Efficiency	92.02	%	Source Testing							
Stack, H2SO4 (oil)	0.00245	lb/gal	So Co Paper							
Stack, TRS/RSC	0.001	lb/mmbtu	Eng. Calc.							
Stack SS&M (PM10)	0.42	lbs/ton	AP42 T1.1-6							
Stack SS&M (PM)	0.6	lbs/ton	AP42 T1.1-6							
Stack SS&M (PM10)	71	%	AP42 T1.1-6							
NOx relationship to Fuel Quality (Baseline)	0.1091x + 0.3341	lb/mmbtu	Plant NOx Basis Worksheet							
NOx relationship to Fuel Quality (No OFA)	0.0848x + 0.2992	lb/mmbtu	Plant NOx Basis Worksheet							
U1 SO2 relationship to Fuel Quality	$0.0817x^2$	lb/mmbtu	U1 SO2 Basis Worksheet							
U2 SO2 relationship to Fuel Quality	$0.0728x^2$	lb/mmbtu	U2 SO2 Basis Worksheet							

	Fuel Quality Data					
	Heating Value (btu/lb)		Fuel Oil	Ash	Sulfur Content	
Month	Coal	Fuel Oil	Density (lb/gal)	%	Coal %	Oil %
Apr-05	11,310	19,302	7.19	10.67	0.53	0.20
May-05	11,596	19,322	7.18	9.63	0.56	0.17
Jun-05	11,864	19,304	7.18	10.30	0.54	0.24
Jul-05	11,805	19,231	7.19	9.96	0.59	0.28
Aug-05	11,582	19,338	7.18	11.15	0.61	0.20
Sep-05	11,578	19,289	7.19	11.33	0.55	0.21
Oct-05	11,456	19,347	7.19	10.59	0.56	0.19
Nov-05	11,405	19,350	7.20	9.97	0.58	0.23
Dec-05	11,433	19,308	7.19	9.70	0.60	0.19
Jan-06	11,501	19,340	7.19	9.58	0.56	0.18
Feb-06	11,559	19,349	7.19	9.20	0.53	0.18
Mar-06	11,661	19,381	7.20	9.26	0.59	0.25

BASELINE WEPCO DATA

WEPCO Compliance Baseline Period: March 1, 2000 to February 28, 2002

	UNIT ONE				UNIT TWO		
Parameter / Emissions	Total	per hour rate	lb/mmbtu		Total	per hour rate	lb/mmbtu
Heat Input (btu)	1.25E+14	7692321075			1.27E+14	7656091981	
Operating Hours	16249.5				16556		
Coal Throughput (tons)	5,252,644	323.2495769			5,327,858	321.808287	
Fuel Oil Throughput (gal	562,687	34.62795778			447779	27.04632762	
NOx (tons)	26717.48895	1.644203757	0.427492233		25900.53434	1.564419808	0.408673201
SO2 (tons)	3724.69	0.229218542	0.059596717		3918.35	0.236672711	0.061825984
Stack PM (tons)	352.6245813	0.021700642	0.005642157		208.5277666	0.012595299	0.003290268
Stack PM10 (tons)	324.4146148	0.019964591	0.005190785		191.8455452	0.011587675	0.003027047
Beryllium (tons)	0.00111424	6.85707E-08	1.78284E-08		0.000610932	3.6901E-08	9.63963E-09
Lead (tons)	0.097237787	5.98405E-06	1.55585E-06		0.066625055	4.02422E-06	1.05125E-06
Mercury (tons)	0.078480844	4.82974E-06	1.25573E-06		0.080212976	4.84495E-06	1.26565E-06
Flourides (tons)	10.37	0.000638028	0.000165887		10.59	0.00063973	0.000167117
Sulfuric Acid (tons)	8.03	0.000494023	0.000128446		8.12	0.00049034	0.000128092
TRS/RSC (tons)	62.50	0.003846161	0.001		63.38	0.003828046	0.001
Ozone (VOCs) (tons)	11.84	0.000728749	0.000189474		12.00	0.000724738	0.000189323

IPP Production Data Actual Emissions

PRODUCTION DATA

Unit 1

Month	Coal Throughput (tons)	Fuel Oil Throughput (gallons)	SS&M Outage Excess Emissions (lbs)	SS&M PM	SS&M PM10	Operating Hours	Heat Input (coal)	Heat Input (oil)	Inlet Sulfur Rate	Inlet Sulfur tons	Outlet SO2 Tons	NOx Rate	NOx tons	PM Emission Rate (lb/mmbtu)	PM Tons	PM10 Tons	BE Emission Factor (coal)	Be tons (coal)	Be tons (oil)	Lead Emission Factor (coal)	Lead tons (coal)	Lead tons (oil)	Mercury tons (coal)	Mercury tons (oil)	Flouridies Tons	Sulfuric Acid tons (coal)	Sulfuric Acid tons (oil)	TRS/RSC Tons	Ozone (VOCs) tons (coal AP42)	Ozone (VOCs) (coal EPRI)	Ozone (VOCs) tons (oil AP42)	Ozone (VOCs) tons (oil EPRI)
Apr-05	144,656	19815	14000	4.2	2.8	484.5	3.27E+12	1.20E+10	0.91	1491.0	97.9	0.329	540.2	0.0030	4.9	4.5	0.0085	0.0000140	0.0000008	0.6007455	0.0011101	0.0000255	0.0021	0.0000006	0.35	0.20	0.0017	1.64	0.31	0.01	0.0081	0.00019
May-05	205,530	22,781	2,900	0.9	0.6	602.0	4.77E+12	3.16E+09	0.86	2058.2	126.3	0.353	841.9	0.0030	7.1	6.6	0.0096	0.0000228	0.0000022	0.6692108	0.0020716	0.0000077	0.0030	0.0000002	0.40	0.32	0.0004	2.38	0.44	0.02	0.0025	0.00005
Jun-05	252,516	14,373	1,100	0.3	0.2	719.3	5.99E+12	1.99E+09	0.84	2526.3	132.0	0.364	1090.9	0.0030	9.0	8.3	0.0089	0.0000256	0.0000001	0.8238759	0.0024676	0.0000049	0.0037	0.0000001	0.50	0.35	0.0003	3.00	0.54	0.02	0.0014	0.00003
Jul-05	265,082	4,541	0	0.0	0.0	744.0	6.28E+12	6.28E+09	0.96	3004.4	161.1	0.376	1176.7	0.0030	9.4	8.6	0.0092	0.0000289	0.0000000	0.8460941	0.0026477	0.0000015	0.0039	0.0000000	0.52	0.40	0.0001	3.13	0.57	0.03	0.0005	0.00001
Aug-05	268,318	10,719	0	0.0	0.0	744.0	6.22E+12	1.48E+09	0.96	2977.9	172.2	0.379	1178.1	0.0030	9.3	8.6	0.0081	0.0000253	0.0000001	0.7730478	0.0024024	0.0000036	0.0040	0.0000001	0.52	0.42	0.0002	3.11	0.58	0.03	0.0011	0.00002
Sep-05	202,866	30,873	3,100	0.9	0.7	577.5	4.70E+12	4.30E+09	0.86	2021.8	111.6	0.358	841.6	0.0030	7.0	6.5	0.0060	0.0000188	0.0000003	0.7632067	0.0017926	0.0000105	0.0030	0.0000002	0.40	0.29	0.0006	2.35	0.44	0.02	0.0031	0.00007
Oct-05	270,804	8,990	1,000	0.3	0.2	743.8	6.20E+12	1.25E+09	0.89	2746.1	147.9	0.349	1082.9	0.0030	9.3	8.6	0.0086	0.0000267	0.0000001	0.8055813	0.0024992	0.0000031	0.0040	0.0000001	0.53	0.39	0.0002	3.10	0.58	0.03	0.0009	0.00002
Nov-05	259,434	17,951	1,300	0.4	0.3	715.8	5.92E+12	2.50E+09	0.95	2787.3	175.4	0.360	1065.6	0.0030	8.9	8.2	0.0082	0.0000273	0.0000002	0.8454151	0.0025015	0.0000061	0.0038	0.0000001	0.51	0.39	0.0004	2.86	0.56	0.02	0.0018	0.00004
Dec-05	265,912	9,287	1,700	0.5	0.4	728.0	6.08E+12	1.29E+09	0.96	2922.2	191.0	0.372	1131.2	0.0030	9.1	8.4	0.0085	0.0000289	0.0000001	0.8641890	0.0026273	0.0000032	0.0039	0.0000001	0.52	0.41	0.0002	3.04	0.57	0.02	0.0009	0.00002
Jan-06	271,071	6,080	0	0.0	0.0	744.0	6.24E+12	8.45E+08	0.90	2800.0	169.2	0.384	1197.3	0.0030	9.4	8.6	0.0096	0.0000300	0.0000001	0.8728381	0.0027211	0.0000021	0.0040	0.0000000	0.53	0.39	0.0001	3.12	0.58	0.03	0.0006	0.00001
Feb-06	244,572	1,505	0	0.0	0.0	672.0	5.65E+12	2.09E+08	0.85	2397.4	136.9	0.378	1068.6	0.0030	8.5	7.8	0.0101	0.0000284	0.0000000	0.9015625	0.0025487	0.0000005	0.0038	0.0000000	0.48	0.33	0.0000	2.83	0.52	0.02	0.0002	0.00000
Mar-06	258,821	40,533	0	0.0	0.0	744.0	6.04E+12	5.66E+09	0.91	2755.1	138.2	0.373	1126.6	0.0030	9.1	8.3	0.0100	0.0000302	0.0000004	0.8958862	0.0027369	0.0000139	0.0038	0.0000003	0.51	0.36	0.0010	3.02	0.56	0.02	0.0041	0.00008

Unit 2

Month	Coal Throughput (tons)	Fuel Oil Throughput (gallons)	SS&M Outage Excess Emissions (lbs)	SS&M PM	SS&M PM10	Operating Hours	Heat Input (coal)	Heat Input (oil)	Inlet Sulfur Rate	Inlet Sulfur tons	Outlet SO2 Tons	NOx Rate	NOx tons	PM Emission Rate (lb/mmbtu)	PM Tons	PM10 Tons	BE Emission Factor (coal)	Be tons (coal)	Be tons (oil)	Lead Emission Factor (coal)	Lead tons (coal)	Lead tons (oil)	Mercury tons (coal)	Mercury tons (oil)	Flouridies Tons	Sulfuric Acid tons (coal)	Sulfuric Acid tons (oil)	TRS/RSC Tons	Ozone (VOCs) tons (coal AP42)	Ozone (VOCs) (coal EPRI)	Ozone (VOCs) tons (oil AP42)	Ozone (VOCs) tons (oil EPRI)
Apr-05	268,039	1007	0	0.0	0.0	720.0	6.06E+12	1.40E+08	0.86	2592.0	147.9	0.288	873.1	0.0033	10.0	9.2	0.0096	0.0000298	0.0000000	0.8647850	0.0026198	0.0000023	0.0040	0.0000000	0.53	0.37	0.0000	3.03	0.58	0.03	0.0001	0.00000
May-05	246,169	26,509	900	0.3	0.2	697.3	5.73E+12	3.69E+09	0.90	2589.5	146.6	0.294	842.2	0.0033	9.4	8.7	0.0106	0.0000304	0.0000003	0.9380786	0.0028854	0.0000090	0.0038	0.0000002	0.49	0.36	0.0004	2.86	0.53	0.02	0.0027	0.00006
Jun-05	256,224	6,543	0	0.0	0.0	720.0	6.08E+12	6.07E+08	0.85	2575.1	129.9	0.317	963.8	0.0033	10.0	9.2	0.0099	0.0000300	0.0000001	0.8889360	0.0027022	0.0000022	0.0038	0.0000000	0.50	0.36	0.0002	3.04	0.55	0.02	0.0007	0.00001
Jul-05	254,212	12,000	2,000	0.6	0.4	725.3	6.00E+12	1.66E+09	0.98	2847.8	156.9	0.342	1026.8	0.0033	9.9	9.1	0.0102	0.0000307	0.0000001	0.9131304	0.0027403	0.0000041	0.0037	0.0000001	0.50	0.39	0.0003	3.00	0.55	0.02	0.0012	0.00003
Aug-05	219,270	33,298	3,400	1.0	0.7	618.5	5.08E+12	4.82E+09	0.97	2475.8	108.0	0.333	846.5	0.0033	8.4	7.7	0.0090	0.0000230	0.0000003	0.8342964	0.0021188	0.0000113	0.0032	0.0000002	0.43	0.34	0.0007	2.54	0.47	0.02	0.0033	0.00007
Sep-05	260,483	9,977	0	0.0	0.0	720.0	6.03E+12	1.38E+09	0.86	2606.3	114.8	0.332	1001.5	0.0033	10.0	9.2	0.0089	0.0000258	0.0000001	0.8236759	0.0024841	0.0000034	0.0038	0.0000001	0.51	0.37	0.0002	3.02	0.58	0.02	0.0010	0.00002
Oct-05	260,512	31,035	2,800	0.8	0.6	714.0	5.97E+12	4.32E+09	0.88	2834.2	137.0	0.307	916.9	0.0033	9.8	9.1	0.0096	0.0000280	0.0000003	0.8694077	0.0025947	0.0000106	0.0038	0.0000002	0.51	0.38	0.0006	2.96	0.56	0.02	0.0031	0.00007
Nov-05	248,063	14,347	1,900	0.6	0.4	677.8	5.66E+12	2.00E+09	0.83	2834.9	140.5	0.288	815.1	0.0033	9.3	8.6	0.0102	0.0000289	0.0000001	0.9123976	0.0025813	0.0000049	0.0037	0.0000001	0.49	0.37	0.0003	2.83	0.53	0.02	0.0014	0.00003
Dec-05	273,504	7,323	0	0.0	0.0	744.0	6.25E+12	1.01E+09	0.95	2980.5	174.2	0.318	994.5	0.0033	10.3	9.5	0.0105	0.0000330	0.0000001	0.9226590	0.0029164	0.0000025	0.0040	0.0000001	0.54	0.42	0.0001	3.13	0.59	0.03	0.0007	0.00002
Jan-06	270,340	12,820	0	0.0	0.0	744.0	6.22E+12	1.78E+09	0.91	2817.7	162.8	0.318	982.8	0.0033	10.3	9.4	0.0107	0.0000332	0.0000001	0.9419994	0.0028288	0.0000044	0.0040	0.0000001	0.53	0.39	0.0002	3.11	0.58	0.03	0.0013	0.00003
Feb-06	243,073	2,149	0	0.0	0.0	672.0	5.62E+12	2.99E+08	0.86	2416.5	146.6	0.312	876.7	0.0033	9.3	8.5	0.0112	0.0000314	0.0000000	0.9729937	0.0027338	0.0000007	0.0036	0.0000000	0.48	0.33	0.0000	2.81	0.52	0.02	0.0002	0.00000
Mar-06	240,158	20,816	3,700	1.1	0.8	717.0	5.60E+12	2.88E+09	0.94	2625.8	136.1	0.325	910.8	0.0033	9.2	8.5	0.0111	0.0000311	0.0000002	0.9679468	0.0027112	0.0000070	0.0035	0.0000002	0.47	0.37	0.0005	2.80	0.52	0.02	0.0021	0.00004

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INTERMOUNTAIN GENERATING STATION
Analysis Protocol

Refer to the following groups for description of general column headings in each WEPCO worksheet.
This protocol overview is provided to ensure consistency and validation in the following areas:

1. - Input Data
2. - Production & Emission Calculations
3. - WEPCO Analysis: Actuals to Actuals comparison, and adjusting for increases not attributable to the modifications.

Data Used	Data Sources
Fuel Throughput - Coal	Calibrated feeders located at each mill. Adjusted annually based upon coal stockpile inventory analysis.
Fuel Throughput - Fuel Oil	Flowmeters for each unit.
Fuel Quality - Coal HHV	ASTM Sampling and Laboratory Analysis - As fired.
Fuel Quality - Coal ASH	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Coal Sulfur	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Coal Trace Elements	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Oil HHV	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Oil Density	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Oil Sulfur	ASTM Sampling and Laboratory Analysis - As fired
Startup, Shutdown, & Malfunction Emissions	Obtained from excess emission reports made to UDAQ, utilizing AP-42 factors for uncontrolled sources
Operating Hours	Boiler operating data obtained from 40 CFR Part 75 CEMS EDR
Inlet Sulfur Rate	Actual CEM measurement taken at scrubber inlet pursuant to 40 CFR Part 60 requirements
Outlet Sulfur Emissions	Actual CEM measurement taken at stack pursuant to both 40 CFR Part 60 and Part 75 requirements
NOx Rate	Actual CEM measurement taken at stack pursuant to both 40 CFR Part 60 and Part 75 requirements
PM Emission Rate	From annual 40 CFR Part 60 App.A. Method 5B stack testing

Production / Emission Calculations	Basis
SS&M PM and PM10 Excess Emissions	Utilizing AP-42 & SS&M emissions (in pounds), converted to tons
Heat Input	Multiplies fuel quality (HHV) by throughput, and conversion factors
Inlet Sulfur Tonnage	Multiplies inlet sulfur rate by heat input, and conversion factors.
NOx emissions in tons	Multiplies NOx emission rate by heat input, and conversion factors
PM emissions in tons	Multiplies PM emission rate by heat input, and conversion factors
PM10 emissions in tons	Multiplies PM10 emission rate by heat input, and conversion factors
Be emission factor	Calculated with AP-42 (coal) or EPRI's Trace Substance Report (oil), using trace concentration and ash content
Be emissions	Utilizes Be emission factors and heat input, and conversion factors
Pb emission factor	Calculated with AP-42 (coal) or EPRI's Trace Substance Report (oil), using trace concentration and ash content
Pb emissions	Utilizes Pb emission factors and heat input, and conversion factors
Hg emissions	Utilizes control efficiencies determined by stack testing
Flourides/HF emissions	Calculated utilizing EPRI's Trace Substance Report and trace concentration, and conversion factors
H2SO4 emissions	Utilizes control efficiencies determined by stack testing, and conversion rates based upon So. Co.'s paper
TRS/RSC sulfur compound emissions	Uses a factor derived on the basis of AP-42 Table 1.1-3, Footnote (b)
VOC's	Using a summation of individual VOC specific emission factors from both AP-42 and EPRI's Trace Substance Report to resolve a single cummulative EF, mulitplying either throughput or heat input, and conversion factors.

WEPCO Analysis	Description
Actual emissions	Summation of 12 rolling months of emissions calculated on the PODUCTION DATA worksheet.
Heat Input	Summation of 12 rolling months of heat input calculated on the PRODUCTION DATA worksheet.
Operating hours	Summation of 12 rolling months of hours calculated on the PRODUCTION DATA worksheet.
Inlet SO2 tonnage	Summation of 12 rolling SO2 tons to the scrubber inlet calculated on the PRODUCTION DATA worksheet.
Effective 12 month SO2 Inlet rate	Derived from dividing 12 month inlet tonnage by 12 month heat rate.
Representative rate	Represents rate predicted to have occurred during baseline if this period's fuel was utilized. Based upon historical operating and emissions data.
Restructured Baseline	Represents predicted emissions that would have occurred during baseline period at the representative rate, using the baseline period heat input.
Excluded emissions	Difference between the actual baseline and the restructured baseline, indicating non-mod emission increases that could be accommodated during baseline period.
Non-OFA Predicted Rate	Expected emssion rate without the benefit of OFA, based upon historical operating and emissions data.
Non-OFA Predicted emissions	Expected emssions without the benefit of OFA, multiplying predicted rate by actual heat input.
Non-OFA Emission difference from actual	This is the calculated benefit from OFA which must be discounted to show WEPCO compliance for the Dense Pack Project.
Discounted actual emissions	Emissions to which the WEPCO test applies, which discounts any OFA benefit, and excludes increases not attributible to the modification.
Baseline (adjusted)	The basis to which the WEPCO test compares, utilizing the baseline emission rate, adjusted to hours of operation.
Discounted Difference	The difference between WEPCO period emissions and Baseline period emissions.
PSD?	An IF statement argument that compares the difference against the PSD significance level.

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