INTERMOUNTAIN POWER SERVICE CORPORATION

April 23, 2009

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

Dear Director Heying:

IPSC PSD Final Compliance Report

Intermountain Power Service Corporation (IPSC) is herein providing information to demonstrate compliance with federally enforceable limits set as conditions within our applicable Title V operating permit and approval order (AO). This report completes the five (5) year monitoring and reporting conditions that were effective during the reporting period:

- Title V Operating Permit #2700010003 (Issued 5/9/2008), Conditions II.B.2.f and II.B.2.g
- AO DAQE-AN0327015-05, Conditions 25 and 26

These conditions require IPSC to prove 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 R307-101-2), 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 modification is shown to have occurred, IPSC must then undergo a full PSD major modification process for that pollutant.

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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 Table 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. Table 1 clearly illustrates 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 SO_2.

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 been used during the baseline period. Operating parameters from the baseline period, such as heat input, are used to make this calculation to ensure it is distinct from emissions that could be attributable to the modification. The difference from what could have been accommodated during the baseline period if this fuel was used and the actual baseline emission rates 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 proving WEPCO compliance solely 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 demonstrate 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 present 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 demonstrated that no significant increase has occurred in the required five (5) year monitoring period, for any pollutant as a result of modifications at IGS. This completes the monitoring and reporting to show 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 need clarifications, please contact Mr. Jon P. Christensen, Superintendent of Technical Services at (435) 864-4414, or jon-c@ipsc.com.

In as much 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 and Chief Operations Officer & Title V Responsible Official
GPC
LPB/BP:jmj

Enclosure: Computational Spreadsheets

cc: Blaine Ipson, IPSC
James Holtkamp, Holland & Hart
Nick C. Kezman, LADWP

TABLE 1 - WEPCO Emission Test - IGS

Pollutant	Baseline Emissions (3/1/2000-2/28/2002	Post change Emissions (4/2008-3/2009)	Difference increase / (decrease)	PSD Significance
Nitrogen Oxides (w/OFA)	26,120	23,267	(2,853)	40
Nitrogen Oxides (w/o OFA)	26,120	24,327	(1,793)	40
Sulfur Dioxide	3,784	2,976	(808)	40
PM (Stack)	283	268	(15)	25
PM10 (Stack)	260	246	(14)	15
Ozone (VOCs)	11.8	13.7	1.9	40
Lead	.08	0.07	(0.02)	0.6
Beryllium	0.00087	0.00077	(0.00010)	0.0004
Mercury	0.079	0.084	0.005	0.1
Fluorides	10.4	12.5	2.1	3
Sulfuric Acid	8.0	10.7	2.7	7
Other sulfur compounds	62.4	67.8	5.4	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 a 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).

IPSC Reporting Year Summary Data

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-08	13640	6.99E+13	8,416	37311	1.068	0.451	14586	749	0.38976668	13617	0	12692	13837	-945	-945	N
Sep-08	13774	6.95E+13	8,372	38983	1.122	0.457	14700	935	0.39435265	13700	0	12839	13766	-927	-927	N
Dec-08	14243	7.20E+13	8,647	40003	1.112	0.455	15145	927	0.39346076	14160	0	13316	14217	-902	-902	N
Mar-09	13979	7.16E+13	8,604	40845	1.140	0.459	15173	1027	0.39590926	14180	200	13153	14146	-1194	-994	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 (Disallowed Add-back)	Discounted Actual Emissions	Baseline (adjusted)	Actual OFA Emissions difference from baseline	Discounted OFA Actuals Difference from Baseline	PSD? (>40ton)
Jun-08	12042	6.65E+13	7,968	35640	1.071	0.451	13755	1290	0.39003845	12977	935	11687	12465	-1713	-778	N
Sep-08	12386	6.60E+13	7,908	37547	1.137	0.458	13869	1497	0.39561268	13065	679	11567	12371	-1483	-804	N
Dec-08	12085	6.61E+13	7,908	37491	1.134	0.458	13860	1488	0.39537402	13070	985	11582	12371	-1775	-790	N
Mar-09	11894	6.39E+13	7,654	37641	1.178	0.463	13553	1580	0.39907984	12754	860	11174	11973	-1659	-799	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-08	2707	6.99E+13	8,416	37311	1.068	0.093	3016	1087	1620	1929	-309	N
Sep-08	2952	6.95E+13	8,372	38983	1.122	0.103	3312	1393	1558	1919	-361	N
Dec-08	3017	7.20E+13	8,647	40003	1.112	0.101	3357	1375	1642	1982	-340	N
Mar-09	3104	7.16E+13	8,604	40845	1.140	0.106	3516	1544	1560	1972	-412	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-08	2418	6.65E+13	7,968	35640	1.071	0.089	2702	816	1602	1886	-284	N
Sep-08	2710	6.60E+13	7,908	37547	1.137	0.100	3021	1149	1560	1872	-311	N
Dec-08	2675	6.61E+13	7,908	37491	1.134	0.099	3006	1134	1540	1872	-331	N
Mar-09	2742	6.39E+13	7,654	37641	1.178	0.107	3138	1326	1416	1811	-396	N

IPSC Reporting Year Summary Data

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-08	124	6.98E+13	0.00354	8,416	115	0	124	183	-59	N
Sep-08	128	6.95E+13	0.00370	8,372	119	0	128	182	-53	N
Dec-08	147	7.20E+13	0.00410	8,647	136	0	147	188	-40	N
Mar-09	161	7.16E+13	0.00449	8,604	149	0	161	187	-26	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-08	116	6.65E+13	0.00348	7,968	106	6	110	100	10	N
Sep-08	129	6.60E+13	0.00390	7,908	118	18	110	100	11	N
Dec-08	129	6.61E+13	0.00390	7,908	118	18	110	100	11	N
Mar-09	125	6.39E+13	0.00390	7,654	114	18	107	96	10	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-08	114	6.98E+13	0.00326	8,416	105	0	114	168	-54.3	N
Sep-08	118	6.95E+13	0.00340	8,372	110	0	118	167	-48.9	N
Dec-08	136	7.20E+13	0.00377	8,647	125	0	136	173	-37.0	N
Mar-09	148	7.16E+13	0.00413	8,604	137	0	148	172	-23.8	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-08	106	6.65E+13	0.00320	7,968	98	5	101	92	8.8	N
Sep-08	118	6.60E+13	0.00359	7,908	109	17	101	92	9.8	N
Dec-08	119	6.61E+13	0.00359	7,908	109	17	102	92	9.9	N
Mar-09	115	6.39E+13	0.00359	7,654	105	16	98	89	9.5	N

IPSC Reporting Year Summary Data

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? (>0.0004 ton)
Jun-08	0.0003	8,416	0.0006	-0.0002	N	0.0003	7,968	0.0003	0.0000	N
Sep-08	0.0003	8,372	0.0006	-0.0002	N	0.0003	7,908	0.0003	0.0001	N
Dec-08	0.0004	8,647	0.0006	-0.0002	N	0.0004	7,908	0.0003	0.0001	N
Mar-09	0.0004	8,604	0.0006	-0.0002	N	0.0003	7,654	0.0003	0.0001	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-08	0.0310	8,416	0.0504	-0.0194	N	0.0289	7,968	0.0321	-0.0032	N
Sep-08	0.0310	8,372	0.0501	-0.0191	N	0.0307	7,908	0.0318	-0.0011	N
Dec-08	0.0352	8,647	0.0517	-0.0165	N	0.0311	7,908	0.0318	-0.0008	N
Mar-09	0.0371	8,604	0.0515	-0.0144	N	0.0296	7,654	0.0308	-0.0012	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-08	0.0413	8,416	0.0406	0.0006	N	0.0393	7,968	0.0386	0.0007	N
Sep-08	0.0412	8,372	0.0404	0.0008	N	0.0392	7,908	0.0383	0.0009	N
Dec-08	0.0434	8,647	0.0418	0.0016	N	0.0399	7,908	0.0383	0.0016	N
Mar-09	0.0442	8,604	0.0416	0.0026	N	0.0395	7,654	0.0371	0.0024	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-08	6.1619	8,416	5.3695	0.7924	N	5.8667	7,968	5.0970	0.7696	N
Sep-08	6.1530	8,372	5.3417	0.8113	N	5.8486	7,908	5.0590	0.7896	N
Dec-08	6.4773	8,647	5.5170	0.9603	N	5.9612	7,908	5.0590	0.9022	N
Mar-09	6.5961	8,604	5.4894	1.1067	N	5.9012	7,654	4.8962	1.0050	N

IPSC Reporting Year Summary Data

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-08	5.1514	8,416	4.1576	0.9938	N	4.8995	7,968	3.9068	0.9928	N
Sep-08	5.3347	8,372	4.1361	1.1987	N	5.0707	7,908	3.8776	1.1931	N
Dec-08	5.5375	8,647	4.2718	1.2657	N	5.0937	7,908	3.8776	1.2161	N
Mar-09	5.6577	8,604	4.2504	1.4073	N	5.0751	7,654	3.7528	1.3223	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-08	34.9354	8,416	32.3683	2.5670	N	33.2705	7,968	30.5000	2.7705	N
Sep-08	34.7417	8,372	32.2010	2.5407	N	33.0246	7,908	30.2722	2.7524	N
Dec-08	35.9884	8,647	33.2578	2.7307	N	33.0575	7,908	30.2722	2.7853	N
Mar-09	35.8151	8,604	33.0914	2.7237	N	31.9583	7,654	29.2979	2.6603	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-08	6.7882	8,416	6.1330	0.6552	N	6.4631	7,968	5.7743	0.6887	N
Sep-08	6.7785	8,372	6.1013	0.6772	N	6.4427	7,908	5.7312	0.7115	N
Dec-08	7.1278	8,647	6.3015	0.8263	N	6.5617	7,908	5.7312	0.8304	N
Mar-09	7.2493	8,604	6.2700	0.9793	N	6.4977	7,654	5.5468	0.9509	N

IPSC Reporting Year Summary Data

WEPCO COMPLIANCE SUMMARY

(12 month rolling total emission)

For the Period ending: March-2009

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	14146	12953	Y	11973	10314	Y
NOx (w/o OFA -projected)	40	14146	13153	Y	11973	11174	Y
SOx	40	1972	1560	Y	1811	1416	Y
$PM_{(stack)}$	25	187	161	Y	96	107	Y
$PM_{10\ (Stack)}$	15	172	148	Y	89	98	Y
$VOC_{(ozone)}$	40	6.3	7.2	Y	5.5	6.5	Y
Lead	0.6	0.05	0.04	Y	0.03	0.03	Y
Beryllium	0.0004	0.00059	0.00044	Y	0.00028	0.00034	Y
Mercury	0.1	0.042	0.044	Y	0.037	0.040	Y
Flourides	3	5.5	6.6	Y	4.9	5.9	Y
Sulfuric Acid	7	4.3	5.7	Y	3.8	5.1	Y
TRS/RSC	10	33.1	35.8	Y	29.3	32.0	Y

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IPSC Reporting Year Summary Data

PRODUCTION DATA

Combustion Emission Units

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 (lbs/mmbtu)	PM Tons	PM10 Tons	SO2 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)	Fluorides Tons	Sulfuric Acid tons (coal)	Sulfuric Acid tons (oil)	TRS/RSC Tons	Carbon (VOCs) tons (coal AP42)	Ozone (VOCs) (coal EPRI)	Ozone (VOCs) tons (oil AP42)	Carbon (VOCs) tons (oil EPRI)
Apr-08	259,429	11,395	0	0.0	0.0	720.0	5.78E+12	1.61E+10	1.06	3057.9	227.8	0.384	1312.0	0.0037	10.7	9.9	0.0101	0.0000760	0.0000001	0.0007234	0.0025147	0.0000040	0.0000040	0.0000000	0.37	0.43	0.0004	2.90	0.54	0.32	0.0012	0.00001
May-08	271,404	15,295	3,000	0.0	0.0	742.0	6.18E+12	2.12E+10	1.10	3414.8	237.8	0.398	1230.0	0.0037	11.4	10.5	0.0101	0.0000795	0.0000001	0.0004942	0.0028147	0.0000202	0.0000202	0.0000000	0.55	0.49	0.0004	3.08	0.56	0.32	0.0016	0.00001
Jun-08	262,198	5,910	0	0.0	0.0	720.0	5.97E+12	8.19E+09	1.16	3191.5	223.9	0.394	1176.0	0.0037	11.0	10.2	0.0101	0.0000375	0.0000001	0.0445859	0.0002159	0.0000012	0.0000012	0.0000000	0.53	0.42	0.0002	2.90	0.56	0.32	0.0006	0.00001
Jul-08	268,400	4,175	0	0.0	0.0	744.0	6.26E+12	5.94E+09	1.15	3589.7	266.3	0.407	1273.0	0.0037	11.6	10.7	0.0101	0.0000315	0.0000001	0.0013849	0.0028267	0.0000027	0.0000027	0.0000000	0.55	0.49	0.0002	3.13	0.56	0.32	0.0006	0.00001
Aug-08	254,201	25,047	4,500	1.3	0.9	700.5	5.86E+12	2.44E+09	1.16	3415.2	265.2	0.402	1173.5	0.0037	10.9	10.3	0.0098	0.0000786	0.0000002	0.0868482	0.0325978	0.0000050	0.0000050	0.0000000	0.52	0.45	0.0008	2.93	0.56	0.32	0.0025	0.00005
Sep-08	243,661	8,726	0	0.0	0.0	720.0	6.07E+12	8.81E+09	1.19	3617.9	274.8	0.432	1204.6	0.0037	11.2	10.3	0.0096	0.0000292	0.0000001	0.0727147	0.0005567	0.0000021	0.0000021	0.0000000	0.54	0.51	0.0002	3.04	0.57	0.32	0.0008	0.00001
Oct-08	257,427	37,309	5,400	1.8	1.1	696.0	5.70E+12	5.20E+09	1.16	3047.6	232.7	0.382	1118.1	0.0053	15.2	14.0	0.0101	0.0000474	0.0000001	1.1679756	0.0004220	0.0000124	0.0000124	0.0000000	0.53	0.44	0.0013	2.88	0.55	0.32	0.0028	0.00008
Nov-08	275,734	11,415	0	0.0	0.0	720.0	6.90E+12	1.58E+09	1.13	3340.7	222.6	0.329	1147.0	0.0053	15.8	14.4	0.0101	0.0000474	0.0000001	1.2674474	0.0003394	0.0000009	0.0000009	0.0000000	0.56	0.45	0.0004	2.95	0.59	0.32	0.0011	0.00003
Dec-08	286,477	15,518	0	0.0	0.0	744.0	6.28E+12	2.14E+09	1.14	3581.8	303.8	0.297	1247.5	0.0053	16.6	15.3	0.0101	0.0000469	0.0000001	1.2368137	0.0000993	0.0000003	0.0000003	0.0000000	0.60	0.53	0.0008	3.14	0.64	0.32	0.0018	0.00003
Jan-09	301,002	10,718	0	0.0	0.0	744.0	6.22E+12	1.43E+09	1.23	3835.0	312.1	0.316	1170.4	0.0053	16.5	15.2	0.0127	0.0000426	0.0000001	1.1310302	0.0002204	0.0000006	0.0000006	0.0000000	0.61	0.53	0.0005	3.11	0.65	0.33	0.0011	0.00003
Feb-09	268,338	12,098	0	0.0	0.0	672.0	5.85E+12	1.61E+09	1.30	3674.0	299.9	0.370	1050.2	0.0053	15.5	13.8	0.0134	0.0000384	0.0000001	1.0261608	0.0001068	0.0000004	0.0000004	0.0000000	0.55	0.51	0.0006	2.82	0.58	0.32	0.0017	0.00003
Mar-09	263,042	2,206	2,600	0.9	0.5	551.0	5.95E+12	3.14E+09	1.19	3114.8	203.5	0.350	1217.0	0.0053	15.3	12.8	0.0139	0.0000335	0.0000000	1.1407917	0.0000344	0.0000000	0.0000000	0.0000000	0.54	0.49	0.0001	2.80	0.56	0.32	0.0012	0.00001

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 (lbs/mmbtu)	PM Tons	PM10 Tons	SO2 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)	Fluorides Tons	Sulfuric Acid tons (coal)	Sulfuric Acid tons (oil)	TRS/RSC Tons	Carbon (VOCs) tons (coal AP42)	Ozone (VOCs) (coal EPRI)	Ozone (VOCs) tons (oil AP42)	Carbon (VOCs) tons (oil EPRI)
Apr-08	15,520	43,347	3,100	1.1	0.9	86.0	4.91E+11	6.32E+09	1.05	252.8	16.4	0.319	72.7	0.0038	0.9	0.8	0.0127	0.0000004	0.0000000	0.0025063	0.0002120	0.0000142	0.0000	0.0000000	0.04	0.03	0.0000	0.25	0.04	0.02	0.0002	0.00000
May-08	223,397	18,609	3,600	1.1	0.8	650.0	5.46E+12	2.59E+10	1.15	2137.5	232.0	0.350	1058.0	0.0039	10.6	9.8	0.0133	0.0000396	0.0000001	0.0003763	0.0005183	0.0000024	0.0000024	0.0000000	0.49	0.42	0.0005	2.73	0.51	0.02	0.0019	0.00004
Jun-08	262,022	1,925	0	0.0	0.0	720.0	4.97E+12	2.67E+08	1.16	3174.2	215.8	0.383	1142.6	0.0039	11.6	10.7	0.0127	0.0000395	0.0000000	0.0771805	0.0005183	0.0000097	0.0000097	0.0000000	0.53	0.42	0.0001	2.90	0.55	0.02	0.0002	0.00000
Jul-08	267,310	9,921	2,100	0.8	0.4	742.5	6.23E+12	1.35E+09	1.16	3621.0	263.7	0.409	1246.5	0.0038	12.2	11.2	0.0101	0.0000332	0.0000001	0.0461573	0.0002091	0.0000003	0.0000003	0.0000000	0.55	0.49	0.0002	3.12	0.57	0.03	0.0010	0.00000
Aug-08	275,503	13,425	0	0.0	0.0	744.0	6.36E+12	1.87E+09	1.20	3806.3	282.0	0.405	1280.0	0.0038	12.4	11.4	0.0101	0.0000403	0.0000001	0.0418967	0.0000351	0.0000009	0.0000009	0.0000000	0.56	0.49	0.0004	3.18	0.59	0.03	0.0013	0.00000
Sep-08	240,067	32,346	2,400	0.7	0.5	661.5	5.53E+12	4.40E+09	1.26	3480.2	271.7	0.413	1143.1	0.0038	10.8	9.9	0.0101	0.0000282	0.0000001	0.3132561	0.0023114	0.0000115	0.0000115	0.0000000	0.49	0.46	0.0010	2.77	0.52	0.02	0.0032	0.00001
Oct-08	281,213	6,534	0	0.0	0.0	744.0	6.30E+12	3.40E+09	1.10	3447.2	251.8	0.371	1174.2	0.0038	12.3	11.3	0.0105	0.0000330	0.0000001	0.0293563	0.0002453	0.0000015	0.0000015	0.0000000	0.53	0.48	0.0002	3.15	0.60	0.03	0.0007	0.00001
Nov-08	279,315	10,215	0	0.0	0.0	720.0	6.37E+12	1.42E+09	1.17	3484.3	218.3	0.324	968.2	0.0038	11.7	10.7	0.0118	0.0000343	0.0000001	0.0919126	0.0002920	0.0000010	0.0000010	0.0000000	0.57	0.45	0.0003	2.99	0.60	0.03	0.0010	0.00003
Dec-08	288,615	15,530	0	0.0	0.0	744.0	6.28E+12	2.19E+09	1.16	3646.5	273.7	0.316	993.4	0.0038	12.3	11.3	0.0111	0.0000349	0.0000002	0.0800062	0.0002463	0.0000013	0.0000013	0.0000000	0.61	0.50	0.0000	3.14	0.64	0.03	0.0018	0.00003
Jan-09	305,338	8,298	0	0.0	0.0	744.0	6.31E+12	1.15E+09	1.25	3978.4	295.5	0.352	1111.4	0.0038	12.0	11.3	0.0046	0.0000329	0.0000001	0.0803578	0.0007940	0.0000029	0.0000029	0.0000000	0.62	0.54	0.0006	3.15	0.66	0.03	0.0008	0.00003
Feb-09	272,532	13,846	0	0.0	0.0	672.0	5.71E+12	2.19E+09	1.34	3824.0	290.2	0.368	1051.0	0.0038	11.1	10.2	0.0147	0.0000377	0.0000002	0.1092178	0.0002390	0.0000014	0.0000014	0.0000000	0.57	0.50	0.0007	2.88	0.59	0.02	0.0018	0.00003
Mar-09	154,520	62,792	12,200	3.7	2.8	405.5	3.31E+12	1.79E+10	1.08	1806.6	145.2	0.370	611.0	0.0038	6.5	5.9	0.0136	0.0000194	0.0000009	0.0607994	0.0014793	0.0000081	0.0000081	0.0000000	0.31	0.25	0.0029	1.48	0.33	0.01	0.0088	0.00023

Fuel Quality Data

Month	Heating Value (Btu/lb) Coal	Heating Value (Btu/lb) Fuel Oil	Fuel Oil Density (lb/gal)	Ash %	Sulfur Content Coal %	Sulfur Content Oil %
Apr-08	11,240	18,340	7.10	12.03	0.67	0.33
May-08	11,391	18,532	7.10	12.05	0.70	0.33
Jun-08	11,365	18,589	7.08	13.48	0.62	0.41
Jul-08	11,653	19,572	7.08	12.37	0.71	0.25
Aug-08	11,328	19,611	7.09	12.64	0.80	0.21
Sep-08	11,520	19,581	7.09	12.88	0.75	0.21
Oct-08	11,193	19,039	7.07	12.55	0.66	0.34
Nov-08	10,606	19,196	7.08	11.57	0.63	0.25
Dec-08	10,594	19,576	7.08	11.91	0.65	0.37
Jan-09	10,338	19,612	7.08	10.34	0.68	0.45
Feb-09	10,480	19,516	7.07	13.47	0.74	0.45
Mar-09	10,705	19,415	7.08	10.29	0.94	0.33

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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

INTERMOUNTAIN GENERATING STATION
EMISSION FACTOR FACT SHEET

SOURCE	EMISSION FACTOR	UNITS / Formulae	Source / Table	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
				PM Emission Rate (lb/mmbtu) and Coal Trace Concentrations (ppm)									
Stack, PM EF, Unit 1		lb/mmbtu	Stack Test	0.0049	0.0073	0.0030	0.0033	0.0040	0.0030	0.0031	0.0031	0.0037	0.0053
Stack, PM EF, Unit 2		lb/mmbtu	Stack Test	0.0034	0.0037	0.0024	0.0032	0.0052	0.0033	0.0030	0.0024	0.0039	0.0039
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	0.41	0.41	0.43	0.43	0.45
Stack, Pb (coal)	3.4*(C/A*PM)^0.80	lb/10^12 btu	AP-42 1.1-15	7.1	6.6	6.2	6	6	6	6	6	6	7
Stack, Hg (coal) Control Efficiency	76.9	%	Source Testing	0.061	0.068	0.065	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Stack, F (coal) Control Efficiency	97	%	EPRI Trace SubstancesReport	63	68	68	65	66	66	67	68	68	72
Stack, Be (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										

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	Multiples 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 emission rate without the benefit of OFA, based upon historical operating and emissions data.
Non-OFA Predicted emissions	Expected emissions 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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