



Southwest Clean Air Agency

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www.swcleanair.org

April 30, 2010

Mr. Jim Janson, Manager
Puget Sound Energy, Jackson Prairie Storage Operations
239 Zandecki Road
Chehalis, WA 98532

Subject: Final Air Discharge Permit for Modification of Catalyst Temperature Requirements

Dear Mr. Janson:

The public comment period for the preliminary determination to issue Air Discharge Permit 00-2302R3 (00-2302R3) in response to ADP Application L-640 concluded on April 30, 2010. The Southwest Clean Air Agency (SWCAA) did not receive any adverse comment from the public relative to the preliminary determination. Therefore, a final determination to issue ADP 00-2302R3 has been made pursuant to Section 400-110(4) of SWCAA's General Regulations for Air Pollution Sources. Electronic copies of ADP 00-2302R3 and the associated Technical Support Document are available for public review in the permit section of SWCAA's internet home page (www.swcleanair.org/permitsfinal.html). Original copies are enclosed for your files.

This Air Discharge Permit may be appealed directly to the Pollution Control Hearings Board (PCHB) at P.O. Box 40903, Olympia, Washington 98504-0903 within 30 days of receipt as provided in RCW 43.21B.

Sincerely,

Robert D. Elliott
Executive Director

RDE:nlk
Attachment

cc: Nancy Helm; U.S. EPA Region 10; Federal & Delegated Air Programs Unit;
1200 Sixth Avenue, MS AWT-107; Seattle, WA 98101



SOUTHWEST CLEAN AIR AGENCY

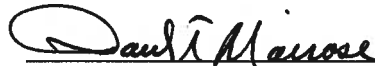
**AIR DISCHARGE PERMIT
00-2302R3**

Final Date: April 30, 2010

Facility Name: Puget Sound Energy
Physical Location: 239 Zandecki Road
Chehalis, WA 98532

SWCAA ID: 1877

REVIEWED BY:


Paul T. Mairose, Chief Engineer



APPROVED BY:

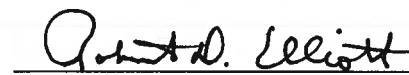

Robert D. Elliott, Executive Director

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. Equipment/Activity Identification	1
2. Approval Conditions	1
2.1 Emission Limits	2
2.2 Operating Limits and Requirements	6
2.3 Monitoring and Recordkeeping Requirements	7
2.4 Emission Monitoring and Testing Requirements	8
2.5 Reporting Requirements	8
3. General Provisions	9
Appendix A Emission Testing Requirements Puget Sound Energy	
Appendix B Emission Monitoring Requirements Puget Sound Energy	

1. Equipment/Activity Identification

ID No.	Generating Equipment/Activity	# of Units	Control Equipment	# of Units
1	Saturn Turbine C2 (1,590 hp)	1	Natural gas	1
2	Saturn Turbine C3 (1,590 hp)	1	Natural gas	1
3	Saturn Turbine C4 (1,590 hp)	1	Natural gas	1
4	Saturn Turbine C5 (1,300 hp)	1	Natural gas	1
5	Centaur Turbine C6 (4,500 hp)	1	SoLoNOx burner, natural gas	1
6	Centaur Turbine C7 (4,500 hp)	1	SoLoNOx burner, natural gas	1
7	Taurus Turbine C8 (7,000 hp)	1	SoLoNOx burner, natural gas	1
8	Taurus Turbine C9 (10,310 hp nominal)	1	SoLoNOx burner, natural gas	1
9	Engine C1 (670 hp)	1	Catalytic converter, natural gas	1
10	Engine IR1 (145 hp)	1	Catalytic converter, natural gas	1
11	Engine IR2 (145 hp)	1	Catalytic converter, natural gas	1
12	Line heater (2.5 MMBtu/hr)	1	Natural gas	1
13	Dehydrator Regen-1 (4.5 MMBtu/hr)	1	Natural gas	1
14	Dehydrator Regen-2 (4.5 MMBtu/hr)	1	Natural gas	1
15	Dehydrator 1 and 2 process gas	2	Thermal oxidizer (8.8 MMBtu/hr)	1
16	Emergency generator (814 hp)	1	Natural gas	1

2. Approval Conditions

The following tables detail the specific requirements of this permit. In addition to the requirements listed below, equipment at this facility may be subject to other federal, state, and local regulations. The permit requirement number is identified in the left hand column. The text of the permit requirement is contained in the middle column. The emission unit, equipment, or activity to which the permit requirement applies is listed in the right hand column.

This Permit supersedes Air Discharge Permit SWCAA 00-2302R2 in its entirety.

2.1 Emission Limits

No.	Emission Limits	Equipment/ Activity																
1.	<p>Combined emissions from plant operations shall not exceed as a 12-month rolling total summed monthly:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>96.0 tpy</td> </tr> <tr> <td>CO</td> <td>96.0 tpy</td> </tr> <tr> <td>VOC</td> <td>16.0 tpy</td> </tr> <tr> <td>SO₂</td> <td>2.2 tpy</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>4.4 tpy</td> </tr> <tr> <td>Formaldehyde</td> <td>1.7 tpy</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	96.0 tpy	CO	96.0 tpy	VOC	16.0 tpy	SO ₂	2.2 tpy	PM/PM ₁₀ /PM _{2.5} (total)	4.4 tpy	Formaldehyde	1.7 tpy	Plantwide		
<u>Pollutant</u>	<u>Emission Limit</u>																	
NO _x	96.0 tpy																	
CO	96.0 tpy																	
VOC	16.0 tpy																	
SO ₂	2.2 tpy																	
PM/PM ₁₀ /PM _{2.5} (total)	4.4 tpy																	
Formaldehyde	1.7 tpy																	
2.	<p>Emissions from Saturn turbines C2, C3 and C4 shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit (Each Turbine)</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>100 ppm_{dv}* @15% O₂</td> </tr> <tr> <td>CO</td> <td>200 ppm_{dv}* @15% O₂</td> </tr> <tr> <td>VOCs</td> <td>25 ppm_{dv} @15% O₂</td> </tr> <tr> <td>SO₂</td> <td>0.06 lbs/hr</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>0.12 lb/hr</td> </tr> <tr> <td>Benzene</td> <td>0.008 lb/hr</td> </tr> <tr> <td>Formaldehyde</td> <td>0.13 lb/hr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit. * At ≥ 80 percent load</p>	<u>Pollutant</u>	<u>Emission Limit (Each Turbine)</u>	NO _x	100 ppm _{dv} * @15% O ₂	CO	200 ppm _{dv} * @15% O ₂	VOCs	25 ppm _{dv} @15% O ₂	SO ₂	0.06 lbs/hr	PM/PM ₁₀ /PM _{2.5} (total)	0.12 lb/hr	Benzene	0.008 lb/hr	Formaldehyde	0.13 lb/hr	1-3
<u>Pollutant</u>	<u>Emission Limit (Each Turbine)</u>																	
NO _x	100 ppm _{dv} * @15% O ₂																	
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Formaldehyde	0.13 lb/hr																	
3.	<p>Emissions from Saturn turbine C5 shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>6.2 lbs/hr</td> </tr> <tr> <td>CO</td> <td>2.9 lbs/hr</td> </tr> <tr> <td>VOCs</td> <td>0.0336 lbs/hr</td> </tr> <tr> <td>SO₂</td> <td>0.0552 lbs/hr</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>0.106 lbs/hr</td> </tr> <tr> <td>Benzene</td> <td>0.007 lb/hr</td> </tr> <tr> <td>Formaldehyde</td> <td>0.0114 lbs/hr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	6.2 lbs/hr	CO	2.9 lbs/hr	VOCs	0.0336 lbs/hr	SO ₂	0.0552 lbs/hr	PM/PM ₁₀ /PM _{2.5} (total)	0.106 lbs/hr	Benzene	0.007 lb/hr	Formaldehyde	0.0114 lbs/hr	4
<u>Pollutant</u>	<u>Emission Limit</u>																	
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CO	2.9 lbs/hr																	
VOCs	0.0336 lbs/hr																	
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Benzene	0.007 lb/hr																	
Formaldehyde	0.0114 lbs/hr																	

No.	Emission Limits	Equipment/ Activity																
4.	<p>Combined emissions from Saturn turbines C2, C3, C4 and C5 shall not exceed the following as a 12-month rolling total summed monthly:</p> <table border="0"> <thead> <tr> <th data-bbox="240 310 354 338"><u>Pollutant</u></th> <th data-bbox="662 310 857 338"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="240 348 305 375">NO_x</td> <td data-bbox="662 348 776 375">32.0 tpy</td> </tr> <tr> <td data-bbox="240 386 289 413">CO</td> <td data-bbox="662 386 776 413">26.0 tpy</td> </tr> <tr> <td data-bbox="240 424 321 451">VOCs</td> <td data-bbox="662 424 760 451">3.1 tpy</td> </tr> <tr> <td data-bbox="240 462 305 489">SO₂</td> <td data-bbox="662 462 760 489">0.3 tpy</td> </tr> <tr> <td data-bbox="240 499 521 527">PM/PM₁₀/PM_{2.5} (total)</td> <td data-bbox="662 499 760 527">0.6 tpy</td> </tr> <tr> <td data-bbox="240 537 354 564">Benzene</td> <td data-bbox="662 537 776 564">0.04 tpy</td> </tr> <tr> <td data-bbox="240 575 435 602">Formaldehyde</td> <td data-bbox="662 575 760 602">0.6 tpy</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	32.0 tpy	CO	26.0 tpy	VOCs	3.1 tpy	SO ₂	0.3 tpy	PM/PM ₁₀ /PM _{2.5} (total)	0.6 tpy	Benzene	0.04 tpy	Formaldehyde	0.6 tpy	1-4
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PM/PM ₁₀ /PM _{2.5} (total)	0.6 tpy																	
Benzene	0.04 tpy																	
Formaldehyde	0.6 tpy																	
5.	<p>Emissions from Centaur turbines C6 and C7 shall not exceed the following as a 12-month rolling total summed monthly:</p> <table border="0"> <thead> <tr> <th data-bbox="240 768 354 795"><u>Pollutant</u></th> <th data-bbox="662 768 857 795"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="240 806 305 833">NO_x</td> <td data-bbox="662 806 1182 833">7.0 lbs/hr each and 26.3 ton/yr, combined</td> </tr> <tr> <td data-bbox="240 844 289 871">CO</td> <td data-bbox="662 844 1182 871">5.1 lbs/hr each and 19.1 ton/yr, combined</td> </tr> <tr> <td data-bbox="240 882 321 909">VOCs</td> <td data-bbox="662 882 1214 909">0.0882 lbs/hr each and 0.3 ton/yr, combined</td> </tr> <tr> <td data-bbox="240 919 305 947">SO₂</td> <td data-bbox="662 919 1198 947">0.145 lbs/hr each and 0.5 ton/yr, combined</td> </tr> <tr> <td data-bbox="240 957 521 984">PM/PM₁₀/PM_{2.5} (total)</td> <td data-bbox="662 957 1198 984">0.227 lbs/hr each and 0.9 ton/yr, combined</td> </tr> <tr> <td data-bbox="240 995 354 1022">Benzene</td> <td data-bbox="662 995 1214 1022">0.023 lb/hr each and 0.09 ton/yr, combined</td> </tr> <tr> <td data-bbox="240 1033 435 1060">Formaldehyde</td> <td data-bbox="662 1033 1198 1060">0.06 lb/hr each and 0.22 ton/yr, combined</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	7.0 lbs/hr each and 26.3 ton/yr, combined	CO	5.1 lbs/hr each and 19.1 ton/yr, combined	VOCs	0.0882 lbs/hr each and 0.3 ton/yr, combined	SO ₂	0.145 lbs/hr each and 0.5 ton/yr, combined	PM/PM ₁₀ /PM _{2.5} (total)	0.227 lbs/hr each and 0.9 ton/yr, combined	Benzene	0.023 lb/hr each and 0.09 ton/yr, combined	Formaldehyde	0.06 lb/hr each and 0.22 ton/yr, combined	5-6
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Benzene	0.023 lb/hr each and 0.09 ton/yr, combined																	
Formaldehyde	0.06 lb/hr each and 0.22 ton/yr, combined																	
6.	<p>Emissions from Taurus turbine C8 shall not exceed the following:</p> <table border="0"> <thead> <tr> <th data-bbox="240 1188 354 1215"><u>Pollutant</u></th> <th data-bbox="662 1188 857 1215"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="240 1226 305 1253">NO_x</td> <td data-bbox="662 1226 776 1253">5.6 lbs/hr</td> </tr> <tr> <td data-bbox="240 1264 289 1291">CO</td> <td data-bbox="662 1264 776 1291">6.8 lbs/hr</td> </tr> <tr> <td data-bbox="240 1302 321 1329">VOCs</td> <td data-bbox="662 1302 808 1329">0.103 lbs/hr</td> </tr> <tr> <td data-bbox="240 1339 305 1367">SO₂</td> <td data-bbox="662 1339 808 1367">0.169 lbs/hr</td> </tr> <tr> <td data-bbox="240 1377 521 1404">PM/PM₁₀/PM_{2.5} (total)</td> <td data-bbox="662 1377 808 1404">0.323lbs/hr</td> </tr> <tr> <td data-bbox="240 1415 354 1442">Benzene</td> <td data-bbox="662 1415 808 1442">0.028 lb/hr</td> </tr> <tr> <td data-bbox="240 1453 435 1480">Formaldehyde</td> <td data-bbox="662 1453 808 1480">0.07 lbs/hr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	5.6 lbs/hr	CO	6.8 lbs/hr	VOCs	0.103 lbs/hr	SO ₂	0.169 lbs/hr	PM/PM ₁₀ /PM _{2.5} (total)	0.323lbs/hr	Benzene	0.028 lb/hr	Formaldehyde	0.07 lbs/hr	7
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No.	Emission Limits	Equipment/ Activity																
7.	<p>Emissions from Taurus turbine C9 shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>15 ppmdv* @15% O₂</td> </tr> <tr> <td>CO</td> <td>25 ppmdv* @15% O₂</td> </tr> <tr> <td>VOCs</td> <td>25 ppmdv @15% O₂</td> </tr> <tr> <td>SO₂</td> <td>0.3 lbs/hr</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>0.58 lb/hr</td> </tr> <tr> <td>Benzene</td> <td>0.05 lb/hr</td> </tr> <tr> <td>Formaldehyde</td> <td>0.124 lb/hr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Permit. * At ≥ 80 percent load</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	15 ppmdv* @15% O ₂	CO	25 ppmdv* @15% O ₂	VOCs	25 ppmdv @15% O ₂	SO ₂	0.3 lbs/hr	PM/PM ₁₀ /PM _{2.5} (total)	0.58 lb/hr	Benzene	0.05 lb/hr	Formaldehyde	0.124 lb/hr	8
<u>Pollutant</u>	<u>Emission Limit</u>																	
NO _x	15 ppmdv* @15% O ₂																	
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9.	<p>Emissions from Engine C1 shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>1.5 lbs/hr</td> </tr> <tr> <td>CO</td> <td>1.5 lbs/hr</td> </tr> <tr> <td>VOCs</td> <td>0.0337 lbs/hr</td> </tr> <tr> <td>SO₂</td> <td>0.0196 lbs/hr</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>0.111 lbs/hr</td> </tr> <tr> <td>Formaldehyde</td> <td>0.0233 lbs/hr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	1.5 lbs/hr	CO	1.5 lbs/hr	VOCs	0.0337 lbs/hr	SO ₂	0.0196 lbs/hr	PM/PM ₁₀ /PM _{2.5} (total)	0.111 lbs/hr	Formaldehyde	0.0233 lbs/hr	9		
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10.	<p>Emissions from Engines IR-1 and IR-2 shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit (Each Unit)</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>0.64 lbs/hr</td> </tr> <tr> <td>CO</td> <td>0.64 lbs/hr</td> </tr> <tr> <td>VOCs</td> <td>0.0073 lbs/hr</td> </tr> <tr> <td>SO₂</td> <td>0.00425 lbs/hr</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>0.0239 lbs/hr</td> </tr> <tr> <td>Formaldehyde</td> <td>0.0050 lb/hr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit (Each Unit)</u>	NO _x	0.64 lbs/hr	CO	0.64 lbs/hr	VOCs	0.0073 lbs/hr	SO ₂	0.00425 lbs/hr	PM/PM ₁₀ /PM _{2.5} (total)	0.0239 lbs/hr	Formaldehyde	0.0050 lb/hr	10-11		
<u>Pollutant</u>	<u>Emission Limit (Each Unit)</u>																	
NO _x	0.64 lbs/hr																	
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SO ₂	0.00425 lbs/hr																	
PM/PM ₁₀ /PM _{2.5} (total)	0.0239 lbs/hr																	
Formaldehyde	0.0050 lb/hr																	

No.	Emission Limits	Equipment/ Activity														
11.	<p>Emissions from the Line Heater shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>120 lbs/MMscf</td> </tr> <tr> <td>CO</td> <td>84 lbs/MMscf</td> </tr> <tr> <td>VOCs</td> <td>5.5 lbs/MMscf</td> </tr> <tr> <td>SO₂</td> <td>3.25 lbs/MMscf</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>7.6 lbs/MMscf</td> </tr> <tr> <td>Formaldehyde</td> <td>0.075 lbs/MMscf</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	120 lbs/MMscf	CO	84 lbs/MMscf	VOCs	5.5 lbs/MMscf	SO ₂	3.25 lbs/MMscf	PM/PM ₁₀ /PM _{2.5} (total)	7.6 lbs/MMscf	Formaldehyde	0.075 lbs/MMscf	12
<u>Pollutant</u>	<u>Emission Limit</u>															
NO _x	120 lbs/MMscf															
CO	84 lbs/MMscf															
VOCs	5.5 lbs/MMscf															
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PM/PM ₁₀ /PM _{2.5} (total)	7.6 lbs/MMscf															
Formaldehyde	0.075 lbs/MMscf															
12.	<p>Combined emissions from the ancillary equipment (C1, IR-1, IR-2 and Line Heater) shall not exceed the following as a 12-month rolling total summed monthly:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>8.7 tpy</td> </tr> <tr> <td>CO</td> <td>8.3 tpy</td> </tr> <tr> <td>VOCs</td> <td>0.2 tpy</td> </tr> <tr> <td>SO₂</td> <td>0.11 tpy</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>0.5 tpy</td> </tr> <tr> <td>Formaldehyde</td> <td>0.1 tpy</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	8.7 tpy	CO	8.3 tpy	VOCs	0.2 tpy	SO ₂	0.11 tpy	PM/PM ₁₀ /PM _{2.5} (total)	0.5 tpy	Formaldehyde	0.1 tpy	9-12
<u>Pollutant</u>	<u>Emission Limit</u>															
NO _x	8.7 tpy															
CO	8.3 tpy															
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SO ₂	0.11 tpy															
PM/PM ₁₀ /PM _{2.5} (total)	0.5 tpy															
Formaldehyde	0.1 tpy															
13.	<p>Emissions from Dehydrator Regens 1 and 2 shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit (Each Unit)</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>120 lbs/MMscf and 2.1 tons/yr</td> </tr> <tr> <td>CO</td> <td>205 lbs/MMscf and 4.0 tons/yr</td> </tr> <tr> <td>VOCs</td> <td>5.5 lbs/MMscf and 0.1 tons/yr</td> </tr> <tr> <td>SO₂</td> <td>3.25 lbs/MMscf and 0.06 tons/yr</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>7.6 lbs/MMscf and 0.15 tons/yr</td> </tr> <tr> <td>Formaldehyde</td> <td>0.075 lbs/MMscf and 0.001 tons/yr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit (Each Unit)</u>	NO _x	120 lbs/MMscf and 2.1 tons/yr	CO	205 lbs/MMscf and 4.0 tons/yr	VOCs	5.5 lbs/MMscf and 0.1 tons/yr	SO ₂	3.25 lbs/MMscf and 0.06 tons/yr	PM/PM ₁₀ /PM _{2.5} (total)	7.6 lbs/MMscf and 0.15 tons/yr	Formaldehyde	0.075 lbs/MMscf and 0.001 tons/yr	13-14
<u>Pollutant</u>	<u>Emission Limit (Each Unit)</u>															
NO _x	120 lbs/MMscf and 2.1 tons/yr															
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PM/PM ₁₀ /PM _{2.5} (total)	7.6 lbs/MMscf and 0.15 tons/yr															
Formaldehyde	0.075 lbs/MMscf and 0.001 tons/yr															
14.	<p>Emissions from the Thermal Oxidizer shall not exceed the following:</p> <table border="0"> <thead> <tr> <th><u>Pollutant</u></th> <th><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td>NO_x</td> <td>0.53 lbs/hr and 2.3 tons/yr</td> </tr> <tr> <td>CO</td> <td>2.6 lbs/hr and 11.4 tons/yr</td> </tr> <tr> <td>VOCs</td> <td>1.03 lbs/hr and 4.5 tons/yr</td> </tr> <tr> <td>SO₂</td> <td>0.0304 lbs/hr and 0.13 tons/yr</td> </tr> <tr> <td>PM/PM₁₀/PM_{2.5} (total)</td> <td>0.0669 lbs/hr and 0.3 tons/yr</td> </tr> <tr> <td>Benzene</td> <td>700 lbs/yr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	0.53 lbs/hr and 2.3 tons/yr	CO	2.6 lbs/hr and 11.4 tons/yr	VOCs	1.03 lbs/hr and 4.5 tons/yr	SO ₂	0.0304 lbs/hr and 0.13 tons/yr	PM/PM ₁₀ /PM _{2.5} (total)	0.0669 lbs/hr and 0.3 tons/yr	Benzene	700 lbs/yr	15
<u>Pollutant</u>	<u>Emission Limit</u>															
NO _x	0.53 lbs/hr and 2.3 tons/yr															
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Benzene	700 lbs/yr															

No.	Emission Limits	Equipment/ Activity														
15.	<p>Emissions from the Emergency Generator shall not exceed the following:</p> <table border="0"> <thead> <tr> <th data-bbox="240 260 358 289"><u>Pollutant</u></th> <th data-bbox="662 260 857 289"><u>Emission Limit</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="240 296 305 325">NO_x</td> <td data-bbox="662 296 1003 325">18.3 lbs/hr and 1.37 tons/yr</td> </tr> <tr> <td data-bbox="240 331 289 361">CO</td> <td data-bbox="662 331 987 361">1.7 lbs/hr and 0.13 tons/yr</td> </tr> <tr> <td data-bbox="240 367 326 396">VOCs</td> <td data-bbox="662 367 1052 396">0.0296 lbs/hr and 0.002 tons/yr</td> </tr> <tr> <td data-bbox="240 403 298 432">SO₂</td> <td data-bbox="662 403 1052 432">0.0239 lbs/hr and 0.002 tons/yr</td> </tr> <tr> <td data-bbox="240 438 521 468">PM/PM₁₀/PM_{2.5} (total)</td> <td data-bbox="662 438 1019 468">0.134 lbs/hr and 0.01 tons/yr</td> </tr> <tr> <td data-bbox="240 474 428 504">Formaldehyde</td> <td data-bbox="662 474 1019 504">0.142 lbs/hr and 0.01 tons/yr</td> </tr> </tbody> </table> <p>Emissions shall be calculated based on the methodology outlined in Section 6 of the Technical Support Document for this Air Discharge Permit.</p>	<u>Pollutant</u>	<u>Emission Limit</u>	NO _x	18.3 lbs/hr and 1.37 tons/yr	CO	1.7 lbs/hr and 0.13 tons/yr	VOCs	0.0296 lbs/hr and 0.002 tons/yr	SO ₂	0.0239 lbs/hr and 0.002 tons/yr	PM/PM ₁₀ /PM _{2.5} (total)	0.134 lbs/hr and 0.01 tons/yr	Formaldehyde	0.142 lbs/hr and 0.01 tons/yr	16
<u>Pollutant</u>	<u>Emission Limit</u>															
NO _x	18.3 lbs/hr and 1.37 tons/yr															
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Formaldehyde	0.142 lbs/hr and 0.01 tons/yr															
16.	Visible emissions shall not exceed five percent opacity for more than 3 minutes in any one hour period as determined by a Certified Observer certified in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400).	Plantwide														

2.2 Operating Limits and Requirements

No.	Operating Limits and Requirements	Equipment/ Activity
17.	Reasonable precautions shall be taken at all times to prevent and minimize fugitive emissions from plant operations.	Plantwide
18.	Operations that cause or contribute to a nuisance odor shall use recognized good practice and procedures to reduce these odors to a reasonable minimum.	Plantwide
19.	Each pollution control device, with the exception of the Thermal Oxidizer as stated in condition 20 below shall be operated whenever the processing equipment served by that control device is in operation. Control devices shall be operated and maintained in accordance with the manufacturer's specifications. Furthermore, control devices shall be operated in a manner that minimizes emissions.	Plantwide
20.	Operation of the gas dehydration units at times when the Thermal Oxidizer is not operating due to maintenance or mechanical failure shall not exceed 7 days per calendar year.	15
21.	Emission units identified in this Permit shall be maintained and operated in total and continuous conformity with the conditions identified in this Permit. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this Permit, including directing the facility to cease operations until corrective action can be completed.	1-16
22.	Hours of operation of Saturn turbines C2, C3, and C4 shall not exceed 5,000 hrs/yr each. Hours of operation of Saturn turbine C5 shall not exceed 5,500 hrs/yr. Combined hours of operation of Saturn turbines C2, C3, C4 and C5 shall not exceed 10,000 hrs/yr on an annual average rolled monthly.	1-4
23.	Hours of operation of Centaur turbines C6 and C7 shall not exceed 7,500 hrs/yr combined on an annual average rolled monthly.	5-6

No.	Operating Limits and Requirements	Equipment/ Activity
24.	Hours of operation of Taurus turbine C9 shall not exceed 5,000 hrs/yr. Combined hours of operation of Taurus turbines C8 and C9 shall not exceed 7,500 hrs/yr on an annual average rolled monthly.	7-8
25.	Hours of operation of the emergency generator shall not exceed 150 hrs/yr on an annual average rolled monthly.	16
26.	The temperature of the thermal oxidizer shall be operated and maintained at 1,500 °F or greater when the dehydration system is operating.	15
27.	Turbines C2, C3, C4 and C9 shall each be equipped with a non-resettable hours meter.	1-3, 8
28.	Each catalyst section shall be equipped with thermocouples and a pressure gauge to monitor the catalyst inlet temperature and pressure drop across the catalyst.	9-11
29.	Other than periods of startup, shutdown or malfunction, the temperature of the exhaust from IR-1, IR-2 and C1 at the catalyst inlet shall be greater than or equal to 750 °F and less than or equal to 1250 °F.	9-11
30.	Other than periods of startup, shutdown or malfunction, the oxygen content at the outlet of the catalyst shall not exceed 1.5% on a one-hour average.	9-11
31.	The catalyst on IR-1, IR-2 and C1 shall be cleaned or replaced if the pressure drop across the catalyst section is greater than 1" w.c. above baseline.	9-11
32.	All equipment shall be fired on natural gas only with a total sulfur content of 20.0 grains per 100 standard cubic feet or less.	1-16

2.3 Monitoring and Recordkeeping Requirements

No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity
33.	Each record required by this Permit shall include the date and the name of the person making the record entry. If a control device or process is not operating during a specific time period, a record shall be made to that effect.	1-16
34.	All records required by this Permit shall be kept for a minimum period of no less than five years and shall be maintained in a form readily available for inspection by SWCAA representatives.	1-16
35.	Excess emissions and upset conditions shall be recorded for each occurrence.	1-16
36.	Hours of operation for each compressor unit shall be recorded monthly.	1-11
37.	Hours of operation of the thermal oxidizer shall be recorded monthly.	15
38.	Hours of operation of the emergency generator shall be recorded monthly.	16
39.	Natural gas usage of each dehydration reboilers and the line heater shall be recorded monthly.	12-14
40.	The amount of natural gas transferred shall be recorded daily.	Plantwide
41.	The temperature of the thermal oxidizer shall be recorded once for each eight hours of operation when the dehydration system is operating.	15

No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity
42.	Turbine C9's "minimum pilot mode" shall be continuously monitored to determine if the turbine is operating in low-NO _x combustion mode. "Minimum pilot mode" is a parameter monitoring system developed by Solar Turbines to indicate the operation of the turbine in lean premixed combustion mode.	8
43.	The pressure drop across each catalyst and the catalyst inlet and outlet temperatures on units C1, IR-1 and IR-2 shall be recorded once for each eight hours of operation.	9-11

2.4 Emission Monitoring and Testing Requirements

No.	Emission Monitoring and Testing Requirements	Equipment/ Activity
44.	Saturn turbines C2, C3 and C4 shall be emission tested within 60 days after achieving maximum production rate after modification but no later than 120 days after start-up. Subsequent performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). If the NO _x emission rate from the previous performance test is ≤ 75 ppm at 15% O ₂ subsequent testing may be performed every two years no later than the end of the month of the initial emission test in accordance with Appendix A of this Air Discharge Permit and 40 CFR 60.4400 and 40 CFR 60.4340.	1-3
45.	Compressors C1, C5-C8, IR-1, IR-2, Regen 1, Regen 2 and the thermal oxidizer shall be emission tested every seven years no later than the end of the month in which the initial test was performed. Testing shall be performed in accordance with Appendix A of this Air Discharge Permit.	4-7, 9-11, 13-14
46.	The Taurus turbine C9 shall be emission tested within 60 days after achieving maximum production rate but no later than 120 days after initial start-up and every two years thereafter no later than the end of the month of the initial emission test in accordance with Appendix A of this Air Discharge Permit and 40 CFR 60.4400 and 40 CFR 60.4340.	8
47.	Emission monitoring of engines C1, IR-1 and IR-2 shall be conducted on a 12 month cycle, no later than the end of the month of December in accordance with Appendix B of this Air Discharge Permit. If the monitoring results from any monitoring event indicate that emission concentrations exceed the permitted emission limits, the permittee shall either perform 60 minutes of additional monitoring to more accurately quantify CO, NO _x and O ₂ emissions, or initiate corrective action. Additional monitoring or corrective action shall be initiated as soon as practical but no later than three days after the exceedance is identified.	9-11

2.5 Reporting Requirements

No.	Reporting Requirements	Equipment/ Activity
48.	Upset conditions shall be reported to SWCAA as soon as possible after discovery. The permittee may provide notification to SWCAA via telephone. A message may be left on the answering machine for upset conditions that occur outside of normal business hours.	1-16

No.	Reporting Requirements	Equipment/ Activity
49.	Excess emissions shall be reported to SWCAA as follows: <ul style="list-style-type: none"> • As soon as possible, but no later than 12 hours after discovery for emissions that represent a potential threat to human health or safety; • As soon as possible, but no later than 48 hours after discovery for emissions which the permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and • No later than 30 days after the end of the month of discovery for all other excess emissions. 	1-16
50.	Emission test results shall be reported to SWCAA in writing within 45 days of test completion.	1-11, 13-15
51.	Emission monitoring results shall be reported to SWCAA in writing within 15 days of completion.	9-11
52.	A report shall be submitted to SWCAA. The report shall be submitted monthly within 30 days of the end of the month if annual emissions from the previous submittal indicate that emissions are within 75% of the annual emission limits contained in conditions 1, 4, 5, 8, or 12 of this Permit. Otherwise the report will be submitted quarterly within 30 days of the end of each calendar quarter. The report shall contain the following: <ol style="list-style-type: none"> (a) Summary of emissions from facility on a 12-month rolling average; (b) Monthly hours of operation of each compressor unit and the thermal oxidizer; (c) Monthly hours of operation for the C9 Taurus turbine including both hours of operation in Low NO_x mode and not in Low NO_x mode; and (d) Monthly natural gas consumption of each dehydration reboiler and the line heater. 	1-16

3. General Provisions

No.	General Provisions
A.	For the purpose of ensuring compliance with this Permit, duly authorized representatives of the Southwest Clean Air Agency shall be permitted access to the permittee's premises and the facilities being constructed, owned, operated and/or maintained by the permittee for the purpose of inspecting said facilities. These inspections are required to determine the status of compliance with this Permit and applicable regulations and to perform or require such tests as may be deemed necessary.
B.	The provisions, terms and conditions of this Permit shall be deemed to bind the permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the permittee.
C.	The requirements of this Permit shall survive any transfer of ownership of the source or any portion thereof.
D.	This Permit shall be posted conspicuously at or be readily available near the source.
E.	This Permit shall be invalid if construction/installation has not commenced within eighteen months from date of issuance.
F.	This Permit does not supersede requirements of other Agencies with jurisdiction and further, this Permit does not relieve the permittee of any requirements of any other governmental Agency. In addition to this Permit, the permittee may be required to obtain permits or approvals from other agencies with jurisdiction.

No.	General Provisions
G.	Compliance with the terms of this Permit does not relieve the permittee from the responsibility of compliance with SWCAA General Regulations for Air Pollution Sources, previously issued Regulatory Orders, RCW 70.94, Title 173 WAC or any other applicable emission control requirements, nor from the resulting liabilities and/or legal remedies for failure to comply.
H.	If any provision of this Permit is held to be invalid, all unaffected provisions of the Permit shall remain in effect and be enforceable.
I.	No change in this Permit shall be made or be effective except as may be specifically set forth by written order of the Southwest Clean Air Agency upon written application by the permittee for the relief sought.
J.	The Southwest Clean Air Agency may, in accordance with RCW 70.94 impose such conditions as are reasonably necessary to assure the maintenance of compliance with the terms of this Permit, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Air Discharge Permit 00-2302R2- Appendix A
Emission Testing Requirements
Underground Gas Storage Facility

1. Introduction:

- a. The purpose of this testing is to quantify emissions from the facility (turbines, internal combustion engines, dehydration reboilers and waste burner) as a result of combustion of natural/process gas and to demonstrate compliance with the requirements of this Permit.
- b. The testing shall be performed for the turbines, internal combustion engines, dehydration reboilers and waste burner at the existing facility at Jackson Prairie Gas Storage facility, 239 Zandecki Road, Chehalis, Lewis County, Washington.
- c. Emission testing of each unit shall be conducted according to the following schedule unless an alternative schedule is approved by SWCAA. Subsequent testing shall be completed no later than the end of the established test month.
 - C1 No later than the end of February 2010 and every seven years following
 - C2-C4 Testing shall be performed on an annual basis (no more than 14 calendar months following the previous performance test). If the NO_x emission rate from the previous performance test is ≤ 75 ppm at 15% O₂ subsequent testing may be performed every two years
 - C5 No later than the end of March 2016 and every seven years following
 - C6 No later than the end of January 2011 and every seven years following
 - C7 No later than the end of February 2010 and every seven years following
 - C8 No later than the end of January 2014 and every seven years following
 - C9 Within 60 days after achieving maximum production rate but no later than 120 days after start up and every two years following
 - IR-1 No later than the end of February 2016 and every seven years following
 - IR-2 No later than the end of February 2016 and every seven years following
 - Oxidizer No later than the end of January 2014 and every seven years following
 - Regen 1 No later than the end of January 2014 and every seven years following
 - Regen 2 No later than the end of December 2015 and every seven years following
- d. A comprehensive test plan shall be submitted to SWCAA for review and approval 10 days prior to each test.
- e. A minimum of three test runs at normal operating conditions shall be performed to ensure that the data are representative. Each test run shall be a minimum of one hour long.
- f. SWCAA personnel shall be informed at least five days prior to testing so that they may be present during testing.
- g. Testing shall include, but not necessarily be limited to the constituents identified in Section 2.a.

Air Discharge Permit 00-2302R2- Appendix A
Emission Testing Requirements
Underground Gas Storage Facility

2. Testing Requirements:

<u>Constituents to be measured:</u>	<u>Test Methods or Equivalent:</u>
Sample & velocity traverse	EPA Methods 1 or 1A
Velocity and flow rate	EPA Methods, 2, 2A, 2B, 2C or 2D
Oxygen (O ₂) & carbon dioxide (CO ₂)	EPA Method 3A
Moisture content of exhaust gas	EPA Method 4
Carbon monoxide (CO)	EPA Method 10
Nitrogen oxides (NO _x)	EPA Method 7E
	EPA Method 20 (turbines)
Opacity	SWCAA Method 9 (15 minutes per run)
Fuel analysis or certification	Fuel analysis certificate from supplier (Btu value & % sulfur)
VOCs	EPA Method 25A (thermal oxidizer only)

3. Source Operation:

- a. A complete record of production related parameters including process startups, shutdowns, and adjustments shall be kept during emissions testing to correlate operations with emissions and shall be recorded in the test results final report.
- b. Source operations during the emissions test must be representative of maximum intended operating conditions.

4. Reporting Requirements:

- a. A final emission test report (hardcopy and electronic) shall be prepared and submitted to SWCAA within 45 calendar days of test completion and, at a minimum, shall contain the following information:
 - (1) Description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations,
 - (2) Time and date of the test and identification and qualifications of the personnel involved,
 - (3) Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit,
 - (4) Summary of control system or equipment operating conditions,
 - (5) Summary of production related parameters,
 - (6) A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation,
 - (7) A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation,
 - (8) Copies of field data and example calculations,
 - (9) Chain of custody information,
 - (10) Calibration documentation,
 - (11) Discussion of any abnormalities associated with the results,
 - (12) A statement signed by the senior management official of the testing firm certifying the validity of the source test report, and
 - (13) Test results for the turbines shall be corrected to 15% O₂.

Air Discharge Permit 00-2302R2- Appendix B
Emission Monitoring Requirements
Underground Gas Storage Facility

1. Introduction:

- a. The purpose of periodically monitoring the engine catalyst exhaust on units C1, IR-1 and IR-2 is to minimize emissions and provide a reasonable assurance that catalyst and engines are operating properly.
- b. Periodic monitoring may be conducted with an electrochemical cell combustion analyzer, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

2. Monitoring Procedure:

- a. Monitoring of engine catalyst exhaust to determine emission concentrations of the constituents listed below shall be conducted on a 12 month cycle, no later than the end of the month of December, unless the engine is not in use during that year. An alternate monitoring schedule may be implemented if approved in writing by SWCAA.

Constituents to be Measured

Carbon Monoxide (CO)

Nitrogen Oxides (NO_x)

Oxygen (O₂)

- b. Source operation during testing must be representative of maximum intended operating conditions during that year.
- c. Alternative testing methodologies must be pre-approved by SWCAA.

3. Minimum Quality Assurance/Quality Control Measures:

- a. Sampling shall consist of at least 1 test consisting of at least 5 minutes of data collection following a "ramp-up phase." The "ramp-up phase" ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration). Emission concentrations shall be recorded at least once every 30 seconds during the data collection phase. All test data collected following the ramp-up phase(s) shall be reported to SWCAA. A sample data sheet is attached for reference.

If the monitoring results from any monitoring event indicate that emission concentrations exceed the permitted emission limits, the permittee shall either perform 60 minutes of additional monitoring to more accurately quantify CO, NO_x and O₂ emissions, or initiate corrective action. Additional monitoring or corrective action shall be initiated as soon as practical but no later than three days after the exceedance is identified. Corrective action includes tuning, maintenance by service personnel, limitation of engine load, or other action taken to maintain compliance with permitted limits. Monitoring of engine catalyst emissions must be conducted within three days following completion of any corrective action to confirm that the corrective action has been effective. Initiation of corrective action does not shield the permittee from enforcement.

Air Discharge Permit 00-2302R2- Appendix B
Emission Monitoring Requirements
Underground Gas Storage Facility

4. Reporting:

- a. All monitoring results shall be recorded at the facility and reported to SWCAA in writing within 15 calendar days of completion. The following information shall be included in the report:
- (1) Time and date of the performance monitoring;
 - (2) Identification of the personnel involved;
 - (3) A summary of results, reported in units consistent with the applicable emission standard or limit;
 - (4) A summary of equipment operating conditions;
 - (5) A description of the evaluation methods or procedures used including all field data, quality assurance/quality control procedures and documentation; and
 - (6) Analyzer response check documentation.
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-
-

Southwest Clean Air Agency
Combustion Equipment Monitoring Data Sheet

Company Name: Puget Sound Energy – Jackson Prairie Date: _____

Emission Unit Identification (Boiler B-1, etc): Engine C1

Make of Emission Unit: Waukesha

Model of Emission Unit: L5788GRU

Serial Number of Emission Unit: 92230

Company Performing Test: _____

Analyst: _____

Make of Instrument(s) Used: _____

Model of Instrument(s) Used: _____

Permitted NO_x Concentration 1.5 lb/hr @ _____ % O₂/CO₂ Permit Number: 00-2302R3

Permitted CO Concentration 1.5 lb/hr @ _____ % O₂/CO₂ Permit Number: 00-2302R3

Target/Permitted O₂/CO₂ concentration (%) 1.5 Permit Number: 00-2302R3

Stack Temperature: _____ °F

Moisture: _____ %

Firing Rate: _____ MMBtu/hr

Firing Rate: _____ %

Steam Rate: _____ 1000 lb/hr

Analyzer Probe Location: _____

Source Operation Notes: Please note the operating conditions of the source including unit load, fuel flow, damper position, oxygen set point, use of flue gas recirculation, steam pressure, afterburner temperature, etc. as applicable:

**Southwest Clean Air Agency
Combustion Equipment Monitoring Data Sheet**

Emissions Data Summary

Test Start Time: _____

Test Stop Time: _____

(Record at least 5 minutes of data)

Time (min)	NO _x Reading (ppm)	NO ₂ Reading (if applicable) (ppm)	CO Reading (ppm)	O ₂ Reading (%)
00:00				
00:30				
01:00				
01:30				
02:00				
02:30				
03:00				
03:30				
04:00				
04:30				
05:00				
05:30				
06:00				
06:30				
07:00				
07:30				
08:00				
08:30				
09:00				
09:30				
10:00				
Average				
Corrected				

Notes: _____

Attach copy of analyzer data print out if available. Submit results to SWCAA within 15 days of tune-up.
Questions? Contact the Southwest Clean Air Agency at (360) 574-3058 - fax (360) 576-0925.

Southwest Clean Air Agency
Combustion Equipment Monitoring Data Sheet

Company Name: Puget Sound Energy – Jackson Prairie Date: _____

Emission Unit Identification (Boiler B-1, etc): Engine IR1

Make of Emission Unit: Caterpillar

Model of Emission Unit: G3306NA

Serial Number of Emission Unit: 07Y07924

Company Performing Test: _____

Analyst: _____

Make of Instrument(s) Used: _____

Model of Instrument(s) Used: _____

Permitted NO_x Concentration 0.64 lb/hr @ _____ % O₂/CO₂ Permit Number: 00-2302R3

Permitted CO Concentration 0.64 lb/hr @ _____ % O₂/CO₂ Permit Number: 00-2302R3

Target/Permitted O₂/CO₂ concentration (%) 1.5 Permit Number: 00-2302R3

Stack Temperature: _____ °F

Moisture: _____ %

Firing Rate: _____ MMBtu/hr

Firing Rate: _____ %

Steam Rate: _____ 1000 lb/hr

Analyzer Probe Location: _____

Source Operation Notes: Please note the operating conditions of the source including unit load, fuel flow, damper position, oxygen set point, use of flue gas recirculation, steam pressure, afterburner temperature, etc. as applicable:

**Southwest Clean Air Agency
Combustion Equipment Monitoring Data Sheet**

Emissions Data Summary

Test Start Time: _____

Test Stop Time: _____

(Record at least 5 minutes of data)

Time (min)	NO _x Reading (ppm)	NO ₂ Reading (if applicable) (ppm)	CO Reading (ppm)	O ₂ Reading (%)
00:00				
00:30				
01:00				
01:30				
02:00				
02:30				
03:00				
03:30				
04:00				
04:30				
05:00				
05:30				
06:00				
06:30				
07:00				
07:30				
08:00				
08:30				
09:00				
09:30				
10:00				
Average				
Corrected				

Notes: _____

Attach copy of analyzer data print out if available. Submit results to SWCAA within 15 days of tune-up.
 Questions? Contact the Southwest Clean Air Agency at (360) 574-3058 - fax (360) 576-0925.

**Southwest Clean Air Agency
Combustion Equipment Monitoring Data Sheet**

Company Name: Puget Sound Energy – Jackson Prairie Date: _____

Emission Unit Identification (Boiler B-1, etc): Engine IR2

Make of Emission Unit: Caterpillar

Model of Emission Unit: G3306NA

Serial Number of Emission Unit: 07Y08712

Company Performing Test: _____

Analyst: _____

Make of Instrument(s) Used: _____

Model of Instrument(s) Used: _____

Permitted NO_x Concentration 0.64 lb/hr @ _____ % O₂/CO₂ Permit Number: 00-2302R3

Permitted CO Concentration 0.64 lb/hr @ _____ % O₂/CO₂ Permit Number: 00-2302R3

Target/Permitted O₂/CO₂ concentration (%) 1.5 Permit Number: 00-2302R3

Stack Temperature: _____ °F

Moisture: _____ %

Firing Rate: _____ MMBtu/hr

Firing Rate: _____ %

Steam Rate: _____ 1000 lb/hr

Analyzer Probe Location: _____

Source Operation Notes: Please note the operating conditions of the source including unit load, fuel flow, damper position, oxygen set point, use of flue gas recirculation, steam pressure, afterburner temperature, etc. as applicable:

Southwest Clean Air Agency Combustion Equipment Monitoring Data Sheet

Emissions Data Summary

Test Start Time: _____

Test Stop Time: _____

(Record at least 5 minutes of data)

Time (min)	NO _x Reading (ppm)	NO ₂ Reading (if applicable) (ppm)	CO Reading (ppm)	O ₂ Reading (%)
00:00				
00:30				
01:00				
01:30				
02:00				
02:30				
03:00				
03:30				
04:00				
04:30				
05:00				
05:30				
06:00				
06:30				
07:00				
07:30				
08:00				
08:30				
09:00				
09:30				
10:00				
Average				
Corrected				

Notes: _____

Attach copy of analyzer data print out if available. Submit results to SWCAA within 15 days of tune-up. Questions? Contact the Southwest Clean Air Agency at (360) 574-3058 - fax (360) 576-0925.